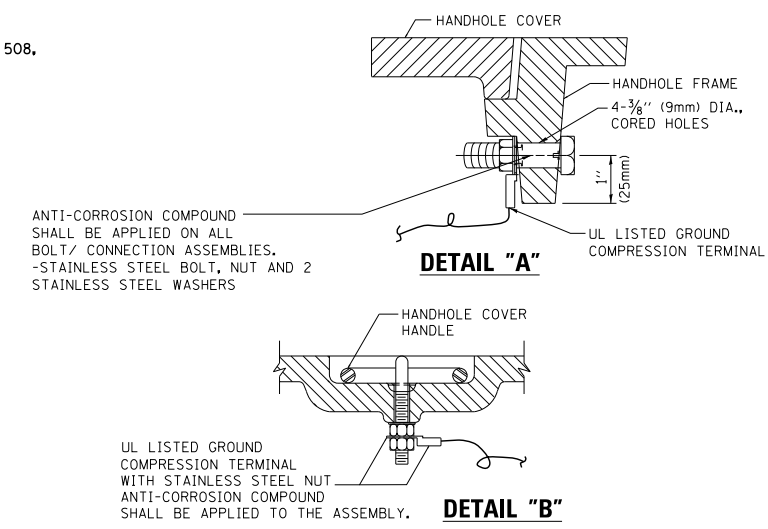
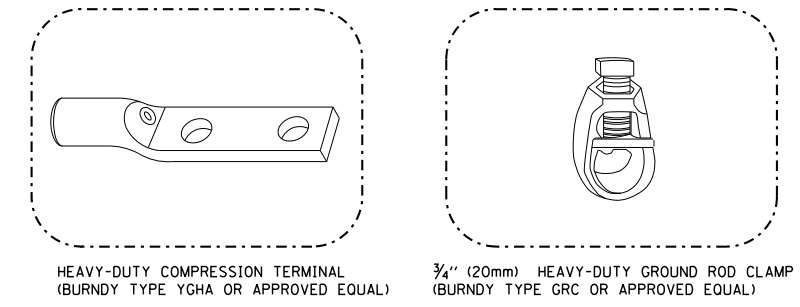
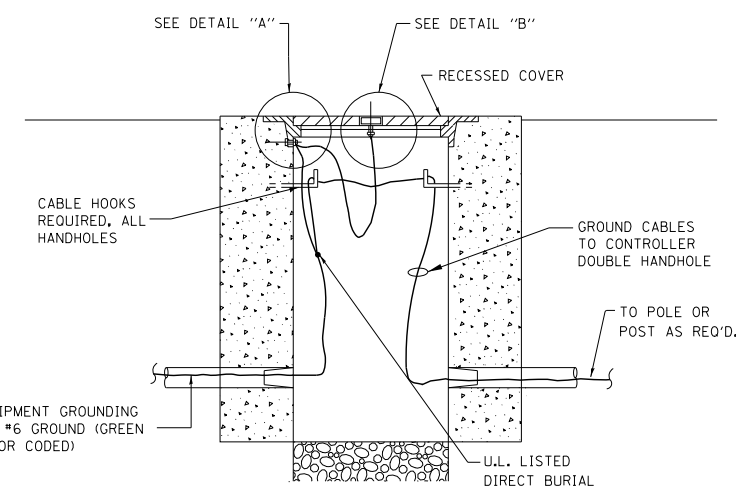


**ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
(NOT TO SCALE)**

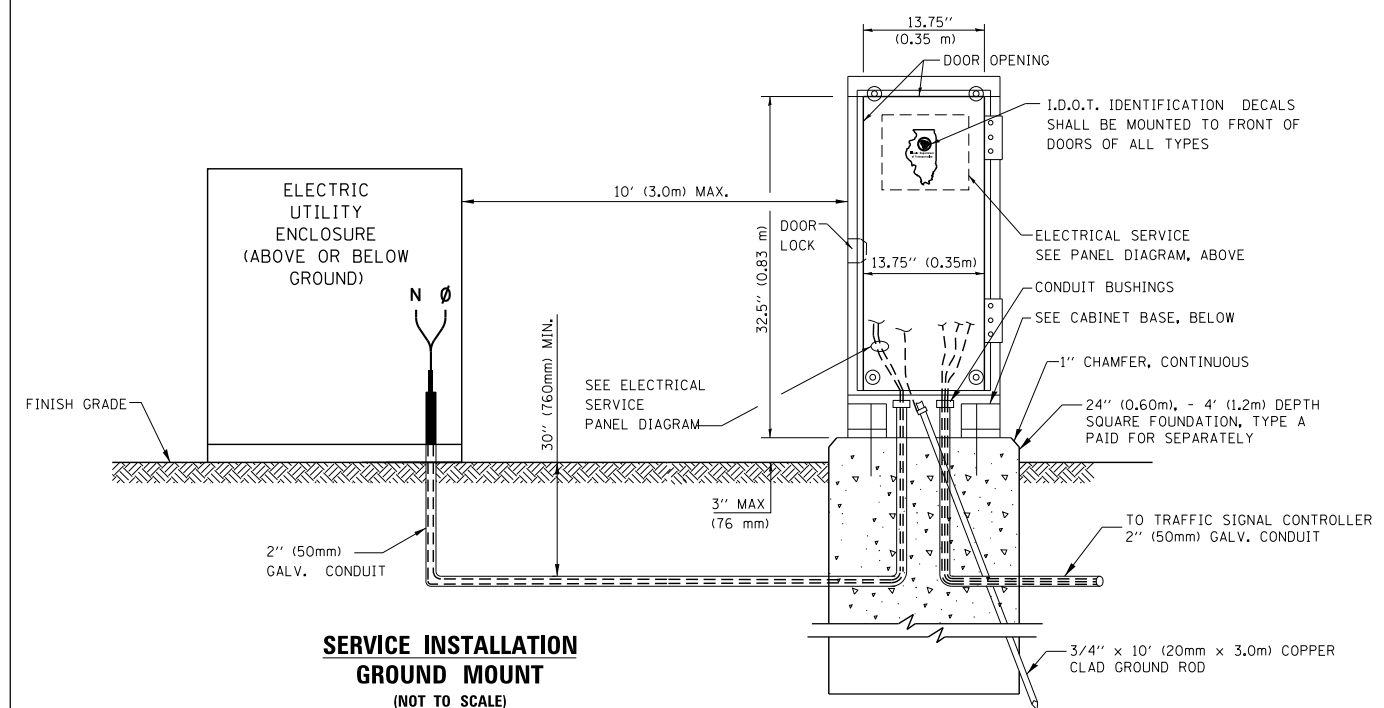
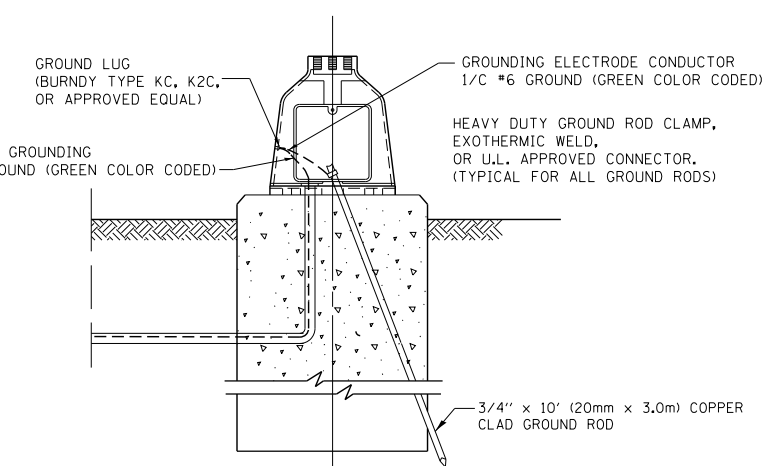
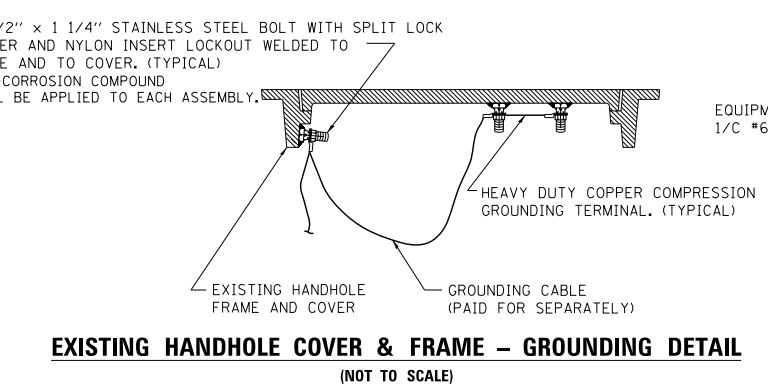


**NOTES:
GROUNDING SYSTEM**

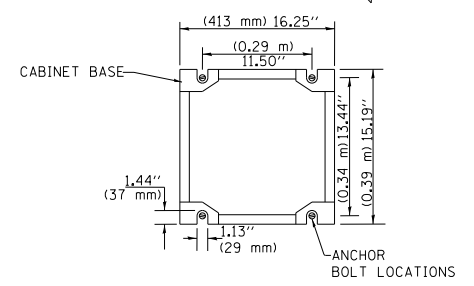
- THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN ENCLOSED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
- THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
- ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
- THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



- NOTES:**
- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
 - GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



**CABINET – BASE BOLT PATTERN
(NOT TO SCALE)**

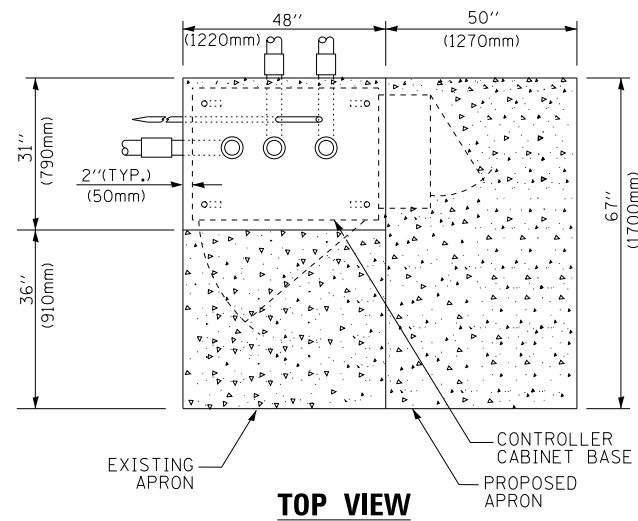


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		DATE - 10-28-09	REVISED -

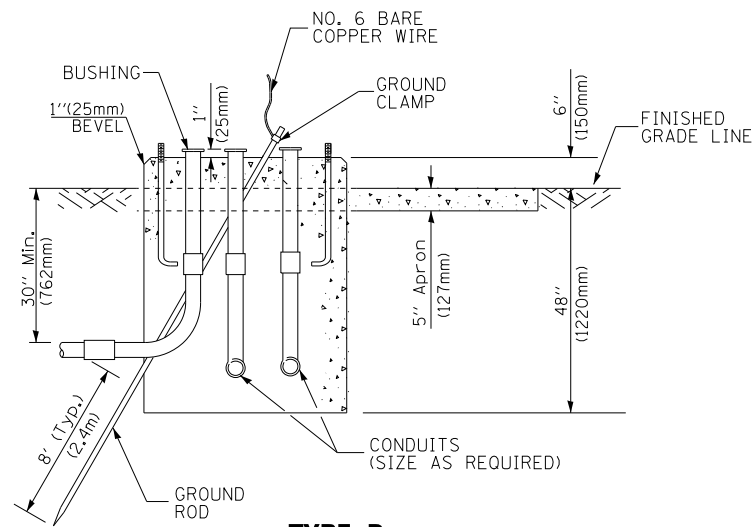
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DISTRICT ONE			
STANDARD TRAFFIC SIGNAL DESIGN DETAILS			
SCALE: NONE	SHEET NO. 4 OF 7 SHEETS	STA.	TO STA.

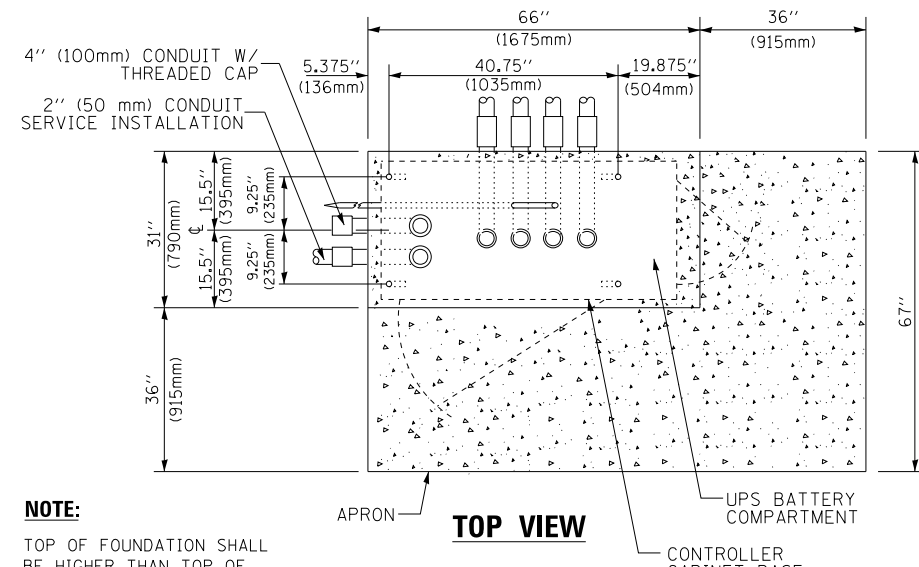
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	201
TS-05		CONTRACT NO. 60V55		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



TOP VIEW



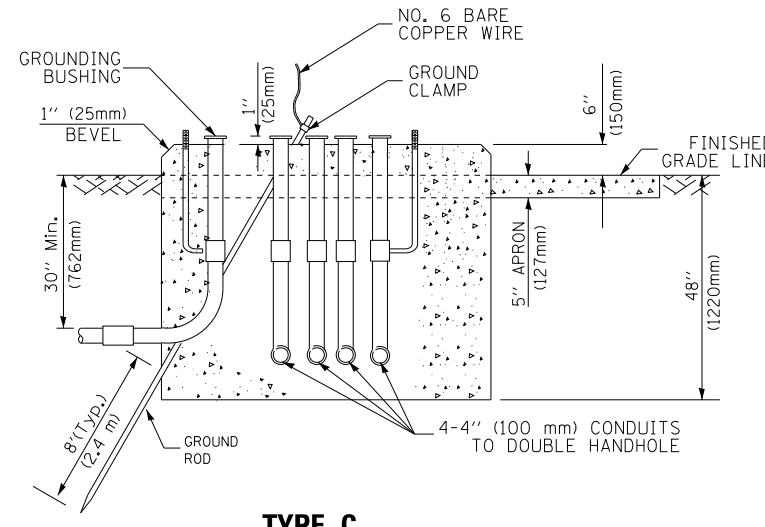
**TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET**



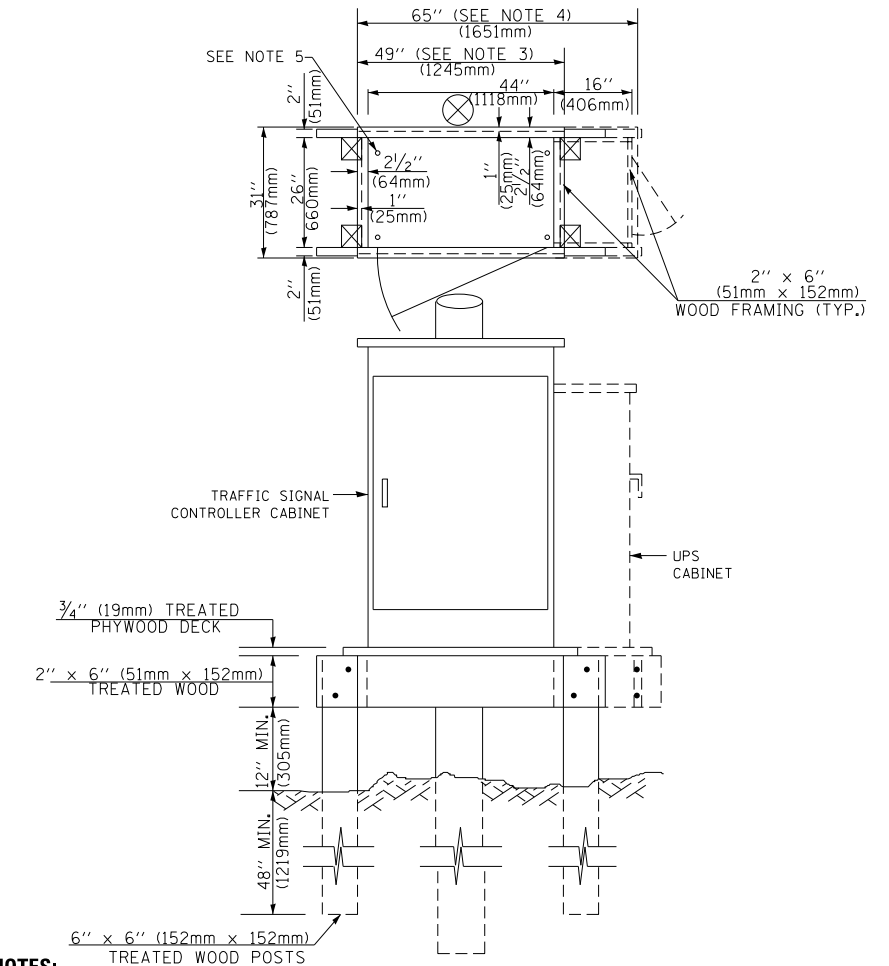
TOP VIEW

NOTE:

TOP OF FOUNDATION SHALL BE HIGHER THAN TOP OF DOUBLE HANDHOLE



**TYPE C
FOR GROUND MOUNTED
SUPER P (TYPE IV) AND SUPER R (TYPE V)
CONTROLLER CABINETS**



NOTES:

1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION..

**TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM**

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

CABLE SLACK

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

VERTICAL CABLE LENGTH

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

DEPTH OF FOUNDATION

MAST ARM LENGTH	① FOUNDATION DEPTH	FOUNDATION DIAMETER	SPIRAL DIAMETER	QUANTITY OF REBARS	SIZE OF REBARS
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 55' (16.8 m) and less than 65' (19.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 75' (22.9 m) and up to 85' (25.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

NOTES:

1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average unconfined compressive strength (qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.
2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations.
4. For mast arm assemblies with dual arms refer to state standard 878001..

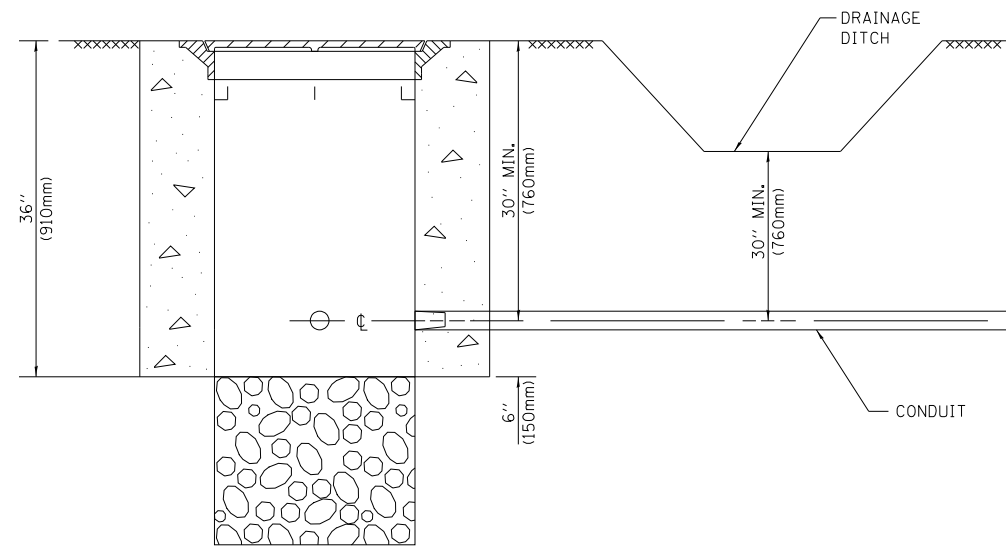
DEPTH OF MAST ARM FOUNDATIONS, TYPE E

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	PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DISTRICT ONE			
STANDARD TRAFFIC SIGNAL DESIGN DETAILS			
SCALE: NONE	SHEET NO. 5 OF 7 SHEETS	STA.	TO STA.

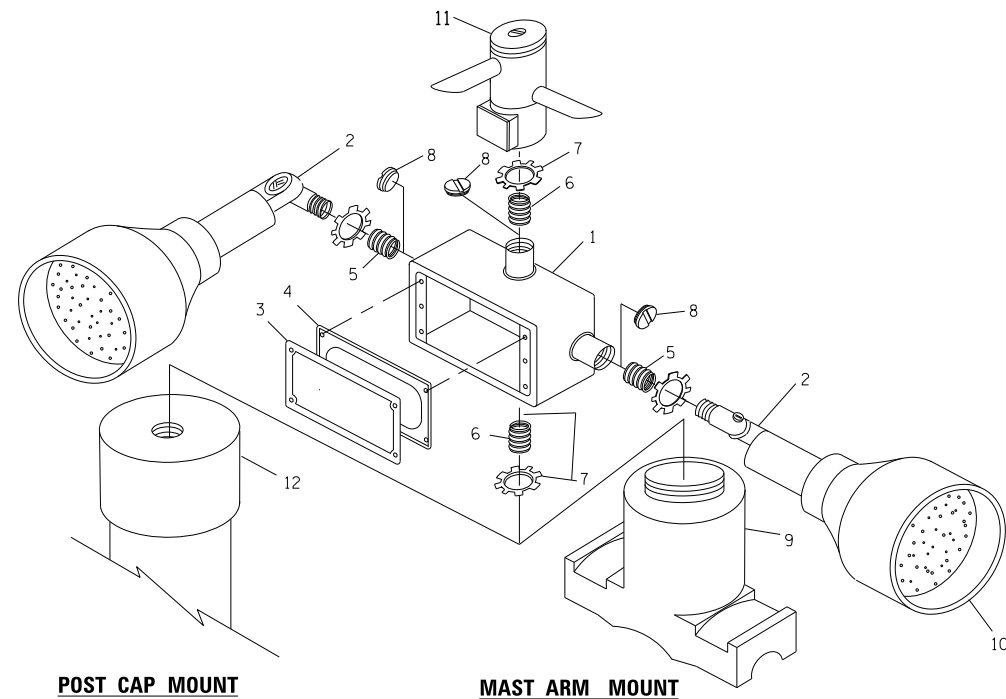
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	202
TS-05		CONTRACT NO. 60V55		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



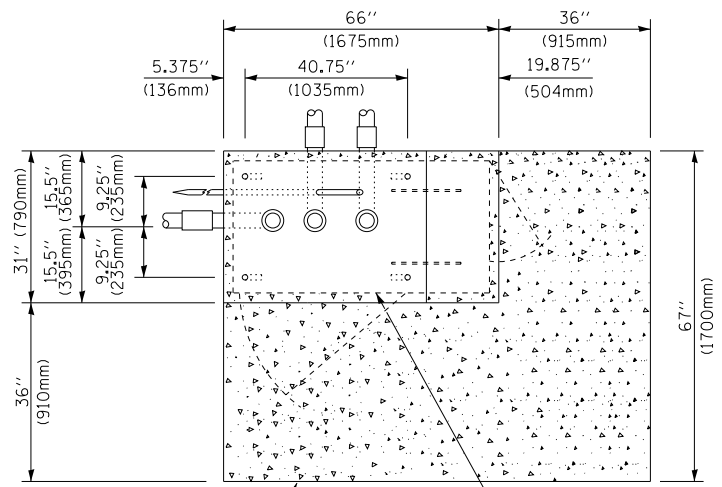
NOTES:

1. CONDUIT DEPTH SHALL BE A MINIMUM OF 30" (760mm) BELOW THE BOTTOM OF THE DRAINAGE DITCH OR ANY SLOPING GROUND
2. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL CONDUIT PLACED UNDER ROADWAY PAVEMENT, MULTI-USE PATHS, SIDEWALKS AND SOIL SURFACES.
3. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL HANDHOLES, HEAVY DUTY HANDHOLES AND DOUBLE HANDHOLES.

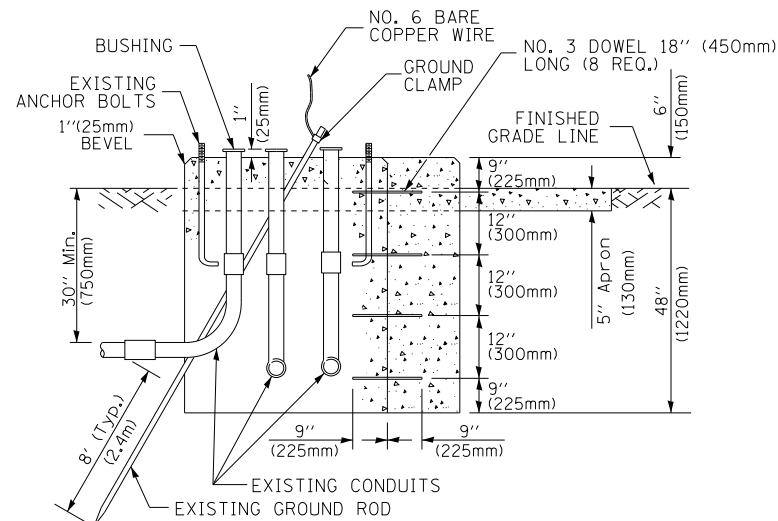
HANDHOLE WITH MINIMUM CONDUIT DEPTH
(NOT TO SCALE)



EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL



TOP VIEW
(NOT TO SCALE)

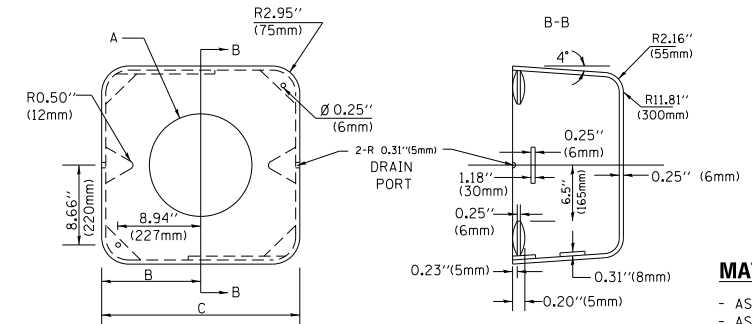


MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION
(NOT TO SCALE)

ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0,000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4" (19 mm) CLOSE NIPPLE
7	3/4" (19 mm) LOCKNUT
8	3/4" (19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

NOTES:

1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
ITEM #2- MULBERRY CON-0-SHADE LAMP SHIELD OR EQUIVALENT
ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4" (19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.



MATERIAL:
- ASTM A36 STEEL
- ASTM A-123 HOT DIPPED GALVANIZED

A	B	C	HEIGHT	WEIGHT
VARIABLES	9.5" (241mm)	19" (483mm)	7" (178mm) - 12" (300mm)	53 lbs (24kg)
VARIABLES	10.75" (273mm)	21.5" (546mm)	7" (178mm) - 12" (300mm)	68 lbs (31 kg)
VARIABLES	13.0" (330mm)	26" (660mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)
VARIABLES	18.5" (470mm)	37" (940mm)	7" (178mm) - 12" (300mm)	126 lbs (57 kg)

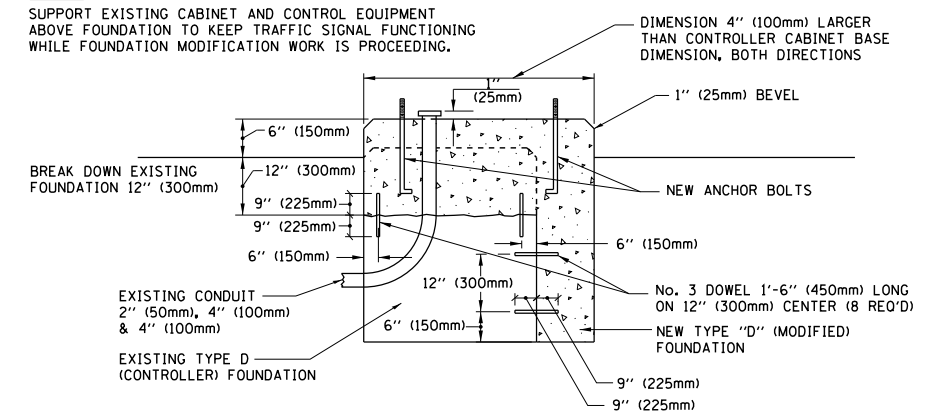
SHROUD

NOTES:

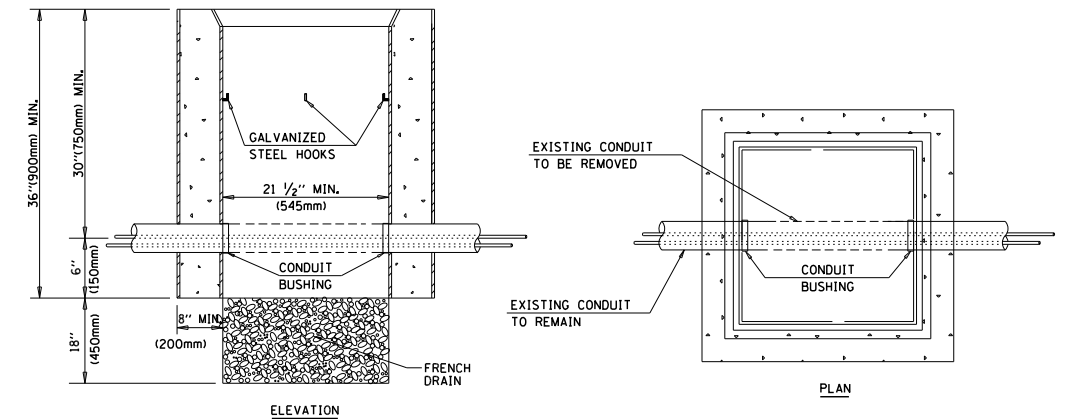
1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.

NOTE:

SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



MODIFY EXISTING TYPE "D" FOUNDATION



NOTES:

1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCLUDED WITH THE COST OF THE HANDHOLE.

HANDHOLE TO INTERCEPT EXISTING CONDUIT

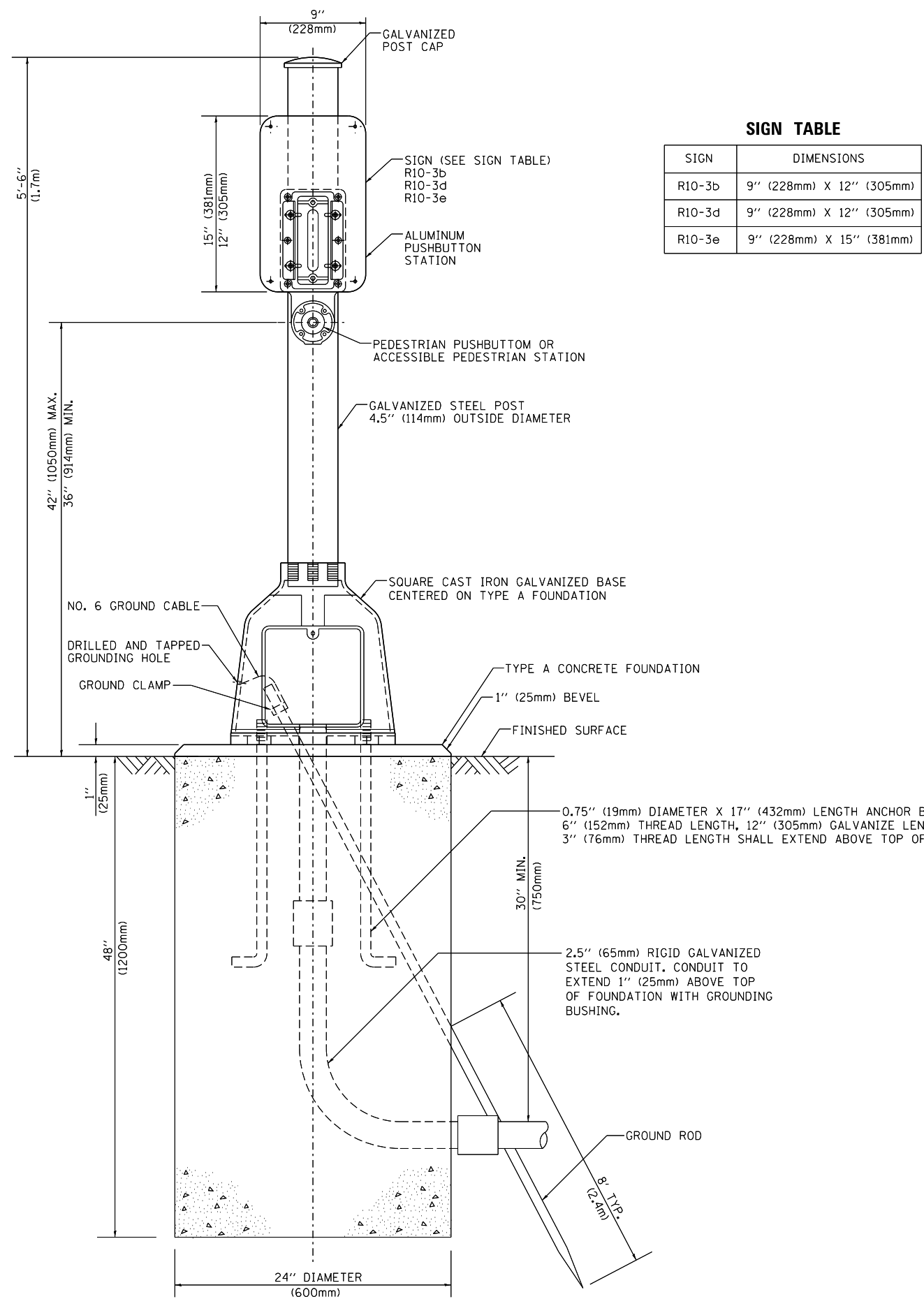
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

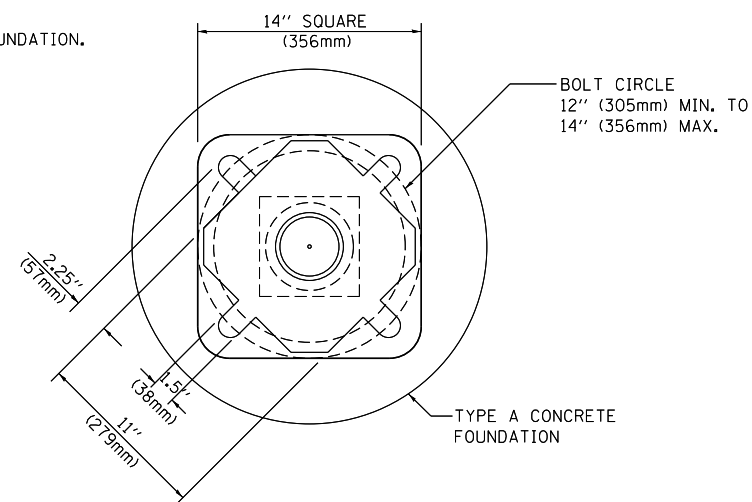
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	203
TS-05		CONTRACT NO. 60V55		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



SIGN TABLE

SIGN	DIMENSIONS
R10-3b	9" (228mm) X 12" (305mm)
R10-3d	9" (228mm) X 12" (305mm)
R10-3e	9" (228mm) X 15" (381mm)



BOLT PATTERN

PEDESTRIAN PUSH BUTTON POST, TYPE A

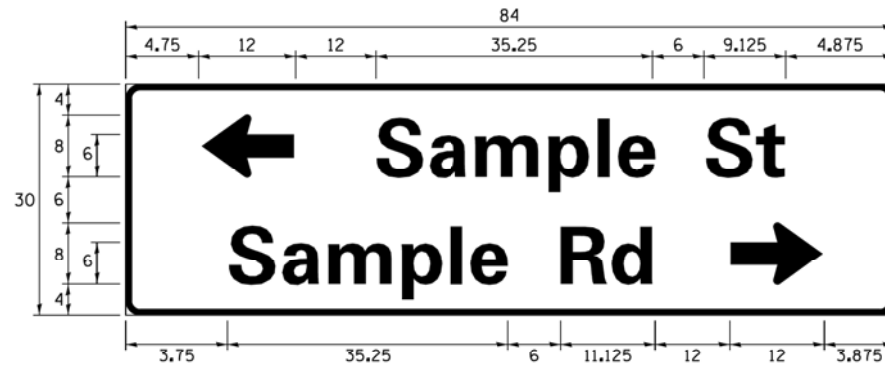
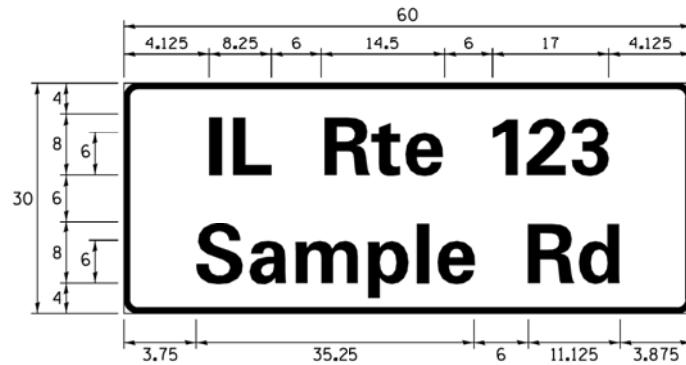
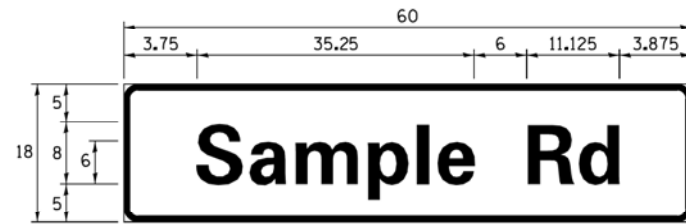
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DISTRICT ONE			
STANDARD TRAFFIC SIGNAL DESIGN DETAILS			
SCALE: NONE	SHEET NO. 7 OF 7 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	204
TS-05			CONTRACT NO. 60V55	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

SIGN PANEL – TYPE 1 OR TYPE 2



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D OR C	-	1 OR 2	ZZ	-

ALL DIMENSIONS ARE IN INCHES EXCEPT NOTED OTHERWISE

COMMON STREET NAME ABBREVIATIONS AND WIDTHS

NAME	ABBREVIATION	WIDTH (INCH)	
		SERIES "C"	SERIES "D"
AVENUE	Ave	15.000	18.250
BOULEVARD	Blvd	17.125	20.000
CIRCLE	Cir	11.125	13.000
COURT	Ct	8.250	9.625
DRIVE	Dr	8.625	10.125
HIGHWAY	Hwy	18.375	22.000
ILLINOIS	IL	7.000	8.250
LANE	Ln	9.125	10.750
PARKWAY	Pkwy	23.375	27.375
PLACE	Pl	7.125	7.750
ROAD	Rd	9.625	11.125
ROUTE	Rte	12.625	14.500
STREET	St	8.000	9.125
TERRACE	Ter	12.625	14.625
TRAIL	Tr	7.750	9.125
UNITED STATES	US	10.375	12.250

GENERAL NOTES

- WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 877001, 877002, 877006, 877011 AND 877012, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 8'-0" MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITY.
- ALL SIGNS SHALL CONSIST OF A WHITE LEGEND AND BORDER (TYPE ZZ SHEETING) ON A GREEN BACKGROUND (TYPE ZZ SHEETING)
- THE SIGN LENGTH SHALL BE IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHALL NOT EXCEED 8'-0". ALL BORDERS SHALL BE 3/4" WIDE. CORNER RADIUS SHALL BE 1-7/8". THE SPACING BETWEEN THE WORDS SHOULD BE 6", IF POSSIBLE, BUT MAY BE REDUCED TO 5" WHEN SPACING IS CRITICAL. A MINIMUM OF 2-1/2" SHALL BE INCLUDED BETWEEN THE WORD AND THE RIGHT AND LEFT EDGES OF THE SIGN.
- A PREFERRED METHOD FOR THE SIGN DESIGN IS TO USE SERIES "D" LETTER ON A ONE-LINE SIGN 18" IN HEIGHT AND A MAXIMUM OF 8'-0" IN WIDTH. IF SERIES "D" DOES NOT FIT ON A 8'-0" SIGN, THEN SERIES "C" SHOULD BE TRIED. IF SERIES "C" DOES NOT FIT ON A 8'-0" SIGN, A 30" HIGH TWO-LINE SIGN CAN BE USED. THE CROSSROAD DESIGNATION AS TO STREET, AVENUE, ETC. SHOULD BE SPELLED OUT ON THE SECOND LINE, IF THE ABBREVIATION CANNOT FIT ON THE FIRST LINE.
- LED ILLUMINATED STREET NAME SIGNS CAN BE USED IN PLACE OF REGULAR SIGN PANELS BUT ANY SPECIAL WORDING AND SYMBOLOLOGY MUST BE APPROVED BY THE DEPARTMENT. GENERAL DESIGN REQUIREMENT AS LISTED ABOVE (COLOR, FONT, SIZE, ETC.) MUST BE FOLLOWED.
- SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS.

LOCAL SUPPLIERS:

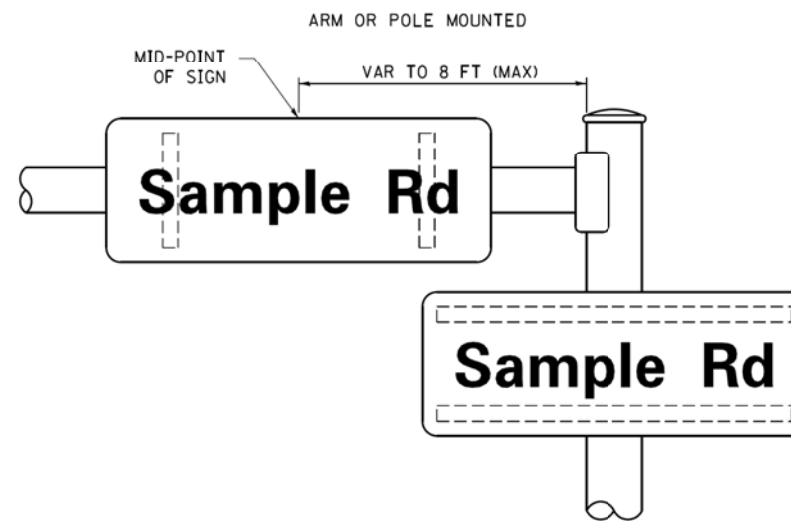
- J.O. HERBERT COMPANY, INC
MIDLOTHIAN, VA
- WESTERN REMAC, INC.
WOODRIDGE, IL

PARTS LISTING:

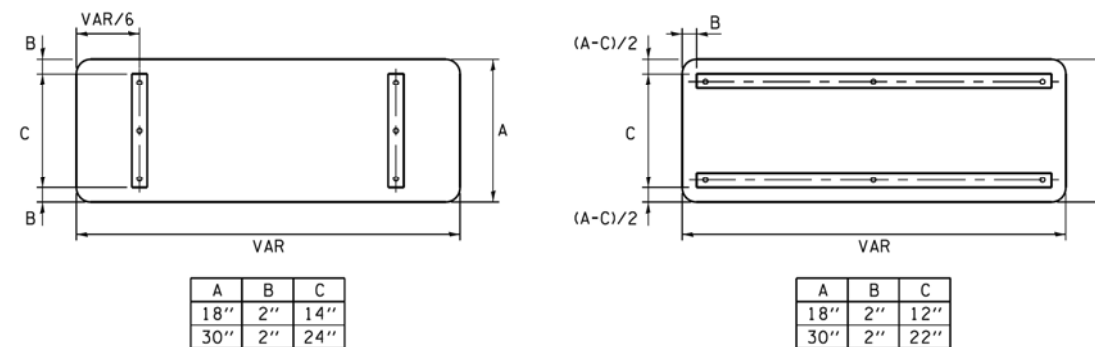
- SIGN CHANNEL PART #HPN053 (MED. CHANNEL)
1/4" x 14 x 1" H.W.H. #3
SELF TAPPING WITH NEOPRENE WASHER
- SIGN SCREWS PART #HPN034 (UNIVERSAL)
CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING
- BRACKETS

OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BACKET OF THE ABOVE PRODUCT.

MOUNTING LOCATION



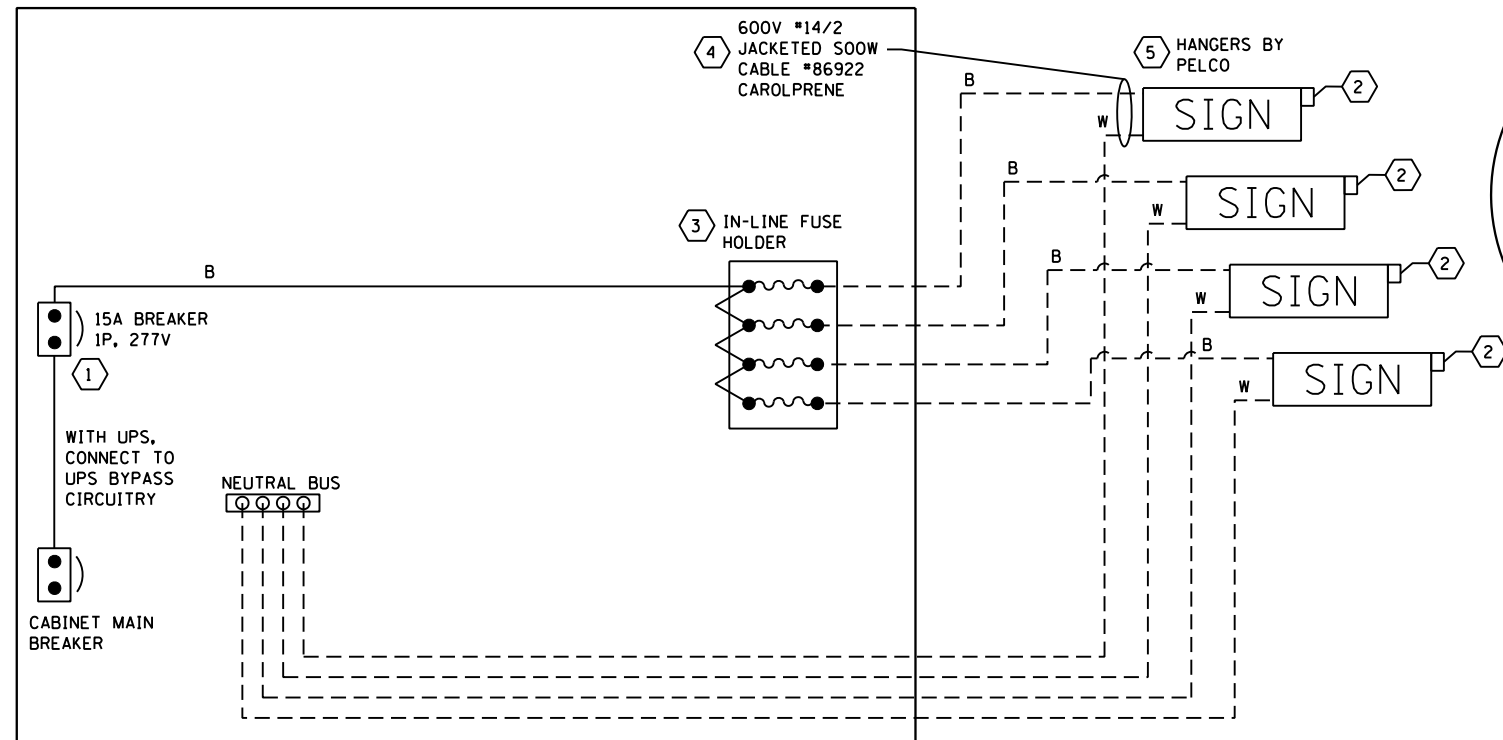
SUPPORTING CHANNELS



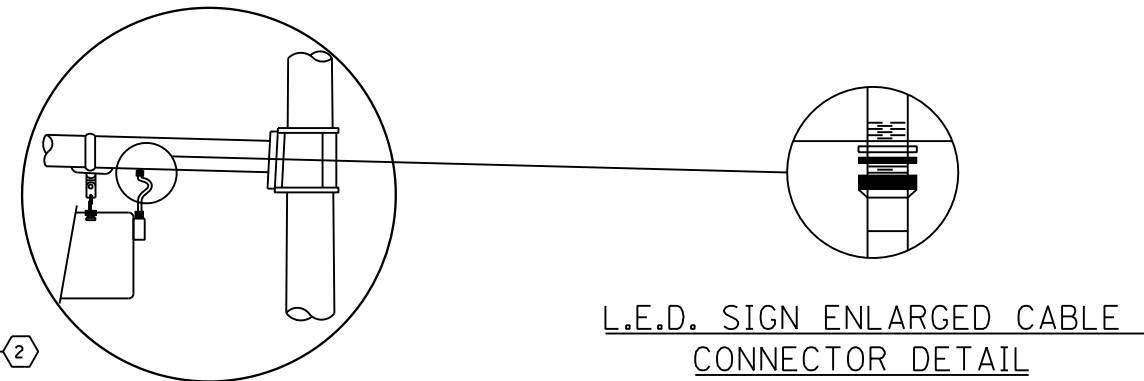
STANDARD ALPHABETS SPACING CHART

(8") UPPER CASE AND (6") LOWER CASE

FHWA SERIES "C"				FHWA SERIES "D"			
CHARACTER	LEFT SPACING (INCH)	WIDTH (INCH)	RIGHT SPACING (INCH)	CHARACTER	LEFT SPACING (INCH)	WIDTH (INCH)	RIGHT SPACING (INCH)
A	0.240	5.122	0.240	A	0.240	6.804	0.240
B	0.880	4.482	0.480	B	0.960	5.446	0.400
C	0.720	4.482	0.720	C	0.800	5.446	0.800
D	0.880	4.482	0.720	D	0.960	5.446	0.800
E	0.880	4.082	0.480	E	0.960	4.962	0.400
F	0.880	4.082	0.240	F	0.960	4.962	0.240
G	0.720	4.482	0.720	G	0.800	5.446	0.800
H	0.880	4.482	0.880	H	0.960	5.446	0.960
I	0.880	1.120	0.880	I	0.960	1.280	0.960
J	0.240	4.082	0.880	J	0.240	5.122	0.960
K	0.880	4.482	0.480	K	0.960	5.604	0.400
L	0.880	4.082	0.240	L	0.960	4.962	0.240
M	0.880	5.284	0.880	M	0.960	6.244	0.960
N	0.880	4.482	0.880	N	0.960	5.446	0.960
O	0.720	4.722	0.720	O	0.800	5.684	0.800
P	0.880	4.482	0.720	P	0.960	5.446	0.240
Q	0.720	4.722	0.720	Q	0.800	5.684	0.800
R	0.880	4.482	0.480	R	0.960	5.446	0.400
S	0.480	4.482	0.480	S	0.400	5.446	0.400
T	0.240	4.082	0.240	T	0.240	4.962	0.240
U	0.880	4.482	0.880	U	0.960	5.446	0.960
V	0.240	4.962	0.240	V	0.240	6.084	0.240
W	0.240	6.084	0.240	W	0.240	7.124	0.240
X	0.240	4.722	0.240	X	0.400	5.446	0.400
Y	0.240	5.122	0.240	Y	0.240	6.884	0.240
Z	0.480	4.482	0.480	Z	0.400	5.446	0.400
a	0.320	3.842	0.640	a	0.400	4.562	0.720
b	0.720	4.082	0.480	b	0.800	4.802	0.480
c	0.480	4.002	0.240	c	0.480	4.722	0.240
d	0.480	4.082	0.720	d	0.480	4.802	0.800
e	0.480	4.082	0.320	e	0.480	4.722	0.320
f	0.320	2.480	0.160	f	0.320	2.882	0.160
g	0.480	4.082	0.720	g	0.480	4.802	0.800
h	0.720	4.082	0.640	h	0.800	4.722	0.720
i	0.720	1.120	0.720	i	0.800	1.280	0.800
j	0.000	2.320	0.720	j	0.000	2.642	0.800
k	0.720	4.322	0.160	k	0.800	5.122	0.160
l	0.720	1.120	0.720	l	0.800	1.280	0.800
m	0.720	6.724	0.640	m	0.800	7.926	0.720
n	0.720	4.082	0.640	n	0.800	4.722	0.720
o	0.480	4.082	0.480	o	0.480	4.882	0.480
p	0.720	4.082	0.480	p	0.800	4.802	0.480
q	0.480	4.082	0.720	q	0.480	4.802	0.800
r	0.720	2.642	0.160	r	0.800	3.042	0.160
s	0.320	3.362	0.240	s	0.320	3.762	0.240
t	0.080	2.882	0.080	t	0.080	3.202	0.080
u	0.640	4.082	0.720	u	0.720	4.722	0.800
v	0.160	4.722	0.160	v	0.160	5.684	0.160
w	0.160	7.524	0.160	w	0.160	9.046	0.160
x	0.000	5.202	0.000	x	0.000	6.244	0.000
y	0.160	4.962	0.160	y	0.160	6.004	0.160
z	0.240	3.362	0.240	z	0.240	4.002	0.240
1	0.720	1.680	0.880	1	0.800	2.000	0.960
2	0.480	4.482	0.480	2	0.800	5.446	0.800
3	0.480	4.482	0.480	3	1.440	5.446	0.800
4	0.240	4.962	0.720	4	0.160	6.004	0.960
5	0.480	4.482	0.480	5	0.800	5.446	0.800
6	0.720	4.482	0.720	6	0.800	5.446	0.800
7	0.240	4.482	0.720	7	0.560	5.446	0.560
8	0.480	4.482	0.480	8	0.800	5.446	0.800
9	0.480	4.482	0.480	9	0.800	5.446	0.800
0	0.720	4.722	0.720	0	0.800	5.684	0.800
-	0.240	2.802	0.240	-	0.240	2.802	0.240

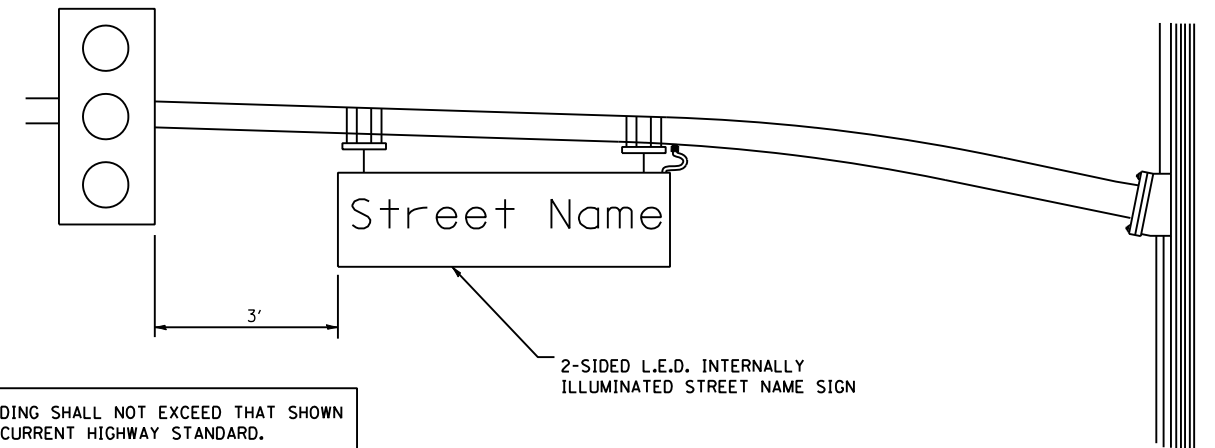


LED SIGN WIRING DETAIL



L.E.D. SIGN ENLARGED CABLE CONNECTOR DETAIL FOR PENDANT MOUNT

L.E.D. SIGN ENLARGED CABLE CONNECTOR DETAIL



STEEL MAST ARM ASSEMBLY AND POLE PENDANT MOUNT

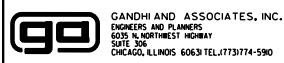
DESCRIPTION	MANUFACTURER	MODEL	NOTES
1) CIRCUIT BREAKER		15 AMPERE	MOLDED CASE, THERMAL MAG. MIN. R.I. OF 14K R.M.S. SYMMETRICAL AMPERE AT 277V.
2) PHOTOCCELL			ONE MOUNTED ON EACH SIGN
3) IN-LINE FUSE HOLDER WITH 5 AMP FUSE	BUSSMAN	S-8000 BK/S-8-3-4-R	
4) ELECTRIC CABLE, NO. 14, 2/C (BLACK, WHITE)	SOOW CAROLPRENE	86922	
5) SIGN MOUNTING HARDWARE	PELCO	PENDANT (SE-5015) DIRECT MOUNT (AB-0104-L-SP) ADDITIONAL SIGN STIFFENERS MAY BE REQUIRED FOR DIRECT MOUNTED SIGNS.	S.S. HARDWARE

BILL OF MATERIALS

NOTES:

- SIGN SHALL BE DOUBLE SIDED FOR PENDANT MOUNT.
- CERTAIN ADDITIONAL INFORMATION MAY BE ALLOWED ON THE SIGN. VERIFY WITH ENGINEER.
- SIGNS SHALL NOT BE ENERGIZED WHEN TRAFFIC SIGNALS ARE POWERED BY THE UPS. THE SIGNS SHALL BE CONNECTED TO THE UPS BYPASS CIRCUITRY.
- ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED:
R = RED BL = BLUE W = WHITE
B = BLACK Y = YELLOW G = GREEN
- ALL 120 VOLT SYSTEM AND ALL CONTROL WIRING SHALL BE #12AWG STRANDED UNLESS OTHERWISE INDICATED.
- EACH INTERNALLY ILLUMINATED SIGN SHALL INCLUDE ITS OWN PHOTOCCELL IN ACCORDANCE WITH THE SPECIAL PROVISION.
- ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

K:\PROJECTS\Projects\2014\IL Rte 132 Murr Rd to Sand Lake Rd\Signs\NP\LED SIGN DETAIL.dgn



USER NAME = #USER#	DESIGNED - PKG	REVISED -
PLOT SCALE = 20.0060 ' / IN.	DRAWN - EA	REVISED -
PLOT DATE = 3/22/2017	CHECKED - PKG	REVISED -
	DATE - 3/21/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLUMINATED STREET NAME SIGN DETAIL

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	206
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 60V55	

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED BY CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

1 EACH CONTROLLER CABINET AND COMPLETE

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACTOR'S BID PRICE.

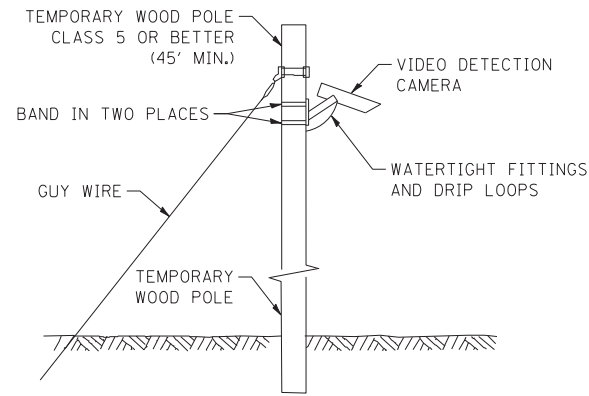
3 EACH SIGNAL HEAD, 1-FACE, 3-SECTION, BRACKET MOUNTED
 3 EACH SIGNAL HEAD, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
 1 EACH SIGNAL HEAD, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
 3 EACH SIGNAL HEAD, 1-FACE, 5-SECTION, BRACKET MOUNTED
 2 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE, BRACKET MOUNTED
 2 EACH PEDESTRIAN PUSH-BUTTON
 4 EACH TRAFFIC SIGNAL BACKPLATE
 6 EACH TRAFFIC SIGNAL POST
 2 EACH STEEL MAST ARM ASSEMBLY AND POLE
 1 EACH SERVICE INSTALLATION

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

AGENCY: VILLAGE OF LINDENHURST

CONTACT INFORMATION:
 BUILDING AND ENGINEERING
 VILLAGE OF LINDENHURST
 PHONE: (847) 356-8252

2 EACH LIGHT DETECTOR
 1 EACH LIGHT DETECTOR AMPLIFIER



TEMPORARY VIDEO DETECTION MOUNTING DETAIL (NOT TO SCALE)

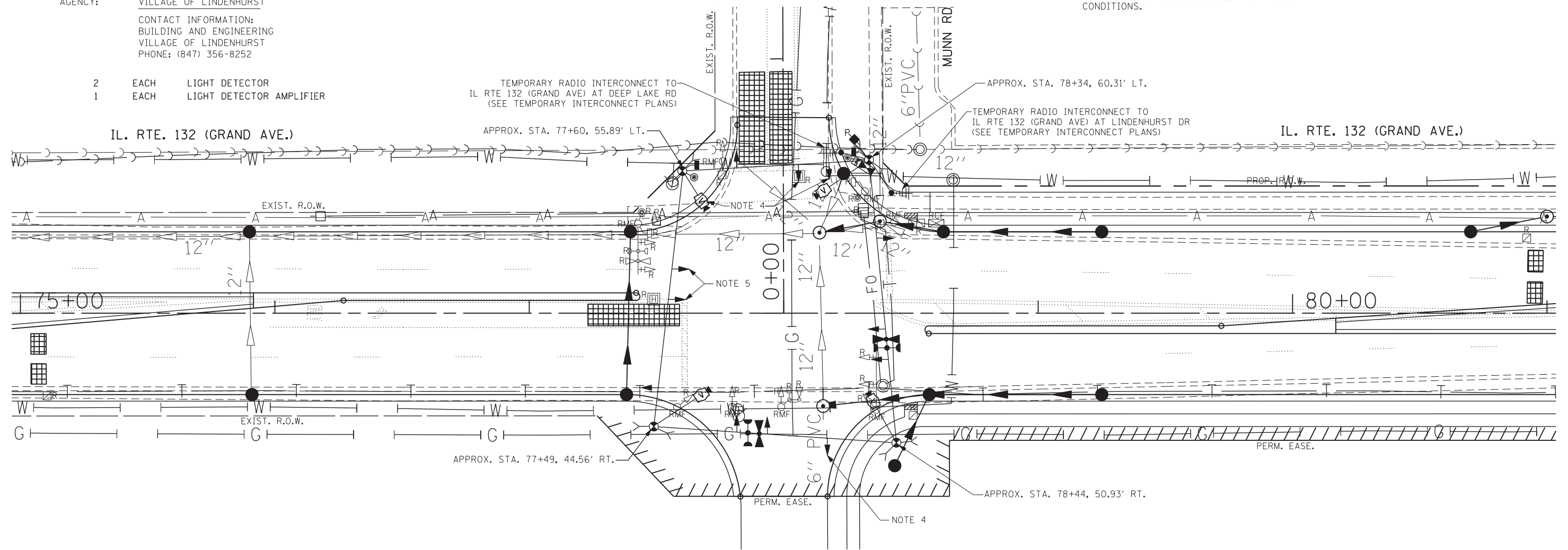
NOTE 1: RELOCATE EXISTING LAYER II SWITCH FROM EXISTING TRAFFIC SIGNAL CABINET TO TEMPORARY TRAFFIC SIGNAL CABINET AND THEN TO PROPOSED TRAFFIC SIGNAL CABINET (AFTER THE CONSTRUCTION) INCLUDING THE POWER SUPPLY, MOUNTING HARDWARE, AND CABLING. THIS ITEM WILL BE PAID FOR AS RELOCATE SWITCH (2 EACH) AND IS INCLUDED IN THE QUANTITIES FOR THE PROPOSED TRAFFIC SIGNAL INSTALLATION.

NOTE 2: THE WIRELESS INTERCONNECT SYSTEM SHALL BECOME PART OF THE LAKE COUNTY PASSAGE WIRELESS NETWORK AND MAY REQUIRE THE INSTALLATION OF RADIO TRANSCEIVER AND ANTENNA AT A HIGHER LOCATION SO AS TO AIM AT ANOTHER ANTENNA ON THE COUNTY'S WIRELESS SYSTEM. THE CONTRACTOR SHALL VERIFY THE LENGTH OF THE WOOD POLE NEEDED FOR THIS PURPOSE PRIOR TO INSTALLATION OF THE TEMPORARY TRAFFIC SIGNALS AND THE REPEATER/S AT LOCATIONS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER.

NOTE 3: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT AND SHALL HAVE ETHERNET PORT.

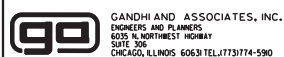
NOTE 4: ALL THE SIGNAL HEADS AND VIDEO DETECTION CAMERA FOR THE NORTHBOUND DIRECTION OF TRAFFIC SHALL BE DISCONNECTED AND BAGGED, UNTIL NEEDED AFTER ALL ROADWAY GEOMETRICS ARE IN PLACE, OPEN TO TRAFFIC AND AS DIRECTED BY THE ENGINEER.

NOTE 5: THE GREEN AND YELLOW LEFT TURN ARROW INDICATION SECTIONS IN THE 5-SECTION SIGNAL HEADS FOR THE WESTBOUND DIRECTION OF TRAFFIC SHALL BE BAGGED FOR THE EXISTING ROADWAY CONDITIONS.



TEMPORARY TRAFFIC SIGNAL PLAN FOR EXISTING ROADWAY GEOMETRICS

FILE NAME = k:\projects\projects\2014\1_rte 132 munn rd to sand lake rd\signals\08.il rte 132 @ munn rd-temp.int.dgn



GANDHI AND ASSOCIATES, INC.
 ENGINEERS AND PLANNERS
 6035 N. NORTHWEST HIGHWAY
 SUITE 306
 CHICAGO, ILLINOIS 60631 TEL: (773) 774-590

USER NAME = \$USER\$	DESIGNED - PKG	REVISED -
DRAWN - EA	REVISOR -	
PLOT SCALE = 20.0000' / IN.	CHECKED - PKG	REVISOR -
PLOT DATE = 6/26/2017	DATE - 6/26/2017	REVISOR -

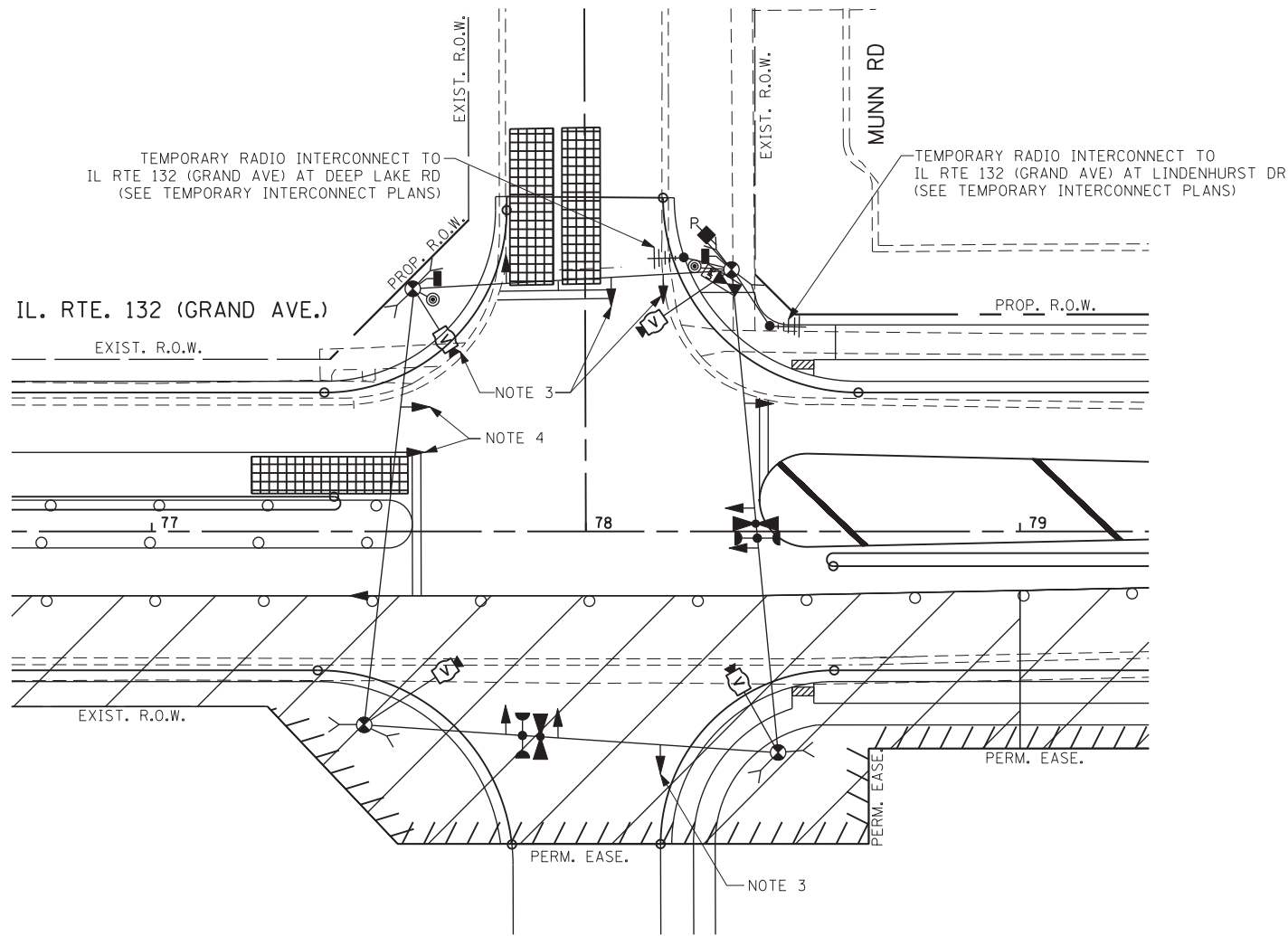
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN AND REMOVAL PLAN
 ILLINOIS ROUTE 132 (GRAND AVE) AT MUNN RD
 (SHEET 1 OF 3)

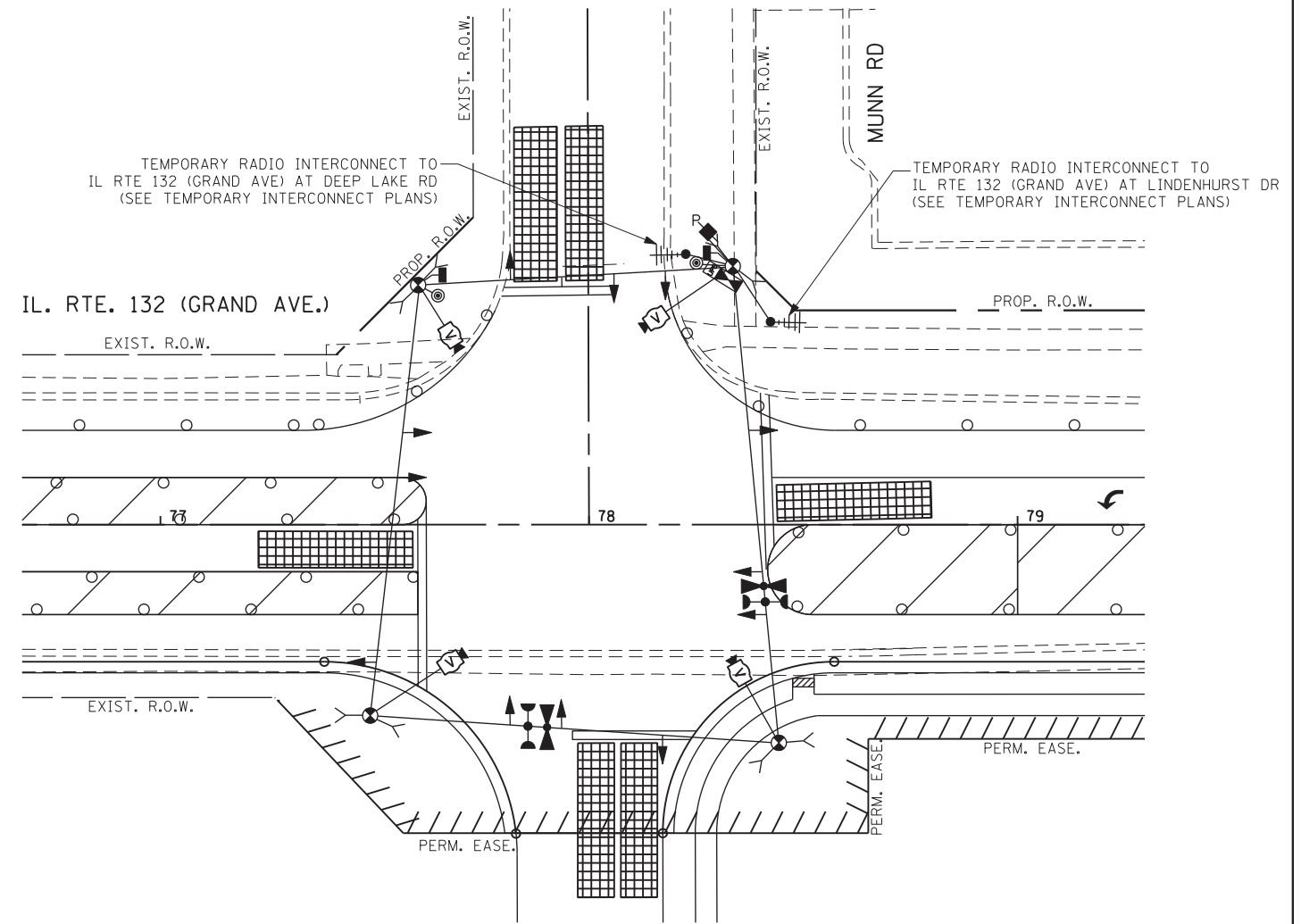
SCALE: 1"=20' SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	207
CONTRACT NO. 60V55				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

TS 7081
 EAGLE 7F



TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1



TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2

NOTE 1: THE FAR OUT VIDEO DETECTION ZONES SHALL BE REDEFINED FOR EACH CONSTRUCTION STAGE AS A PART OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION" WORK.

NOTE 2: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT AND SHALL HAVE ETHERNET PORT.

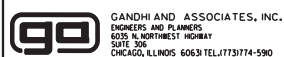
NOTE 3: ALL THE SIGNAL HEADS AND VIDEO DETECTION CAMERA FOR THE NORTHBOUND DIRECTION OF TRAFFIC SHALL BE DISCONNECTED AND BAGGED, UNTIL NEEDED AFTER ALL ROADWAY GEOMETRICS ARE IN PLACE AND OPEN TO TRAFFIC AS DIRECTED BY THE ENGINEER.

NOTE 4: THE GREEN AND YELLOW LEFT TURN ARROW INDICATION SECTIONS IN THE 5-SECTION SIGNAL HEADS FOR THE WESTBOUND DIRECTION OF TRAFFIC SHALL BE BAGGED DURING CONSTRUCTION STAGE 1.

NOTE 1: THE FAR OUT VIDEO DETECTION ZONES SHALL BE REDEFINED FOR EACH CONSTRUCTION STAGE AS A PART OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION" WORK.

NOTE 2: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT AND SHALL HAVE ETHERNET PORT.

FILE NAME = k:\projects\projects\2014\1_rte 132 munn rd to sand lake rd\gis\09_IL RTE 132 @ MUNN RD_TEMP_INT_2.dgn



GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60659 TEL: 773/774-590

USER NAME = \$USER\$	DESIGNED - PKG	REVISED -
	DRAWN - EA	REVISED -
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PLOT DATE = 6/26/2017	DATE - 6/26/2017	REVISED -

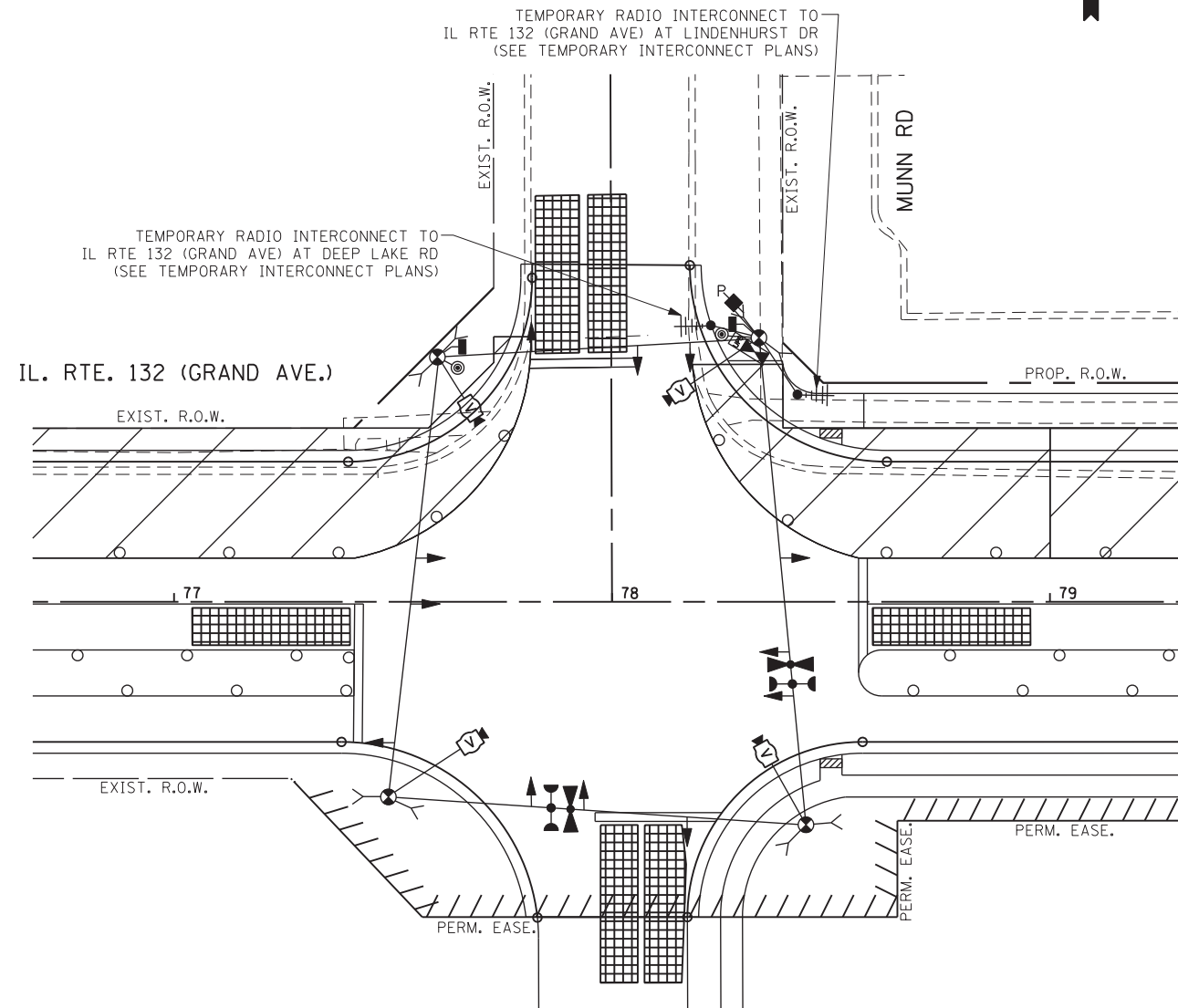
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN
ILLINOIS ROUTE 132 (GRAND AVE) AT MUNN RD
STAGE 1 AND STAGE 2 (SHEET 2 OF 3)

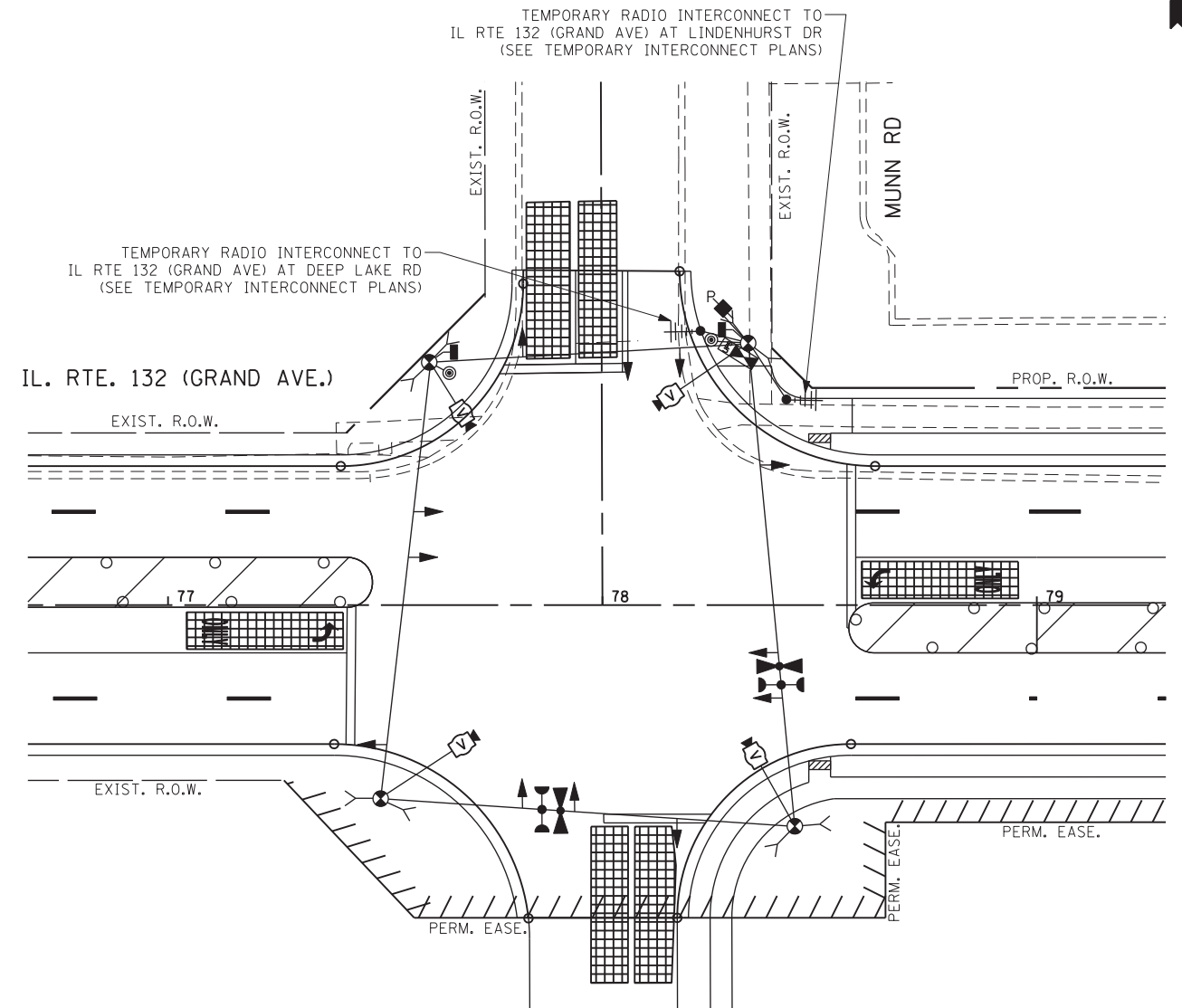
SCALE: 1"=20' SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	208
CONTRACT NO. 60V55				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

TS 7081
EAGLE 7F



TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 3

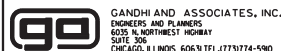


TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 4

NOTE 1: THE FAR OUT VIDEO DETECTION ZONES SHALL BE REDEFINED FOR EACH CONSTRUCTION STAGE AS A PART OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION" WORK.

NOTE 2: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT AND SHALL HAVE ETHERNET PORT.

FILE NAME = k:\projects\projects 2014\1_rte 132 munn rd to sand lake rd\signals\118.il rte 132 @ MUNN RD.TEMP.INT.3.dgn



GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60630 TEL: (773) 774-5900

USER NAME = \$USER\$	DESIGNED - PKG	REVISED -
	DRAWN - EA	REVISED -
PLOT SCALE = 20.0000' / IN.	CHECKED - PKG	REVISED -
PLOT DATE = 6/26/2017	DATE - 6/26/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

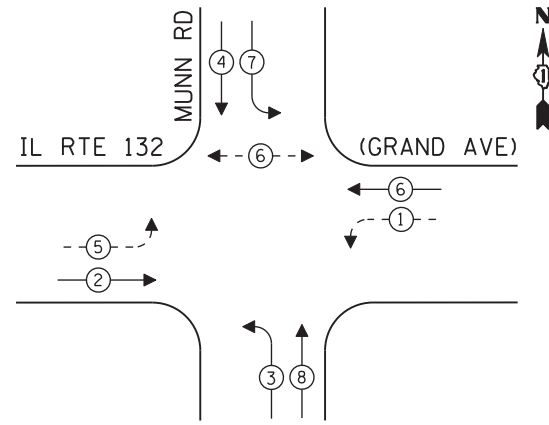
TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN
ILLINOIS ROUTE 132 (GRAND AVE) AT MUNN RD
STAGE 3 AND STAGE 4 (SHEET 3 OF 3)

SCALE: 1"=20' SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	209
CONTRACT NO. 60V55				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

TS 7081
EAGLE 7F

TEMPORARY CONTROLLER SEQUENCE



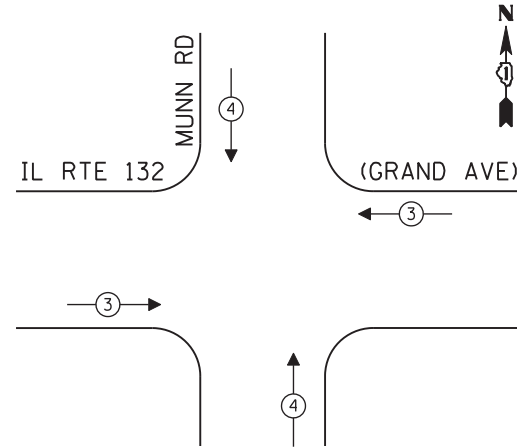
LEGEND:

- ← (⊛) ← PROTECTED PHASE
- ← (⊙) ← PROTECTED/PERMITTED PHASE
- ← (⊛) → PEDESTRIAN PHASE
- ← (⊛) OL OVERLAP

TEMPORARY PHASE DESIGNATION DIAGRAM

STAGE 2, STAGE 3, STAGE 4, AND AFTER ALL ROADWAY GEOMETRICS ARE IN PLACE PRIOR TO ACTIVATION OF NEW SIGNALS

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



STAGE 2, STAGE 3, STAGE 4, AND AFTER ALL ROADWAY GEOMETRICS ARE IN PLACE PRIOR TO ACTIVATION OF NEW SIGNALS

TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

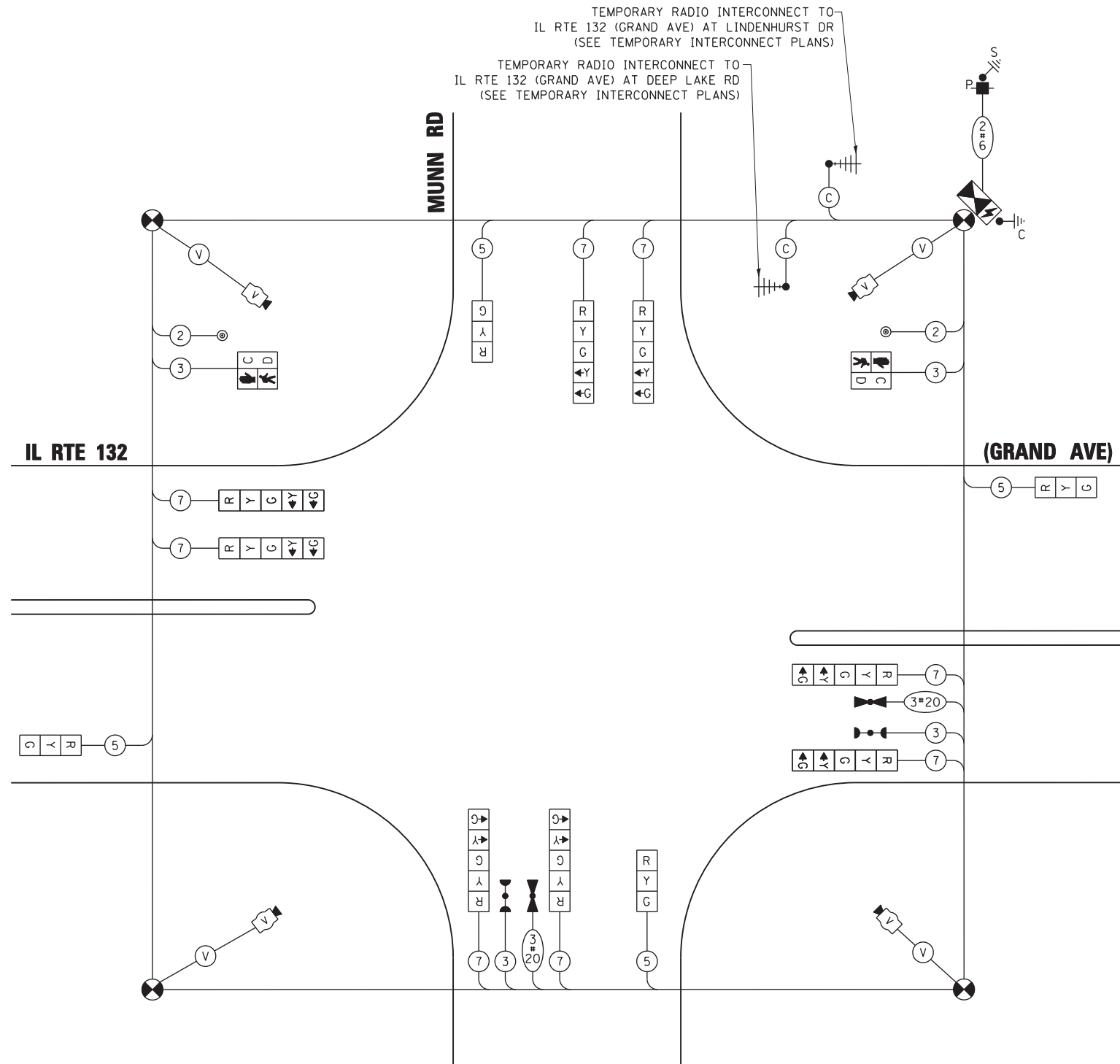
TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	11	50	66.0
(YELLOW)	12	20	5	12.0
(GREEN)	12	12	45	64.8
PERMISSIVE ARROW	16	10	10	16.0
PED. SIGNAL	2	20	100	40.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	1	150	100	150.0
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	-	-	-	-
TOTAL =				473.8

ENERGY COSTS TO:

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY: CONTACT: DOROTHY PROSEN
PHONE: (847) 816-5323
COMPANY: COMMONWEALTH EDISON
ACCOUNT NUMBER: ---

NOTE 1: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT AND SHALL HAVE ETHERNET PORT.



TEMPORARY CABLE PLAN

(NOT TO SCALE)

STAGE 2, STAGE 3, STAGE 4, AND AFTER ALL ROADWAY GEOMETRICS ARE IN PLACE PRIOR TO ACTIVATION OF NEW SIGNALS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN, TEMPORARY PHASE DESIGNATION DIAGRAM,
AND TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE
ILLINOIS ROUTE 132 (GRAND AVE) AT MUNN RD.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	211
CONTRACT NO. 60V55				

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

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

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USER NAME = \$USER\$	DESIGNED - PKG	REVISED -
	DRAWN - EA	REVISED -
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PLOT DATE = 6/26/2017	DATE - 6/26/2017	REVISED -

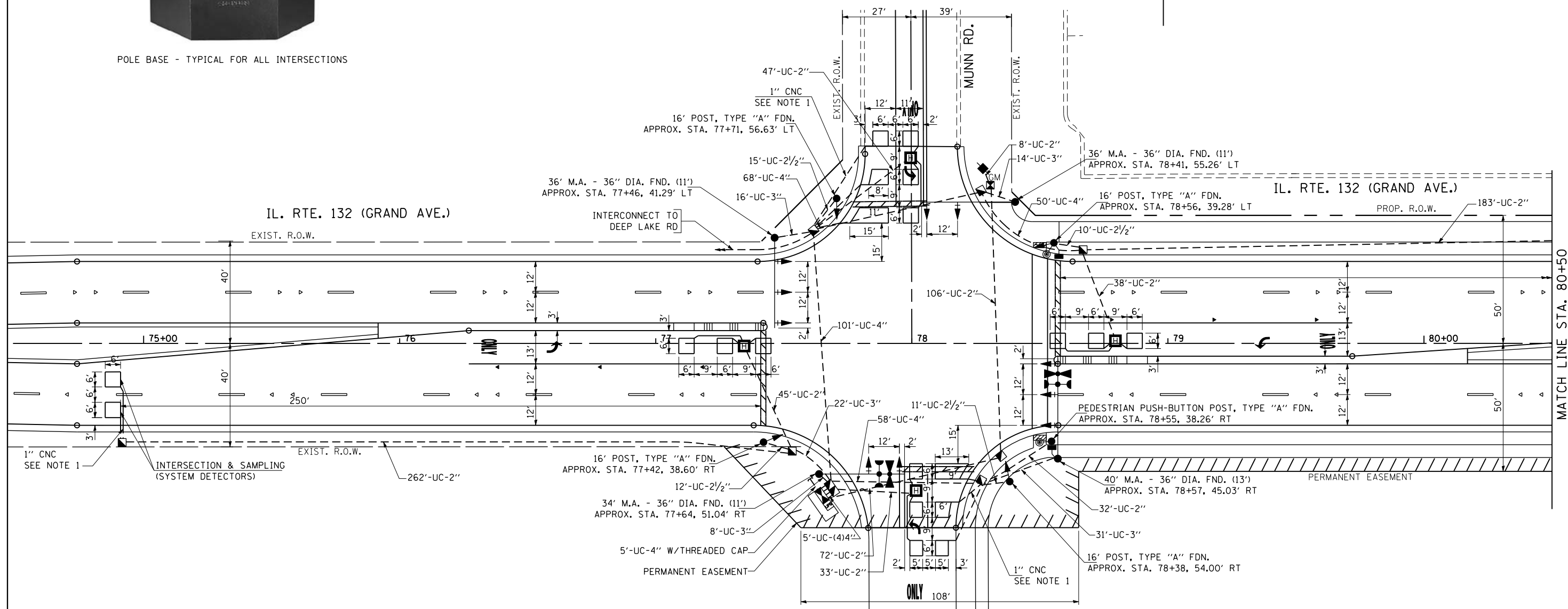
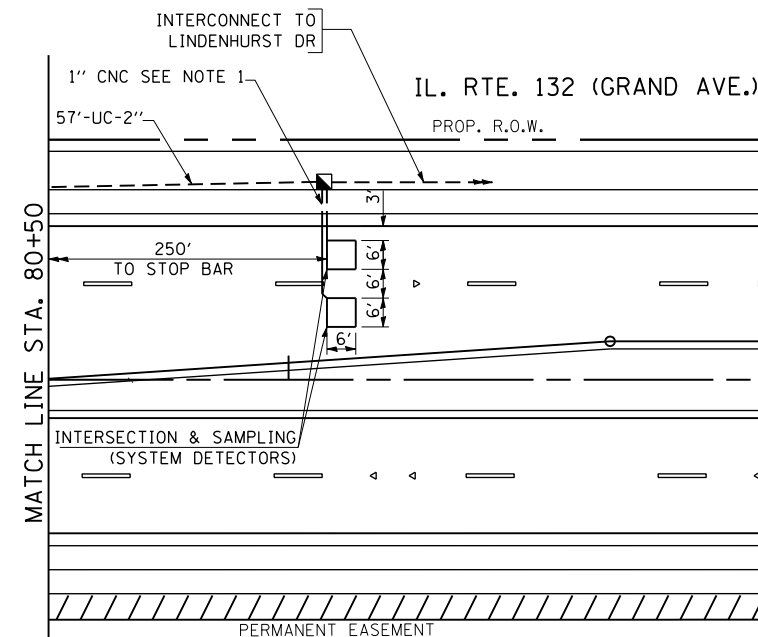
TS 7081
EAGLE 7F



POLE BASE - TYPICAL FOR ALL INTERSECTIONS

NOTES:

- NOTE 1: EACH DETECTOR LOOP SHALL HAVE ITS OWN 1" COILABLE NONMETALLIC CONDUIT BETWEEN THE EDGE OF PAVEMENT AND THE ADJACENT HANDHOLE AS SHOWN ON THE PLANS AND AS STATED IN THE TRAFFIC SIGNAL SPECIFICATIONS.
- NOTE 2: ADDITIONAL R.O.W. AND/OR PERMANENT EASEMENT FOR SOUTHWEST CORNER OF THE INTERSECTION HAVE BEEN REQUESTED. ADJUSTMENTS WILL BE MADE AS NEEDED.
- NOTE 3: RELOCATE EXISTING LAYER II SWITCH FROM EXISTING TRAFFIC SIGNAL CABINET TO TEMPORARY TRAFFIC SIGNAL CABINET AND THEN TO PROPOSED TRAFFIC SIGNAL CABINET (AFTER THE CONSTRUCTION) INCLUDING THE POWER SUPPLY, MOUNTING HARDWARE, AND CABLING. THIS ITEM WILL BE PAID FOR AS RELOCATE SWITCH (2 EACH) AND IS INCLUDED IN THE QUANTITIES FOR THE PROPOSED TRAFFIC SIGNAL INSTALLATION.
- NOTE 4: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT.



FILE NAME = k:\projects\projects\2014\1_rte 132 munn rd to sand lake rd\signals\13.IL RTE 132 @ MUNN RD.INT.dgn

GO GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60630 TEL: (773) 774-5900

USER NAME = \$USER\$	DESIGNED - PKG	REVISED -
DRAWN - EA	REVISED -	
CHECKED - PKG	REVISED -	
DATE - 3/21/2017	REVISED -	

DESIGNED - PKG	REVISED -
DRAWN - EA	REVISED -
CHECKED - PKG	REVISED -
DATE - 3/21/2017	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

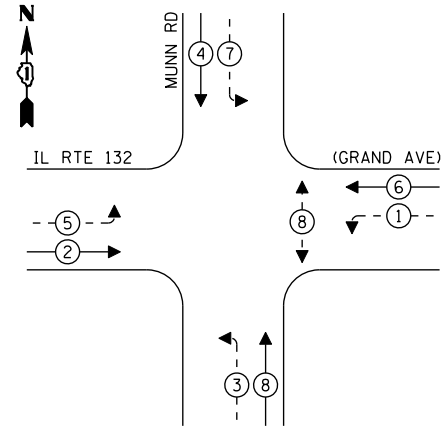
**TRAFFIC SIGNAL INSTALLATION PLAN
ILLINOIS ROUTE 132 (GRAND AVE) AT MUNN ROAD**

SCALE: 1"=20' SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE. 541	SECTION A-WRS-2	COUNTY LAKE	TOTAL SHEETS 345	SHEET NO. 212
CONTRACT NO. 60V55				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

**TS 7081
EAGLE 7F**

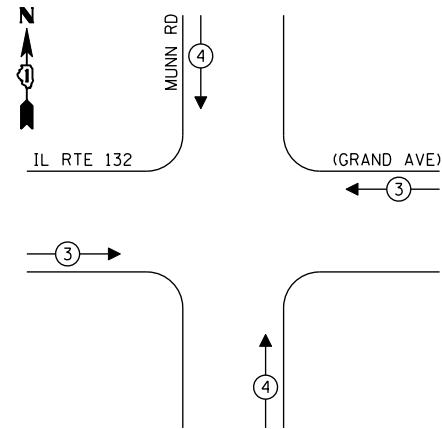
PROPOSED CONTROLLER SEQUENCE



LEGEND:

- ← (⊛) ← PROTECTED PHASE
- ← (⊛) ← PROTECTED/PERMITTED PHASE
- ← (⊛) ← PEDESTRIAN PHASE
- ← (⊛) ← OVERLAP

PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	14	11	50	77.0
(YELLOW)	14	20	5	14.0
(GREEN)	14	12	45	75.6
PERMISSIVE ARROW	16	10	10	16.0
PED. SIGNAL	2	20	100	40.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	-	-	-	-
TOTAL =				347.6

ENERGY COSTS TO:

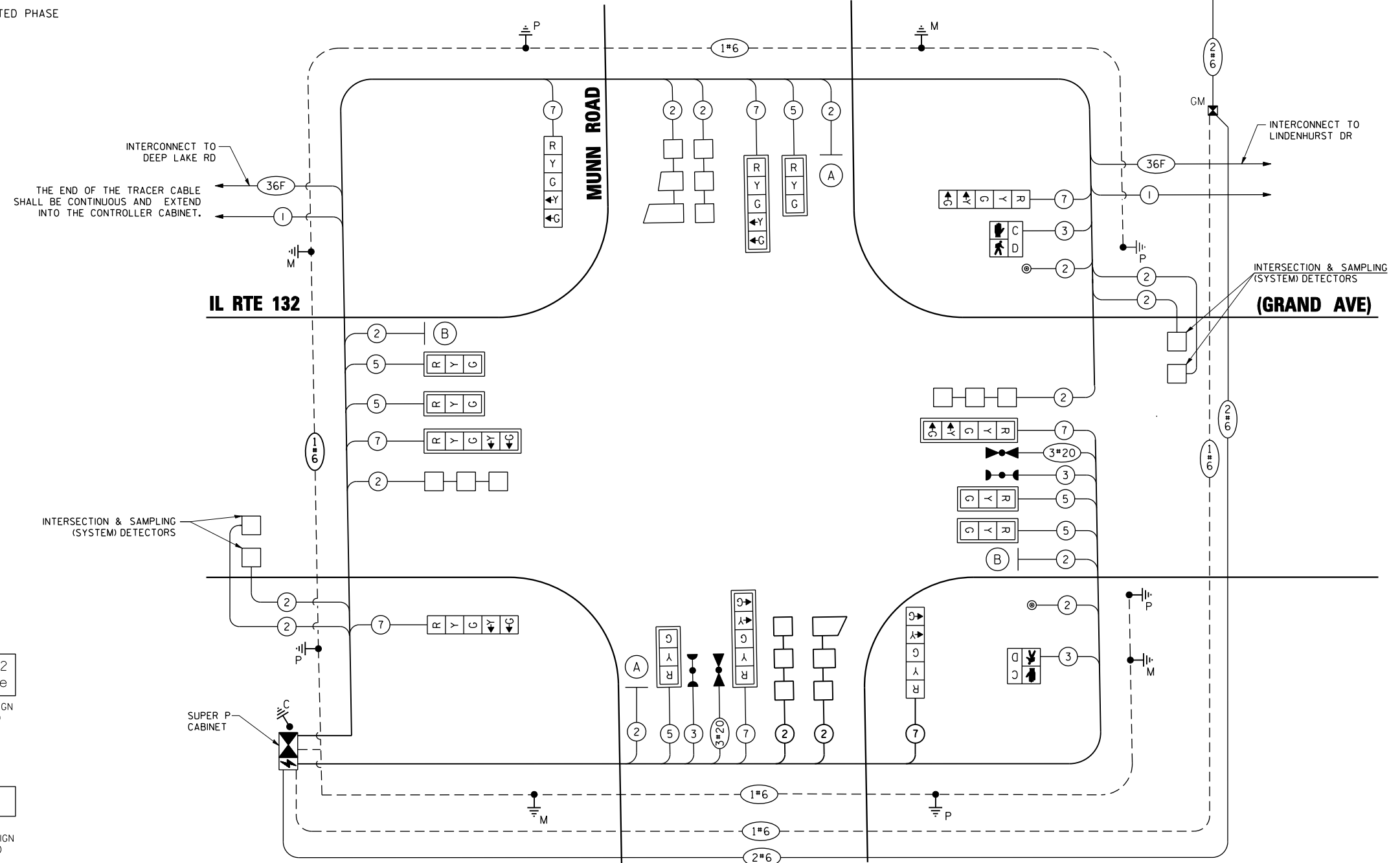
ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY: CONTACT: DOROTHY PROSEN
PHONE: (847) 816-5323
COMPANY: COMMONWEALTH EDISON
ACCOUNT NUMBER: ---

(A)
IL Rte 132
Grand Ave
ILLUMINATED SIGN
(2 REQUIRED)

(B)
Munn Rd
ILLUMINATED SIGN
(2 REQUIRED)

NOTE: THE SIGNS ARE DOUBLE SIDED.



CABLE PLAN
(NOT TO SCALE)

NOTE 1: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE 'EAGLE' TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT.

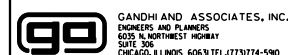
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND
EMERGENCY VEHICLE PREEMPTION SEQUENCE
ILLINOIS ROUTE 132 (GRAND AVE) AT MUNN RD**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	213
CONTRACT NO. 60V55				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

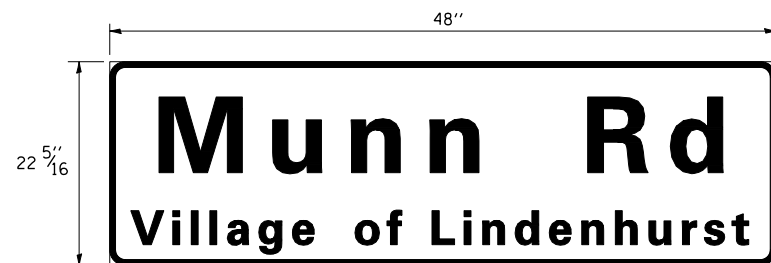
**TS 7081
EAGLE 7F**

FILE NAME = k:\projects\projects 2014\1_rte 132_munn rd to sand lake rd\signals\114_IL RTE 132 @ MUNN RD.CADD



DESIGNED -	PKG	REVISED -	
DRAWN -	EA	REVISED -	
CHECKED -	PKG	REVISED -	
DATE -	3/21/2017	REVISED -	

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.



NOTE: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT.

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	883
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	48
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	91
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	302
HANDHOLE	EACH	8
HEAVY-DUTY HANDHOLE	EACH	4
DOUBLE HANDHOLE	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1059
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	680
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1032
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1378
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	2528
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	227
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	843
CONCRETE FOUNDATION, TYPE A	FOOT	24
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	46
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	6
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	4
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	10
INDUCTIVE LOOP DETECTOR	EACH	10
DETECTOR LOOP, TYPE I	FOOT	744
• LIGHT DETECTOR	EACH	2
• LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	2
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	7
REMOVE EXISTING DOUBLE HANDHOLE	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	9
• EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	255
RELOCATE SWITCH	EACH	2
LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4
FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL)	EACH	1
SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
PEDESTRIAN PUSH-BUTTON POST, TYPE A	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 34 FT. (SPECIAL)	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 36 FT. (SPECIAL)	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 40 FT. (SPECIAL)	EACH	1
TRAFFIC SIGNAL POST, 16 FOOT, (SPECIAL)	EACH	4
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1

• 100% COST TO VILLAGE OF LINDENHURST

FILE NAME = K:\PROJECTS\Projects\2014\IL Rte 132 Munn Rd to Sand Lake Rd\Signals\114_IL RTE 132 @ MUNN RD.CD.2.dgn



USER NAME = \$USER\$	DESIGNED - PKG	REVISED -
	DRAWN - EA	REVISED -
PLOT SCALE = 20.0060' / IN.	CHECKED - PKG	REVISED -
PLOT DATE = 5/2/2017	DATE - 3/21/2017	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MAST ARM MOUNTED STREET NAME SIGNS
AND SCHEDULE OF QUANTITIES
ILLINOIS ROUTE 132 (GRAND AVE) AT MUNN RD.**

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	214
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 60V55	

**TS 7081
EAGLE 7F**

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED BY CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

- 1 EACH CONTROLLER CABINET AND COMPLETE

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACTOR'S BID PRICE.

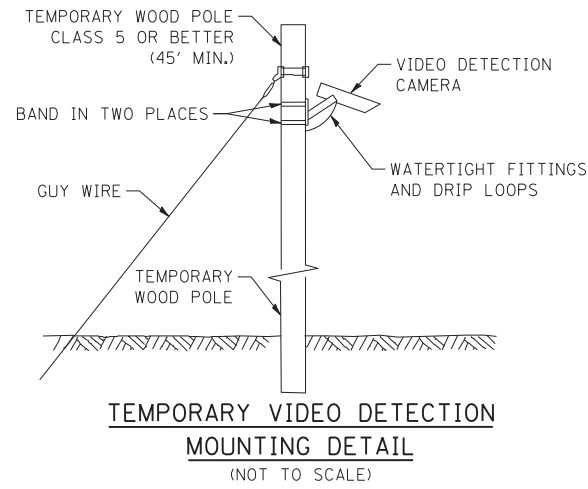
- 2 EACH SIGNAL HEAD, 1-FACE, 3-SECTION, BRACKET MOUNTED
- 3 EACH SIGNAL HEAD, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
- 1 EACH SIGNAL HEAD, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
- 3 EACH SIGNAL HEAD, 2-FACE, 3-SECTION, BRACKET MOUNTED
- 1 EACH SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
- 4 EACH TRAFFIC SIGNAL BACKPLATE
- 6 EACH TRAFFIC SIGNAL POST
- 2 EACH STEEL MAST ARM ASSEMBLY AND POLE
- 1 EACH SERVICE INSTALLATION

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

AGENCY: VILLAGE OF LINDENHURST

CONTACT INFORMATION:
BUILDING AND ENGINEERING
VILLAGE OF LINDENHURST
PHONE: (847) 356-8252

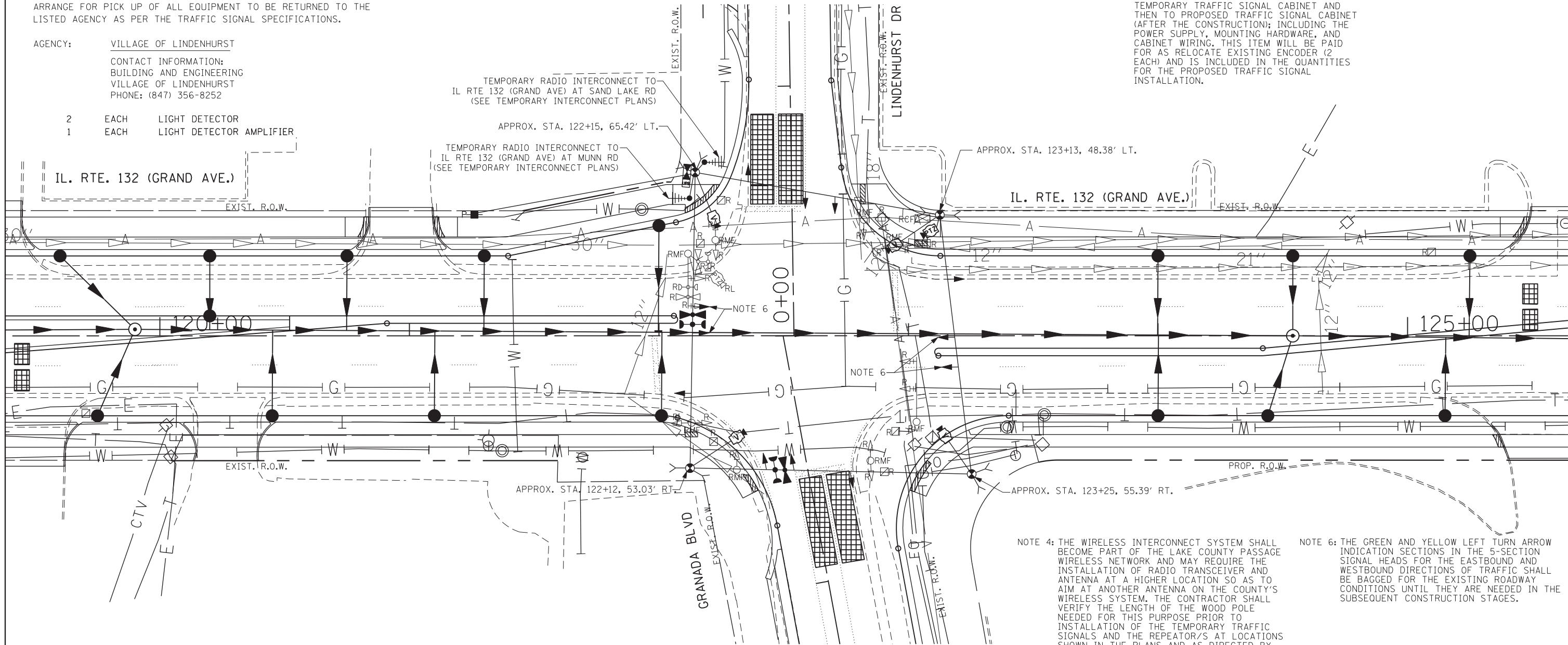
- 2 EACH LIGHT DETECTOR
- 1 EACH LIGHT DETECTOR AMPLIFIER



NOTE 1: RELOCATE EXISTING LAYER II SWITCH FROM EXISTING TRAFFIC SIGNAL CABINET TO TEMPORARY TRAFFIC SIGNAL CABINET AND THEN TO PROPOSED TRAFFIC SIGNAL CABINET (AFTER THE CONSTRUCTION) INCLUDING THE POWER SUPPLY, MOUNTING HARDWARE, AND CABLING. THIS ITEM WILL BE PAID FOR AS RELOCATE SWITCH (2 EACH) AND IS INCLUDED IN THE QUANTITIES FOR THE PROPOSED TRAFFIC SIGNAL INSTALLATION.

NOTE 2: RELOCATE EXISTING REMOTE-CONTROLLED VIDEO SYSTEM (PTZ CAMERA) FROM EXISTING TRAFFIC SIGNAL INSTALLATION TO TEMPORARY TRAFFIC SIGNAL POLE AS SHOWN IN THE PLANS AND THEN TO PROPOSED COMBINATION MAST ARM POLE (AFTER THE CONSTRUCTION) AS SHOWN IN THE PLAN; INCLUDING THE POWER SUPPLY, MOUNTING HARDWARE, AND CABINET WIRING. THIS ITEM WILL BE PAID FOR AS RELOCATE EXISTING REMOTE-CONTROLLED VIDEO SYSTEM (PTZ CAMERA) (2 EACH) AND IS INCLUDED IN THE QUANTITIES FOR THE PROPOSED TRAFFIC SIGNAL INSTALLATION.

NOTE 3: RELOCATE EXISTING VIDEO ENCODER FROM EXISTING TRAFFIC SIGNAL CABINET TO TEMPORARY TRAFFIC SIGNAL CABINET AND THEN TO PROPOSED TRAFFIC SIGNAL CABINET (AFTER THE CONSTRUCTION); INCLUDING THE POWER SUPPLY, MOUNTING HARDWARE, AND CABINET WIRING. THIS ITEM WILL BE PAID FOR AS RELOCATE EXISTING ENCODER (2 EACH) AND IS INCLUDED IN THE QUANTITIES FOR THE PROPOSED TRAFFIC SIGNAL INSTALLATION.



TEMPORARY TRAFFIC SIGNAL PLAN FOR EXISTING ROADWAY GEOMETRICS

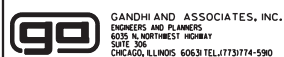
NOTE 4: THE WIRELESS INTERCONNECT SYSTEM SHALL BECOME PART OF THE LAKE COUNTY PASSAGE WIRELESS NETWORK AND MAY REQUIRE THE INSTALLATION OF RADIO TRANSCEIVER AND ANTENNA AT A HIGHER LOCATION SO AS TO AIM AT ANOTHER ANTENNA ON THE COUNTY'S WIRELESS SYSTEM. THE CONTRACTOR SHALL VERIFY THE LENGTH OF THE WOOD POLE NEEDED FOR THIS PURPOSE PRIOR TO INSTALLATION OF THE TEMPORARY TRAFFIC SIGNALS AND THE REPEATOR/S AT LOCATIONS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER.

NOTE 6: THE GREEN AND YELLOW LEFT TURN ARROW INDICATION SECTIONS IN THE 5-SECTION SIGNAL HEADS FOR THE EASTBOUND AND WESTBOUND DIRECTIONS OF TRAFFIC SHALL BE BAGGED FOR THE EXISTING ROADWAY CONDITIONS UNTIL THEY ARE NEEDED IN THE SUBSEQUENT CONSTRUCTION STAGES.

NOTE 5: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT AND SHALL HAVE ETHERNET PORT.

TS 7075
EAGLE 7F

FILE NAME = h:\projects\projects\2014\1_rte 132 main rd to sand lake rd\atg\115.il rte 132 @ lindenhurst dr.temporary.dgn



USER NAME = \$USER\$	DESIGNED - PKG	REVISED -
	DRAWN - EA	REVISED -
PLOT SCALE = 20.0000' / IN.	CHECKED - PKG	REVISED -
PLOT DATE = 6/26/2017	DATE - 6/26/2017	REVISED -

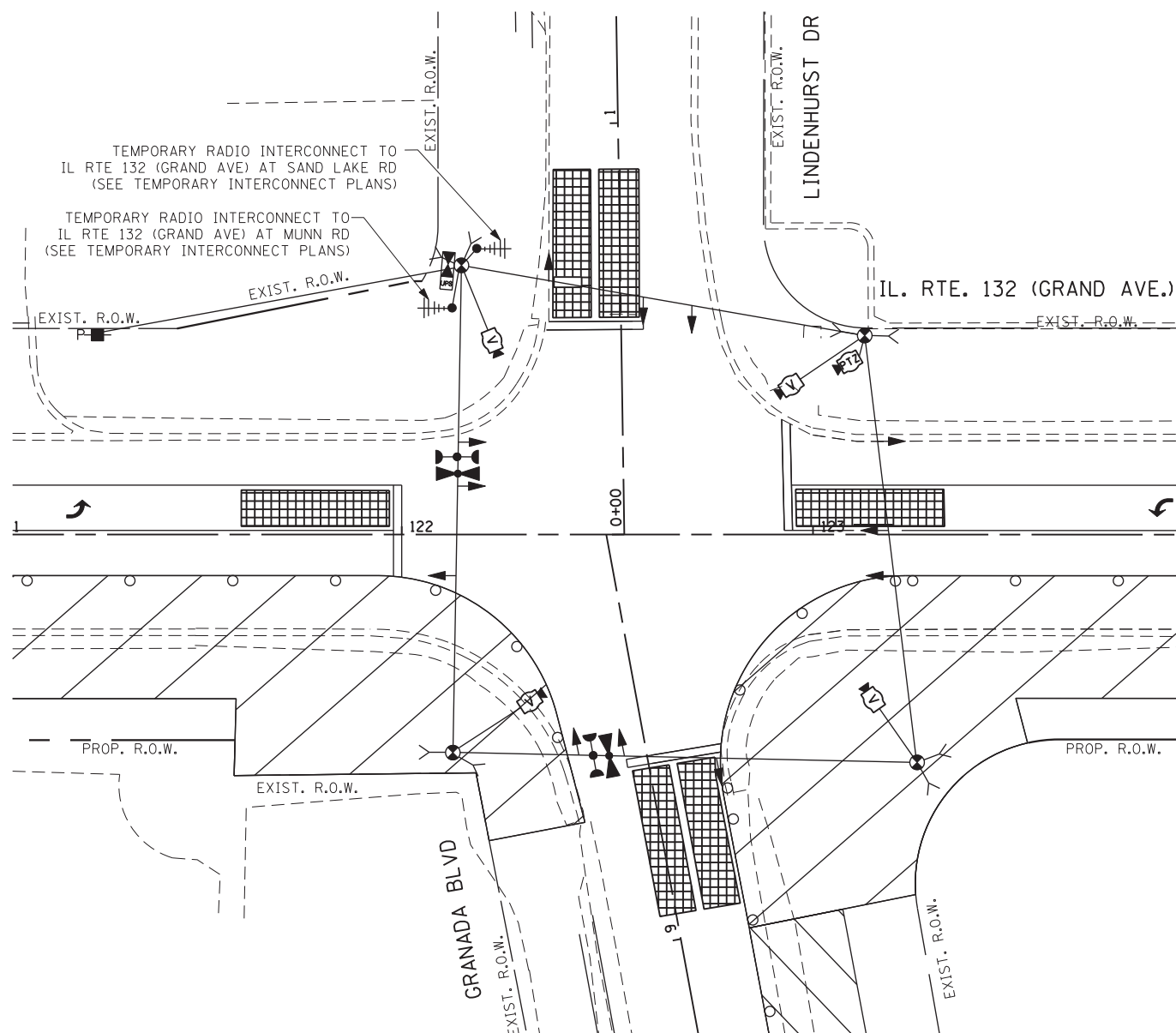
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN AND REMOVAL PLAN
ILLINOIS ROUTE 132 (GRAND AVE) AT LINDENHURST DR /GRANADA BLVD
(SHEET 1 OF 3)

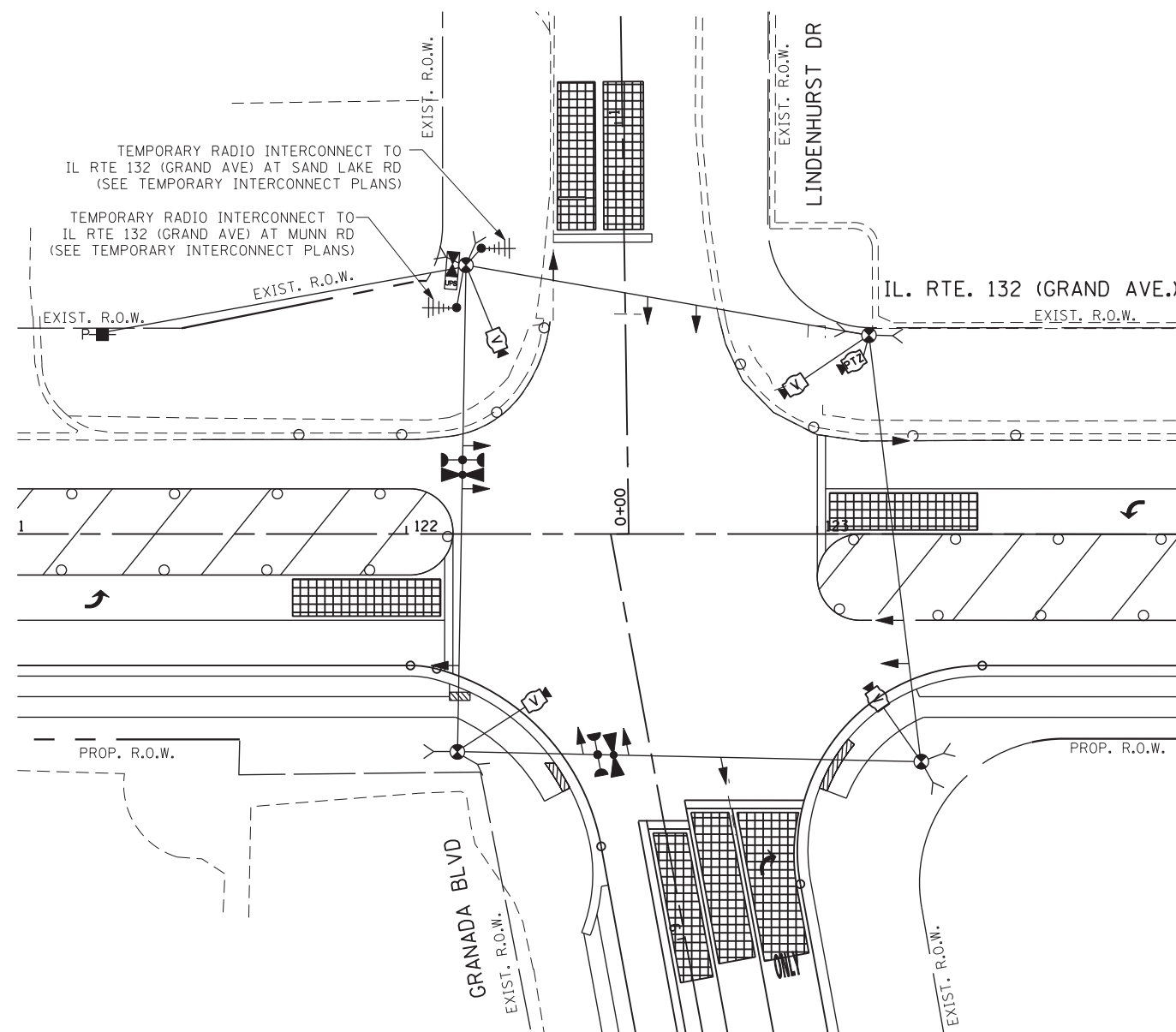
SCALE: 1"=20' SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	215
CONTRACT NO. 60V55				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

FILE NAME = k:\projects\projects\2016\11_rte 132_munn rd to sand lake rd\signals\116.il rte 132 @ lindenhurst dr temp_int_2.dgn



TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1



TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2

NOTE 1: THE FAR OUT VIDEO DETECTION ZONES SHALL BE REDEFINED FOR EACH CONSTRUCTION STAGE AS A PART OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION" WORK.

NOTE 2: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT AND SHALL HAVE ETHERNET PORT.



USER NAME = #USER#	DESIGNED - PKG	REVISED -
DRAWN - EA	REVISOR -	
PLOT SCALE = 20.0000' / IN.	CHECKED - PKG	REVISOR -
PLOT DATE = 6/26/2017	DATE - 6/26/2017	REVISOR -

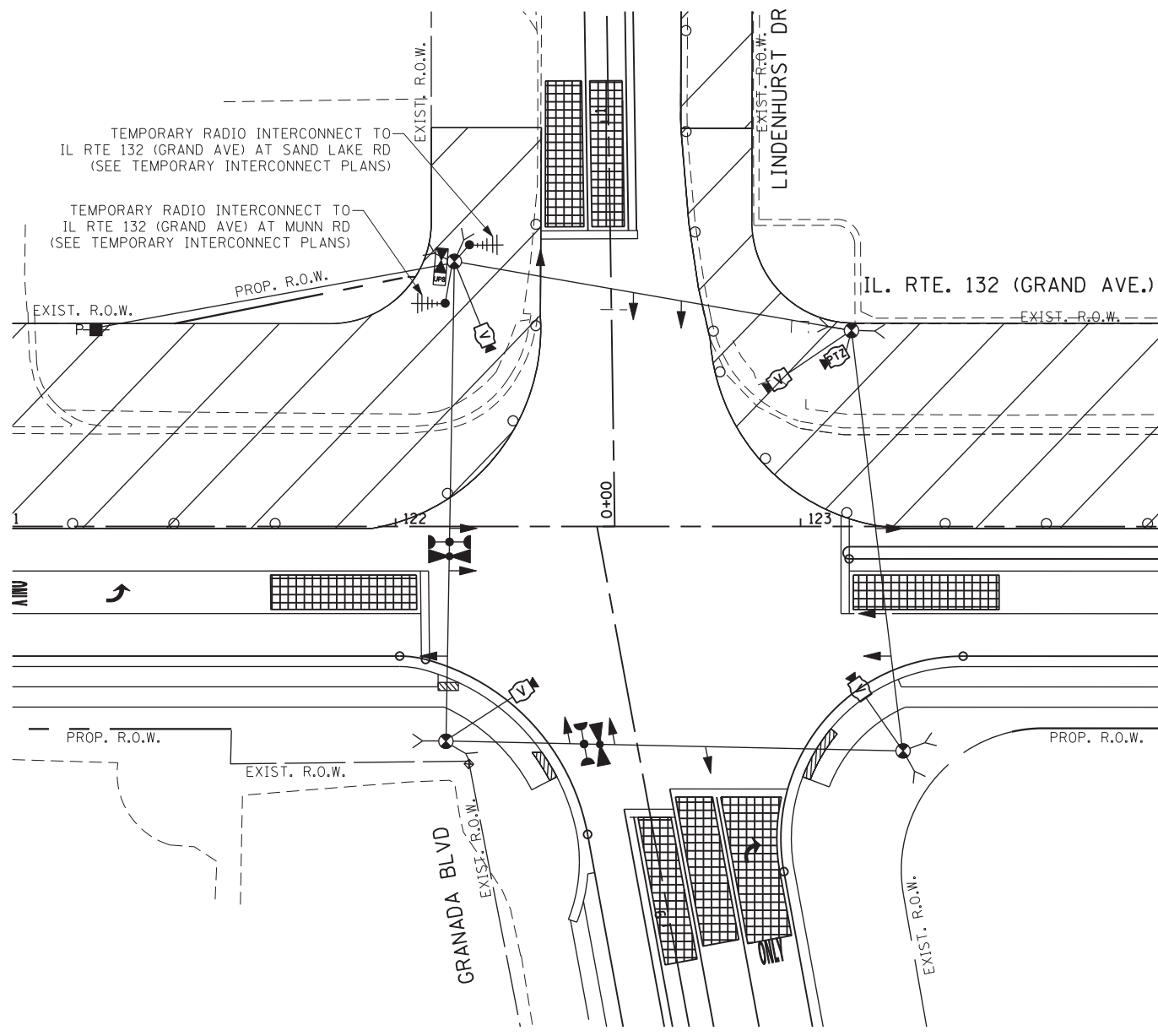
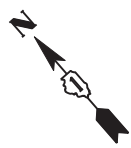
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN AND REMOVAL PLAN
ILLINOIS ROUTE 132 (GRAND AVE) AT LINDENHURST DR /GRANADA BLVD
STAGE 1 AND STAGE 2 (SHEET 2 OF 3)**

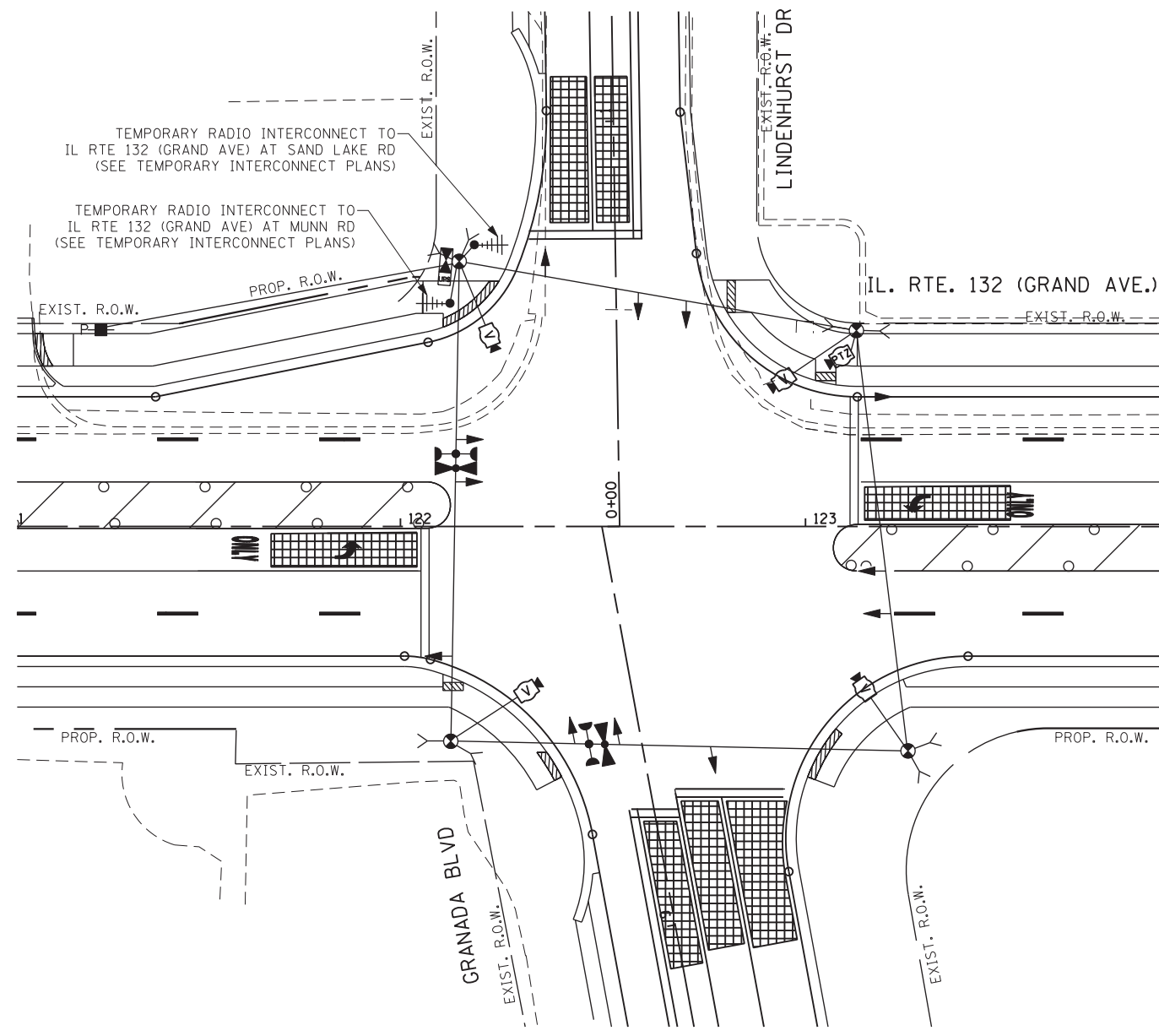
SCALE: 1"=20' SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	216
CONTRACT NO. 60V55				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

**TS 7075
EAGLE 7F**



TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 3



TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 4

NOTE 1: THE FAR OUT VIDEO DETECTION ZONES SHALL BE REDEFINED FOR EACH CONSTRUCTION STAGE AS A PART OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION" WORK.

NOTE 2: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT AND SHALL HAVE ETHERNET PORT.

FILE NAME = k:\projects\projects\2015\11_rte 132_munn rd to sand lake rd\signals\17\IL RTE 132 @ LINDENHURST DR.TEMP.INT.3.dgn

GO GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
5035 N. NORTHWEST HIGHWAY
SUITE 305
CHICAGO, ILLINOIS 60630 TEL: (773) 774-590

USER NAME = \$USER\$	DESIGNED - PKG	REVISED -
DRAWN - EA	REVISIONS -	
PLOT SCALE = 20.0000' / IN.	CHECKED - PKG	REVISED -
PLOT DATE = 6/26/2017	DATE - 6/26/2017	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

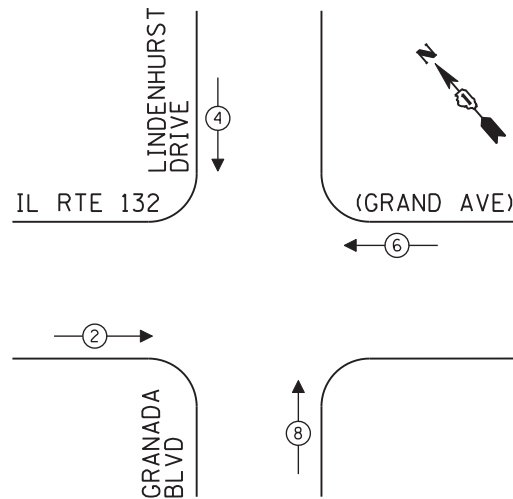
**TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN AND REMOVAL PLAN
ILLINOIS ROUTE 132 (GRAND AVE) AT LINDENHURST DR /GRANADA BLVD
STAGE 3 AND STAGE 4 (SHEET 3 OF 3)**

SCALE: 1"=20' SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	217
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 60V55	

**TS 7075
EAGLE 7F**

TEMPORARY CONTROLLER SEQUENCE



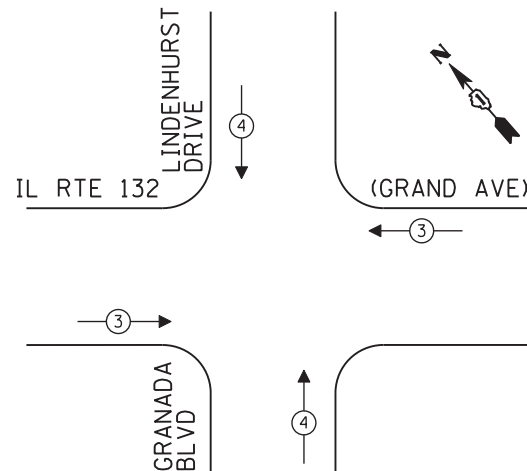
LEGEND:

- ⊙ — PROTECTED PHASE
- ⊙ — PROTECTED/PERMITTED PHASE
- ⊙ — PEDESTRIAN PHASE
- ⊙ OL — OVERLAP

TEMPORARY PHASE DESIGNATION DIAGRAM

FOR EXISTING ROADWAY GEOMETRICS

**TEMPORARY EMERGENCY VEHICLE
PREEMPTION SEQUENCE**



FOR EXISTING ROADWAY GEOMETRICS

**TRAFFIC SIGNAL
ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	11	50	66.0
(YELLOW)	12	20	5	12.0
(GREEN)	12	12	45	64.8
PERMISSIVE ARROW	8	10	10	8.0
PED. SIGNAL	-	20	100	-
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	1	150	100	150.0
PTZ CAMERA	1	65	100	65.0
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	-	-	-	-
TOTAL =				490.8

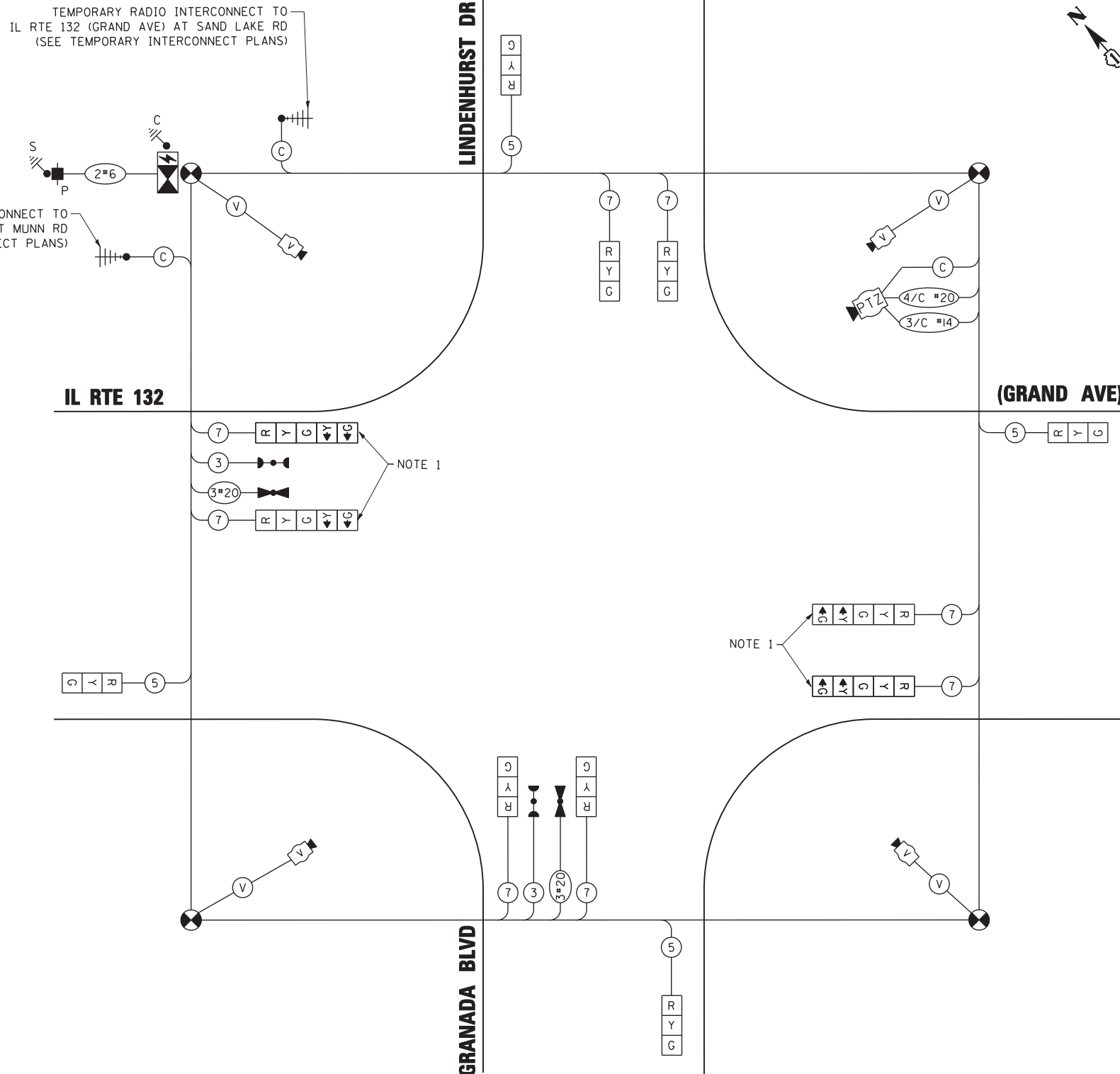
ENERGY COSTS TO:

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY: CONTACT: DOROTHY PROSEN
PHONE: (847) 816-5323
COMPANY: COMMONWEALTH EDISON
ACCOUNT NUMBER: ---

NOTE 1: THE GREEN AND YELLOW LEFT TURN ARROW INDICATION SECTIONS IN THE 5-SECTION SIGNAL HEADS FOR THE EASTBOUND AND WESTBOUND DIRECTIONS OF TRAFFIC SHALL BE BAGGED FOR THE EXISTING ROADWAY CONDITIONS UNTIL THEY ARE NEEDED IN THE SUBSEQUENT CONSTRUCTION STAGES.

NOTE 2: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT AND SHALL HAVE ETHERNET PORT.



TEMPORARY CABLE PLAN

(NOT TO SCALE)

FOR EXISTING ROADWAY GEOMETRICS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN, TEMPORARY PHASE DESIGNATION DIAGRAM,
AND TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE
ILLINOIS ROUTE 132 (GRAND AVE) AT LINDENHURST DR /GRANADA BLVD

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	218
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 60V55	

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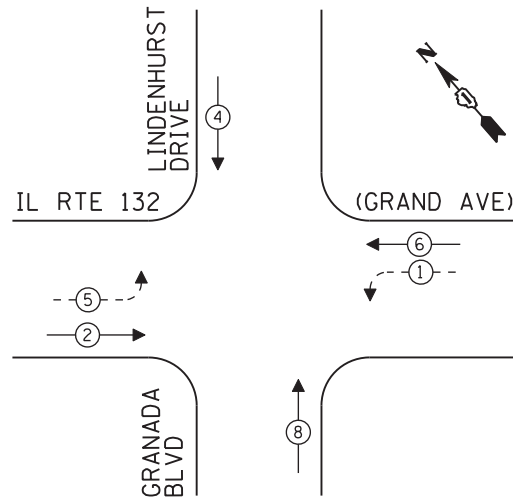


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PLOT SCALE = 20.0000' / IN.	DRAWN - EA	REVISED -
PLOT DATE = 6/26/2017	CHECKED - PKG	REVISED -
	DATE - 6/26/2017	REVISED -

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

TS 7075
EAGLE 7F

TEMPORARY CONTROLLER SEQUENCE



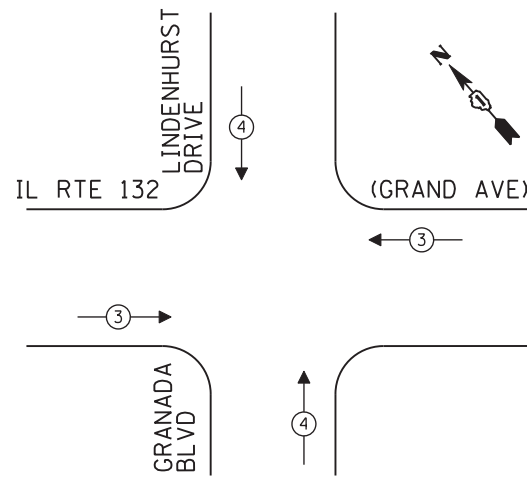
LEGEND:

- ← ⊙ → PROTECTED PHASE
- ← ⊙ - - PROTECTED/PERMITTED PHASE
- ← ⊙ → PEDESTRIAN PHASE
- ← ⊙ OL OVERLAP

TEMPORARY PHASE DESIGNATION DIAGRAM

STAGE 1, STAGE 2, STAGE 3, STAGE 4, AND AFTER ALL ROADWAY GEOMETRICS ARE IN PLACE PRIOR TO ACTIVATION OF NEW SIGNALS

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



STAGE 1, STAGE 2, STAGE 3, STAGE 4, AND AFTER ALL ROADWAY GEOMETRICS ARE IN PLACE PRIOR TO ACTIVATION OF NEW SIGNALS

TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

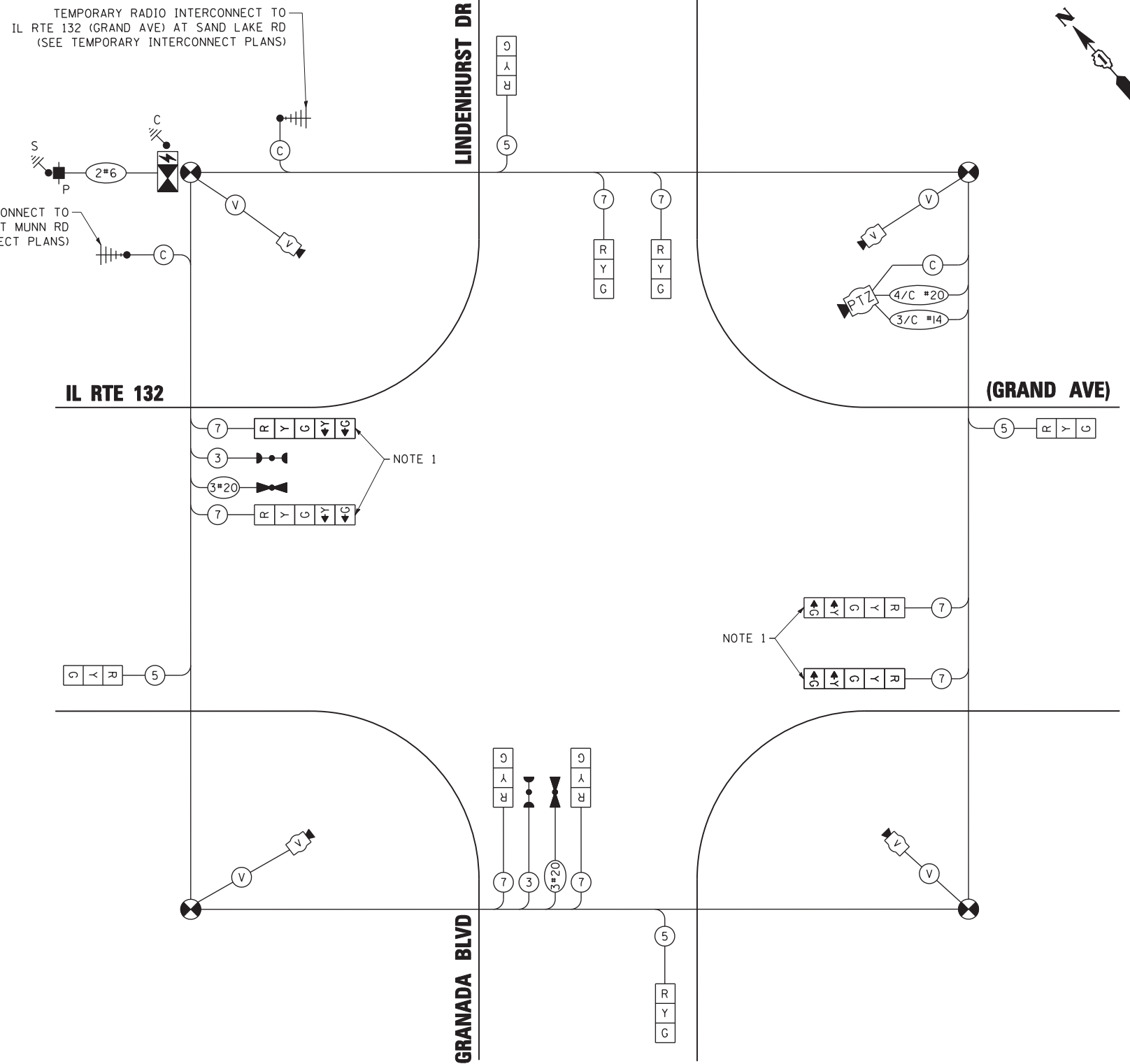
TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	11	50	66.0
(YELLOW)	12	20	5	12.0
(GREEN)	12	12	45	64.8
PERMISSIVE ARROW	8	10	10	8.0
PED. SIGNAL	-	20	100	-
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	1	150	100	150.0
PTZ CAMERA	1	65	100	65.0
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	-	-	-	-
TOTAL =				490.8

ENERGY COSTS TO:

ILLINOIS DEPARTMENT OF TRANSPORTATION
 201 WEST CENTER COURT
 SCHAUMBURG, ILLINOIS 60196-1096
 ENERGY SUPPLY: CONTACT: DOROTHY PROSEN
 PHONE: (847) 816-5323
 COMPANY: COMMONWEALTH EDISON
 ACCOUNT NUMBER: ---

NOTE 1: THE GREEN AND YELLOW LEFT TURN ARROW INDICATION SECTIONS IN THE 5-SECTION SIGNAL HEADS FOR THE EASTBOUND AND WESTBOUND DIRECTIONS OF TRAFFIC SHALL BE BAGGED FOR THE EXISTING ROADWAY CONDITIONS UNTIL THEY ARE NEEDED IN THE SUBSEQUENT CONSTRUCTION STAGES.

NOTE 2: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT AND SHALL HAVE ETHERNET PORT.



TEMPORARY CABLE PLAN

(NOT TO SCALE)

STAGE 1, STAGE 2, STAGE 3, STAGE 4, AND AFTER ALL ROADWAY GEOMETRICS ARE IN PLACE PRIOR TO ACTIVATION OF NEW SIGNALS

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN, TEMPORARY PHASE DESIGNATION DIAGRAM,
 AND TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE
 ILLINOIS ROUTE 132 (GRAND AVE) AT LINDENHURST DR / GRANADA BLVD

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	219
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 60V55	

FILE NAME = K:\projects\projects\2014\1_rte 132_mun rd to sand lake rd\signal\118.il rte 132 @ Lindenhurst Dr.Temp.cd.2.dgn



USER NAME = \$USER\$	DESIGNED - PKG	REVISED -
	DRAWN - EA	REVISED -
PLOT SCALE = 20.0000' / IN.	CHECKED - PKG	REVISED -
PLOT DATE = 6/26/2017	DATE - 6/26/2017	REVISED -

TS 7075
 EAGLE 7F

NOTES:

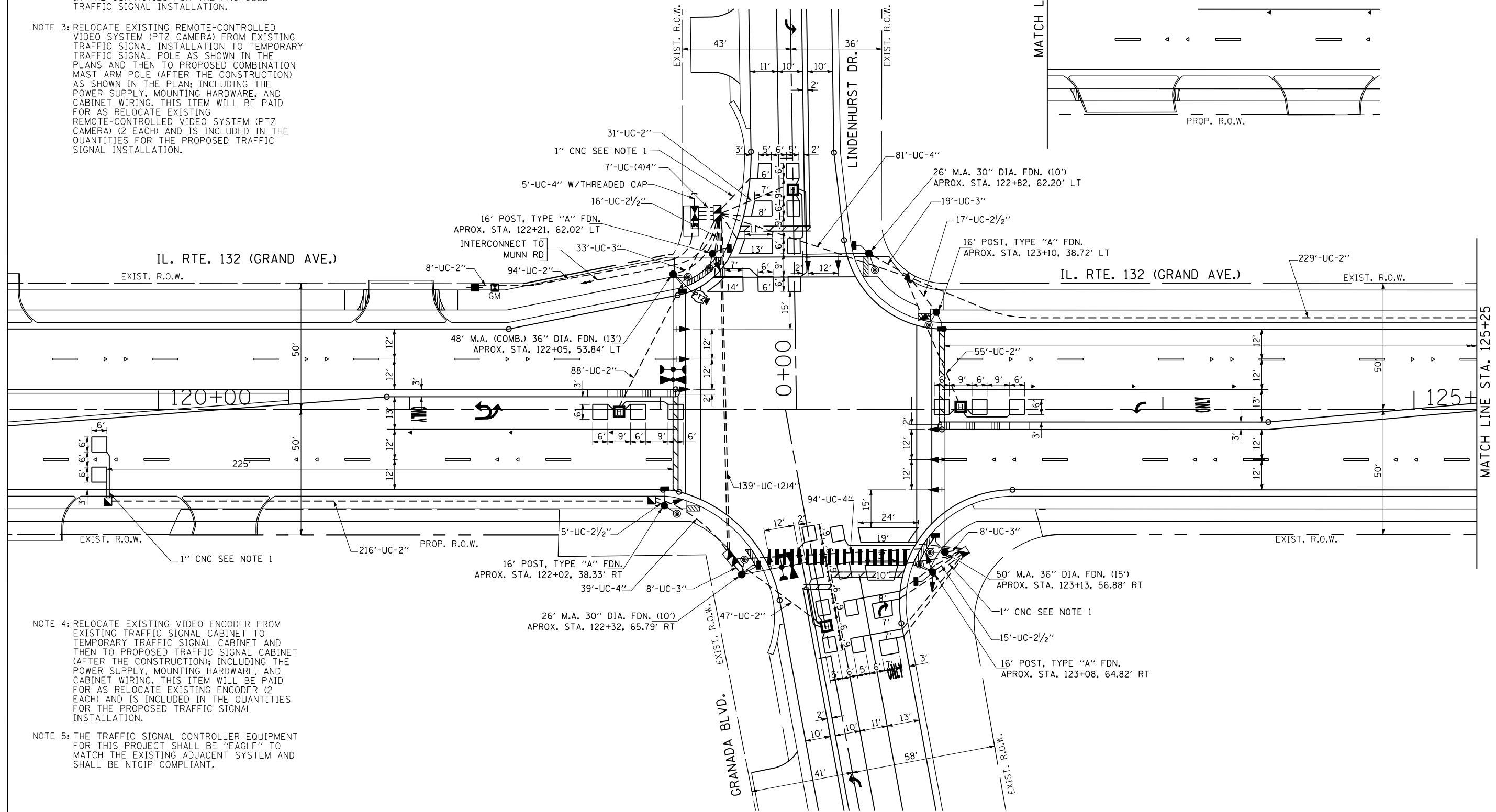
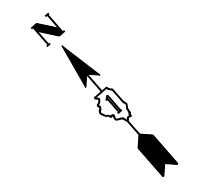
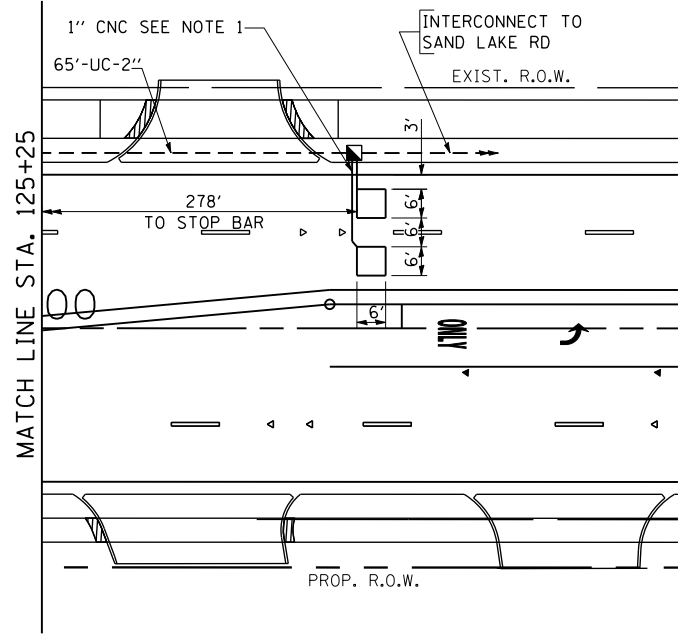
NOTE 1: EACH DETECTOR LOOP SHALL HAVE ITS OWN 1" COILABLE NONMETALLIC CONDUIT BETWEEN THE EDGE OF PAVEMENT AND THE ADJACENT HANDHOLE AS SHOWN ON THE PLANS AND AS STATED IN THE TRAFFIC SIGNAL SPECIFICATIONS.

NOTE 2: RELOCATE EXISTING LAYER II SWITCH FROM EXISTING TRAFFIC SIGNAL CABINET TO TEMPORARY TRAFFIC SIGNAL CABINET AND THEN TO PROPOSED TRAFFIC SIGNAL CABINET (AFTER THE CONSTRUCTION) INCLUDING THE POWER SUPPLY, MOUNTING HARDWARE, AND CABLING. THIS ITEM WILL BE PAID FOR AS RELOCATE SWITCH (2 EACH) AND IS INCLUDED IN THE QUANTITIES FOR THE PROPOSED TRAFFIC SIGNAL INSTALLATION.

NOTE 3: RELOCATE EXISTING REMOTE-CONTROLLED VIDEO SYSTEM (PTZ CAMERA) FROM EXISTING TRAFFIC SIGNAL INSTALLATION TO TEMPORARY TRAFFIC SIGNAL POLE AS SHOWN IN THE PLANS AND THEN TO PROPOSED COMBINATION MAST ARM POLE (AFTER THE CONSTRUCTION) AS SHOWN IN THE PLAN; INCLUDING THE POWER SUPPLY, MOUNTING HARDWARE, AND CABINET WIRING. THIS ITEM WILL BE PAID FOR AS RELOCATE EXISTING REMOTE-CONTROLLED VIDEO SYSTEM (PTZ CAMERA) (2 EACH) AND IS INCLUDED IN THE QUANTITIES FOR THE PROPOSED TRAFFIC SIGNAL INSTALLATION.

NOTE 4: RELOCATE EXISTING VIDEO ENCODER FROM EXISTING TRAFFIC SIGNAL CABINET TO TEMPORARY TRAFFIC SIGNAL CABINET AND THEN TO PROPOSED TRAFFIC SIGNAL CABINET (AFTER THE CONSTRUCTION); INCLUDING THE POWER SUPPLY, MOUNTING HARDWARE, AND CABINET WIRING. THIS ITEM WILL BE PAID FOR AS RELOCATE EXISTING ENCODER (2 EACH) AND IS INCLUDED IN THE QUANTITIES FOR THE PROPOSED TRAFFIC SIGNAL INSTALLATION.

NOTE 5: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT.



FILE NAME = h:\projects\projects\2014\1_rte 132 munn rd to sand lake rd\signals\19_IL RTE 132 @ LINDENHURST DR.INT.dgn

GO GANDHI AND ASSOCIATES, INC.
 ENGINEERS AND PLANNERS
 5055 N. NORTHWEST HIGHWAY
 SUITE 200
 CHICAGO, ILLINOIS 60630 TEL: (773) 774-5900

USER NAME = #USER#	DESIGNED - PKG	REVISED -
PLOT SCALE = 20.0000' / IN.	DRAWN - EA	REVISED -
PLOT DATE = 3/22/2017	CHECKED - PKG	REVISED -
	DATE - 3/21/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

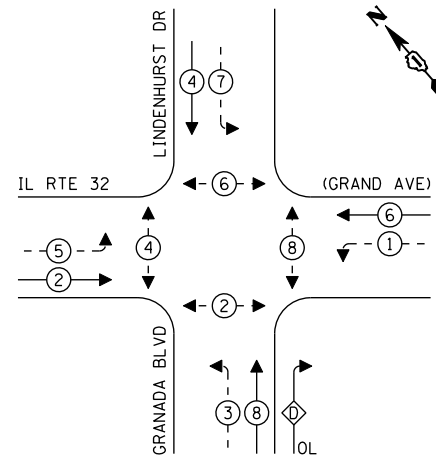
TRAFFIC SIGNAL INSTALLATION PLAN
ILLINOIS ROUTE 132 (GRAND AVE) AT LINDENHURST DR./GRANADA BLVD.

SCALE: 1"=20' SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE. 541	SECTION A-WRS-2	COUNTY LAKE	TOTAL SHEETS 345	SHEET NO. 220
FED. ROAD DIST. NO. - ILLINOIS			FED. AID PROJECT	

TS 7075
EAGLE 7F
 CONTRACT NO. 60V55

PROPOSED CONTROLLER SEQUENCE



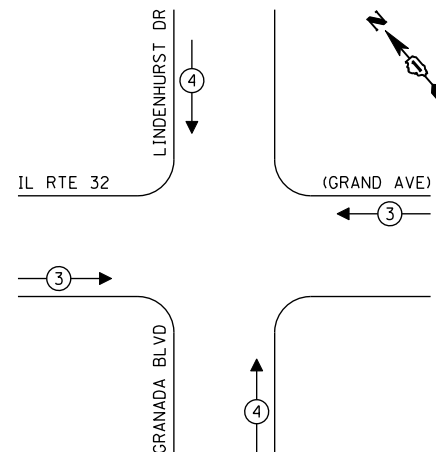
LEGEND:

- ⊙ PROTECTED PHASE
- ⊙-⊙ PROTECTED/PERMITTED PHASE
- ⊙-⊙ PEDESTRIAN PHASE
- ⊙ OL OVERLAP

RIGHT TURN OVERLAP PHASE DESIGNATION:

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
D	= 8	+ 1

PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	15	11	50	82.5
(YELLOW)	15	20	5	15.0
(GREEN)	15	12	45	81.0
PERMISSIVE ARROW	20	10	10	20.0
PED. SIGNAL	8	20	100	160.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
PTZ CAMERA	1	65	100	65.00
VIDEO SYSTEM	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	-	-	-	-
TOTAL =				548.5

ENERGY COSTS TO:

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY: CONTACT: DOROTHY PROSEN
PHONE: (847) 816-5323
COMPANY: COMMONWEALTH EDISON
ACCOUNT NUMBER: ---

(A)
IL Rte 132
Grand Ave

ILLUMINATED SIGN
(2 REQUIRED)

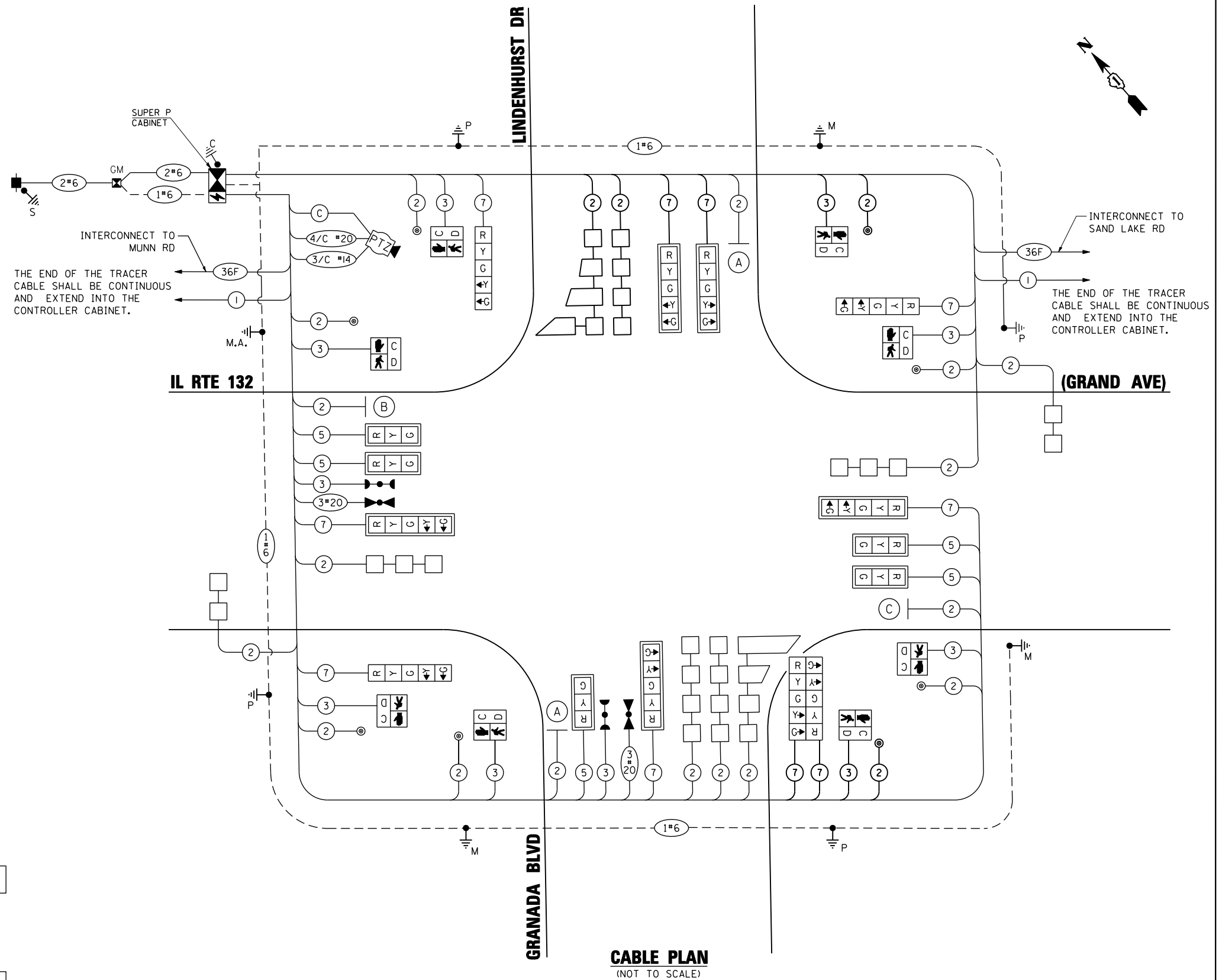
(B)
Lindenhurst Dr

ILLUMINATED SIGN
(1 REQUIRED)

(C)
Granada Blvd

ILLUMINATED SIGN
(1 REQUIRED)

NOTE: THE SIGNS ARE DOUBLE SIDED.



CABLE PLAN
(NOT TO SCALE)

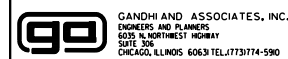
NOTE 1: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT.

TS 7075
EAGLE 7F

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND
EMERGENCY VEHICLE PREEMPTION SEQUENCE
ILLINOIS ROUTE 132 (GRAND AVE) AT LINDENHURST DR/GRANADA BLVD.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	221
CONTRACT NO. 60V55				



USER NAME	#	USER#
DESIGNED	-	PKG
DRAWN	-	EA
CHECKED	-	PKG
DATE	-	3/21/2017

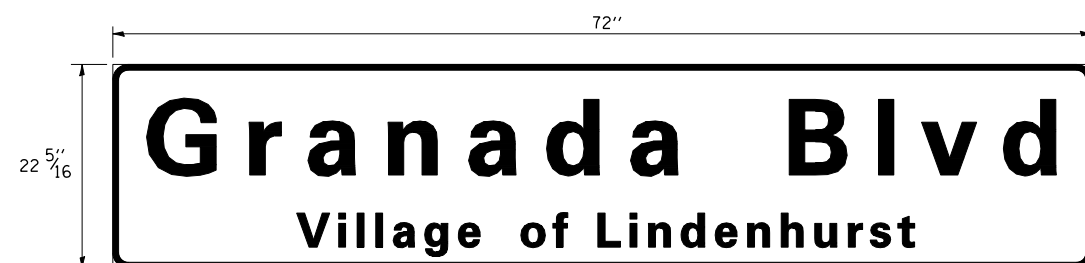
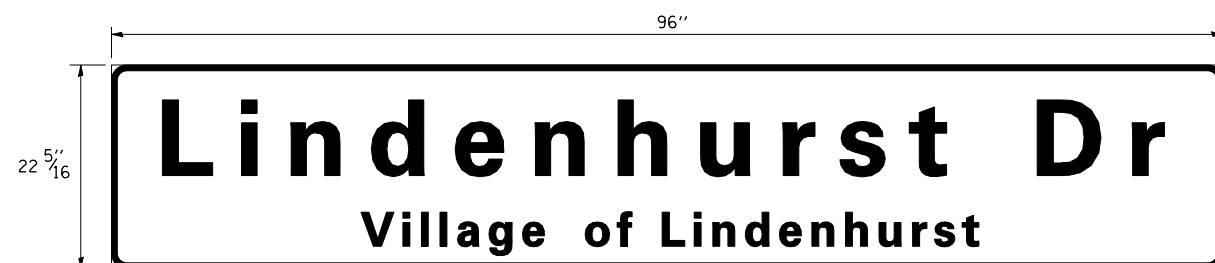
REVISION	DATE	BY
REVISED	-	-
REVISED	-	-
REVISED	-	-
REVISED	-	-

SCALE	SHEET NO.	OF SHEETS	STA.	TO STA.
SCALE: N.T.S.				

SCALE	SHEET NO.	OF SHEETS	STA.	TO STA.
SCALE: N.T.S.				

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

FILE NAME = h:\projects\projects\2014\1_rte 132_munn rd to sand lake rd\signals\2014\1_rte 132 @ LINDENHURST DR.CAD.dgn



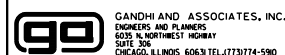
NOTE 1: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT.

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	833
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	53
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	68
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	525
HANDHOLE	EACH	5
HEAVY-DUTY HANDHOLE	EACH	4
DOUBLE HANDHOLE	EACH	2
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	2227
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1851
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1124
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	2140
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	2022
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	137
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	775
CONCRETE FOUNDATION, TYPE A	FOOT	20
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	20
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	28
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	5
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	5
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	5
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	10
INDUCTIVE LOOP DETECTOR	EACH	9
DETECTOR LOOP, TYPE I	FOOT	1135
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	8
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	7
REMOVE EXISTING DOUBLE HANDHOLE	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	9
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	359
RELOCATE SWITCH	EACH	2
LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4
FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL)	EACH	1
SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	123
ELECTRIC CABLE IN CONDUIT, VIDEO, NO. 20 4 C	FOOT	123
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 48 FT. (SPECIAL)	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 26 FT. (SPECIAL)	EACH	2
TRAFFIC SIGNAL POST, 16 FOOT, (SPECIAL)	EACH	4
RELOCATE EXISTING ENCODER	EACH	2
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1
RELOCATE EXISTING REMOTE-CONTROLLED VIDEO SYSTEM	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 50 FT. (SPECIAL)	EACH	1

• 100% COST TO VILLAGE OF LINDENHURST

K:\PROJECTS\Projects\2014\IL Rte 132 Murr Rd to Sand Lake Rd\Signals\20A-IL RTE 132 @ LINDENHURST DR.CC.2.dgn



GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
5015 N. NORTHWEST HIGHWAY
SUITE 305
CHICAGO, ILLINOIS 60630 TEL: (773) 774-590

USER NAME = \$USER*	DESIGNED - PKG	REVISED -
	DRAWN - EA	REVISED -
PLOT SCALE = 20.0000' / IN.	CHECKED - PKG	REVISED -
PLOT DATE = 5/2/2017	DATE - 3/21/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**MAST ARM MOUNTED STREET NAME SIGNS
AND SCHEDULE OF QUANTITIES**
ILLINOIS ROUTE 132 (GRAND AVE) AT LINDENHURST DR /GRANADA BLVD
SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	222
FED. ROAD DIST. NO. . ILLINOIS FED. AID PROJECT			CONTRACT NO. 60V55	

**TS 7075
EAGLE 7F**

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED BY CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

- 1 EACH CONTROLLER CABINET AND COMPLETE

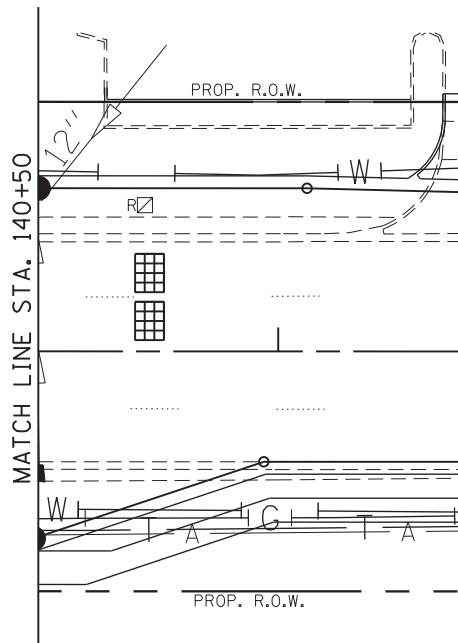
THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACTOR'S BID PRICE.

- 1 EACH SIGNAL HEAD, 1-FACE, 3-SECTION, BRACKET MOUNTED
- 3 EACH SIGNAL HEAD, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
- 1 EACH SIGNAL HEAD, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
- 1 EACH SIGNAL HEAD, 1-FACE, 5-SECTION, BRACKET MOUNTED
- 1 EACH SIGNAL HEAD, 2-FACE, 1-3 SECTION, BRACKET MOUNTED
- 1 EACH SIGNAL HEAD, 3-FACE, 2-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
- 2 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE BRACKET MOUNTED
- 4 EACH TRAFFIC SIGNAL BACKPLATE
- 3 EACH TRAFFIC SIGNAL POST
- 2 EACH STEEL MAST ARM ASSEMBLY AND POLE
- 2 EACH PEDESTRIAN PUSH-BUTTON
- 1 EACH SERVICE INSTALLATION

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

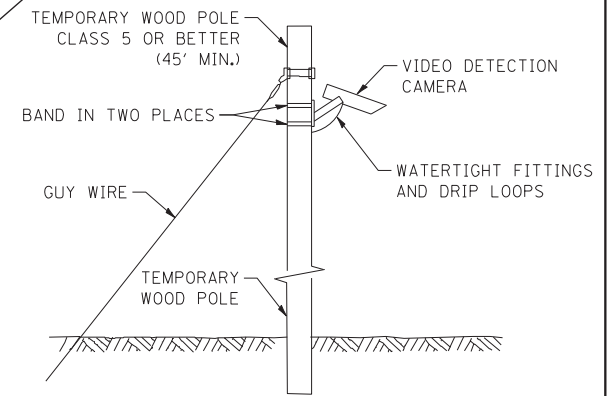
AGENCY: VILLAGE OF LINDENHURST
 CONTACT INFORMATION:
 BUILDING AND ENGINEERING
 VILLAGE OF LINDENHURST
 PHONE: (847) 356-8252

- 2 EACH LIGHT DETECTOR
- 1 EACH LIGHT DETECTOR AMPLIFIER

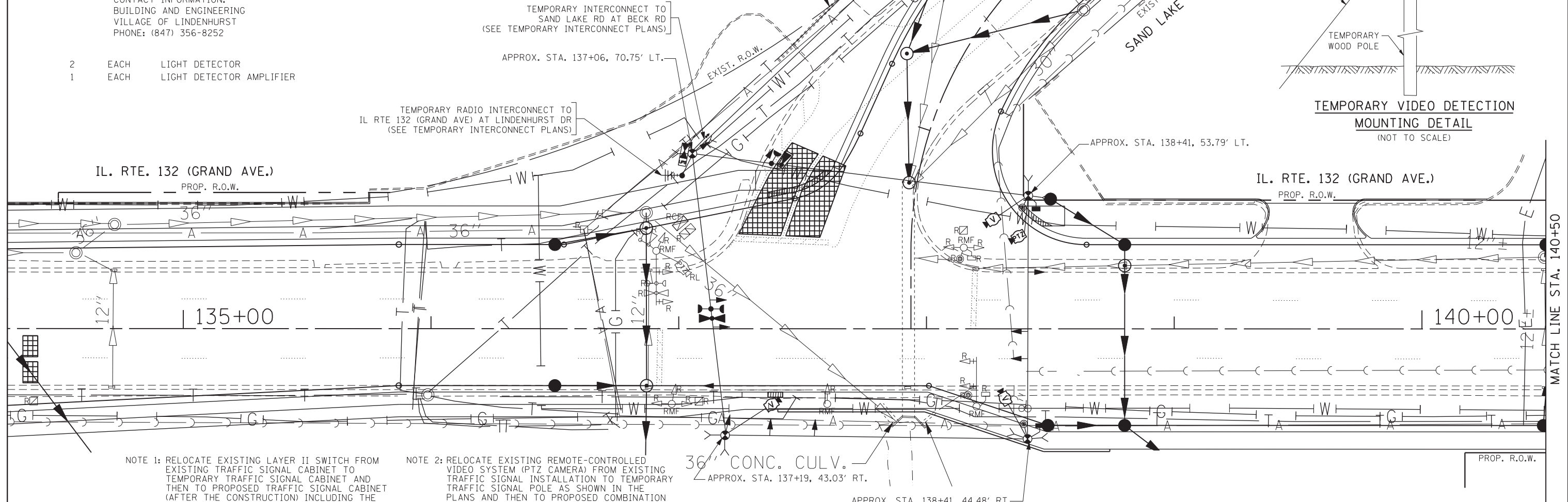


NOTE 3: RELOCATE EXISTING VIDEO ENCODER FROM EXISTING TRAFFIC SIGNAL CABINET TO TEMPORARY TRAFFIC SIGNAL CABINET AND THEN TO PROPOSED TRAFFIC SIGNAL CABINET (AFTER THE CONSTRUCTION); INCLUDING THE POWER SUPPLY, MOUNTING HARDWARE, AND CABINET WIRING. THIS ITEM WILL BE PAID FOR AS RELOCATE EXISTING ENCODER (2 EACH) AND IS INCLUDED IN THE QUANTITIES FOR THE PROPOSED TRAFFIC SIGNAL INSTALLATION.

NOTE 4: THE WIRELESS INTERCONNECT SYSTEM SHALL BECOME PART OF THE LAKE COUNTY PASSAGE WIRELESS NETWORK AND MAY REQUIRE THE INSTALLATION OF RADIO TRANSCEIVER AND ANTENNA AT A HIGHER LOCATION SO AS TO AIM AT ANOTHER ANTENNA ON THE COUNTY'S WIRELESS SYSTEM. THE CONTRACTOR SHALL VERIFY THE LENGTH OF THE WOOD POLE NEEDED FOR THIS PURPOSE PRIOR TO INSTALLATION OF THE TEMPORARY TRAFFIC SIGNALS AND THE REPEATER/S AT LOCATIONS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER.



TEMPORARY VIDEO DETECTION MOUNTING DETAIL (NOT TO SCALE)



NOTE 1: RELOCATE EXISTING LAYER II SWITCH FROM EXISTING TRAFFIC SIGNAL CABINET TO TEMPORARY TRAFFIC SIGNAL CABINET AND THEN TO PROPOSED TRAFFIC SIGNAL CABINET (AFTER THE CONSTRUCTION) INCLUDING THE POWER SUPPLY, MOUNTING HARDWARE, AND CABLING. THIS ITEM WILL BE PAID FOR AS RELOCATE SWITCH (2 EACH) AND IS INCLUDED IN THE QUANTITIES FOR THE PROPOSED TRAFFIC SIGNAL INSTALLATION.

NOTE 2: RELOCATE EXISTING REMOTE-CONTROLLED VIDEO SYSTEM (PTZ CAMERA) FROM EXISTING TRAFFIC SIGNAL INSTALLATION TO TEMPORARY TRAFFIC SIGNAL POLE AS SHOWN IN THE PLANS AND THEN TO PROPOSED COMBINATION MAST ARM POLE (AFTER THE CONSTRUCTION) AS SHOWN IN THE PLAN; INCLUDING THE POWER SUPPLY, MOUNTING HARDWARE, AND CABINET WIRING. THIS ITEM WILL BE PAID FOR AS RELOCATE EXISTING REMOTE-CONTROLLED VIDEO SYSTEM (PTZ CAMERA) (2 EACH) AND IS INCLUDED IN THE QUANTITIES FOR THE PROPOSED TRAFFIC SIGNAL INSTALLATION.

36" CONC. CULV. APPROX. STA. 137+19, 43.03' RT.

APPROX. STA. 138+41, 44.48' RT.

NOTE 5: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT AND SHALL HAVE ETHERNET PORT.

TEMPORARY TRAFFIC SIGNAL PLAN FOR EXISTING ROADWAY GEOMETRICS

FILE NAME = I:\projects\projects\2014\11_rte 132 main rd to sand lake rd\va\gis\12\11_rte 132 @ sand lake rd.TEMP.INT.dgn



USER NAME = \$USER\$	DESIGNED - PKG	REVISED -
PLOT SCALE = 20.0060 ' / IN.	DRAWN - EA	REVISED -
PLOT DATE = 6/26/2017	CHECKED - PKG	REVISED -
	DATE - 6/26/2017	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

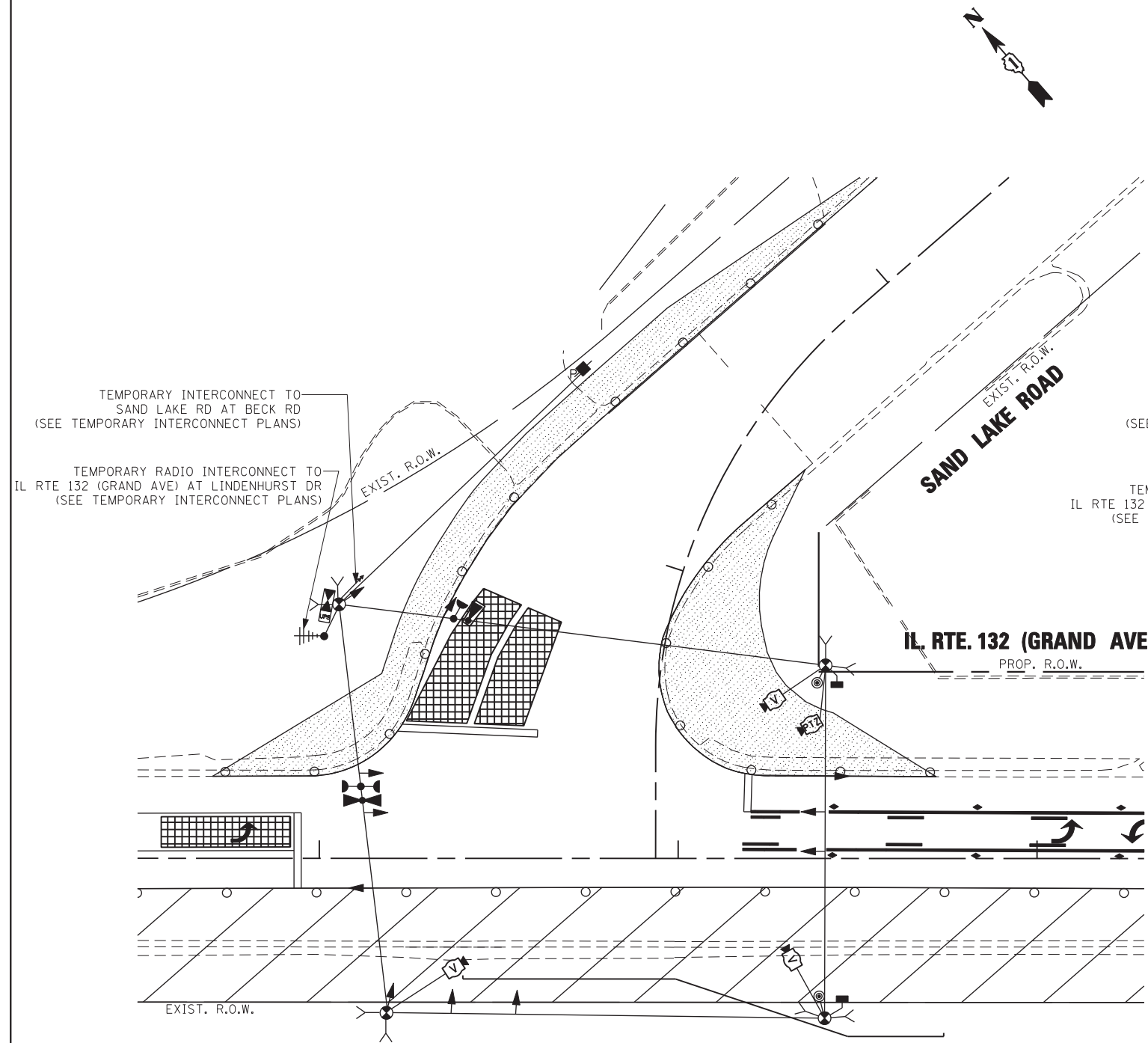
TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN AND REMOVAL PLAN ILLINOIS ROUTE 132 (GRAND AVE) AT SAND LAKE ROAD (SHEET 1 OF 3)

SCALE: 1"=20' SHEET NO. OF SHEETS STA. TO STA.

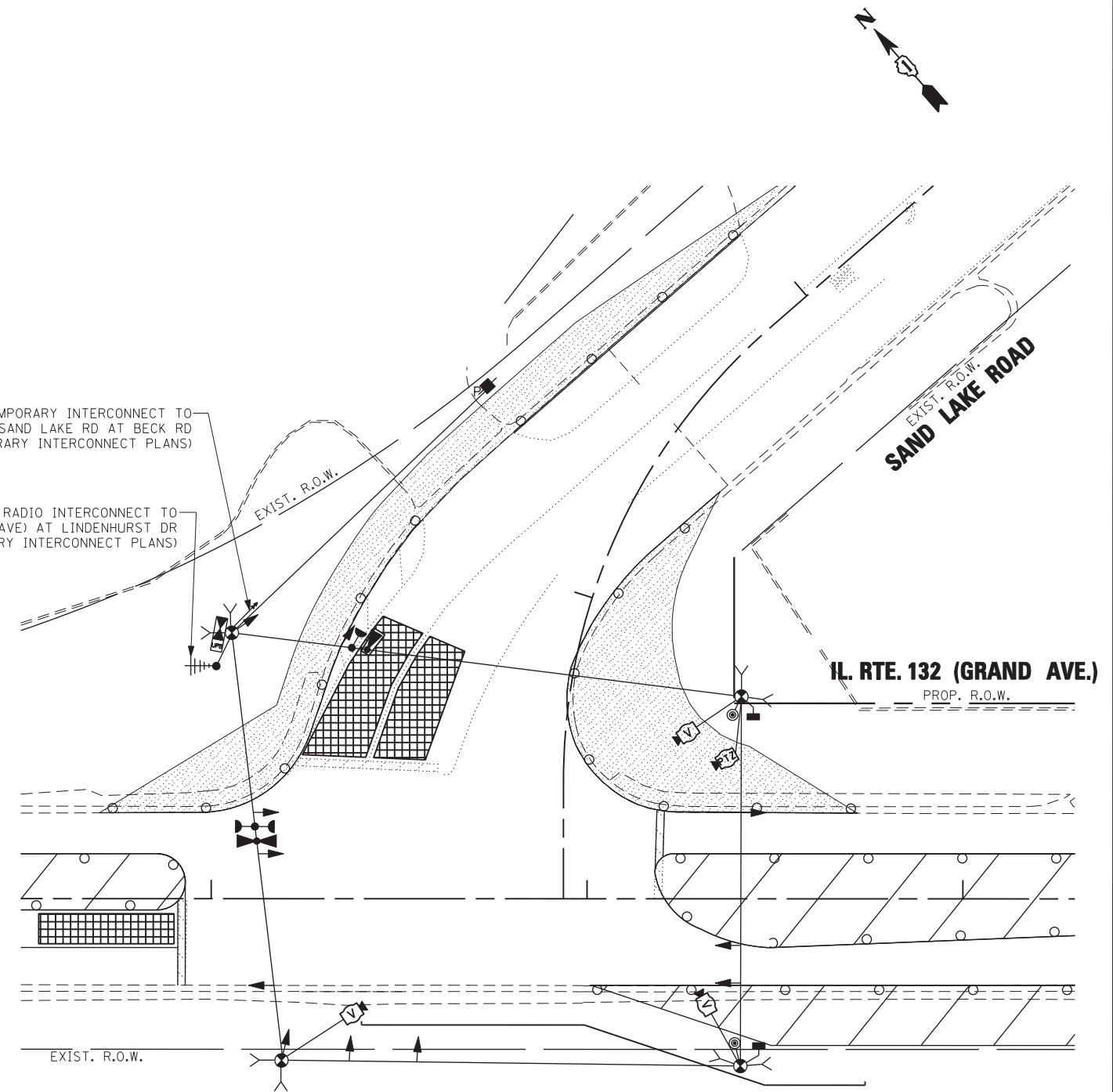
F.A.P. RTE. 541	SECTION A-WRS-2	COUNTY LAKE	TOTAL SHEETS 345	SHEET NO. 223
CONTRACT NO. 60V55				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

TS 7070 EAGLE 7E

FILE NAME = h:\projects\projects\2014\1_rte 132 main rd to sand lake rd\signals\123.il rte 132 @ sand lake rd TEMP_INT_2.dgn



TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1



TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2

NOTE 1: THE FAR OUT VIDEO DETECTION ZONES SHALL BE REDEFINED FOR EACH CONSTRUCTION STAGE AS A PART OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION" WORK.

NOTE 2: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT AND SHALL HAVE ETHERNET PORT.



USER NAME = #USER#	DESIGNED - PKG	REVISED -
	DRAWN - EA	REVISED -
PLOT SCALE = 20,000/1" / IN.	CHECKED - PKG	REVISED -
PLOT DATE = 6/26/2017	DATE - 6/26/2017	REVISED -

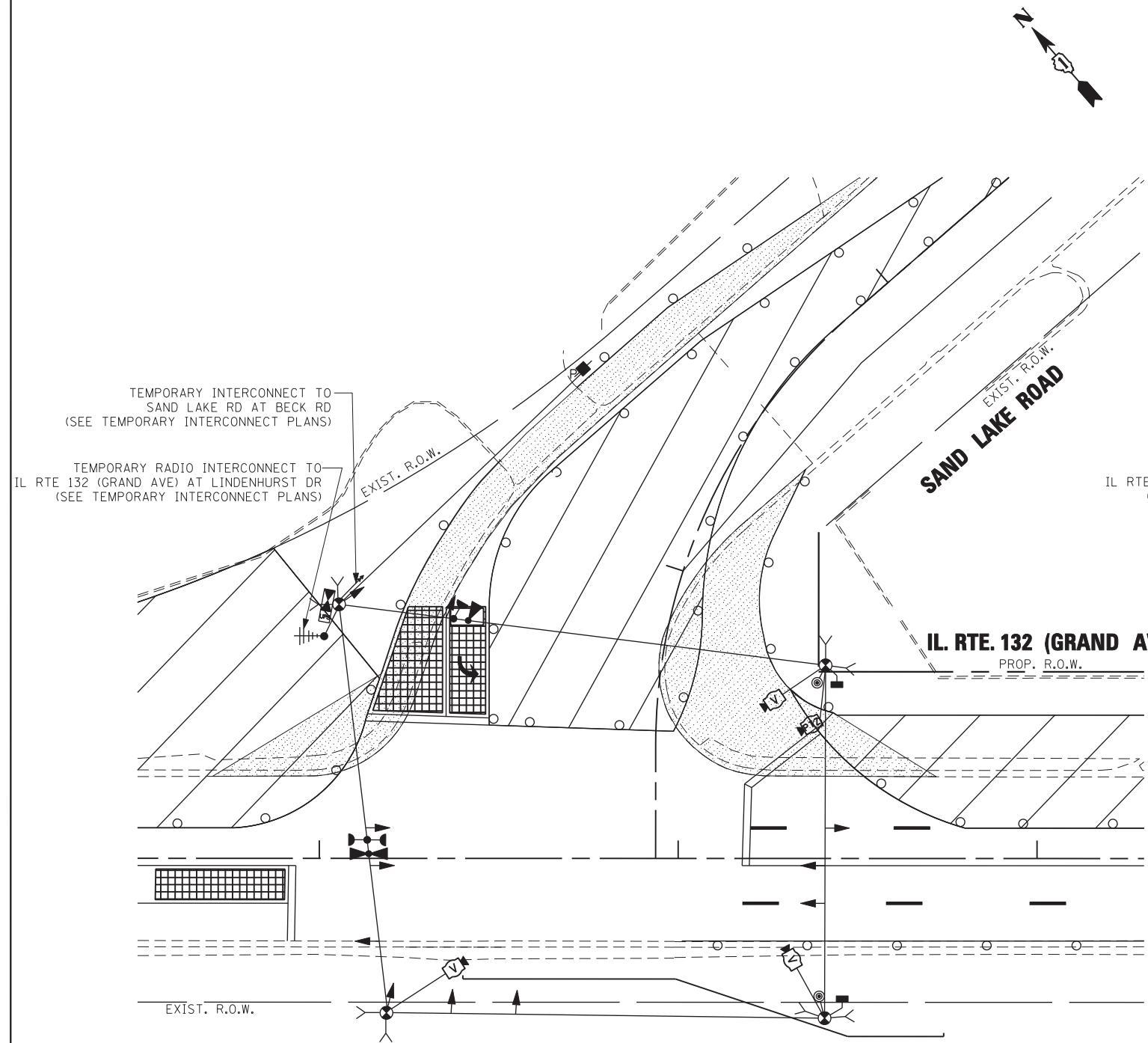
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN			
ILLINOIS ROUTE 132 (GRAND AVE) AT SAND LAKE ROAD			
STAGE 1 AND STAGE 2 (SHEET 2 OF 3)			
SCALE: 1"=20'	SHEET NO.	OF SHEETS	STA. TO STA.

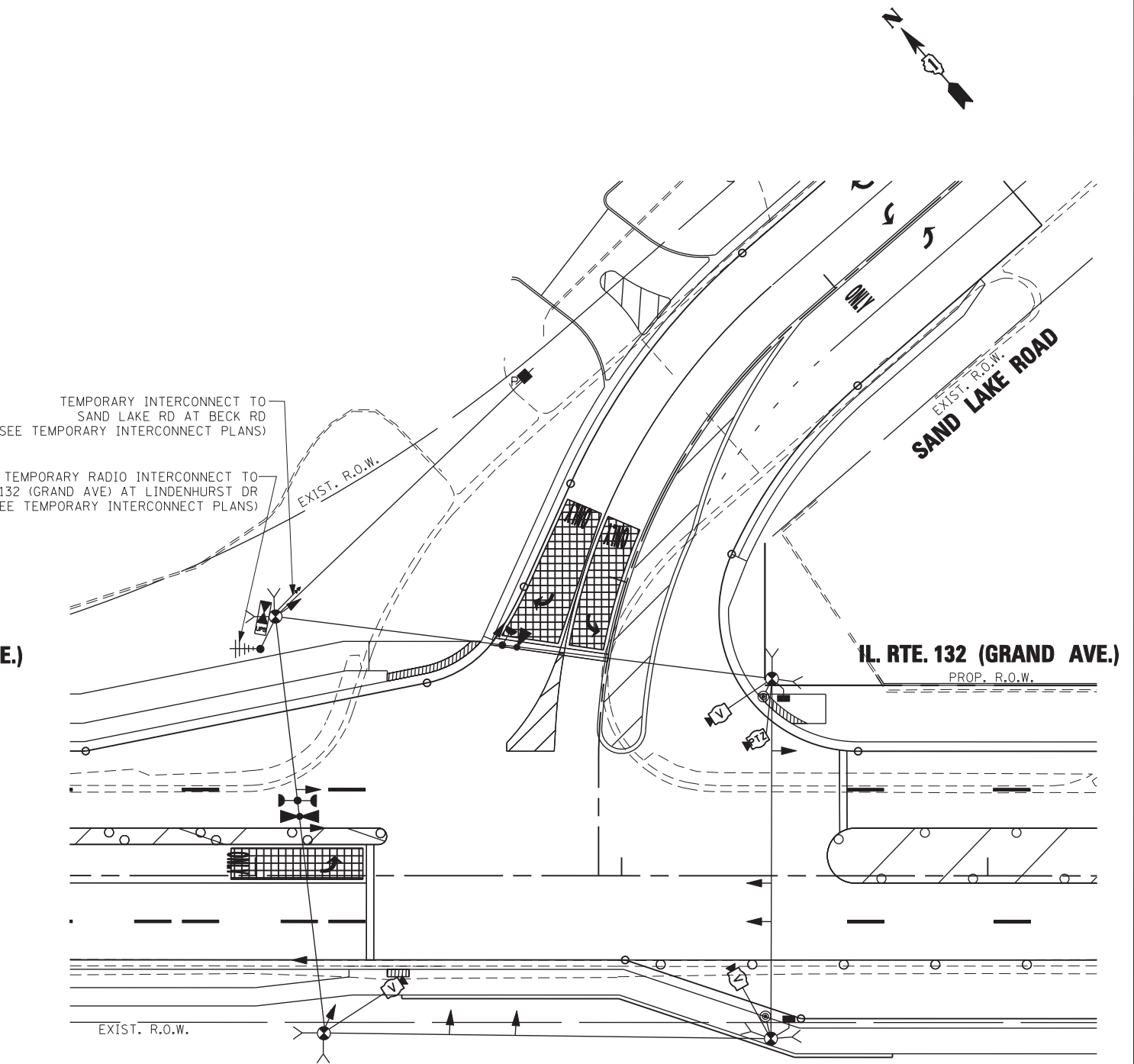
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	224
CONTRACT NO. 60V55				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

TS 7070
EAGLE 7F

FILE NAME = k:\projects\projects\2014\1_rte 132 main rd to sand lake rd\gis\124_IL RTE 132 @ SAND LAKE RD_TEMP_INT_3.dgn



TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 3



TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 4

NOTE 1: THE FAR OUT VIDEO DETECTION ZONES SHALL BE REDEFINED FOR EACH CONSTRUCTION STAGE AS A PART OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION" WORK.

NOTE 2: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT AND SHALL HAVE ETHERNET PORT.

GO GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
5015 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60630 TEL: (773) 774-590

USER NAME = #USER#	DESIGNED - PKG	REVISED -
	DRAWN - EA	REVISED -
PLOT SCALE = 20,000' / 1" IN.	CHECKED - PKG	REVISED -
PLOT DATE = 6/26/2017	DATE - 6/26/2017	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

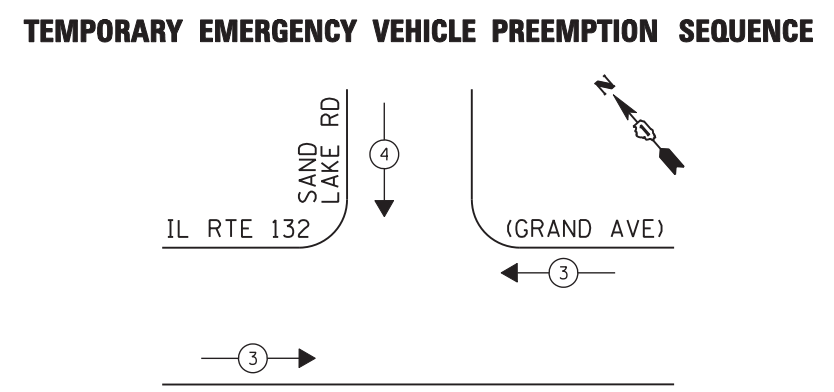
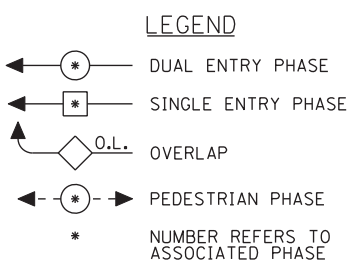
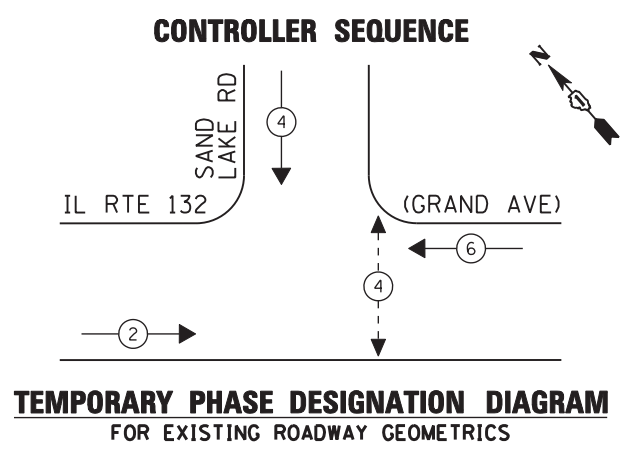
**TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN
ILLINOIS ROUTE 132 (GRAND AVE) AT SAND LAKE ROAD
STAGE 3 AND STAGE 4 (SHEET 3 OF 3)**

SCALE: 1"=20' SHEET NO. OF SHEETS STA. TO STA.

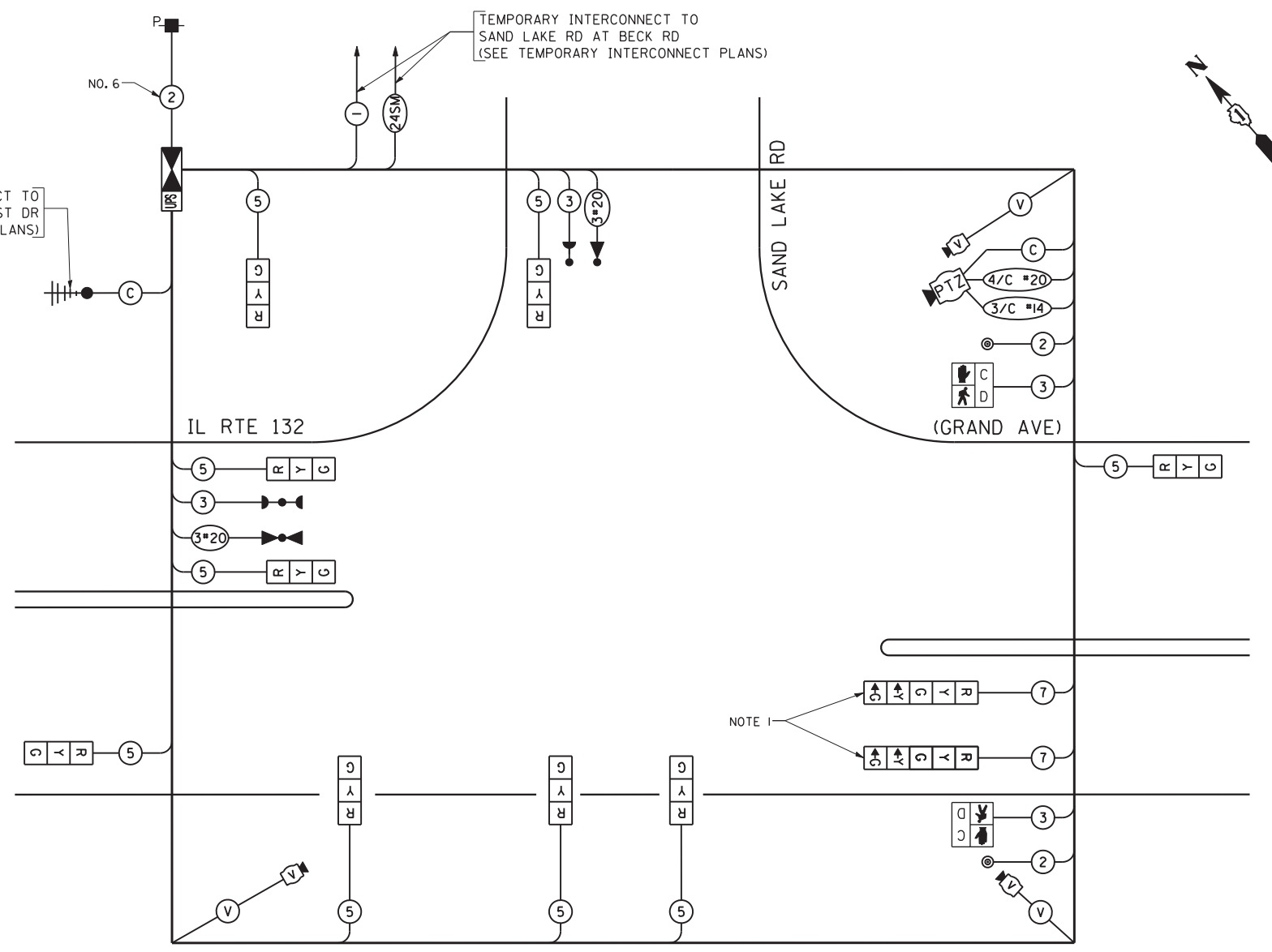
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541	A-WRS-2	LAKE	345	225
CONTRACT NO. 60V55				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

**TS 7070
EAGLE 7F**

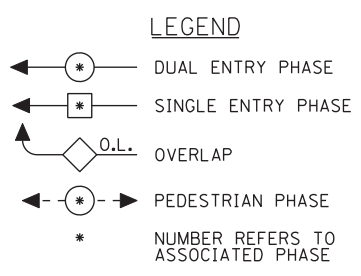
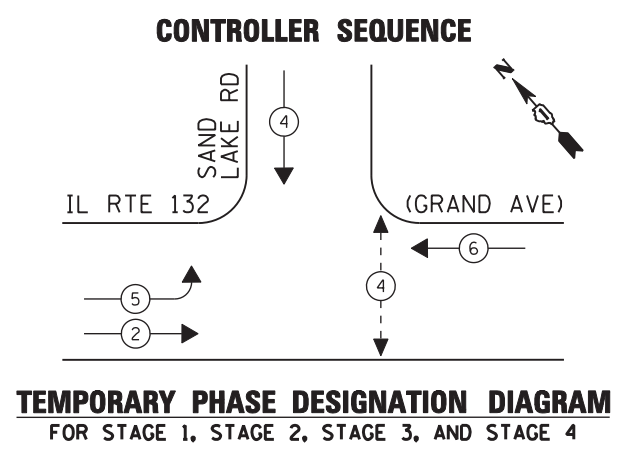
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TEMPORARY RADIO INTERCONNECT TO IL RTE 132 (GRAND AVE) AT LINDENHURST DR (SEE TEMPORARY INTERCONNECT PLANS)



TEMPORARY CABLE PLAN
(NOT TO SCALE)
ALL STAGES



TEMPORARY PHASE DESIGNATION DIAGRAM
FOR STAGE 1, STAGE 2, STAGE 3, AND STAGE 4

NOTE 1: THE GREEN AND YELLOW LEFT TURN ARROW INDICATION SECTIONS IN THE 5-SECTION SIGNAL HEADS FOR THE EASTBOUND DIRECTION OF TRAFFIC SHALL BE BAGGED DURING THE EXISTING ROADWAY GEOMETRIC CONDITIONS UNTIL THEY ARE NEEDED IN THE SUBSEQUENT CONSTRUCTION STAGES.

NOTE 2: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT AND SHALL HAVE ETHERNET PORT.

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO LAMPS	WATTAGE		%OPERATION	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	11		11	0.50	60.5
(YELLOW)	11		20	0.05	11.0
(GREEN)	11		12	0.45	59.4
ARROW	4		10	0.10	4.0
PED. SIGNAL	2		20	1.00	40.0
CONTROLLER	1		100	1.00	100.0
ILLUM. SIGN			25	0.05	
VIDEO SYSTEM	1	150		1.00	150.0
PTZ CAMERA	1	65		1.00	65.0
FLASHER				0.50	
ENERGY COSTS TO:					TOTAL = 489.9
ILLINOIS DEPARTMENT OF TRANSPORTATION 201 WEST CENTER COURT SCHAUMBURG, ILLINOIS 60196-1096 ENERGY SUPPLY CONTACT: DOROTHY PROSEN PHONE: (847) 816-5323 COMPANY: COMMONWEALTH EDISON					

USER NAME = \$USER\$	DESIGNED - PKG	REVISED -
PLOT SCALE = 20.0000' / IN.	DRAWN - EA	REVISED -
PLOT DATE = 6/26/2017	CHECKED - PKG	REVISED -
	DATE - 6/26/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN, TEMPORARY PHASE DESIGNATION DIAGRAM, AND TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE ILLINOIS ROUTE 132 (GRAND AVE) AT SAND LAKE RD.

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE. 541	SECTION A-WRS-2	COUNTY LAKE	TOTAL SHEETS 345	SHEET NO. 226
CONTRACT NO. 60V55				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

**TS 7070
EAGLE 7F**

NOTES:

NOTE 1: EACH DETECTOR LOOP SHALL HAVE ITS OWN 1" COILABLE NONMETALLIC CONDUIT BETWEEN THE EDGE OF PAVEMENT AND THE ADJACENT HANDHOLE AS SHOWN ON THE PLANS AND AS STATED IN THE TRAFFIC SIGNAL SPECIFICATIONS.

NOTE 2: RELOCATE EXISTING LAYER II SWITCH FROM EXISTING TRAFFIC SIGNAL CABINET TO TEMPORARY TRAFFIC SIGNAL CABINET AND THEN TO PROPOSED TRAFFIC SIGNAL CABINET (AFTER THE CONSTRUCTION) INCLUDING THE POWER SUPPLY, MOUNTING HARDWARE, AND CABLING. THIS ITEM WILL BE PAID FOR AS RELOCATE SWITCH (2 EACH) AND IS INCLUDED IN THE QUANTITIES FOR THE PROPOSED TRAFFIC SIGNAL INSTALLATION.

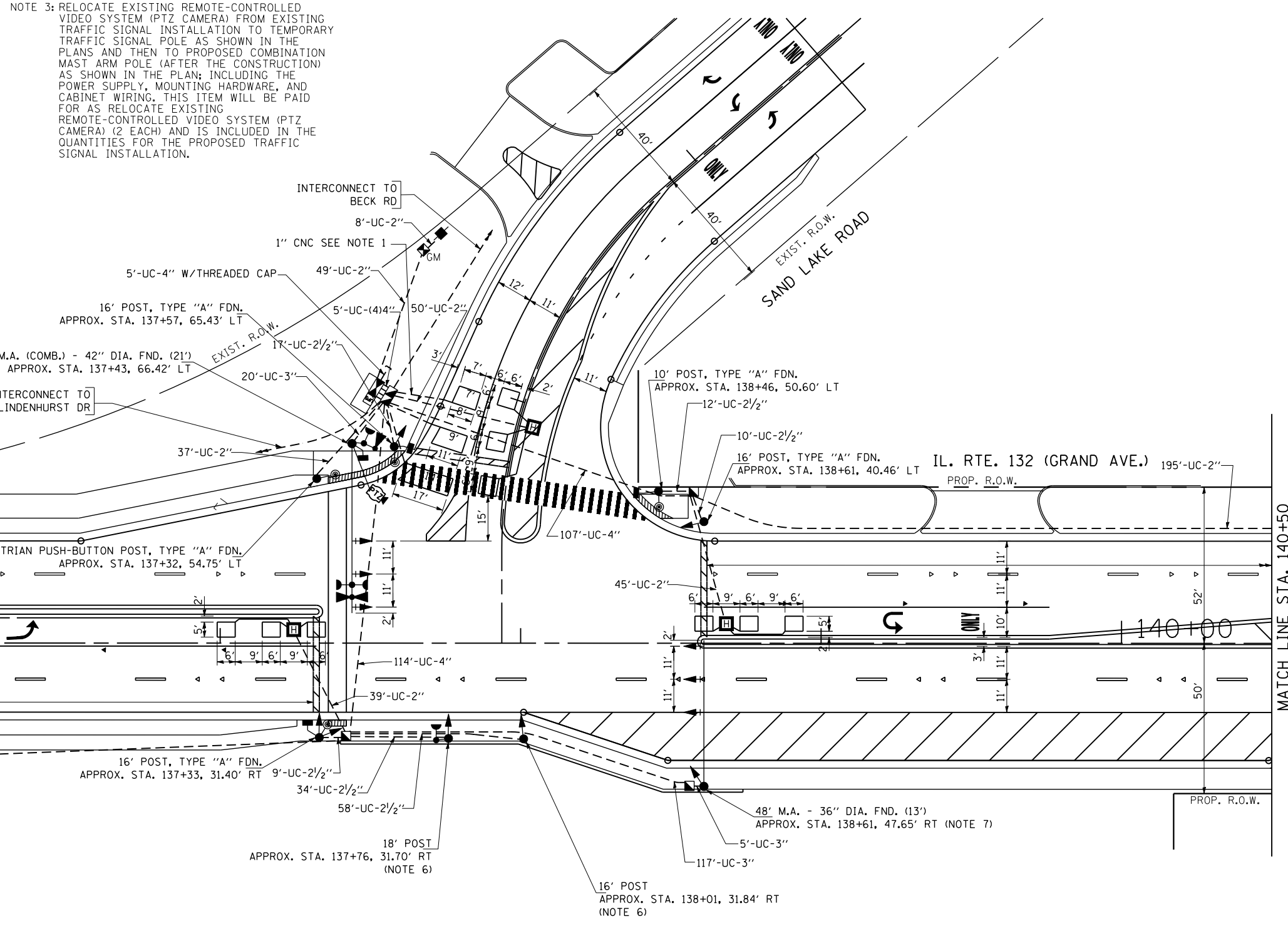
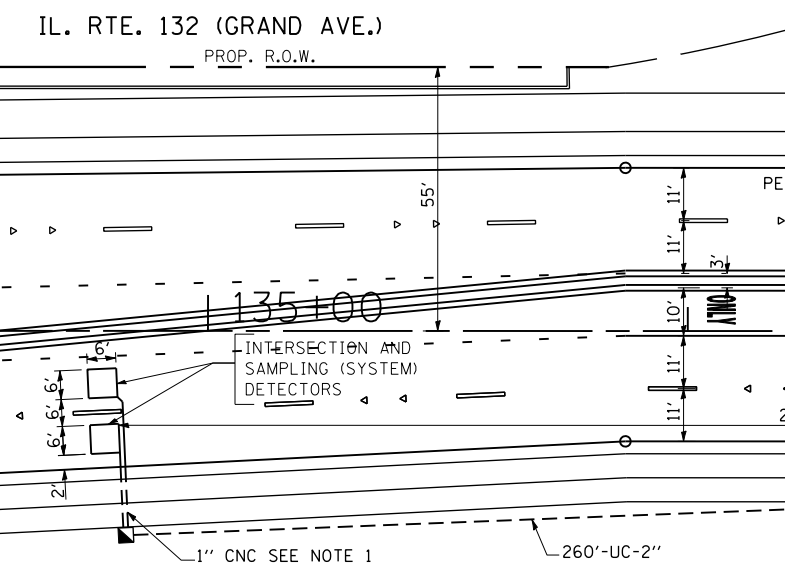
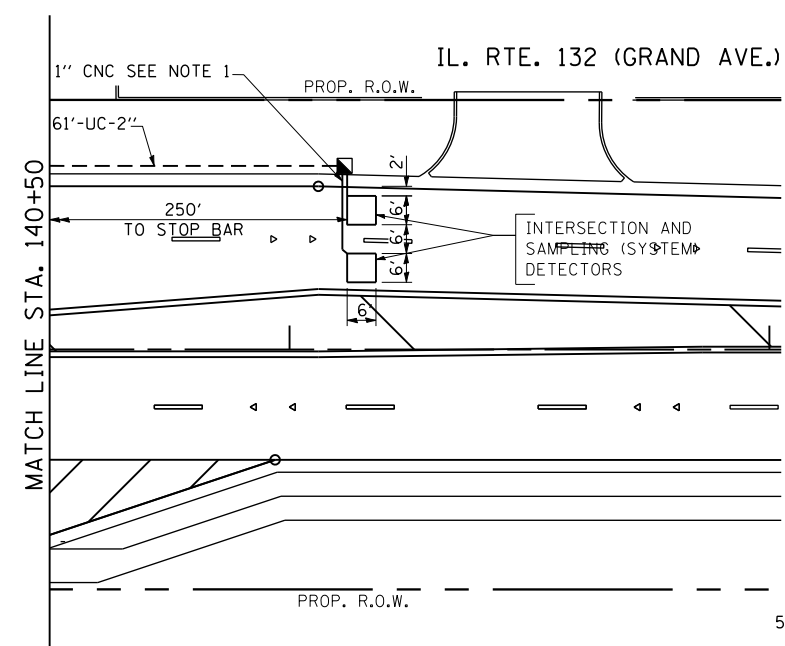
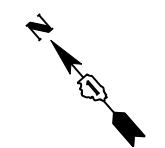
NOTE 3: RELOCATE EXISTING REMOTE-CONTROLLED VIDEO SYSTEM (PTZ CAMERA) FROM EXISTING TRAFFIC SIGNAL INSTALLATION TO TEMPORARY TRAFFIC SIGNAL POLE AS SHOWN IN THE PLANS AND THEN TO PROPOSED COMBINATION MAST ARM POLE (AFTER THE CONSTRUCTION) AS SHOWN IN THE PLAN; INCLUDING THE POWER SUPPLY, MOUNTING HARDWARE, AND CABINET WIRING. THIS ITEM WILL BE PAID FOR AS RELOCATE EXISTING REMOTE-CONTROLLED VIDEO SYSTEM (PTZ CAMERA) (2 EACH) AND IS INCLUDED IN THE QUANTITIES FOR THE PROPOSED TRAFFIC SIGNAL INSTALLATION.

NOTE 4: RELOCATE EXISTING VIDEO ENCODER FROM EXISTING TRAFFIC SIGNAL CABINET TO TEMPORARY TRAFFIC SIGNAL CABINET AND THEN TO PROPOSED TRAFFIC SIGNAL CABINET (AFTER THE CONSTRUCTION); INCLUDING THE POWER SUPPLY, MOUNTING HARDWARE, AND CABINET WIRING. THIS ITEM WILL BE PAID FOR AS RELOCATE EXISTING ENCODER (2 EACH) AND IS INCLUDED IN THE QUANTITIES FOR THE PROPOSED TRAFFIC SIGNAL INSTALLATION.

NOTE 5: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT.

NOTE 6: THE FOUNDATIONS FOR THE 14' & 18' POSTS WILL BE INTEGRAL PART OF THE RETAINING WALL AND WILL NOT BE PAID FOR SEPARATELY.

NOTE 7: THE MAST ARM POLE IS NOT TO BE INSTALLED ON THE FOUNDATION UNTIL THE FOUNDATION HAS BEEN BACKFILLED AND PROPERLY COMPACTED.



FILE NAME = k:\projects\projects\2014\1_rte 132 main rd to sand lake rd\gis\126.il rte 132 @ sand lake rd.int.dgn



USER NAME = \$USER\$	DESIGNED - PKG	REVISED -
PLOT SCALE = 20.0060 ' / IN.	DRAWN - EA	REVISED -
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	DATE - 3/21/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

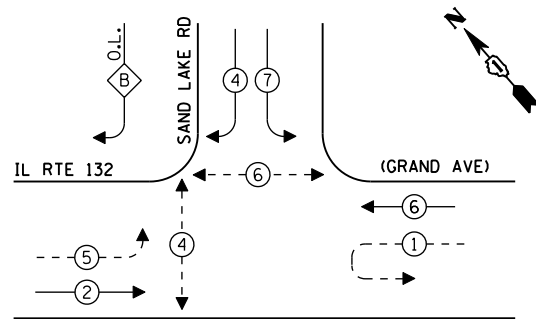
TRAFFIC SIGNAL INSTALLATION PLAN
ILLINOIS ROUTE 132 (GRAND AVE) AT SAND LAKE ROAD

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	227
CONTRACT NO. 60V55				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

TS 7070
EAGLE 7F

SCALE: 1"=20' SHEET NO. OF SHEETS STA. TO STA.

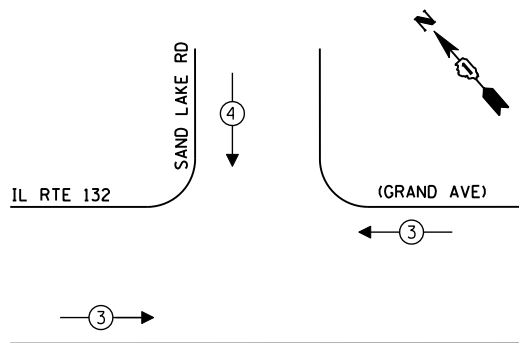
PROPOSED CONTROLLER SEQUENCE



**RIGHT TURN OVERLAP
PHASE DESIGNATION:**

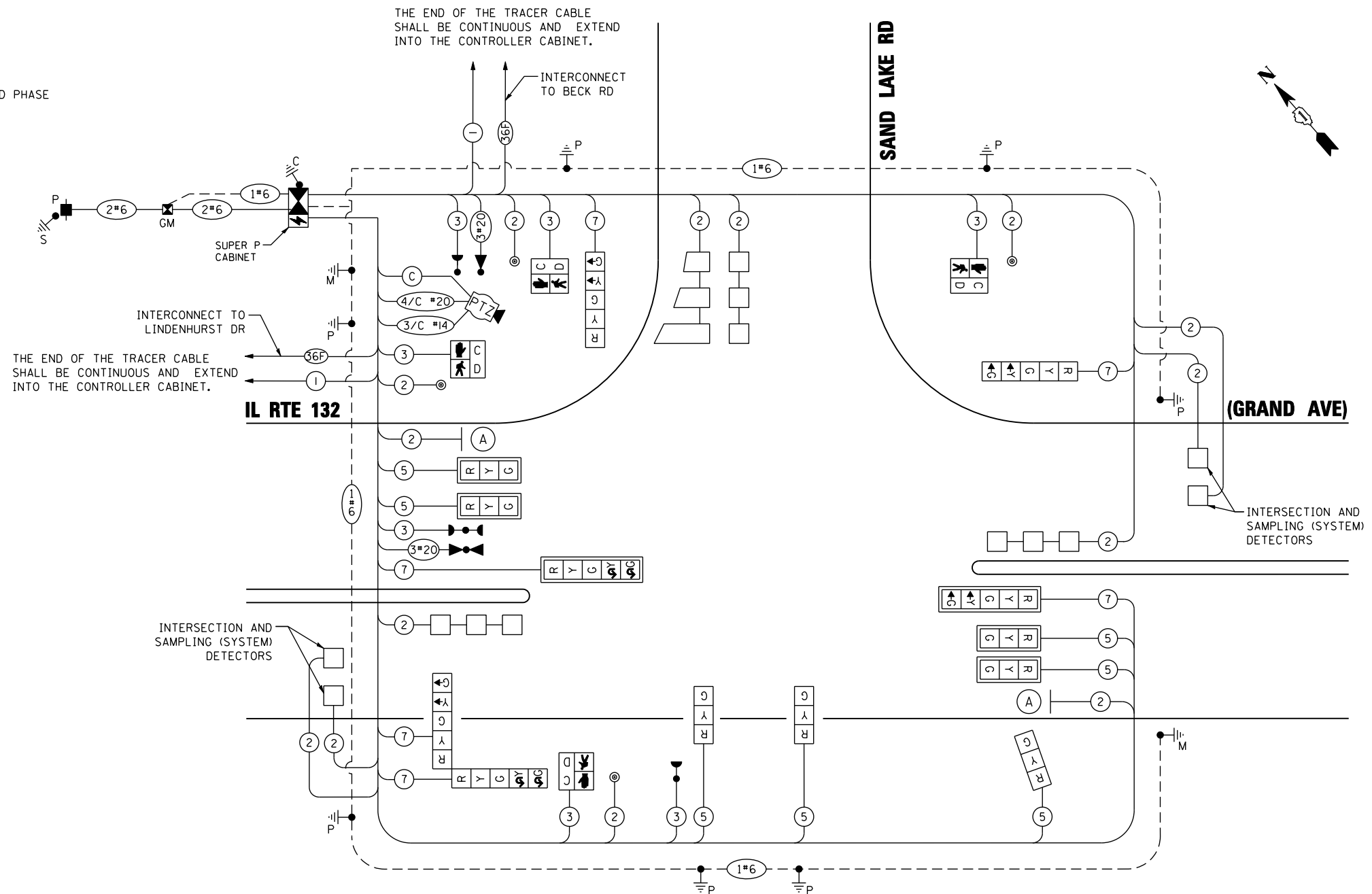
OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
B	4	5

**PROPOSED EMERGENCY VEHICLE
PREEMPTION SEQUENCE**



LEGEND:

- ⊙ — PROTECTED PHASE
- ⊙ — PROTECTED/PERMITTED PHASE
- ⊙ — PEDESTRIAN PHASE
- ⊙ OL — OVERLAP



CABLE PLAN
(NOT TO SCALE)

NOTE 1: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT.

**TRAFFIC SIGNAL
ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	13	11	50	71.5
(YELLOW)	13	20	5	13.0
(GREEN)	13	12	45	70.2
PERMISSIVE ARROW	12	10	10	12.0
PED. SIGNAL	4	20	100	80.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
PTZ CAMERA	1	65	100	65.0
VIDEO SYSTEM	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	-	-	-	-
TOTAL =				436.7

ENERGY COSTS TO:

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY: CONTACT: DOROTHY PROSEN
PHONE: (847) 816-5323
COMPANY: COMMONWEALTH EDISON
ACCOUNT NUMBER: ---



ILLUMINATED SIGN
(2 REQUIRED)

NOTE: THE SIGNS ARE DOUBLE SIDED.

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

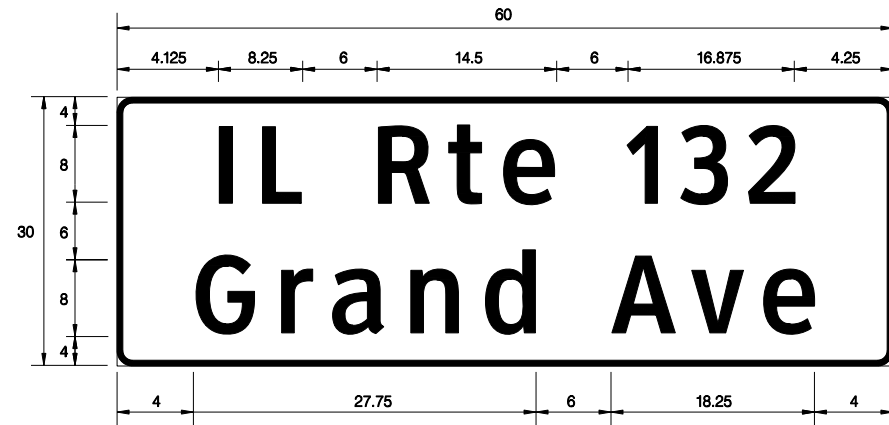
**CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND
EMERGENCY VEHICLE PREEMPTION SEQUENCE
ILLINOIS ROUTE 132 (GRAND AVE) AT SAND LAKE RD**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	228
CONTRACT NO. 60V55				

**TS 7070
EAGLE 7F**

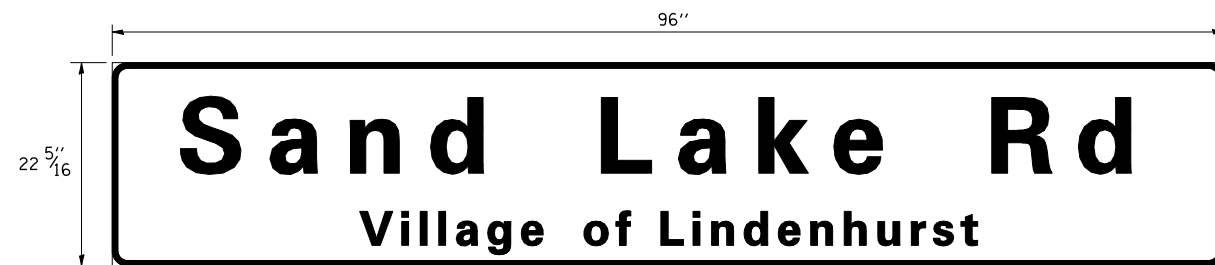
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PLOT DATE = 3/22/2017	CHECKED - PKG	REVISED -
	DATE - 3/21/2017	REVISED -

SIGN PANEL – TYPE 1 OR TYPE 2



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	12.50	2	ZZ	1

NOTE 1: FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGNS DETAIL.



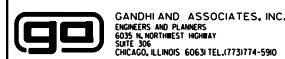
NOTE 2: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT.

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
SIGN PANEL - TYPE 2	SO FT	12.5
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	744
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	140
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	142
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	246
HANDHOLE	EACH	5
HEAVY-DUTY HANDHOLE	EACH	3
DOUBLE HANDHOLE	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	819
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	919
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1522
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1005
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	2097
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	92
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	802
CONCRETE FOUNDATION, TYPE A	FOOT	24
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	13
CONCRETE FOUNDATION, TYPE E 42-INCH DIAMETER	FOOT	21
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	3
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	4
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	6
INDUCTIVE LOOP DETECTOR	EACH	8
DETECTOR LOOP, TYPE I	FOOT	537
CONFIRMATION BEACON	EACH	1
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	4
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	4
REMOVE EXISTING DOUBLE HANDHOLE	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	6
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	161
RELOCATE SWITCH	EACH	2
LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	2
FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL)	EACH	1
SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	108
ELECTRIC CABLE IN CONDUIT, VIDEO, NO. 20 4 C	FOOT	108
PEDESTRIAN PUSH-BUTTON POST, TYPE A	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 56 FT. (SPECIAL)	EACH	1
TRAFFIC SIGNAL POST, 10 FOOT, (SPECIAL)	EACH	1
TRAFFIC SIGNAL POST, 16 FOOT, (SPECIAL)	EACH	4
TRAFFIC SIGNAL POST, 18 FOOT, (SPECIAL)	EACH	1
RELOCATE EXISTING ENCODER	EACH	2
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1
RELOCATE EXISTING REMOTE-CONTROLLED VIDEO SYSTEM	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 48 FT. (SPECIAL)	EACH	1

• 100% COST TO VILLAGE OF LINDENHURST

FILE NAME = K:\PROJECTS\Projects\2014\IL Rte 132 Murr Rd to Sand Lake Rd\Signals\127_IL RTE 132 @ SAND LAKE RD_CD_2.dgn



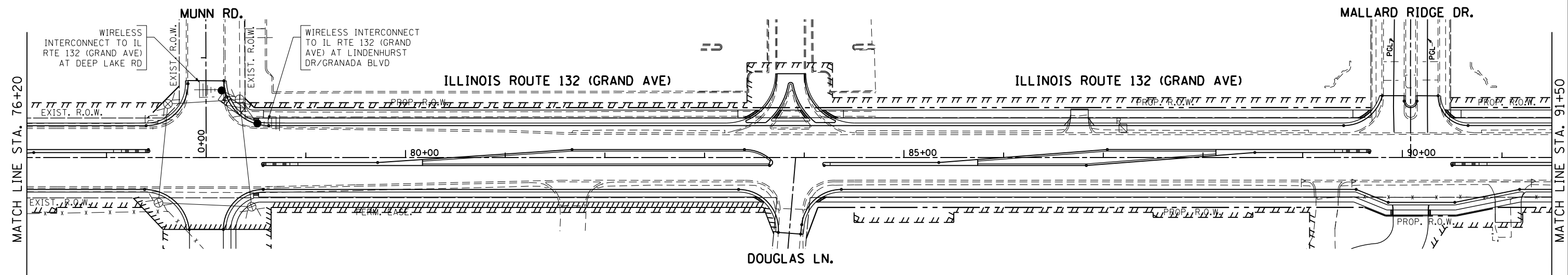
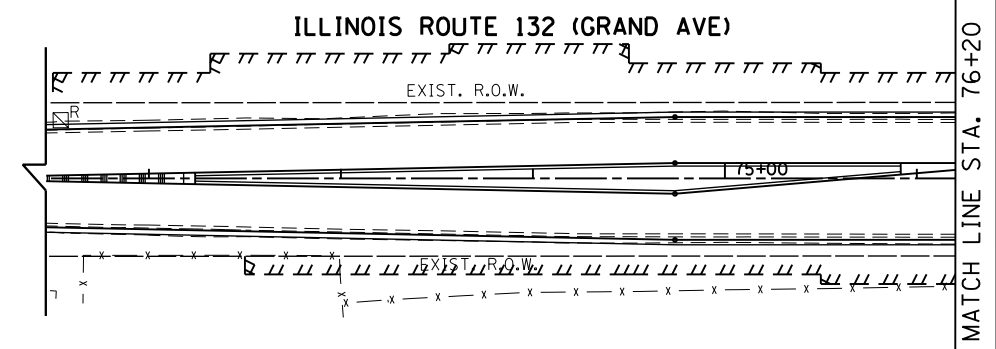
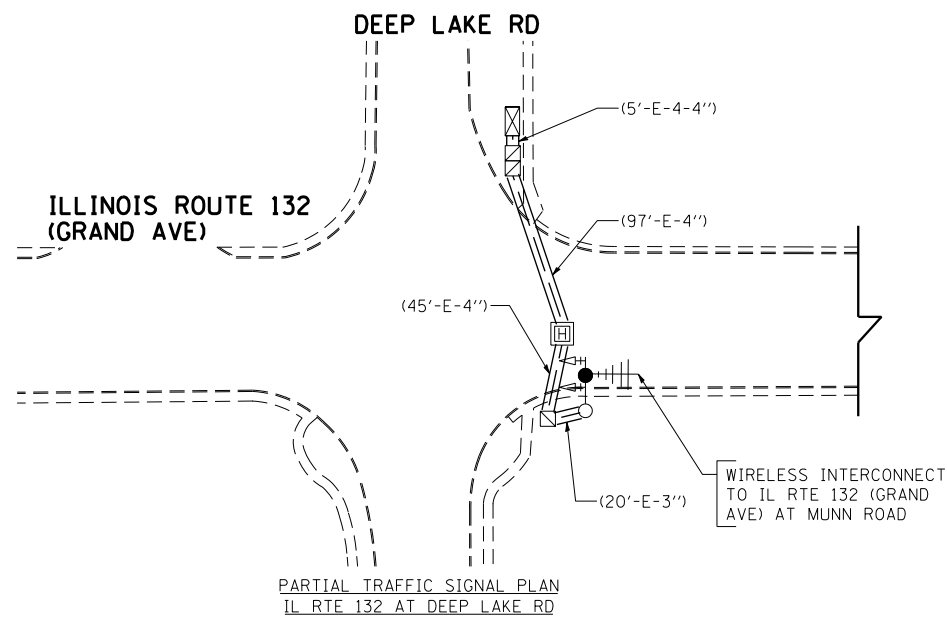
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PLOT DATE = 5/2/2017	DATE - 3/21/2017	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

MAST ARM MOUNTED STREET NAME SIGNS AND SCHEDULE OF QUANTITIES			
ILLINOIS ROUTE 132 (GRAND AVE) AT SAND LAKE RD.			
SCALE: N.T.S.	SHEET NO. OF SHEETS	STA. TO STA.	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	229
CONTRACT NO. 60V55			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	

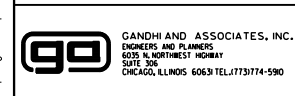
**TS 7070
EAGLE 7F**



NOTE 1: COST TO INSTALL WIRELESS INTERCONNECT AT THIS LOCATION (DEEP LAKE RD.) SHALL BE INCIDENTAL TO THE COST OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION AT IL RTE 132 (GRAND AVE) AT MUNN RD.

NOTE 2: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT.

FILE NAME = h:\projects\projects 2014\11 rte 132 munn rd to sand lake rd\signals\128.il rte 132_TEMP_INTERCONNECT.dgn



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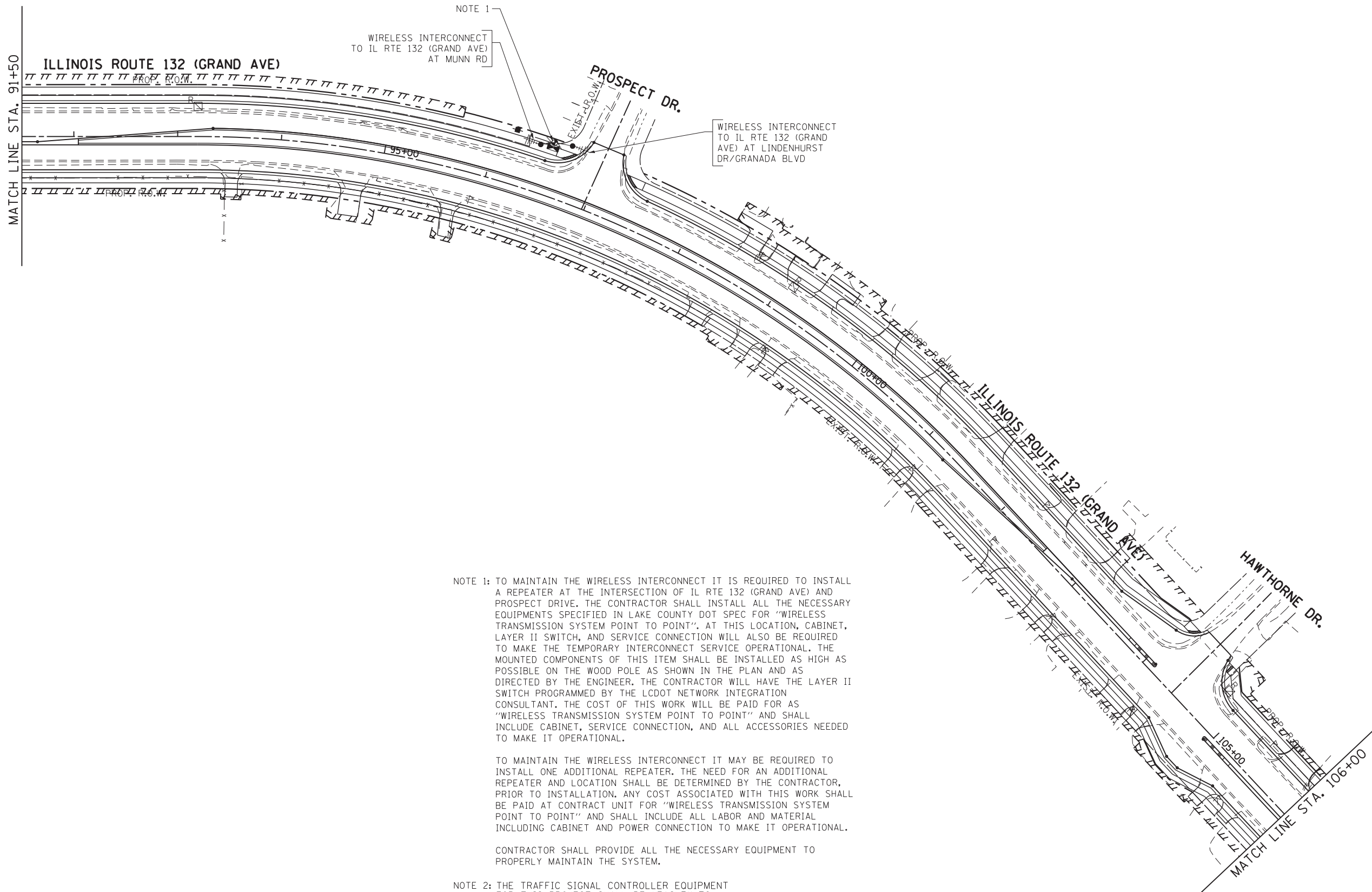
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY INTERCONNECT PLAN
ILLINOIS ROUTE 132 (GRAND AVE) FROM DEEP LAKE RD. TO
SAND LAKE RD. (SHEET 1 OF 4)**

SCALE: 1"=50' SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	230
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 60V55	

EAGLE 7F



NOTE 1
WIRELESS INTERCONNECT
TO IL RTE 132 (GRAND AVE)
AT MUNN RD

WIRELESS INTERCONNECT
TO IL RTE 132 (GRAND
AVE) AT LINDENHURST
DR/GRANADA BLVD

NOTE 1: TO MAINTAIN THE WIRELESS INTERCONNECT IT IS REQUIRED TO INSTALL A REPEATER AT THE INTERSECTION OF IL RTE 132 (GRAND AVE) AND PROSPECT DRIVE. THE CONTRACTOR SHALL INSTALL ALL THE NECESSARY EQUIPMENTS SPECIFIED IN LAKE COUNTY DOT SPEC FOR "WIRELESS TRANSMISSION SYSTEM POINT TO POINT". AT THIS LOCATION, CABINET, LAYER II SWITCH, AND SERVICE CONNECTION WILL ALSO BE REQUIRED TO MAKE THE TEMPORARY INTERCONNECT SERVICE OPERATIONAL. THE MOUNTED COMPONENTS OF THIS ITEM SHALL BE INSTALLED AS HIGH AS POSSIBLE ON THE WOOD POLE AS SHOWN IN THE PLAN AND AS DIRECTED BY THE ENGINEER. THE CONTRACTOR WILL HAVE THE LAYER II SWITCH PROGRAMMED BY THE LCDOT NETWORK INTEGRATION CONSULTANT. THE COST OF THIS WORK WILL BE PAID FOR AS "WIRELESS TRANSMISSION SYSTEM POINT TO POINT" AND SHALL INCLUDE CABINET, SERVICE CONNECTION, AND ALL ACCESSORIES NEEDED TO MAKE IT OPERATIONAL.

TO MAINTAIN THE WIRELESS INTERCONNECT IT MAY BE REQUIRED TO INSTALL ONE ADDITIONAL REPEATER. THE NEED FOR AN ADDITIONAL REPEATER AND LOCATION SHALL BE DETERMINED BY THE CONTRACTOR, PRIOR TO INSTALLATION. ANY COST ASSOCIATED WITH THIS WORK SHALL BE PAID AT CONTRACT UNIT FOR "WIRELESS TRANSMISSION SYSTEM POINT TO POINT" AND SHALL INCLUDE ALL LABOR AND MATERIAL INCLUDING CABINET AND POWER CONNECTION TO MAKE IT OPERATIONAL.

CONTRACTOR SHALL PROVIDE ALL THE NECESSARY EQUIPMENT TO PROPERLY MAINTAIN THE SYSTEM.

NOTE 2: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT AND SHALL HAVE ETHERNET PORT.

FILE NAME = H:\Projects\Projects 2014\11_rte 132_munn rd to sand lake rd\signals\129_IL RTE 132_TEMP_INTERCONNECT_2.dgn

GO GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 300
CHICAGO, ILLINOIS 60630 TEL: 773-774-5900

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	DRAWN - EA	REVISED -
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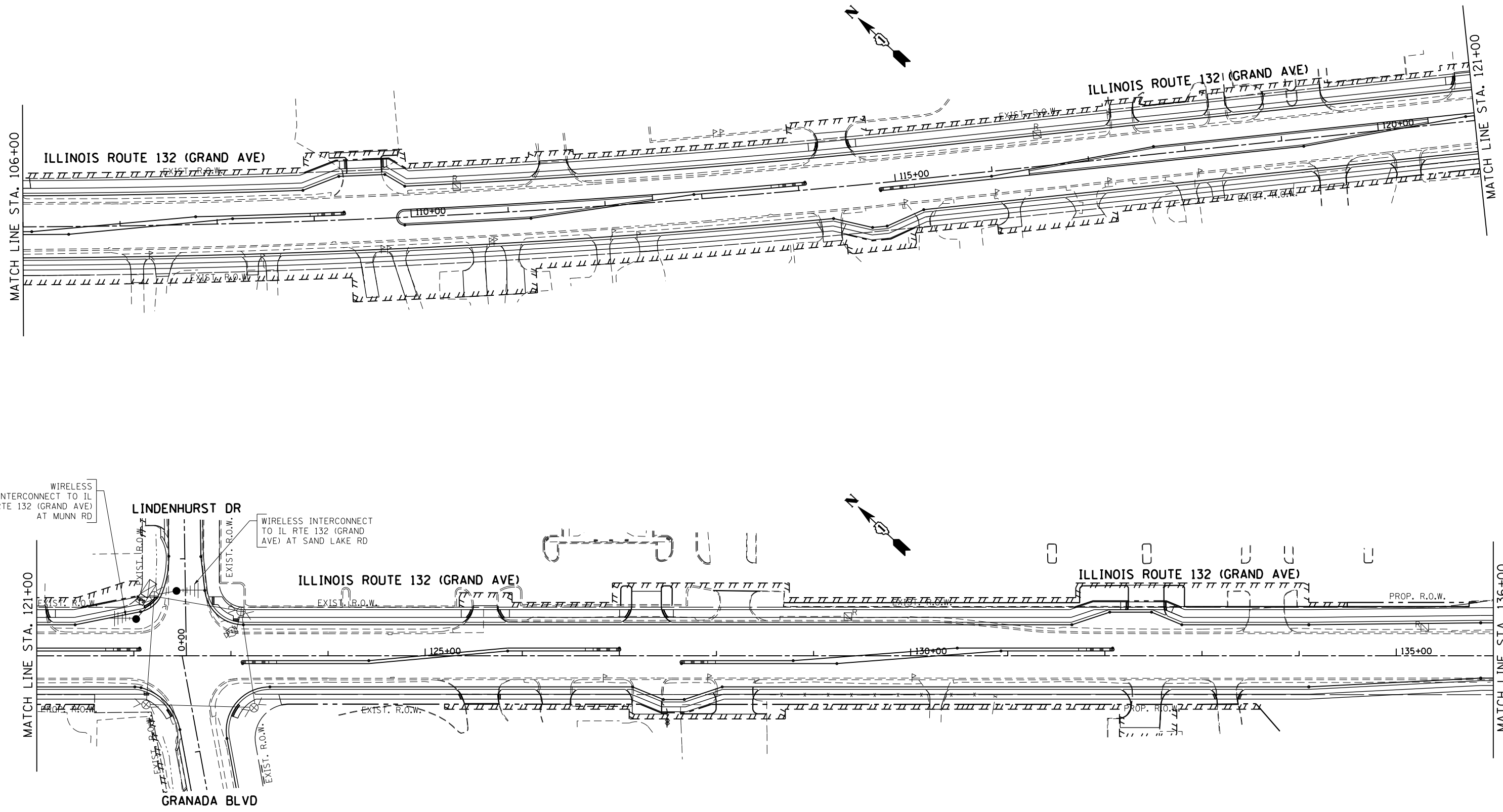
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY INTERCONNECT PLAN
ILLINOIS ROUTE 132 (GRAND AVE) FROM DEEP LAKE RD. TO
SAND LAKE RD. (SHEET 2 OF 4)**

SCALE: 1"=50' SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	231
CONTRACT NO. 60V55				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

EAGLE 7F



NOTE 1: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT.

FILE NAME = h:\projects\projects\2014\11_rte 132_munn rd to sand lake rd\signals\130_IL RTE 132_TEMP_INTERCONNECT_3.dgn



GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
5035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60630 TEL: (773) 774-5900

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

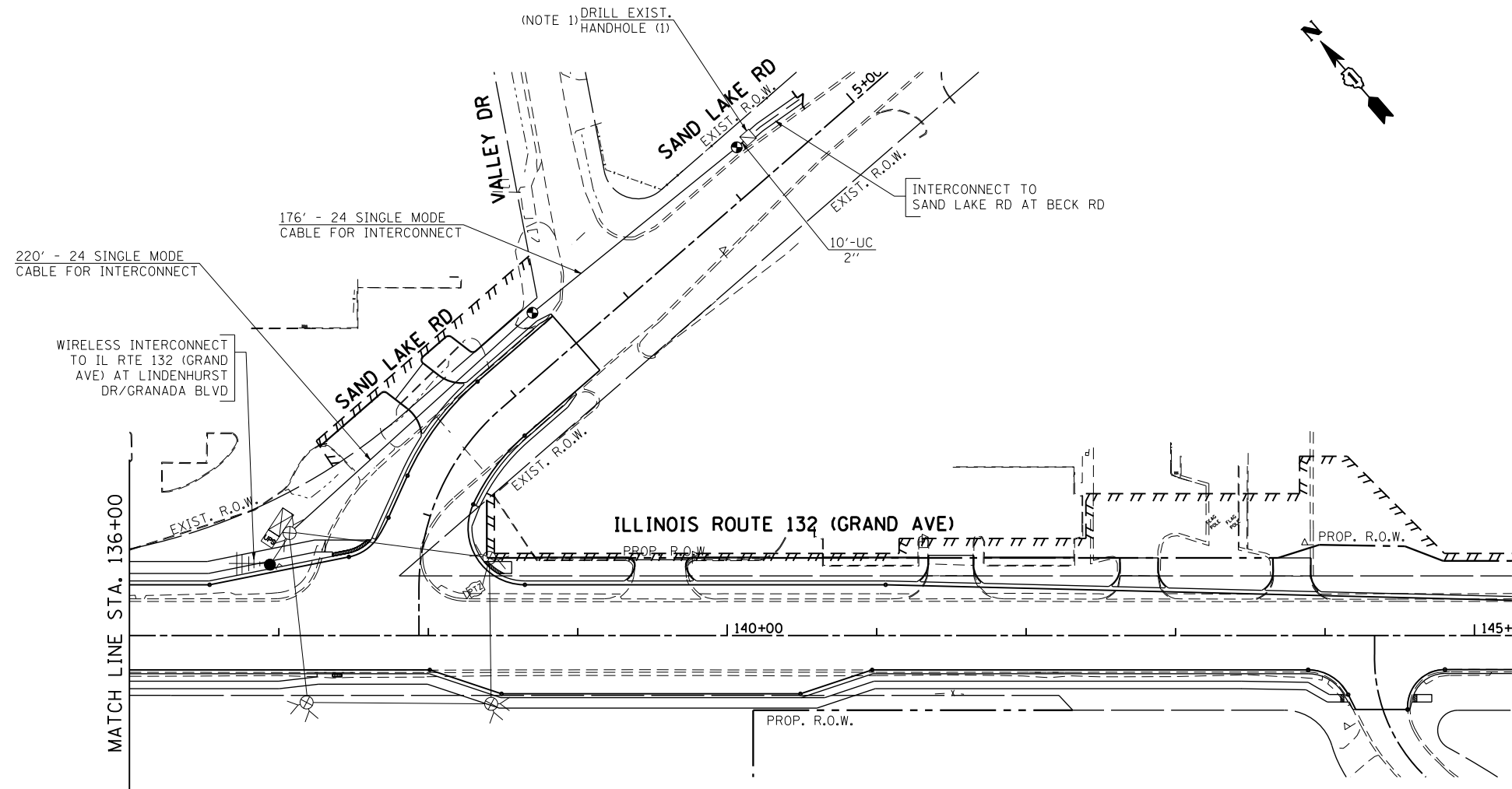
**TEMPORARY INTERCONNECT PLAN
ILLINOIS ROUTE 132 (GRAND AVE) FROM DEEP LAKE RD. TO
SAND LAKE RD. (SHEET 3 OF 4)**

SCALE: 1"=50' SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	232
CONTRACT NO. 60V55				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

EAGLE 7F

FILE NAME = K:\PROJECTS\Projects 2014\IL Rte 132 Munn Rd to Sand Lake Rd\SIGNALS\131\IL RTE 132-TEMP-INTERCONNECT.dgn



NOTE 1: CONDUIT SHALL BE ATTACHED TO THE WOOD POLE TO A HEIGHT OF 10FT. USE 24SM FIBER OPTIC CABLE BETWEEN IL 132 AND BECK ROAD AS TEMPORARY INTERCONNECT CABLE. IF NEEDED, ADDITIONAL FIBER OPTIC CABLE SHALL BE SPLICED TO THE EXISTING FIBER OPTIC CABLE. THE COST OF THE TEMPORARY INTERCONNECT WORK, COMPLETE, SHALL BE INCLUDED IN THE COST OF TEMPORARY TRAFFIC SIGNAL INSTALLATION WORK FOR THIS PROJECT.

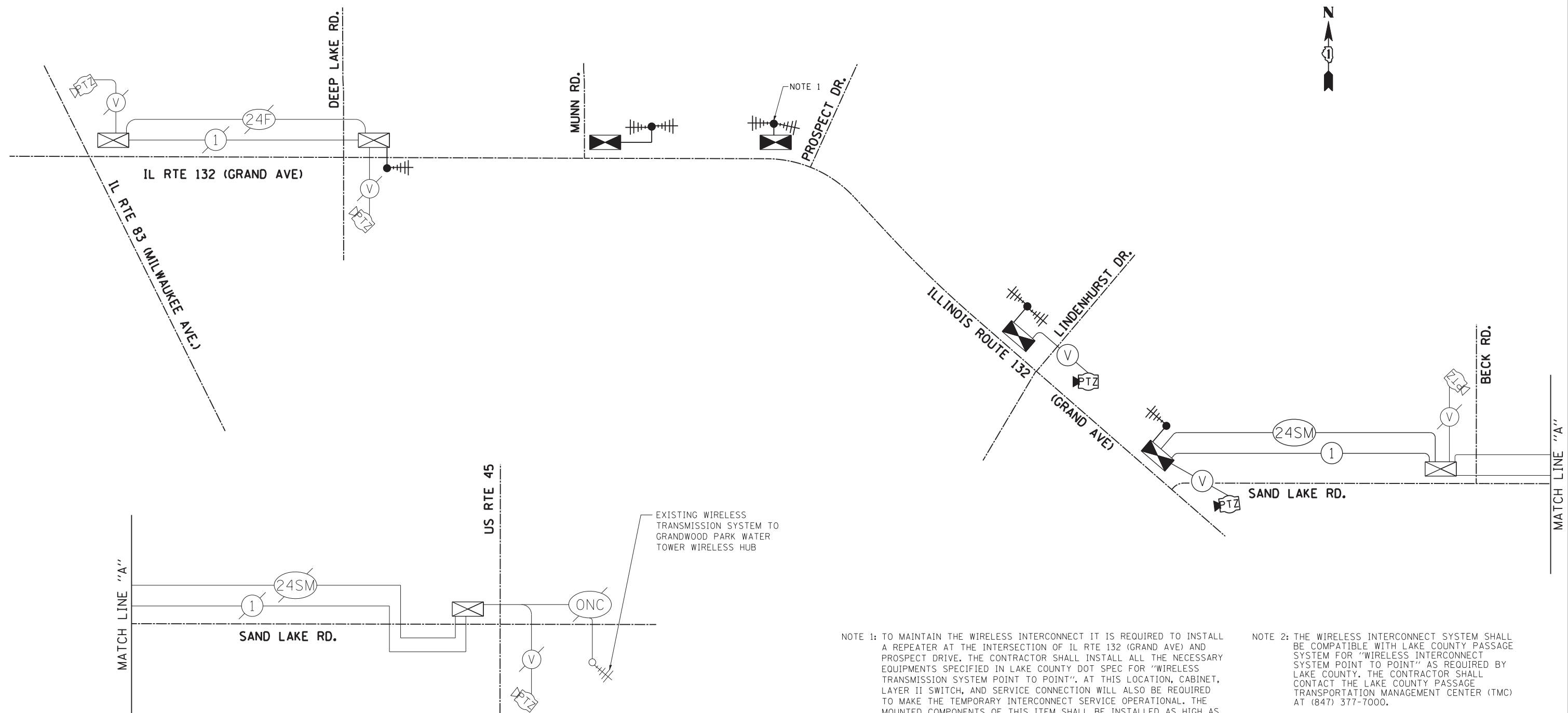
ALL SPLICES SHALL BE IN AN ABOVE GROUND ENCLOSURE MOUNTED ON A TEMPORARY POLE.

NOTE 2: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT.

EAGLE 7F

 GANDHI AND ASSOCIATES, INC. ENGINEERS AND PLANNERS 6035 N. NORTHWEST HIGHWAY SUITE 306 CHICAGO, ILLINOIS 60630 TEL: (773) 774-5900	USER NAME = \$USER\$	DESIGNED - PKG	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY INTERCONNECT PLAN ILLINOIS ROUTE 132 (GRAND AVE) FROM DEEP LAKE RD. TO SAND LAKE RD. (SHEET 4 OF 4)			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN - EA	CHECKED - PKG	REVISED -		541	A-WRS-2	LAKE	345	233			
PLOT SCALE = 50.0118" / IN.	DATE - 3/21/2017	REVISED -	REVISED -		SCALE: 1"=50' SHEET NO. OF SHEETS STA. TO STA.			CONTRACT NO. 60V55				
PLOT DATE = 5/3/2017	DATE - 3/21/2017	REVISED -	REVISED -		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							

FILE NAME = k:\projects\projects 2014\11_rte 132_munn rd to sand lake rd\signals\132_IL RTE 132 @ TEMP SCHEMATIC.dgn



EXISTING WIRELESS TRANSMISSION SYSTEM TO GRANDWOOD PARK WATER TOWER WIRELESS HUB

NOTE 1: TO MAINTAIN THE WIRELESS INTERCONNECT IT IS REQUIRED TO INSTALL A REPEATER AT THE INTERSECTION OF IL RTE 132 (GRAND AVE) AND PROSPECT DRIVE. THE CONTRACTOR SHALL INSTALL ALL THE NECESSARY EQUIPMENTS SPECIFIED IN LAKE COUNTY DOT SPEC FOR "WIRELESS TRANSMISSION SYSTEM POINT TO POINT". AT THIS LOCATION, CABINET, LAYER II SWITCH, AND SERVICE CONNECTION WILL ALSO BE REQUIRED TO MAKE THE TEMPORARY INTERCONNECT SERVICE OPERATIONAL. THE MOUNTED COMPONENTS OF THIS ITEM SHALL BE INSTALLED AS HIGH AS POSSIBLE ON THE WOOD POLE AS SHOWN IN THE PLAN AND AS DIRECTED BY THE ENGINEER. THE CONTRACTOR WILL HAVE THE LAYER II SWITCH PROGRAMMED BY THE LCDOT NETWORK INTEGRATION CONSULTANT. THE COST OF THIS WORK WILL BE PAID FOR AS "WIRELESS TRANSMISSION SYSTEM POINT TO POINT" AND SHALL INCLUDE CABINET, SERVICE CONNECTION, AND ALL ACCESSORIES NEEDED TO MAKE IT OPERATIONAL.

NOTE 2: THE WIRELESS INTERCONNECT SYSTEM SHALL BE COMPATIBLE WITH LAKE COUNTY PASSAGE SYSTEM FOR "WIRELESS INTERCONNECT SYSTEM POINT TO POINT" AS REQUIRED BY LAKE COUNTY. THE CONTRACTOR SHALL CONTACT THE LAKE COUNTY PASSAGE TRANSPORTATION MANAGEMENT CENTER (TMC) AT (847) 377-7000.

NOTE 3: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT AND SHALL HAVE ETHERNET PORT.

TO MAINTAIN THE WIRELESS INTERCONNECT IT MAY BE REQUIRED TO INSTALL ONE ADDITIONAL REPEATER. THE NEED FOR AN ADDITIONAL REPEATER AND LOCATION SHALL BE DETERMINED BY THE CONTRACTOR, PRIOR TO INSTALLATION. ANY COST ASSOCIATED WITH THIS WORK SHALL BE PAID AT CONTRACT UNIT FOR "WIRELESS TRANSMISSION SYSTEM POINT TO POINT" AND SHALL INCLUDE ALL LABOR AND MATERIAL INCLUDING CABINET AND POWER CONNECTION TO MAKE IT OPERATIONAL.

CONTRACTOR SHALL PROVIDE ALL THE NECESSARY EQUIPMENT TO PROPERLY MAINTAIN THE SYSTEM.

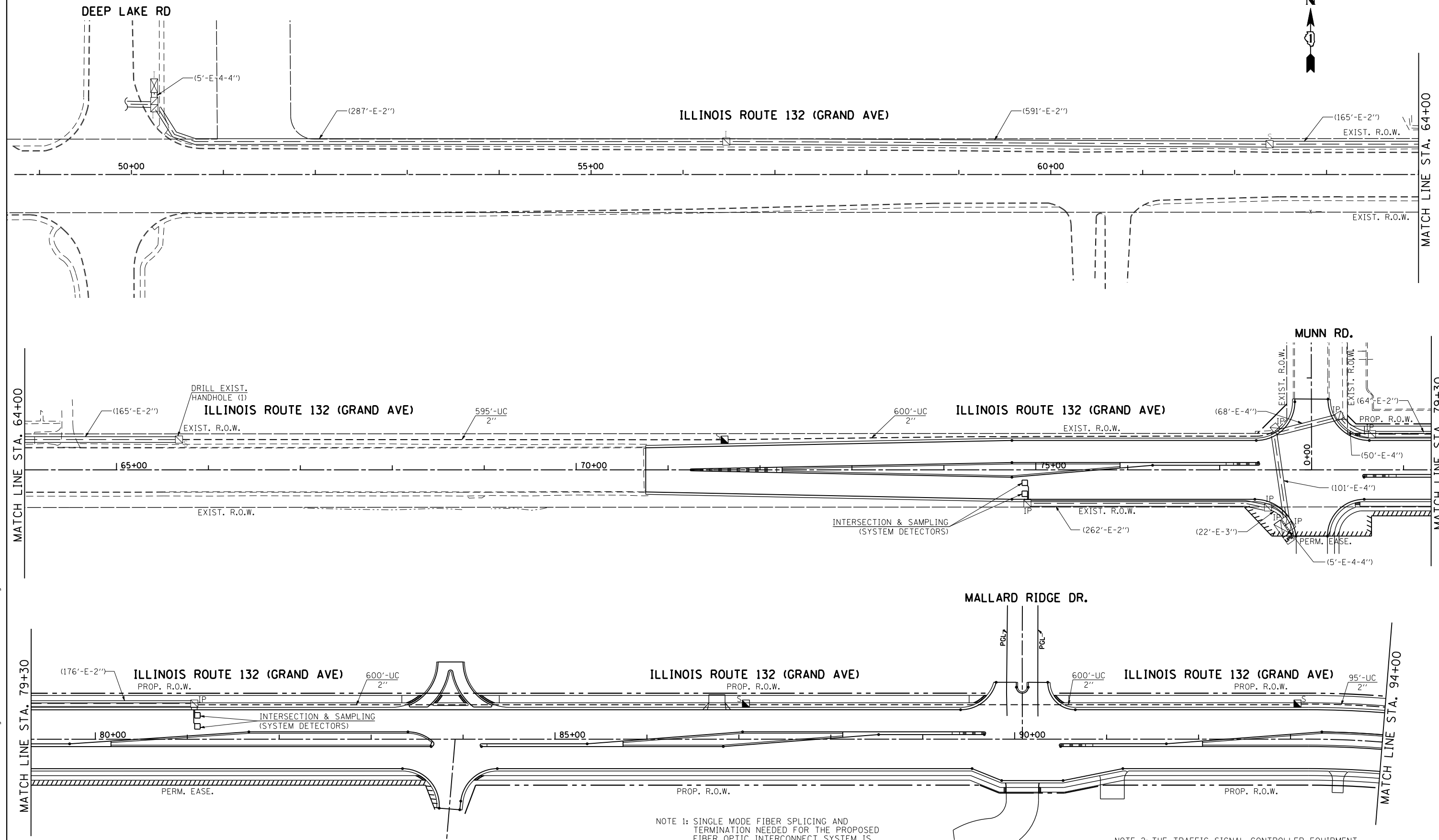
 GANDHI AND ASSOCIATES, INC. ENGINEERS AND PLANNERS 6035 N. NORTHWEST HIGHWAY SUITE 306 CHICAGO, ILLINOIS 60631 TEL: (773) 774-590	USER NAME = \$USER\$	DESIGNED - PKG	REVISED -	
	DRAWN - EA	REVISED -		
	PLOT SCALE = 50.0000' / IN.	CHECKED - PKG	REVISED -	
	PLOT DATE = 6/28/2017	DATE - 6/26/2017	REVISED -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TEMPORARY INTERCONNECT SCHEMATIC ILLINOIS ROUTE 132 (GRAND AVE) FROM DEEP LAKE RD. TO SAND LAKE RD.			
SCALE: N.T.S.	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	234
CONTRACT NO. 60V55				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

EAGLE 7F



NOTE 1: SINGLE MODE FIBER SPLICING AND TERMINATION NEEDED FOR THE PROPOSED FIBER OPTIC INTERCONNECT SYSTEM IS INCLUDED IN THE COST OF THE FIBER OPTIC INTERCONNECT CABLE AND NO SEPARATE PAYMENT SHALL BE MADE FOR THIS WORK.

NOTE 2: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT.

EAGLE 7F

FILE NAME: h:\projects\projects\2014\11_rte 132_munn rd to sand lake rd\signals\140_11 RTE 132_PROP_INTERCONNECT.dgn



GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 300
CHICAGO, ILLINOIS 60631 TEL: 773-774-5900

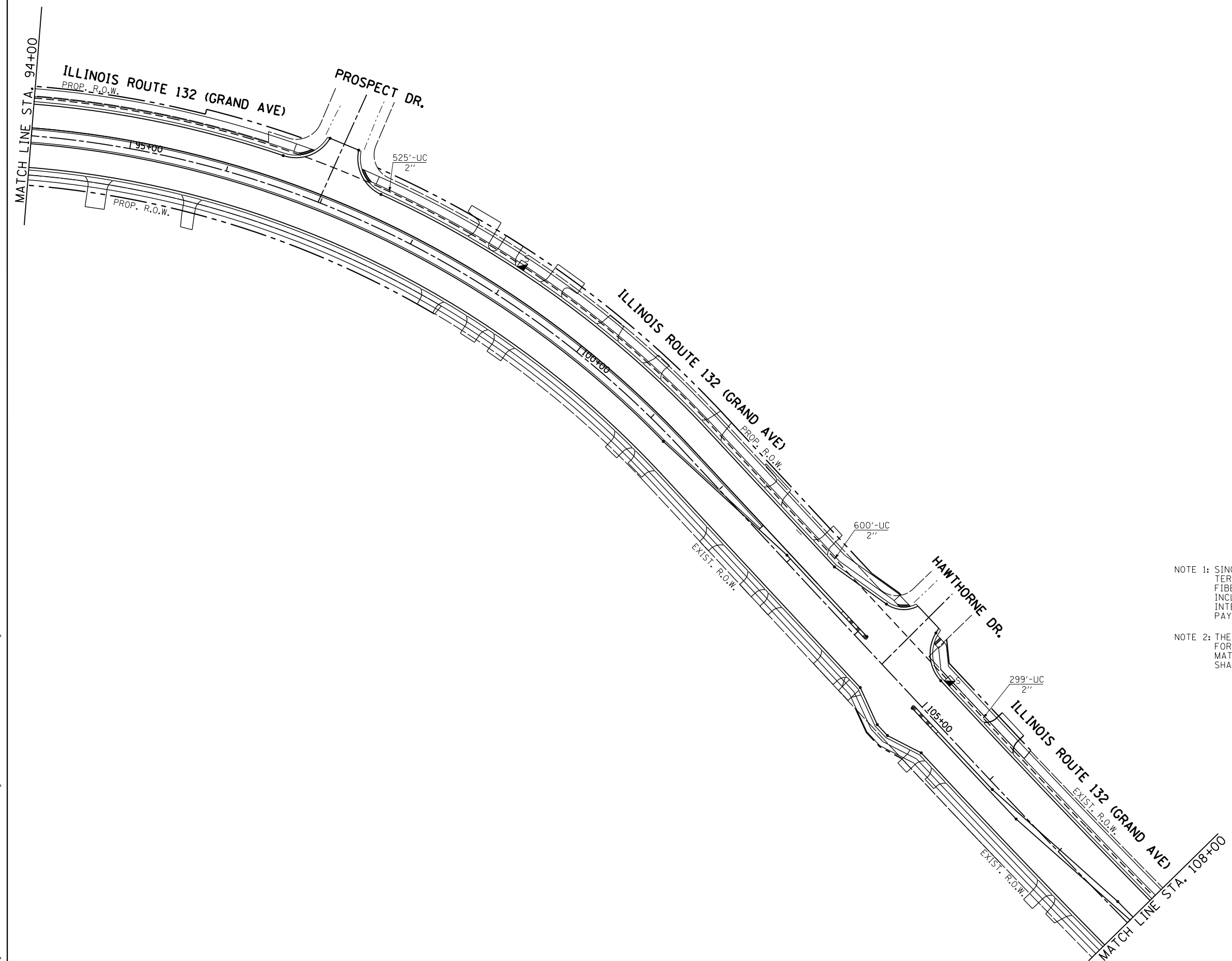
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	DRAWN - EA	REVISED -
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PLOT DATE = 3/22/2017	DATE - 3/21/2017	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT PLAN
ILLINOIS ROUTE 132 (GRAND AVE) FROM DEEP LAKE RD. TO
SAND LAKE RD. (SHEET 1 OF 4)**

SCALE: 1"=50' SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	235
CONTRACT NO. 60V55				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



NOTE 1: SINGLE MODE FIBER SPLICING AND TERMINATION NEEDED FOR THE PROPOSED FIBER OPTIC INTERCONNECT SYSTEM IS INCLUDED IN THE COST OF THE FIBER OPTIC INTERCONNECT CABLE AND NO SEPARATE PAYMENT SHALL BE MADE FOR THIS WORK.

NOTE 2: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT.

FILE NAME = H:\Projects\Projects 2014\11 rte 132 murr rd to sand lake rd\signals\11.11 IL RTE 132.PROP.INTERCONNECT.2.dgn



GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 300
CHICAGO, ILLINOIS 60630 TEL: 773-774-5900

USER NAME = \$USER\$	DESIGNED - PKG	REVISED -
	DRAWN - EA	REVISED -
PLOT SCALE = 50.0037' / IN.	CHECKED - PKG	REVISED -
PLOT DATE = 3/22/2017	DATE - 3/21/2017	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

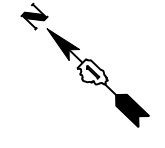
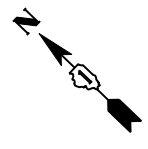
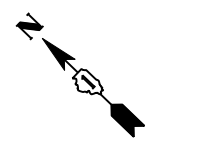
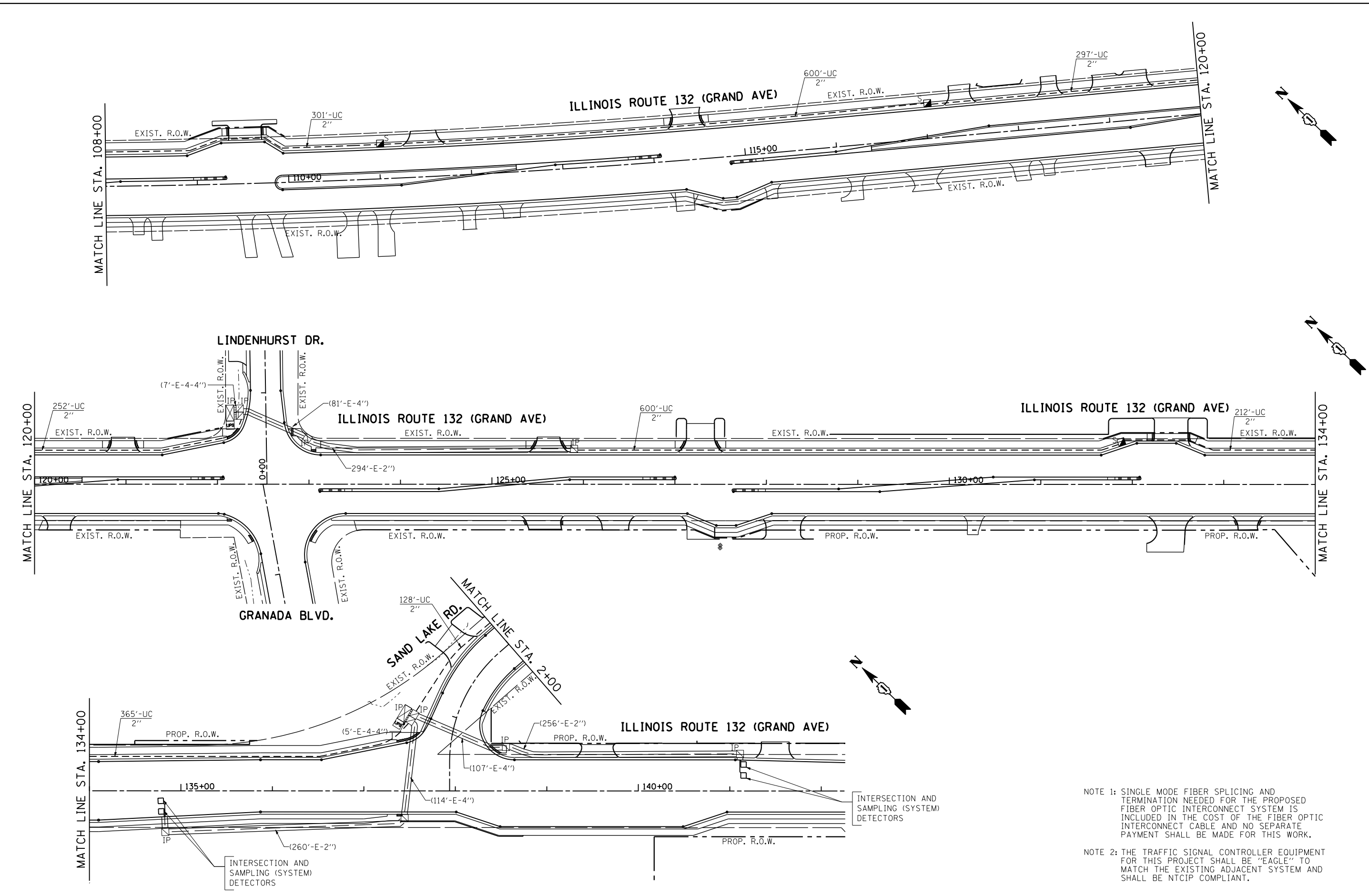
**INTERCONNECT PLAN
ILLINOIS ROUTE 132 (GRAND AVE) FROM DEEP LAKE RD. TO
SAND LAKE RD. (SHEET 2 OF 4)**

SCALE: 1"=50' SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	236
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 60V55	

EAGLE 7F

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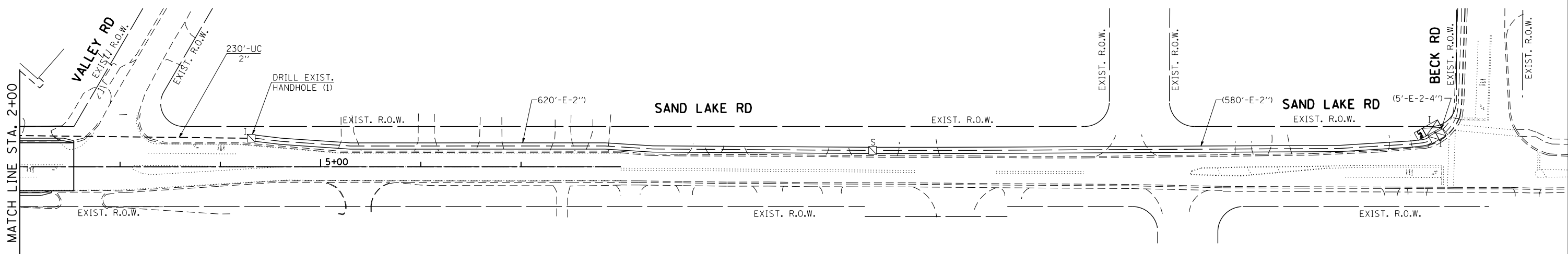


NOTE 1: SINGLE MODE FIBER SPLICING AND TERMINATION NEEDED FOR THE PROPOSED FIBER OPTIC INTERCONNECT SYSTEM IS INCLUDED IN THE COST OF THE FIBER OPTIC INTERCONNECT CABLE AND NO SEPARATE PAYMENT SHALL BE MADE FOR THIS WORK.

NOTE 2: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT.

EAGLE 7F

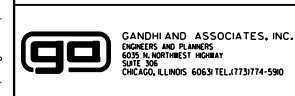
 GANDHI AND ASSOCIATES, INC. ENGINEERS AND PLANNERS 6035 N. NORTHWEST HIGHWAY SUITE 300 CHICAGO, ILLINOIS 60630 TEL: 773.774.5590	USER NAME = \$USER\$	DESIGNED - PKG	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INTERCONNECT PLAN ILLINOIS ROUTE 132 (GRAND AVE) FROM DEEP LAKE RD. TO SAND LAKE RD. (SHEET 3 OF 4)			F.A.P. RTE. 541	SECTION A-WRS-2	COUNTY LAKE	TOTAL SHEETS 345	SHEET NO. 237
	PLOT SCALE = 50.0037' / IN.	CHECKED - PKG	REVISED -		SCALE: 1"=50'	SHEET NO.	OF SHEETS	STA.	TO STA.	CONTRACT NO. 60V55		
	PLOT DATE = 3/22/2017	DATE - 3/21/2017	REVISED -		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							



NOTE 1: SINGLE MODE FIBER SPLICING AND TERMINATION NEEDED FOR THE PROPOSED FIBER OPTIC INTERCONNECT SYSTEM IS INCLUDED IN THE COST OF THE FIBER OPTIC INTERCONNECT CABLE AND NO SEPARATE PAYMENT SHALL BE MADE FOR THIS WORK.

NOTE 2: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT.

FILE NAME = h:\projects\projects 2014\11 rte 132 munn rd to sand lake rd\signals\142.il RTE 132-PROP_INTERCONNECT_4.dgn



GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 300
CHICAGO, ILLINOIS 60630 TEL: 773-774-5900

USER NAME = \$USER\$	DESIGNED - PKG	REVISED -
	DRAWN - EA	REVISED -
PLOT SCALE = 50.0037' / IN.	CHECKED - PKG	REVISED -
PLOT DATE = 3/22/2017	DATE - 3/21/2017	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

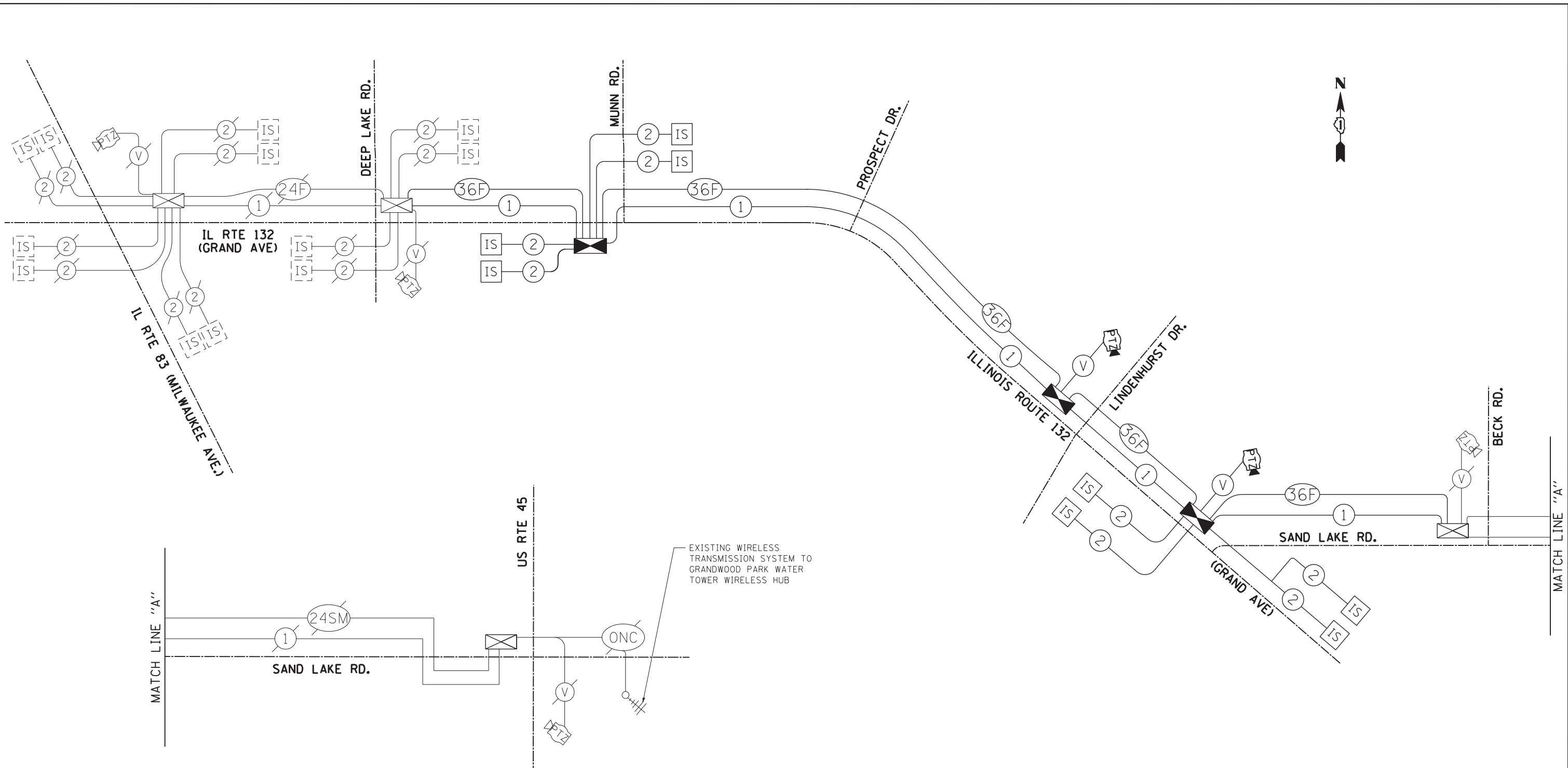
**INTERCONNECT PLAN
ILLINOIS ROUTE 132 (GRAND AVE) FROM DEEP LAKE RD. TO
SAND LAKE RD. (SHEET 4 OF 4)**

SCALE: 1"=50' SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	238
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 60V55	

EAGLE 7F

FILE NAME = k:\projects\projects 2014\1_rte 132 munn rd to sand lake rd\signals\13.IL RTE 132 @ PROP. SCHEMATIC.dgn



SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	6899
HANDHOLE	EACH	8
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2
ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1C	FOOT	10514
DRILL EXISTING HANDHOLE	EACH	2
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	4998
REMOVE EXISTING HANDHOLE	EACH	9
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	10618
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	3
* WIRELESS TRANSMISSION SYSTEM POINT TO POINT	EACH	5
* OUTDOOR RATED NETWORK CABLE	FOOT	570

* FOR TEMPORARY INTERCONNECT

NOTE 1: SINGLE MODE FIBER SPLICING AND TERMINATION NEEDED FOR THE PROPOSED FIBER OPTIC INTERCONNECT SYSTEM IS INCLUDED IN THE COST OF THE FIBER OPTIC INTERCONNECT CABLE AND NO SEPARATE PAYMENT SHALL BE MADE FOR THIS WORK.

NOTE 2: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP COMPLIANT.



USER NAME = #USER*	DESIGNED - PKG	REVISED -
PLOT SCALE = 50.0149 "/ IN.	DRAWN - EA	REVISED -
PLOT DATE = 6/28/2017	CHECKED - PKG	REVISED -
	DATE - 6/26/2017	REVISED -

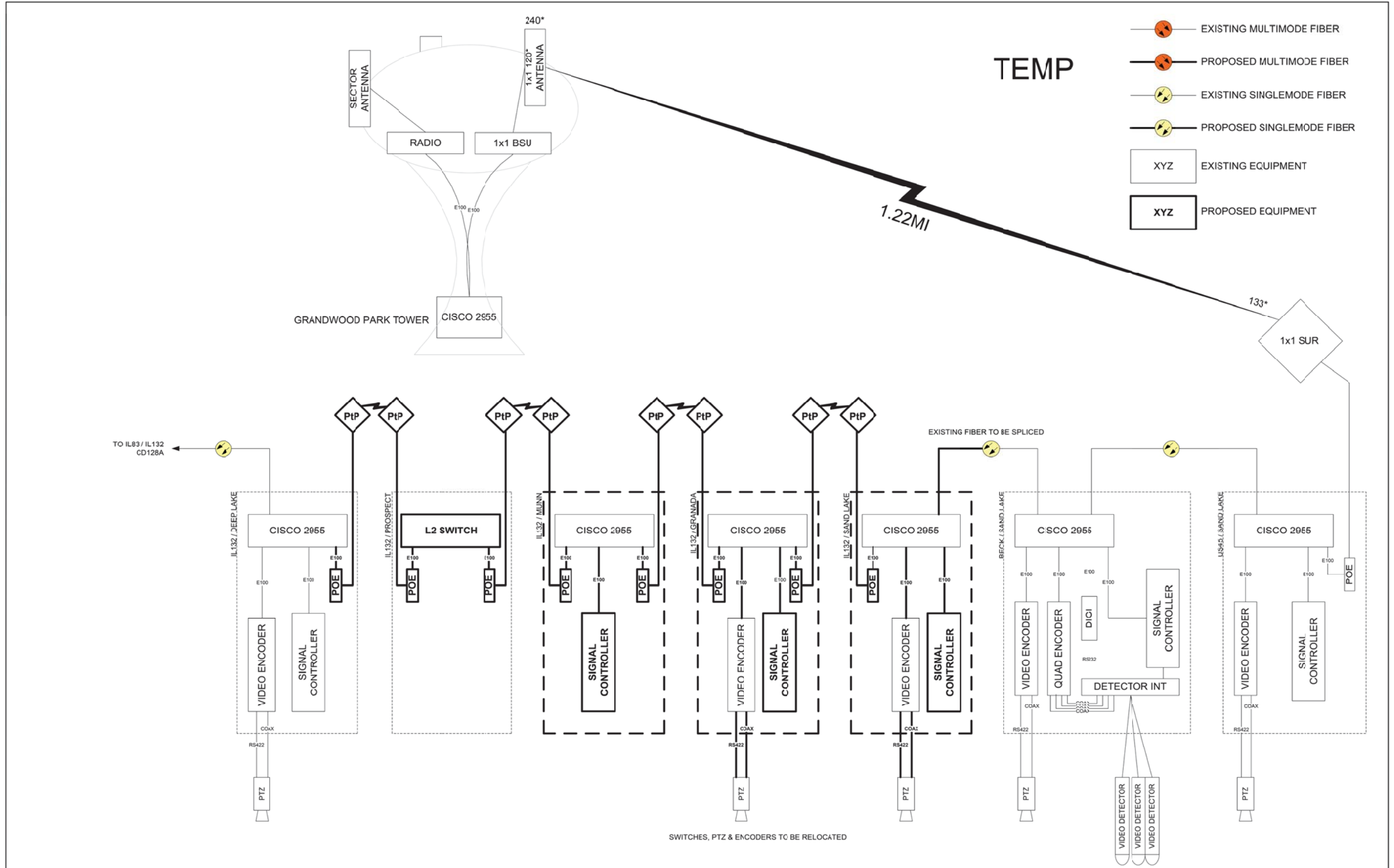
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT SCHEMATIC
ILLINOIS ROUTE 132 (GRAND AVE) FROM DEEP LAKE RD.
TO SAND LAKE RD.**

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	239
CONTRACT NO. 60V55				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

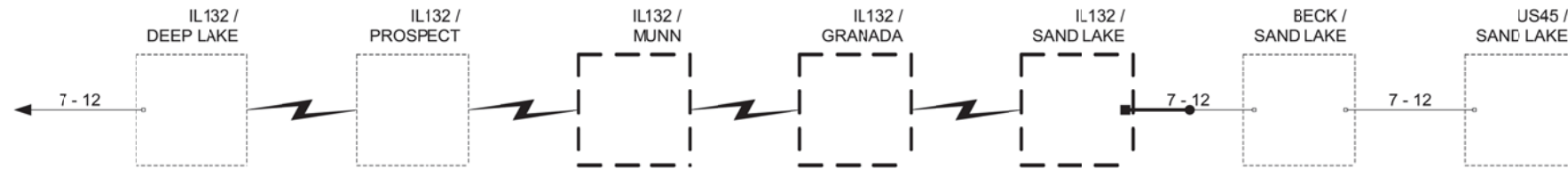
EAGLE 7F



DESIGNED - DG	REvised -	LAKE COUNTY DIVISION OF TRANSPORTATION	128B IL83 / IL132 TEMP		ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
DRAWN - DG	REvised -		SCALE N/A					1	
CHECKED - DG	REvised -								
DATE 2017/3/21	REvised -								

FILE NAME = K:\PROJECTS\Projects 2017\IL Rte 132 Nunn Rd to Sand Lake Rd\Signal\14_PASRADE_SCHEMATIC.Ldgn

	USER NAME : #USER* DESIGNED - PKG DRAWN - EA CHECKED - PKG DATE - 6/26/2017	REvised - REvised - REvised - REvised -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	128B IL83 / IL 132 TEMP	F.A.P. RTE. 541 SECTION A-WRS-2 COUNTY LAKE TOTAL SHEETS 345 SHEET NO. 239A CONTRACT NO. 60V55 FED. ROAD DIST. NO. [] ILLINOIS FED. AID PROJECT
	PLOT SCALE : 20.0060' / in. PLOT DATE : 6/26/2017		SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.		
	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				

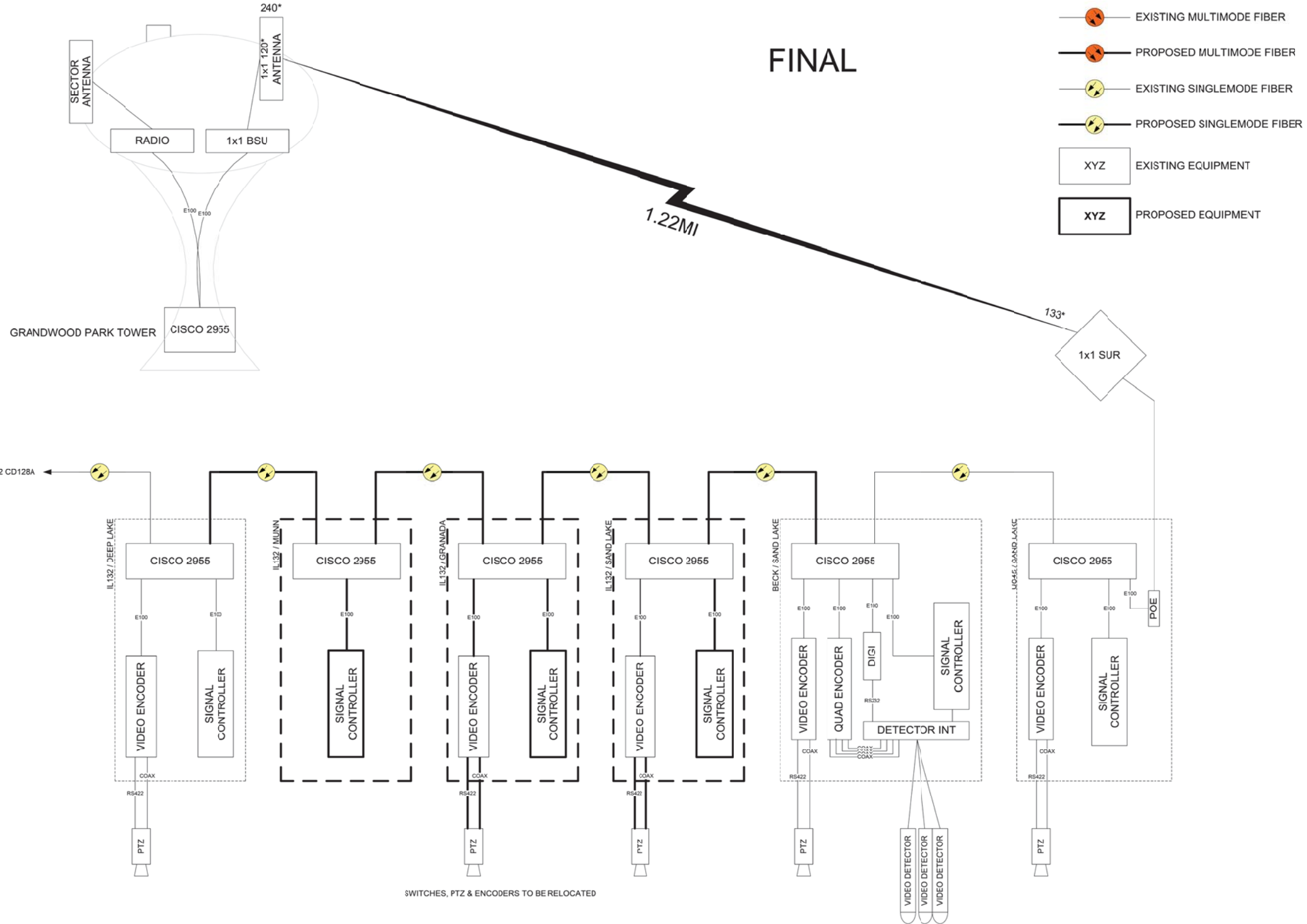


TEMP

- EXISTING CONNECTOR / EXISTING FIBER
- NEW CONNECTOR / EXISTING FIBER
- EXISTING FUSION SPLICE / EXISTING FIBER
- NEW FUSION SPLICE / EXISTING FIBER
- NEW CONNECTOR / NEW FIBER
- NEW FUSION SPLICE / NEW FIBER

	DESIGNED - DG	REVISIONS		LAKE COUNTY DIVISION OF TRANSPORTATION	FIBER SPLICING DIAGRAM IL132 from SAND LAKE to DEEP LAKE TEMP		ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
	DRAWN - DG	REVISIONS			SCALE N/A						1
	CHECKED - DG	REVISIONS									
	DATE 2017/03/21	REVISIONS									

FILE NAME = K:\PROJECTS\Projects 2017\IL Rte 132 Munn Rd to Sand Lake Rd\Signal\145_PASSAGE_SCHEMATIC_2.dgn



DESIGNED - DG	REVISED -	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
DRAWN - DG	REVISED -					1
CHECKED - DG	REVISED -					
DATE 2017/3/21	REVISED -					

LAKE COUNTY
DIVISION OF TRANSPORTATION

128B
IL83 / IL132 FINAL

SCALE N/A

FILE NAME = K:\PROJECTS\Projects\2017\IL Rte 132 Nunn Rd to Sand Lake Rd\Signal\146_PASSAGE_SCHEMATIC.dgn



GANSHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
SUITE 200 NORTHWEST HIGHWAY
CHICAGO, ILLINOIS 60631 TEL: 773-774-5900

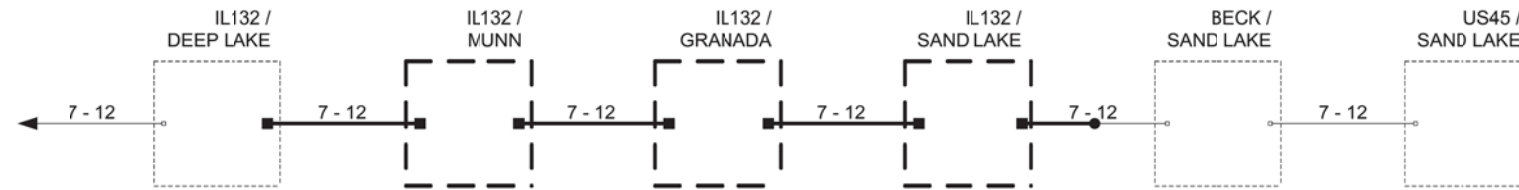
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PLOT DATE : 6/26/2017	DATE - 6/26/2017	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCALE: N.T.S.	SHEET NO.	OF	SHEETS	STA.	TO STA.

**128B
IL83 / IL132 FINAL**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	239C
CONTRACT NO. 60V55				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				



FINAL

- EXISTING CONNECTOR / EXISTING FIBER
- NEW CONNECTOR / EXISTING FIBER
- EXISTING FUSION SPLICE / EXISTING FIBER
- NEW FUSION SPLICE / EXISTING FIBER
- NEW CONNECTOR / NEW FIBER
- NEW FUSION SPLICE / NEW FIBER

	DESIGNED - DG	REVISED -	LAKE COUNTY DIVISION OF TRANSPORTATION	FIBER SPLICING DIAGRAM IL132 from SAND LAKE to DEEP LAKE FINAL		ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
	DRAWN - DG	REVISED -		SCALE N/A					1	
	CHECKED - DG	REVISED -								
	DATE 2017/03/21	REVISED -								

FILE NAME = K:\PROJECTS\Projects 2017\IL 132 Munn Rd to Sand Lake Rd\Signal\117_PASSAGE_SCHEMATIC.dgn

Bench Mark: Cut "□" in Traffic Signal Controller Foundation.
 Located Along IL. Rte. 132 Near -Sand Lake Road
 at Sta. 137+05 LT. Elev. = 770.75

Existing Structure: None

Construction will be completed utilizing staged construction
 as part of IL Rte. 132 Roadway Construction

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design
 Specifications 6th Edition with 2012 Interims

DESIGN STRESSES

FIELD UNITS

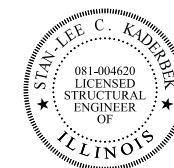
$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)

INDEX OF SHEETS

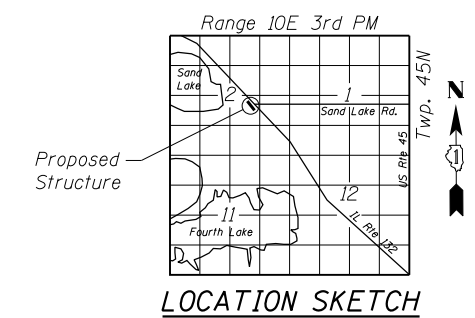
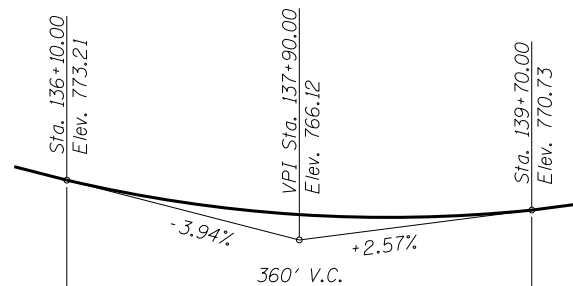
- SA-1. General Plan & Elevation
- SA-2. Wall Plan & Elevation-1
- SA-3. Wall Plan & Elevation-2
- SA-4. Wall Details
- SA-5. Typical Sections
- SA-6. Chain Link Fence Details
- SA-7. Architectural Finish Details
- SA-8. Boring Logs 1
- SA-9. Boring Logs 2

TOTAL BILL OF MATERIAL

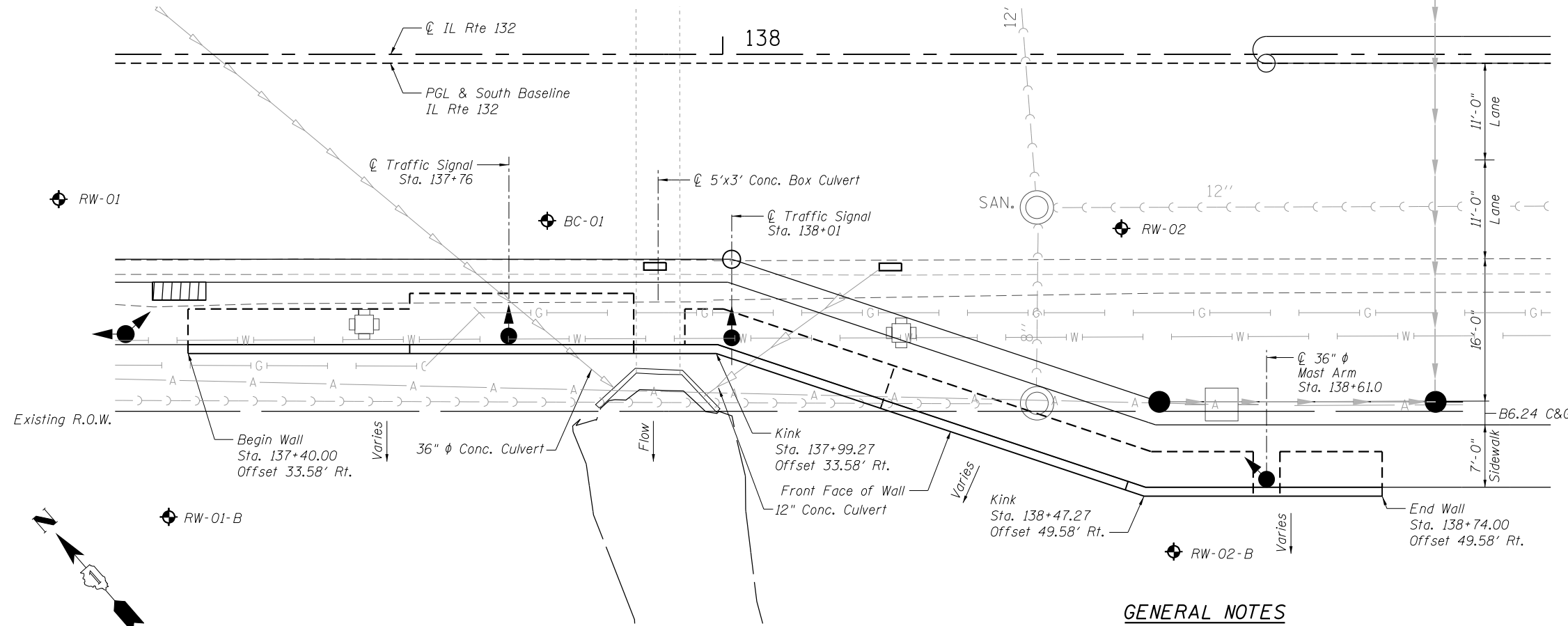
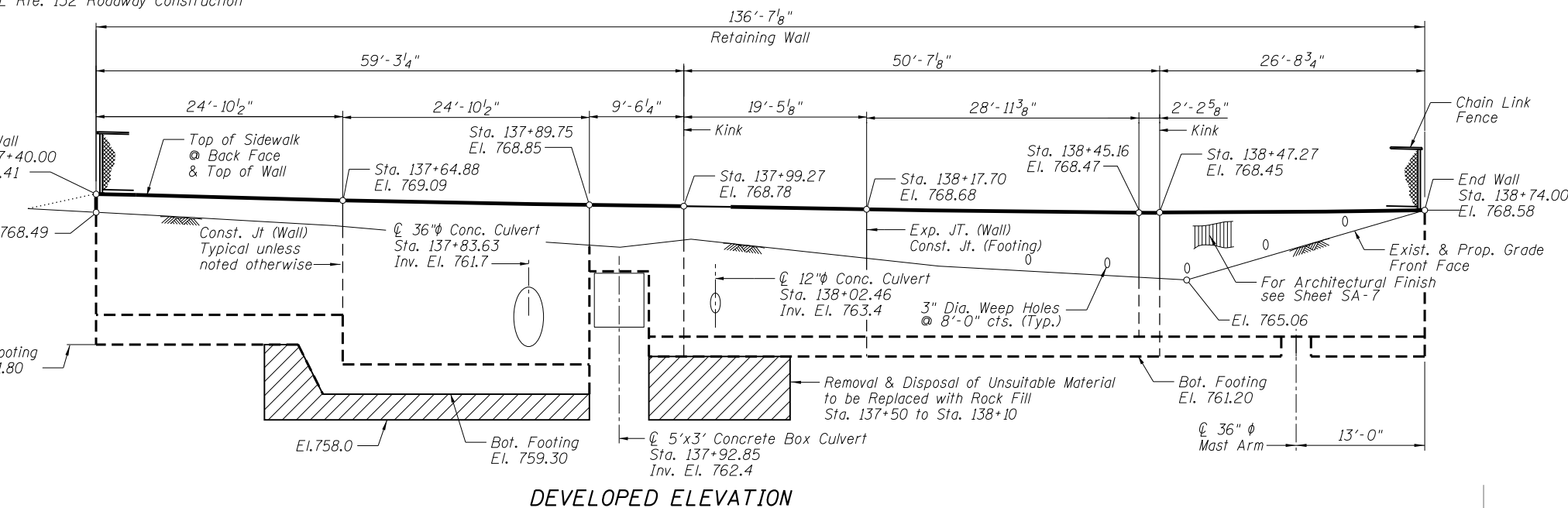
ITEM	UNIT	TOTAL
Removal and Disposal of Unsuitable Material	Cu. Yd.	31
Structure Excavation	Cu. Yd.	273
Concrete Structures	Cu. Yd.	78.7
Form Liner Textured Surface	Sq. Ft.	268
Reinforcement Bars, Epoxy Coated	Pound	9,870
Geocomposite Wall Drain	Sq. Yd.	23
Granular Backfill for Structures	Cu. Yd.	31
Chain Link Fence, 4' Attached to Structure	Foot	137
Rock Fill	Cu. Yd.	31



Signature: *[Signature]* Date: March 20, 2017
 November 30, 2018
 Expires



GENERAL PLAN AND ELEVATION
IL RTE 132 FAP RTE 541
SECTION A-WRS-2
LAKE COUNTY
STA. 137+40.00 TO STA. 138+74.00
SN 049-W085



GENERAL NOTES

- Offsets are measured from the \odot IL Rte. 132 to the front face of the wall.
- Reinforcement Bars designated (E) shall be epoxy coated.
- Resolution of conflicts with existing utilities to be determined.

PLAN

FILE NAME = P:\2015\0549\DOT D1 IL 132 Restoring Walls - J.J. Benes\Drawings\Wall 132\W085\W085-01-SA01-GPE.dgn



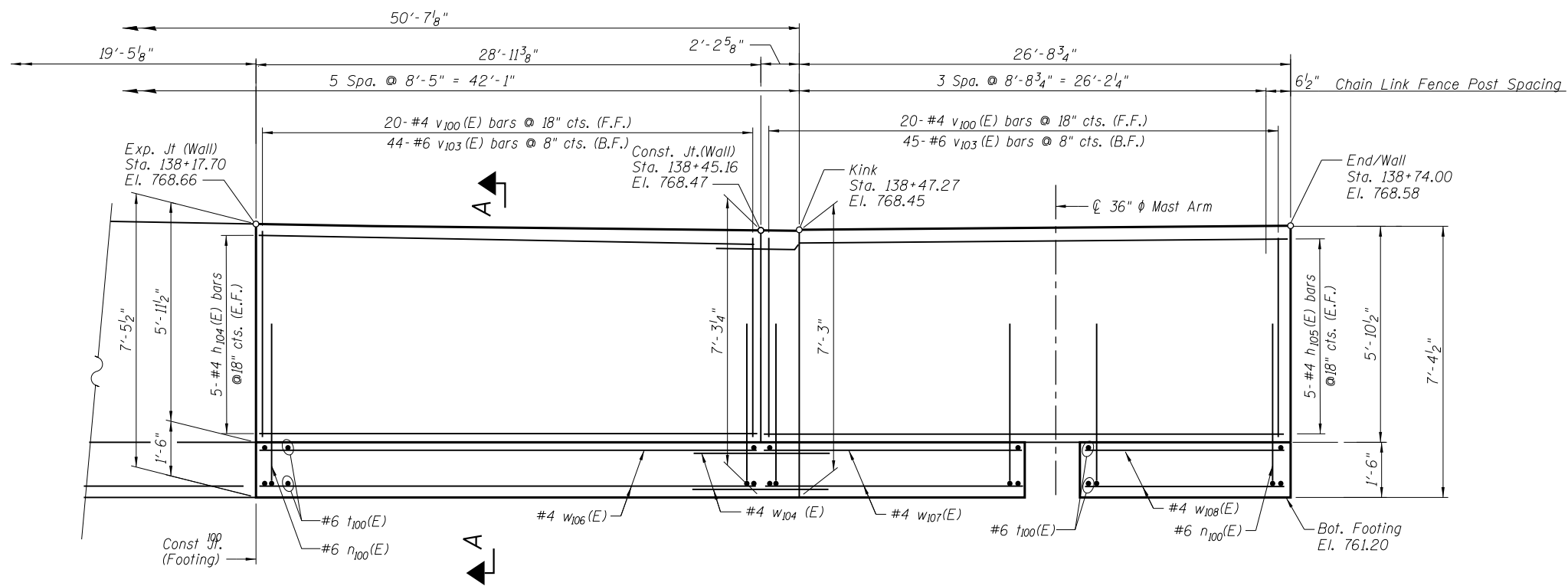
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PLOT DATE = 3/20/2017	DRAWN - TCS	REVISED -
	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

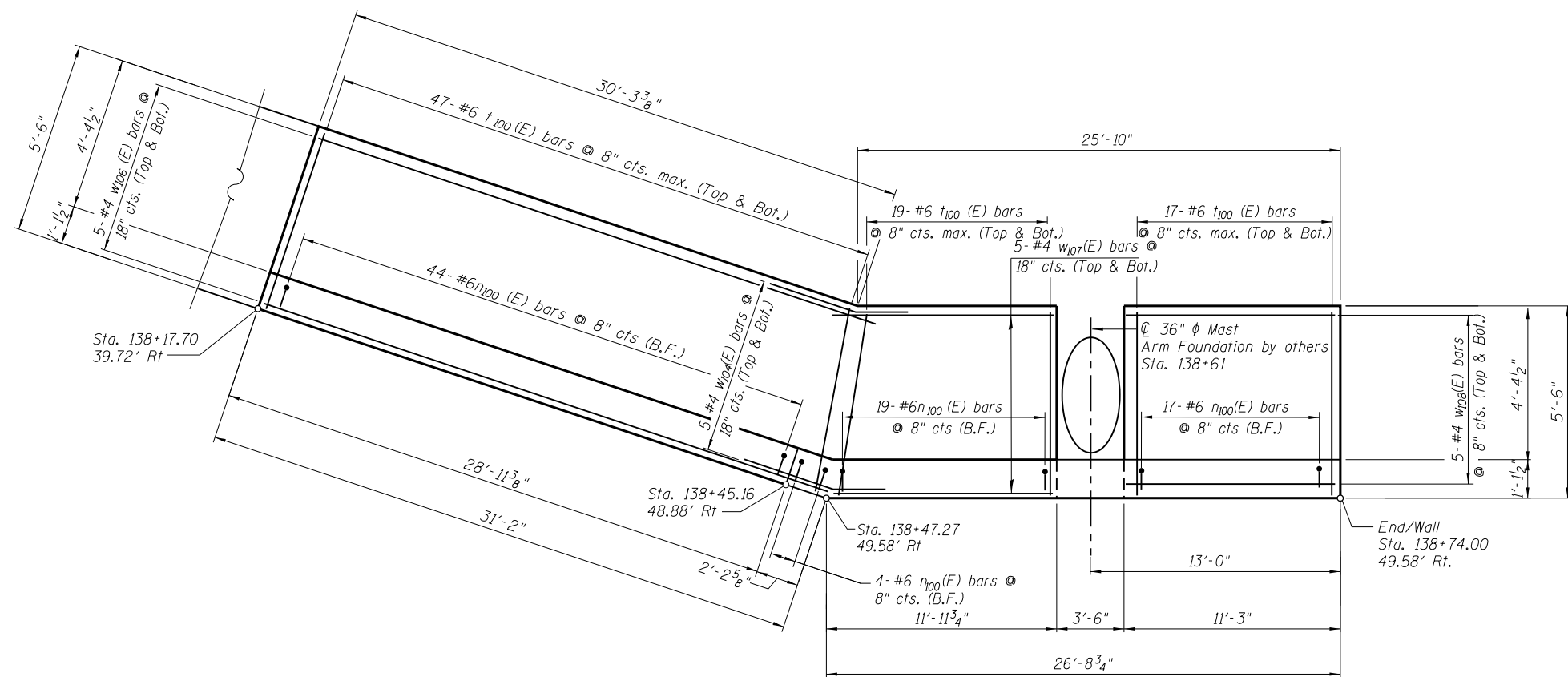
GENERAL PLAN & ELEVATION
STA. 137+40.00 TO STA. 138+74.00 SN 049-W085

SHEET NO. SA-1 OF SA-9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	240
CONTRACT NO. 60V55				
ILLINOIS FED. AID PROJECT				



DEVELOPED ELEVATION



FOOTING PLAN

Notes:
 Minimum lap for #4 bar is 2'-11", #6 bar is 4'-4".
 See Sheet SA-4 for Section A-A, Section B-B, Details and Bill of Material.

FILE NAME = P:\2015\0549 IDOT DI IL 132 Restoring Walls - J.J. Benes\Drawings\Wall 1150\W085\RM1-SA03-WPE2.dgn



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PLOT DATE = 3/20/2017	DRAWN - TCS	REVISED -
	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

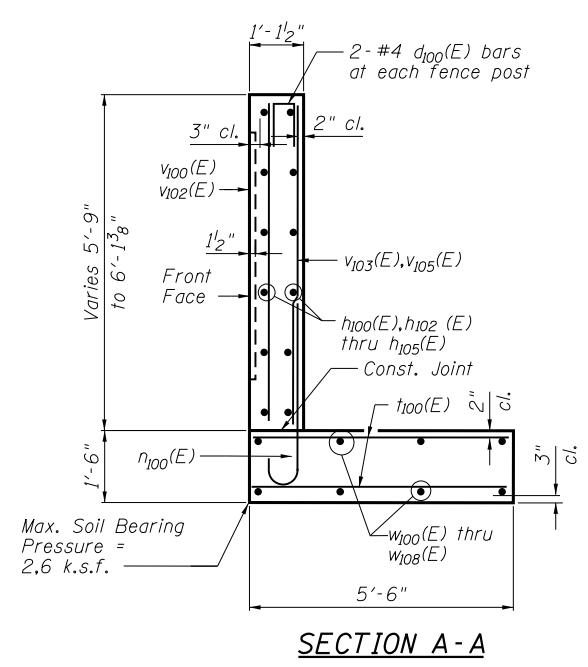
WALL PLAN & ELEVATION - 2
 STA. 137 + 40.00 TO STA. 138 + 74.00 SN 049-W085

SHEET NO. SA-3 OF SA-9 SHEETS

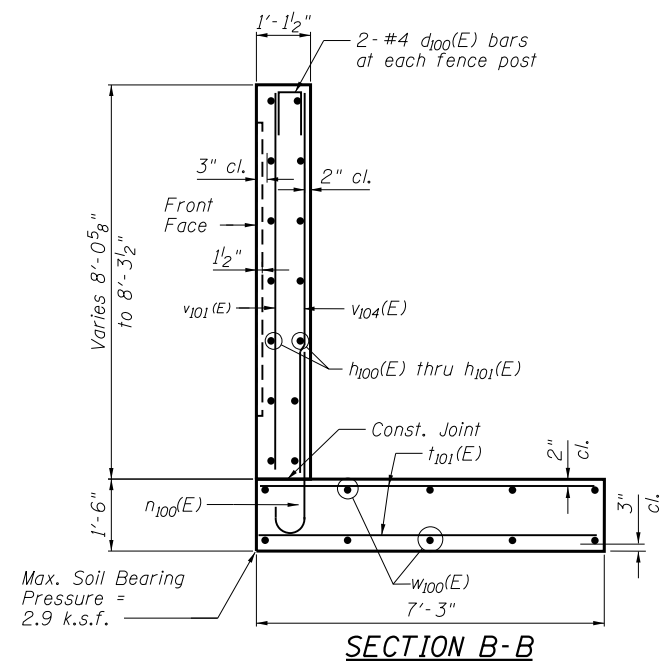
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	242
CONTRACT NO. 60V55				
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL

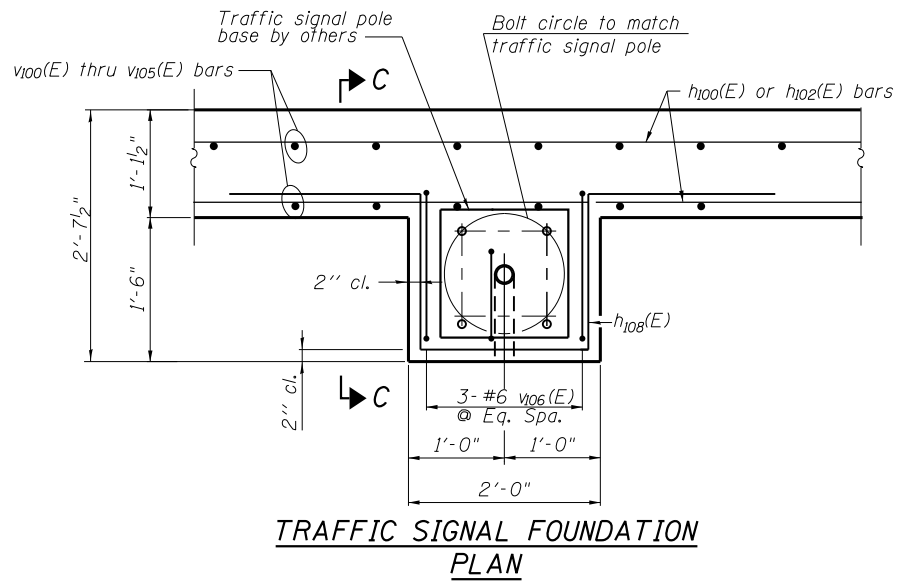
Bar	No.	Size	Length	Shape	
d ₁₀₀ (E)	34	#4	2'-0"	□	
h ₁₀₀ (E)	16	#4	27'-10"	—	
h ₁₀₁ (E)	10	#4	24'-7"	—	
h ₁₀₂ (E)	6	#4	28'-7"	—	
h ₁₀₃ (E)	4	#4	22'-5"	—	
h ₁₀₄ (E)	10	#4	28'-8"	—	
h ₁₀₅ (E)	10	#4	31'-9"	—	
h ₁₀₆ (E)	24	#4	5'-0"	—	
h ₁₀₇ (E)	16	#4	3'-0"	—	
h ₁₀₈ (E)	12	#6	9'-0"	—	
n ₁₀₀ (E)	196	#6	6'-7"	—	
t ₁₀₀ (E)	318	#6	5'-2"	—	
t ₁₀₁ (E)	76	#6	6'-11"	—	
v ₁₀₀ (E)	74	#4	5'-6"	—	
v ₁₀₁ (E)	18	#4	7'-9"	—	
v ₁₀₂ (E)	5	#4	2'-6"	—	
v ₁₀₃ (E)	163	#6	5'-6"	—	
v ₁₀₄ (E)	38	#6	7'-9"	—	
v ₁₀₅ (E)	10	#6	2'-6"	—	
v ₁₀₆ (E)	6	#6	6'-4"	—	
w ₁₀₀ (E)	22	#4	24'-7"	—	
w ₁₀₁ (E)	5	#4	8'-4"	—	
w ₁₀₂ (E)	5	#4	11'-5"	—	
w ₁₀₃ (E)	10	#4	4'-0"	—	
w ₁₀₄ (E)	20	#4	5'-10"	—	
w ₁₀₅ (E)	10	#4	23'-3"	—	
w ₁₀₆ (E)	10	#4	30'-10"	—	
w ₁₀₇ (E)	10	#4	11'-9"	—	
w ₁₀₈ (E)	10	#4	10'-11"	—	
Item				Unit	Quantity
Concrete Structures				Cu. Yd.	78.7
Reinforcement Bars, Epoxy Coated				Pound	9,870
Geocomposite Wall Drain				Sq. Yd.	23
Granular Backfill for Structures				Cu. Yd.	31



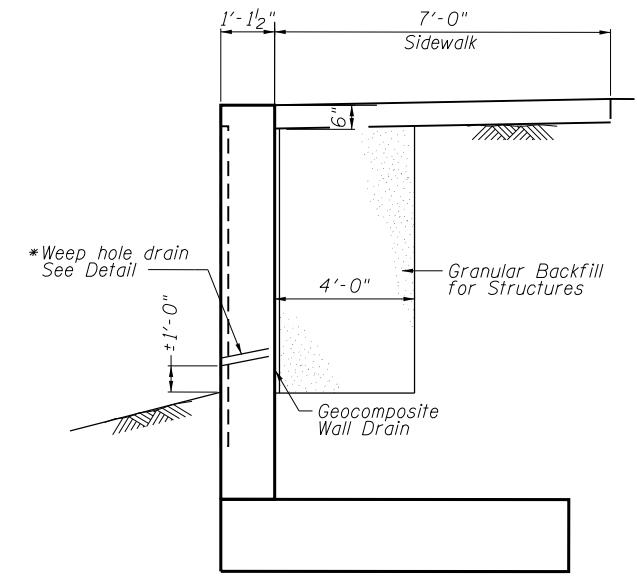
SECTION A-A



SECTION B-B

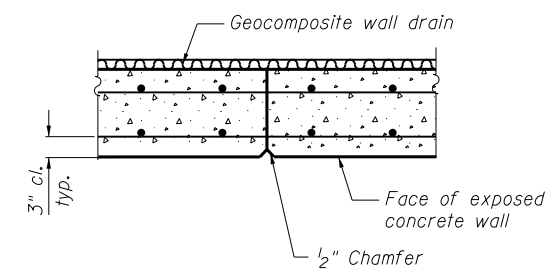


TRAFFIC SIGNAL FOUNDATION PLAN

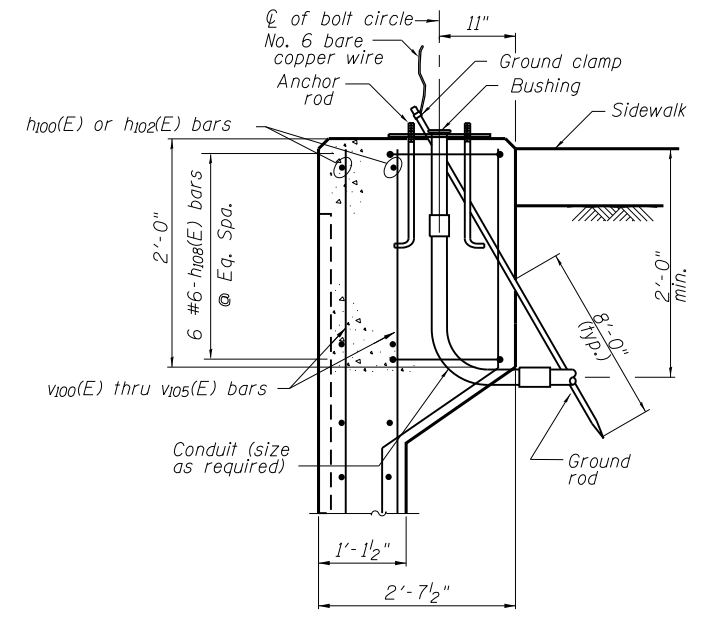


TYPICAL DRAINAGE DETAIL

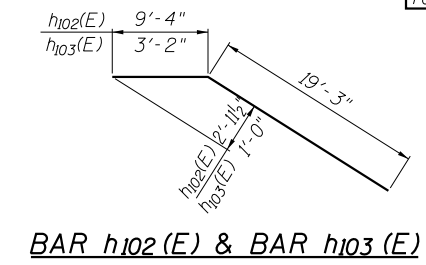
* Weep hole spacing shall be ±8'-0" horizontally



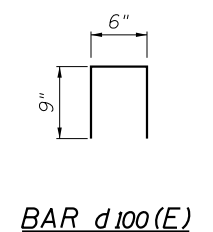
CONSTRUCTION JOINT DETAIL



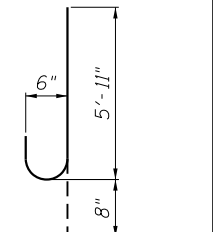
SECTION C-C



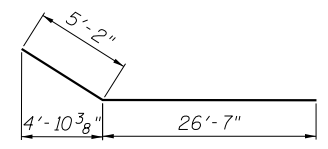
BAR h₁₀₂(E) & BAR h₁₀₃(E)



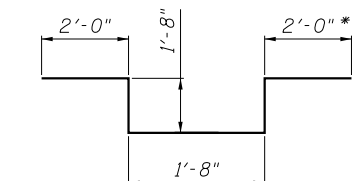
BAR d₁₀₀(E)



BAR n₁₀₀(E)

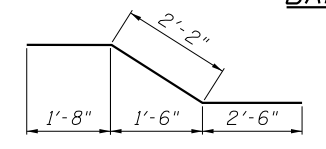


BAR h₁₀₅(E)

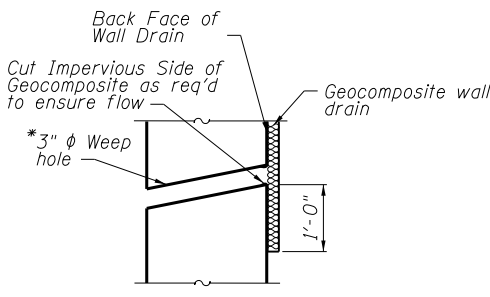


BAR h₁₀₈(E)

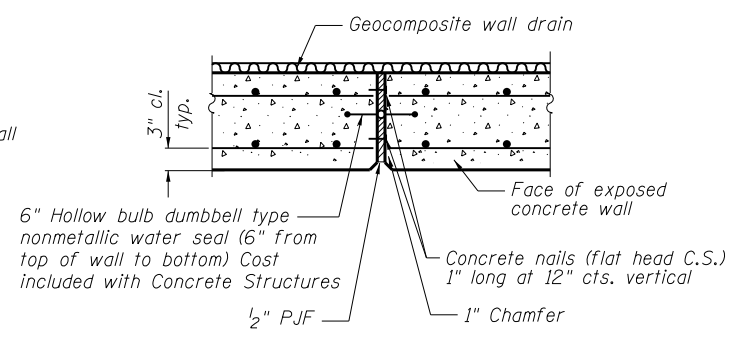
* Field verify angle of wall, bend bar to be parallel to wall at kink.



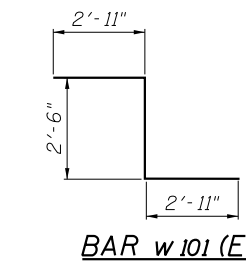
BAR v₁₀₆(E)



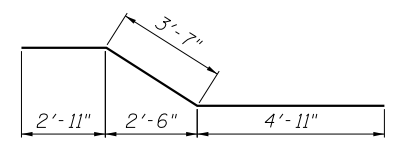
WEEP HOLE DRAIN DETAIL



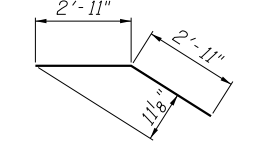
EXPANSION JOINT DETAIL



BAR w₁₀₁(E)



BAR w₁₀₂(E)



BAR W₁₀₄(E)

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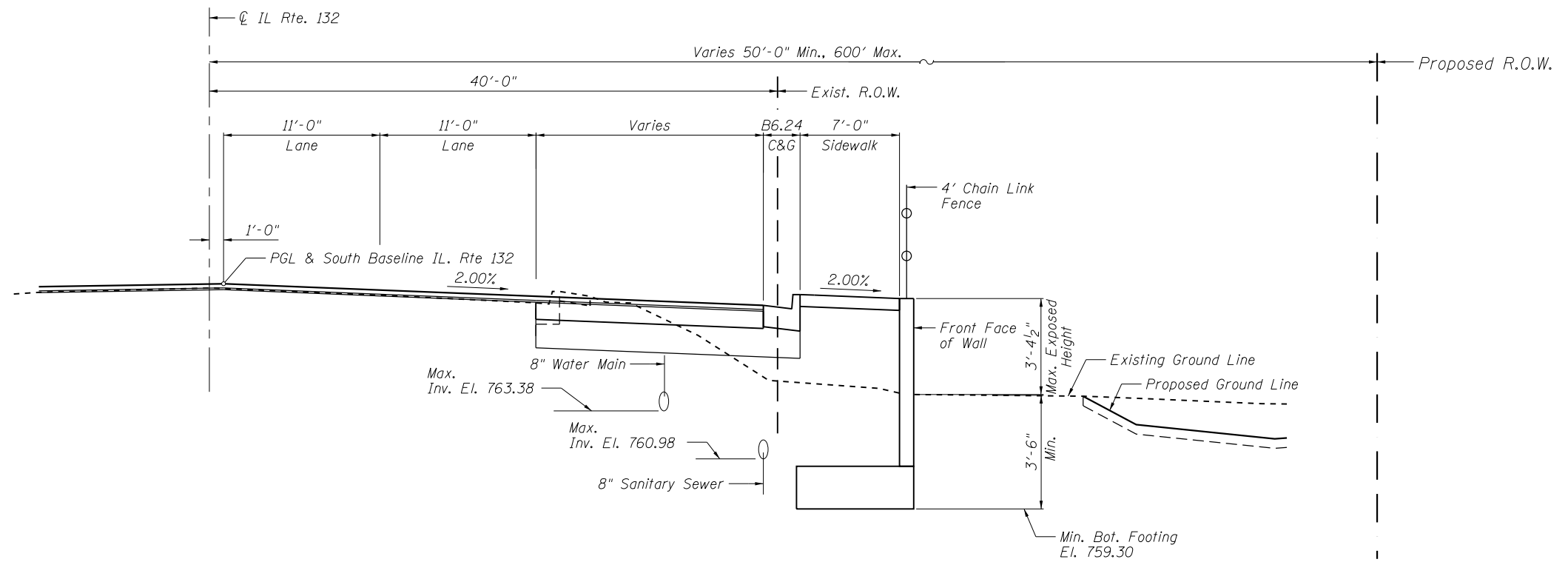
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

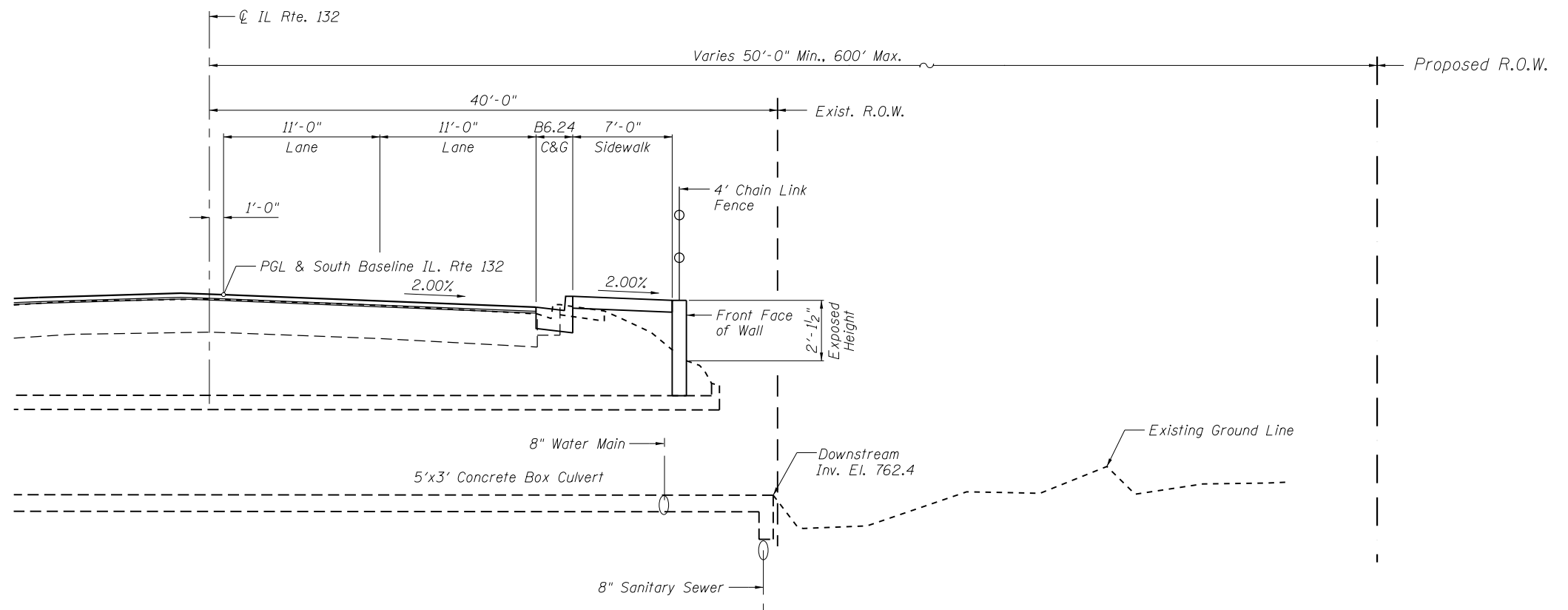
**WALL DETAILS
STA. 137 + 40.00 TO STA. 138 + 74.00 SN 049-W085**

SHEET NO. SA-4 OF SA-9 SHEETS

F.A.P. RTE. 541	SECTION A-WRS-2	COUNTY LAKE	TOTAL SHEETS 345	SHEET NO. 243
CONTRACT NO. 60V55				ILLINOIS FED. AID PROJECT



TYPICAL SECTION



SECTION AT CULVERT

FILE NAME = P:\2015\0549 IDOT D1 IL 132 Restoring Walls - J.J. Benes\Drawings\Wall 115A\W085\FM1-SA05-TipSec.dgn



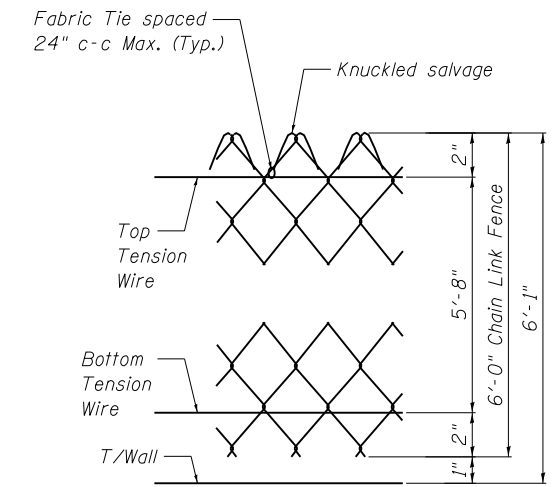
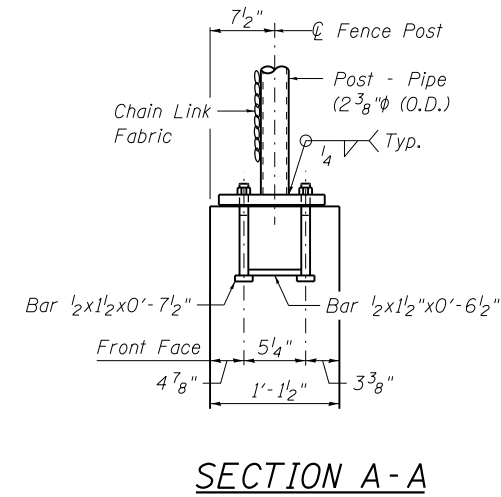
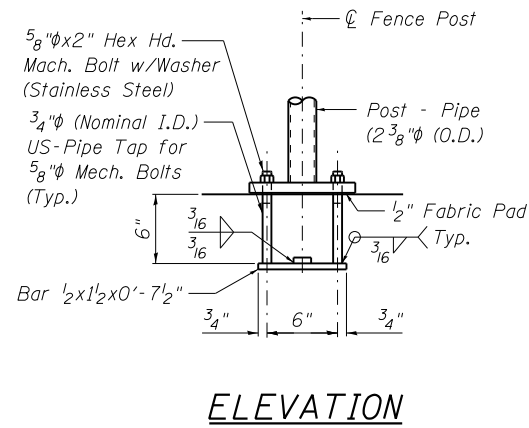
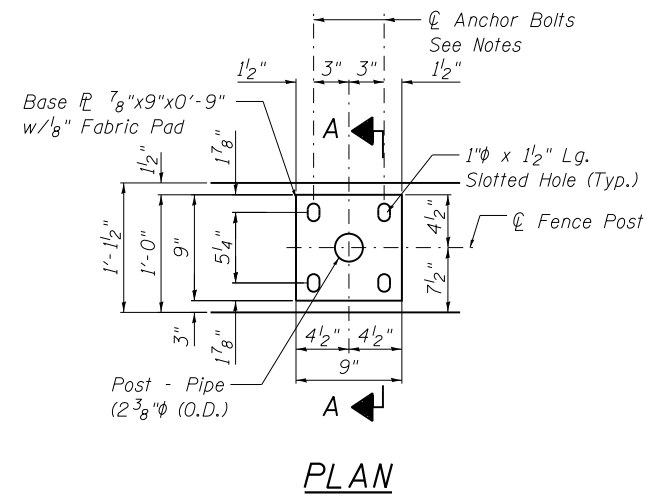
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	CHECKED - LAS	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS
STA. 137 + 40.00 TO STA. 138 + 74.00 SN 049-W085**

SHEET NO. SA-5 OF SA-9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	244
CONTRACT NO. 60V55				
ILLINOIS FED. AID PROJECT				



In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

FENCE POST ANCHOR ASSEMBLY DETAILS

BILL OF MATERIAL

Item	Unit	Quantity
Chain Link Fence, 4' Attached to Structure	Foot	137

FILE NAME = P:\2015\0549 IDOT DI IL 132 Restoring Walls \JJ Benes\Drawings\Wall 1150\W085\RM1-SA06-FenceDetails.dgn



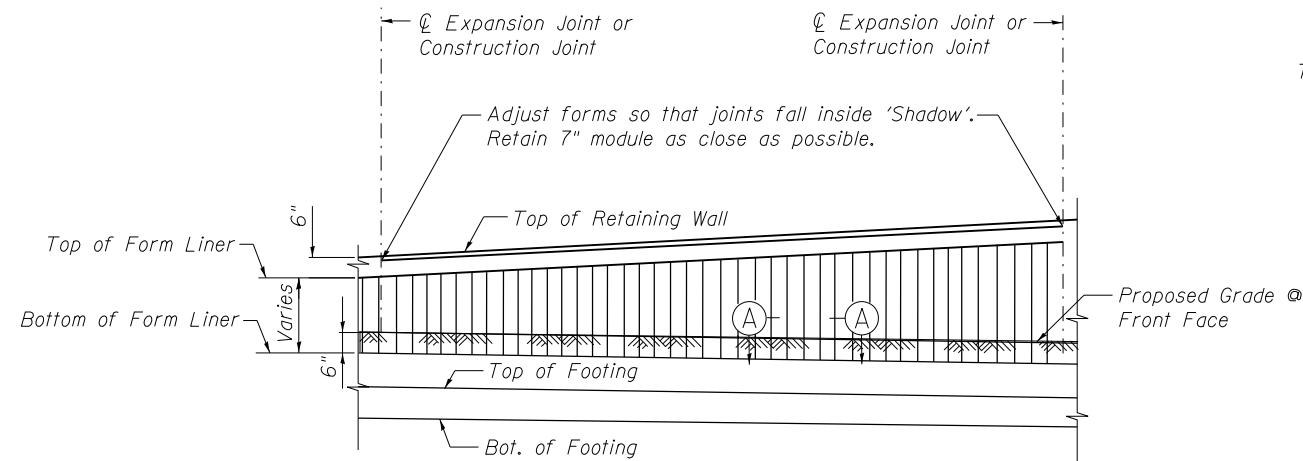
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

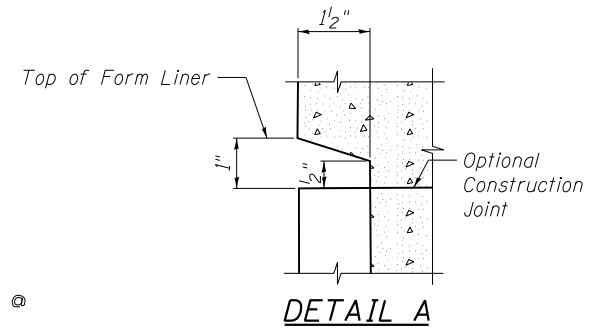
CHAIN LINK FENCE DETAILS
STA. 137 + 40.00 TO STA. 138 + 74.00 SN 049-W085

SHEET NO. SA-6 OF SA-9 SHEETS

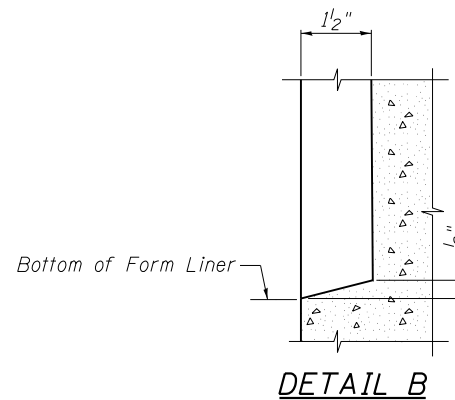
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	245
CONTRACT NO. 60V55				
ILLINOIS FED. AID PROJECT				



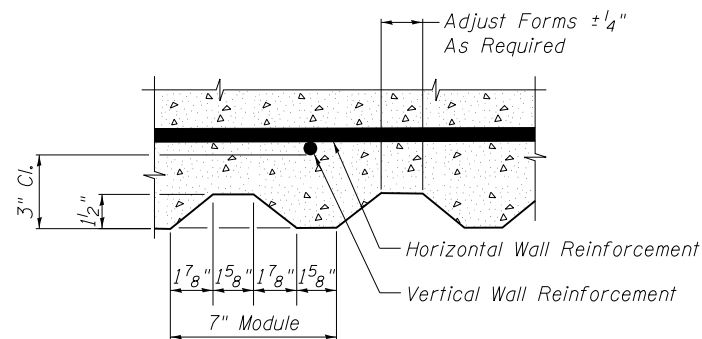
ELEVATION-TYPICAL FORM LINER FINISH



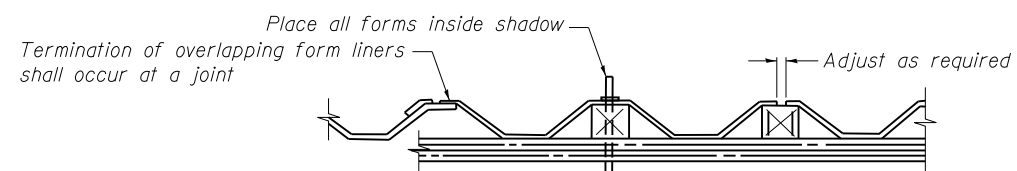
DETAIL A



DETAIL B



SECTION A-A



SUGGESTED FORMWORK DETAIL

FORM LINER ELEVATION TABLE

Station	Form Liner Top Elevation	Form Liner Bottom Elevation
137+40.00	768.91	767.99
137+50.00	768.76	767.69
137+75.00	768.47	766.82
137+92.86	768.32	766.21
138+00.00	768.28	766.62
138+25.00	768.05	765.26
138+50.00	767.94	764.56
138+67.00	768.04	767.05

BILL OF MATERIAL

Item	Unit	Quantity
Form Liner Textured Surface	Sq. Ft.	268

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ARCHITECTURAL FINISH DETAILS
STA. 137 + 40.00 TO STA. 138 + 74.00 SN 049-W085

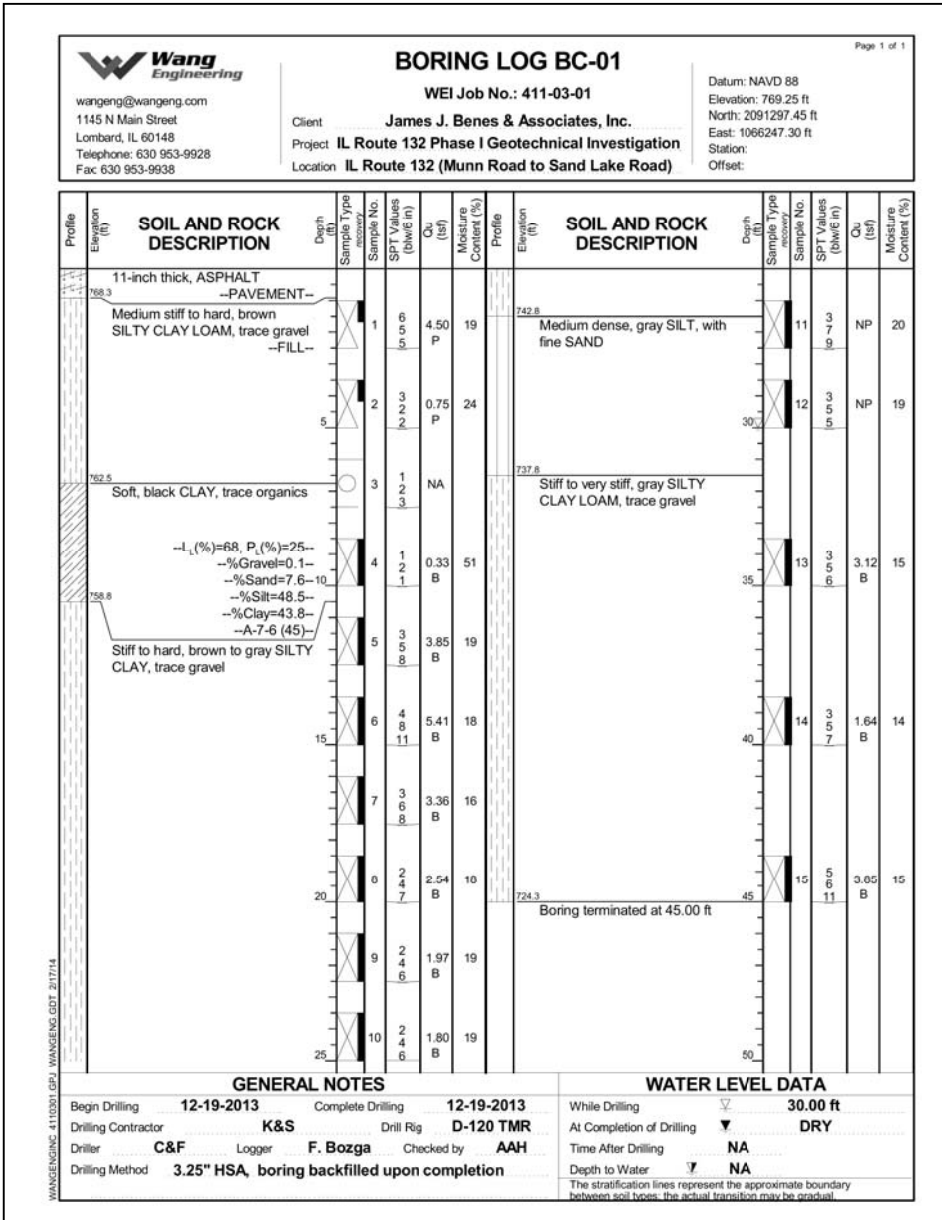
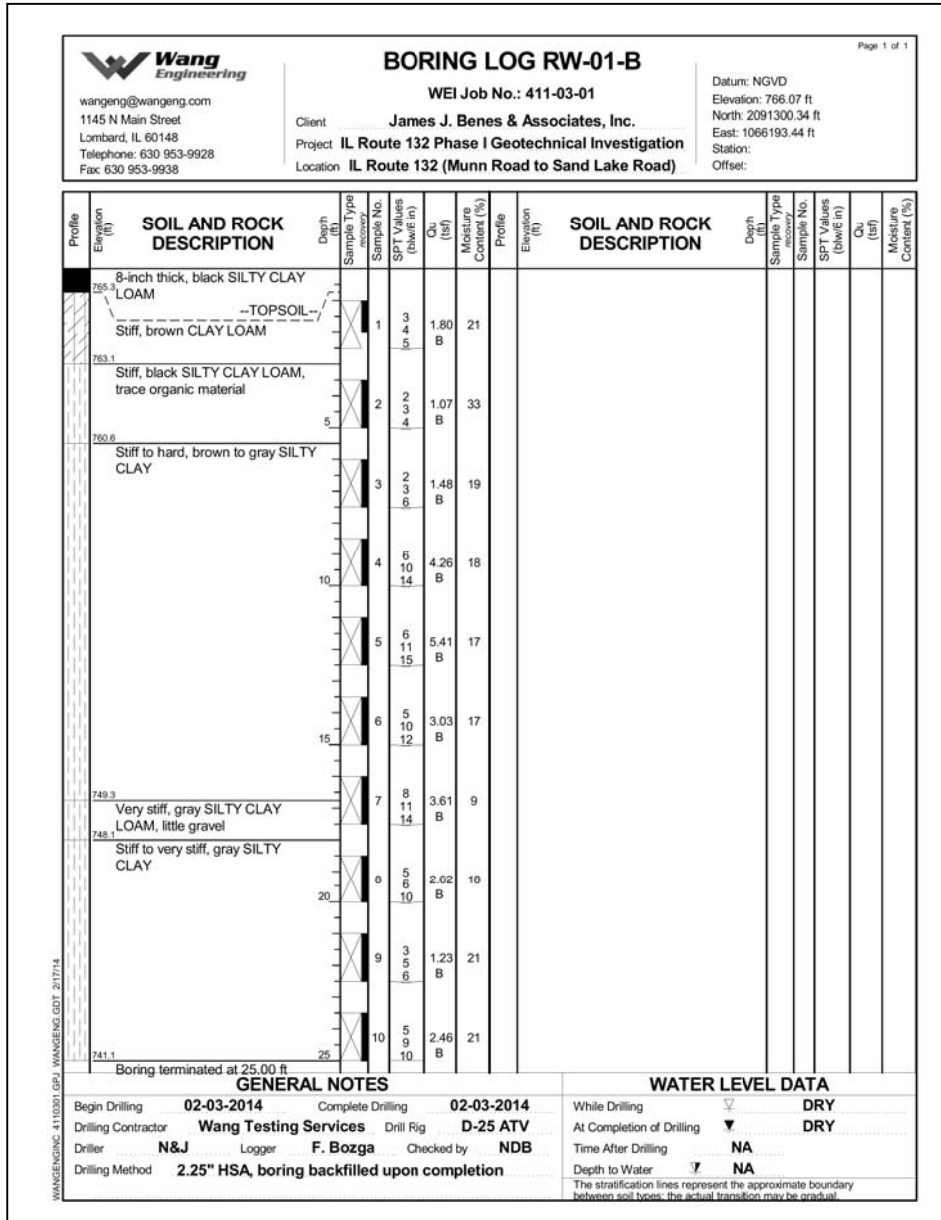
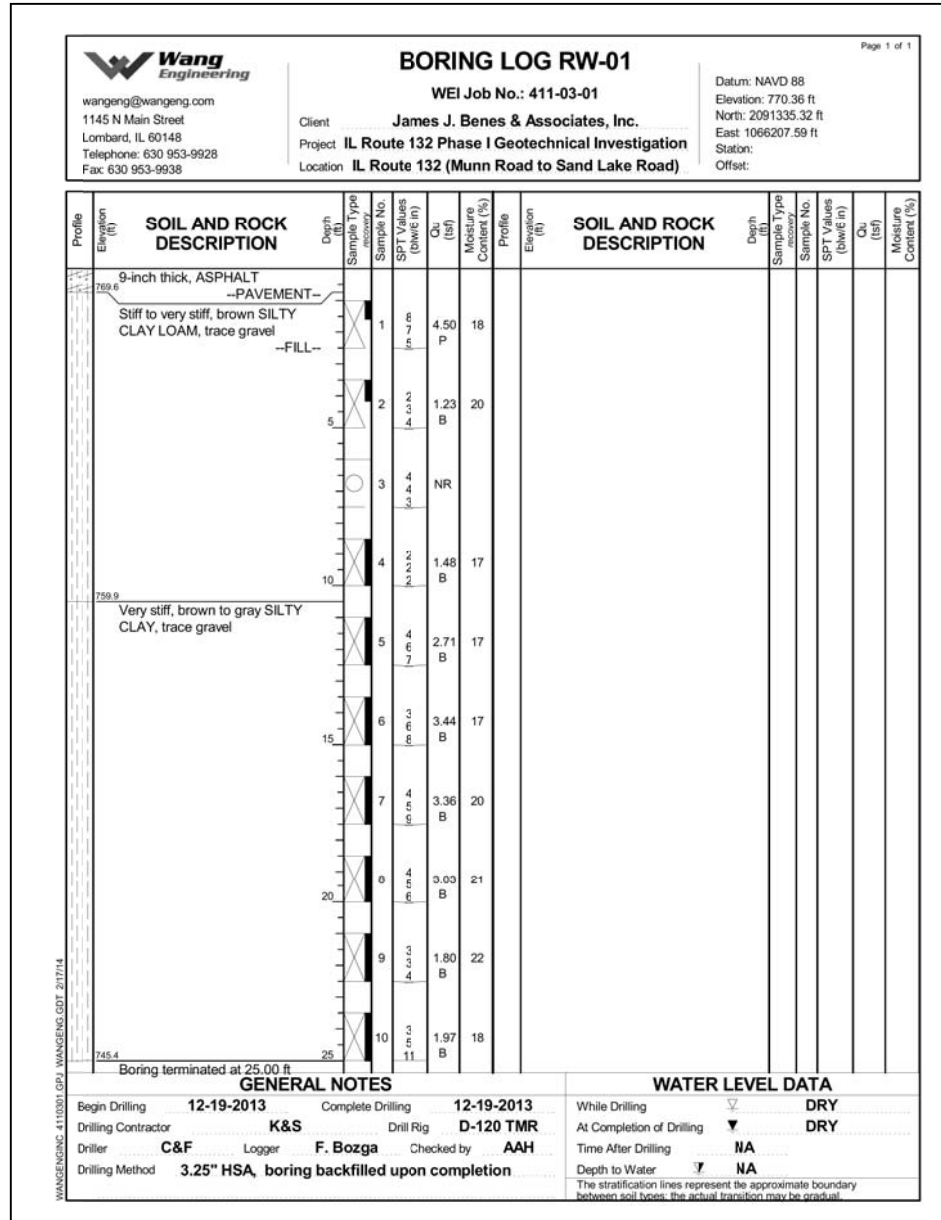
SHEET NO. SA-7 OF SA-9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	246
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60V55	

BORING LOG RW-01

BORING LOG RW-01-B

BORING LOG BC-01



FILE NAME = PA20150849 IDOT DI IL 132 Retaining Walls - J.J. Benes & Associates, Inc. - SA088-BoringLogs.dgn



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

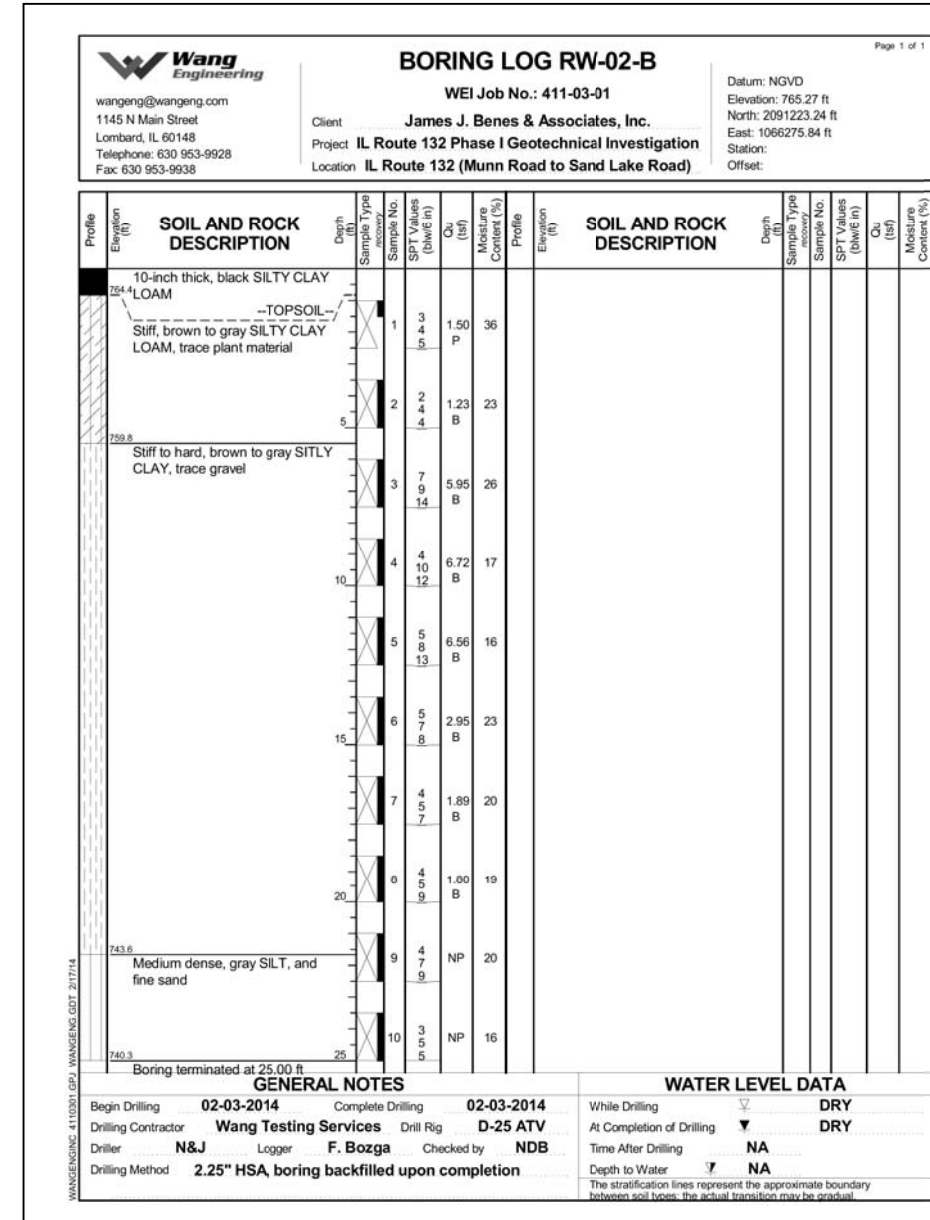
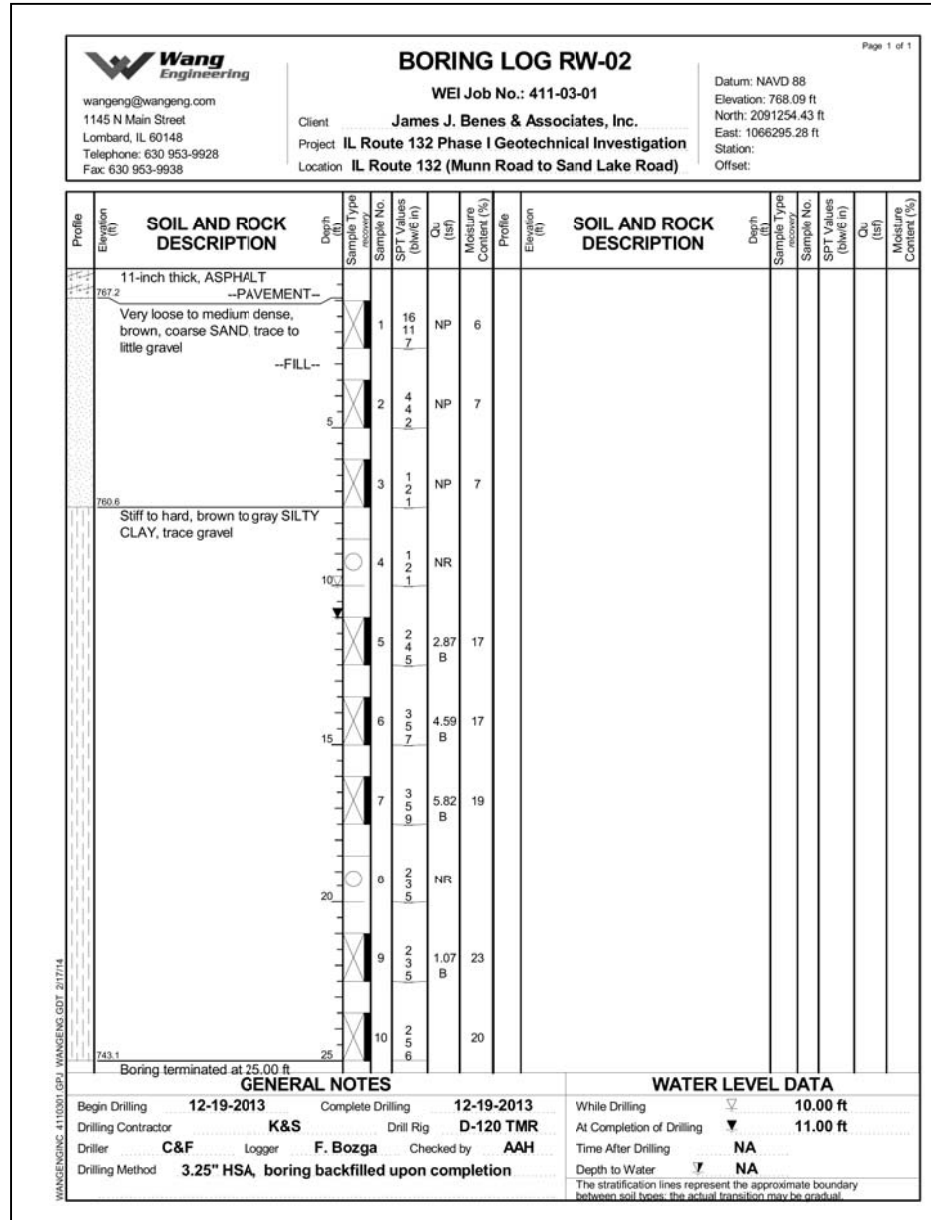
BORING LOGS 1
STA. 137 + 40.00 TO STA. 138 + 74.00 SN 049-W085

SHEET NO. SA-8 OF SA-9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	247
CONTRACT NO. 60V55				
ILLINOIS FED. AID PROJECT				

BORING LOG RW-02

BORING LOG RW-02-B



FILE NAME = PA\2015\08549\DOT DI IL 132 Restoring Wells - J.J. Benes\Drawings\Well 115A\W085\RM1-SA089-BoringLog2.dgn



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 2
STA. 137 + 40.00 TO STA. 138 + 74.00 SN 049-W085

SHEET NO. SA-9 OF SA-9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	248
CONTRACT NO. 60V55				
ILLINOIS FED. AID PROJECT				

Bench Mark: Cut " " in Traffic Signal Controller Foundation.
 Located Along IL. Rte. 132 Near Sand Lake Road
 at Sta. Rte. 137+05 LT. Elev. = 770.75

Existing Structure: None

Construction will be completed utilizing staged construction
 as part of IL Rte. 132 Roadway Construction

DESIGN SPECIFICATIONS
 2012 AASHTO LRFD Bridge Design
 Specifications 6th Edition with 2012 Interims

DESIGN STRESSES
FIELD UNITS
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)

INDEX OF SHEETS

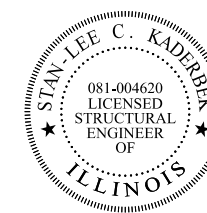
- SB-1. General Plan & Elevation
- SB-2. Wall Plan & Elevation-1
- SB-3. Wall Plan & Elevation-2
- SB-4. Wall Details
- SB-5. Typical Sections
- SB-6. Chain Link Fence Details
- SB-7. Architectural Finish Details
- SB-8. Boring Logs

GENERAL NOTES

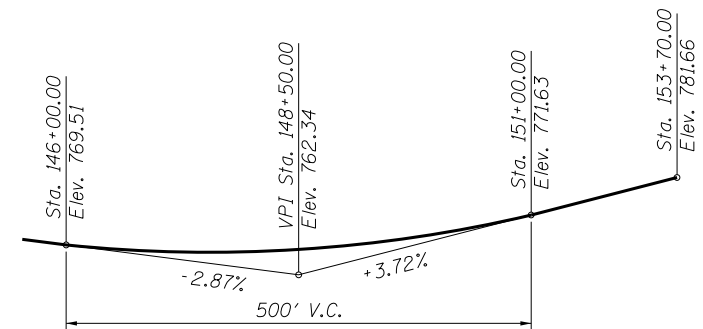
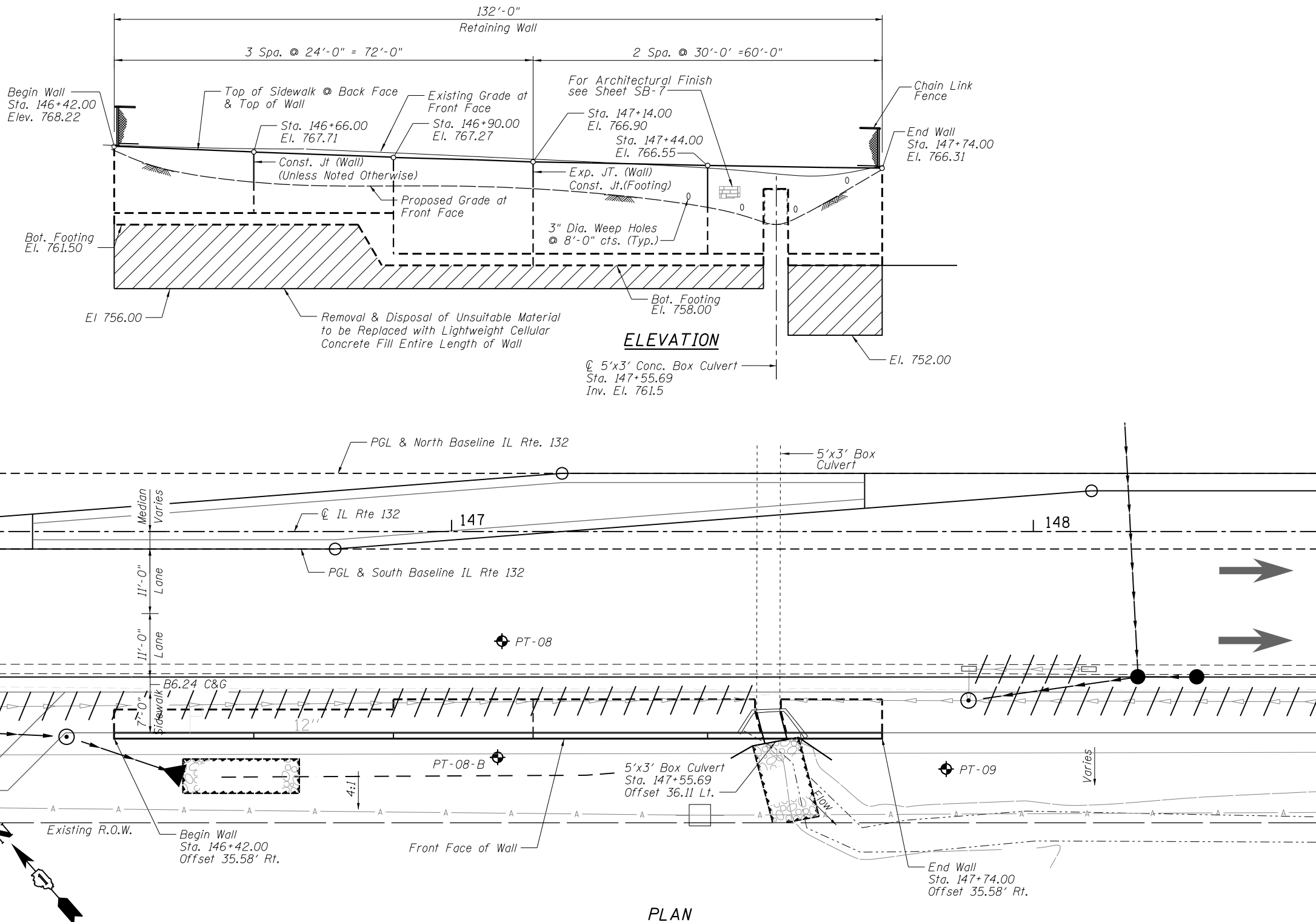
1. Reinforcement bars designated (E) shall be epoxy coated.
2. For Removal of Existing Wingwalls and Proposed Culvert Extension details, see Culvert Plans.
3. Offsets are measured from the CL IL Rte. 132 to the front face of the wall.

TOTAL BILL OF MATERIAL

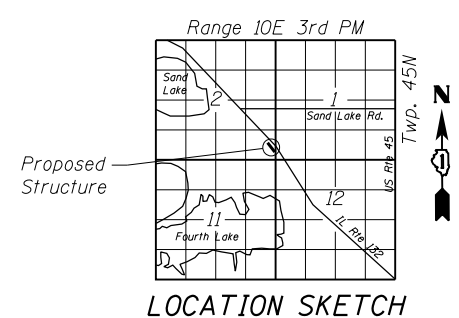
ITEM	UNIT	TOTAL
Removal and Disposal of Unsuitable Material	Cu. Yd.	535
Concrete Structures	Cu. Yd.	82.2
Form Liner Textured Surface	Sq. Ft.	332
Reinforcement Bars, Epoxy Coated	Pound	9,500
Geocomposite Wall Drain	Sq. Yd.	28
Lightweight Cellular Concrete Fill Class IV	Cu. Yd.	456
Granular Backfill for Structures	Cu. Yd.	37
Chain Link Fence, 4' Attached to Structure	Foot	132



Signature: *[Signature]* Date: March 20, 2017
 Expires: November 30, 2018



PROFILE GRADE
 (along South Baseline IL Route 132)



GENERAL PLAN AND ELEVATION
IL RTE 132 FAP RTE 541
SECTION A-WRS-2
LAKE COUNTY
STA. 146+42.00 TO STA. 147+74.00
SN 049-W087

FILE NAME = P:\2015\0549\DOT D1 IL 132 Restoring Walls - J.J. Benes\Drawings\Wall 2415\SB087\RM24-SB01-CPE.dgn

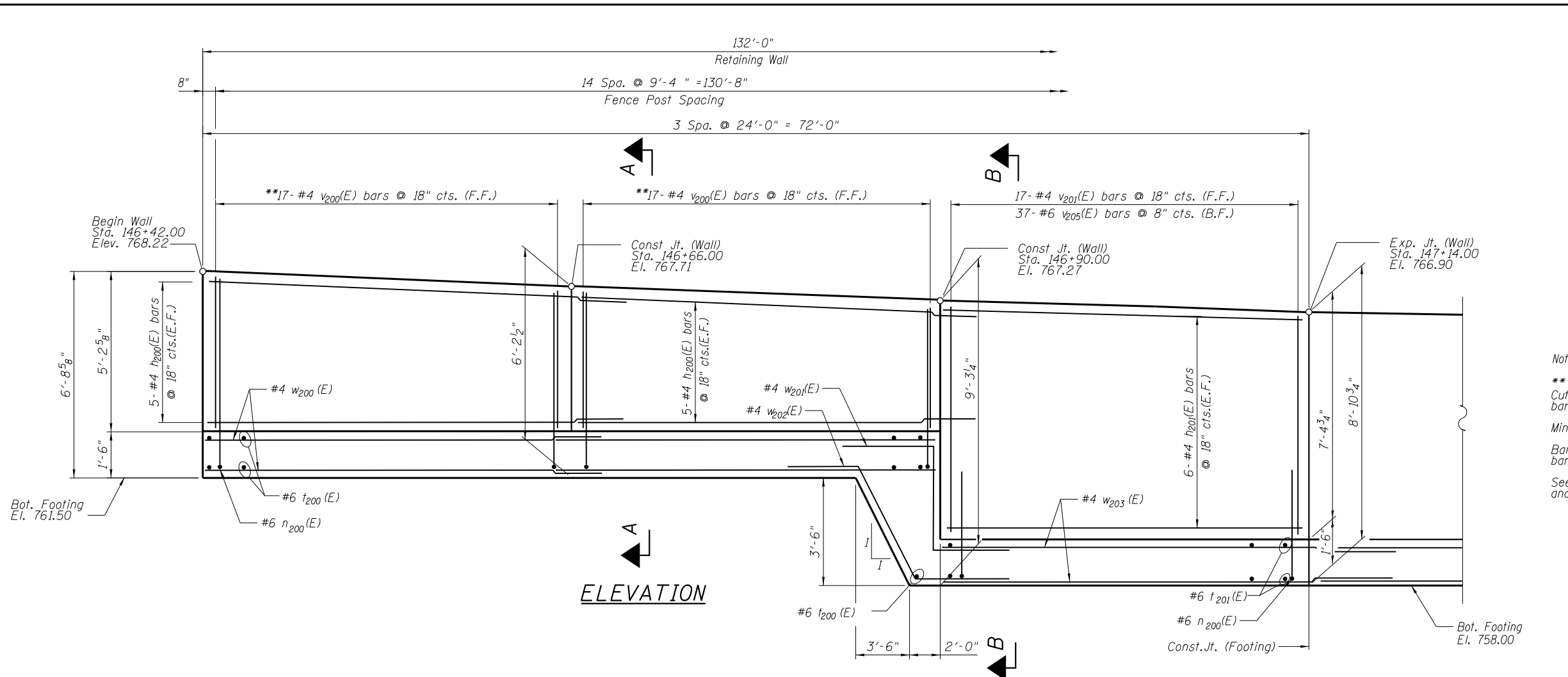


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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

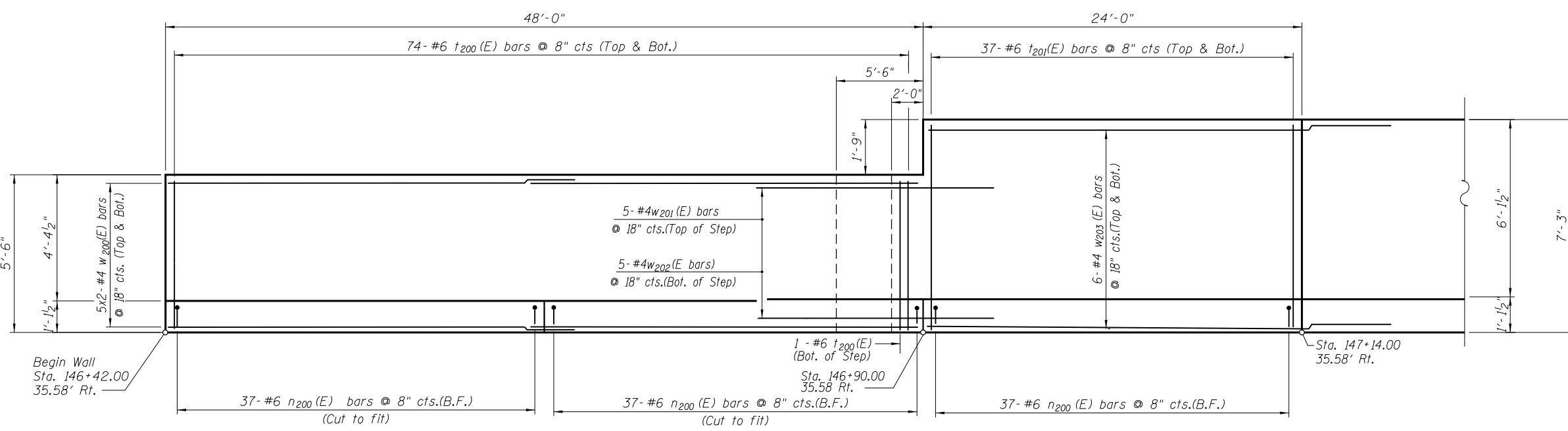
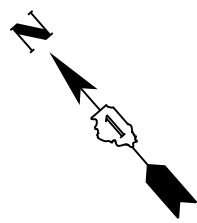
GENERAL PLAN & ELEVATION
 STA. 146+42.00 TO STA. 147+74.00 SN 049-W087
 SHEET NO. SB-1 OF SB-8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	249
CONTRACT NO. 60V55				
ILLINOIS FED. AID PROJECT				



ELEVATION

Note
 ** Signifies cut bar, order per length on Bill of Material. Cut as shown in Cutting Diagram on SB-4. Use half bars in each panel.
 Minimum lap for #4 bar is 2'-11", #6 bar is 4'-4".
 Bars Indicated thus: 5x2-#4 etc. Indicates 5 lines of bars with 2 Length per line.
 See Sheet SB-4 for Section A-A, Section B-B, Details and Bill of Material.



FOOTING PLAN

FILE NAME = P:\2015\0549\DOT D1 IL 132 Retaining Walls \ J.J. Benes\Drawings\Wall 24\SBM087\RM24-SB02-WPEL.dgn



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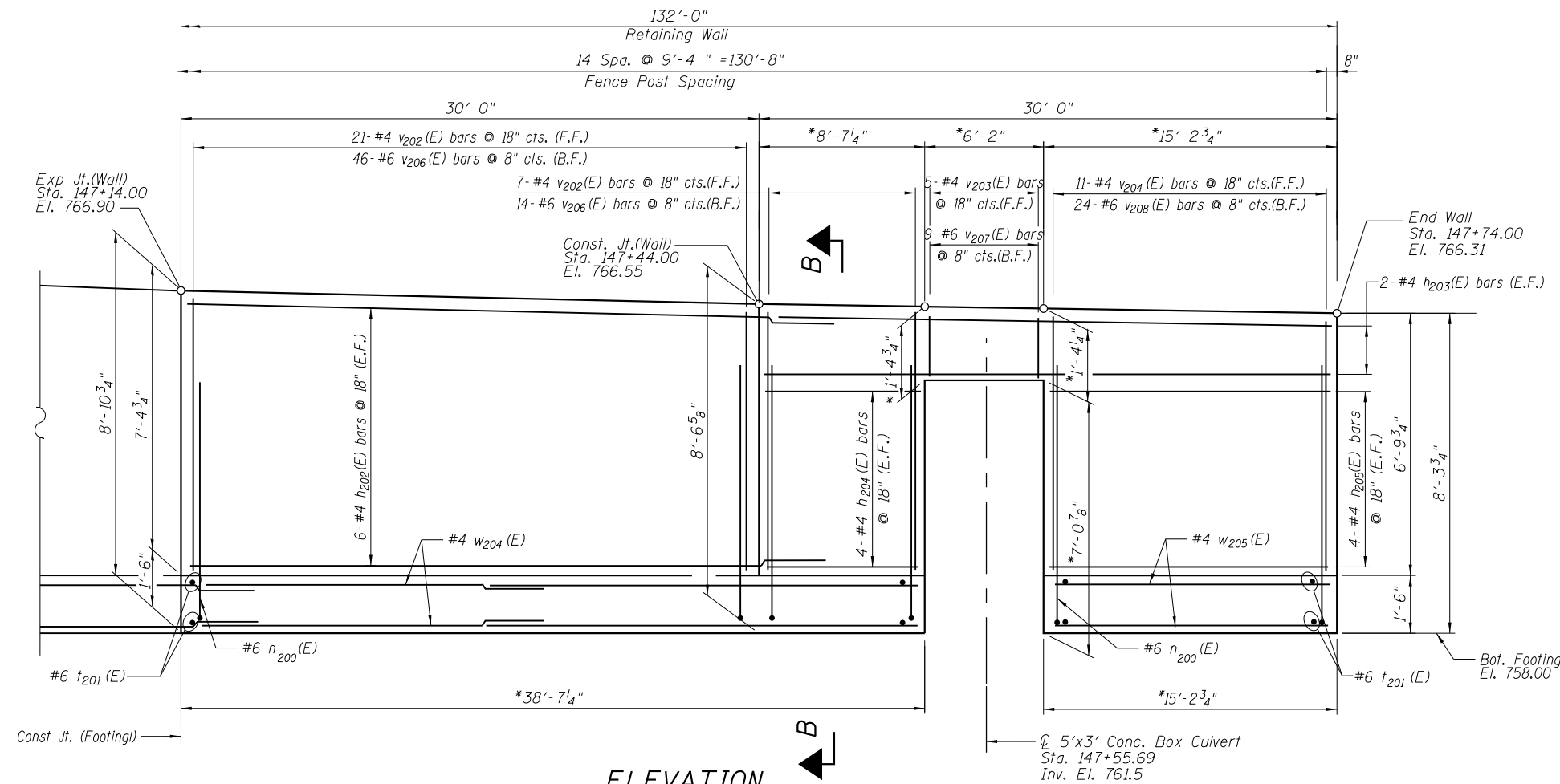
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

WALL PLAN & ELEVATION - 1
 STA. 146 + 42.00 TO STA. 147 + 74.00 SN 049-W087

SHEET NO. SB-2 OF SB-8 SHEETS

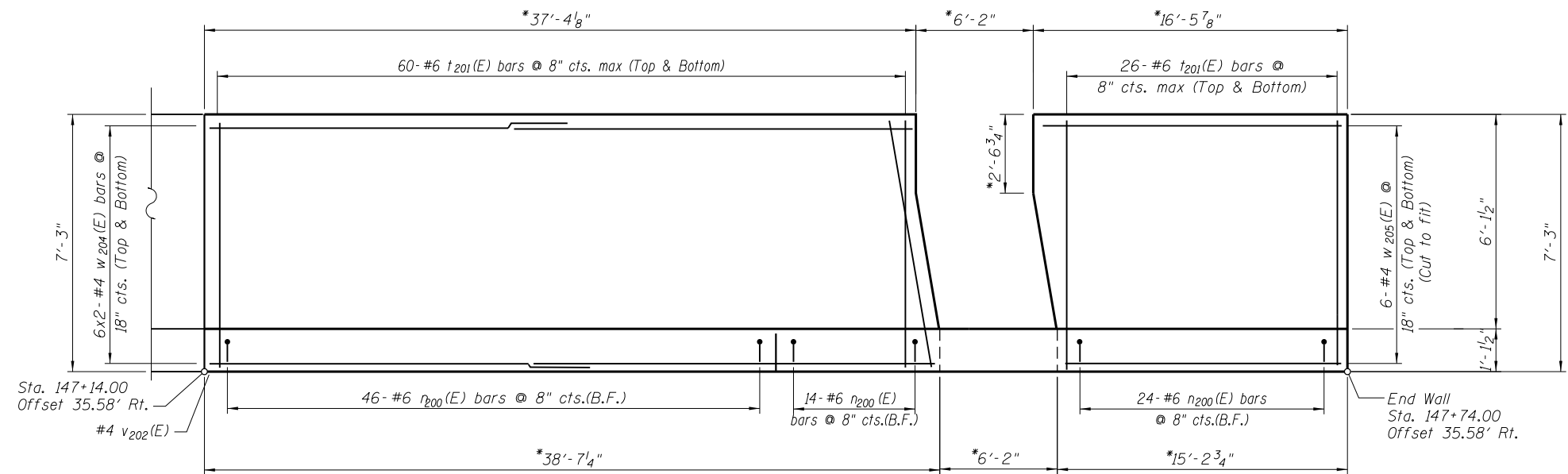
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	250
CONTRACT NO. 60V55				

ILLINOIS FED. AID PROJECT



ELEVATION

*Dimension to be Verified in Field. 1" P.J.F. to be placed between Existing Culvert and Proposed Wall



FOOTING PLAN

Notes:
 Minimum lap for #4 bar is 2'-11", #6 bar is 4'-4".
 Bars Indicated thus: 6x2-#4 etc. Indicates 6 lines of bars with 2 Length per line.
 See Sheet SB-4 for Section A-A, Section B-B, Details and Bill of Material.

FILE NAME = P:\2015\0549 IDOT D1 IL 132 Retaining Walls v J.J. Benes\Drawings\Wall 24\SBM087\W24-SB03-WPE2.dgn



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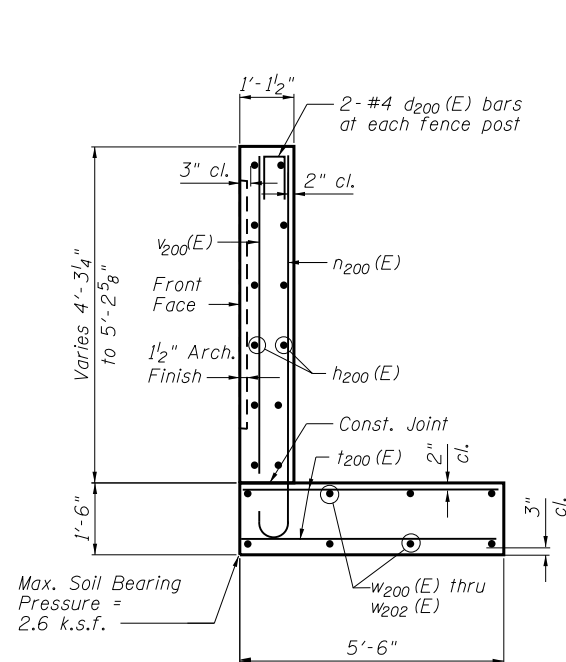
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

WALL PLAN & ELEVATION - 2
 STA. 146+42.00 TO STA. 147+74.00 SN 049-W087
 SHEET NO. SB-3 OF SB-8 SHEETS

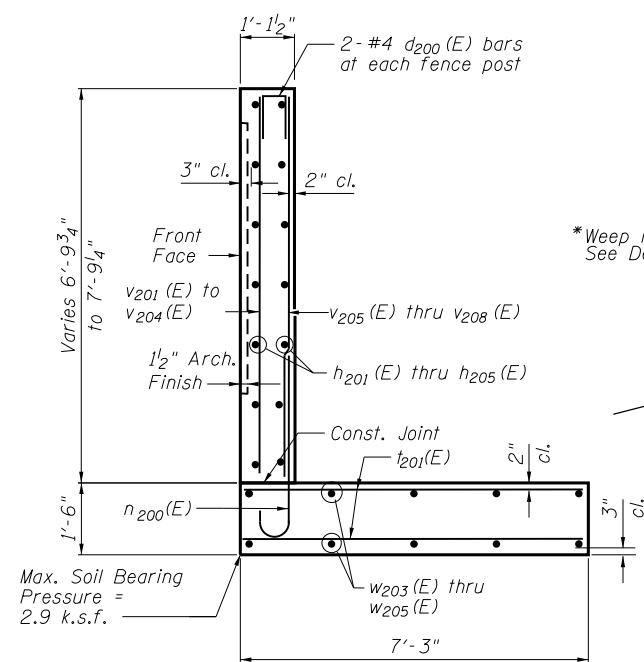
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	251
CONTRACT NO. 60V55				
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL

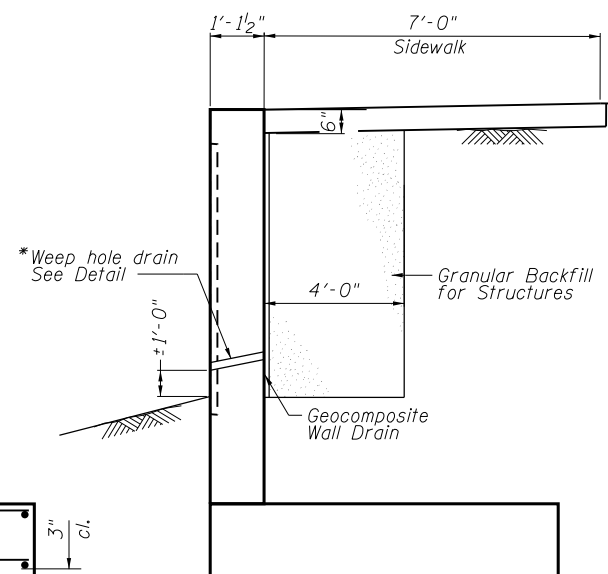
Bar	No.	Size	Length	Shape
d200 (E)	30	#4	2'-0"	□
h200 (E)	20	#4	26'-11"	—
h201 (E)	12	#4	23'-9"	—
h202 (E)	12	#4	32'-11"	—
h203 (E)	4	#4	29'-8"	—
h204 (E)	8	#4	8'-3"	—
h205 (E)	8	#4	14'-11"	—
n200 (E)	195	#6	6'-11"	⌋
t200 (E)	149	#6	5'-2"	—
t201 (E)	246	#6	6'-11"	—
v200 (E)	17	#4	8'-10"	—
v201 (E)	17	#4	7'-1"	—
v202 (E)	28	#4	6'-8"	—
v203 (E)	5	#4	1'-0"	—
v204 (E)	11	#4	6'-6"	—
v205 (E)	37	#6	7'-1"	—
v206 (E)	60	#6	6'-8"	—
v207 (E)	9	#6	1'-0"	—
v208 (E)	24	#6	6'-6"	—
w200 (E)	20	#4	25'-4"	—
w201 (E)	5	#4	9'-4"	—
w202 (E)	5	#4	12'-10"	—
w203 (E)	12	#4	26'-11"	—
w204 (E)	24	#4	21'-0"	—
w205 (E)	12	#4	16'-2"	—
Item	Unit	Quantity		
Concrete Structures	Cu. Yd.	82.2		
Reinforcement Bars, Epoxy Coated	Pound	9,500		
Geocomposite Wall Drain	Sq. Yd.	28		
Granular Backfill for Structures	Cu. Yd.	37		



SECTION A-A

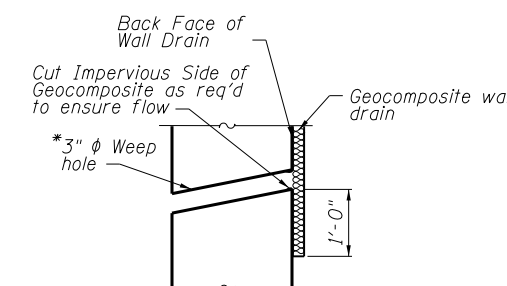


SECTION B-B

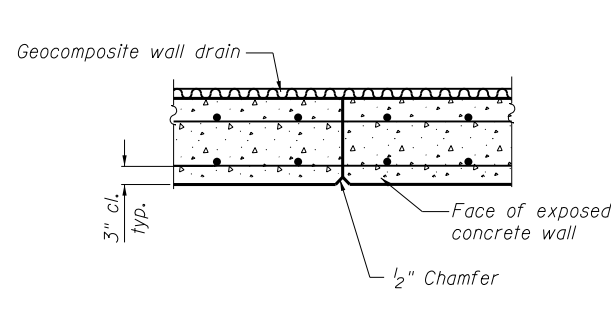


TYPICAL DRAINAGE DETAIL

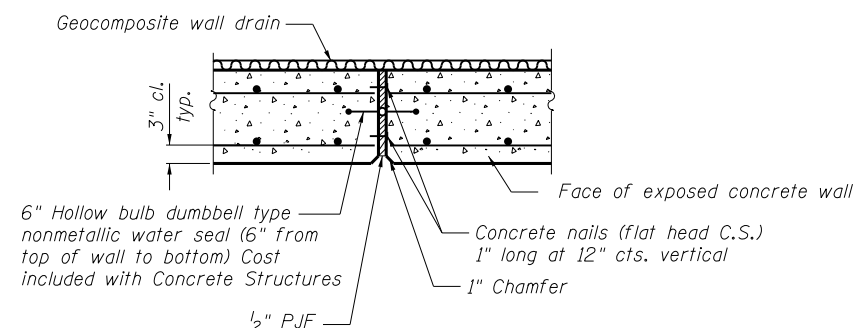
* Weep hole spacing shall be ±8'-0" horizontally



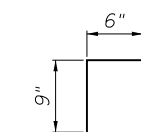
WEEP HOLE DRAIN DETAIL



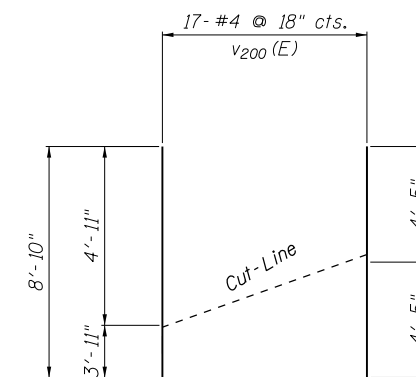
CONSTRUCTION JOINT DETAIL



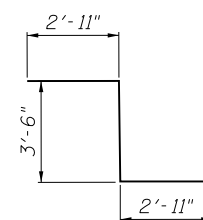
EXPANSION JOINT DETAIL



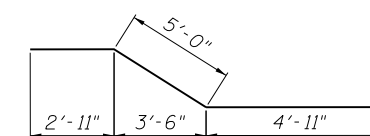
BAR d200(E)



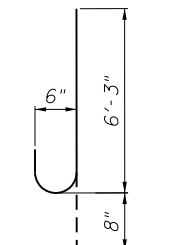
CUTTING DIAGRAM



BAR w201(E)



BAR w202(E)



BAR n200(E)

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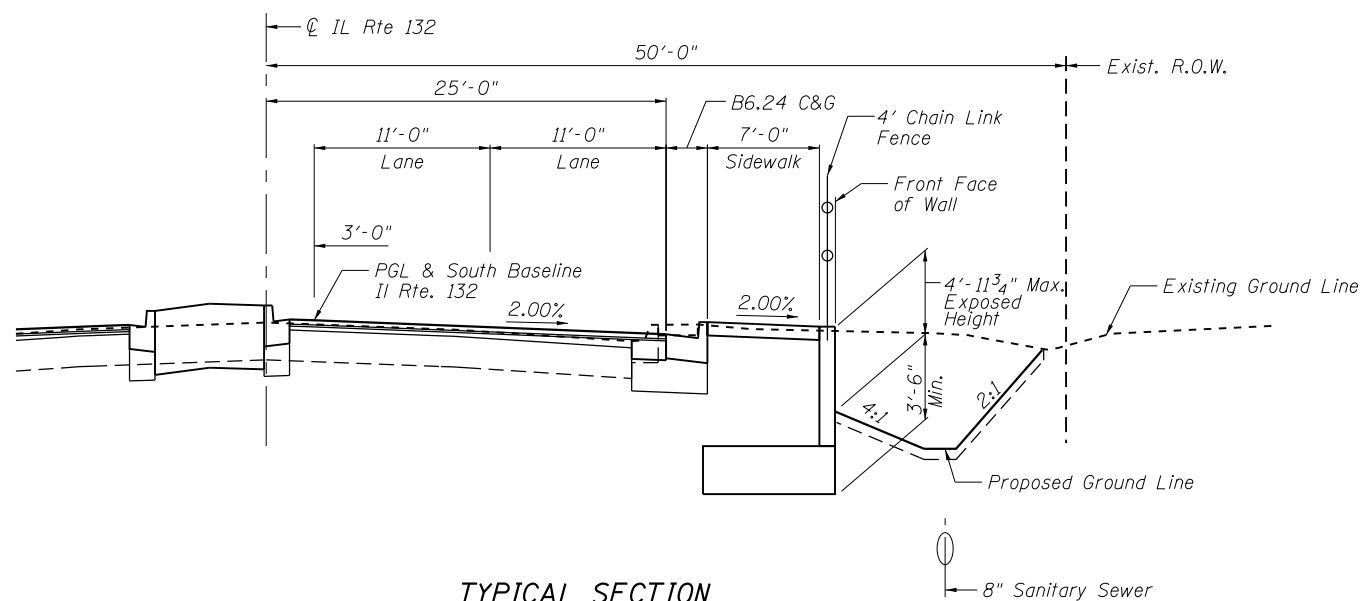
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	CHECKED - DAZ	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WALL DETAILS
STA. 146 + 42.00 TO STA. 147 + 74.00 SN 049-W087**

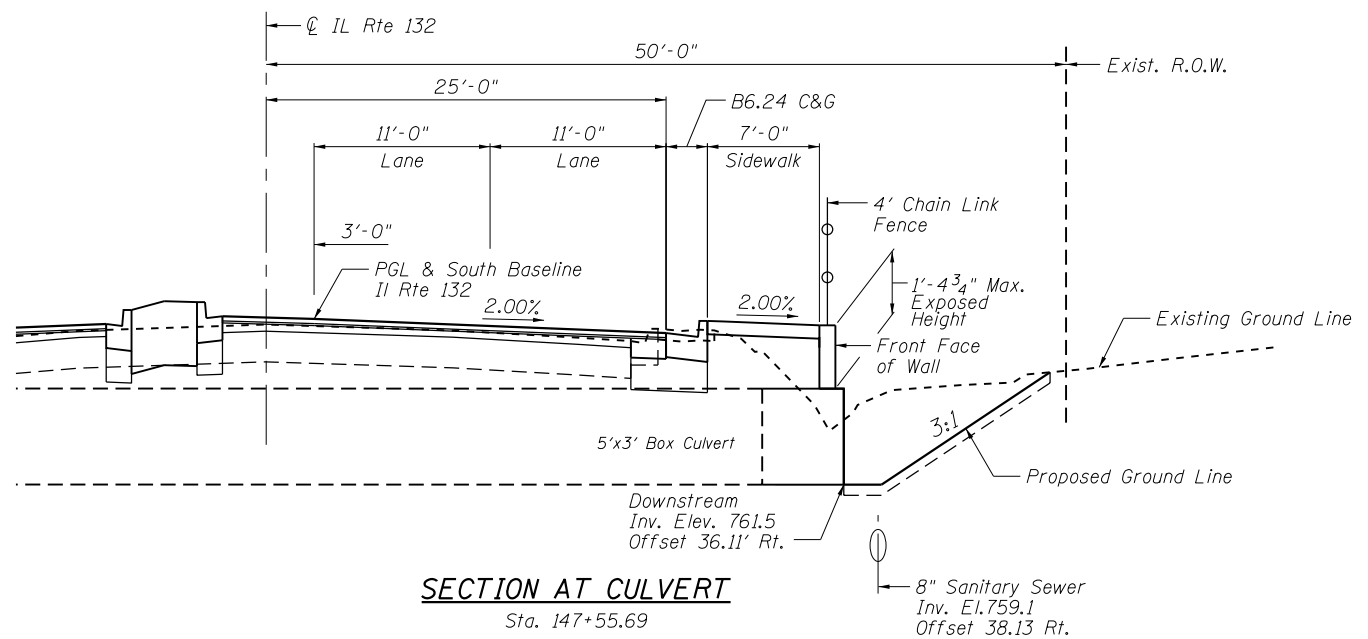
SHEET NO. SB-4 OF SB-8 SHEETS

F.A.P. RTE. 541	SECTION A-WRS-2	COUNTY LAKE	TOTAL SHEETS 345	SHEET NO. 252
CONTRACT NO. 60V55			ILLINOIS FED. AID PROJECT	



TYPICAL SECTION

Sta. 146+42.00 to Sta. 147+74.00



SECTION AT CULVERT

Sta. 147+55.69

FILE NAME = P:\2015\0549\DOT D1 IL 132 Restoring Walls - JJ Benes\Drawings\Wall 24\SBW087\RM24-SB05-1.dwg



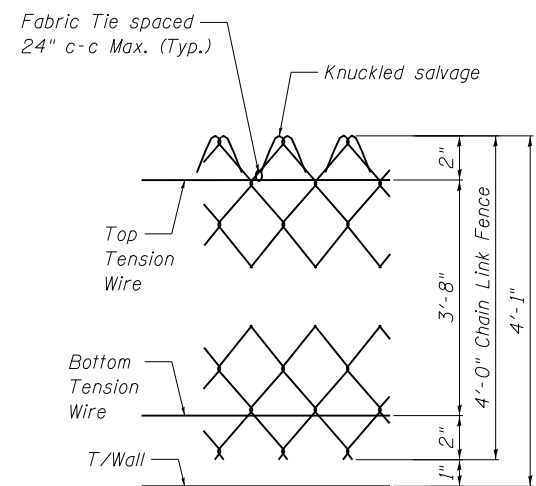
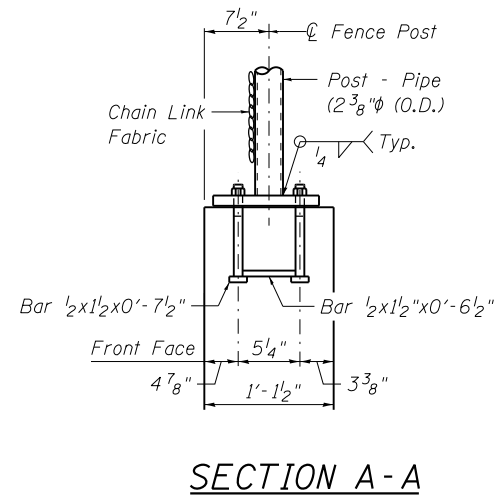
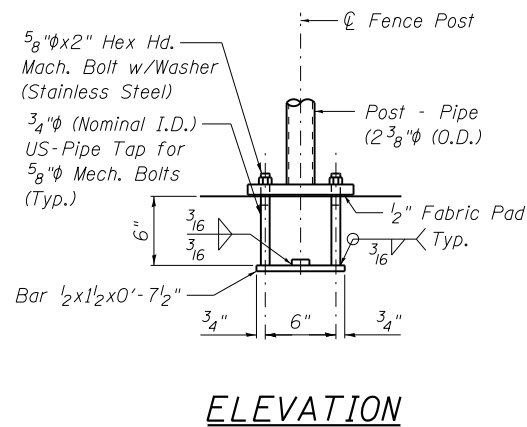
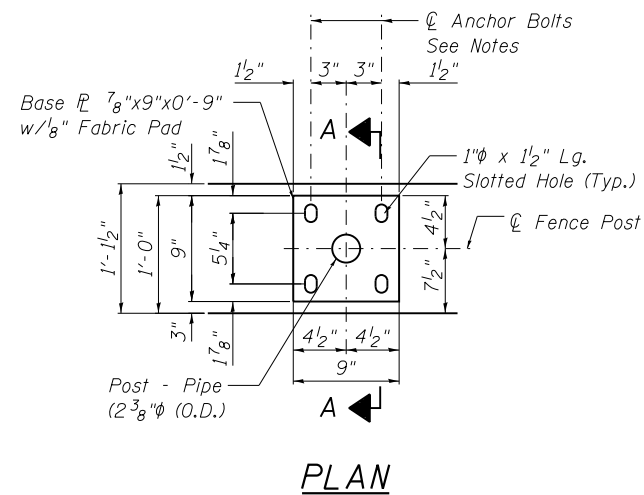
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS
STA. 146 + 42.00 TO STA. 147 + 74.00 SN 049-W087**

SHEET NO. SB-5 OF SB-8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	253
CONTRACT NO. 60V55				
ILLINOIS FED. AID PROJECT				



In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

FENCE POST ANCHOR ASSEMBLY DETAILS

BILL OF MATERIAL

Item	Unit	Quantity
Chain Link Fence, 4' Attached to Structure	Foot	132

FILE NAME = P:\2015\0549 IDOT D1 IL 132 Restoring Walls \JJ Benes\Drawings\Wall 24\SBM\087\RM24-SB06-FenceDetails.dgn



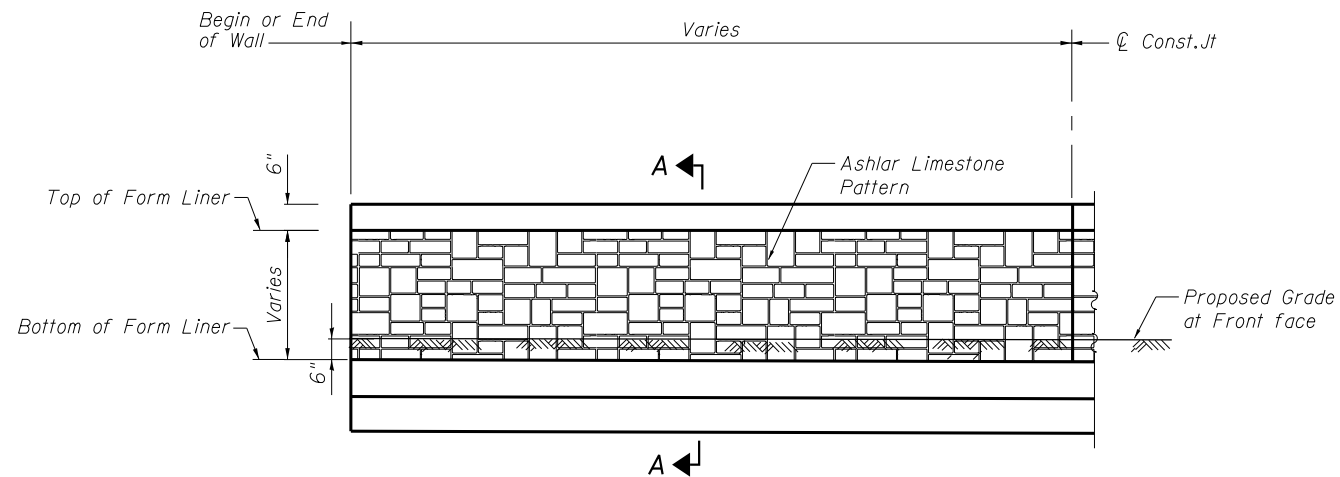
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

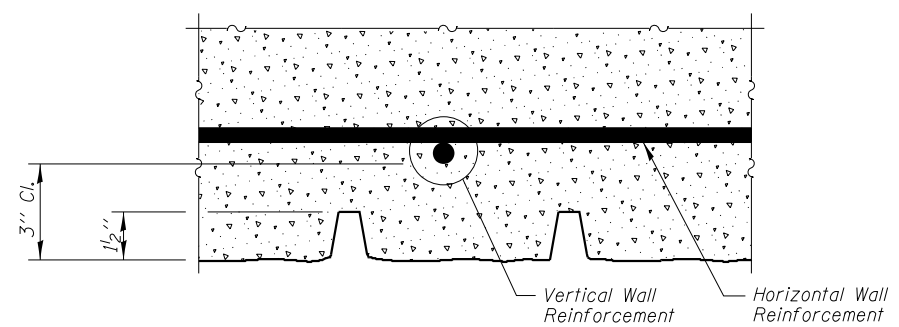
CHAIN LINK FENCE DETAILS
STA. 146 + 42.00 TO STA. 147 + 74.00 SN 049-W087

SHEET NO. SB-6 OF SB-8 SHEETS

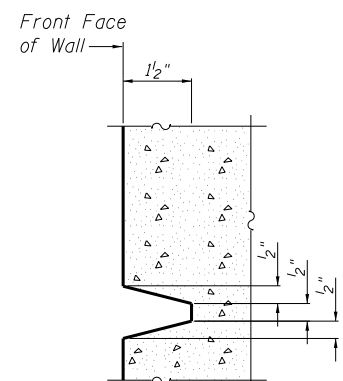
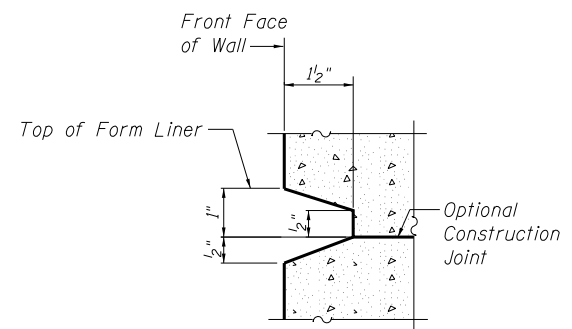
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	254
CONTRACT NO. 60V55			ILLINOIS FED. AID PROJECT	



ELEVATION - FORM LINER



PLAN - FORM LINER



SECTION A-A

FORM LINER ELEVATION TABLE

Station	Form Liner Top Elevation	Form Liner Bottom Elevation
146+45.40	767.64	766.65
146+50.00	767.54	765.50
146+75.00	767.03	764.55
147+00.00	766.60	764.50
147+25.00	766.25	763.85
147+50.00	765.99	762.23
147+54.52	765.95	761.00
147+74.00	765.81	764.83

BILL OF MATERIAL

Item	Unit	Quantity
Form Liner Textured Surface	Sq. Ft.	332

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ARCHITECTURAL FINISH DETAILS
STA. 146 + 42.00 TO STA. 147 + 74.00 SN 049-W087**

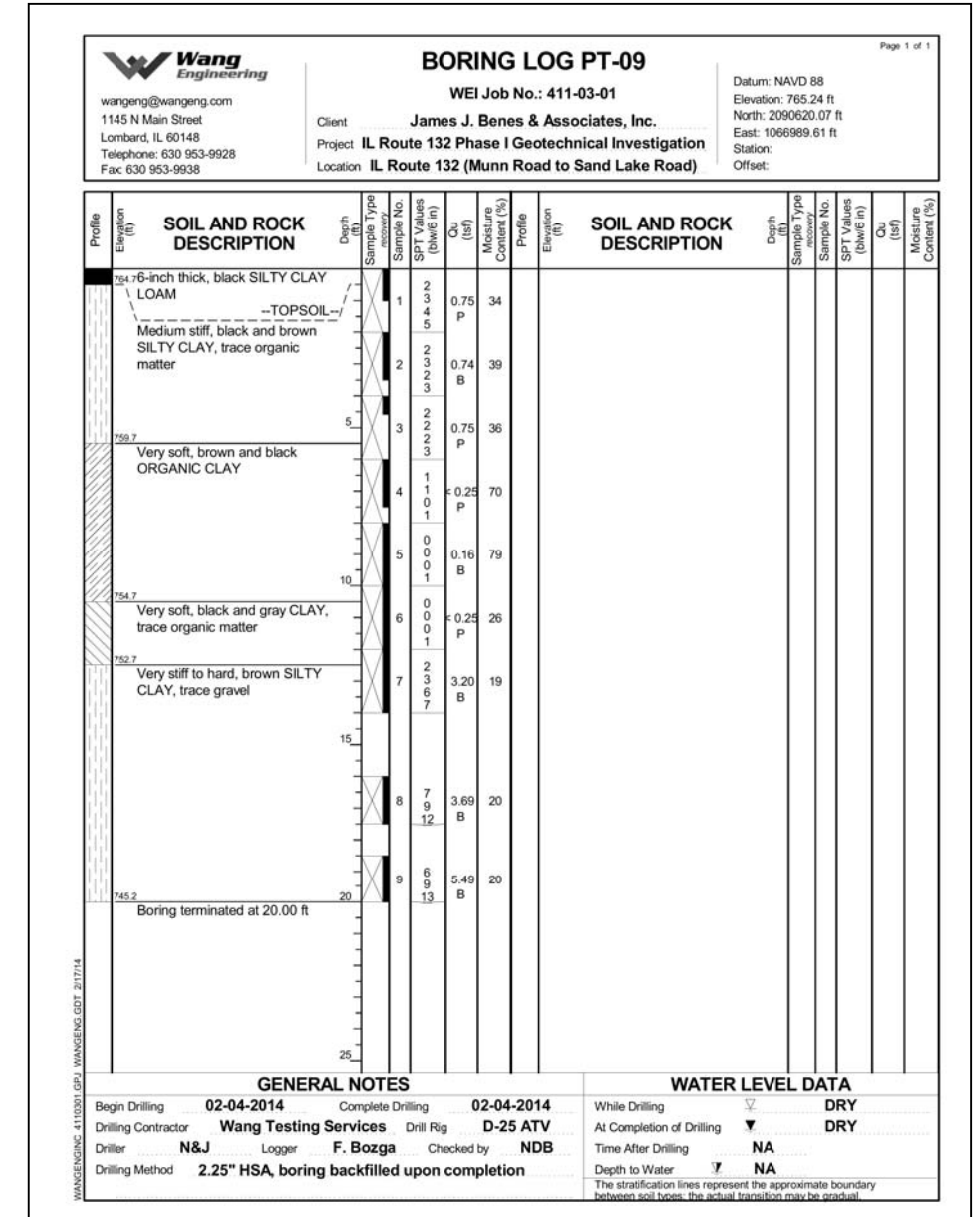
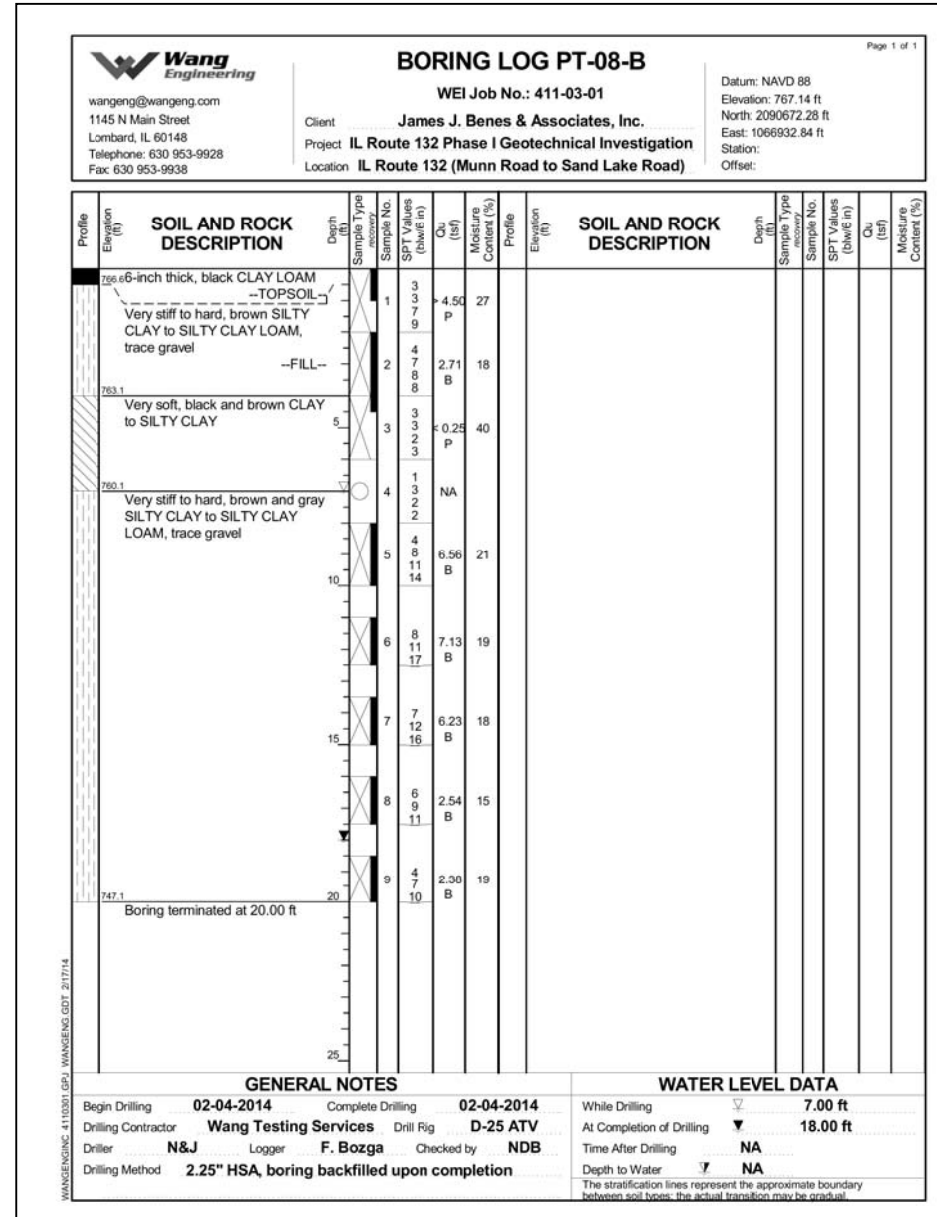
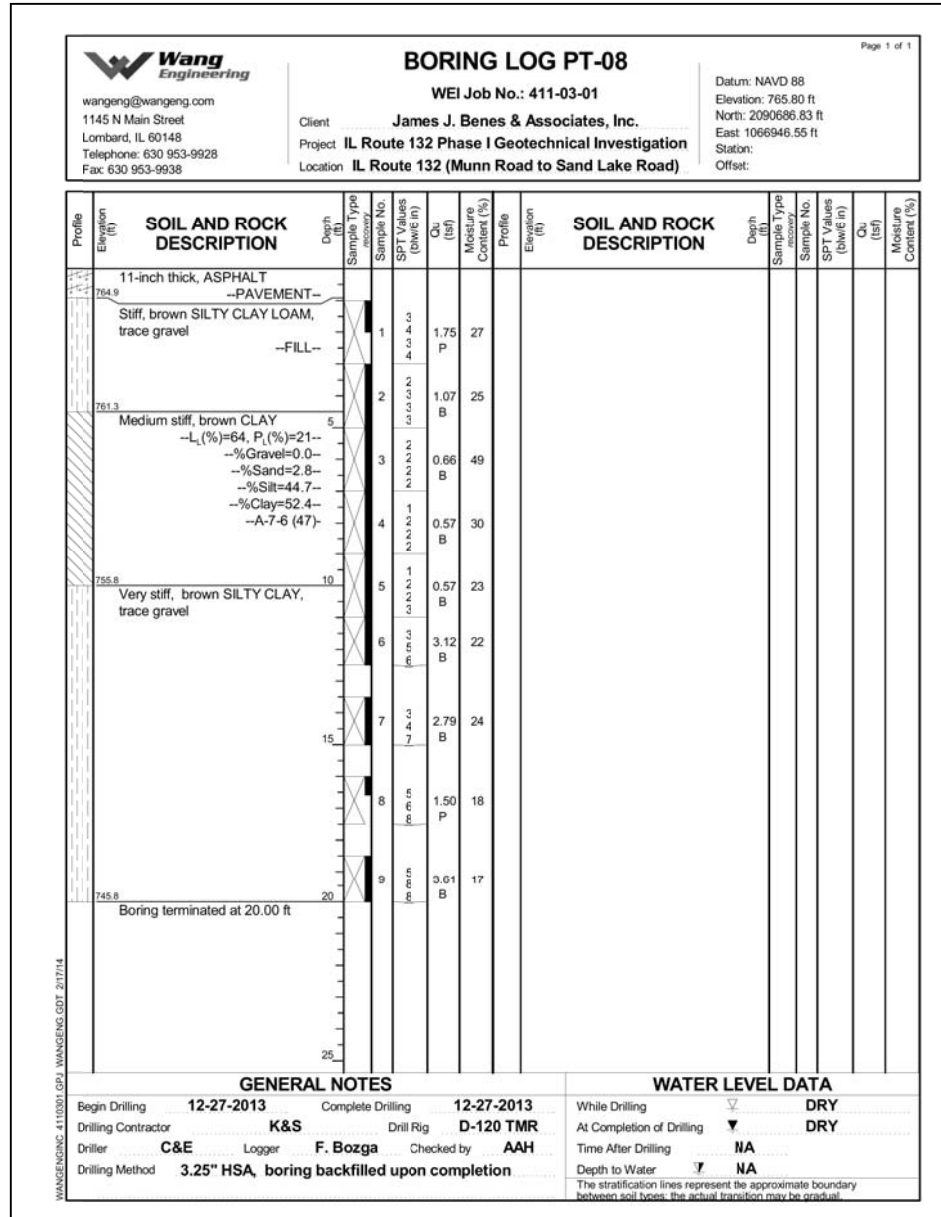
SHEET NO. SB-7 OF SB-8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	255
CONTRACT NO. 60V55				
ILLINOIS FED. AID PROJECT				

BORING LOG PT-08

BORING LOG PT-08-B

BORING LOG PT-09



FILE NAME = PA\2015\0549 IDOT DI IL 132 Retaining Walls - J.J. Benes & Associates, Inc. \Drawings\Well 24\SBM087\RM24-SB08-BoringLogs.dgn



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
STA. 146 + 42.00 TO STA. 147 + 74.00 SN 049-W087

SHEET NO. SB-8 OF SB-8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	256
CONTRACT NO. 60V55				
ILLINOIS FED. AID PROJECT				

Bench Mark: Cut "□" in Traffic Signal Controller Foundation.
 Located Along IL Rte. 132 Near Sand Lake Road
 at Sta. 137+05 LT. Elev. = 770.75

Existing Structure: None

Construction will be completed utilizing staged construction
 as part of IL 132 Roadway Construction

INDEX OF SHEETS

- SD-1. General Plan & Elevation
- SD-2. Typical Sections
- SD-3. Soldier Pile Layout
- SD-4. Details
- SD-5. Concrete Facing & Details
- SD-6. Chain Link Fence Details
- SD-7. Architectural Finish Details
- SD-8. Boring Logs

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	Cu. Yd.	43
Concrete Structures	Cu. Yd.	11.6
Form Liner Textured Surface	Sq. Ft.	228
Stud Shear Connectors	Each	44
Reinforcement Bars, Epoxy Coated	Pound	950
Geocomposite Wall Drain	Sq. Yd.	17
Driving Soldier Piles	Foot	205
Chain Link Fence, 4' Attached to Structure	Foot	50
Untreated Timber Lagging	Sq. Ft.	208
Furnishing Soldier Piles (HP Section)	Foot	205
Pipe Underdrains for Structures, 4"	Foot	60

GENERAL NOTES

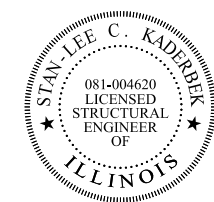
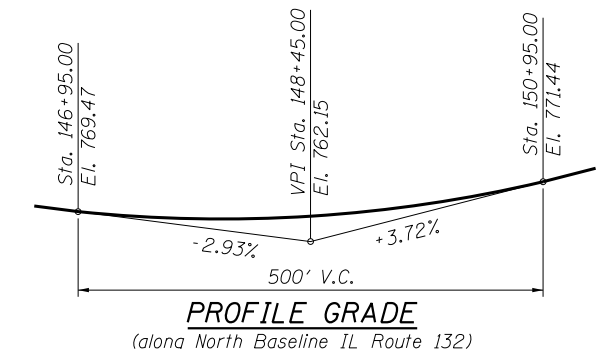
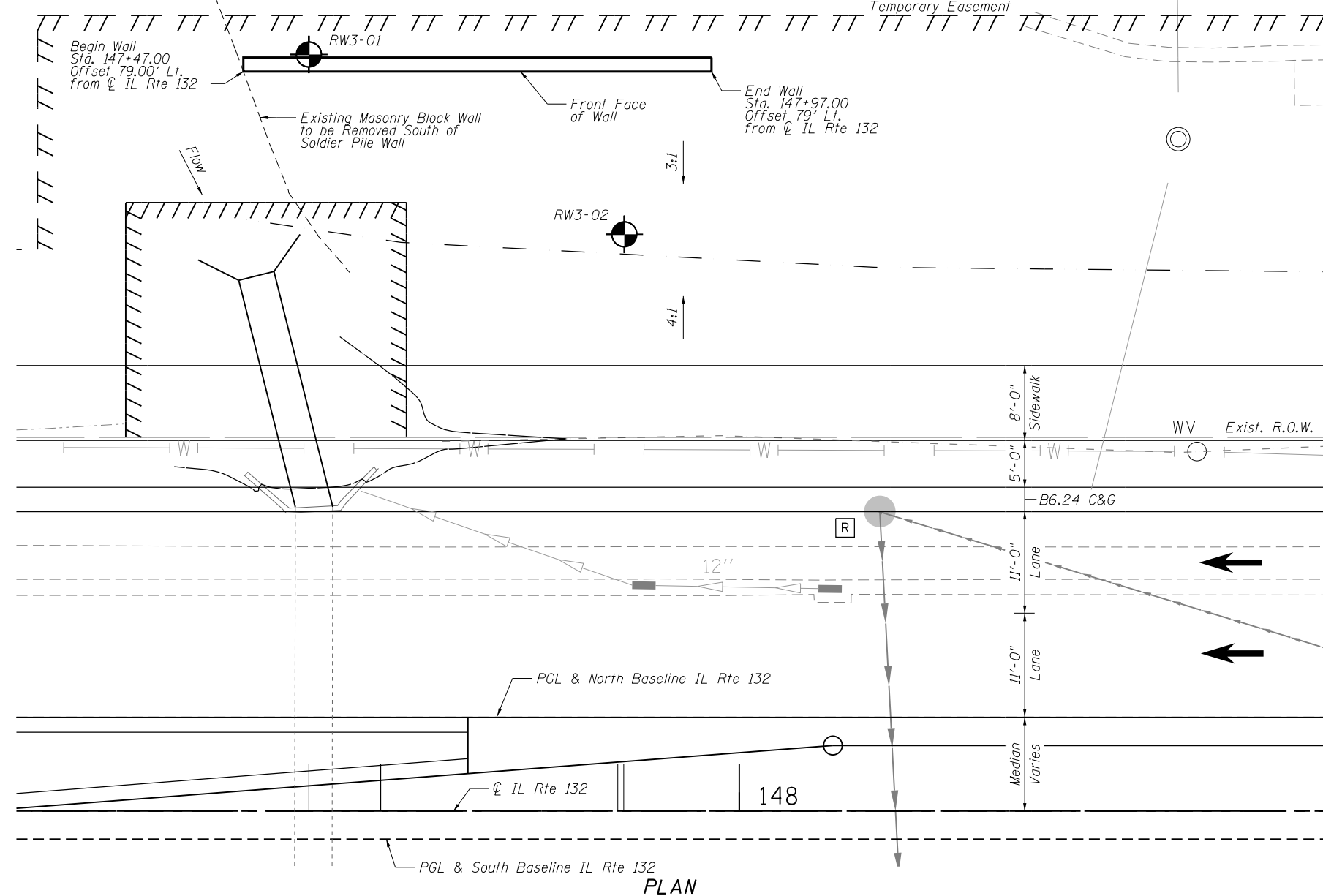
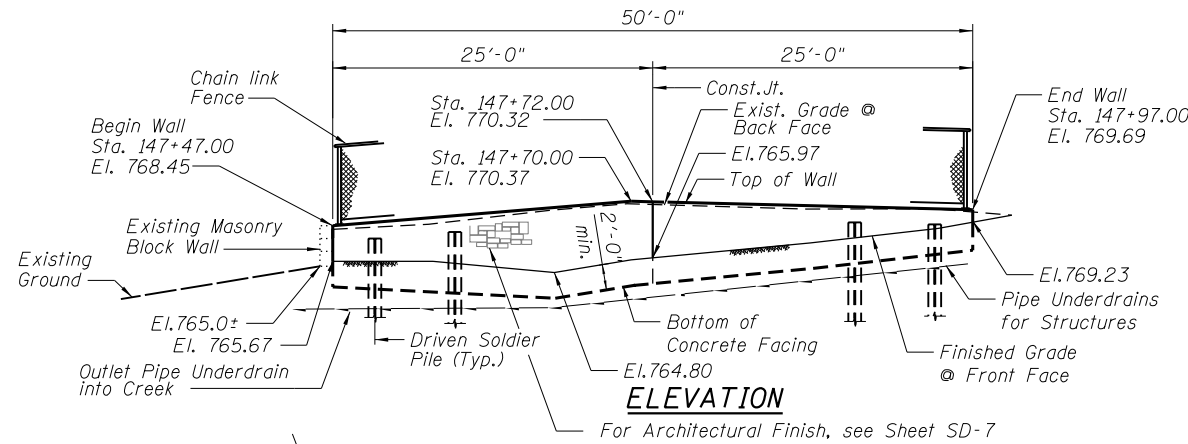
1. Reinforcement bars designated (E) shall be epoxy coated.
2. The Contractor is responsible for the design and performance of the lagging using no less than 3" nominal rough-sawn thickness and timber with a minimum allowable bending stress of 1000 psi.

DESIGN STRESSES

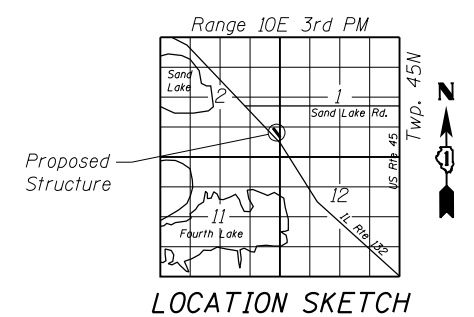
FIELD UNITS
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)
 $f_y = 50,000$ psi (M270 Grade 50)

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design
 Specifications 6th Edition with 2012 Interims



Signature: *[Signature]* Date: March 20, 2017
 Expires: November 30, 2018



GENERAL PLAN AND ELEVATION
IL RTE 132 FAP RTE 541
SECTION A-WRS-2
LAKE COUNTY
STA. 147+47.00 TO STA. 147+97.00
SN 049-W086

FILE NAME = P:\2015\0549\DOT D1 IL 132 Restoring Walls - J.J. Benes\Drawings\Wall 3 (SDM)\086\RW3-SD01-GPE.dgn



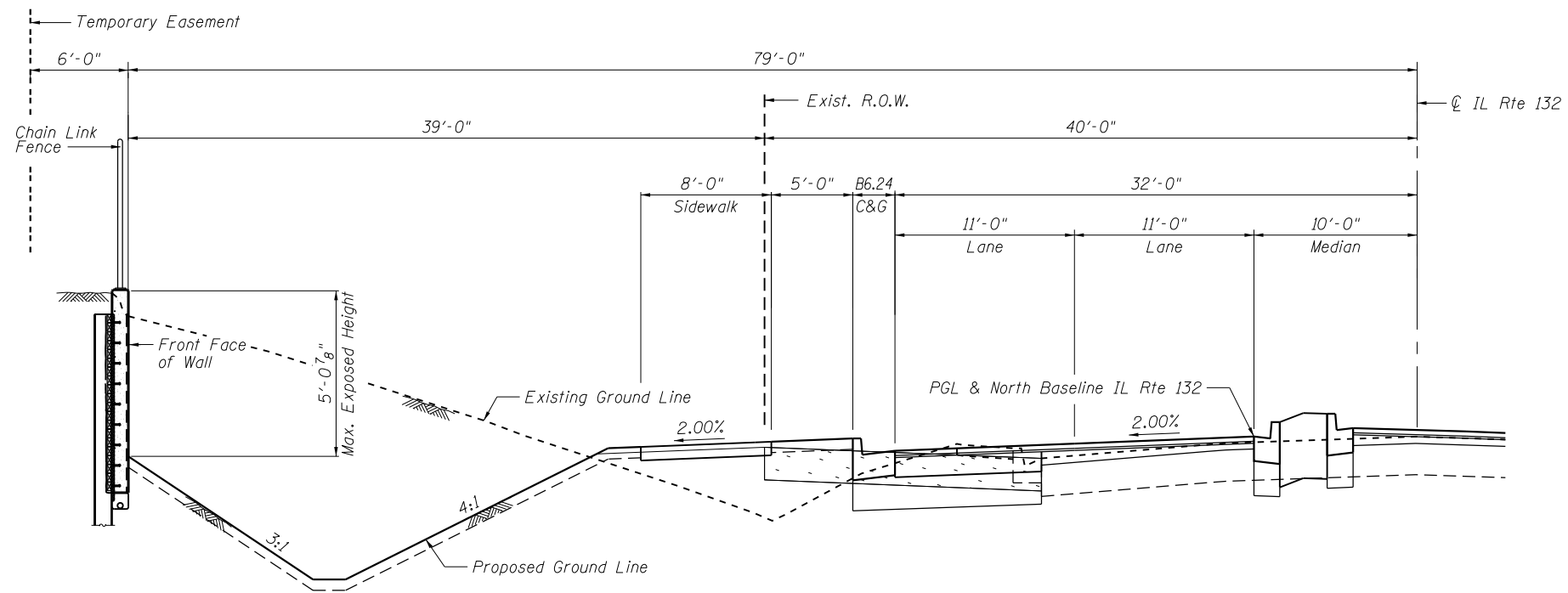
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

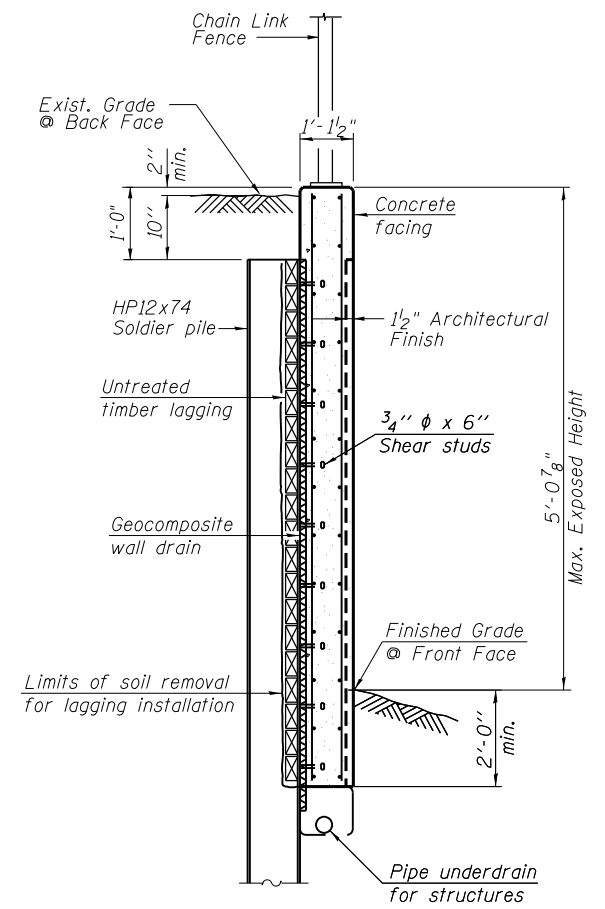
GENERAL PLAN & ELEVATION
 STA. 147 + 47.00 TO STA. 147 + 97.00 SN 049-W086

SHEET NO. SD-1 OF SD-8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	257
CONTRACT NO. 60V55			ILLINOIS FED. AID PROJECT	



TYPICAL SECTION
(Looking East)



SECTION THRU SOLDIER PILE WALL

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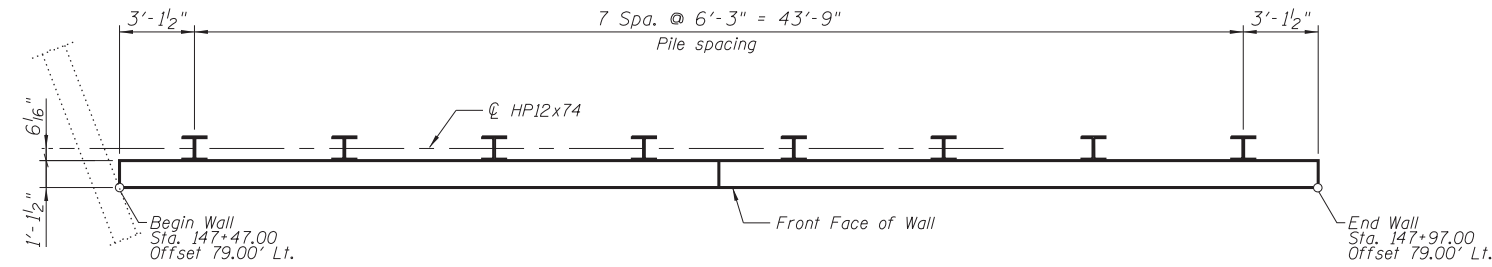


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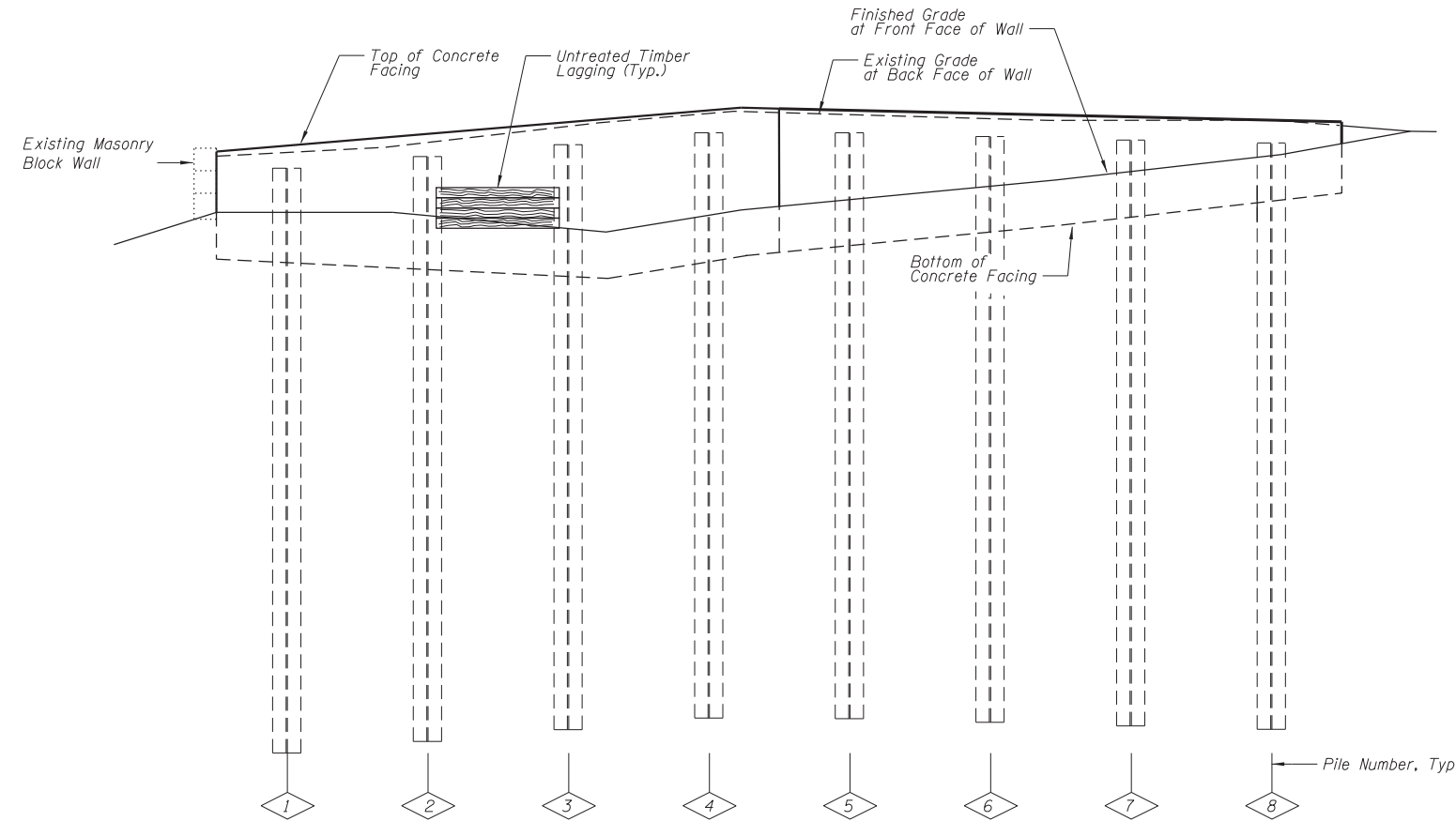
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TYPICAL SECTIONS
STA. 147 + 47.00 TO STA. 147 + 97.00 SN 049-W086
SHEET NO. SD-2 OF SD-8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	258
CONTRACT NO. 60V55			ILLINOIS FED. AID PROJECT	



PLAN



ELEVATION

PILE SUMMARY

Pile No.	Station	Offset to ¢ Pile	Pile Designation	Length	Bottom Elevation	Top Elevation
1	147+50.13	80.63	HP 12x74	24.51	743.20	767.71
2	147+56.38	80.63	HP 12x74	25.03	743.20	768.23
3	147+62.63	80.63	HP 12x74	25.55	743.20	768.75
4	147+68.88	80.63	HP 12x74	26.07	743.20	769.27
5	147+75.13	80.63	HP 12x74	26.04	743.20	769.24
6	147+81.38	80.63	HP 12x74	25.88	743.20	769.08
7	147+87.63	80.63	HP 12x74	25.72	743.20	768.92
8	147+93.88	80.63	HP 12x74	25.57	743.20	768.77

Note: All offsets are to the left of centerline of IL Rte. 132

BILL OF MATERIAL

Item	Unit	Quantity
Furnishing Soldier Piles (HP Section)	Foot	205
Driving Soldier Piles	Foot	205
Untreated Timber Lagging	Sq Ft	208
Stud Shear Connectors	Each	44

FILE NAME = PA\2015\0549\DOT D1 IL 132 Retaining Walls - J.J. Benes\Drawings\Wall 3 (SDM086\0160V55-SD03-SoldierPileLayout.dgn



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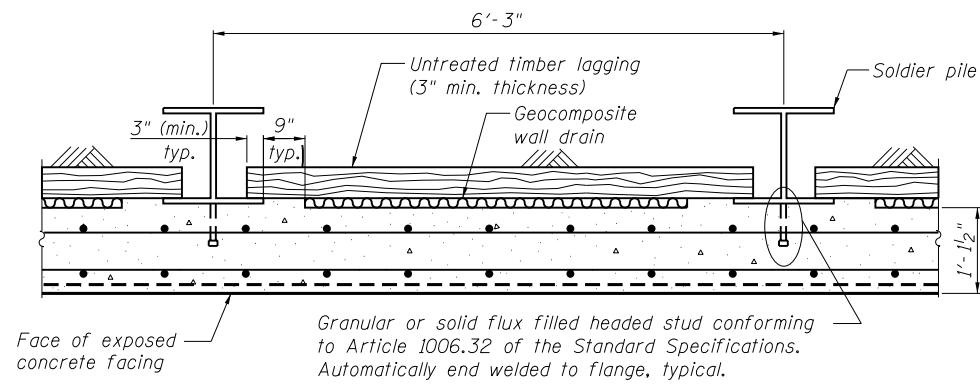
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

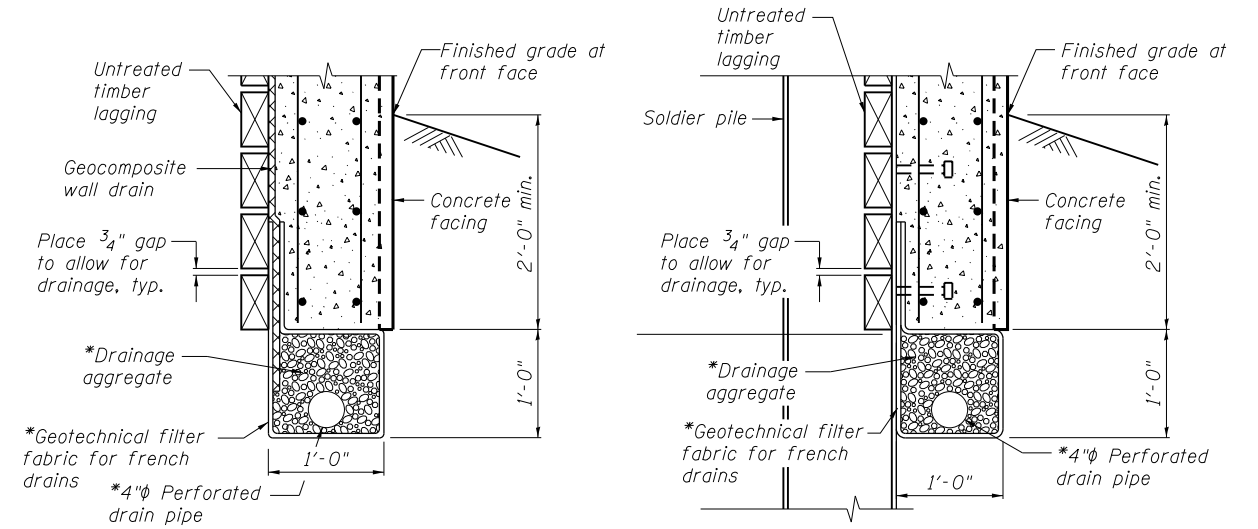
SOLDIER PILE LAYOUT
 STA. 147 + 47.00 TO STA. 147 + 97.00 SN 049-W086

SHEET NO. SD-3 OF SD-8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	259
CONTRACT NO. 60V55				
ILLINOIS FED. AID PROJECT				



SECTION THRU DRIVEN SOLDIER PILE WALL

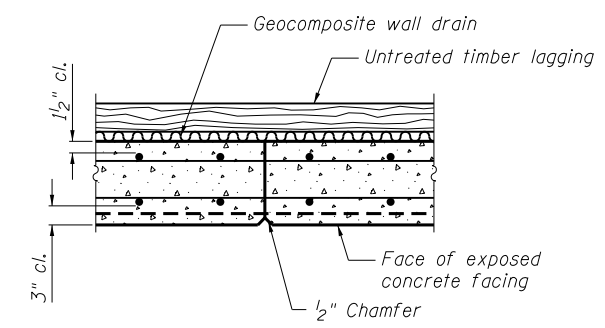


BETWEEN SOLDIER PILES

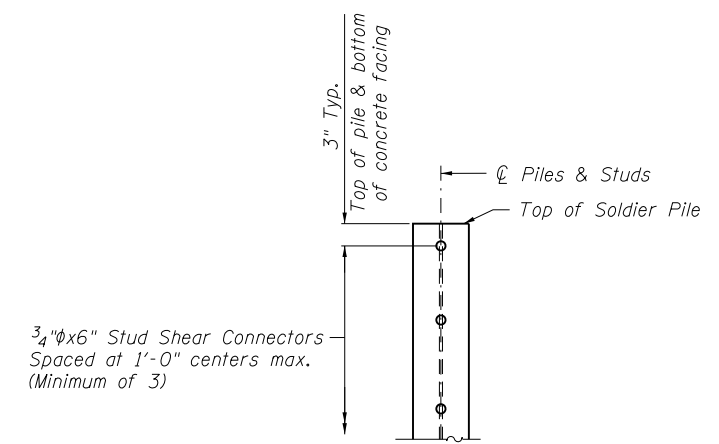
AT SOLDIER PILES

PIPE UNDERDRAIN DETAIL

*Included in the cost of Pipe Underdrains for Structures 4"



CONSTRUCTION JOINT DETAIL



DETAIL OF SHEAR STUD PLACEMENT

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

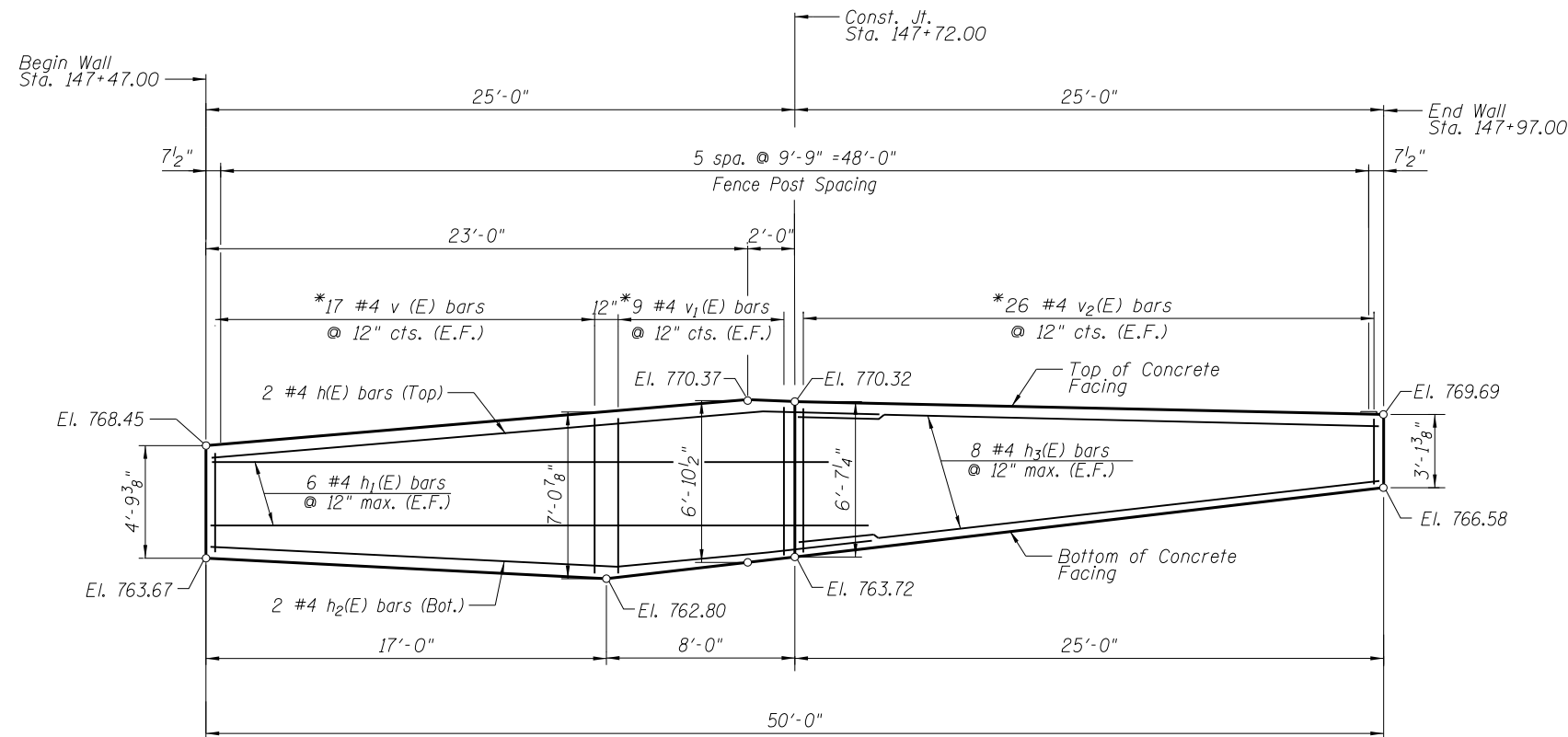
DETAILS
STA. 147 + 47.00 TO STA. 147 + 97.00 SN 049-W086

SHEET NO. SD-4 OF SD-8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	260
CONTRACT NO. 60V55				
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d (E)	12	#4	2'-0"	□
h (E)	2	#4	28'-0"	—
h ₁ (E)	12	#4	27'-11"	—
h ₂ (E)	2	#4	28'-0"	—
h ₃ (E)	16	#4	24'-8"	—
v (E)	17	#4	11'-2"	—
v ₁ (E)	9	#4	13'-1"	—
v ₂ (E)	26	#4	9'-2"	—
Item	Unit	Quantity		
Concrete Structures	Cu. Yd.	11.6		
Reinforcement Bars, Epoxy Coated	Pound	950		
Pipe Underdrains for Structures 4"	Foot	60		
Geocomposite Wall Drain	Sq. Yd.	17		



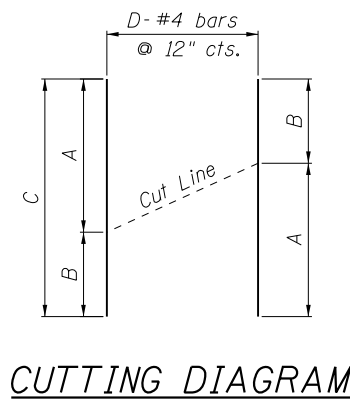
ELEVATION

Notes:

Minimum lap for #4 bar is 2'-11".

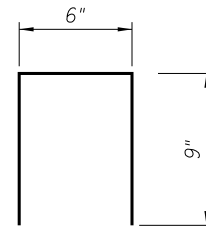
Space reinforcement in wall to miss shear studs.

* Signifies cut bar. Order per length on Bill of Material. Cut as shown in Cutting Diagram and use half of bars in each face.

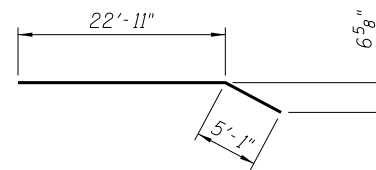


CUTTING DIAGRAM

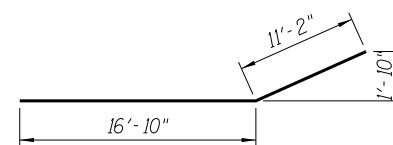
Bar	A	B	C	D
v (E)	4'-5"	6'-9"	11'-2"	17
v ₁ (E)	6'-9"	6'-4"	13'-1"	9
v ₂ (E)	6'-4"	2'-10"	9'-2"	26



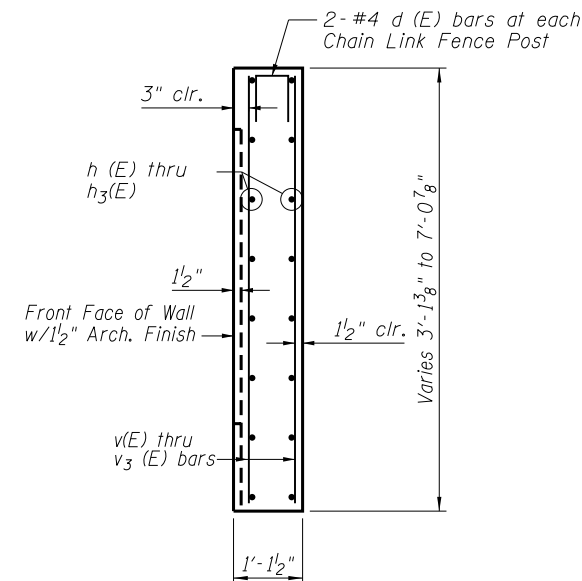
Bar d(E)



BAR h (E)



BAR h₂(E)



SECTION THRU CONCRETE FACING

FILE NAME = P:\2015\0549 IDOT D1 IL 132 Restoring Walls - J.J. Benes\Drawings\Wall 3 (SDM)086\RW3-SD05-Concrete Facing.dgn



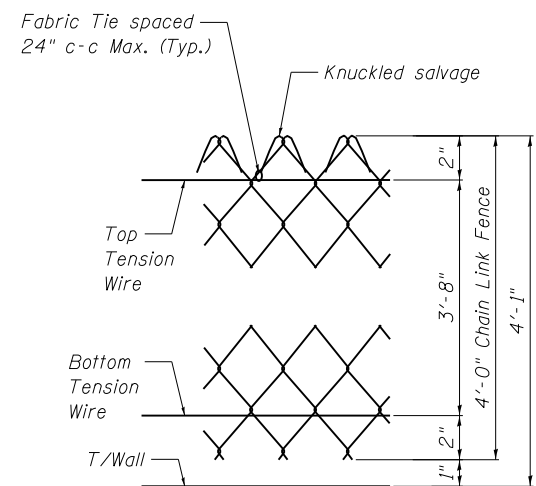
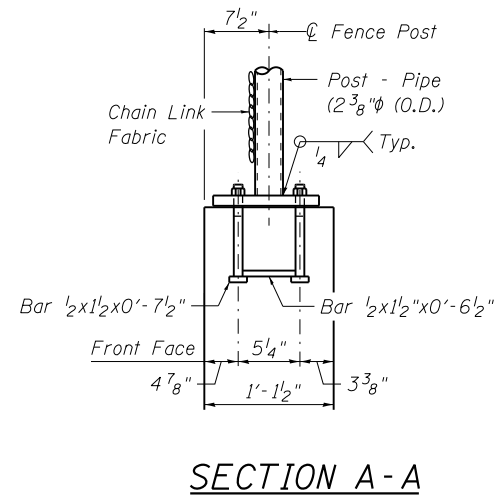
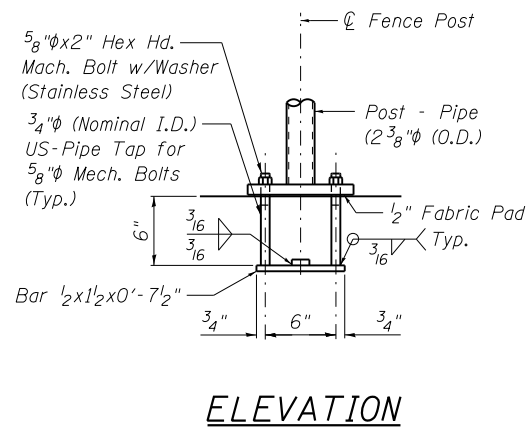
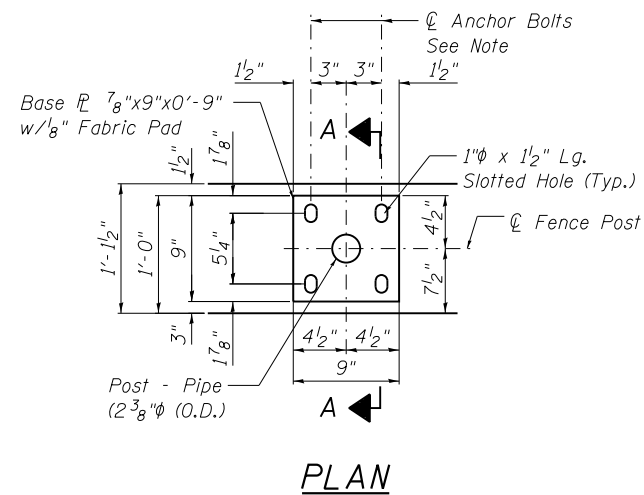
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PLOT SCALE = 3.7500' / 1" =	CHECKED - DAZ	REVISED -
PLOT DATE = 3/20/2017	DRAWN - TCS	REVISED -
	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE FACING & DETAILS
STA. 147 + 47.00 TO STA. 147 + 97.00 SN 049-W086

SHEET NO. SD-5 OF SD-8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	261
CONTRACT NO. 60V55			ILLINOIS FED. AID PROJECT	



In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

FENCE POST ANCHOR ASSEMBLY DETAILS

BILL OF MATERIAL

Item	Unit	Quantity
Chain Link Fence, 4' Attached to Structure	Foot	50

FILE NAME = P:\2015\0549 IDOT D1 IL 132 Restoring Walls & J.J. Benes\Drawings\Wall 3 (SDM086)\R43-SD06-FenceDetails.dgn



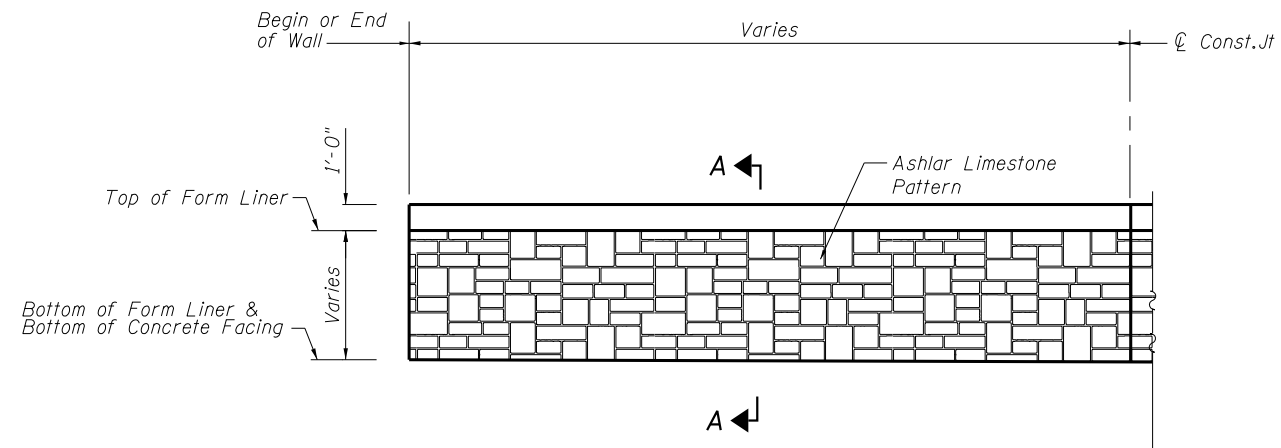
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PLOT SCALE = 0.0833' / in.	CHECKED - DAZ	REVISED -
PLOT DATE = 3/20/2017	DRAWN - TCS	REVISED -
	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

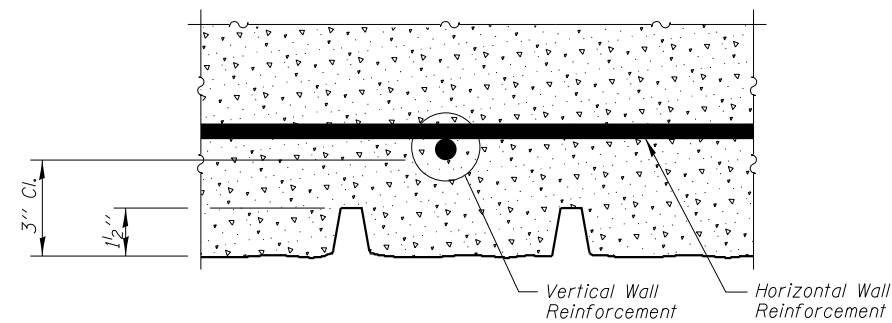
CHAIN LINK FENCE DETAILS
STA. 147 + 47.00 TO STA. 147 + 97.00 SN 049-W086

SHEET NO. SD-6 OF SD-8 SHEETS

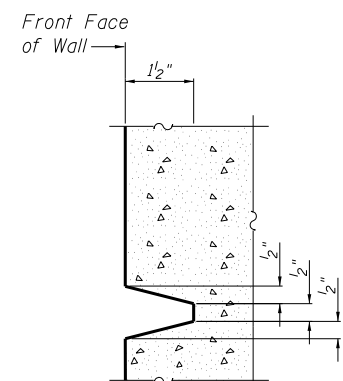
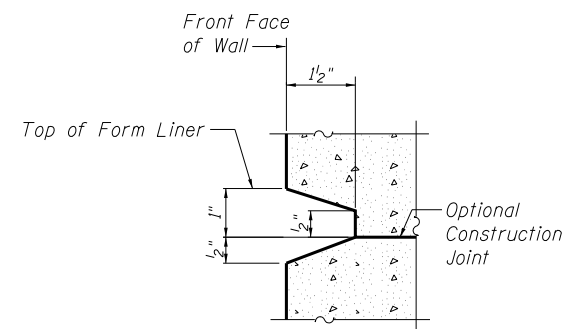
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	262
CONTRACT NO. 60V55			ILLINOIS FED. AID PROJECT	



ELEVATION - FORM LINER



PLAN - FORM LINER



SECTION A-A

BILL OF MATERIAL

Item	Unit	Quantity
Form Liner Textured Surface	Sq. Ft.	228

FILE NAME = P:\2015\0549 IDOT D1 IL 132 Restoring Walls - JJ Benes\Drawings\Wall 3 (SDM086)\R43-SD07-ArchFinish.dgn



USER NAME = tsledge	DESIGNED - LAS	REVISED -
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PLOT DATE = 3/20/2017	DRAWN - TCS	REVISED -
	CHECKED - LAS	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ARCHITECTURAL FINISH DETAILS
STA. 147 + 47.00 TO STA. 147 + 97.00 SN 049-W086**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	263
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60V55	

SHEET NO. SD-7 OF SD-8 SHEETS

BORING LOG RW3-01

Wang Engineering
 wangeng@wangeng.com
 1145 N Main Street
 Lombard, IL 60148
 Telephone: 630 953-9928
 Fax: 630 953-9928

BORING LOG RW3-01
 WEI Job No.: 411-03-02
 Client: **James J. Benes & Associates, Inc.**
 Project: **IL-132 Supplemental**
 Location: **Lindenhurst, IL**

Datum: NAVD 88
 Elevation: 768.75 ft
 North: 2090734.32 ft
 East: 1067043.70 ft
 Station: 147+50.6
 Offset: 80.82 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
768.3	0.5-inch thick, black SILTY CLAY LOAM --TOPSOIL-- Very stiff to hard, brown SILTY CLAY LOAM, trace gravel, asphalt traces --FILL--	1	3	3.50	23		742.8	Boring terminated at 26.00 ft	13	13	22	6.15	17
763.5	Medium stiff, dark gray to black ORGANIC SILTY CLAY, trace plant material	3	7	3.50	18				30				
760.0	Gray SAND with silt --Moist--	5	11	0.82	38				35				
759.0	Soft to medium stiff, brown and gray ORGANIC SILTY CLAY LOAM, trace shell fragments --L _c (%)=98, P _c (%)=42-- Organic Content(%)=12.6	6	12	0.66	116				40				
753.3	Very stiff to hard, brown and gray SILTY CLAY, trace gravel	8	1	0.25	59				45				
		9	1	0.25	60				50				

GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling	04-29-2015	Complete Drilling	04-29-2015	While Drilling	9.50 ft
Drilling Contractor	K&S	Drill Rig	D-50 TMR	At Completion of Drilling	12.00 ft
Driller	R&E	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 RW3-02

Wang Engineering
 wangeng@wangeng.com
 1145 N Main Street
 Lombard, IL 60148
 Telephone: 630 953-9928
 Fax: 630 953-9928

BORING LOG RW3-02
 WEI Job No.: 411-03-02
 Client: **James J. Benes & Associates, Inc.**
 Project: **IL-132 Supplemental**
 Location: **Lindenhurst, IL**

Datum: NAVD 88
 Elevation: 768.97 ft
 North: 2090695.52 ft
 East: 1067058.99 ft
 Station: 147+87.64
 Offset: 61.64 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
768.5	0.5-inch thick, dark brown SILTY CLAY LOAM --TOPSOIL-- Hard, brown SILTY CLAY LOAM, trace gravel --FILL-- Medium dense, brown SANDY GRAVEL --FILL-- Stiff, brown and gray SILTY CLAY LOAM, trace gravel --FILL--	1	4	4.50	23		743.0	Boring terminated at 26.00 ft	13	14	18	5.49	20
763.7	Medium stiff, gray to dark gray ORGANIC SILTY CLAY, trace organic matter --L _c (%)=45, P _c (%)=23--	3	2	0.82	37				30				
759.2	Soft, black ORGANIC CLAY Organic Content(%)=25.5	6	2	0.25	147				35				
757.2	Gray SAND, trace silt seams --Moist--	7	2	0.74	65				40				
751.5	Very stiff to hard, brown and gray SILTY CLAY --Silt seams--	9	0	0.25	54				45				
		10	6	2.21	20				50				
		11	5	3.69	20								
		12	9	5.00	17								

GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling	04-29-2015	Complete Drilling	04-29-2015	While Drilling	Dry
Drilling Contractor	K&S	Drill Rig	D-50 TMR	At Completion of Drilling	Dry
Driller	R&E	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 = PA\2015\0549 IDOT DI IL 132 Restoring Wells - J.J. Benes\Drawings\Well 3 (SDM086)\RW3-SD08-Boring-log.dgn



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PLOT DATE = 3/20/2017	DRAWN - TCS	REVISED -
	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BORING LOGS
 STA. 147 + 47.00 TO STA. 147 + 97.00 SN 049-W086

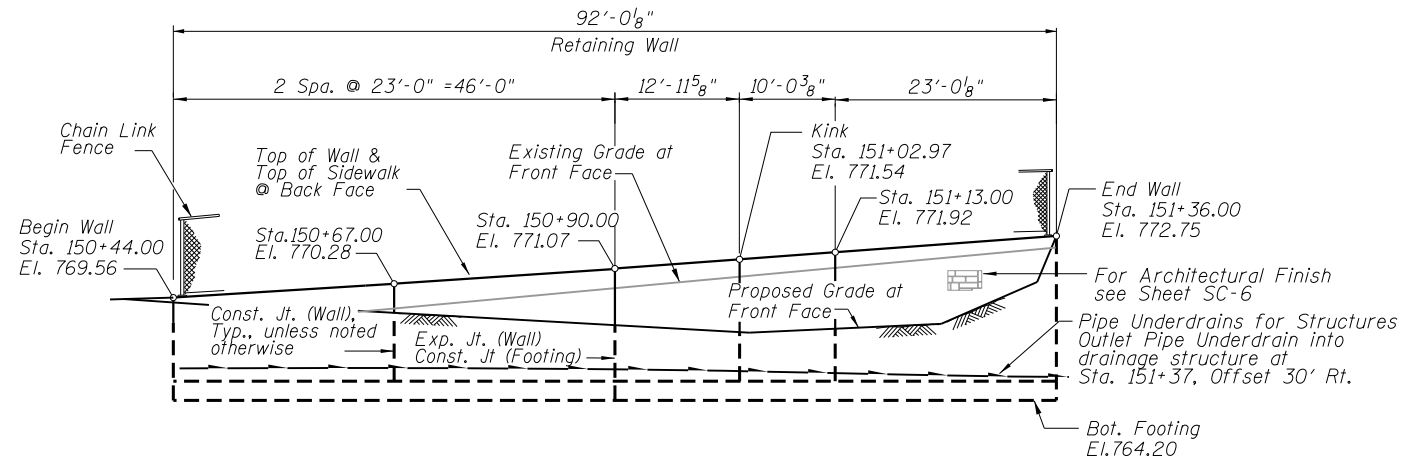
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	264
CONTRACT NO. 60V55				
ILLINOIS FED. AID PROJECT				

SHEET NO. SD-8 OF SD-8 SHEETS

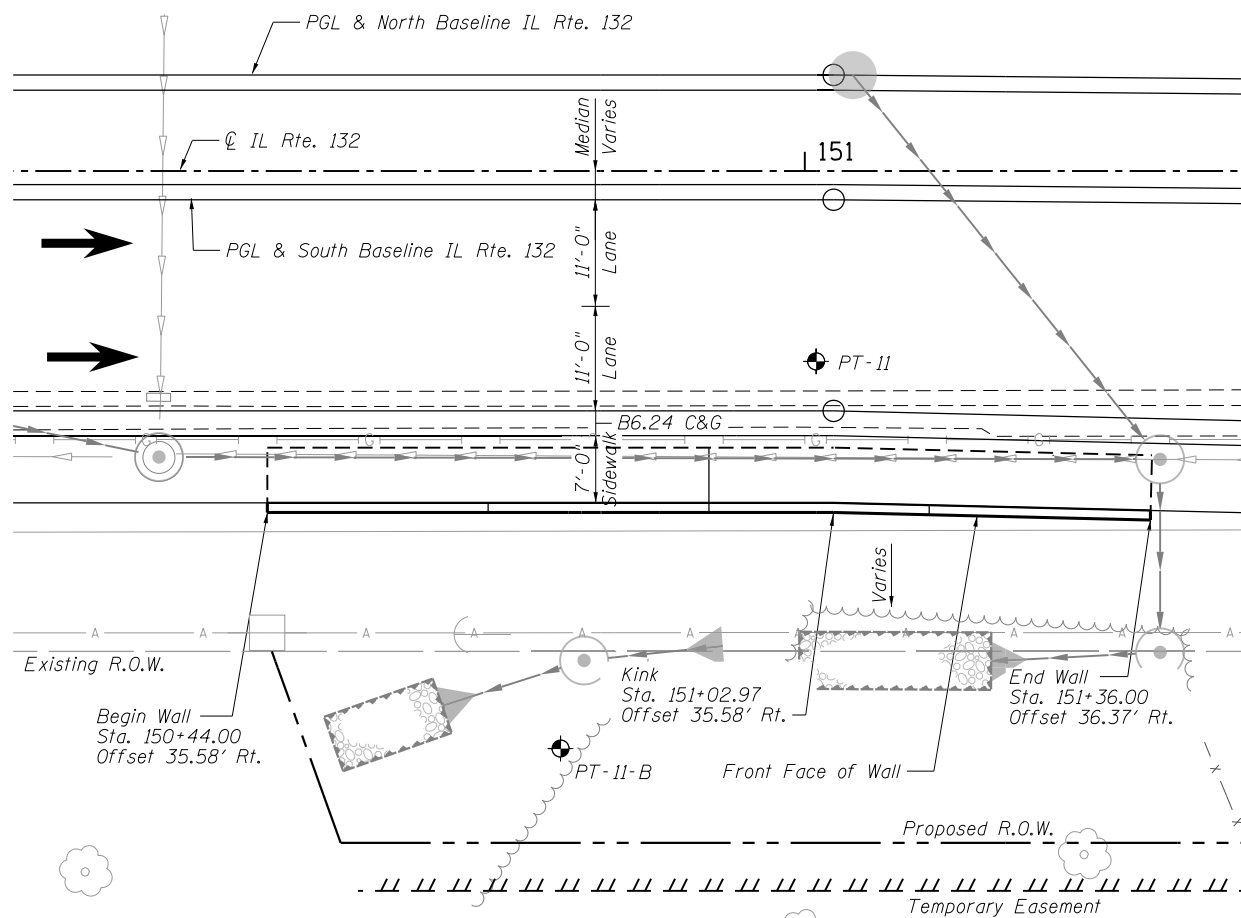
Bench Mark: Cut "□" in Traffic Signal Controller Foundation.
 Located Along IL Rte. 132 Near -Sand Lake Road
 at Sta. 137+05 LT. Elev. = 770.75

Existing Structure: None

Construction will be completed utilizing staged construction
 as part of IL Rte. 132 Roadway Construction.



DEVELOPED ELEVATION



PLAN

INDEX OF SHEETS

- SC-1. General Plan & Elevation
- SC-2. Wall Plan & Elevation
- SC-3. Wall Details
- SC-4. Typical Section
- SC-5. Chain Link Fence Details
- SC-6. Architectural Finish Details
- SC-7. Boring Logs

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications 6th Edition with 2012 Interims

DESIGN STRESSES

FIELD UNITS

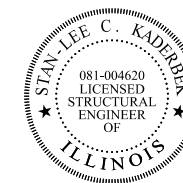
$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)

GENERAL NOTES

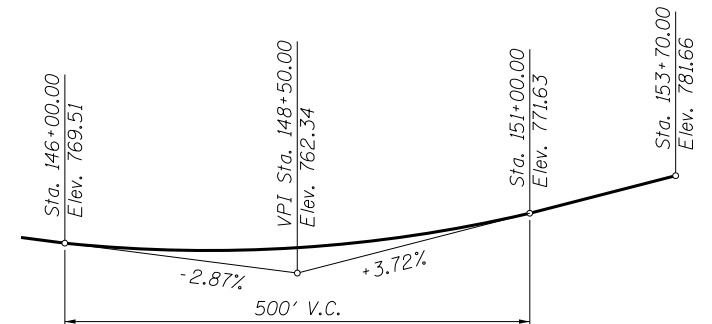
1. Reinforcement bars designated (E) shall be epoxy coated.
2. Offsets are measured from the C IL Rte. 132 to the front face of the wall.
3. Resolution of conflicts with existing utilities to be determined.

TOTAL BILL OF MATERIAL

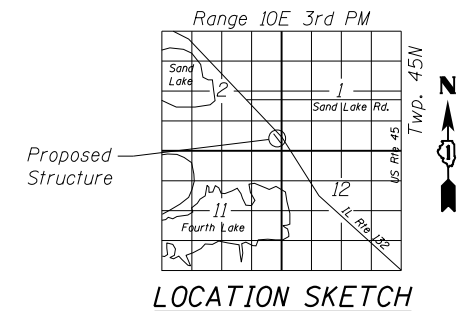
ITEM	UNIT	TOTAL
Structure Excavation	Cu. Yd.	225
Concrete Structures	Cu. Yd.	57.8
Form Liner Textured Surface	Sq. Ft.	219
Reinforcement Bars, Epoxy Coated	Pound	6,780
Geocomposite Wall Drain	Sq. Yd.	35
Granular Backfill for Structures	Cu. Yd.	53
Chain Link Fence, 4' Attached to Structure	Foot	92
Pipe Underdrains for Structures, 4"	Foot	98



Signature: *[Signature]* Date: March 20, 2017
 November 30, 2018 Expires



PROFILE GRADE
 (along South Baseline IL Route 132)



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
IL RTE 132 FAP RTE 541
SECTION A-WRS-2
LAKE COUNTY
STA. 150+44.00 TO STA. 151+36.00
SN 049-W084

FILE NAME = P:\2015\0549\DOT D1 IL 132 Restoring Walls - J.J. Benes\Drawings\Wall 2B (SC)W084\W084-SC01-GPE.dgn



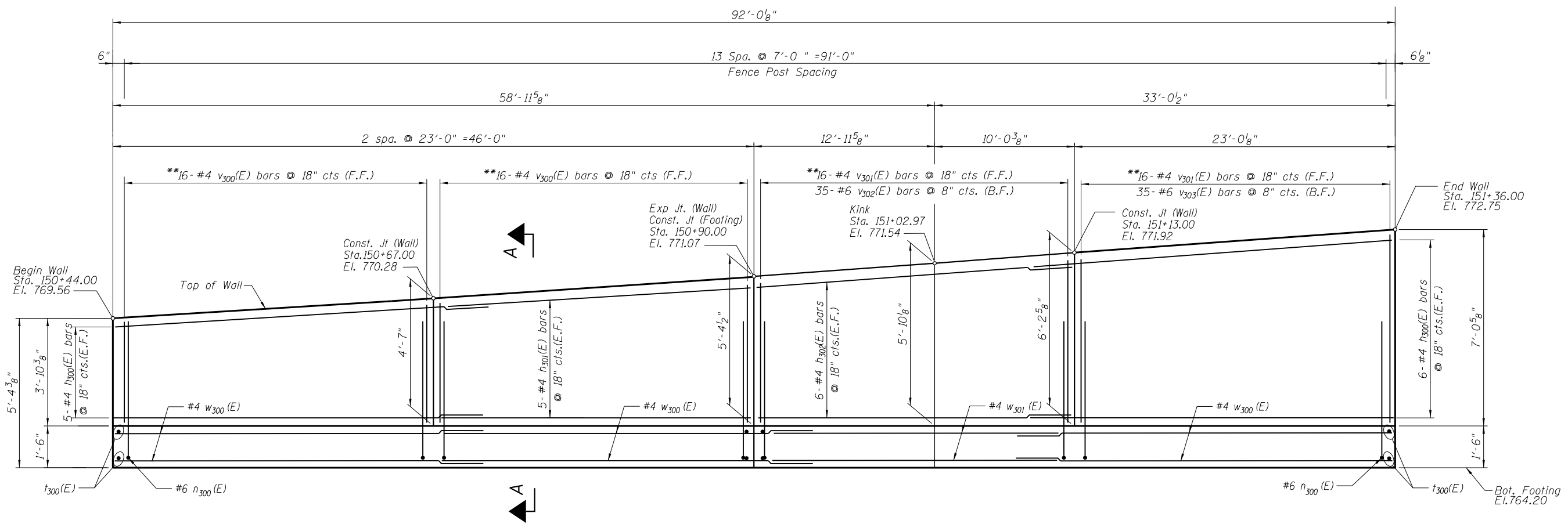
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

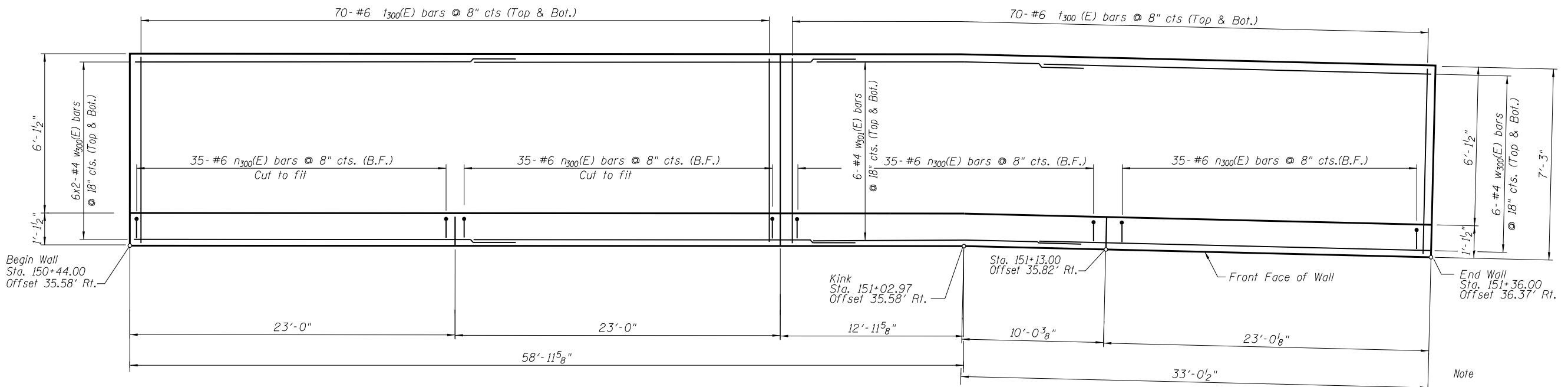
GENERAL PLAN & ELEVATION
 STA. 150 + 44.00 TO STA. 151 + 36.00 SN 049-W084

SHEET NO. SC-1 OF SC-7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	265
CONTRACT NO. 60V55				
ILLINOIS FED. AID PROJECT				



DEVELOPED ELEVATION



FOOTING PLAN

Note
 ** Signifies cut bar, order per length on Bill of Material. Cut as shown in Cutting Diagram on SC-3. Use half bars in each panel.
 Minimum lap for #4 bar is 2'-11", #6 bar is 4'-4".
 See Sheet SC-3 for Section A-A, Details and Bill of Material.
 Bars Indicated thus: 6x2-#4 etc. indicates 6 lines of bars with 2 Length per line.

FILE NAME = P:\2015\0549 IDOT D1 IL 132 Restoring Walls - J.J. Benes\Drawings\Wall 2B (SC)W084\W084-SC02-WPE.dgn



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PLOT DATE = 3/20/2017	DRAWN - TCS	REVISED -
	CHECKED - LAS	REVISED -

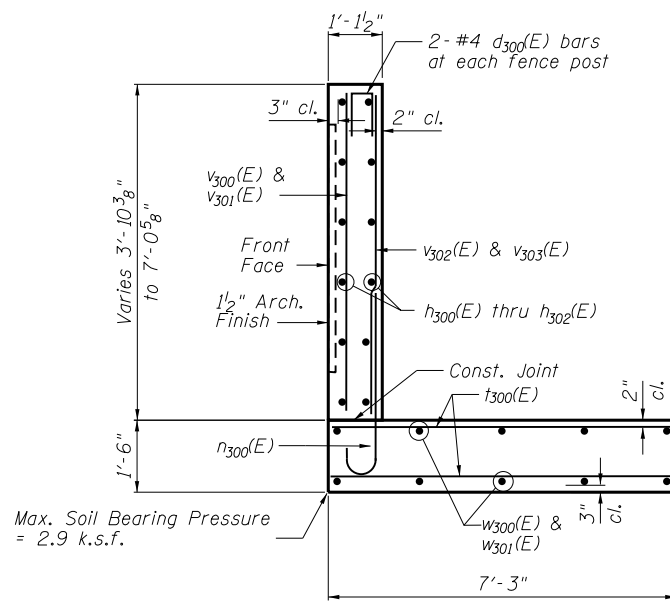
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

WALL PLAN & ELEVATION
 STA. 150 + 44.00 TO STA. 151 + 36.00 SN 049-W084
 SHEET NO. SC-2 OF SC-7 SHEETS

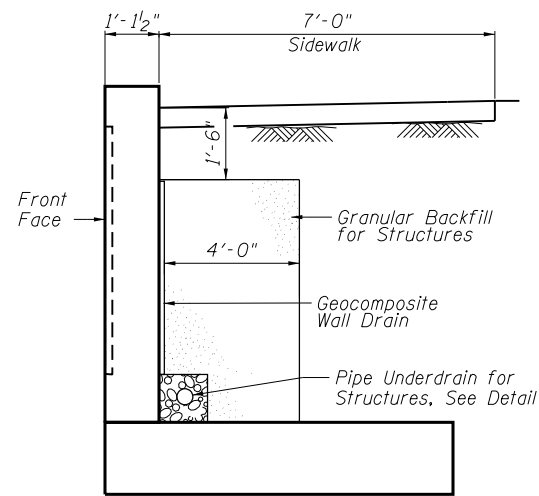
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	266
CONTRACT NO. 60V55				
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL

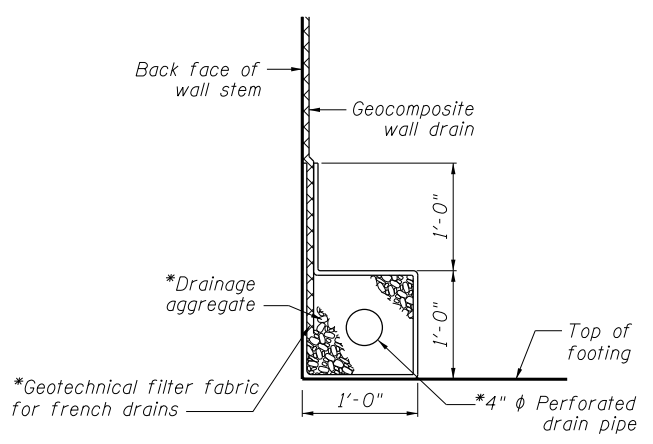
Bar	No.	Size	Length	Shape	
d300 (E)	28	#4	2'-0"	□	
h300 (E)	22	#4	25'-11"	—	
h301 (E)	10	#4	22'-8"	—	
h302 (E)	12	#4	22'-8"	—	
n300 (E)	140	#6	7'-2"	—	
t300 (E)	280	#6	6'-11"	—	
v300 (E)	16	#4	8'-8"	—	
v301 (E)	16	#4	11'-10"	—	
v302 (E)	35	#6	5'-1"	—	
v303 (E)	35	#6	5'-11"	—	
w300 (E)	36	#4	25'-11"	—	
w301 (E)	12	#4	22'-10"	—	
Item				Unit	Quantity
Concrete Structures				Cu. Yd.	57.8
Reinforcement Bars, Epoxy Coated				Pound	6,780
Pipe Underdrains for Structures, 4"				Foot	98
Geocomposite Wall Drain				Sq. Yd.	35
Granular Backfill for Structures				Cu. Yd.	53



SECTION A-A

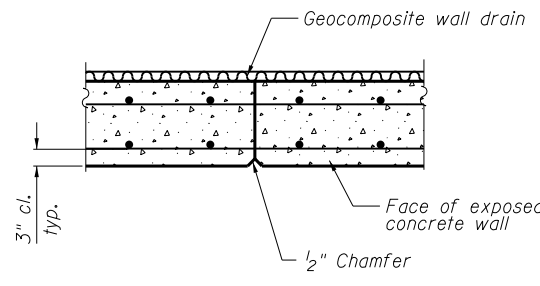


TYPICAL DRAINAGE DETAIL

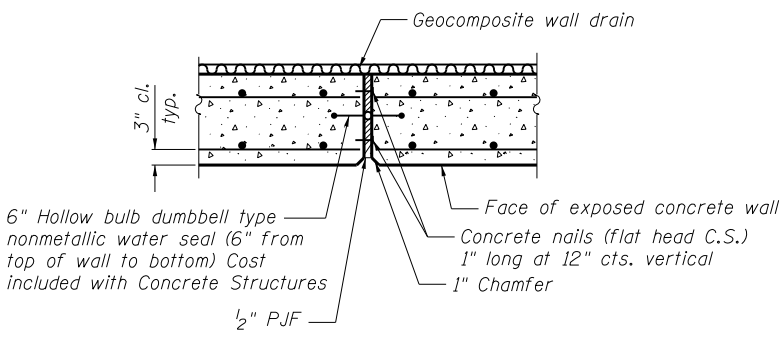


PIPE UNDERDRAIN DETAIL

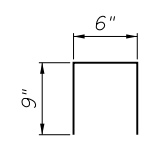
*Included in the cost of "Pipe Underdrains for Structures"



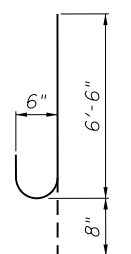
CONSTRUCTION JOINT DETAIL



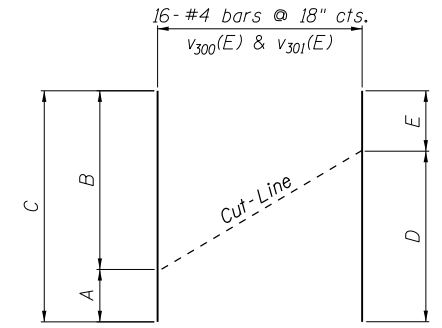
EXPANSION JOINT DETAIL



BAR d300(E)

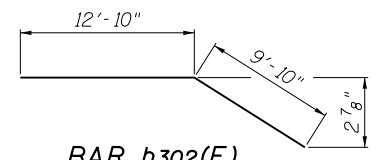


BAR n300(E)

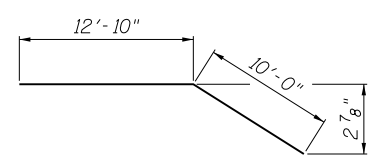


CUTTING DIAGRAM

Bar	A	B	C	D	E
v300 (E)	3'-7"	5'-1"	8'-8"	4'-4"	4'-4"
v301 (E)	5'-1"	6'-9"	11'-10"	5'-11"	5'-11"



BAR h302(E)



BAR w301(E)

FILE NAME = P:\2015\0549 IDOT D1 IL 132 Restoring Walls - J.J. Benes\Drawings\Wall 2B (SC)W084\W084-SC03-WallDetail.scdgn



USER NAME = tsledge	DESIGNED - LAS	REVISED -
PLOT SCALE = 2.00' / 1"	CHECKED - DAZ	REVISED -
PLOT DATE = 3/20/2017	DRAWN - TCS	REVISED -
	CHECKED - LAS	REVISED -

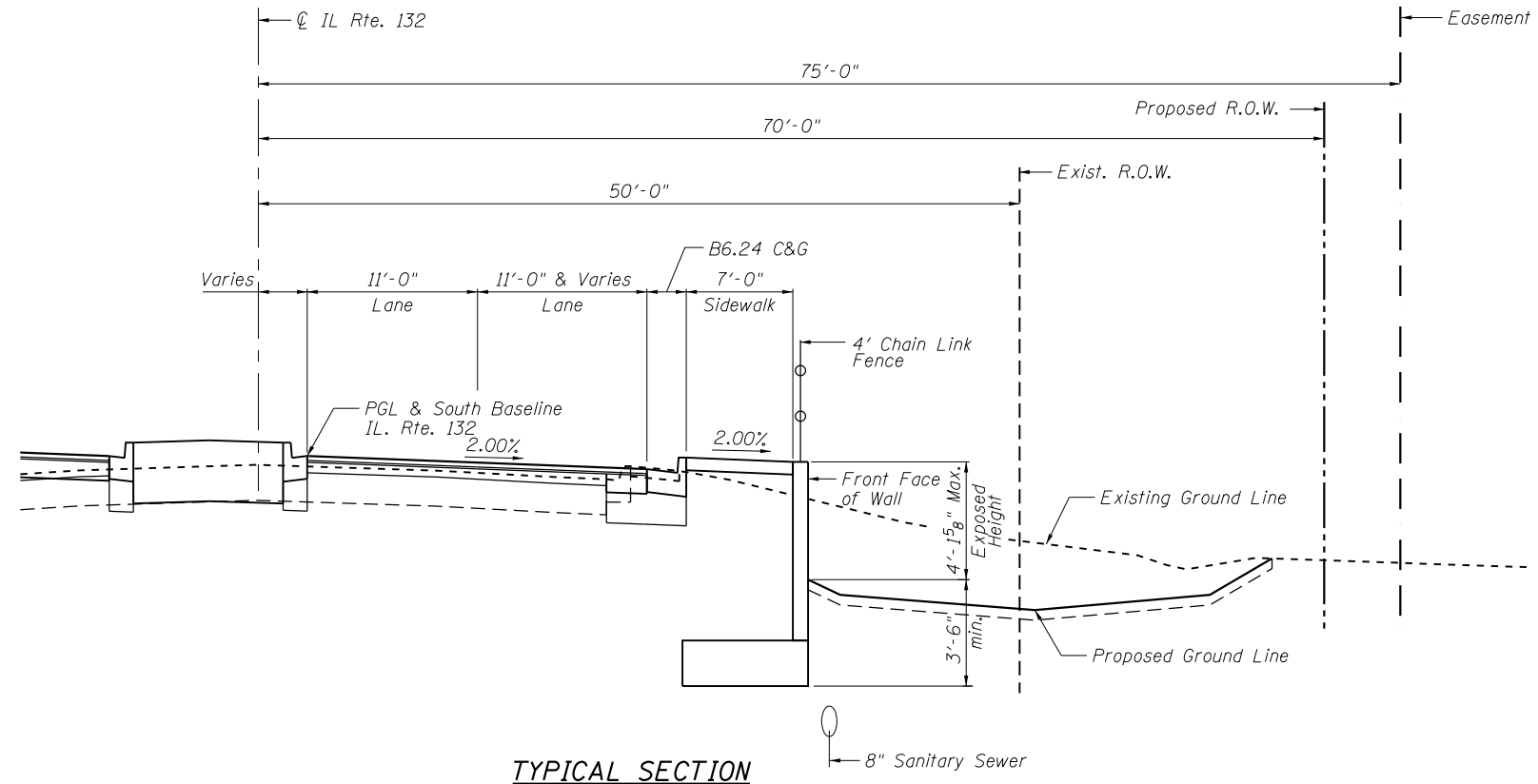
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WALL DETAILS
STA. 150 + 44.00 TO STA. 151 + 36.00 SN 049-W084**

SHEET NO. SC-3 OF SC-7 SHEETS

F.A.P. RTE. 541	SECTION A-WRS-2	COUNTY LAKE	TOTAL SHEETS 345	SHEET NO. 267
CONTRACT NO. 60V55				
ILLINOIS FED. AID PROJECT				

FILE NAME = P:\2015\0549 IDOT D1 IL 132 Restoring Walls - JJ Benes\Drawings\Wall 2B (SC)W084\W084-SC04-TypSec.dgn



TYPICAL SECTION
Sta. 150+44.00 to Sta. 151+36.00

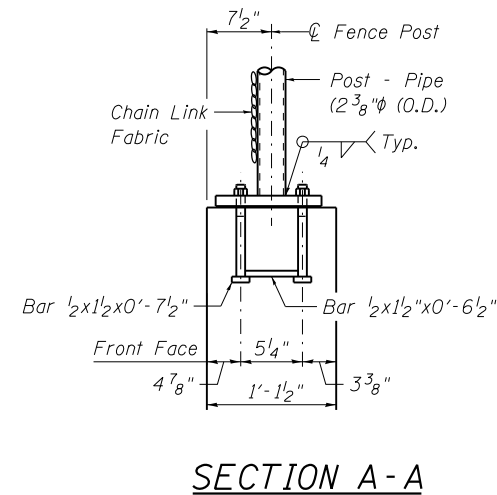
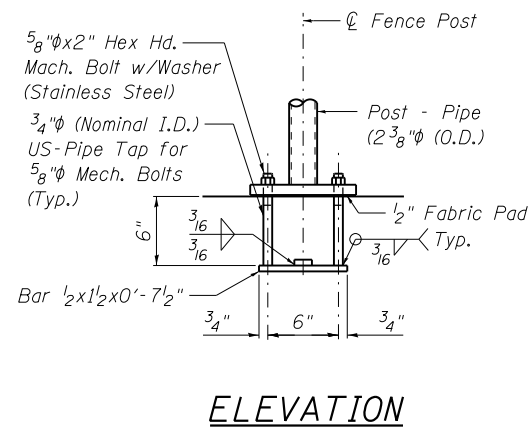
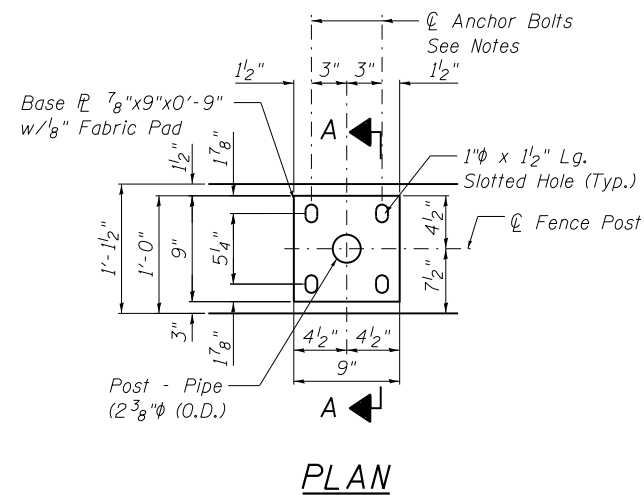


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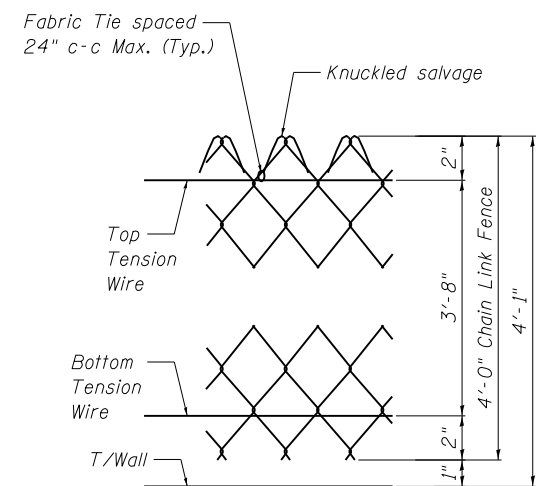
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTION
STA. 150 + 44.00 TO STA. 151 + 36.00 SN 049-W084
SHEET NO. SC-4 OF SC-7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	268
CONTRACT NO. 60V55				
ILLINOIS FED. AID PROJECT				



In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



FENCE POST ANCHOR ASSEMBLY DETAILS

BILL OF MATERIAL

Item	Unit	Quantity
Chain Link Fence, 4' Attached to Structure	Foot	92

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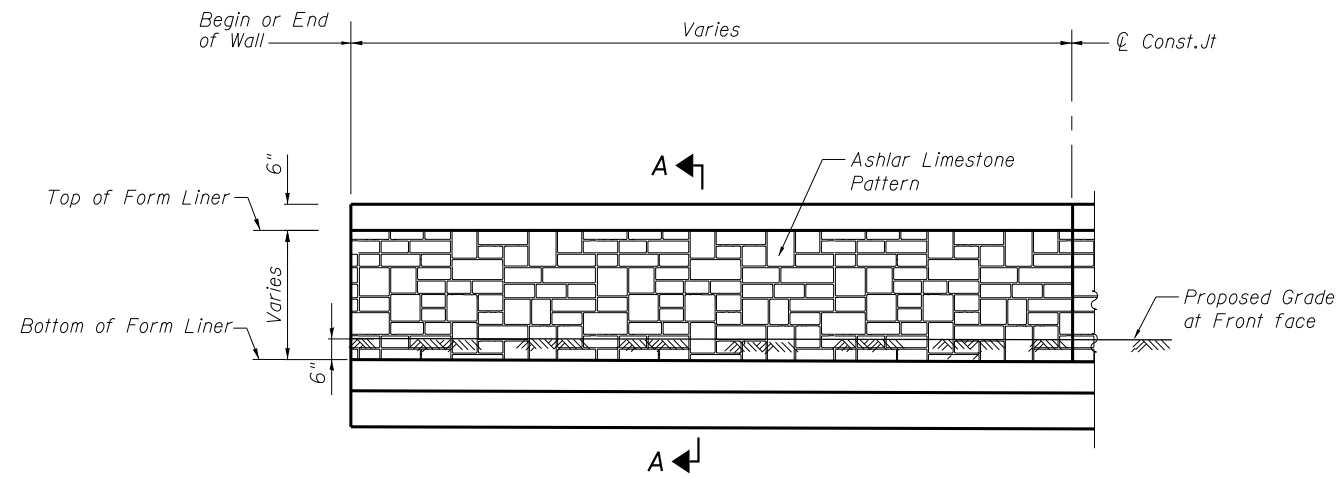
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

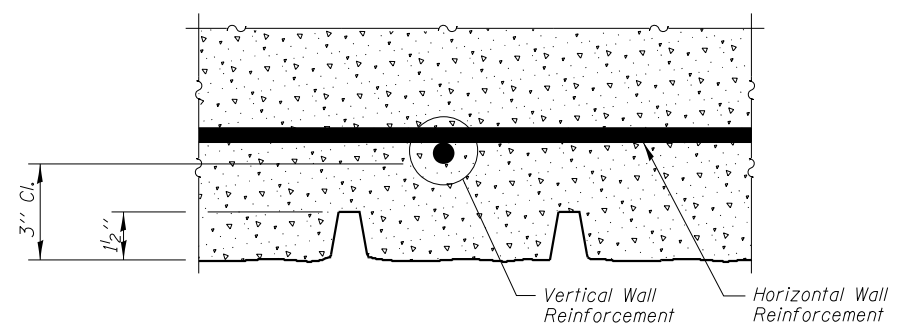
CHAIN LINK FENCE DETAILS
STA. 150 + 44.00 TO STA. 151 + 36.00 SN 049-W084

SHEET NO. SC-5 OF SC-7 SHEETS

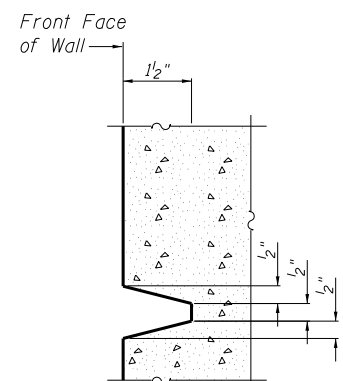
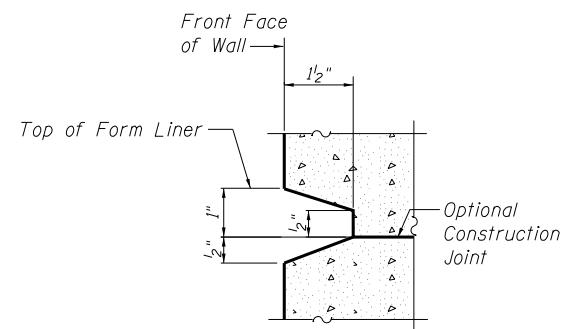
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	269
CONTRACT NO. 60V55			ILLINOIS FED. AID PROJECT	



ELEVATION - FORM LINER



PLAN - FORM LINER



SECTION A-A

FORM LINER ELEVATION TABLE

Station	Form Liner Top Elevation	Form Liner Bottom Elevation
150+44.00	769.06	767.82
150+67.00	769.78	767.78
150+90.00	770.57	767.43
151+02.97	771.04	767.32
151+13.00	771.42	767.63
151+30.00	772.03	771.04

BILL OF MATERIAL

Item	Unit	Quantity
Form Liner Textured Surface	Sq. Ft.	219

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

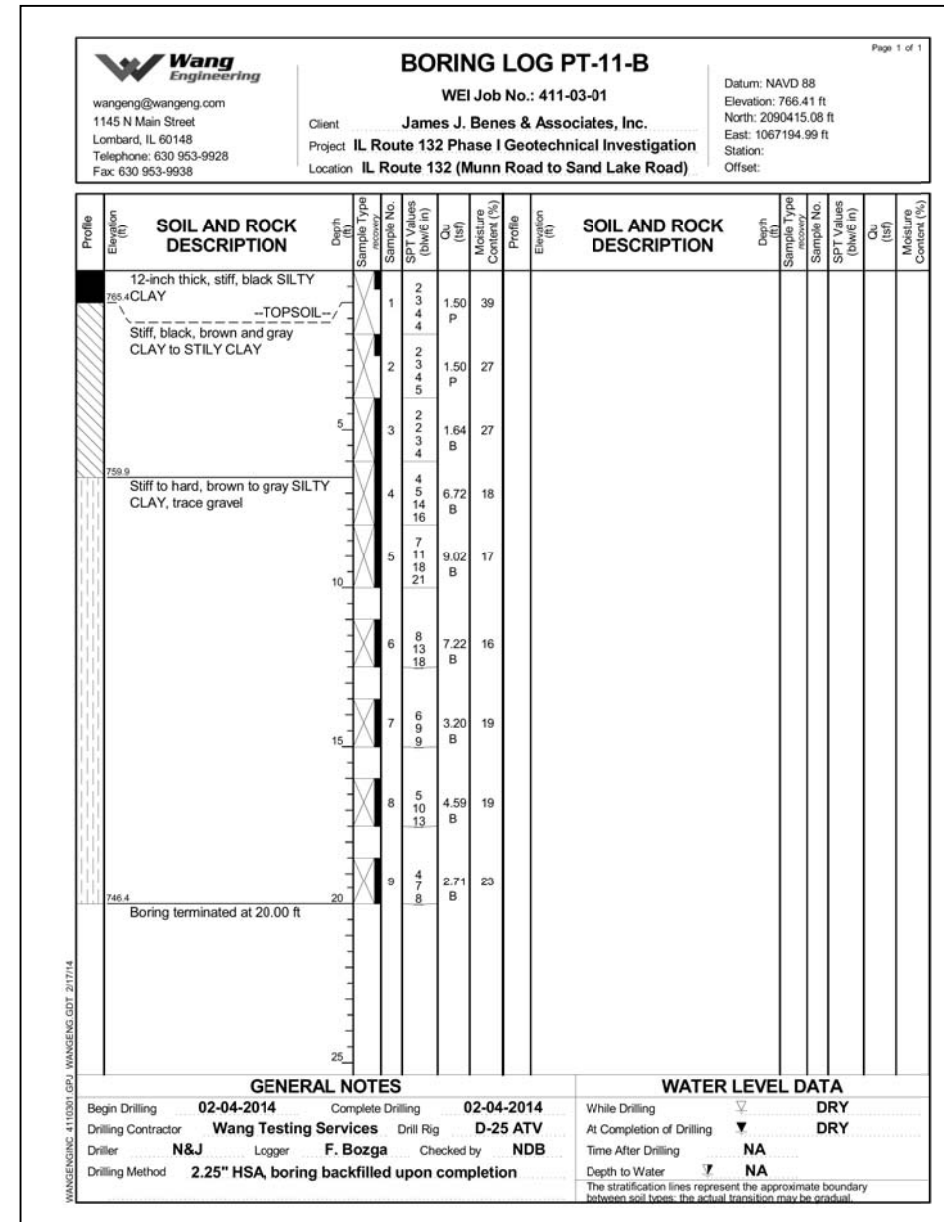
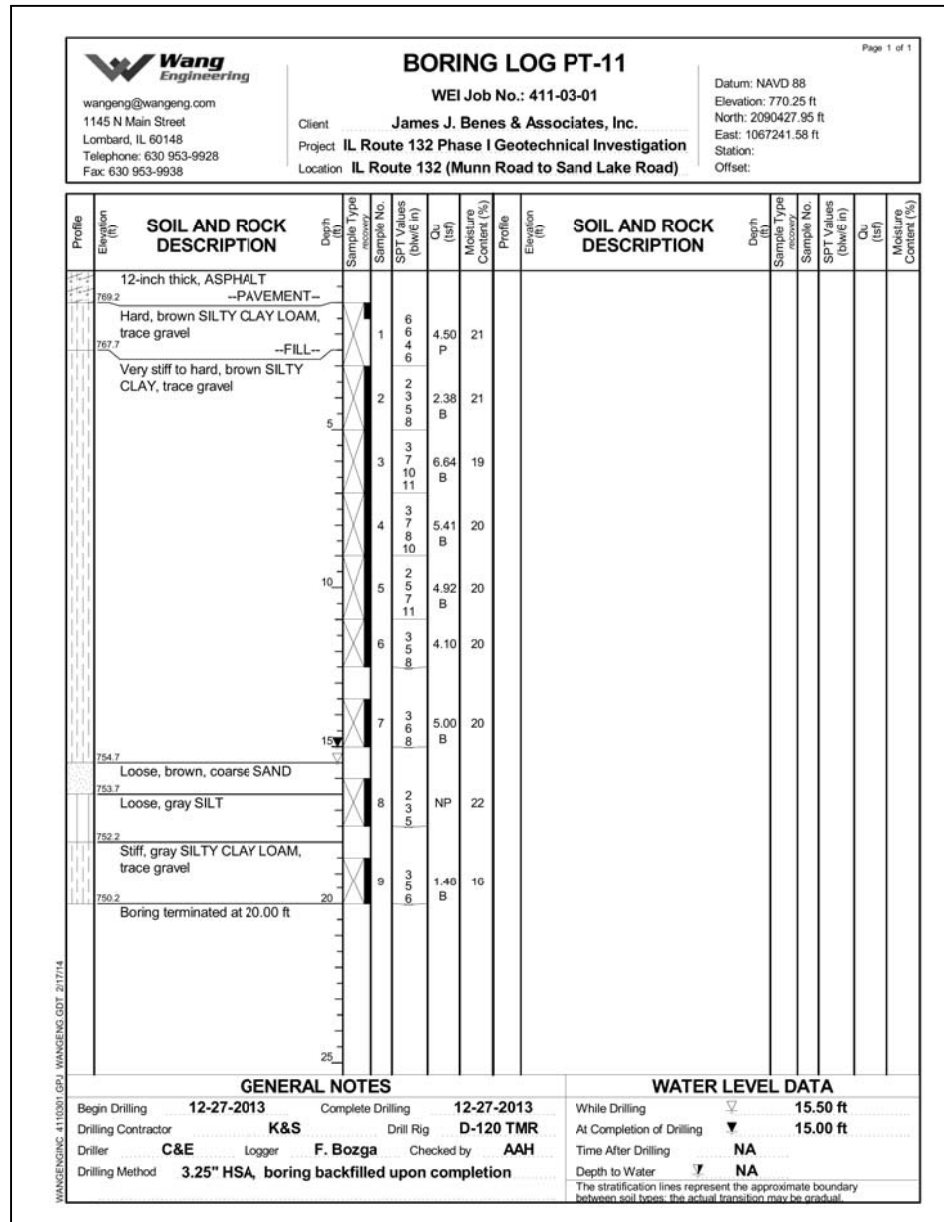
**ARCHITECTURAL FINISH DETAILS
STA. 150 + 44.00 TO STA. 151 + 36.00 SN 049-W084**

SHEET NO. SC-6 OF SC-7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	270
CONTRACT NO. 60V55				
ILLINOIS FED. AID PROJECT				

BORING LOG PT-11

BORING LOG PT-11-B



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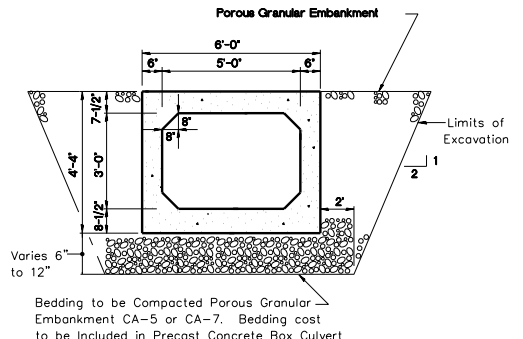
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS
STA. 150 + 44.00 TO STA. 151 + 36.00 SN 049-W084

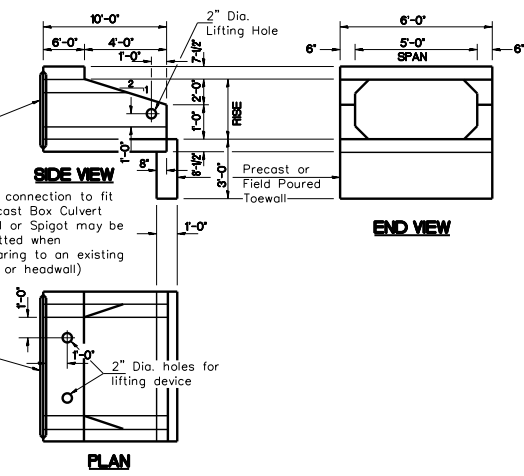
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	271
CONTRACT NO. 60V55				
ILLINOIS FED. AID PROJECT				



Bedding to be Compacted Porous Granular Embankment CA-5 or CA-7. Bedding cost to be included in Precast Concrete Box Culvert

SECTION THRU BARREL
(Precast)
AASHTO Designation: M273
ASTM Designation: C850
Allowable Stress Design (ASD) Method



PRECAST BOX CULVERT END SECTION

ITEM	UNIT	TOTAL
Box Culvert End Sections	Each	1
Precast Concrete Box Culvert 5'x3'	Foot	83

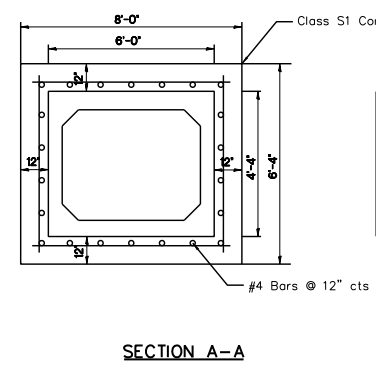
GENERAL NOTES

Box Culvert End Sections shall conform to the requirements of article 540.06 of the Standard Specifications and the applicable requirements of AASHTO M273.

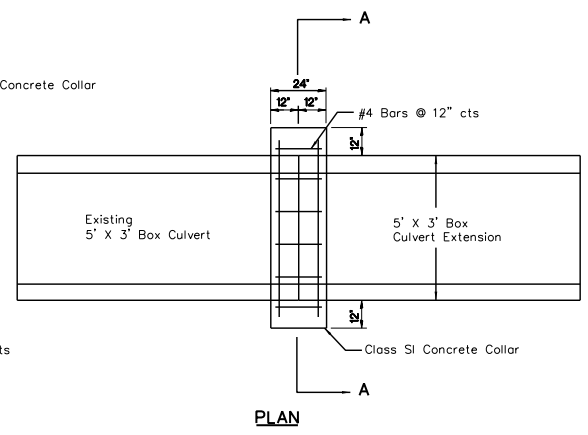
The minimum concrete strength shall be 5,000 psi. Lifting holes shall be filled with concrete plugs and mastic after box sections are in place.

Reinforcement Bars shall conform to the requirements of AASHTO M-31M, M-42M or M-53M, Grade 420. Based on Allowable Stress Design (ASD) Method.

**IL ROUTE 132 (GRAND AVENUE)
STA. 137+93 AND STA. 147+55
PRECAST BOX CULVERT & END SECTION
DETAILS**



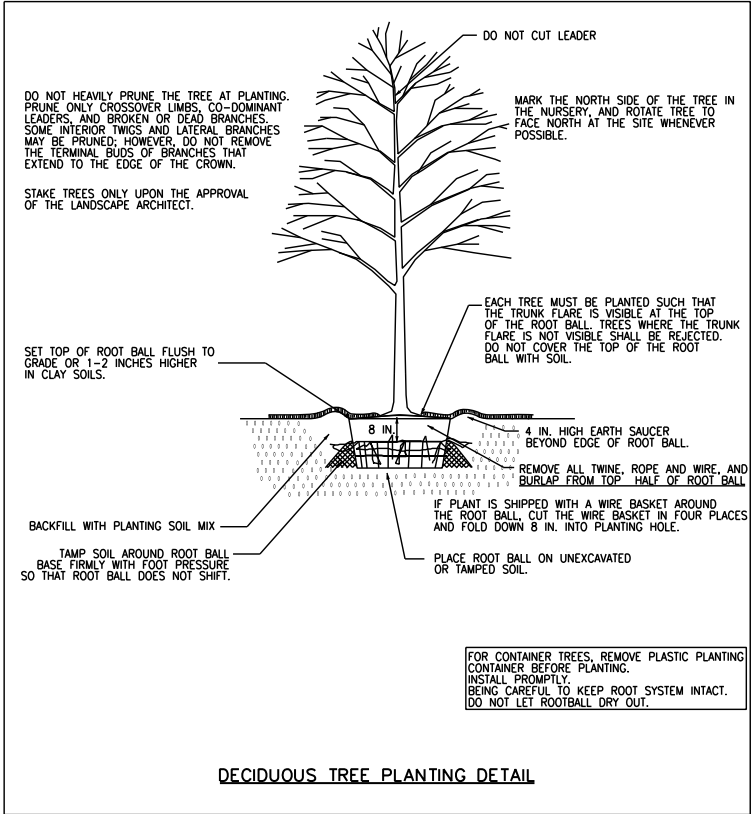
SECTION A-A



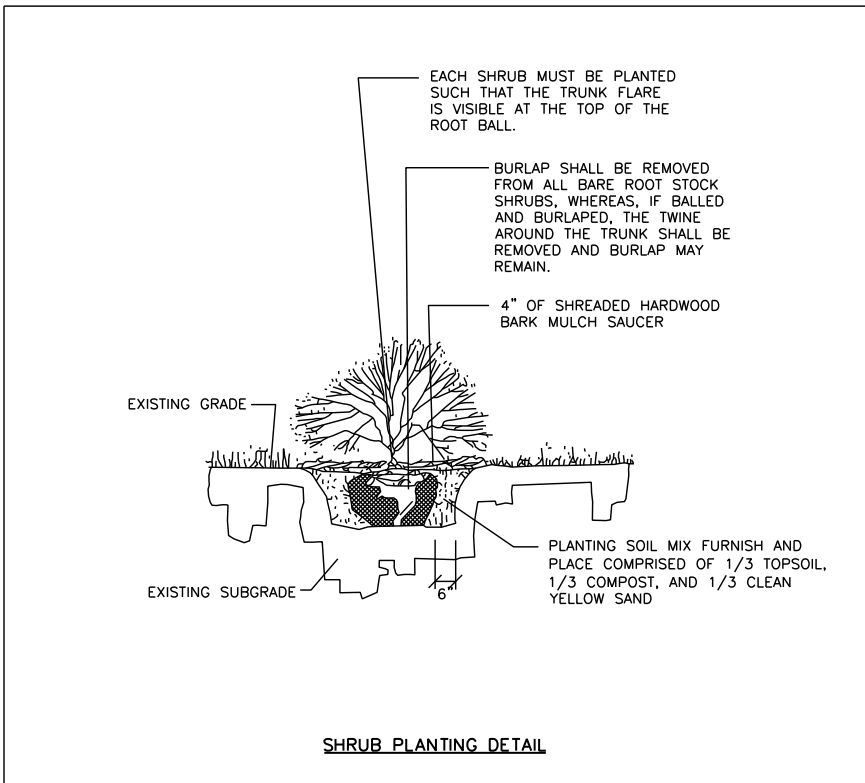
PLAN

- NOTES:
1. CLASS S1 CONCRETE SHALL BE USED THROUGHOUT.
 2. WHEN CONCRETE COLLARS ARE USED TO CONNECT PIPES OF DIFFERENT OUTSIDE DIAMETERS, THE CONCRETE COLLAR SHALL BE FORMED USING THE LARGEST OUTSIDE DIAMETER.
 3. CONTRACTOR SHALL SAW CUT THE EXISTING BOX CULVERT TO PROVIDE A SQUARE BUTT JOINT BETWEEN EXISTING AND PROPOSED SECTIONS.
 4. REINFORCEMENT STEEL SHALL BE INCLUDED IN THE COST OF CONCRETE COLLAR.

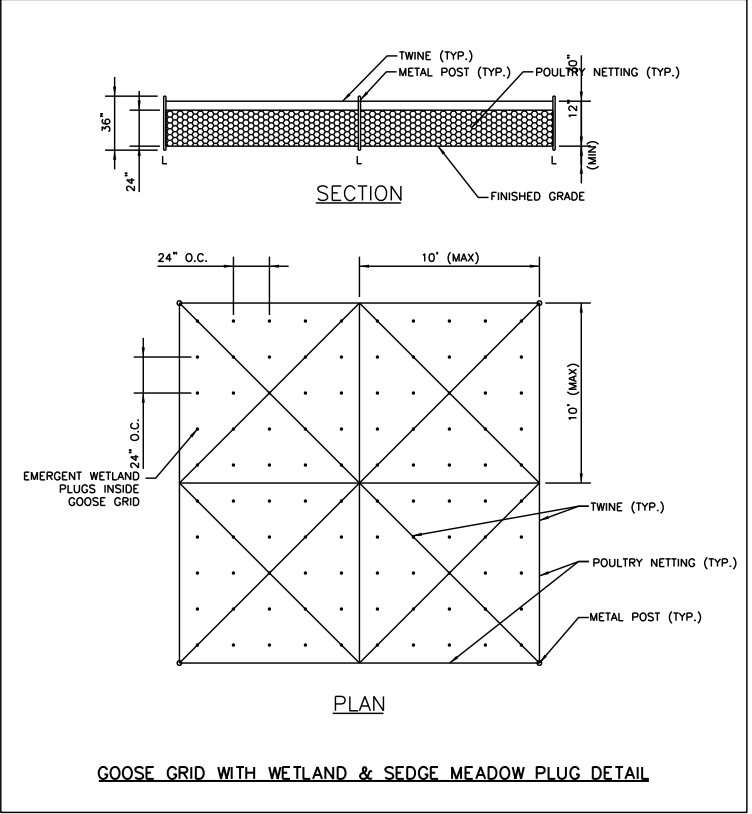
CONCRETE COLLAR DETAIL



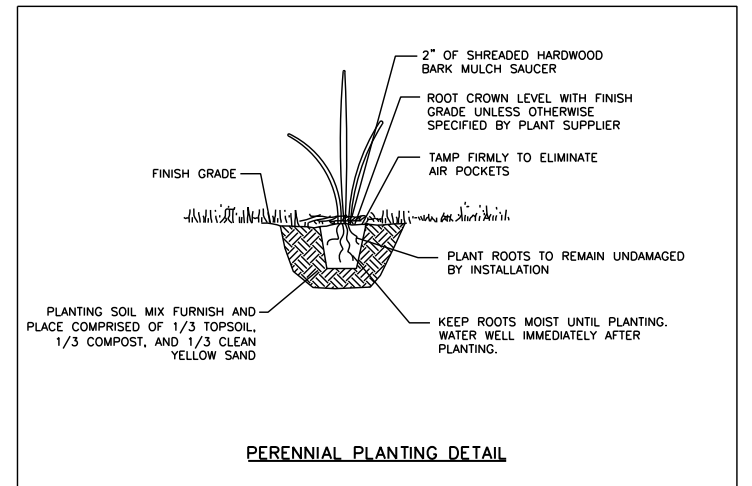
DECIDUOUS TREE PLANTING DETAIL



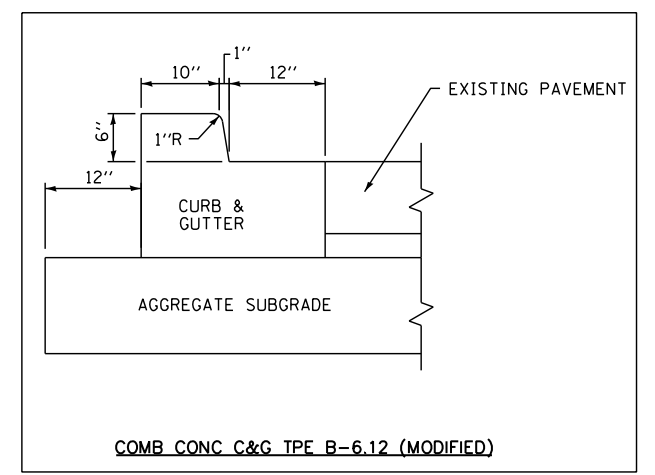
SHRUB PLANTING DETAIL



GOOSE GRID WITH WETLAND & SEDGE MEADOW PLUG DETAIL



PERENNIAL PLANTING DETAIL



COMB CONC C&G TPE B-6.12 (MODIFIED)

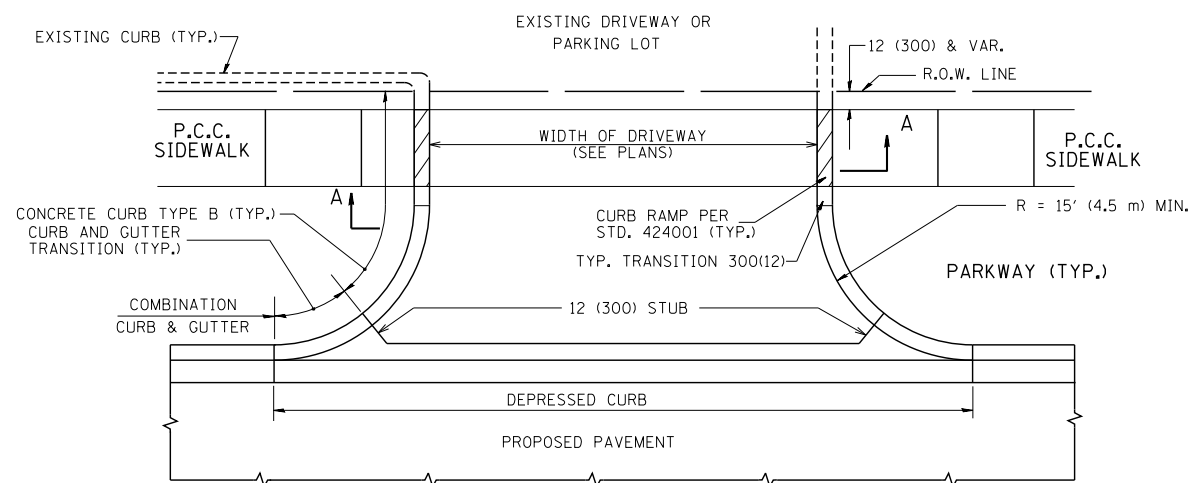
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

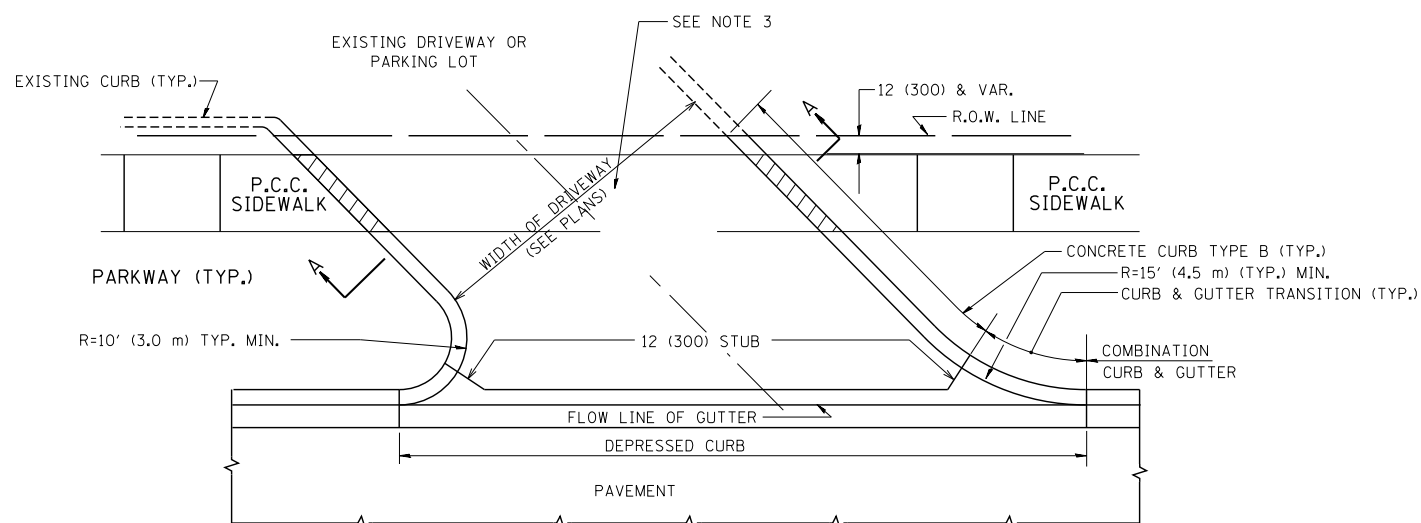
CONSTRUCTION DETAILS

SCALE: N/A SHEET NO. OF SHEETS STA. TO STA.

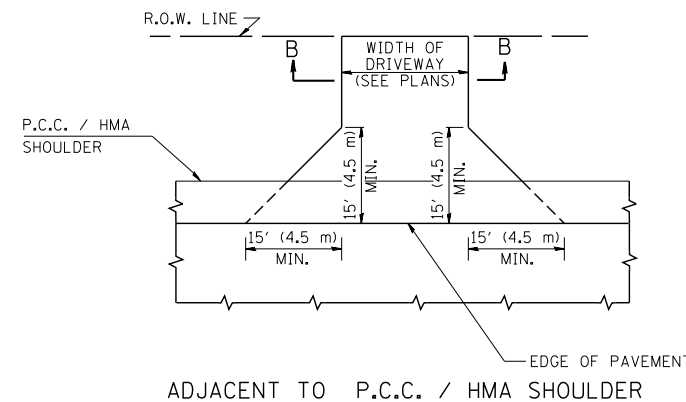
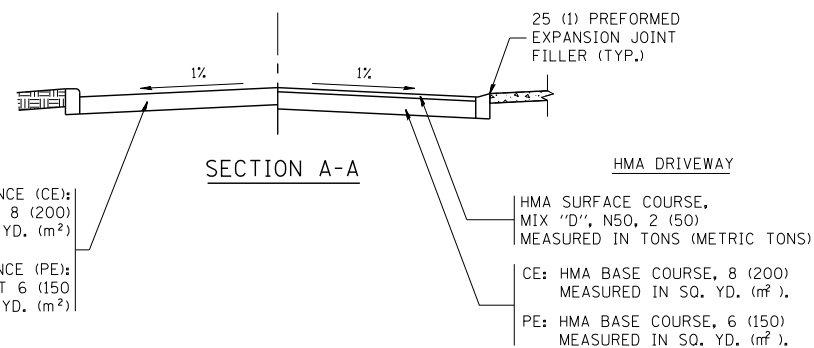
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	272
CONTRACT NO. 60V55				
ILLINOIS FED. AID PROJECT				



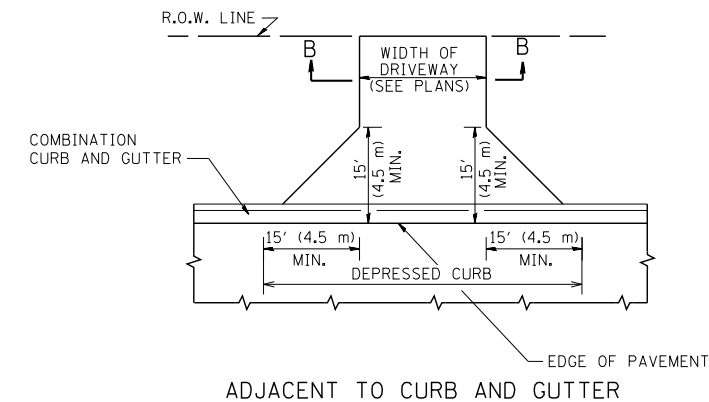
WITH CONCRETE CURB, TYPE B



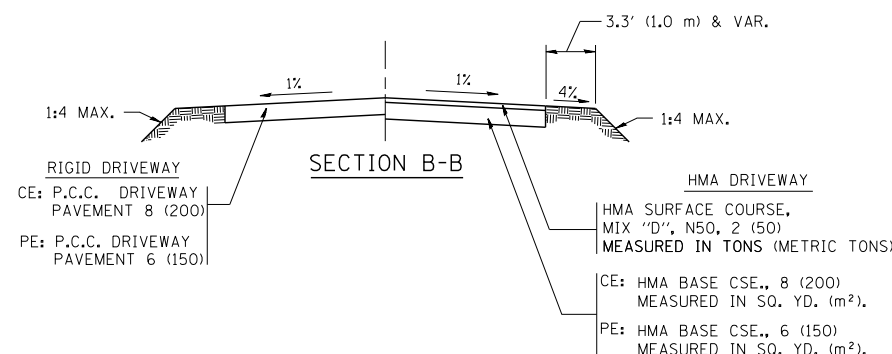
WITH CONCRETE CURB, TYPE B



ADJACENT TO P.C.C. / HMA SHOULDER



ADJACENT TO CURB AND GUTTER



RURAL FIELD ENTRANCE (FE)
HMA SURFACE COURSE,
MIX "D", N50, 2 (50)
MEASURED IN TONS (METRIC TONS)
AGGREGATE BASE CSE., TYPE B, 8 (200)
MEASURED IN SQ. YD. (m²).

GENERAL NOTES:

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATIONS IN THE PERMIT HANDBOOK. DRIVEWAYS SHALL BE REPLACED IN KIND, UNLESS OTHERWISE NOTED ON THE PLANS.

COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED WITH CONCRETE CURB, TYPE B RETURNS EXCEPT WHEN THE SIDEWALK EDGE IS 4 FEET (1.2 METERS) OR LESS FROM THE BACK OF CURB, CONSTRUCT A FLARE DRIVEWAY WITHOUT CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

WHEN THE P.C.C. SIDEWALK EXTENDS THROUGH THE DRIVEWAY, THE THICKNESS OF THE SIDEWALK IN THE DRIVEWAY AREA SHALL BE THE SAME AS THE DRIVEWAY THICKNESS. SIDEWALK WILL BE PAID FOR AS P.C.C. SIDEWALK OF THE THICKNESS SPECIFIED. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

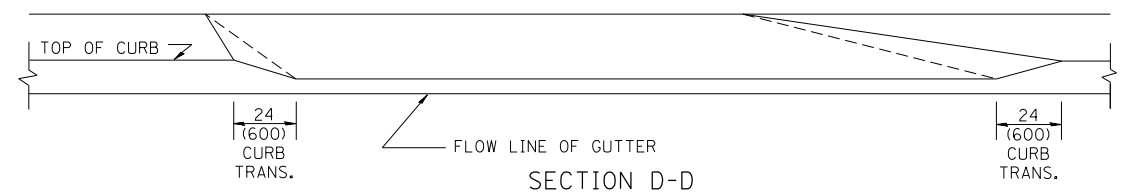
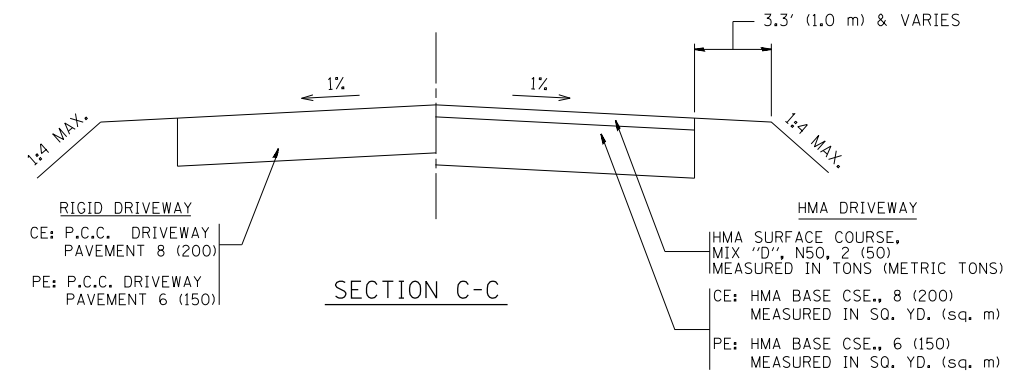
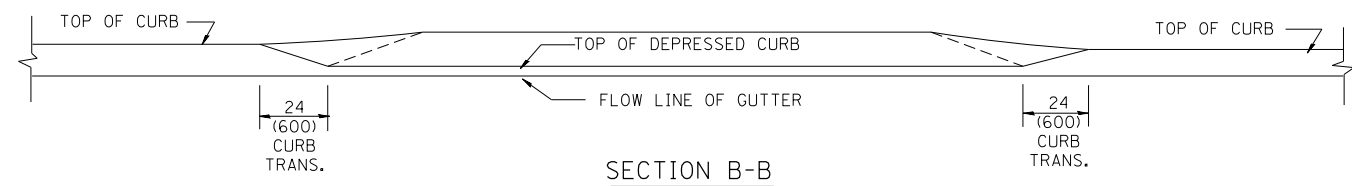
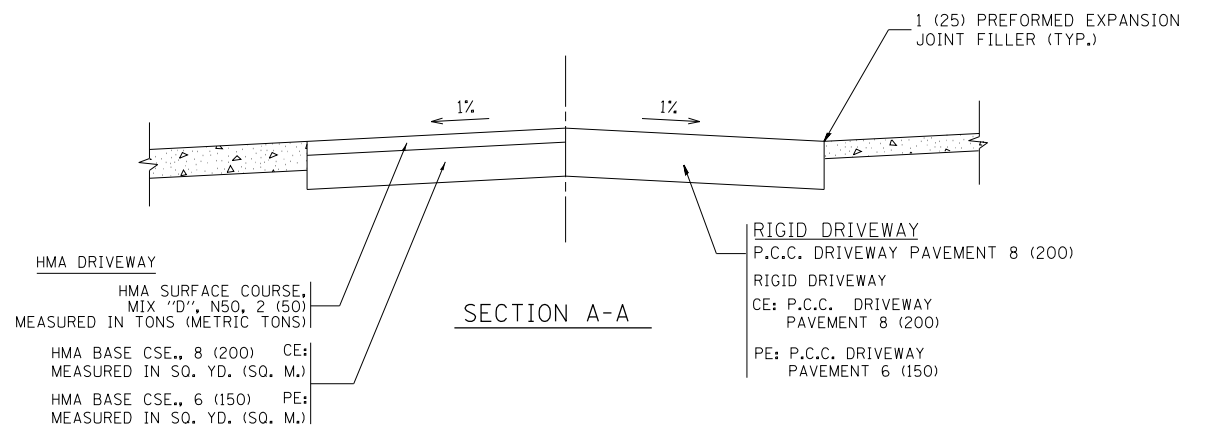
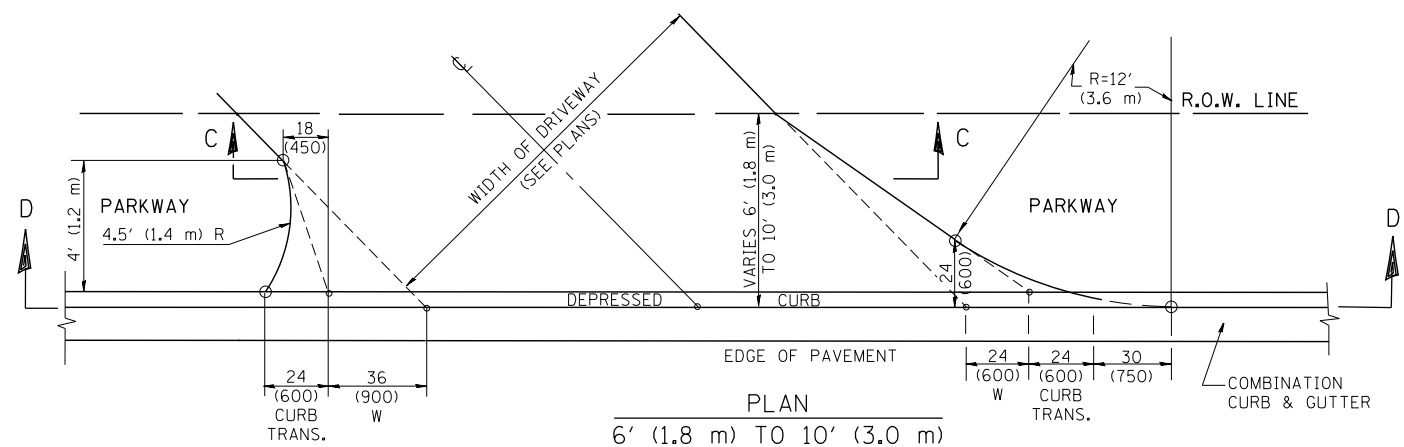
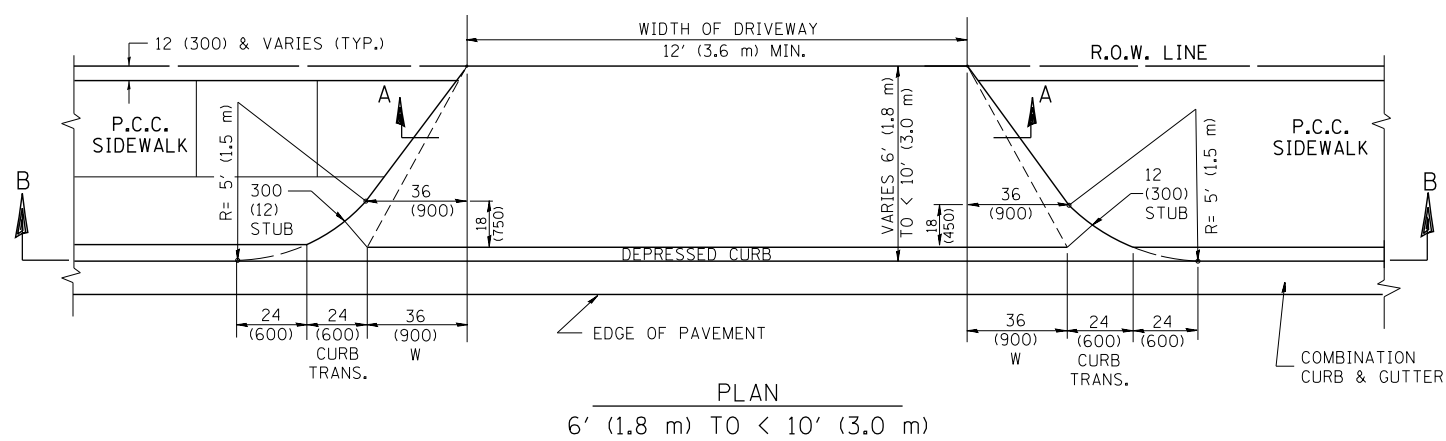
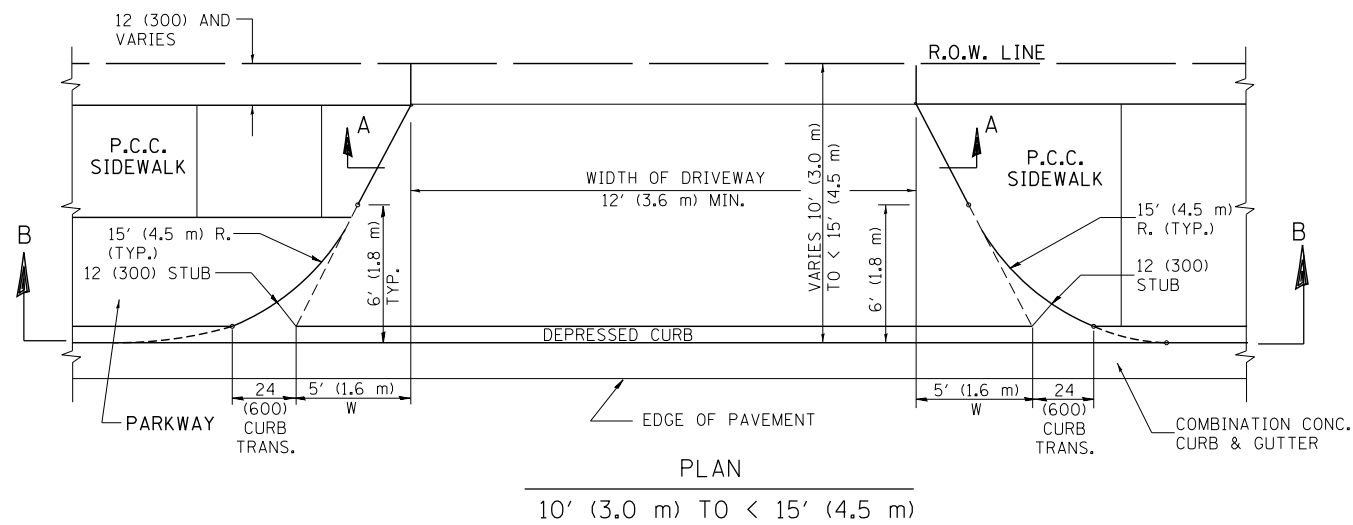
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	PLOT DATE = 9/6/2011	DATE - 11-04-95	REVISED - R. BORO 09-06-11

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRIVEWAY DETAILS - DISTANCE BETWEEN R.O.W.
AND FACE OF CURB & EDGE OF SHOULDER >= 15' (4.5 m)

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	273
BD0156-07 (BD-01)		CONTRACT NO. 60V55		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



GENERAL NOTES

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATION 10 IN THE PERMIT HANDBOOK. WHERE SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED WITH RIGID PAVEMENT. WHERE NO SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED IN KIND. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

WHEN THE DISTANCE BETWEEN R.O.W. AND THE BACK OF CURB IS EQUAL TO OR LESS THAN 8' (2.4 m), THE P.C.C. SIDEWALK SHALL EXTEND TO THE BACK OF CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

THE 1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

"W" VARIES FROM 36 (900) TO 5' (1.5 m) PROPORTIONAL TO THE LENGTH (L), FROM 6' (1.8 m) TO 10' (3 m).

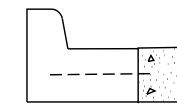
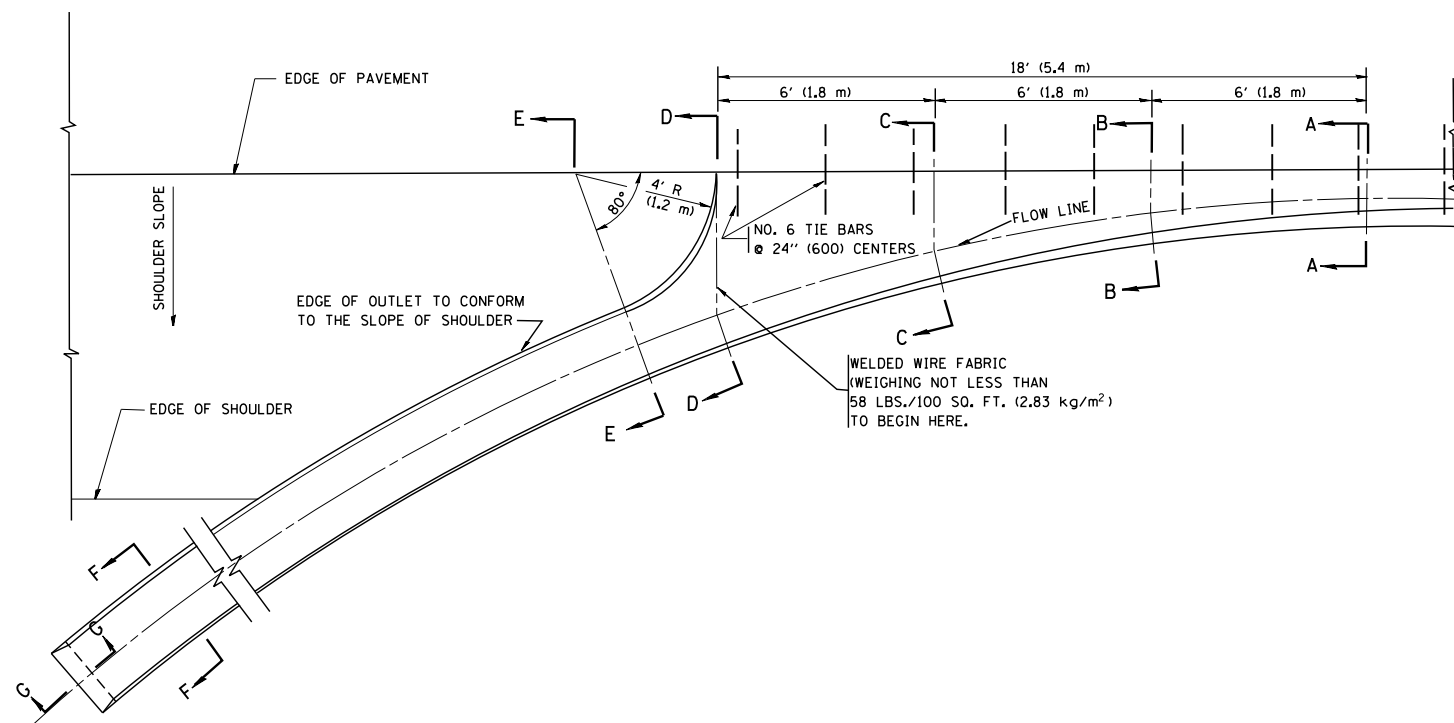
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

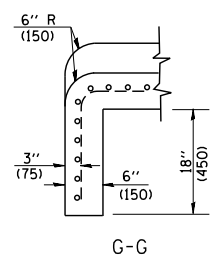
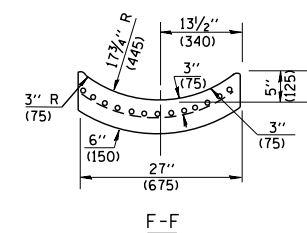
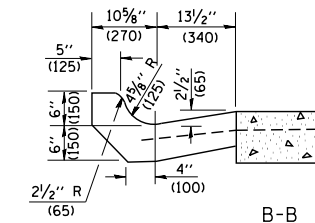
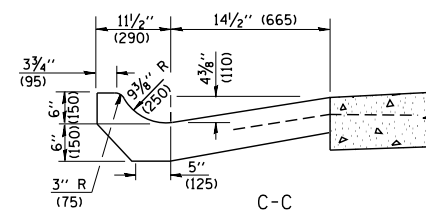
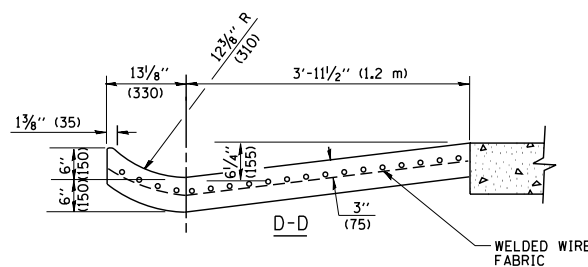
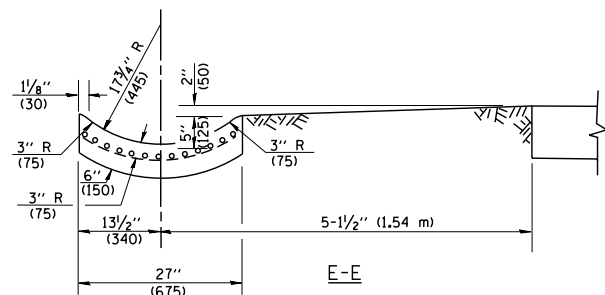
DRIVEWAY DETAILS			
DISTANCE BETWEEN ROW AND FACE OF CURB < 15' (4.5 m)			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	274
BD400-02 (BD-02)		CONTRACT NO. 60V55		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



A-A *

* DIMENSIONS OF THE CURB & GUTTER AT SECTION A-A ARE SHOWN ON STATE STANDARD 606001. FOR DETAILS OF OUTLET FOR CONCRETE CURB & GUTTER, TYPE B-6.24 (B-15.60) SEE STATE STANDARD 606006.



GENERAL NOTES

GUTTER OUTLET SHALL BE TIED TO THE PAVEMENT IN ACCORDANCE WITH DETAILS FOR LONGITUDINAL CONSTRUCTION JOINT SHOWN ON STANDARD 420001.

TIE BARS SHALL BE NO. 20 (NO.6) AT 24\"/>

IF THE AVERAGE GRADE OF PAVEMENT FOR THE DISTANCE FROM SECTION A-A TO D-D EXCEEDS 2%, THIS DISTANCE SHALL BE INCREASED 6' (1.8 m) FOR EACH 1% INCREASE IN GRADE.

QUANTITIES

FOR SECTION A-A TO E-E AND CURTAIN WALL =
 1.25 CU. YDS. (0.96 m³) CLASS S1 CONCRETE (OUTLET) FOR 9\"/>

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

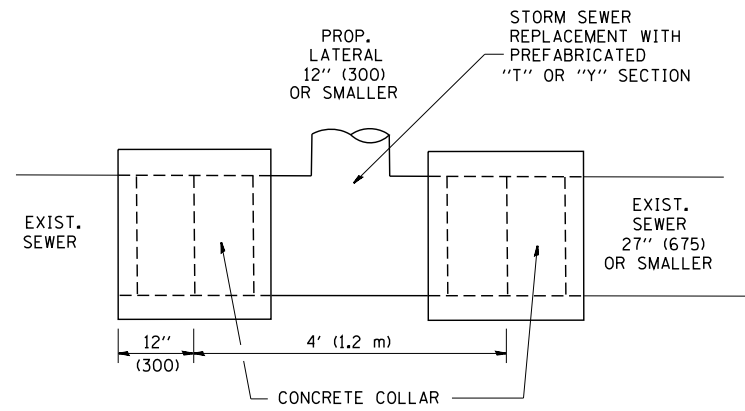
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	PLOT DATE = 1/4/2008	DATE - 08-04-86	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**OUTLET FOR CONCRETE
CURB AND GUTTER**

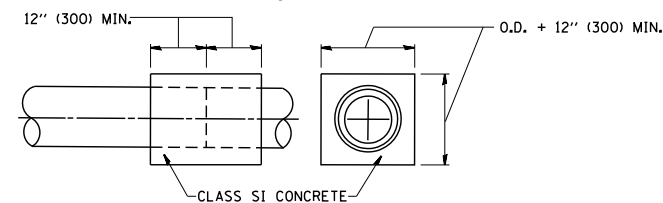
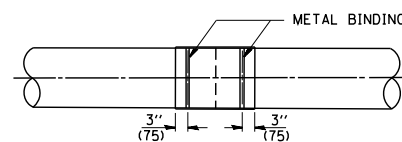
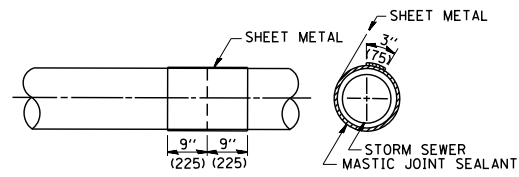
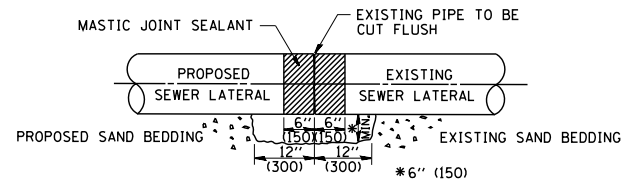
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE. 541	SECTION A-WRS-2	COUNTY LAKE	TOTAL SHEETS 345	SHEET NO. 275
BD600-01 (BD-03)		CONTRACT NO.	60V55	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



DETAIL "A"

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

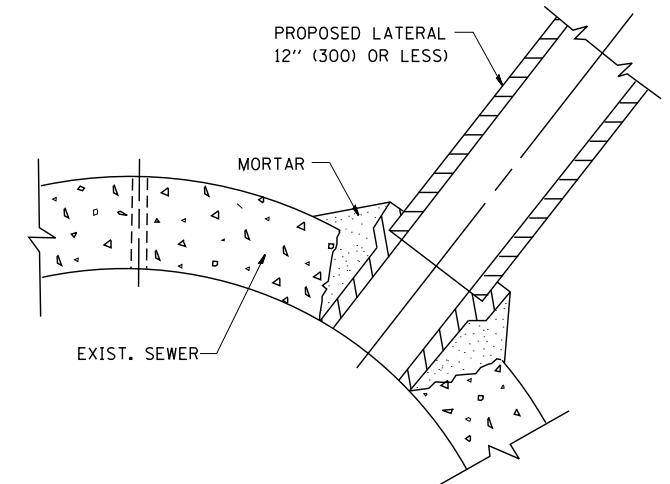


DETAIL "B"

CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

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



DETAIL "C"

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

NOTES

MATERIAL

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

CONSTRUCTION METHODS

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

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

GENERAL

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

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

BASIS OF PAYMENT

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

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

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

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

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

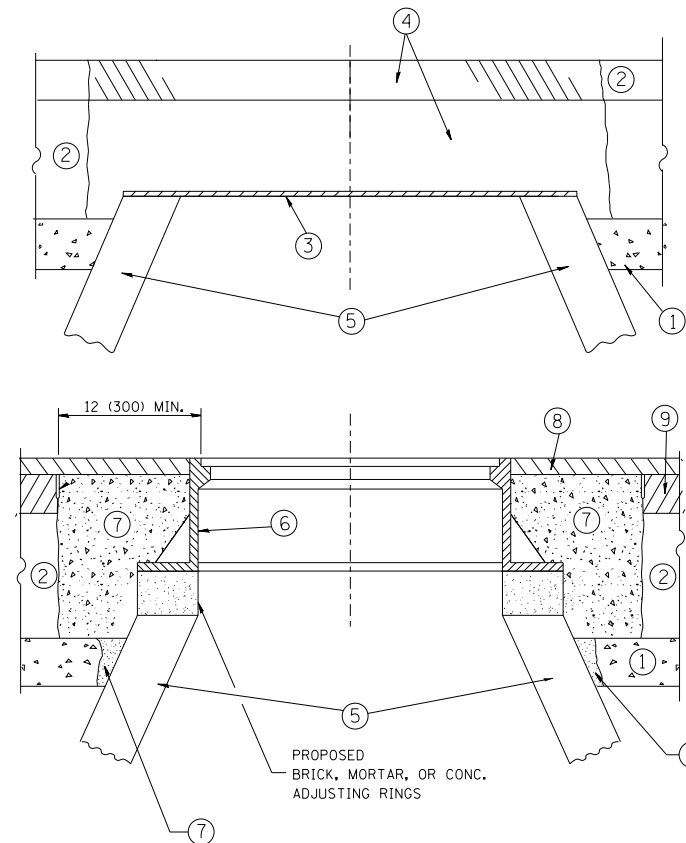
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	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - R. SHAH 10-25-94
	PLOT DATE = 1/4/2008	DATE - 07-25-90	REVISED - R. SHAH 06-12-96

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAIL OF STORM SEWER
CONNECTION TO EXISTING SEWER

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	276
BD500-01 (BD-7)		CONTRACT NO. 60V55		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



CONSTRUCTION PROCEDURES

STAGE 1 (BEFORE PAVEMENT MILLING)

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

STAGE 2 (AFTER PAVEMENT MILLING)

- A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
- B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
- C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS PP-1* CONCRETE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

* UNLESS OTHERWISE SPECIFIED IN THE PLANS.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS EXCEPT THAT "THE CONTRACTOR SHALL ADJUST THE STRUCTURES TO THE FINISHED PAVEMENT ELEVATION NO MORE THAN 5 CALENDAR DAYS PRIOR TO PLACEMENT OF THE FINAL LIFT OF SURFACE UNLESS APPROVED BY THE ENGINEER."

LEGEND

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

LOCATION OF STRUCTURES:

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

BASIS OF PAYMENT:

REMOVING FRAMES AND LIDS ON DRAINAGE AND UTILITY STRUCTURES IN THE PAVEMENT PRIOR TO MILLING, AND ADJUSTING TO FINAL GRADE PRIOR TO PLACING THE SURFACE COURSE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)."

THIS WORK WILL NOT BE PAID FOR WHEN DRAINAGE AND UTILITY STRUCTURES ARE SPECIFIED FOR PAYMENT AS STRUCTURE RECONSTRUCTION.

NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

NOTES:

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

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

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

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

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

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

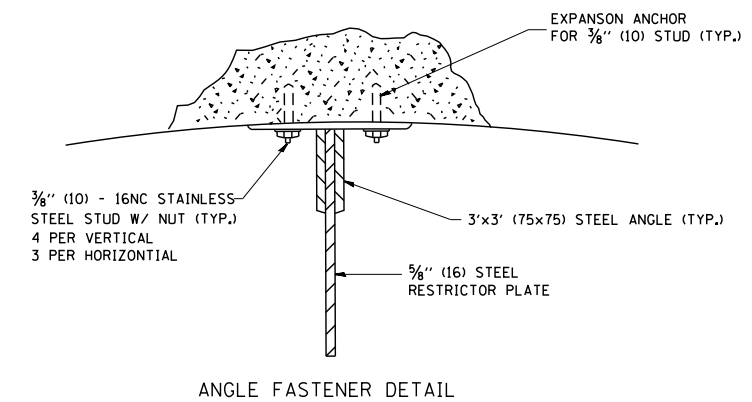
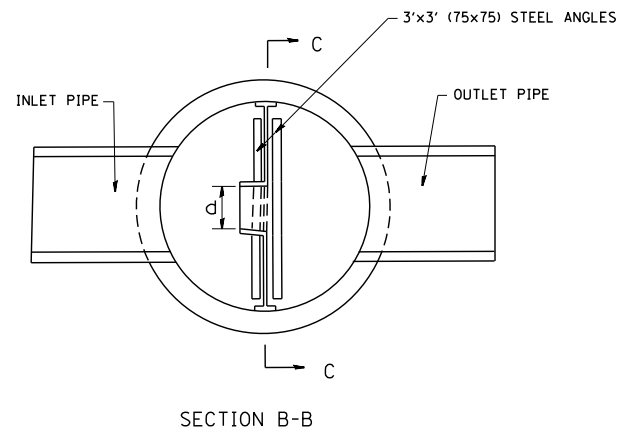
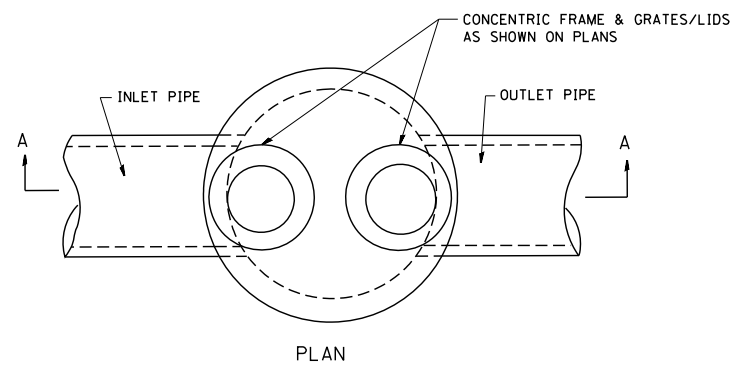
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

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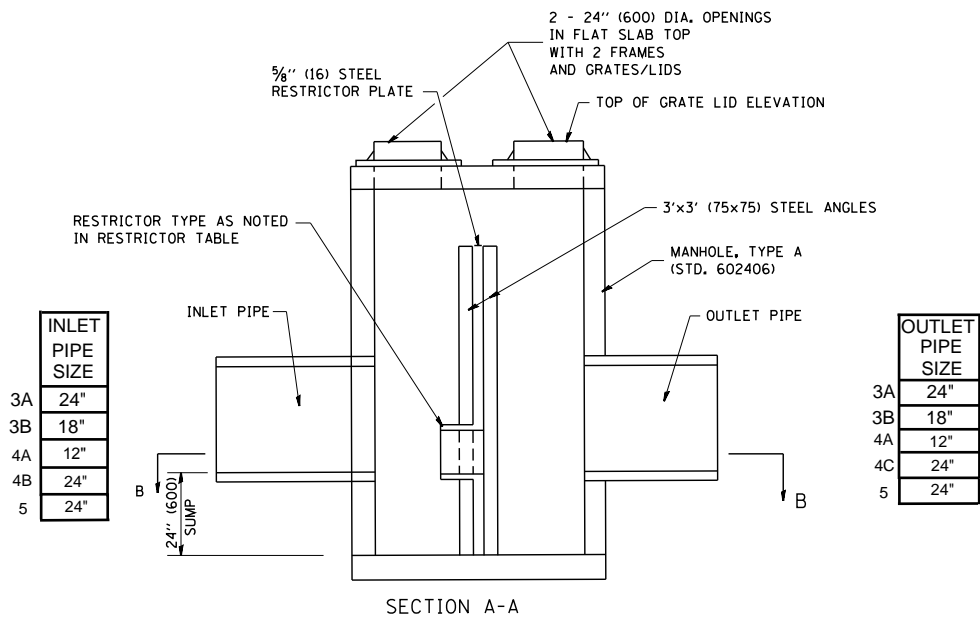
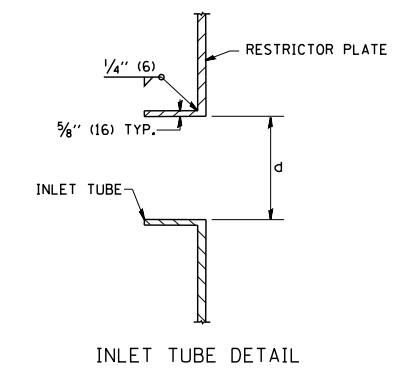
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	277
BD600-03 (BD-8)		CONTRACT NO. 60V55		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

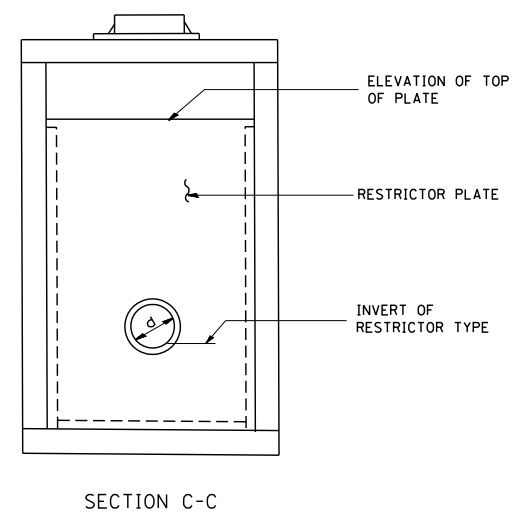


- NOTES:
1. ALL STEEL ANGLES AND PLATES TO BE GALVANIZED AFTER FABRICATION.
 2. ALL RESTRICTOR PLATES, ANGLES AND HARDWARE TO BE INCLUDED IN THE COST OF THE MANHOLE.
 3. BASIS OF PAYMENT: "MANHOLES, TYPE A 6' - DIAMETER, WITH 2 TYPE 1 FRAME, OPEN LIDS, RESTRICTOR PLATE" EACH

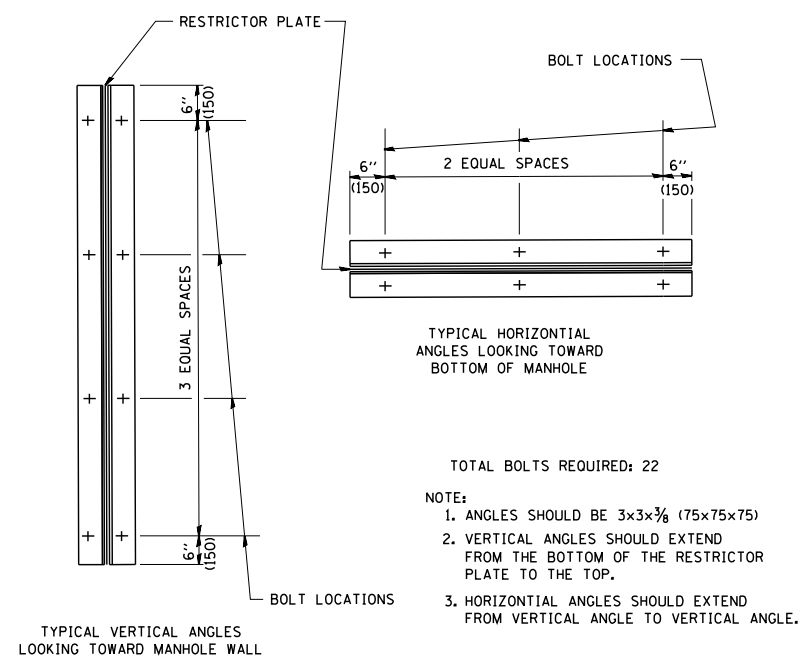


INLET PIPE SIZE
3A 24"
3B 18"
4A 12"
4B 24"
5 24"

OUTLET PIPE SIZE
3A 24"
3B 18"
4A 12"
4C 24"
5 24"



STATION	MANHOLE DIAMETER	FRAME AND GRATE RIM ELEVATION	RESTRICTOR TYPE	INSIDE RESTRICTOR TYPE DIAMETER in. (mm) (d)	INVERT OF RESTRICTOR TYPE	ELEVATION OF TOP OF PLATE OVERFLOW	
3A	137+25.27	6'	768.50	SHARP EDGE	18.4"	763.50	767.00
3B	138+80	6'	768.00	SHARP EDGE	10"	763.50	766.00
4A	146+33.97	6'	768.40	SHARP EDGE	8"	764.00	766.48
4C	150+77	6'	769.00	SHARP EDGE	21"	765.00	767.00
5	165+91.79	6'	791.09	SHARP EDGE	15"	787.08	790.00



- TOTAL BOLTS REQUIRED: 22
- NOTE:
1. ANGLES SHOULD BE 3x3x3/8 (75x75x75)
 2. VERTICAL ANGLES SHOULD EXTEND FROM THE BOTTOM OF THE RESTRICTOR PLATE TO THE TOP.
 3. HORIZONTAL ANGLES SHOULD EXTEND FROM VERTICAL ANGLE TO VERTICAL ANGLE.

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

VALUES OF "C" FOR CIRCULAR AND SQUARE ORIFICES

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

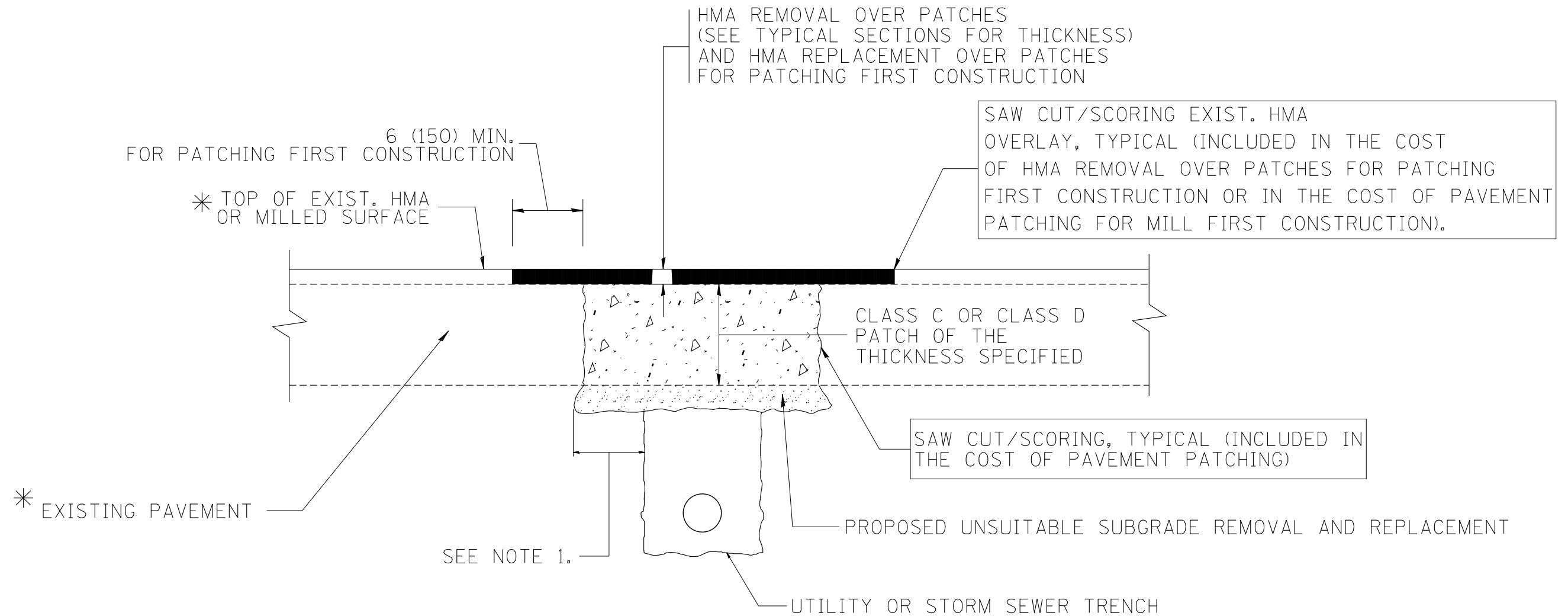
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		DRAWN -	REVISED - E. GOMEZ 08-28-00
	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - M. GOMEZ 01-08-01
	PLOT DATE = 1/4/2008	DATE - 09-09-94	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MANHOLE WITH
RESTRICTOR PLATE

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	278
BD600-04 (BD-12)		CONTRACT NO.	60V55	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



* SEE TYPICAL SECTIONS FOR
THICKNESS AND MATERIALS

NOTES:

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

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

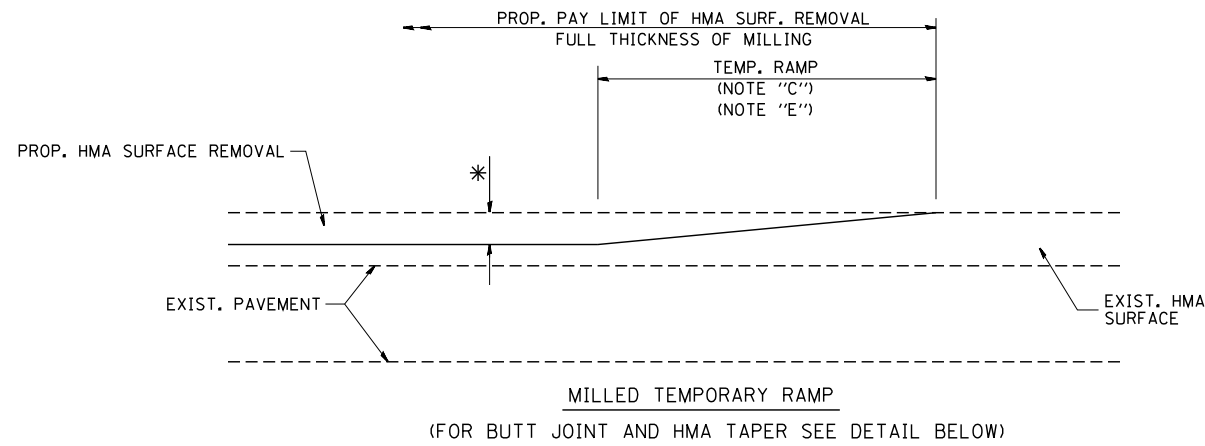
1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

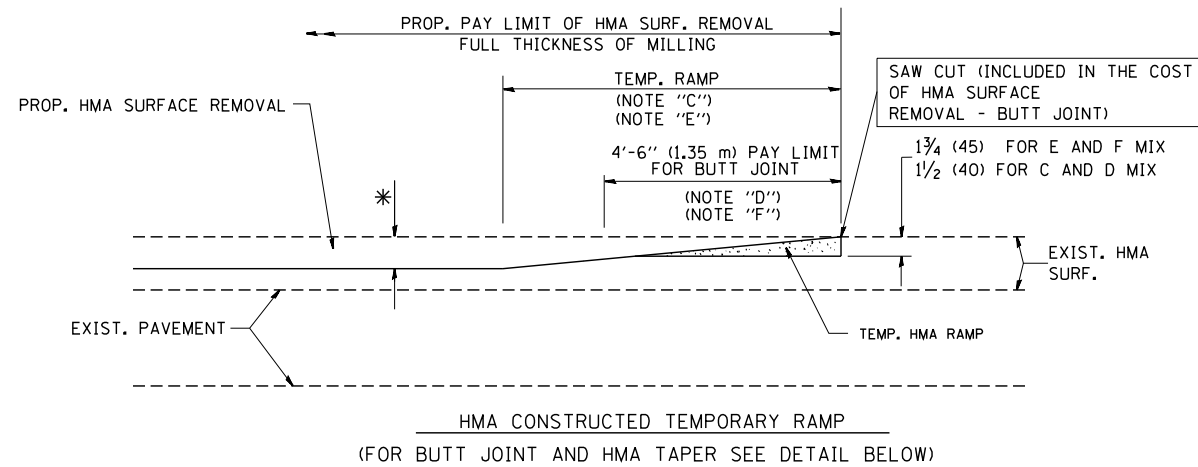
1. MILL HMA FIRST IF THERE IS AT LEAST 4 1/2 INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

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

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		DRAWN -	REVISED - R. BORO 01-01-07		541	A-WRS-2	LAKE	345	279			
		PLOT SCALE = 50.000' / IN.	REVISED - R. BORO 09-04-07		BD400-04 (BD-22)			CONTRACT NO. 60V55				
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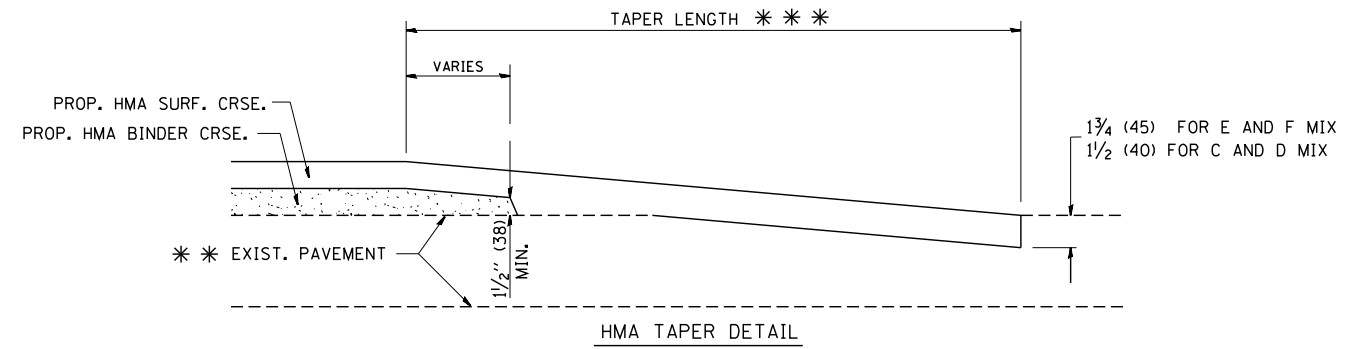
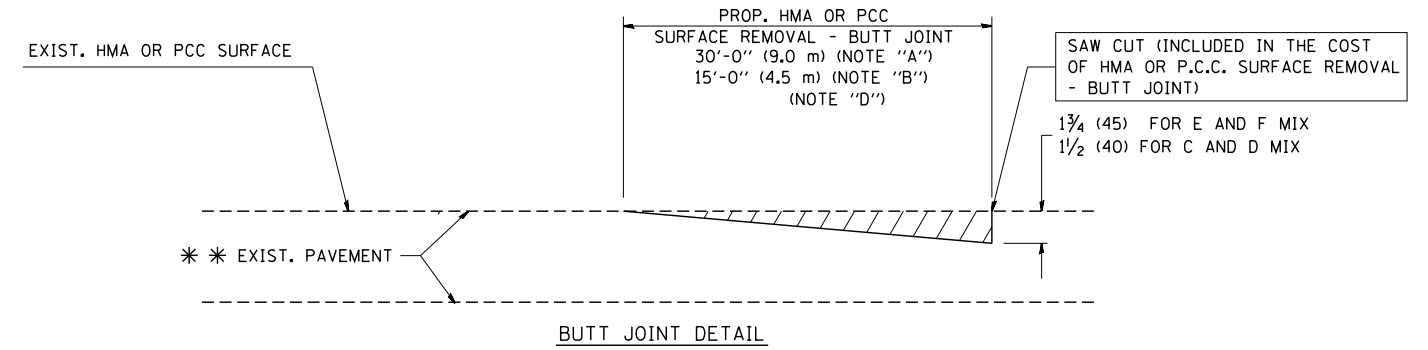


OPTION 1



OPTION 2

TYPICAL TEMPORARY RAMP



TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

* * PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

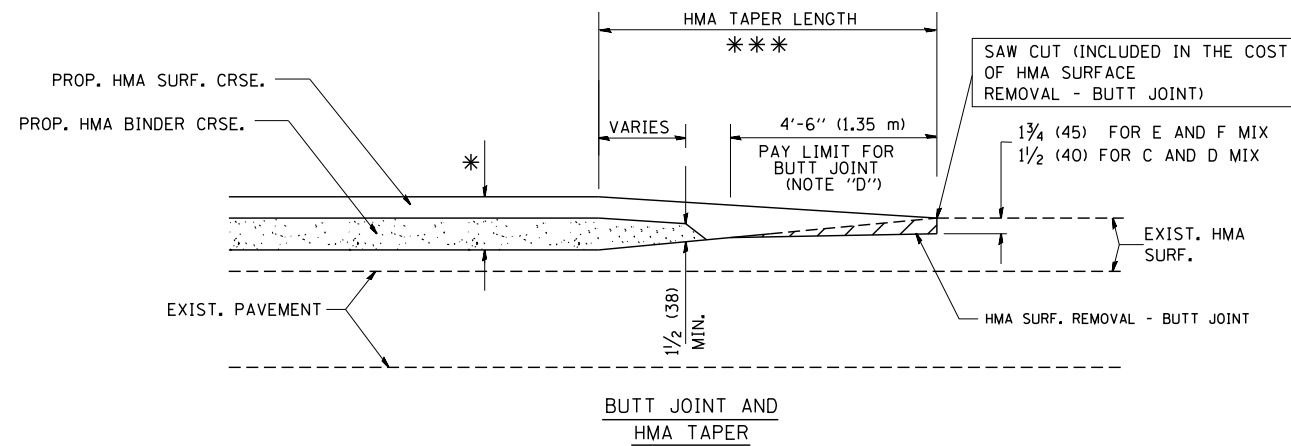
NOTES

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
 - B: MINOR SIDE ROADS.
 - C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
 - D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
 - E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
 - F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
 - G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- * * * 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

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



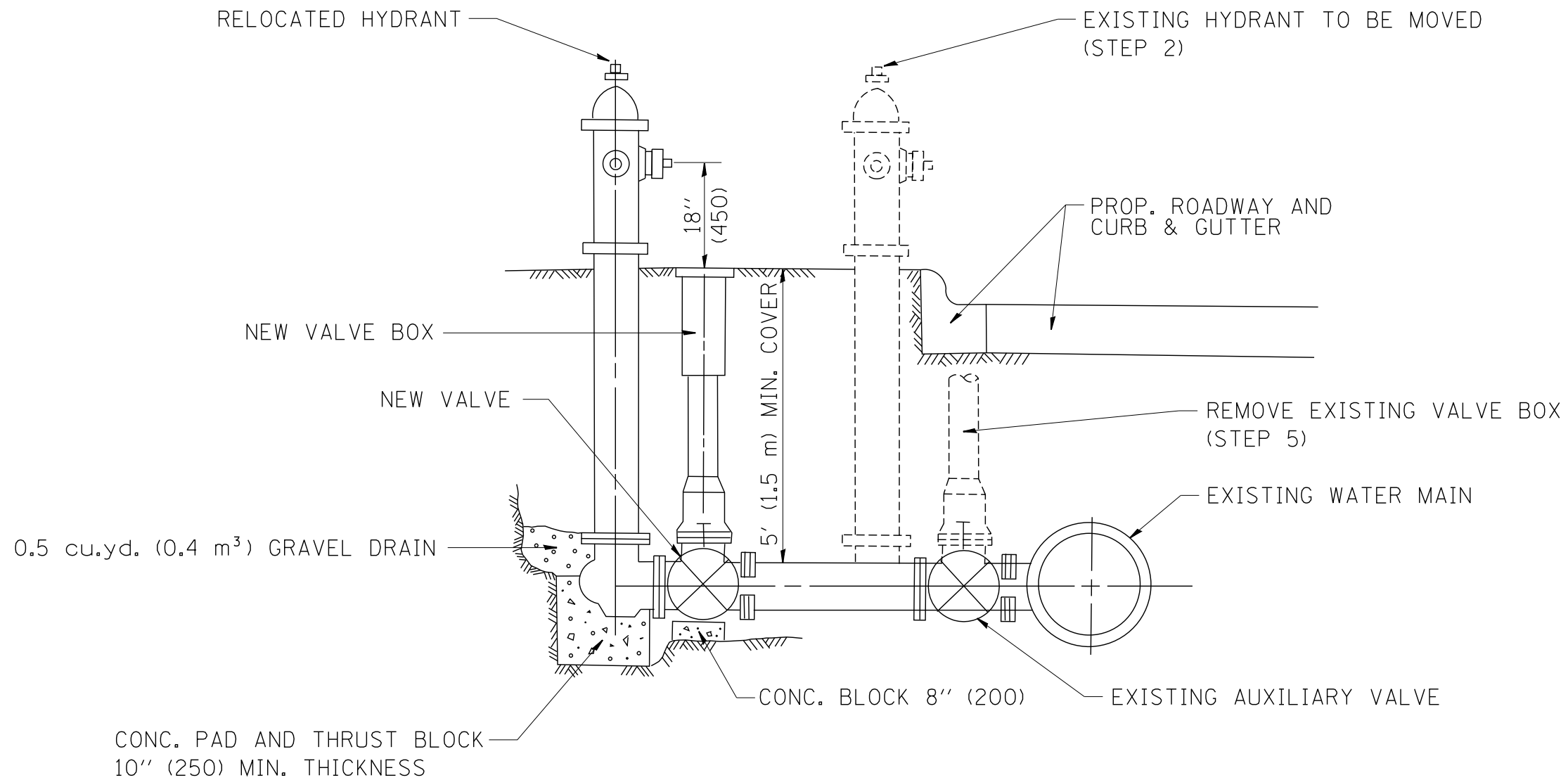
TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING

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		DRAWN -	REVISED - A. ABBAS 03-21-97
	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED - M. GOMEZ 04-06-01
	PLOT DATE = 1/4/2008	DATE - 06-13-90	REVISED - R. BORO 01-01-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	280
BD400-05 BD32		CONTRACT NO. 60V55		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



SEQUENCE OF CONSTRUCTION:

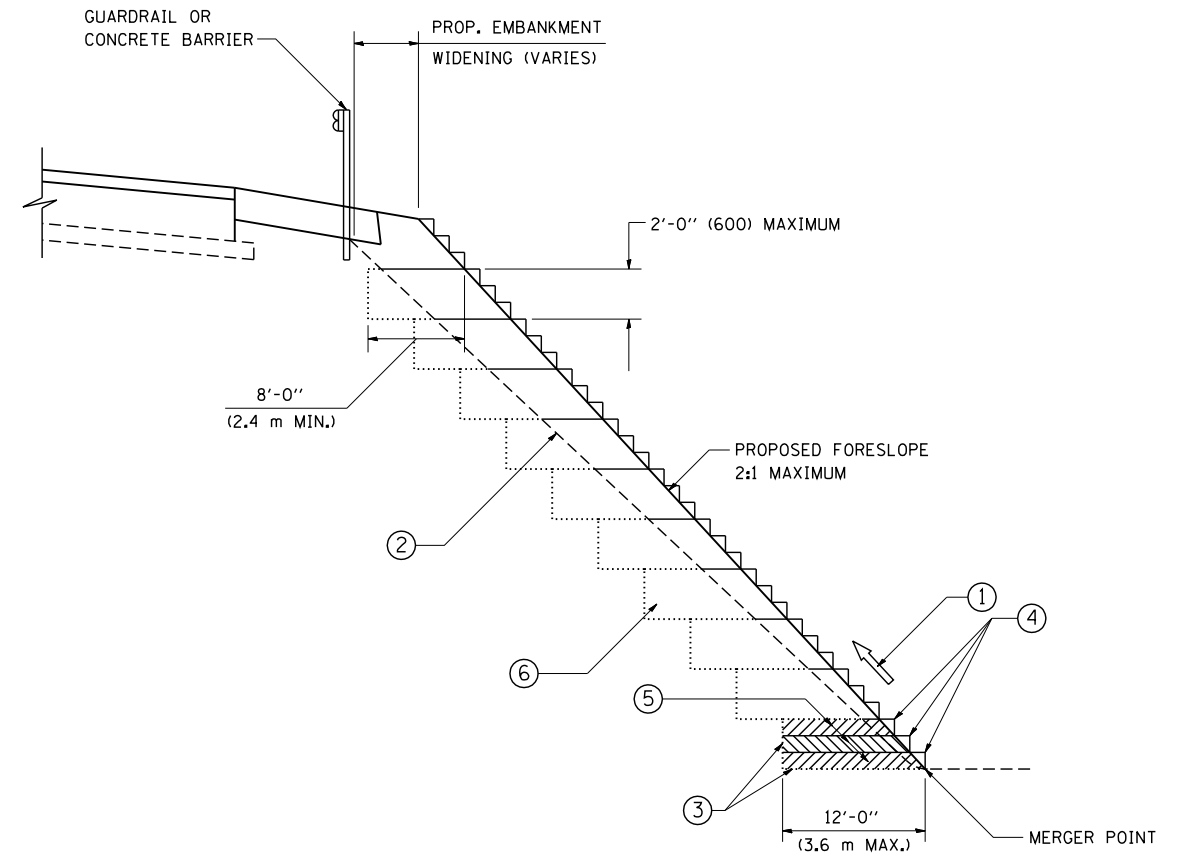
1. CLOSE EXISTING VALVE.
2. REMOVE EXISTING HYDRANT.
3. INSTALL HYDRANT EXTENSION AND NEW VALVE.
4. RELOCATE EXISTING HYDRANT.
5. OPEN EXISTING VALVE, REMOVE BOX.
6. BACKFILL.
7. FLUSH AND TEST FOR CHLORIDE RESIDUAL AND PROVIDE TEST.

ALL WORK TO BE DONE IN ACCORDANCE WITH ARTICLE 564 OF THE STANDARD SPECIFICATIONS. NEW VALVE AND BOX SHALL BE SAME MAKE AND MODEL AS EXISTING.

FIRE HYDRANT TO BE MOVED

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

FILE NAME = W:\diststd\22x34\bd36.dgn	USER NAME = gajlonobt	DESIGNED -	REVISED - R. SHAH 09-09-94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FIRE HYDRANT TO BE MOVED			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50.0000' / IN.	DRAWN -	REVISED - R. SHAH 10-25-94					541	A-WRS-2	LAKE	345	281
PLOT DATE = 1/4/2008	CHECKED -	DATE -	REVISED -	SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	BD-36		CONTRACT NO. 60V55		
								FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



TYPICAL BENCHING DETAIL
FOR EMBANKMENT

NOTES:

- ① CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
- ② EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
- ③ BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
- ④ TRIM TO FINAL SLOPE.
- ⑤ EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
- ⑥ EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- ⑦ SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5' (1.5 m).

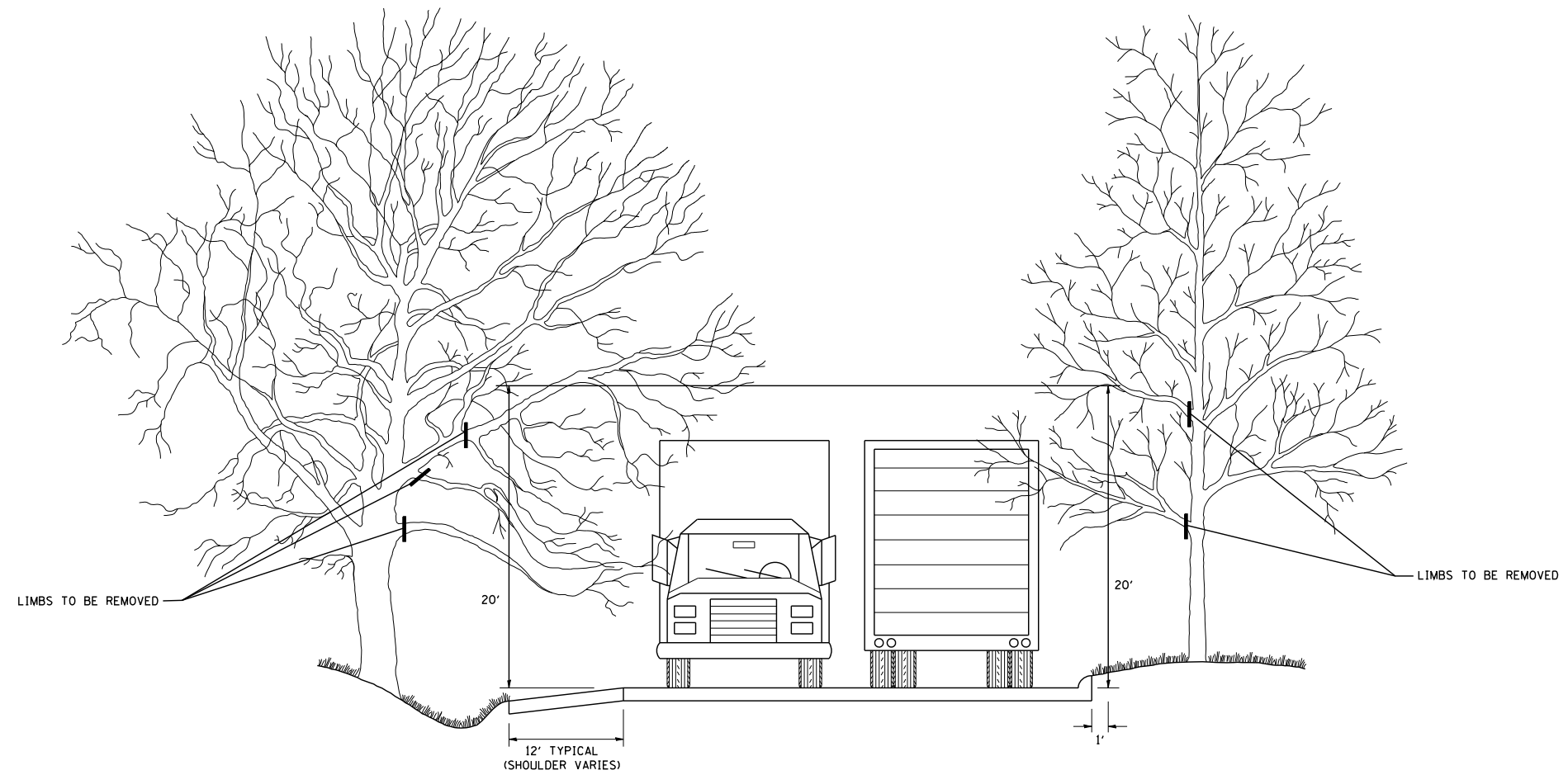
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	PLOT DATE = 1/4/2008	DATE - 06-16-04	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BENCHING DETAIL			
FOR EMBANKMENT WIDENING			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	282
BD-51		CONTRACT NO. 60V55		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



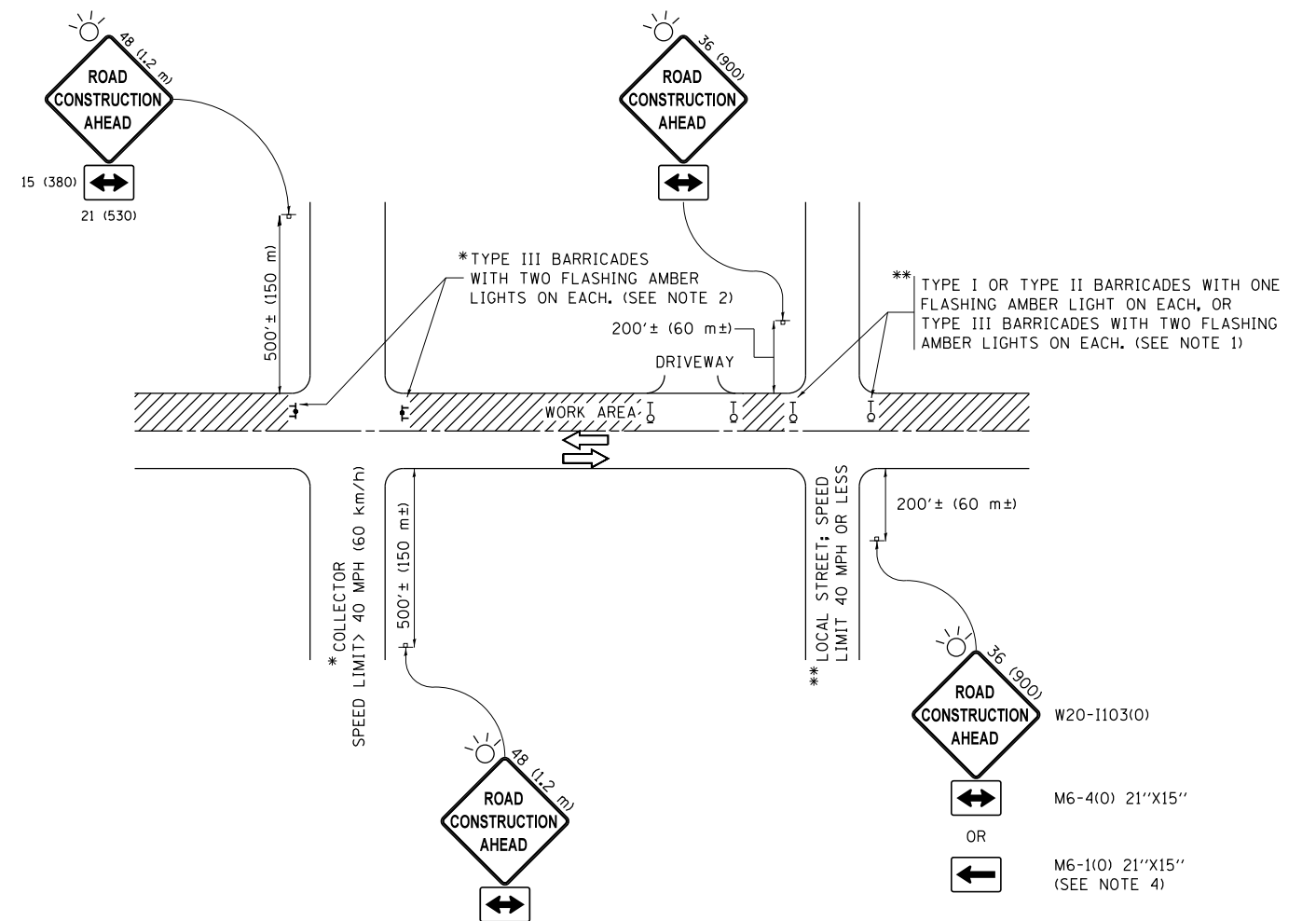
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	PLOT DATE = 1/4/2008	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PRUNING FOR SAFETY AND
EQUIPMENT CLEARANCE**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	283
BM-20		CONTRACT NO. 60V55		
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.

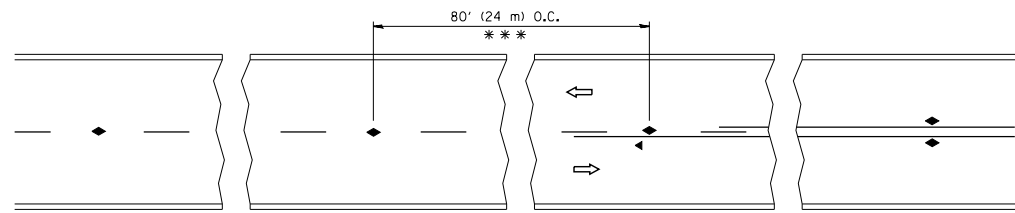
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Default	PLOT SCALE = 50.000' / in.	CHECKED -	REVISED - A. SCHUETZE 07-01-13
	PLOT DATE = 9/15/2016	DATE - 06-89	REVISED - A. SCHUETZE 09-15-16

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

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

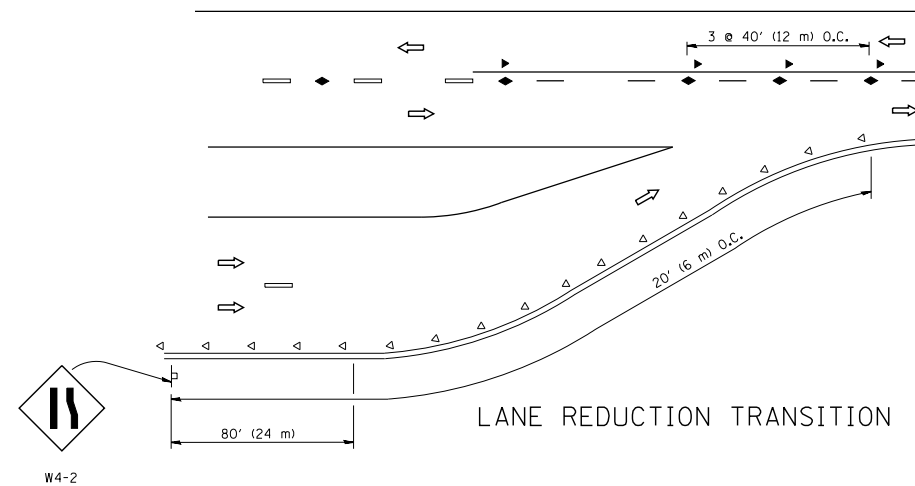
SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	284
TC-10			CONTRACT NO. 60V55	
ILLINOIS FED. AID PROJECT				

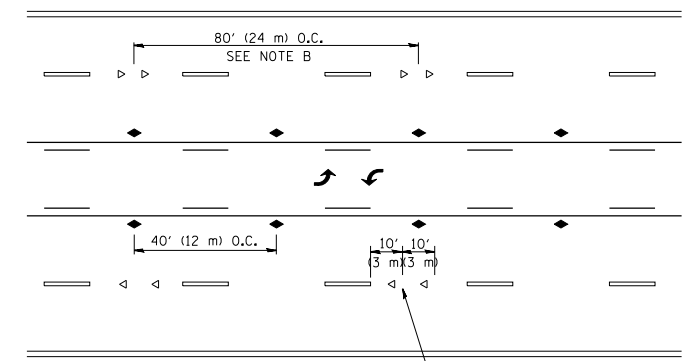


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

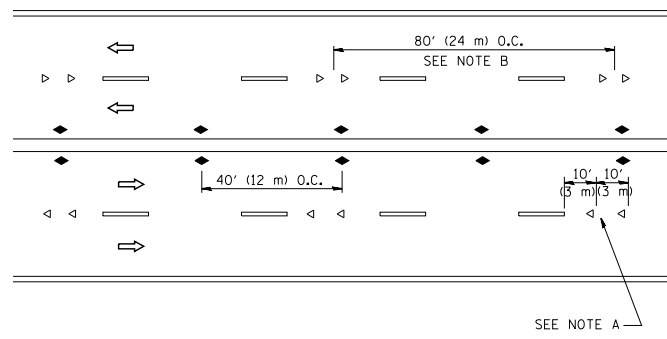
TWO-LANE/TWO-WAY



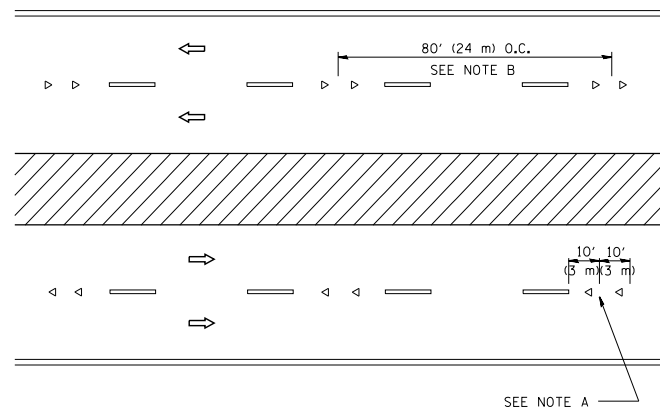
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

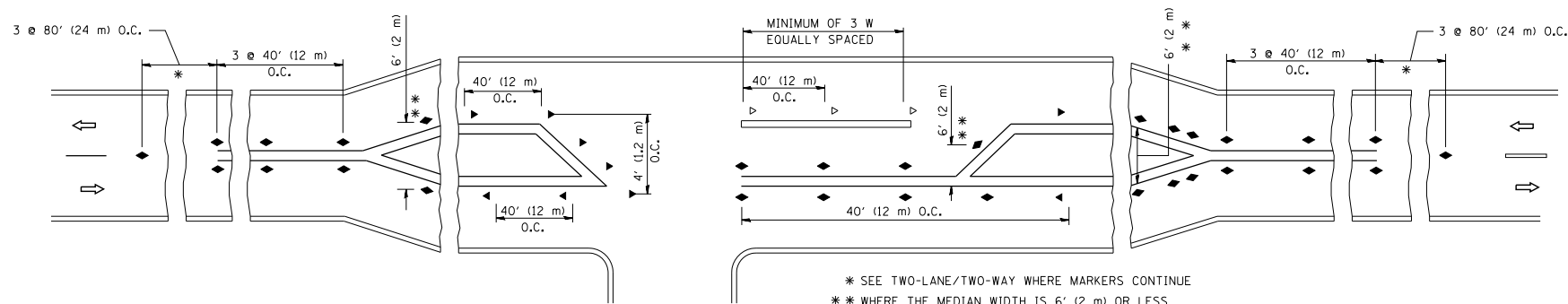
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

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

DESIGN NOTES

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



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

LEFT TURN

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

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cr:\pw\work\p\dot\lryso\d0108315\l1.dgn		DRAWN -	REVISED - T. RAMMACHER 03-12-99
	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - T. RAMMACHER 01-06-00
	PLOT DATE = 3/2/2011	DATE -	REVISED - C. JUCIUS 09-09-09

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	285
TC-11			CONTRACT NO. 60V55	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

TURN BAY ENTRANCE AT START OF LANE CLOSURE TAPER

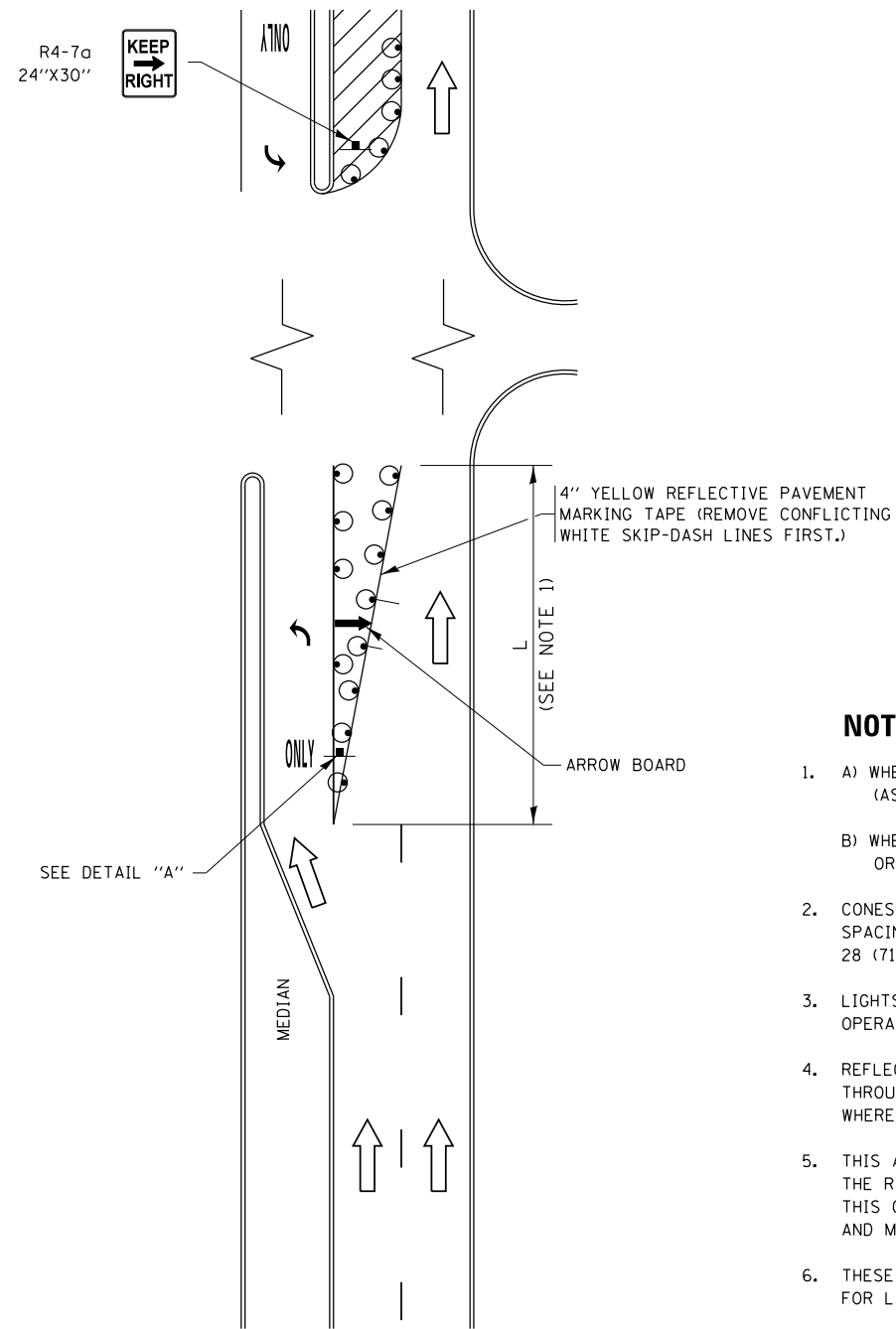


FIGURE 1

TURN BAY ENTRANCE WITHIN A LANE CLOSURE

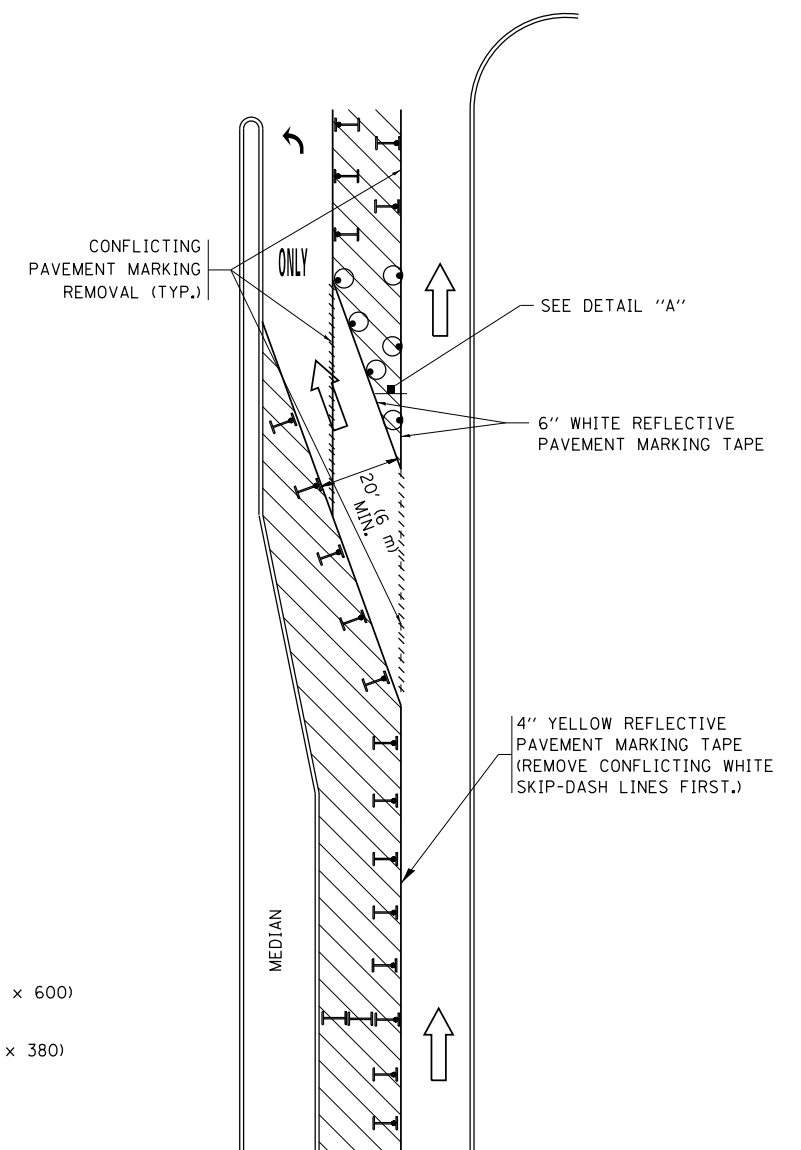


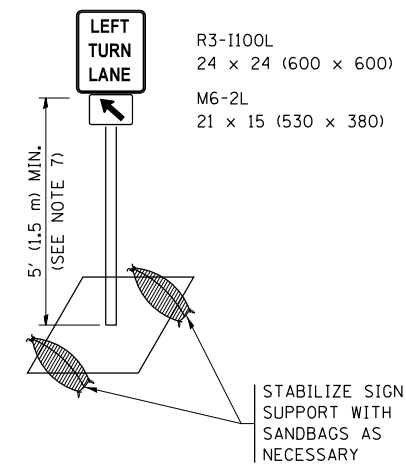
FIGURE 2

LEGEND

- WORK AREA
- LANE OPEN TO TRAFFIC
- ARROW BOARD
- TYPE I OR II BARRICADE OR DRUM WITH STEADY BURN LIGHT
- DRUM WITH STEADY BURN LIGHT
- SIGN ASSEMBLY
- TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

NOTES:

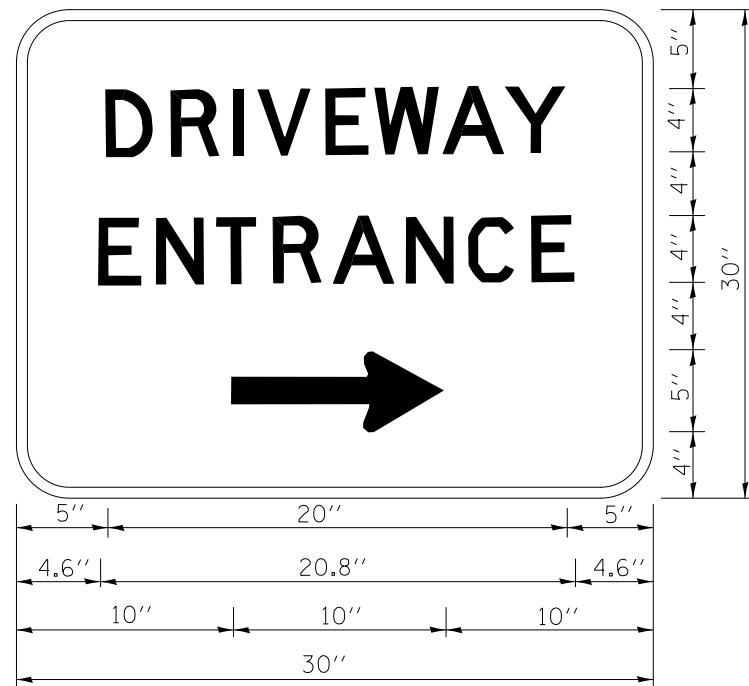
1. A) WHEN "L" IS \leq THE STORAGE LENGTH OF THE TURN LANE (AS SHOWN IN FIG. 1), USE FIGURE 1.
B) WHEN "L" IS $>$ THE STORAGE LENGTH OF THE TURN LANE OR THE TURN LANE IS WITHIN THE LANE CLOSURE, USE FIGURE 2.
2. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
3. LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
4. REFLECTIVE TEMPORARY PAVEMENT MARKINGS SHALL BE PLACED THROUGHOUT THE BARRICADED AREAS OF EACH TURN BAY AS SHOWN WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN (14) DAYS.
5. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-1100R 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
6. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
7. THE SIGNS SHALL BE MOUNTED ABOVE THE BARRICADES/DRUMS ON SEPARATE SIGN SUPPORTS THAT MEET NCHRP 350 OR MASH PREQUIREMENTS.
8. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.



DETAIL A

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

FILE NAME =	USER NAME = footemj	REVISED - T. RAMMACHER 09-08-94	REVISED - R. BORO 09-14-09	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)			F.A.P. R.E. =	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\IL\084EBIDINTEG\illinois.gov\PIDOT\Documents\IDOT Offices\District 1\Projects\Dist 1\ADDData\CAHOUSEH1407-95	REVISED - A. HOUSEH 10-07-95	REVISED - A. SCHUETZE 07-01-13	REVISED - A. SCHUETZE 09-15-16					541	A-WRS-2	LAKE	345	287
PLOT SCALE = 50.0000' / in.	REVISED - A. HOUSEH 10-12-96	REVISED - A. SCHUETZE 09-15-16						TC-14		CONTRACT NO. 60V55		
Default	PLOT DATE = 9/15/2016	REVISED - T. RAMMACHER 01-06-00	REVISED -					ILLINOIS FED. AID PROJECT				
				SCALE: NONE	SHEET 1	OF 1 SHEETS	STA.	TO STA.				



3.0" RADIUS, 0.5" BORDER, WHITE ON GREEN; REFLECTORIZED
 "DRIVEWAY" D; "ENTRANCE" D; STANDARD ARROW CUSTOM 12.0" x 5.0"

NOTES:

1. HALF OF THE SIGNS WILL REQUIRE A LEFT HAND FACING ARROW.
2. TWO SIGNS SHALL BE USED AT EACH COMMERCIAL ENTRANCE
 PLACED BACK-TO-BACK; ONE WITH A RIGHT HAND ARROW (SHOWN)
 SHALL BE PLACED ON THE NEAR RIGHT SIDE THE DRIVEWAY
 AND ONE WITH A LEFT HAND ARROW SHALL BE PLACED ON THE
 FAR LEFT SIDE OF THE DRIVEWAY.
3. SIGNS TO BE PAID FOR AS ITEM "TEMPORARY INFORMATION SIGNING".

FILE NAME =	USER NAME = gegl1enobt	DESIGNED -	REVISED - C. JUCIUS 02-15-07
ct:\pw\work\p1dot\gagl1enobt\d0108315\to26.dgn		DRAWN -	REVISED -
	PLOT SCALE = 50.000' / in.	CHECKED -	REVISED -
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

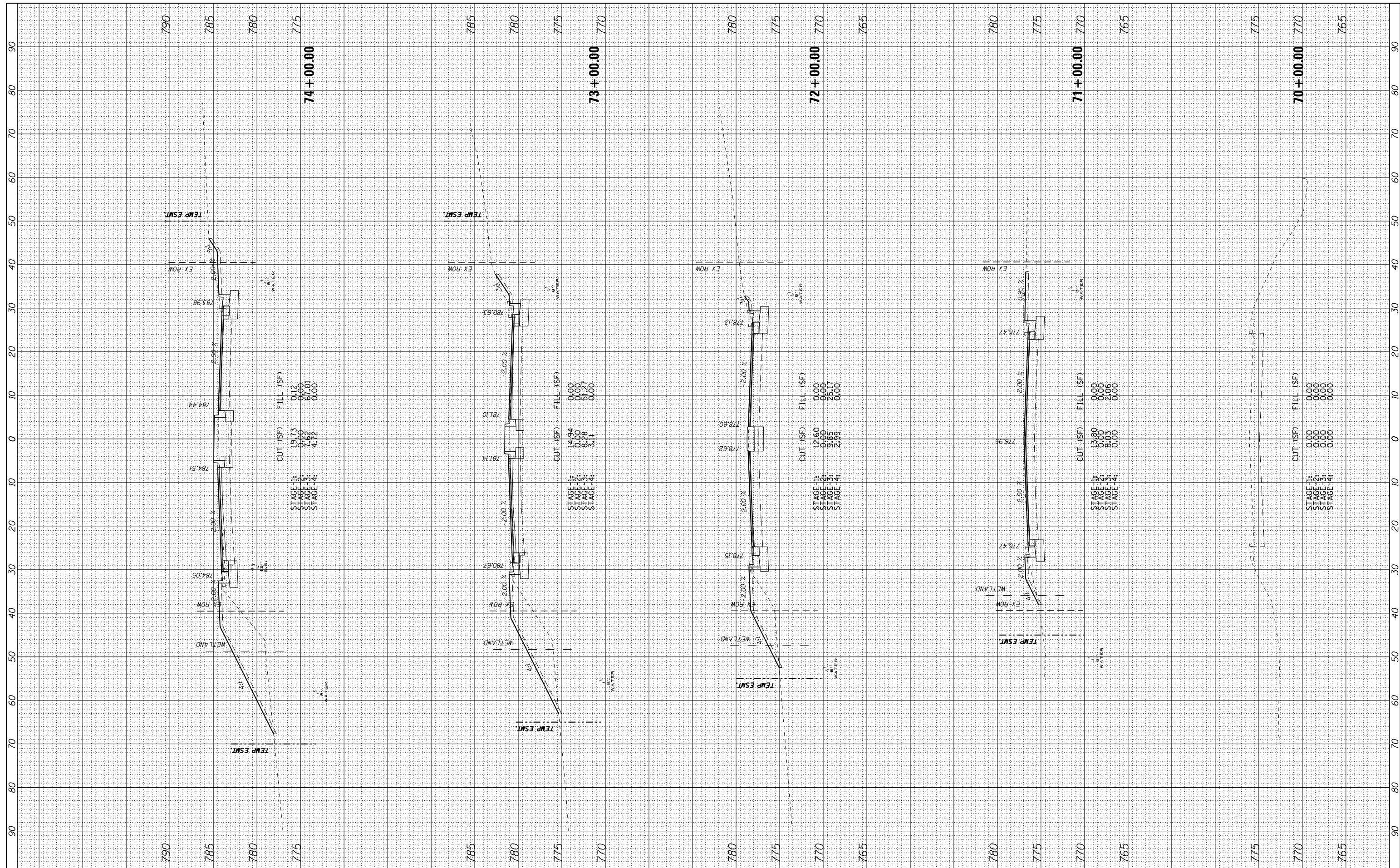
DRIVEWAY ENTRANCE SIGNING

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	290
TC-26			CONTRACT NO. 60V55	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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

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



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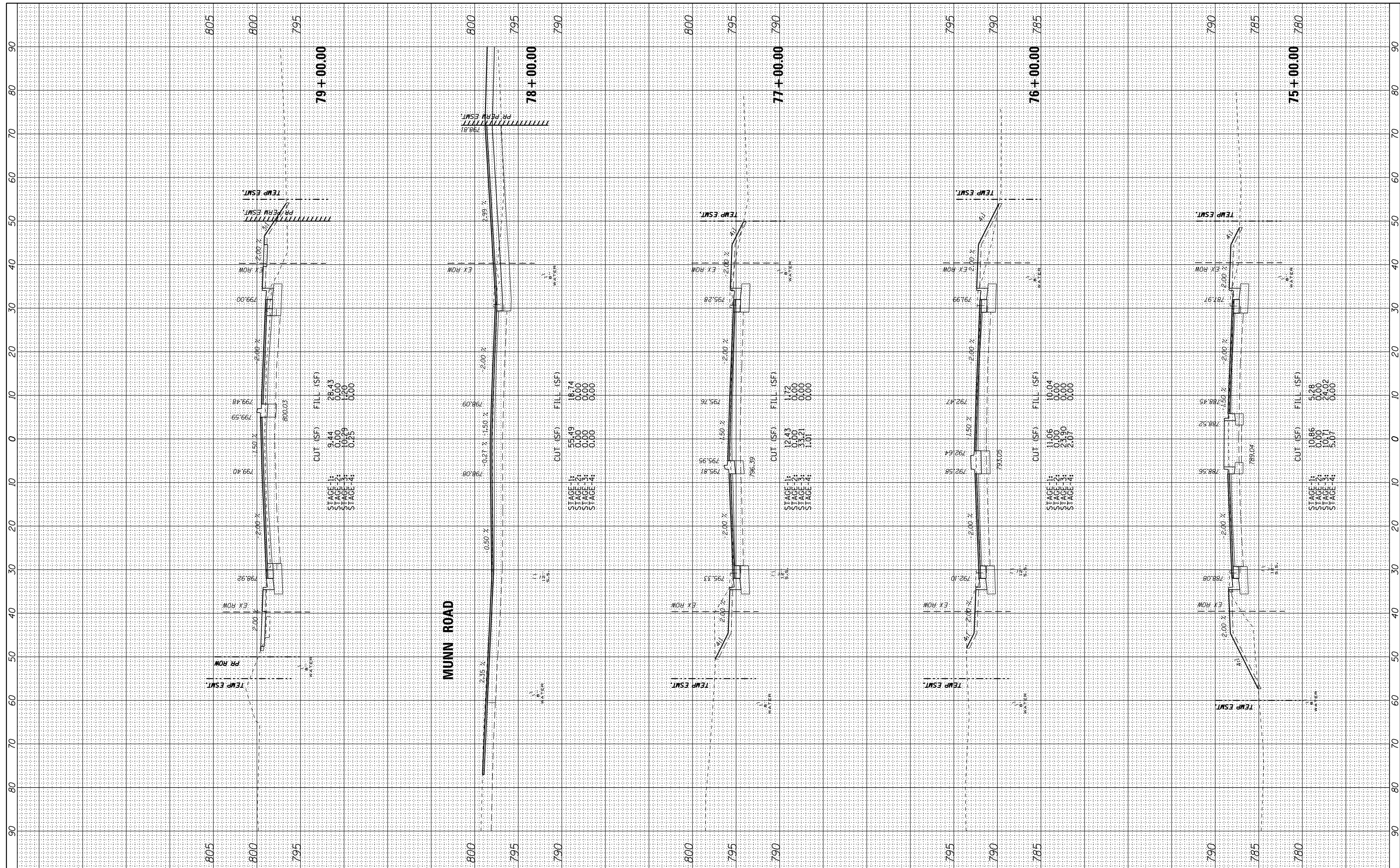
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS - IL ROUTE 132
 1"=10' HORIZ.
 SCALE: 1"=5' VERT. SHEET OF SHEETS STA. 70+00.00 TO STA. 74+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	291
CONTRACT NO. 60V55			ILLINOIS FED. AID PROJECT	

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

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



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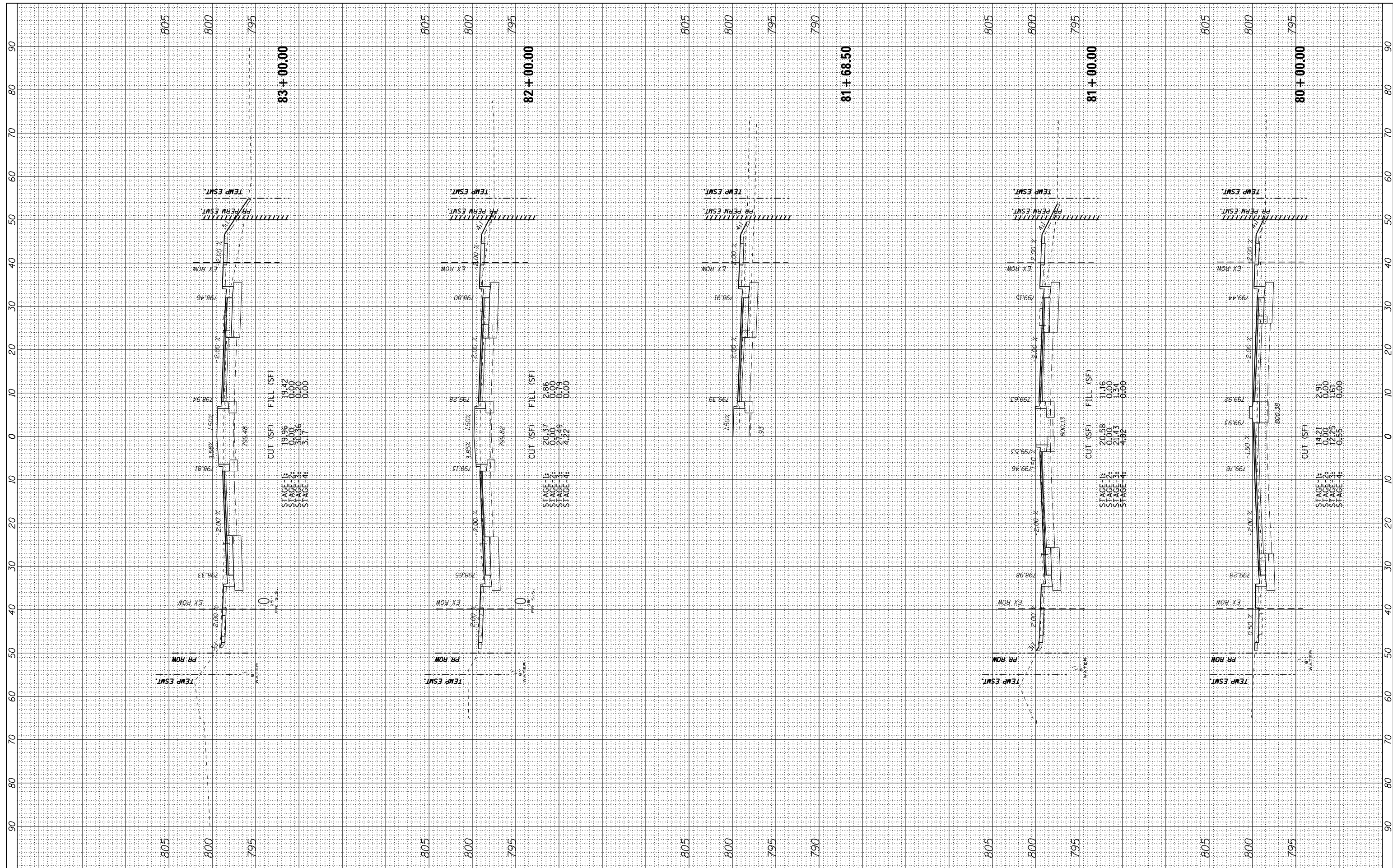
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS - IL ROUTE 132
 1"=10' HORIZ.
 SCALE: 1"=5' VERT. SHEET OF SHEETS STA. 75+00.00 TO STA. 79+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	292
CONTRACT NO. 60V55			ILLINOIS FED. AID PROJECT	

BY	DATE

ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
	TEMPLATE
	AREAS
	CHECKED



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*MODELNAME#	

	REVIS	

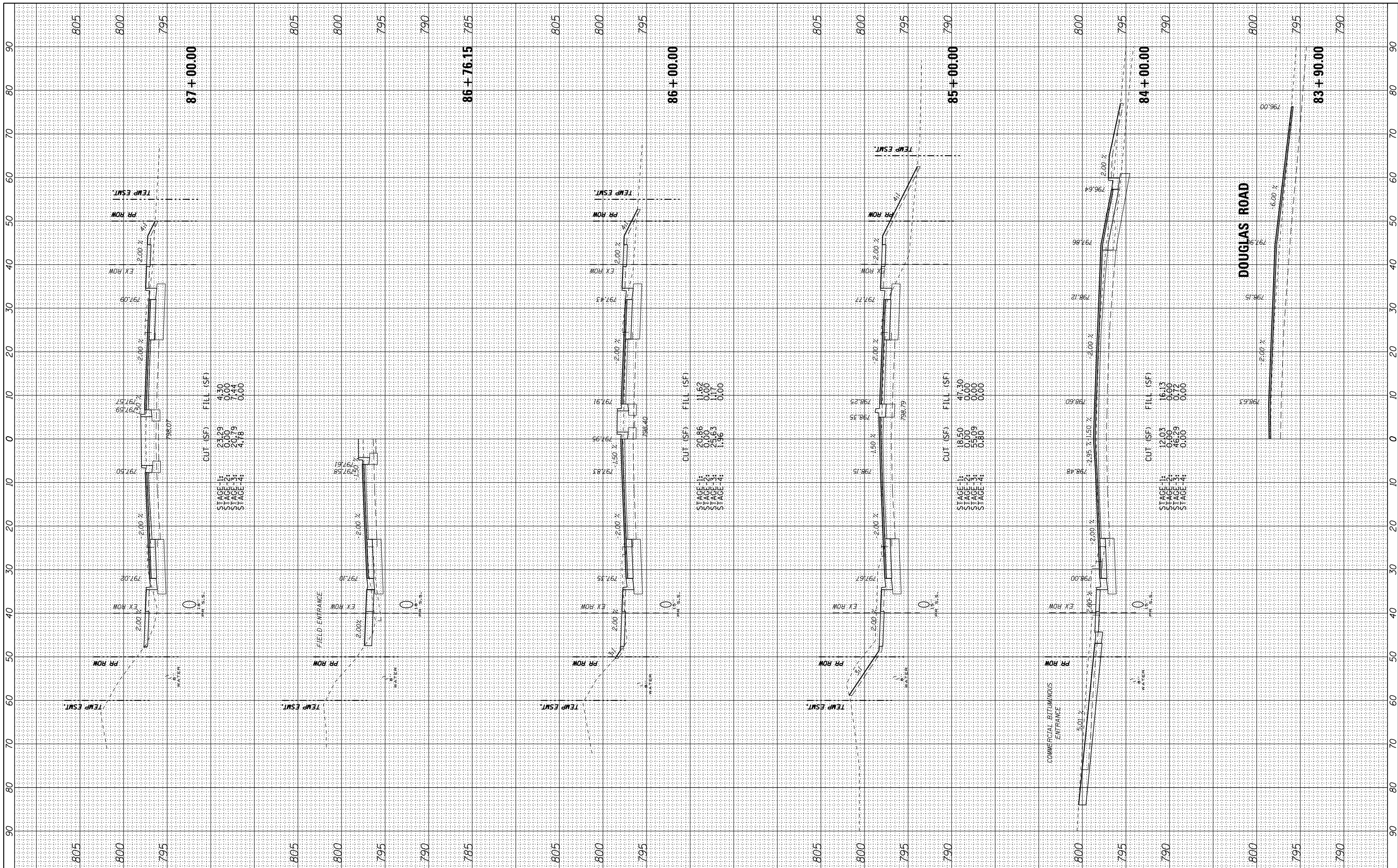
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS - IL ROUTE 132
 1"=10' HORIZ.
 SCALE: 1"=5' VERT. SHEET OF SHEETS STA. 80+00.00 TO STA. 83+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	293
				CONTRACT NO. 60V55
ILLINOIS FED. AID PROJECT				

BY	DATE

ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
	TEMPLATE
	AREAS
	CHECKED



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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

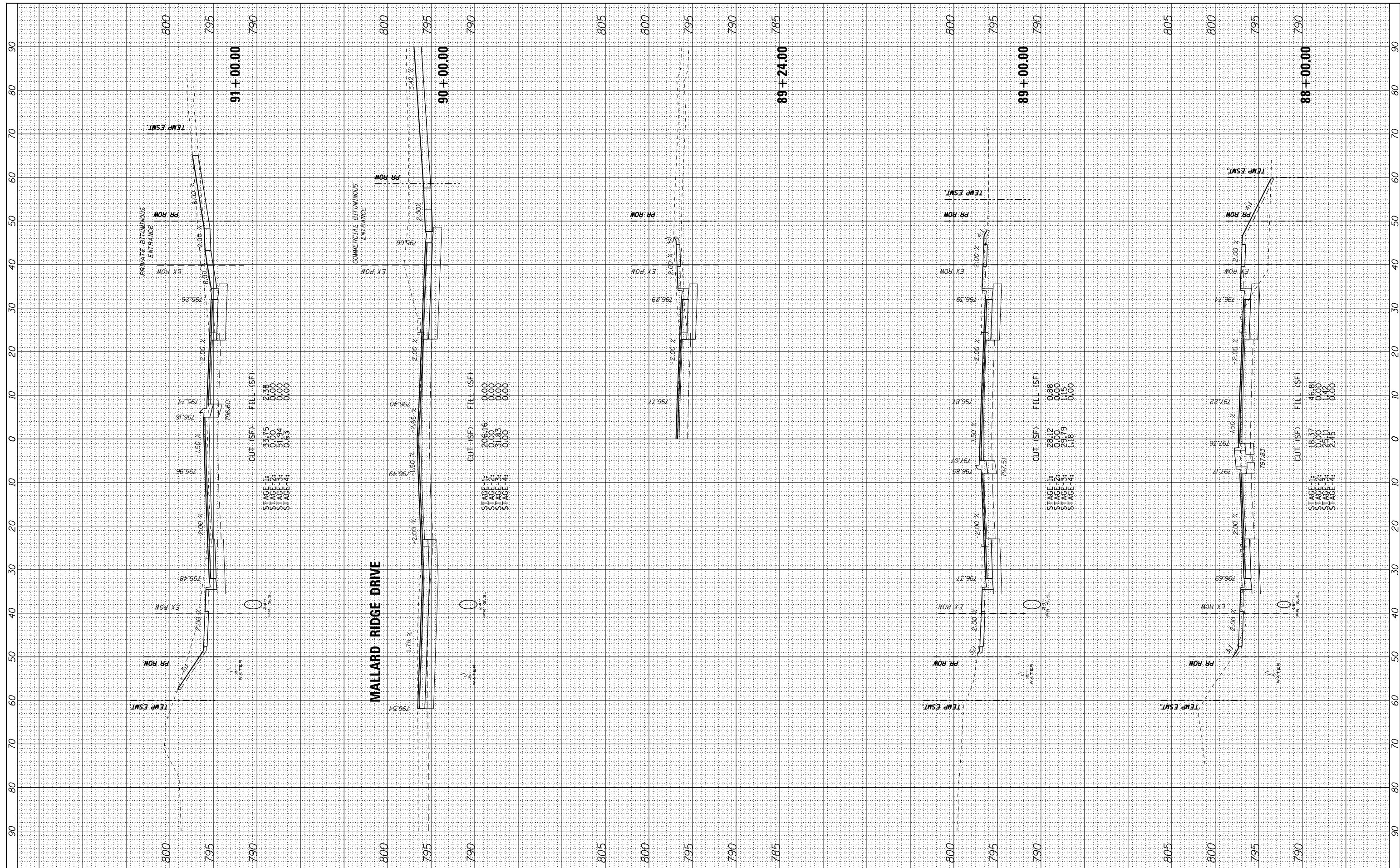
CROSS SECTIONS - IL ROUTE 132
 1"=10' HORIZ.
 SCALE: 1"=5' VERT. SHEET OF SHEETS STA. 84+00.00 TO STA. 87+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	294
CONTRACT NO. 60V55				
ILLINOIS FED. AID PROJECT				

BY	DATE

ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
	TEMPLATE
	AREAS CHECKED

FINISH SURVEY	SURVEYED
NOTE BOOK	PLOTTED
	TEMPLATE
	AREAS CHECKED



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MODELNAME	

DESIGNED -	BLG	REVISED -	
DRAWN -	TLA	REVISED -	
CHECKED -	BLG	REVISED -	
DATE -	4/28/2017	REVISED -	

CUT (SF)	FILL (SF)
STAGE 1: 206.16	0.00
STAGE 2: 3.93	0.00
STAGE 3: 3.03	0.00
STAGE 4: 0.90	0.00

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

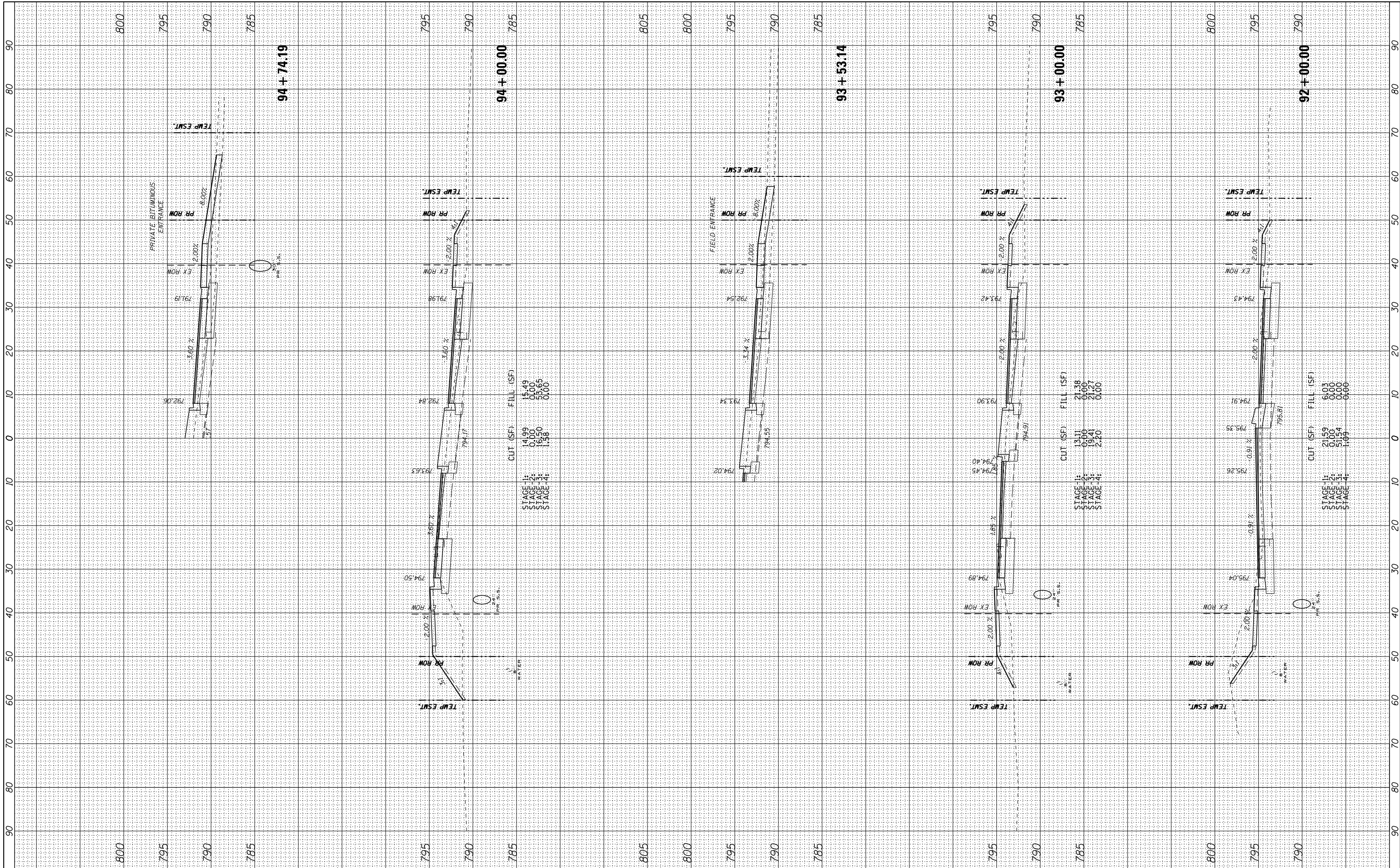
CROSS SECTIONS - IL ROUTE 132

1"=10' HORIZ.
SCALE: 1"=5' VERT. SHEET OF SHEETS STA. 88+00.00 TO STA. 91+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	295
CONTRACT NO. 60V55				
ILLINOIS FED. AID PROJECT				

BY	DATE

ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED



CUT (SF)	FILL (SF)
STAGE 1: 14.99	15.49
STAGE 2: 0.00	0.00
STAGE 3: 16.50	55.65
STAGE 4: 1.58	0.00

CUT (SF)	FILL (SF)
STAGE 1: 13.11	21.38
STAGE 2: 0.00	0.00
STAGE 3: 19.41	21.27
STAGE 4: 2.20	0.00

CUT (SF)	FILL (SF)
STAGE 1: 21.59	6.03
STAGE 2: 0.00	0.00
STAGE 3: 21.94	0.00
STAGE 4: 1.09	0.00

FILE NAME =
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USER NAME = *USER*
 SCALE
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DESIGNED - BLG
 DRAWN - TLA
 CHECKED - BLG
 DATE - 4/28/2017

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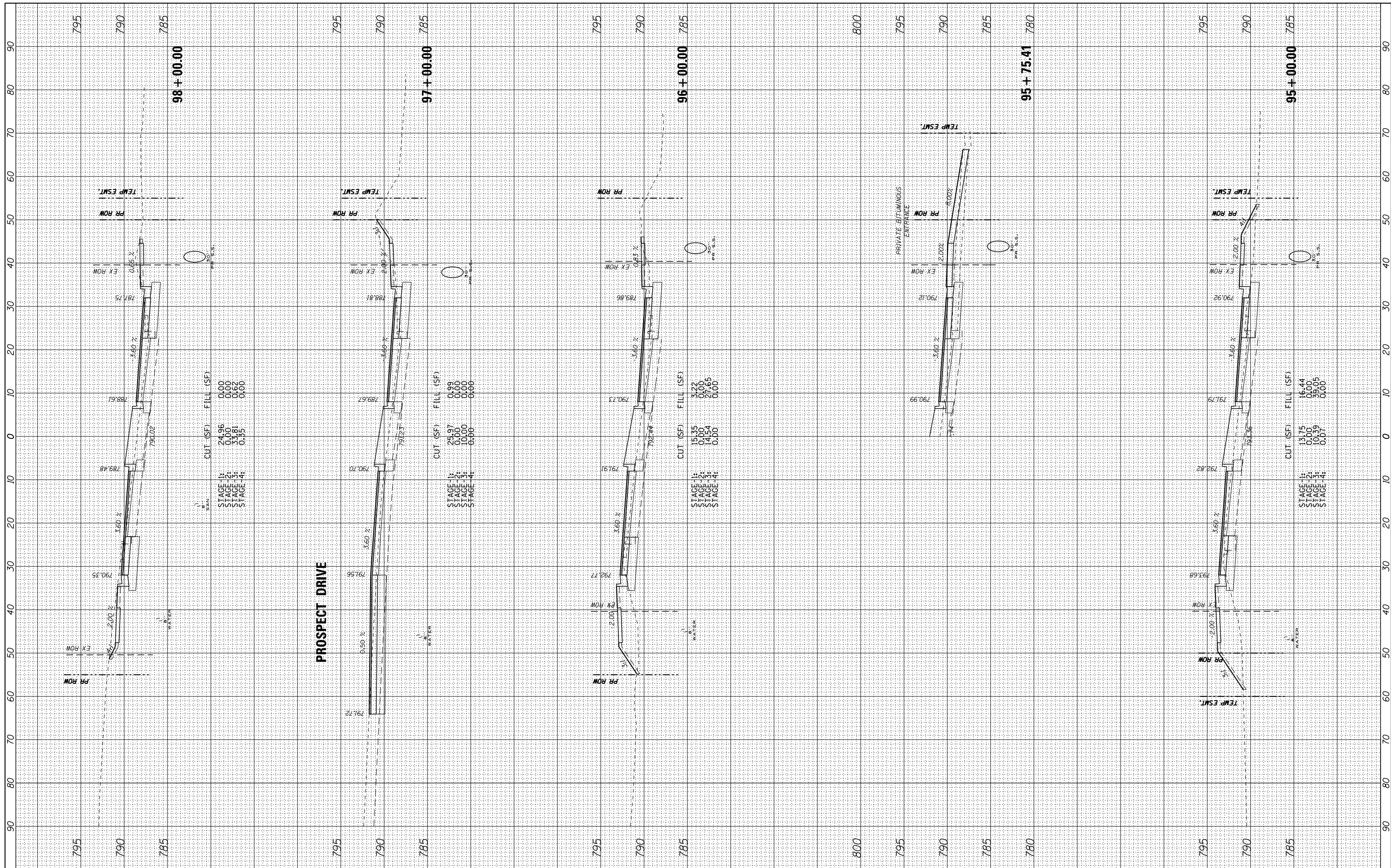
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS - IL ROUTE 132
 1"=10' HORIZ.
 SCALE: 1"=5' VERT. SHEET OF SHEETS STA. 92+00.00 TO STA. 94+74.19

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	296
CONTRACT NO. 60V55				ILLINOIS FED. AID PROJECT

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

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



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS - IL ROUTE 132

1"=10' HORIZ.
SCALE: 1"=5' VERT. SHEET OF SHEETS STA. 95+00.00 TO STA. 98+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	297
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60V55	

BY	DATE

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NOTE BOOK	PLOTTED	
NO.	TEMPLATE	
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DATE - 4/28/2017

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS - IL ROUTE 132

1"=10' HORIZ.
SCALE: 1"=5' VERT. SHEET OF SHEETS STA. 98+45.00 TO STA. 99+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	A-WRS-2	LAKE	345	298
CONTRACT NO. 60V55			ILLINOIS FED. AID PROJECT	

