

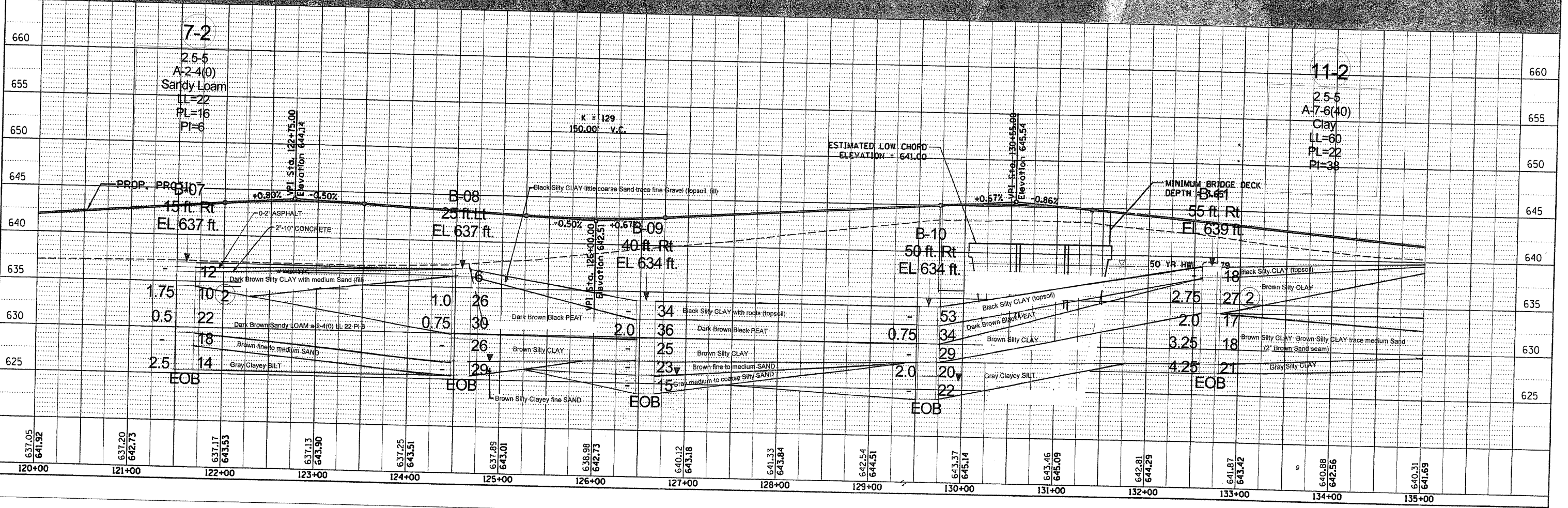
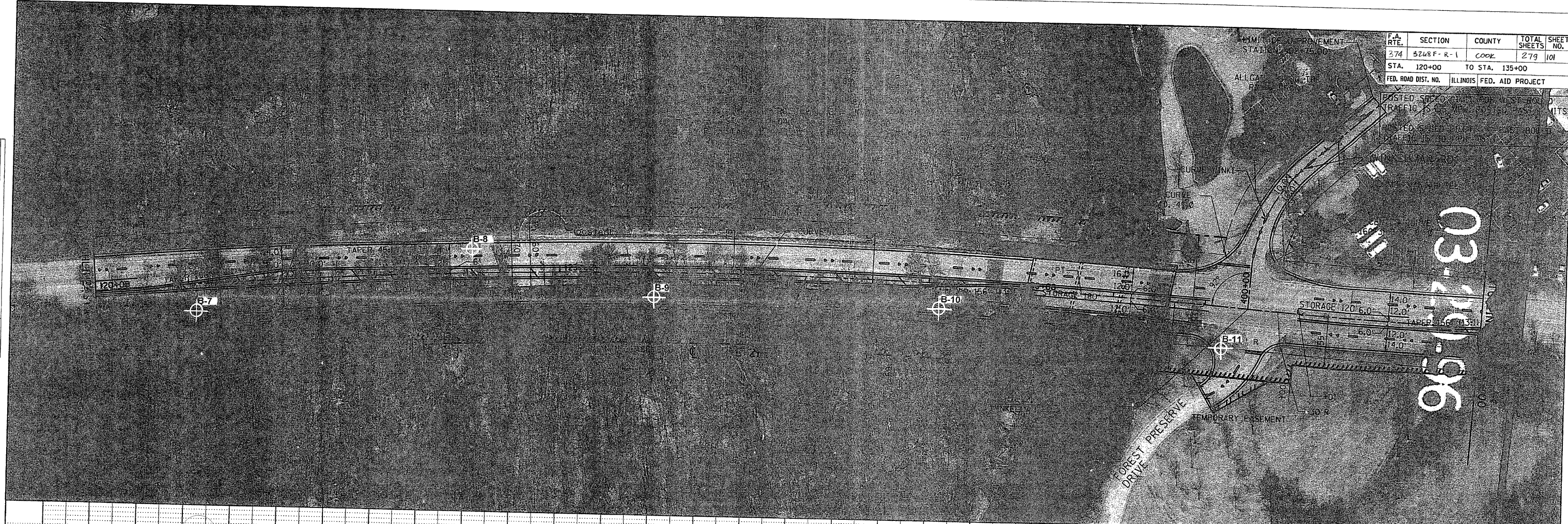
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 NOTE BOOK NO. BY
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PROFILE SURVEYED BY DATE
 NOTE BOOK NO. BY
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	5248 F-R-1	COOK	279	101
STA. 120+00	TO STA. 135+00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

POSTED SPEED LIMIT
 TRAFFIC CONTROL
 POSTED SPEED LIMIT
 TRAFFIC CONTROL

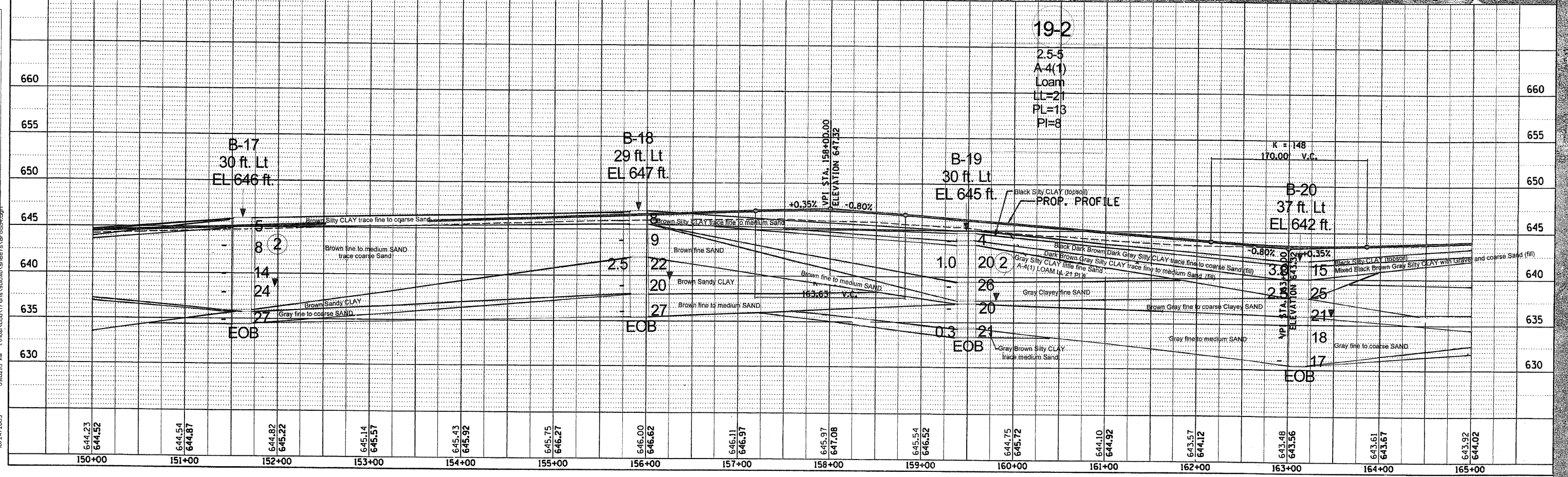
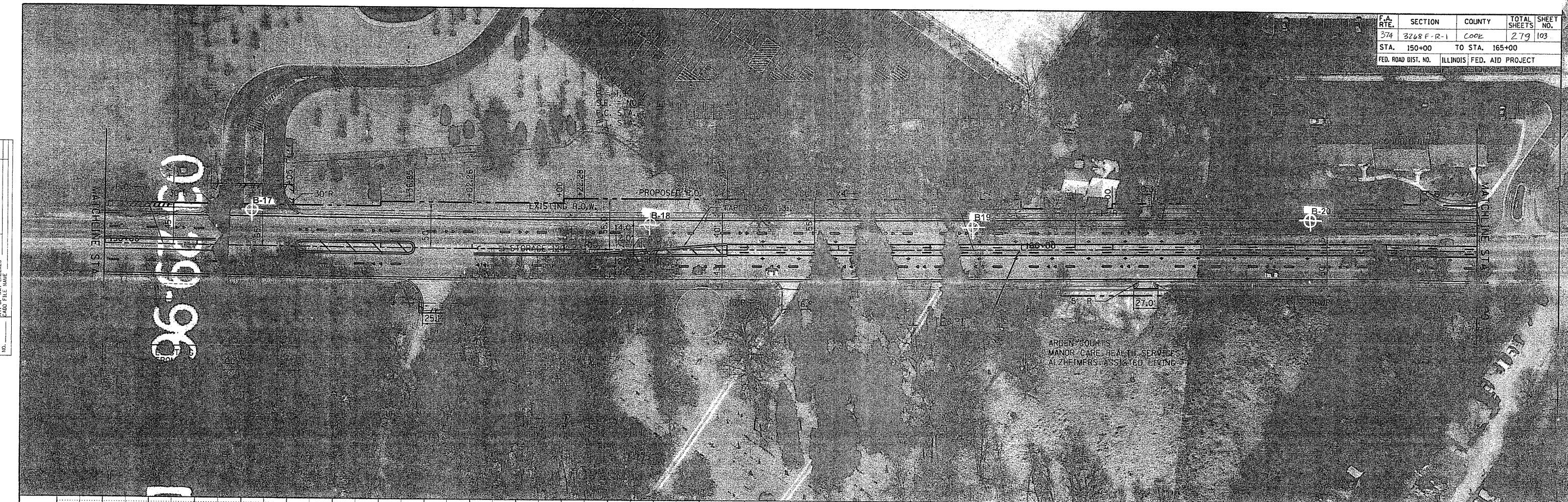
03-21-96



F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268 F-R-1	COOK	279	103
STA. 150+00	TO STA. 165+00			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

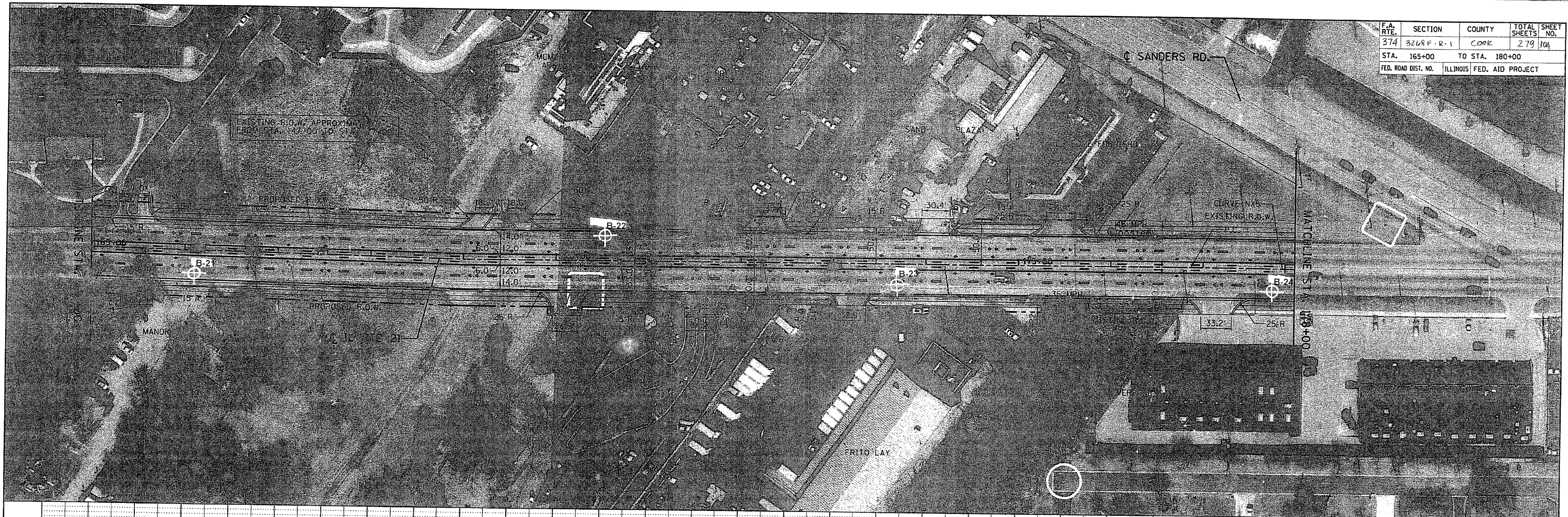
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PROFILE	SURVEYED	BY	DATE
	GRADES CHECKED		
	NOTED		
	STRUCTURE NOTATIONS CHECKED		
	NO.		



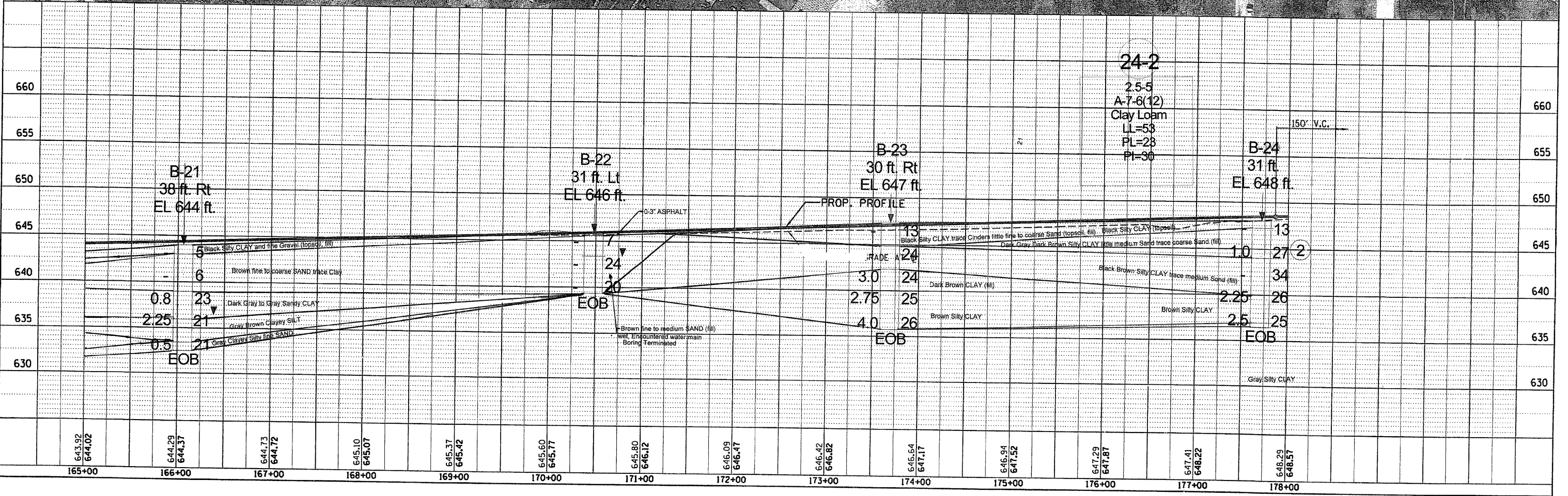
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268 F-R-1	COOK	279	104
STA. 165+00		TO STA. 180+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

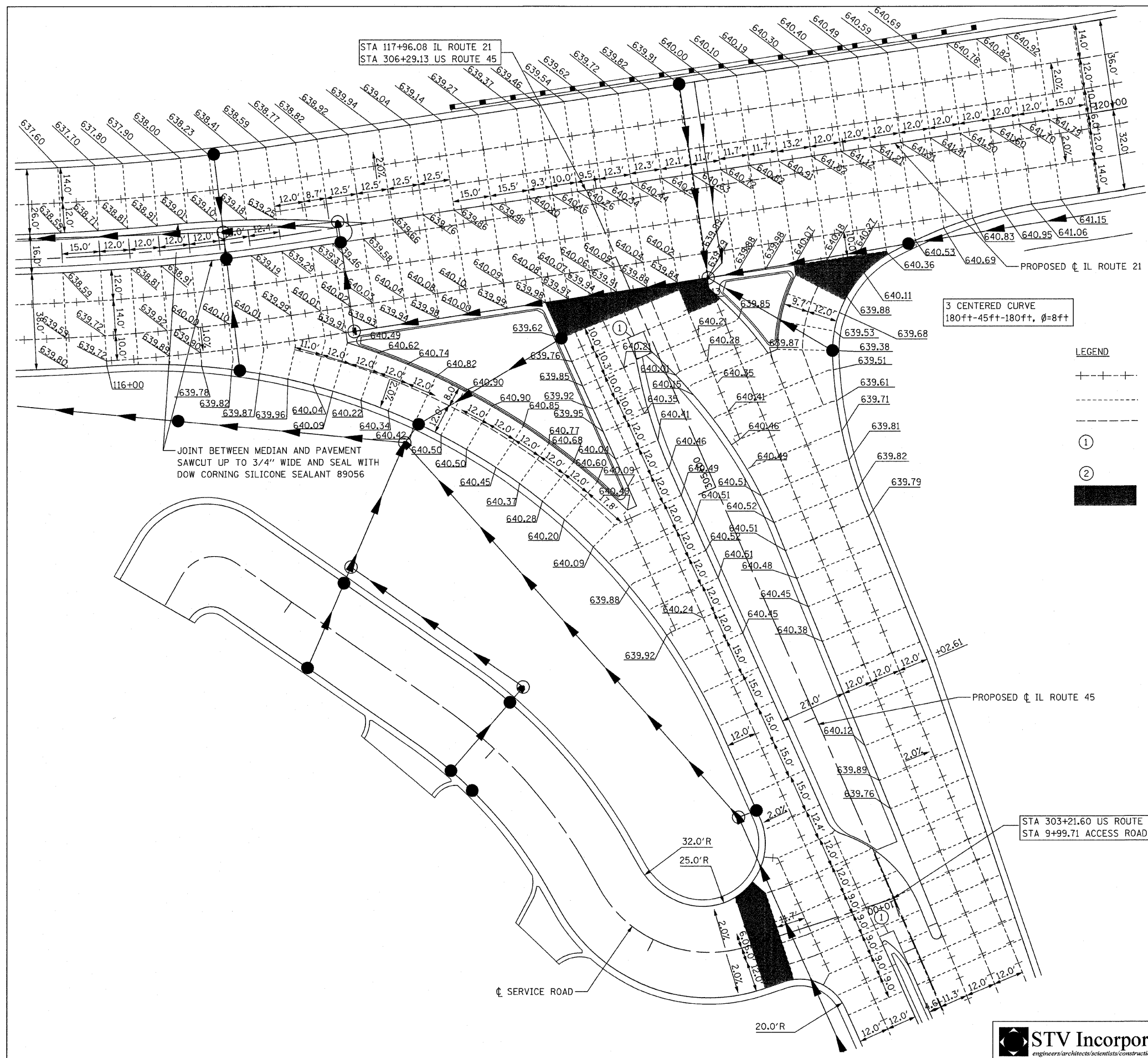
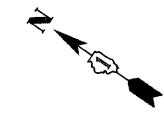


PLAN	DATE
NO.	BY
NOTE BOOK	
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GRADES CHECKED	
PLAN CHECKED	
CAD FILE NAME	

PROFILE	DATE
NO.	BY
NOTE BOOK	
SURVEYED	
PLOTTED	
GRADES CHECKED	
PLAN CHECKED	
CAD FILE NAME	



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	106
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 62387				



JOINT BETWEEN MEDIAN AND PAVEMENT
SAWCUT UP TO 3/4" WIDE AND SEAL WITH
DOW CORNING SILICONE SEALANT 89056

3 CENTERED CURVE
180ft-45ft-180ft, R=8ft

LEGEND

---+---+---	LONGITUDINAL CONSTRUCTION JOINT
-----	SAWED TRANSVERSE JOINT
-----	SAWED LONGITUDINAL JOINT
①	3/4" FULL DEPTH TRANSVERSE JOINT FILL WITH PREFORMED EXPANSION JOINT FILLER.
②	2" TRANSVERSE JOINT
■	TRANSITION PANEL (DOWELS ON ALL SIDES)

- NOTES:
- FOR MORE INFO, SEE STANDARDS 420001, 420101, AND 606001.
 - ADDITIONAL SAWED CONTRACTION JOINTS MAY BE REQUIRED IN THE FIELD AS DIRECTED BY THE ENGINEER. EXACT LOCATIONS TO BE VERIFIED IN THE FIELD AND APPROVED BY THE ENGINEER.
 - PAVEMENT BLOCK-OUTS FOR MANHOLES, VALVE VAULTS, AND OTHER STRUCTURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD 420111.
 - CONTRACTOR TO VERIFY ELEVATION OF EXISTING PAVEMENT PRIOR TO CONSTRUCTION.
 - CONCRETE ISLANDS AND MEDIANS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD 606301.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

INTERSECTION DETAIL

ILLINOIS ROUTE 21
AT US ROUTE 45

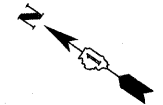
DATE: 02/05/08
DRAWN BY: RDT
CHECKED BY: GC

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STV Incorporated
engineers/architects/scientists/construction managers

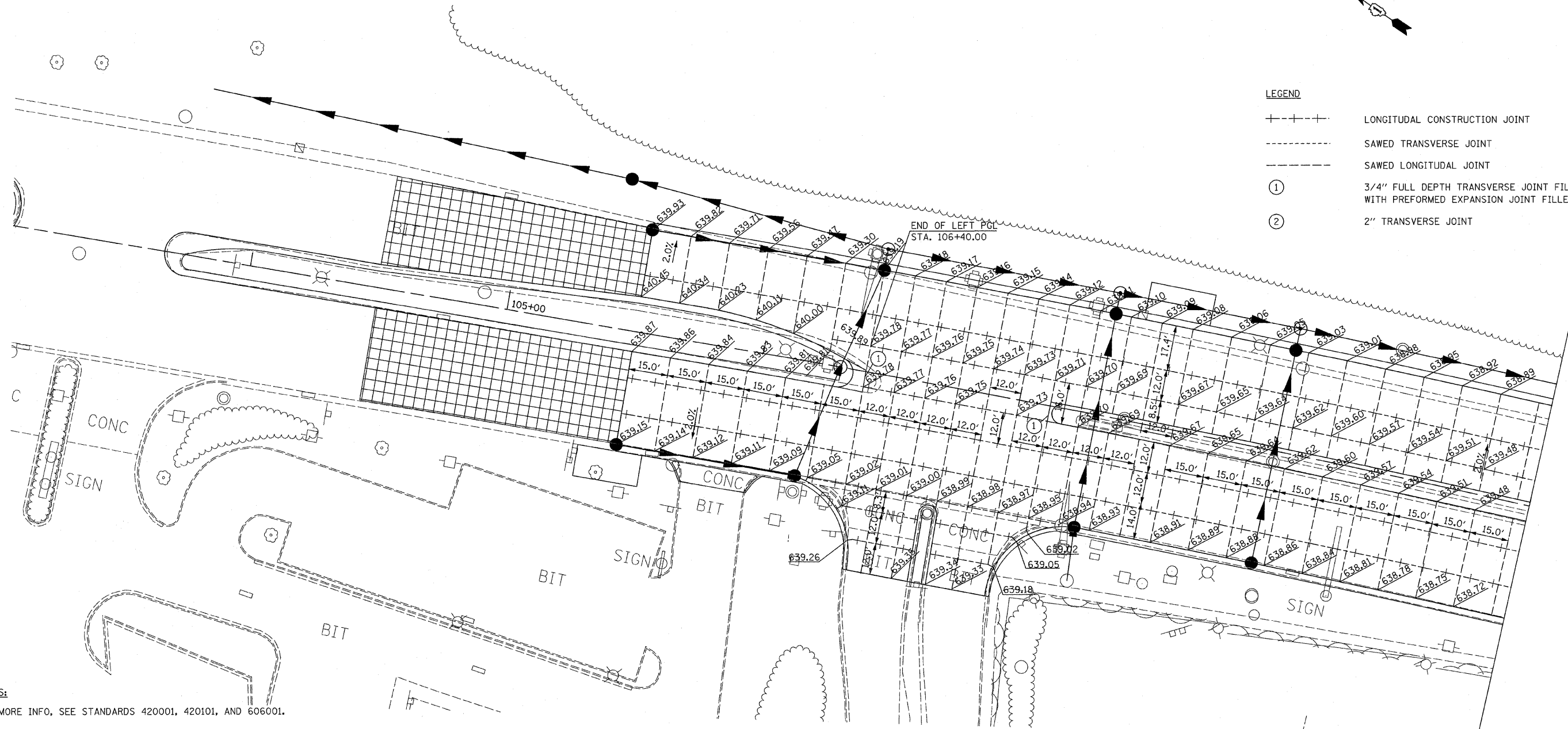
200 W Monroe - Suite 1650
Chicago, Illinois 60606

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	108
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		CONTRACT NO. 62387



LEGEND

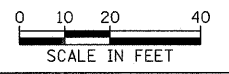
---+---+---	LONGITUDINAL CONSTRUCTION JOINT
-----	SAWED TRANSVERSE JOINT
-----	SAWED LONGITUDINAL JOINT
①	3/4" FULL DEPTH TRANSVERSE JOINT FILL WITH PREFORMED EXPANSION JOINT FILLER.
②	2" TRANSVERSE JOINT



- NOTES:**
- FOR MORE INFO, SEE STANDARDS 420001, 420101, AND 606001.
 - ADDITIONAL SAWED CONTRACTION JOINTS MAY BE REQUIRED IN THE FIELD AS DIRECTED BY THE ENGINEER. EXACT LOCATIONS TO BE VERIFIED IN THE FIELD AND APPROVED BY THE ENGINEER.
 - PAVEMENT BLOCK-OUTS FOR MANHOLES, VALVE VAULTS, AND OTHER STRUCTURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD 420111.
 - CONTRACTOR TO VERIFY ELEVATION OF EXISTING PAVEMENT PRIOR TO CONSTRUCTION.
 - CONCRETE ISLANDS AND MEDIANS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD 606301.

REVISIONS	
NAME	DATE

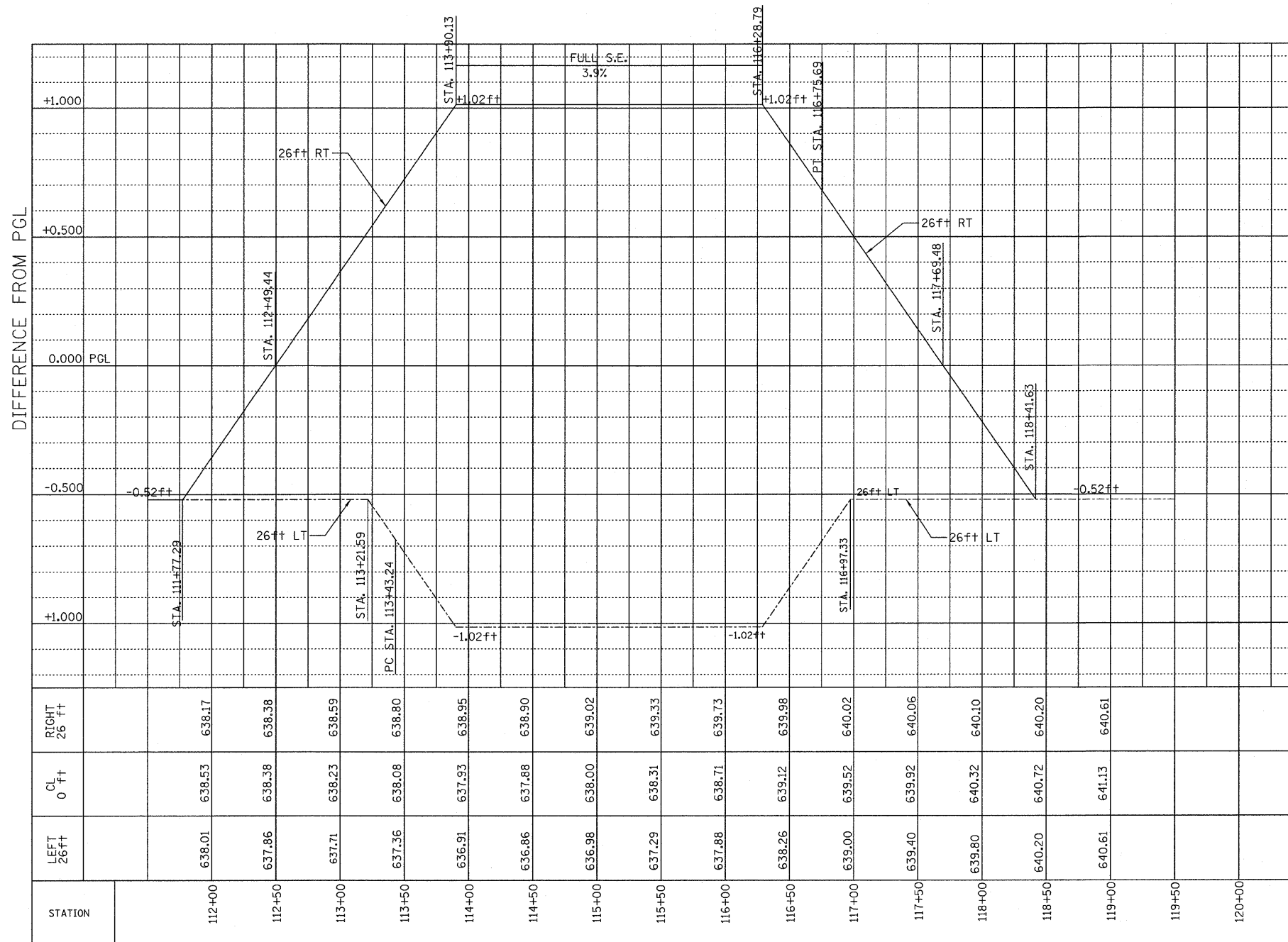
ILLINOIS DEPARTMENT OF TRANSPORTATION
INTERSECTION DETAIL
 ILLINOIS ROUTE 21
 AT APPLE DRIVE



DATE: 02/05/08
 DRAWN BY: RDT
 CHECKED BY: GC

STV Incorporated
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 200 W Monroe - Suite 1650
 Chicago, Illinois 60606

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STATION	LEFT 26ft	CL 0ft	RIGHT 26ft
112+00	638.01	638.53	638.17
112+50	637.86	638.38	638.38
113+00	637.71	638.23	638.59
113+50	637.36	638.08	638.80
114+00	636.91	637.93	638.95
114+50	636.86	637.88	638.90
115+00	636.98	638.00	639.02
115+50	637.29	638.31	639.33
116+00	637.88	638.71	639.73
116+50	638.26	639.12	639.98
117+00	639.00	639.52	640.02
117+50	639.40	639.92	640.06
118+00	639.80	640.32	640.10
118+50	640.20	640.72	640.20
119+00	640.61	641.13	640.61
119+50			
120+00			

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**SUPERELEVATION TRANSITION
 DETAIL**
 ILLINOIS ROUTE 21

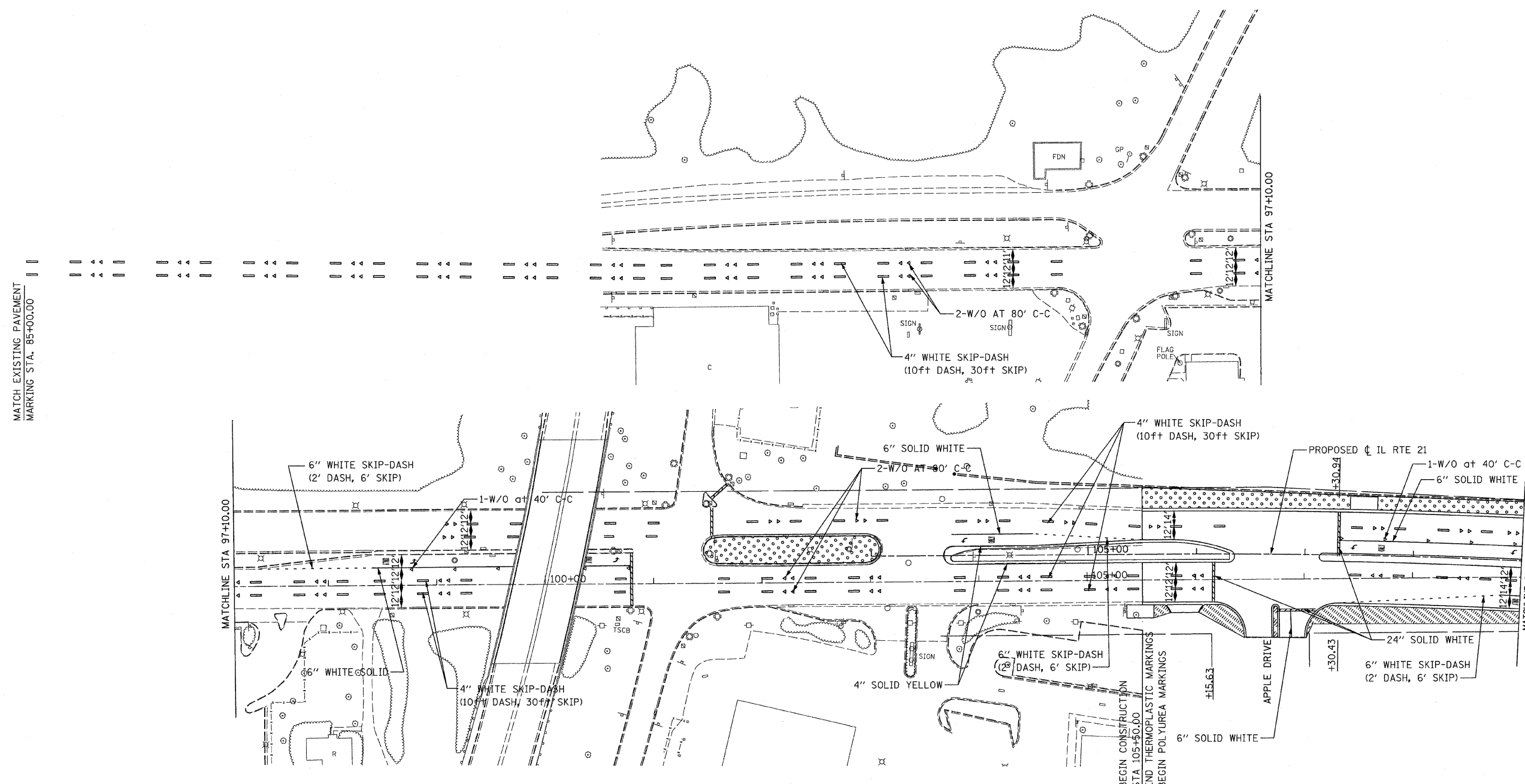
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 CHECKED BY GC

STV Incorporated
 engineers/architects/scientists/construction managers
 200 W Monroe - Suite 1650
 Chicago, Illinois 60606

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	111
STA. 85+00.00		TO STA. 109+00.00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 62387				



LEGEND:

PROPOSED RAISED REFLECTIVE PAVEMENT MARKERS

WHITE / OPAQUE W/O

YELLOW / YELLOW Y/Y

SODDING, SALT TOLERANT

SEEDING, CLASS 2A

SEEDING, CLASS 4

30' 1010101010'

- NOTES:**
- POLYUREA PAVEMENT MARKINGS SHALL BE USED ON PCC PAVEMENT.
 - THERMOPLASTIC PAVEMENT MARKINGS SHALL BE USED ON ALL BITUMINOUS SURFACES.
 - PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS SHALL BE PER DISTRICT ONE ONE PAVEMENT MARKING AND RAISED PAVEMENT MARKERS DETAIL.
 - NOTIFY MELISSA DEL ROSARIO, ROADSIDE UNIT, 72 HOURS PRIOR TO PLANTING AT (847) 705-4171 FOR LAYOUT.

STV Incorporated
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 Chicago, Illinois 60606

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PAVEMENT MARKING AND LANDSCAPING PLAN - 1

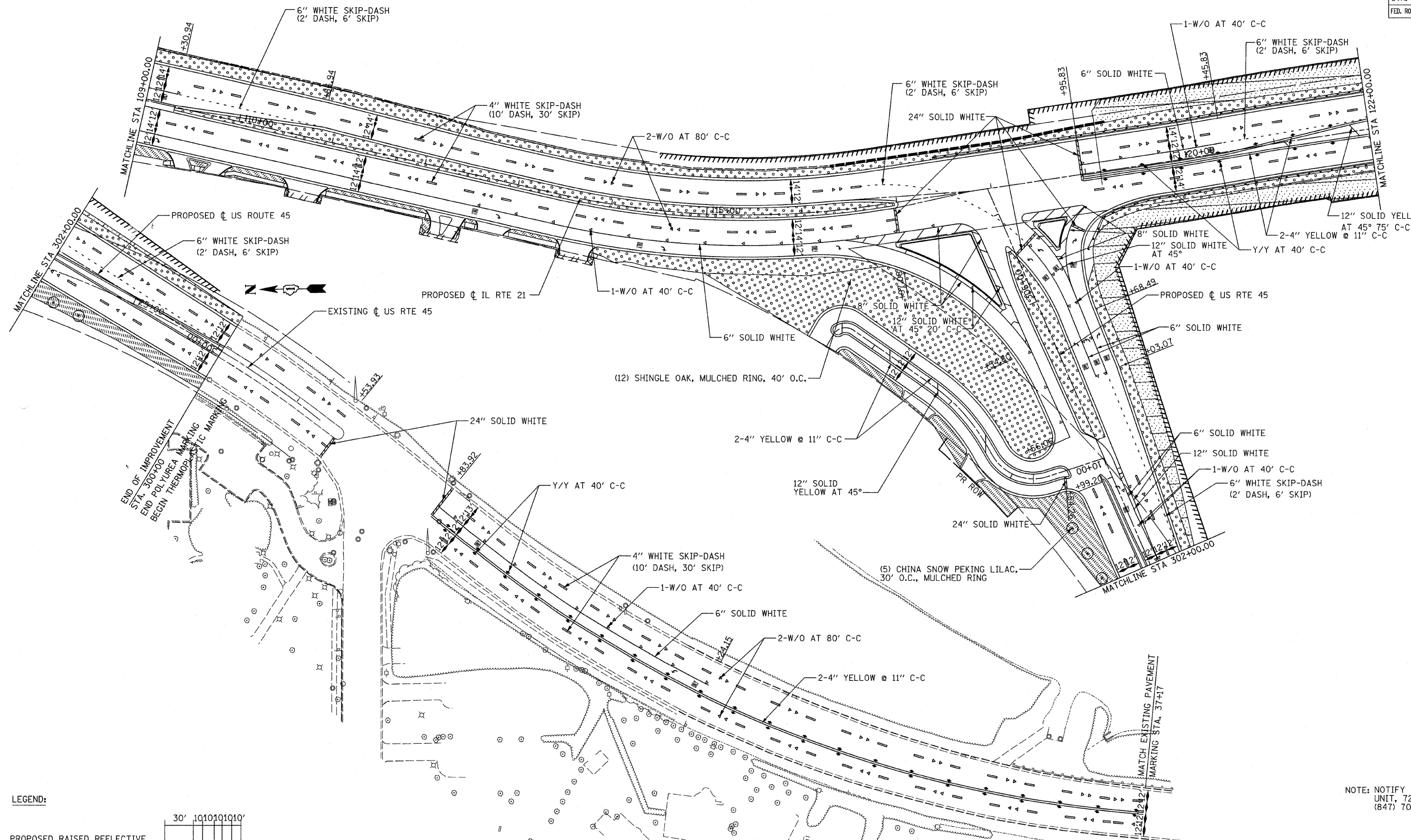
ILLINOIS ROUTE 21
 STA 85+00.00 TO STA 109+00.00

DATE: 02/05/08
 DRAWN BY: RDT
 CHECKED BY: GC

0 50' 100'
 1" = 50'

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	112
STA. 109+00.00		TO STA. 122+00.00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 62387				



LEGEND:

PROPOSED RAISED REFLECTIVE PAVEMENT MARKERS

WHITE / OPAQUE W/O
 YELLOW / YELLOW Y/Y

SODDING, SALT TOLERANT
 SEEDING, CLASS 2A
 SEEDING, CLASS 4

30' 1010101010'

NOTE: NOTIFY MELISSA DEL ROSARIO, ROADSIDE UNIT, 72 HOURS PRIOR TO PLANTING AT (847) 705-4171 FOR LAYOUT.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PAVEMENT MARKING AND LANDSCAPING PLAN - 2

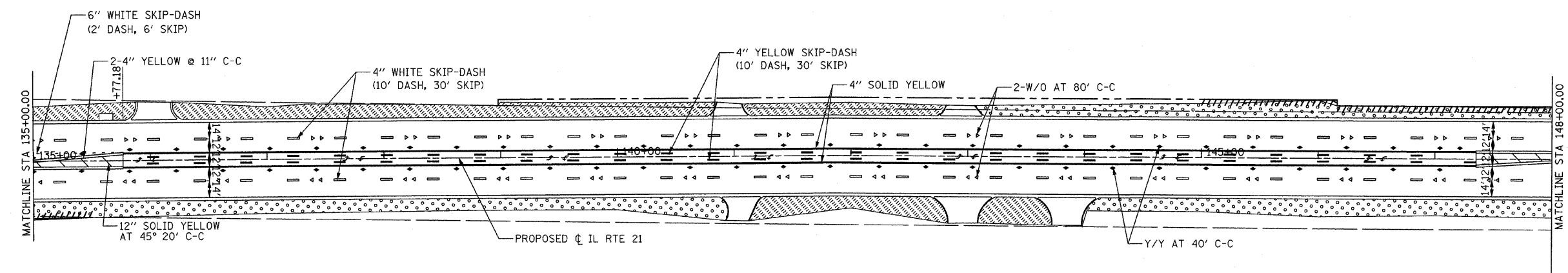
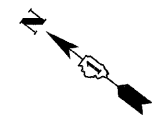
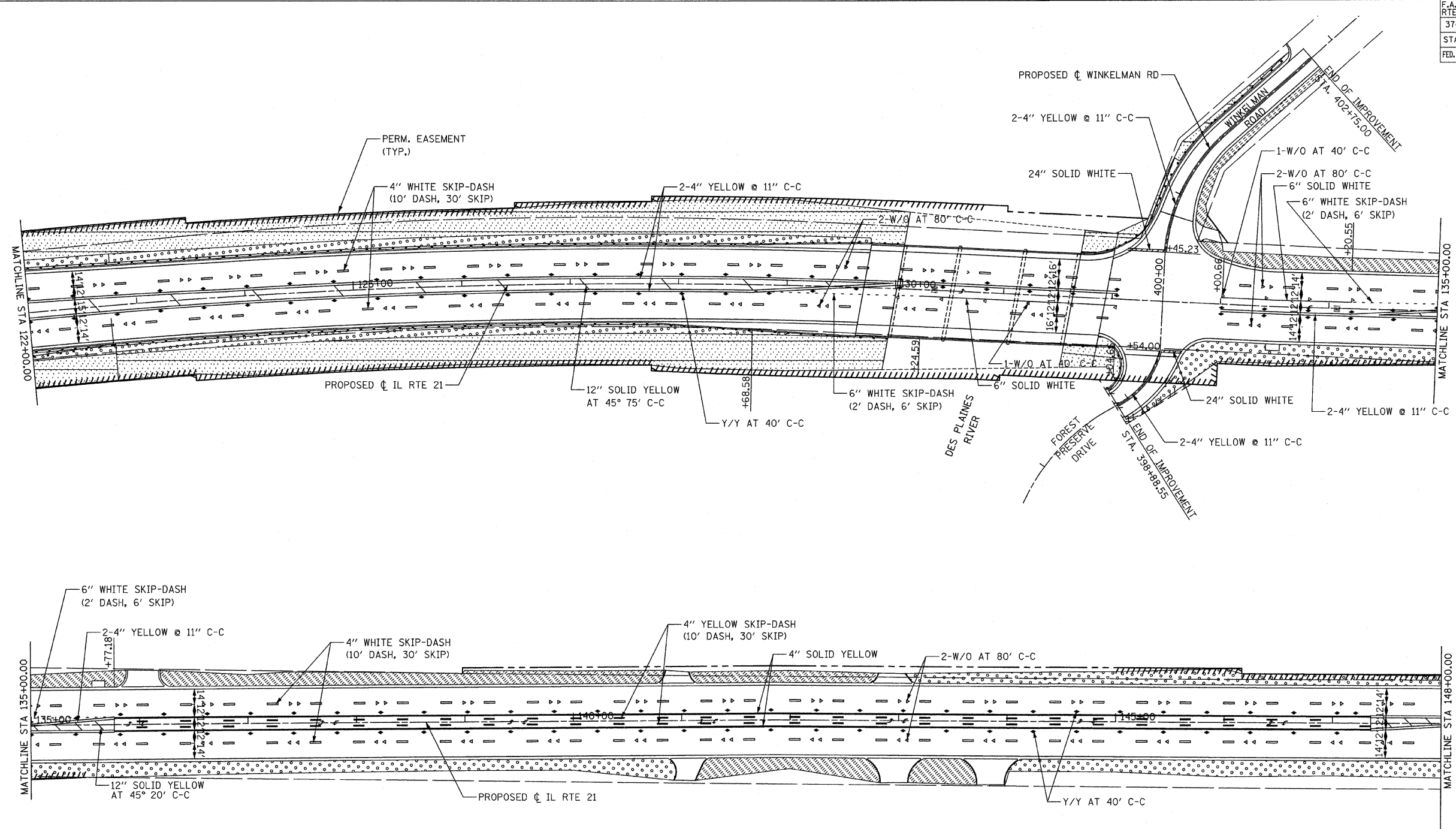
ILLINOIS ROUTE 21
 STA 109+00.00 TO STA 122+00.00

DATE: 02/05/08
 DRAWN BY: RDT
 CHECKED BY: GC

0 50' 100'
 1" = 50'

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 Chicago, Illinois 60606

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	113
STA. 122+00.00		TO STA. 148+00.00		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		CONTRACT NO. 62387	



LEGEND:

- 30' 10' 10' 10' 10' 10'
 - SODDING, SALT TOLERANT
 - SEEDING, CLASS 2A
 - SEEDING, CLASS 4
- WHITE / OPAQUE W/O
 YELLOW / YELLOW Y/Y

REVISIONS	
NAME	DATE

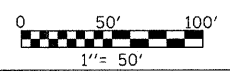
ILLINOIS DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKING AND
 LANDSCAPING PLAN - 3**

ILLINOIS ROUTE 21
 STA 122+00.00 TO STA 148+00.00

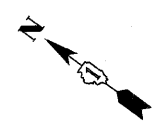
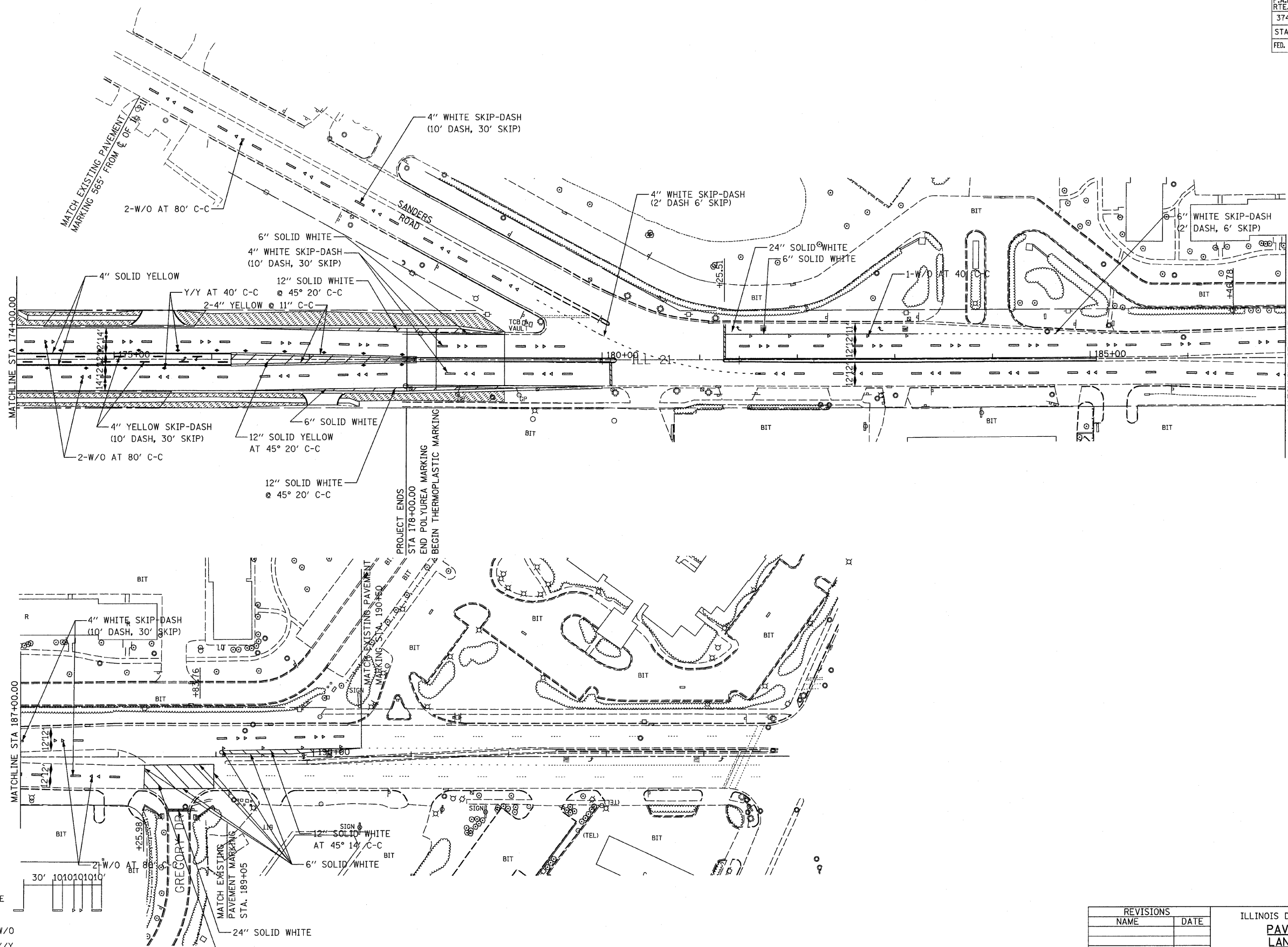
DATE: 02/05/08
 DRAWN BY: RDT
 CHECKED BY: GC

STV Incorporated
engineers/architects/scientists/construction managers

200 W Monroe - Suite 1650
 Chicago, Illinois 60606



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	115
STA. 174+00.00 TO STA. 200+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



LEGEND:
 PROPOSED RAISED REFLECTIVE PAVEMENT MARKERS

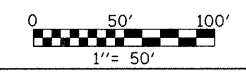
- WHITE / OPAQUE W/O
- YELLOW / YELLOW Y/Y
- SODDING, SALT TOLERANT
- SEEDING, CLASS 2A
- SEEDING, CLASS 4

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PAVEMENT MARKING AND LANDSCAPING PLAN - 5

ILLINOIS ROUTE 21
 STA 174+00.00 TO STA 200+00.00
 DATE: 02/05/08
 DRAWN BY: RDT
 CHECKED BY: GC

STV Incorporated
 engineers/architects/scientists/construction managers
 200 W Monroe - Suite 1650
 Chicago, Illinois 60606



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SCHEDULE OF EXISTING SIGNS

SIGN NO	SIGN INFORMATION	LOCATION		SIGN ASSEMBLY REMOVAL		SIGN PANEL REMOVAL		RELOCATE SIGN PANEL		RELOCATE SIGN PANEL ASSEMBLY		NOTE
				TYPE A	TYPE B	TYPE 1	TYPE 2	TYPE 1	TYPE 2	TYPE A	TYPE B	
		EACH	EACH	AREA SO. FT.	AREA SO. FT.	AREA SO. FT.	AREA SO. FT.	EACH	EACH	EACH	EACH	
1	ILLINOIS 21/NORTH	177+49	31 LT							1		
2	SPEED LIMIT	175+90	31 LT							1		
3	NO PARKING ALONG HIGHWAY	174+84	34 LT							1		
4	NO PARKING ALONG HIGHWAY	174+30	36 LT							1		
5	SPEED LIMIT/NO PARKING ALONG HIGHWAY	175+55	37 RT								1	REMOVE SPEED LIMIT SIGN/RELOCATE NO PARKING SIGN
6	NO PARKING ALONG HIGHWAY	172+65	32 LT			4.0						
7	RED'S AUTHORIZED VEHICLES ONLY	170+61	41 LT							1		RED'S APPROVAL REQUIRED
8	NO LEFT TURN	169+47	57 LT							1		
9	STOP	169+32	43 LT							1		
10	NO LEFT TURN	169+14	57 LT							1		
11	MEDIAN ARROWS YELLOW NO PARKING ALONG HIGHWAY	168+61	36 RT	1								
12	NO PARKING	169+51	34 RT							1		
13	NO LEFT TURN	167+02	64 RT	1								
14	NO PARKING	170+73	33 RT			4.0						
15	NO THOROUGH-FARE	165+66	46 LT									REMAIN IN PLACE
16	STOP	165+72	58.00 RT							1		
17	CEMETERY ENTRANCE	162+33.31	21.07 LT							1		
18	WILDLIFE VIEWING INFO	158+30	24 LT								1	
19	CEMETERY ENTRANCE	156+60	36 RT							1		
20	NORTHFIELD OAKWOOD CEMETERY	158+20	50 RT									REMAIN IN PLACE
21	RIGHT TURN ONLY	152+38	42 LT	1								
22	STOP	153+75	67 RT							1		
23	RIVER TRAIL NATURE CENTER	153+19	56 RT									REMAIN IN PLACE
24	STOP	151+21	62 LT							1		
25	SPEED LIMIT	147+83	34 LT							1		
26	SPEED LIMIT	147+71	42 RT							1		
27	PREISER ANIMAL HOSPITAL	141+95	47 LT									RELOCATE BY OTHERS
28	EXIT ONLY	143+12	50 LT	1								
29	ENTRANCE ONLY	143+69	51 RT	1								
31	INTERSECTION WINKELMAN ROAD	139+20	30 LT		1							
32	PACE BUS STOP	135+56	39 LT							1		PACE BUS AUTHORITY APPROVAL FOR NEW LOCATION REQUIRED
33	SPEED LIMIT	134+44	37 LT							1		
34	STOP	132+21	50 LT							1		
35	DES PLAINES RIVER/WATER TRAIL	131+42	35 LT								1	
36	DES PLAINES RIVER/WATER TRAIL	129+74	34 RT								1	
37	SPEED LIMIT	128+78	39 LT							1		
38	WILDLIFE VIEWING INFO	132+03	22 RT								1	
39	STOP	399+56	32 RT							1		
40	ALLISON WOODS	132+89	31 RT								1	
41	PACE BUS STOP	133+57	27 RT							1		PACE BUS AUTHORITY APPROVAL FOR NEW LOCATION REQUIRED
42	SPEED LIMIT	134+41	29 RT							1		
43	HILTON	131+78	58 LT									RELOCATE BY OTHERS
44	ROUTE 45/JCT/DES PLAINES RIVER ROAD	124+20	38 LT								1	
45	ROAD TURNS RIGHT	123+19	37 LT							1		
46	DOUBLE RIGHT ARROWS ONLY	121+42	36 LT	1								
47	TRAFFIC SIGNAL SIGN	119+32	39 LT			6.25						SIGN LOCATED ON THE TRAFFIC SIGNAL POST TRAFFIC SIGNAL POST AND HEAD WILL BE SEPARATE QUANTITY
48	WINKELMAN ROAD INTERSECTION SIGN	121+88	24 RT		1							
49	SPEED LIMIT	120+15	30 RT							1		
50	DOUBLE RIGHT ARROWS ONLY	117+11	36 LT							1		
51	SOUTH/ILLINOIS 21/WEIGHT LIMIT 20 TONS/ 2 1/2 MILES	116+97	32 RT								1	
52	FOREST PRESERVE RIVER TRAIL NATURE CENTER	116+79	57 RT								1	

SIGN NO	SIGN INFORMATION	LOCATION		SIGN ASSEMBLY REMOVAL		SIGN PANEL REMOVAL		RELOCATE SIGN PANEL		RELOCATE SIGN PANEL ASSEMBLY		NOTE
				TYPE A	TYPE B	TYPE 1	TYPE 2	TYPE 1	TYPE 2	TYPE A	TYPE B	
		EACH	EACH	AREA SO. FT.	AREA SO. FT.	AREA SO. FT.	AREA SO. FT.	EACH	EACH	EACH	EACH	
53	NO RIGHT TURN	116+15	37 RT	1								
54	NO LEFT TURN	115+48	47 RT			6.25						
55	SPEED LIMIT	115+54	91 RT								1	
56	DOUBLE RIGHT ARROWS ONLY	115+93	36 LT			6.25						
57	STOP HERE ON RED/ NO TURN ON RED	115+62	37 LT			12.5						2 PANELS
58	DOUBLE RIGHT ARROWS ONLY/NO LEFT TURN	115+64	2 LT		1							
59	NO LEFT TURN	114+61	36 LT			4.00						
60	NORTH/ROUTE 45/ ILLINOIS 21	113+48.17	37.21 LT								1	
61	SPEED LIMIT	109+70	39 LT					5.0				
62	ILLINOIS TOLLWAY DIRECTION	107+92	43 LT					5.0				
63	PACE BUS STOP	107+14	41 LT								1	PACE BUS AUTHORITY APPROVAL FOR NEW LOCATION REQUIRED
64	NO LEFT TURN	162+03	48 RT								1	
65	LEFT TURN AND "U" TURN	107+40	4 RT								1	
66	"U" TURN PERMITTED ON LEFT ARROW ONLY/MEDIAN AND ARROW	106+19	1 LT					9.5				2 PANELS
67	LEFT ARROW ONLY/ NO "U" TURN	103+97	1 LT								1	
68	MEDIAN AND ARROW	103+95	1 LT								1	
69	NO "U" TURN	106+17	0 LT					4.0				
70	OVERHEAD SIGN STRUCTURE IL-21/ROUTE	108+31	50 RT									REMAIN IN PLACE
71	SPEED LIMIT	104+39	51 RT									REMAIN IN PLACE
72	RED'S	105+33	53 RT									RED'S APPROVAL REQUIRED
73	PACE BUS STOP	106+13	49 RT								1	PACE BUS AUTHORITY APPROVAL FOR NEW LOCATION REQUIRED
76	NO TURN ON RED	107+11	54 RT								1	
77	DO NOT ENTER	107+11	54 RT			5.00						
78	TRUCK/DETOUR/SOUTH/IL-21/ RIGHT TURN ARROW	107+87	54 RT			15.00						5 PANELS
79	MEDIAN AND ARROW	107+40	4 RT								1	
80	STOP	109+89	68 RT								1	
81	WINGATE INN	109+87	79 RT									REMAIN IN PLACE
82	NO LEFT TURN	109+90	64 RT	1								
83	DO NOT ENTER	110+60	76 RT									REMAIN IN PLACE
84	RED'S	111+53	52 RT								1	RED'S APPROVAL REQUIRED
85	TRIPLE TRAFFIC DIRECTION ARROWS ONLY	112+33	58 RT								1	
86	TRUCK/DETOUR/SOUTH/IL-21/ ARROW	113+51	62 RT			15.00						5 PANELS
87	RIGHT TURN ARROW ONLY	113+88	59 RT			5.00						
88	SOUTH/ROUTE 45/ARROW	114+69	61 RT			10.00						3 PANELS
89	SPEED LIMIT	302+81	81 LT								1	
90	TRAFFIC SIGNAL AND OLD WILLOW RD/SEMINOLE LN	301+00	46 LT								1	
91	JCT/ILLINOIS 21/MILWAUKEE AVE	303+27.73	40.00 RT			7.25						
92	RADISSON EXIT	135+83	45 LT									RELOCATE BY OTHERS
93	RADISSON ENTRANCE	136+23	45 LT									RELOCATE BY OTHERS
94	APPLE DR./MILWAUKEE AVE.	106+39	63 RT								1	
		147+92	33 LT	1								TWO SIGN POSTS PAID AS SIGN ASSEMBLY REMOVAL
100	NO LEFT TURN/KEEP RIGHT	180+00	0 RT								1	
101	NO LEFT TURN/KEEP RIGHT	181+41	0 RT								1	

TOTALS= 9 3 92.50 0.00 31.50 0.00 39 14
EACH EACH SQ. FT. SQ. FT. SQ. FT. SQ. FT. EACH EACH

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF SIGNS - 1
SCALE: NTS
DATE 02/05/08
DRAWN BY RDT
CHECKED BY MK

SCHEDULE OF PROPOSED SIGNS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	117
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

CONTRACT NO. 62387

SIGN NO	SIGN INFORMATION	LOCATION	MUTCD CODE	SIGN PANEL				METAL POST		NOTE
				TYPE 1		TYPE 2		TYPE A	TYPE B	
				EACH	AREA SQ FT	EACH	AREA SQ FT	LENGTH FOOT	LENGTH FOOT	
1	NORTH ILLINOIS 21	175+90	37 LT							RELOCATE
2	SPEED LIMIT 45	173+39	38 LT							RELOCATE
3	NO PARKING ALONG HIGHWAY	174+19	38 LT							RELOCATE
4	NO PARKING ALONG HIGHWAY	174+88	38 LT							RELOCATE
5	SPEED LIMIT 35 NO PARKING ALONG HIGHWAY	175+55	37 RT							RELOCATE
6	NO PARKING ALONG HIGHWAY	172+86	37 LT					14		RELOCATE SIGN PANEL WITH NEW POLE
7	RED'S	169+93	48 LT							RELOCATE
8	STOP TURN PROHIBITION	169+03	44 LT							RELOCATE
9	STOP	171+82	47 RT							RELOCATE
10	TURN PROHIBITION	169+46	40 LT							RELOCATE
11	TURN PROHIBITION	157+64	40 RT	R3-2	1	4.0		14		
12	NO PARKING ALONG HIGHWAY	169+34	40 RT							RELOCATE
13	STOP	172+02	47 LT	R1-1						
14	NO PARKING ALONG HIGHWAY	170+70	37 RT					14		RELOCATE SIGN PANEL WITH NEW POLE
15	NO THOROUGHFARE	165+66	46 LT	N/A						EXISTING TO REMAIN
15A	STOP	165+23	45 LT	R1-1	1	6.3				
16	STOP	165+73	47 RT							RELOCATE
17	CEMETERY ENTRANCE	163+50	36 LT							RELOCATE
18	BINOCULARS INFORMATION SIGN DIRECTIONAL ARROW	158+24	39 LT							RELOCATE
19	CEMETERY ENTRANCE	154+60	40 RT							RELOCATE
20	NORTHFIELD OAKWOOD CEMETERY	158+20	50 RT							EXISTING TO REMAIN
21	STOP	142+73	40 LT	R1-1	1	6.3				
22	STOP	153+85	52 RT							RELOCATE
23	RIVER TRAIL NATURE CENTER	153+19	56 RT							EXISTING TO REMAIN
24	STOP	151+21	62 LT							RELOCATE
25	SPEED LIMIT 45	147+82	40 LT							RELOCATE
26	SPEED LIMIT 45	147+70	40 RT							RELOCATE
28	TURN PROHIBITION	142+58	40 RT	R3-1	1	6.3				
28A	ONE WAY ARROW	142+68	40 RT	R6-1	1	3.0		14		
28B	DO NOT ENTER	143+25	40 RT	R5-1	1	6.3		14		
29	STOP	143+25	40 RT	R1-1	1	6.3		14		
29	WRONG WAY DO NOT ENTER	144+03	57 RT	R5-1a	1	6.0				
29A	ONE WAY ARROW	143+66	57 RT	R6-1	1	3.0		14		
29B	ONE WAY ARROW	143+64	57 RT	R6-1	1	3.0		14		
30	STOP	135+82	43 LT							RELOCATE
31	4 WAY INTERSECTION STREET NAME PLAQUE	139+20	40 LT	W2-1	1	6.3		14		
32	PACE BUS STOP 272	135+55	39 LT	W16-8A	1	3.0				RELOCATE
33	SPEED LIMIT 40	134+44	40 LT							RELOCATE
34	STOP	132+07	46 LT							RELOCATE
34A	STOP AHEAD	401+14	19 LT	W3-1A	1	9.0		14		
35	RIVER INFORMATION	131+73	39 LT							RELOCATE
36	WATER TRAIL INFORMATION	130+00	41 RT							RELOCATE
37	WATER TRAIL INFORMATION	130+00	41 RT							RELOCATE
37	SPEED LIMIT 40	128+80	40 LT							RELOCATE
38	BINOCULARS INFORMATION SIGN DIRECTIONAL ARROW	148+56	39 RT							RELOCATE
39	STOP	132+76	46 RT							RELOCATE
40	ALLISON WOODS	132+92	50 RT							RELOCATE
41	PACE BUS STOP 272	133+57	40 RT							RELOCATE
42	SPEED LIMIT 45	134+44	40 RT							RELOCATE
44	JUNCTION ROUTE INFORMATION STREET NAME PLAQUE	124+20	40 LT							RELOCATE
44A	SIGNAL WARNING STREET NAME PLAQUE	126+50	41 LT	R6-1	1	9.0		14		
45	ROAD CURVES RIGHT	123+18	41 LT	D1-2	1	5.0				RELOCATE
45A	ADVANCE LANE INTERSECTION CONTROL	122+05	43 LT	R3-8B (MODIFIED)			1	18.8		14
46	NO TURN ON RED	118+96	44 LT	R10-11B	1	4.0		14		
47	NO TURN ON RED	119+07	54 RT	R10-11B	1	4.0		14		
48	4 WAY INTERSECTION STREET NAME PLAQUE	127+00	40 RT	W2-1	1	6.3				
49	SPEED LIMIT 40	121+02	40 RT	W16-8A	1	3.0		14		
50	KEEP RIGHT	116+94	2 RT	R4-7	1	6.3		14		RELOCATE
51	SOUTH ILLINOIS 21 WEIGHT LIMIT DISTANCE	120+00	39 RT							RELOCATE
52	FOREST PRESERVE RIVER TRAIL	305+28	97 RT							RELOCATE
53	TURN PROHIBITION	117+52	49 RT	R3-1	1	6.3				
54	ADDED LANE	305+23	38 LT	W4-3	1	9.0		14		
55	SPEED LIMIT 40	EX US 45								RELOCATE
56	DRIVEWAY 100 FT	304+53	49 LT	SPECIAL	1	9.0		14		
57	STOP TURN PROHIBITION	303+00	53 LT	R1-1	1	6.3				
				R3-2	1	4.0		14		

SIGN NO	SIGN INFORMATION	LOCATION	MUTCD CODE	SIGN PANEL				METAL POST		NOTE
				TYPE 1		TYPE 2		TYPE A	TYPE B	
				EACH	AREA SQ FT	EACH	AREA SQ FT	LENGTH FOOT	LENGTH FOOT	
58	STOP	111+09	49 RT	R1-1	1	6.3		14		
59	STOP	112+56	49 RT	R1-1	1	6.3		14		
60	DIRECTION SIGN ROUTE INFORMATION ROUTE INFORMATION	113+43	44 LT							RELOCATE
61	SPEED LIMIT 35	109+66	47 LT					14		RELOCATE
62	ILLINOIS TOLLWAY DIRECTIONAL	107+91	47 LT					14		RELOCATE
63	PACE BUS STOP 272	107+39	47 LT							RELOCATE
64	TURN PROHIBITION	161+74	45 RT							RELOCATE
64A	STOP	162+10	47 RT	R1-1	1	6.3				
65	LEFT TURN ONLY	107+40	5 RT	R3-2	1	4.0			14	
66	KEEP RIGHT	106+26	2 RT						14	RELOCATE WITH SIGN PANEL 69 WITH NEW POLE
67	LEFT TURN ONLY NO "U" TURN	103+78	1 LT							RELOCATE WITH SIGN 68
68	KEEP RIGHT	103+78	1 LT							RELOCATE WITH SIGN 67
69	NO "U" TURN	106+26	2 RT							
70	OVERHEAD SIGN	108+31	50 RT							EXISTING TO REMAIN
71	SPEED LIMIT 35	104+39	51 RT							EXISTING TO REMAIN
72	RED'S	105+33	53 RT							EXISTING TO REMAIN
73	PACE BUS STOP 272	105+62	50 RT							RELOCATE
74	KEEP RIGHT	EX US 45			1	6.3		14		
75	STOP	113+06	49 RT	R1-1						
76	NO TURN ON RED	107+11	54 RT							RELOCATE
77	STOP	113+97	52 RT	R1-1	1	6.3		14		
78	TRUCK DETOUR DIRECTION ROUTE INFORMATION DIRECTIONAL ARROW	108+05	51 RT						14	RELOCATE SIGN PANELS WITH NEW POLE
79	KEEP RIGHT	107+40	4 RT							EXISTING TO REMAIN
80	STOP	110+04	51 RT							RELOCATE
81	SIGNAL AHEAD STREET NAME PLAQUE	EX US 45		W3-3	1	9.0			14	
				W16-8	1	3.8				
82	RIGHT TURN LANE	107+57	52 RT	SPECIAL	1	7.5		14		
83	DO NOT ENTER	110+60	76 RT							EXISTING TO REMAIN
85	ADVANCE LANE INTERSECTION CONTROL	300+00	36 RT							RELOCATE
86	TRUCK DETOUR DIRECTION ROUTE INFORMATION DIRECTIONAL ARROW	113+33	49 RT						14	RELOCATE SIGN PANELS WITH NEW POLE
87	RIGHT TURN ONLY	115+23	50 RT					14		RELOCATE
88	DIRECTION ROUTE INFORMATION DIRECTIONAL ARROW	116+25	54 RT	M3-3	1	2.0			14	RELOCATE US 45 SIGN PANEL ASSEMBLY AND ADD IL 21 SIGN PANEL WITH NEW POLE
				M1-4	1	4.0				
				M6-3	1	2.2				
89	SPEED LIMIT 40	302+07	44 LT							RELOCATE
90	SIGNAL AHEAD STREET NAME PLAQUE	302+56	43 LT							RELOCATE
91	DIRECTION STREET NAME PLAQUE ROUTE INFORMATION	EX US 45						14		RELOCATE SIGN PANEL WITH NEW POLE
94	APPLE DR. MILWAUKEE AVE.	106+39	63 RT							RELOCATE
95	RIGHT TURN ONLY	108+82	52 RT	R3-5R	1	7.0		14		
96	SPEED LIMIT 40	EX US 45		R2-1	1	5.0		14		
				M4-5	1	2.2				
97	INTERSTATE ROUTE DIRECTIONAL ARROW	102+96	53 LT	M1-1	1	5.0				
				M6-1	1	2.2		14		
98	DIRECTION ROUTE INFORMATION	EX US 45		M3-1	1	2.0			14	
				M1-4	1	4.0				
99	DIRECTION ROUTE INFORMATION DIRECTIONAL ARROW	111+55	49 RT	M3-3	1	2.0			14	
				M1-4	1	4.0				
				M6-3	1	2.2				
				M3-3	1	2.0				
				M1-4	1	4.0				
				M5-2	1	2.2				
100	TURN PROHIBITION KEEP RIGHT	180+00	0 RT							RELOCATE
101	TURN PROHIBITION KEEP RIGHT	181+41	0 RT							RELOCATE
102	LEFT TURN LANE	110+87	10 LT	SPECIAL	1	6.0		14		

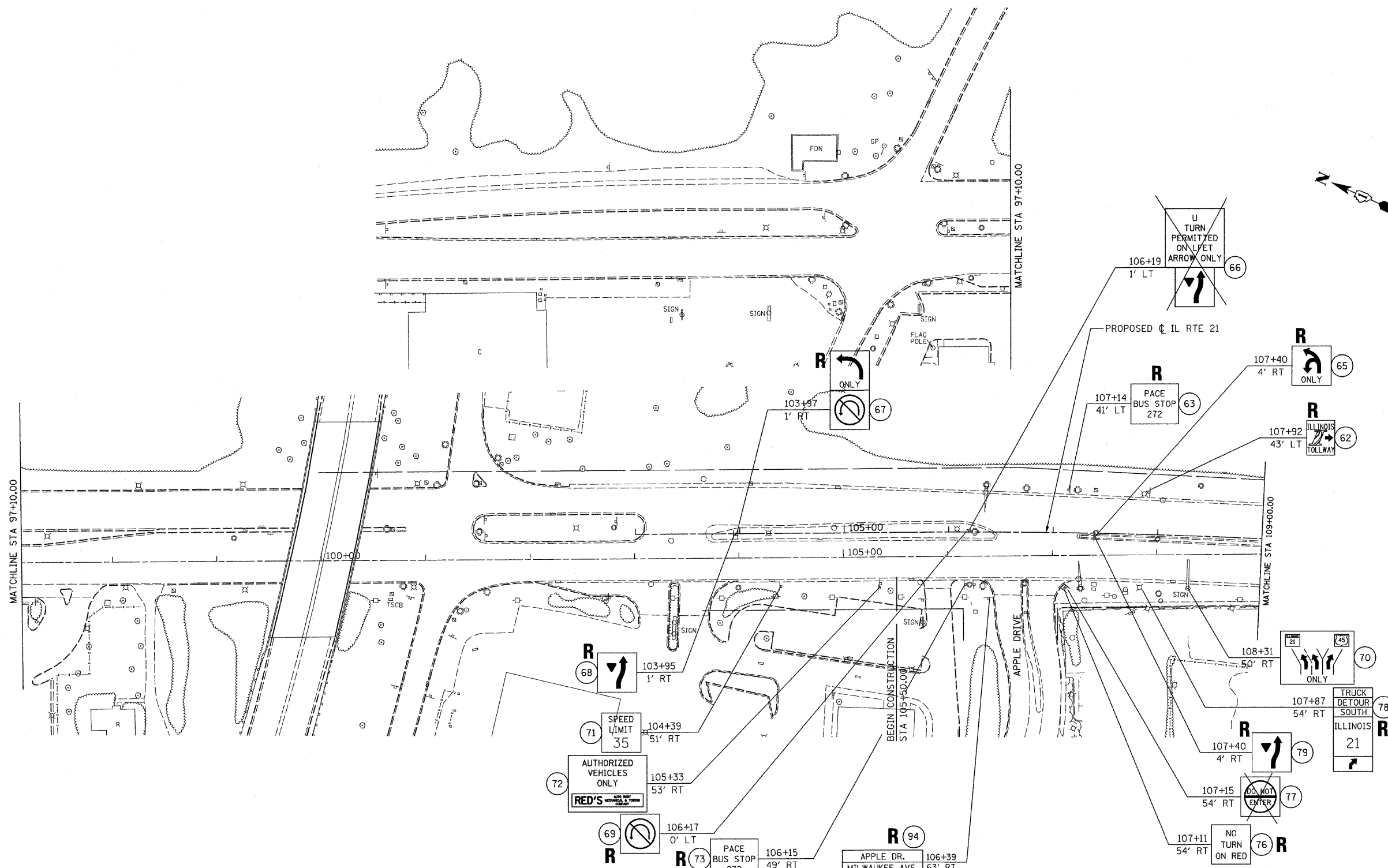
TOTALS= 260.4 SQ FT 18.8 SQ FT 378.0 FEET 196.0 FEET

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF SIGNS - 2
 SCALE: NTS
 DATE 02/05/08
 DRAWN BY RDT
 CHECKED BY MK

STV Incorporated
 engineers/architects/scientists/construction managers
 200 W Monroe - Suite 1650
 Chicago, Illinois 60606

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	118
STA. 85+00.00		TO STA. 109+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		CONTRACT NO. 62387



LEGEND

- 1 - SIGNS TO BE REMOVED
- 2 - SIGNS TO REMAIN
- 3 - SIGNS TO BE RELOCATED

REVISIONS	
NAME	DATE

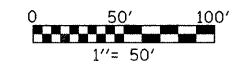
**ILLINOIS DEPARTMENT OF TRANSPORTATION
EXISTING SIGNING PLAN - 1**

ILLINOIS ROUTE 21
STA 85+00.00 TO STA 109+00.00

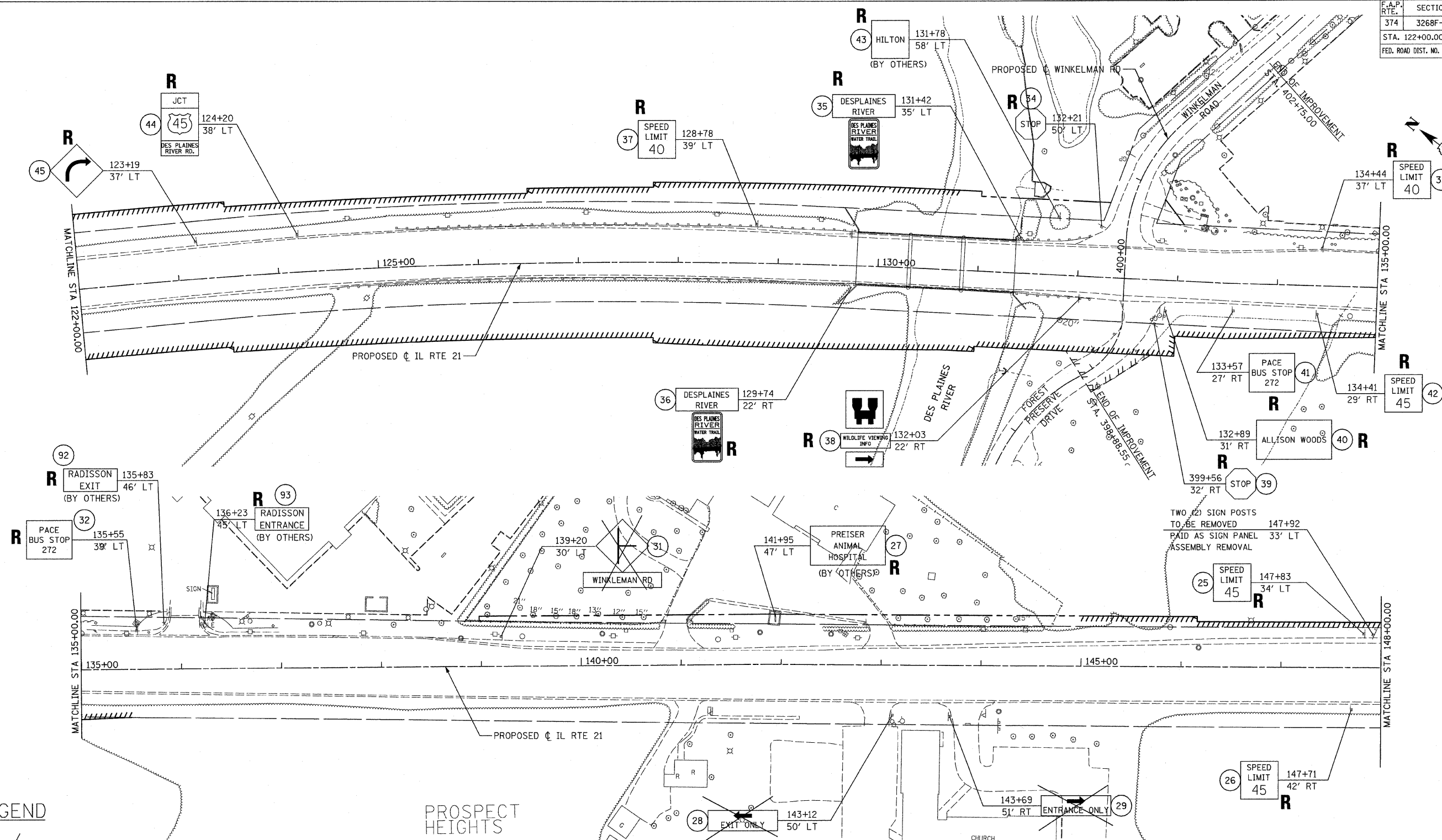
DATE: 02/05/08
DRAWN BY: RDT
CHECKED BY: MK

STV Incorporated
engineers/architects/scientists/construction managers

200 W Monroe - Suite 1650
Chicago, Illinois 60606



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	120
STA. 122+00.00 TO STA. 148+00.00				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT CONTRACT NO. 62387				



LEGEND

- 1 - SIGNS TO BE REMOVED
- 2 - SIGNS TO REMAIN
- 3 - SIGNS TO BE RELOCATED

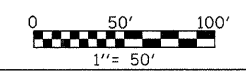
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EXISTING SIGNING PLAN - 3

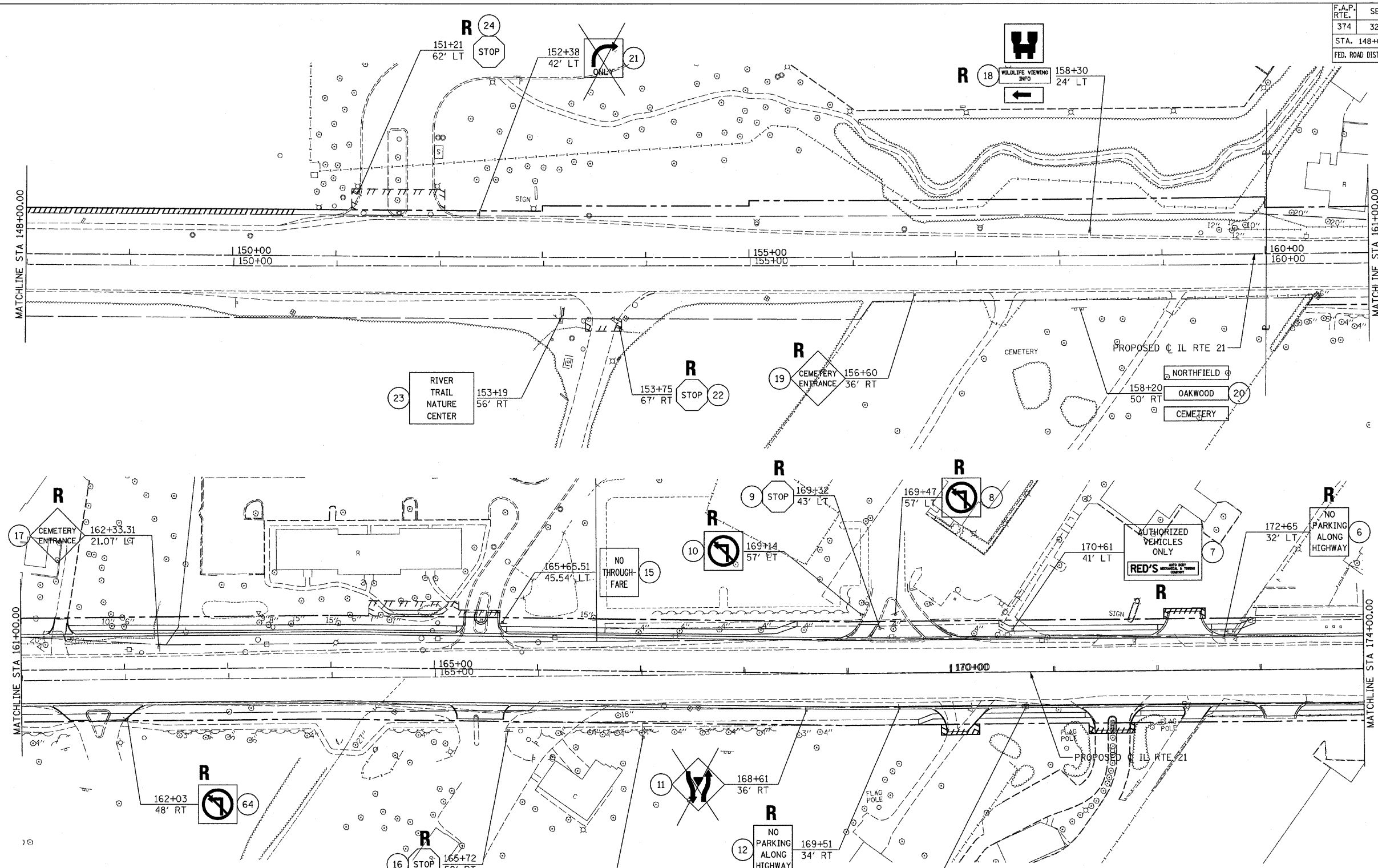
ILLINOIS ROUTE 21
STA 122+00.00 TO STA 148+00.00

DATE: 02/05/08
DRAWN BY: RDT
CHECKED BY: MK

STV Incorporated
engineers/architects/scientists/construction managers
200 W Monroe - Suite 1650
Chicago, Illinois 60606



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	121
STA. 148+00.00		TO STA. 174+00.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 62387				



LEGEND

- 1 - SIGNS TO BE REMOVED
- 2 - SIGNS TO REMAIN
- 3 - SIGNS TO BE RELOCATED

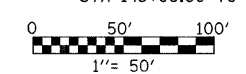
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EXISTING SIGNING PLAN - 4

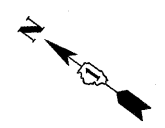
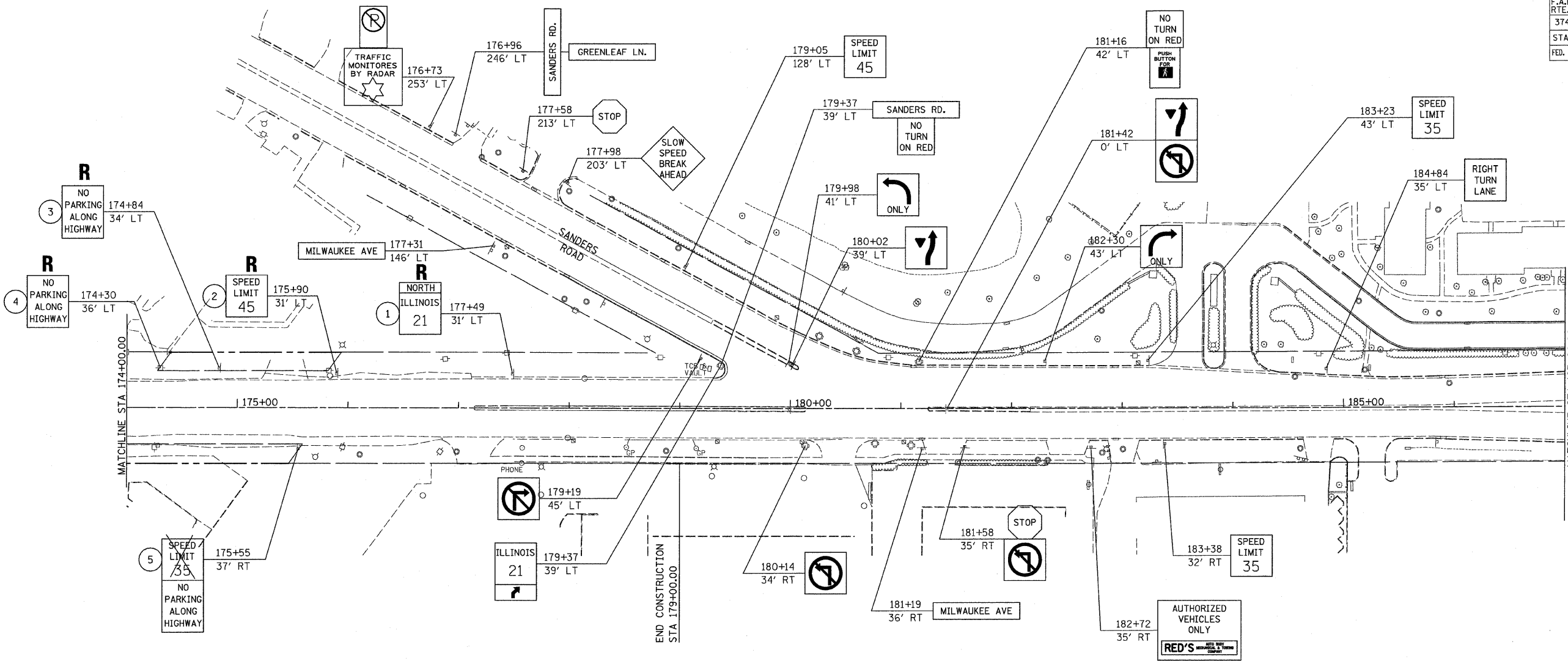
ILLINOIS ROUTE 21
STA 148+00.00 TO STA 174+00.00

DATE: 02/05/08
DRAWN BY: RDT
CHECKED BY: MK

STV Incorporated
engineers/architects/scientists/construction managers
200 W Monroe - Suite 1650
Chicago, Illinois 60606



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	122
STA. 174+00.00		TO STA. 187+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62387				



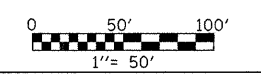
LEGEND

- 1 - SIGNS TO BE REMOVED
- 2 - SIGNS TO REMAIN
- 3 **R** - SIGNS TO BE RELOCATED

REVISIONS	
NAME	DATE

**ILLINOIS DEPARTMENT OF TRANSPORTATION
EXISTING SIGNING PLAN - 5**

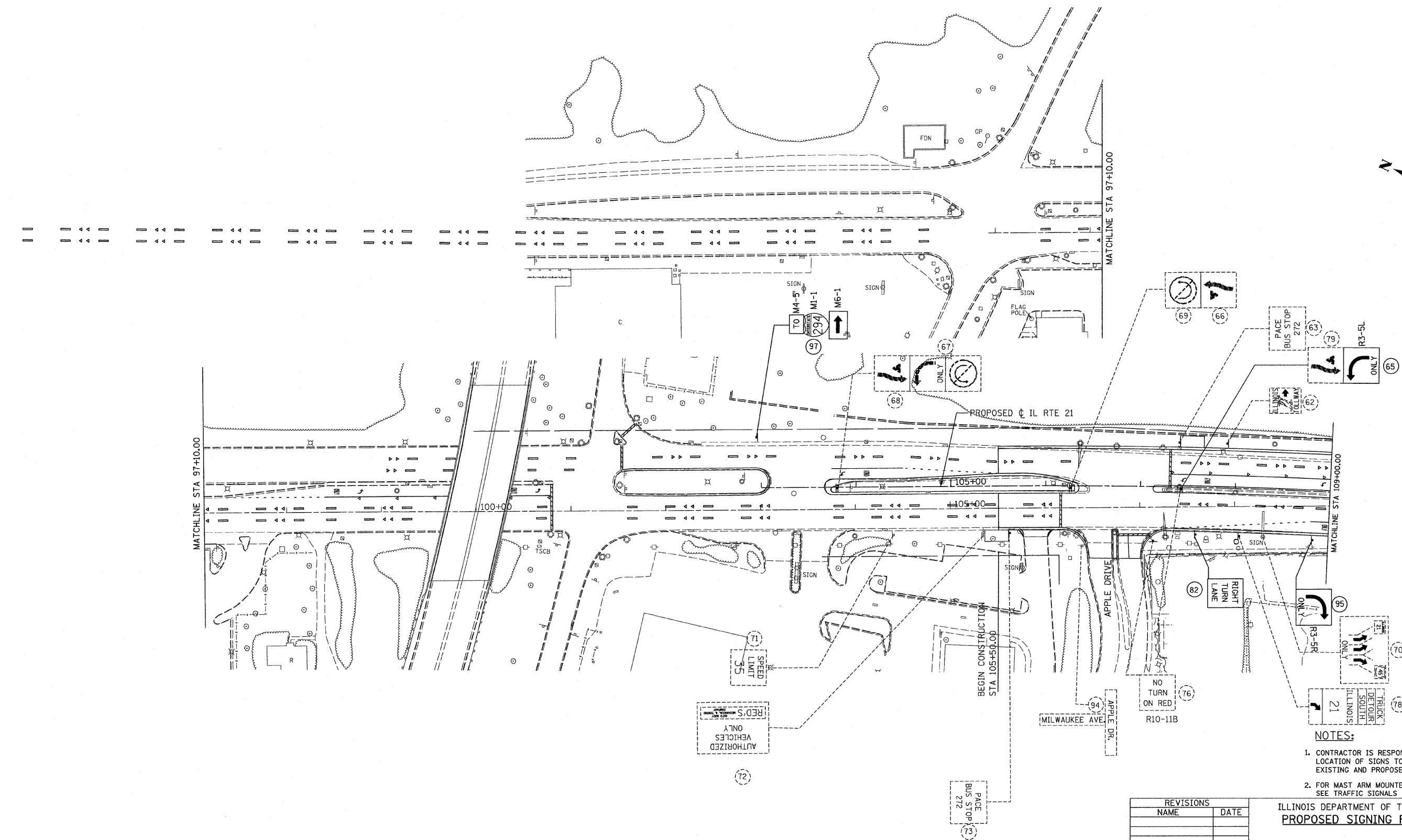
ILLINOIS ROUTE 21
STA 174+00.00 TO STA 187+00.00
DATE: 02/05/08
DRAWN BY: RDT
CHECKED BY: MK



STV Incorporated
engineers/architects/scientists/construction managers
200 W Monroe - Suite 1650
Chicago, Illinois 60606

DATE PLOTTED: 02/05/08 10:58 AM

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	123
STA. 85+00.00		TO STA. 109+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62387				



- NOTES:**
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATION OF SIGNS TO AVOID CONFLICTS WITH EXISTING AND PROPOSED UTILITIES.
 - FOR MAST ARM MOUNTED SIGNS SEE TRAFFIC SIGNALS PLAN.

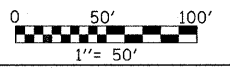
ILLINOIS DEPARTMENT OF TRANSPORTATION
PROPOSED SIGNING PLAN - 1

ILLINOIS ROUTE 21
STA 85+00.00 TO STA 109+00.00

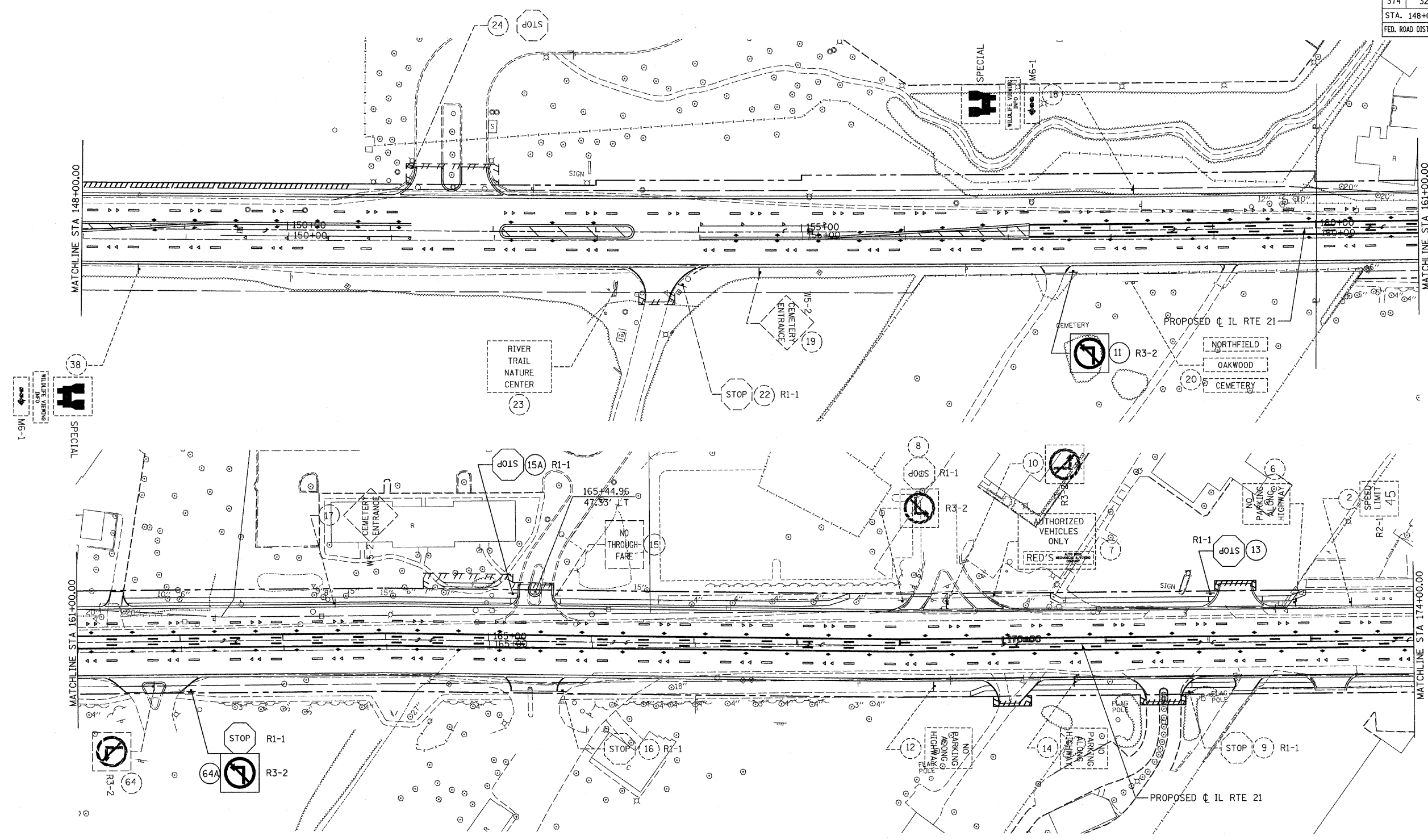
DATE: 02/05/08
DRAWN BY: RDT
CHECKED BY: MK

REVISIONS	
NAME	DATE

STV Incorporated
engineers/architects/scientists/construction managers
200 W Monroe - Suite 1650
Chicago, Illinois 60606



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	126
STA. 148+00.00		TO STA. 174+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62387				



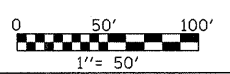
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PROPOSED SIGNING PLAN - 4

ILLINOIS ROUTE 21
 STA 148+00.00 TO STA 174+00.00

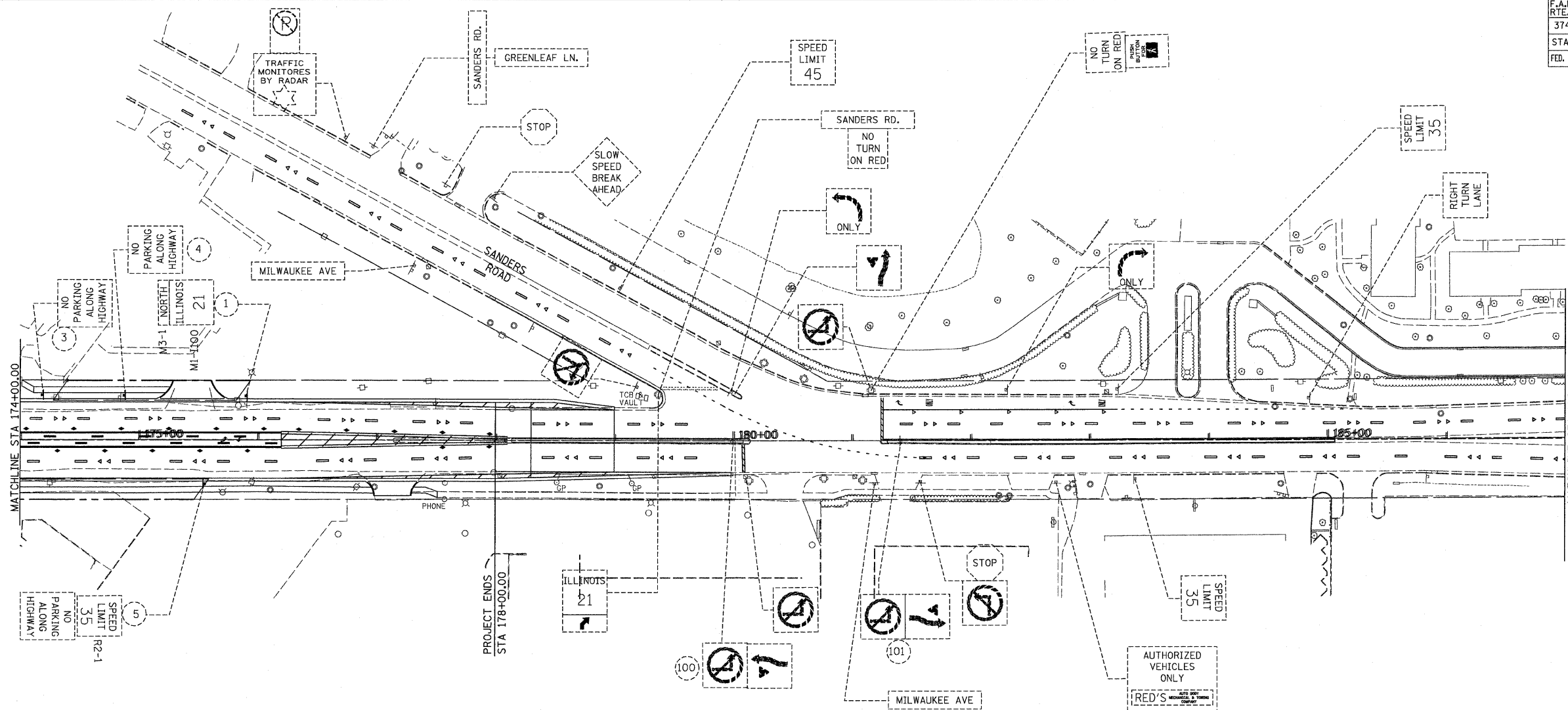
DATE: 02/05/08
 DRAWN BY: RDT
 CHECKED BY: MK

STV Incorporated
 engineers/architects/scientists/construction managers
 200 W Monroe - Suite 1650
 Chicago, Illinois 60606



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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	127
STA. 174+00.00		TO STA. 187+00.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 62387				

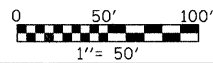


REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PROPOSED SIGNING PLAN - 5

ILLINOIS ROUTE 21
 STA 174+00.00 TO STA 187+00.00

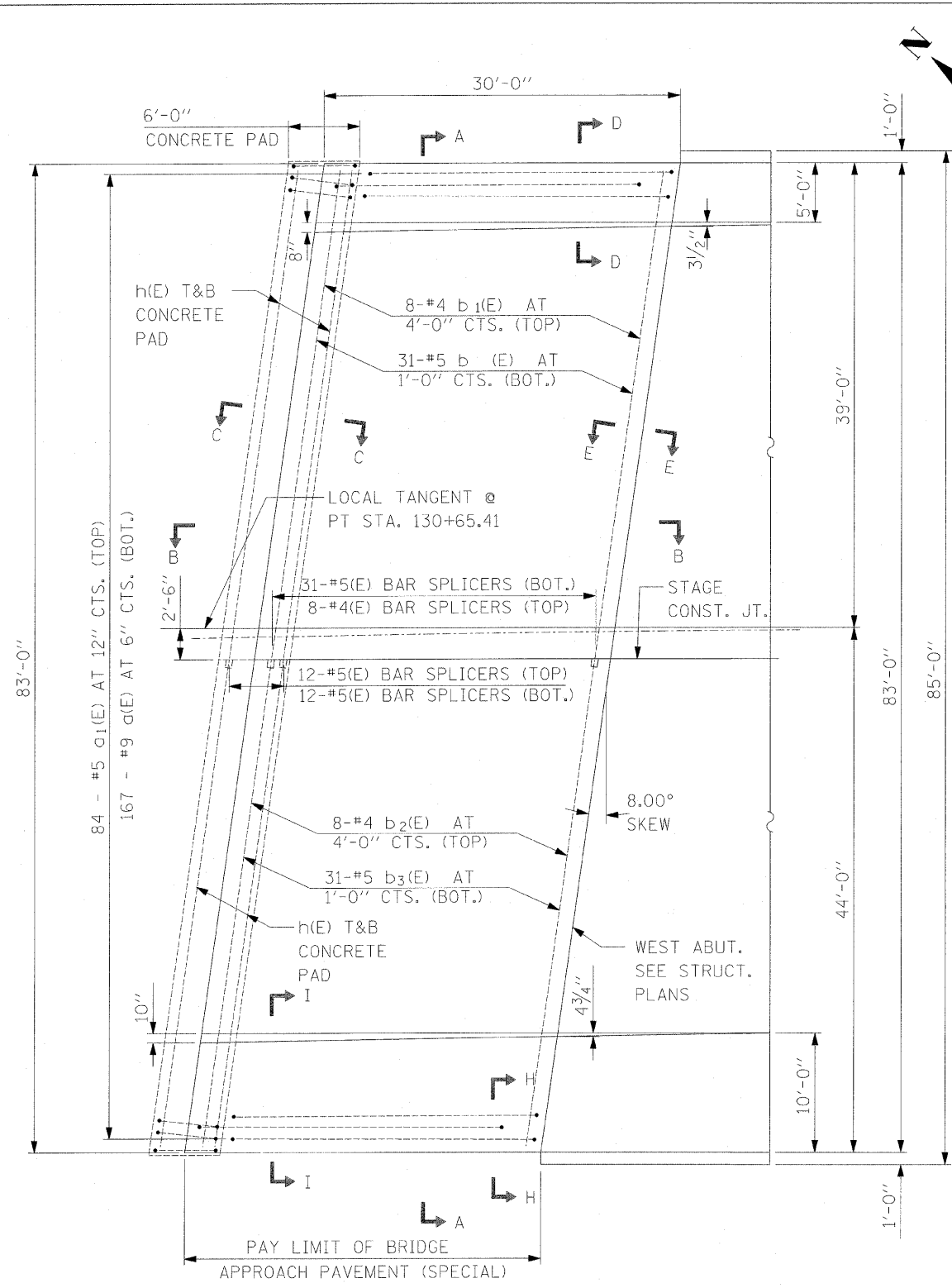
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 DRAWN BY: RDT
 CHECKED BY: MK



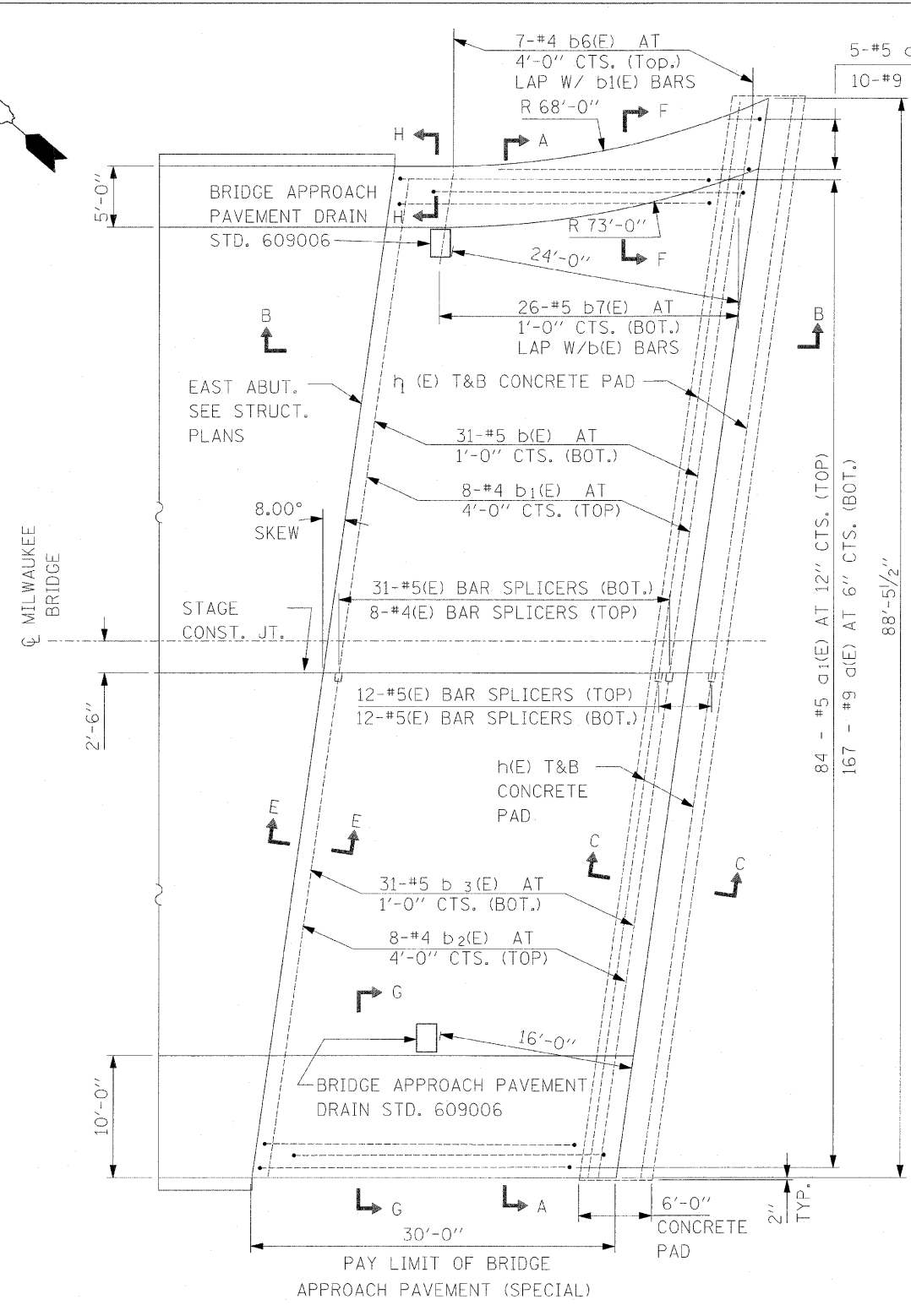
STV Incorporated
 engineers/architects/scientists/construction managers
 200 W Monroe - Suite 1650
 Chicago, Illinois 60606

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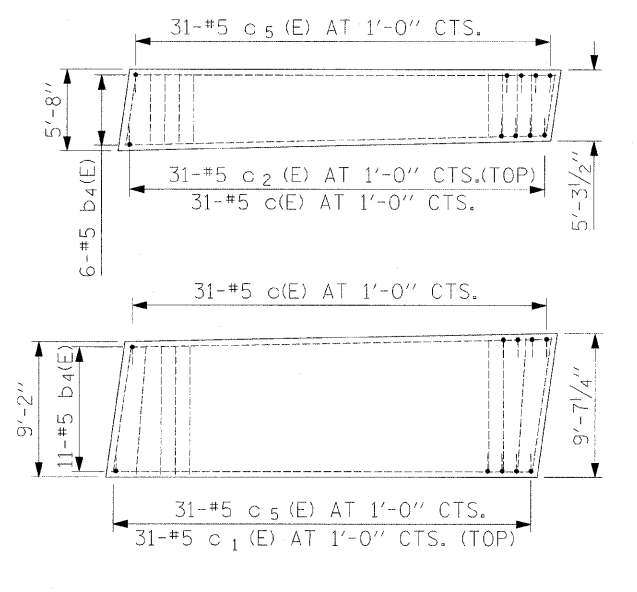
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	129
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 62387				



BRIDGE APPROACH PAVEMENT PLAN - NORTH

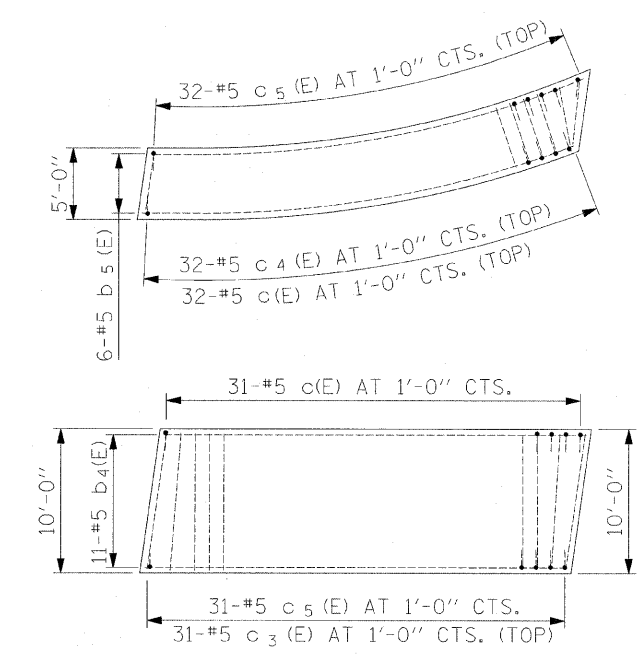


BRIDGE APPROACH PAVEMENT PLAN - SOUTH



NORTH SIDEWALK PLAN

Bar b4(E) cut in place.



SOUTH SIDEWALK PLAN

GENERAL NOTES

1. SEE STANDARD 421001 FOR REINFORCEMENT DETAILS NOT SHOWN.
2. SEE STANDARD 420001 FOR DETAILS OF JOINTS NOT SHOWN.
3. REFER TO STRUCTURAL BRIDGE PLANS FOR ABUTMENT, WINGWALL, AND PARAPET DETAILS.
4. BLOCK OUT CONCRETE SLEEPER SLAB FOR STEEL PLATE BEAM GUARD RAIL POSTS. COORDINATE WITH STANDARD 631031-03.

REVISIONS	
NAME	DATE

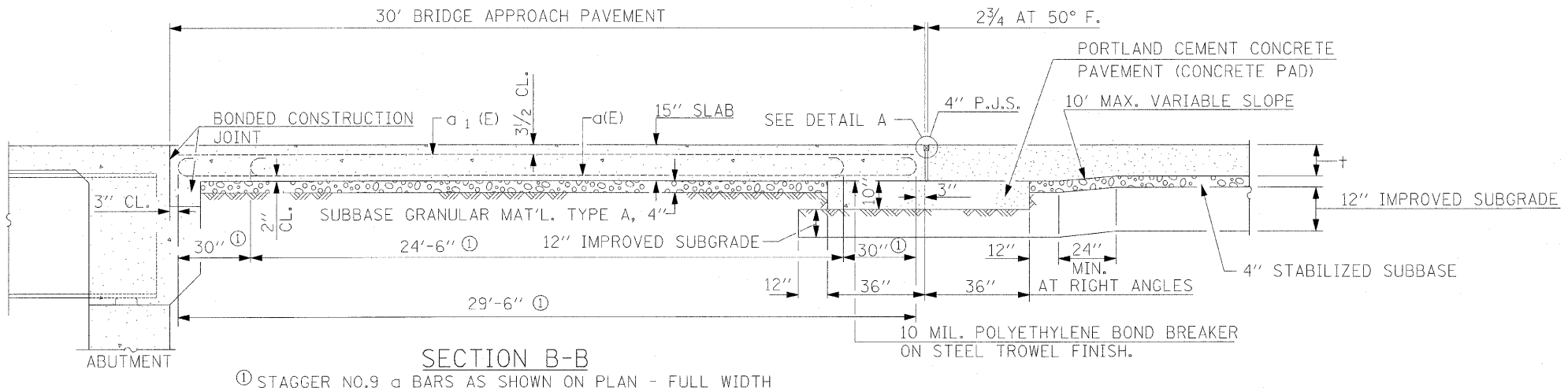
ILLINOIS DEPARTMENT OF TRANSPORTATION
 IL ROUTE 21
 MILWAUKEE AVE. OVER DESPLAINES RIVER
 COOK COUNTY - F.A.P. ROUTE 374
 SN 016-6566

BRIDGE APPROACH PAVEMENT

SCALE: NOT TO SCALE
 DATE 02/05/08
 DRAWN BY BTO
 CHECKED BY JAN

STV Incorporated 200 W Monroe - Suite 1650
 Chicago, Illinois 60606
 engineers/architects/scientists/construction managers

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	130
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 62387				



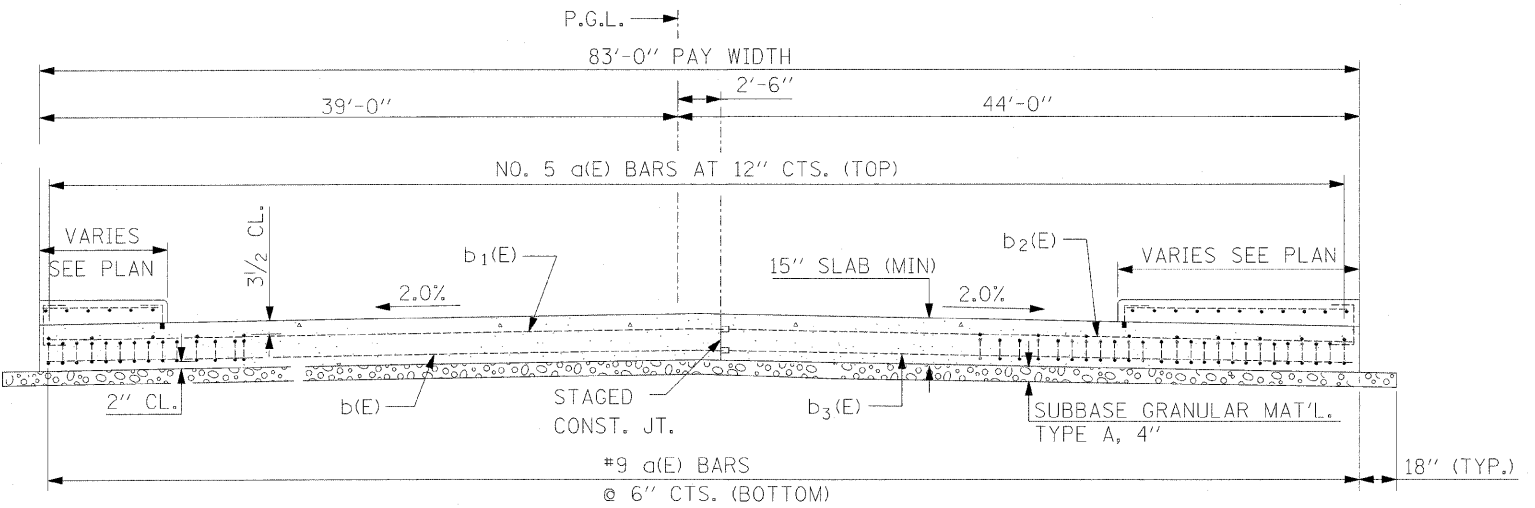
DESIGN STRESSES

FY = 60,000 P.S.I.
 F'C = 3,500 P.S.I.
 N = 8.5

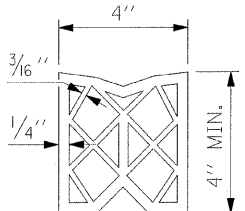
GENERAL NOTES

1. THICKNESS - "t" = THICKNESS OF PAVEMENT
2. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN.

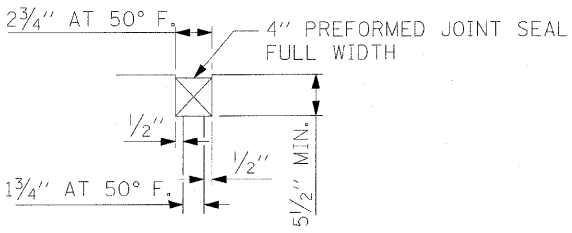
SECTION B-B
 ① STAGGER NO.9 a BARS AS SHOWN ON PLAN - FULL WIDTH



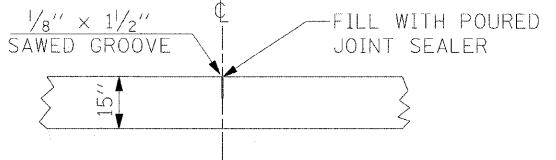
SECTION A-A
 (SEE PLAN FOR DIMENSIONS NOT SHOWN, ALSO SEE STRUCTURAL PLANS)
 ALL REINFORCEMENT BARS SHALL BE EPOXY COATED.



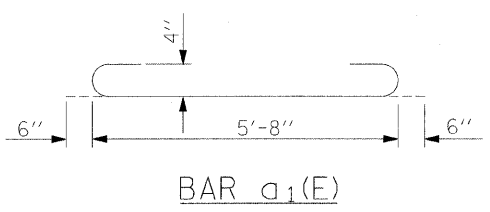
PREFORMED JOINT SEAL



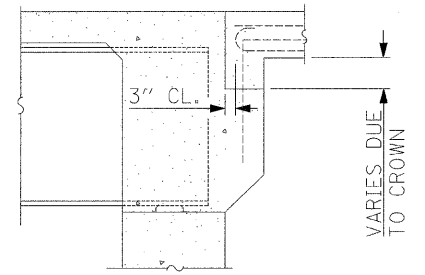
DETAIL A



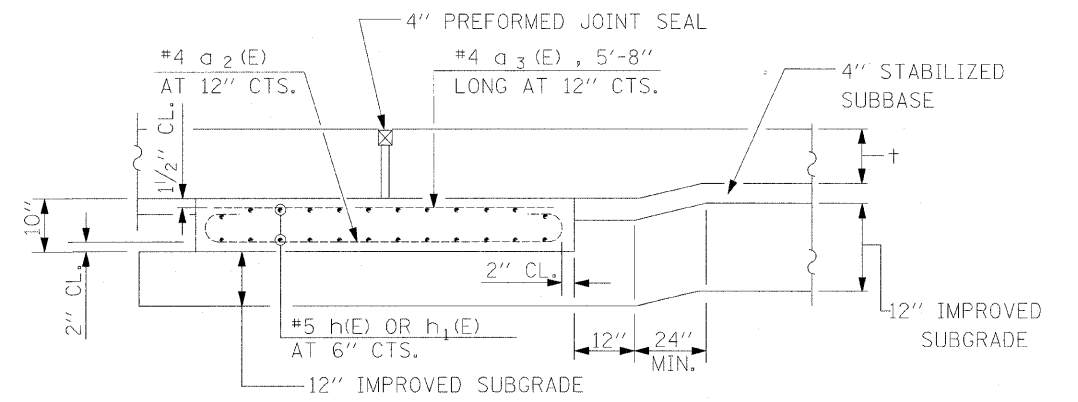
DETAIL B



BAR a1(E)



SECTION E-E
 (JOINED ABUTMENTS)



SECTION C-C - RIGID PAVEMENT
 (SHOWING REINFORCEMENT)

REVISIONS	
NAME	DATE

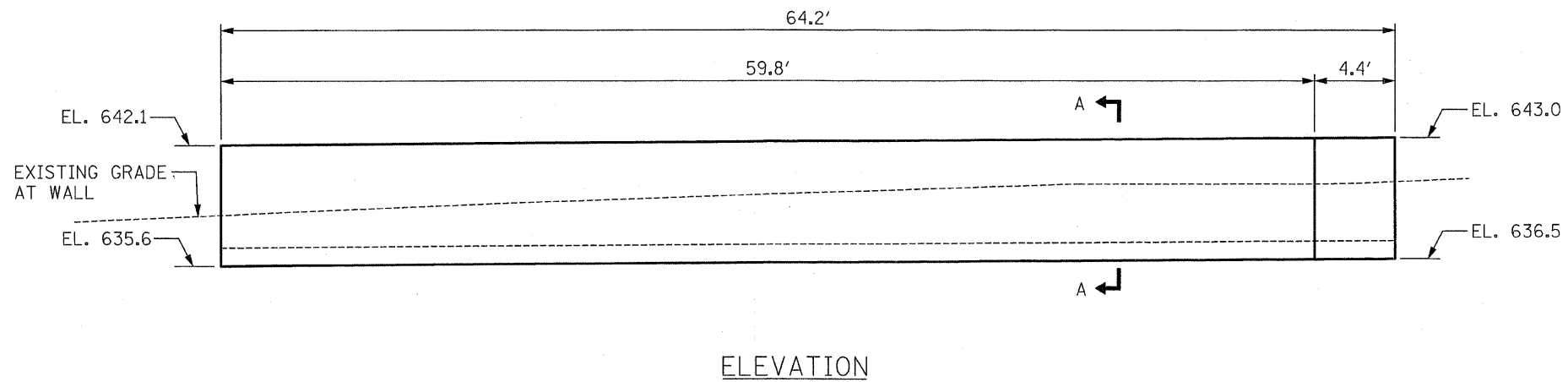
ILLINOIS DEPARTMENT OF TRANSPORTATION
 IL ROUTE 21
 MILWAUKEE AVE. OVER DESPLAINES RIVER
 COOK COUNTY - F.A.P. ROUTE 374
 SN 016-6566

BRIDGE APPROACH PAVEMENT
 DETAILS

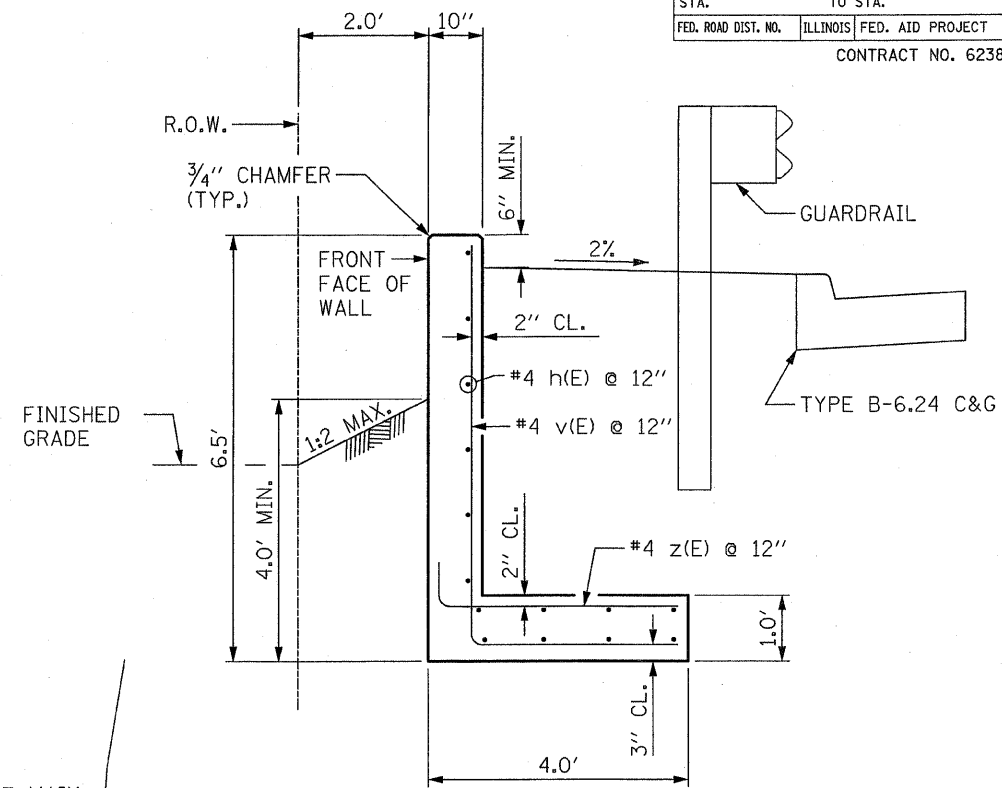
SCALE: NOT TO SCALE
 DATE: 02/05/08
 DRAWN BY: BTO
 CHECKED BY: JAW

STV Incorporated 200 W Monroe - Suite 1650
 Chicago, Illinois 60606
 engineers/architects/scientists/construction managers

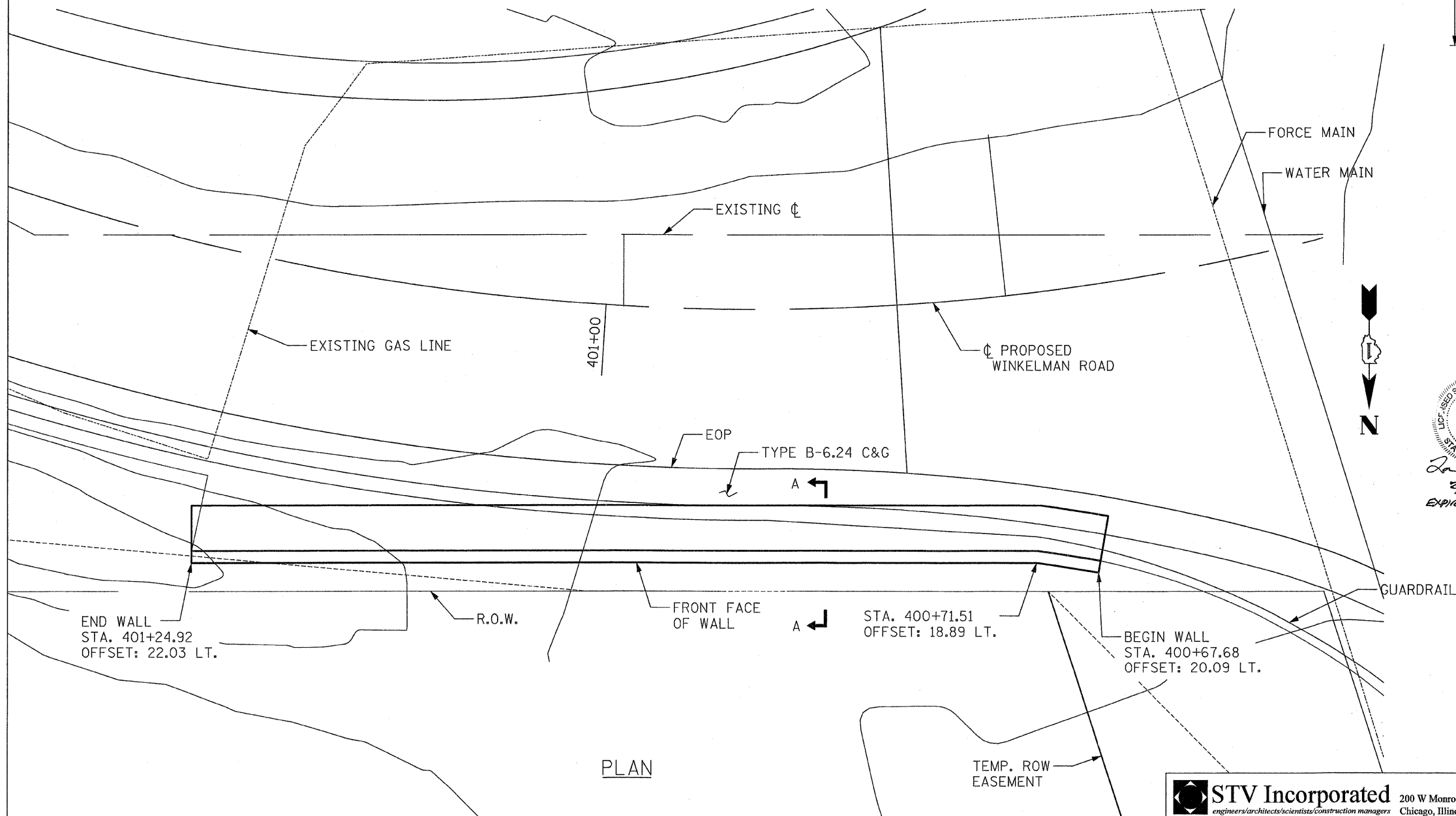
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	132
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62387				



ELEVATION



SECTION A-A



PLAN

LAWRENCE L. KIRCHNER
 081-005343
 CHICAGO, ILLINOIS
 STATE OF ILLINOIS
 2/5/08
 EXPIRES 11/30/08

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	28	#4	32'-8"	—
v(E)	65	#4	9'-3"	└┘
z(E)	65	#4	4'-4"	└┘
CONCRETE STRUCTURES			C.Y.	20.4
REINFORCEMENT BARS, EPOXY COATED			LB	1200
STRUCTURAL EXCAVATION			C.Y.	76

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
 #4 BAR LAP = 1'-8"

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WINKELMAN ROAD RETAINING WALL
 SCALE: NTS
 DATE 02/05/08
 DRAWN BY BTO
 CHECKED BY JAN

STV Incorporated
 engineers/architects/scientists/construction managers
 200 W Monroe - Suite 1650
 Chicago, Illinois 60606

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	134
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62387

GENERAL NOTES

Fasteners shall be high strength bolts (AASHTO M164, Type 3 in unpainted areas and mechanically galvanized AASHTO M 164, Type 1 or 2 in painted areas). Bolts $\frac{7}{8}$ " diameter, open holes $\frac{15}{16}$ " diameter, unless otherwise noted.

Calculated weight of Structural Steel:
AASHTO (M270 GR 50W) = 244,060 pounds

All structural steel shall be AASHTO M270 Grade 50W.

Field welding of construction accessories will not be permitted to beams.

Anchor bolts shall be set before bolting diaphragms over supports.

The main load carrying member components subjected to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material except fill plates.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ ". Adjustments shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$ " adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

Steel piles at abutments shall be driven in holes precored through the embankment according to Article 512.09(c) of the Standard Specifications.

The contractor shall drive 1 test pile, HP10x42, in a permanent location at each abutment and pier as directed by the Engineer before ordering the remainder of the piles.

AASHTO M 270 Grade 50W structural steel shall only be painted, at the ends of the beams, for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Those areas shall be primed in the shop with an inorganic zinc rich primer per AASHTO M300, Type I. No field painting shall be required. All structural steel shall be cleaned as specified in the special provision for "Surface Preparation and Painting Requirements for Weathering Steel".

All construction joints shall be bonded.

All embedded and separate bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 (as applicable).

Slipforming of the parapets is not allowed.

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.

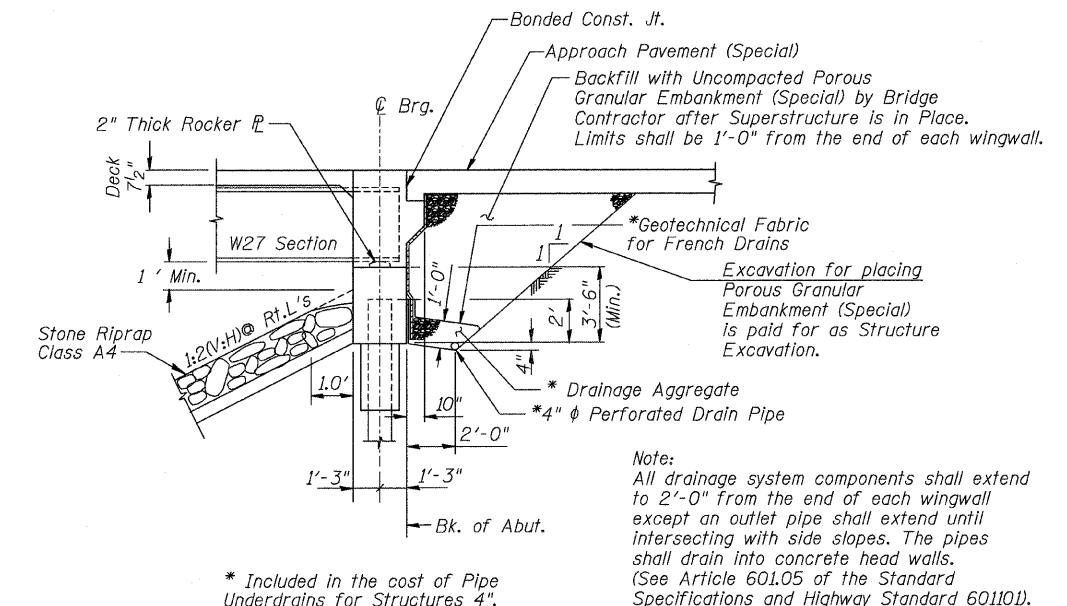
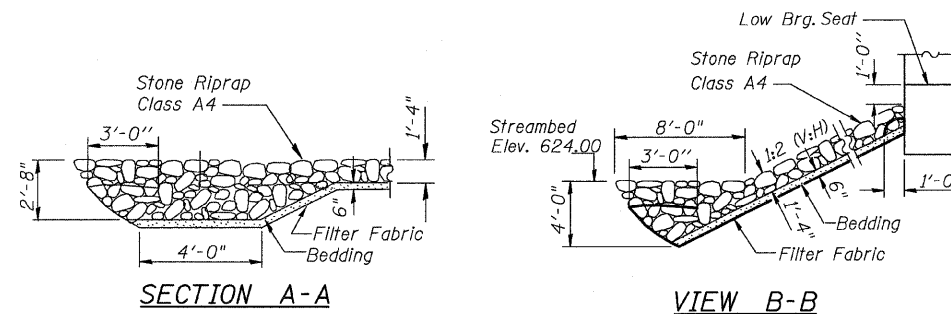
All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

TOTAL BILL OF MATERIAL

DESCRIPTION	UNIT	SUB-STRUCTURE	SUPER STRUCTURE	TOTAL QUANTITIES
Porous Granular Embankment (Special)	CU YD	210		210
Stone Riprap, Class A4	SQ YD	1160		1160
Filter Fabric	SQ YD	1350		1350
Removal of Existing Structure	EACH		1	1
Structure Excavation	CU YD	229		229
Concrete Structures	CU YD	305.1		305.1
Concrete Superstructure	CU YD		480	480
Bridge Deck Grooving	SQ YD		1200	1200
Protective Coat	SQ YD		1620	1620
Erecting Structural Steel	LUMP SUM		1	1
Stud Shear Connectors	EACH		6210	6210
Reinforcement Bars, Epoxy Coated	POUND	25880	111200	137080
Aluminum Railing, Type L	FOOT		309	309
Furnishing Steel Piles HP10x42	FOOT	2813		2813
Driving Piles	FOOT	2813		2813
Pile Shoes	EACH	52		52
Test Pile Steel HP10x42	EACH		4	4
Temporary Sheet Piling	SQ FT	2780		2780
Name Plates	EACH		1	1
Anchor Bolts, 1"	EACH	80		80
Underwater Structure Excavation Protection - Location 1	EACH	1		1
Underwater Structure Excavation Protection - Location 2	EACH	1		1
Bar Splicers	EACH	114	857	971
Pipe Underdrains For Structures 4"	FOOT	203		203

INDEX OF SHEETS

- 1 General Plan
- 2 General Notes & Bill of Material
- 3 Foundation Plan
- 4 Stage Construction Sections
- 5 Temporary Sheet Piling
- 6 Screed Plan
- 7 Deck Elevations
- 8 Deck Elevations
- 9 Deck Elevations
- 10 Deck Elevations
- 11 Deck Plan
- 12 Deck Cross Section
- 13 Parapet Elevation and B.O.M.
- 14 Framing Plan
- 15 Girder Elevation & Moment Table
- 16 Diaphragm / Splice Details
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- 18 North Abutment
- 19 South Abutment
- 20 Abutment Diaphragm Details
- 21 Pier 1 Elevation and Plan
- 22 Pier 2 Elevation and Plan
- 23 Type L Railing
- 24 Cantilever Forming Brackets
- 25 Bar Splicer Assembly
- 26 Temporary Concrete Barrier
- 26A Pile Base Sheet F-HP
- 27 Boring Logs
- 28 Boring Logs



SECTION THRU INTEGRAL ABUTMENT

Dimensions at Rt. L's

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
ILLINOIS ROUTE 21
MILWAUKEE AVE. OVER DES PLAINES RIVER
F.A.P. ROUTE 374 SECTION 3268F-R-1
COOK COUNTY, SN 016-6566

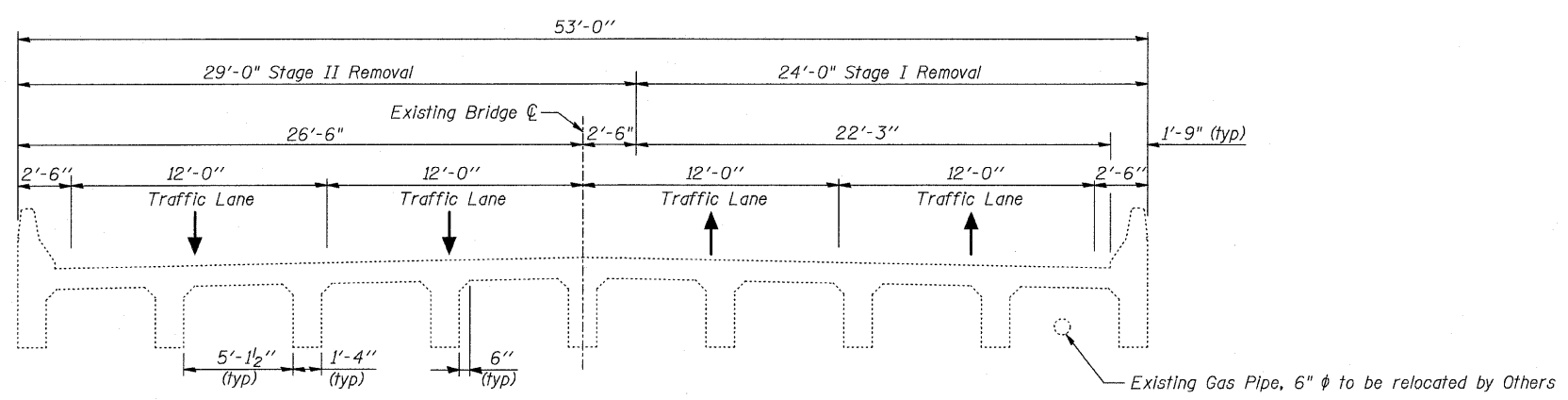
GENERAL NOTES & B.O.M.

DESIGN BY: BTO DRAWN BY: BTO
DATE: 02/05/08 CHECKED BY: JAW CHECKED BY: JAN

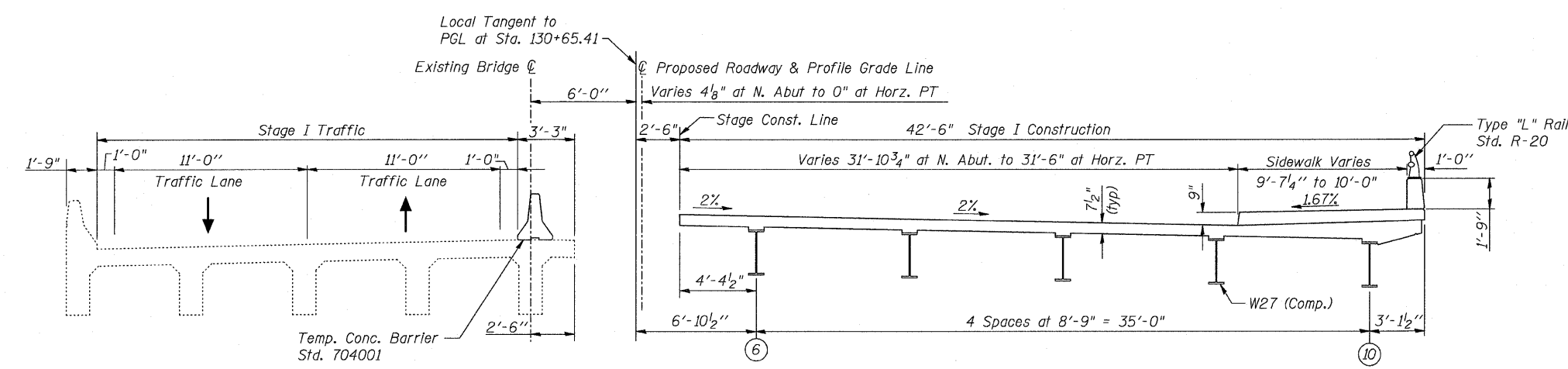


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

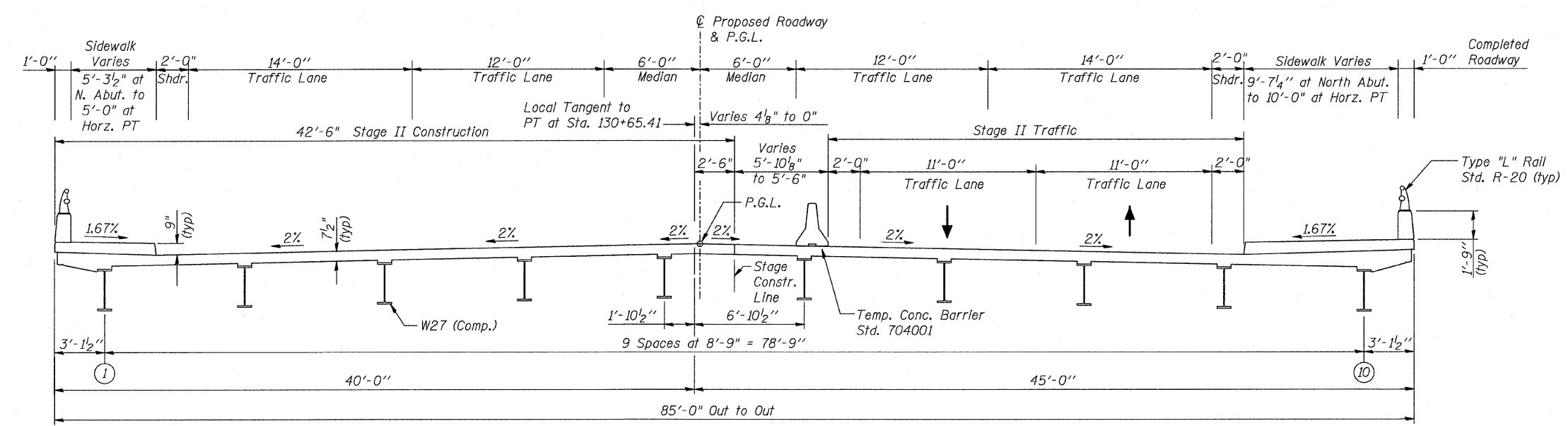
CONTRACT NO. 62387



EXISTING BRIDGE CROSS SECTION
(Looking South)



STAGE I CONSTRUCTION
(Looking South)
(Horizontal Dimensions at Right L's to Local Tangent Line)



STAGE II CONSTRUCTION AND PROPOSED BRIDGE CROSS SECTION
(Looking South)
(Horizontal Dimensions at Right L's to Local Tangent Line)

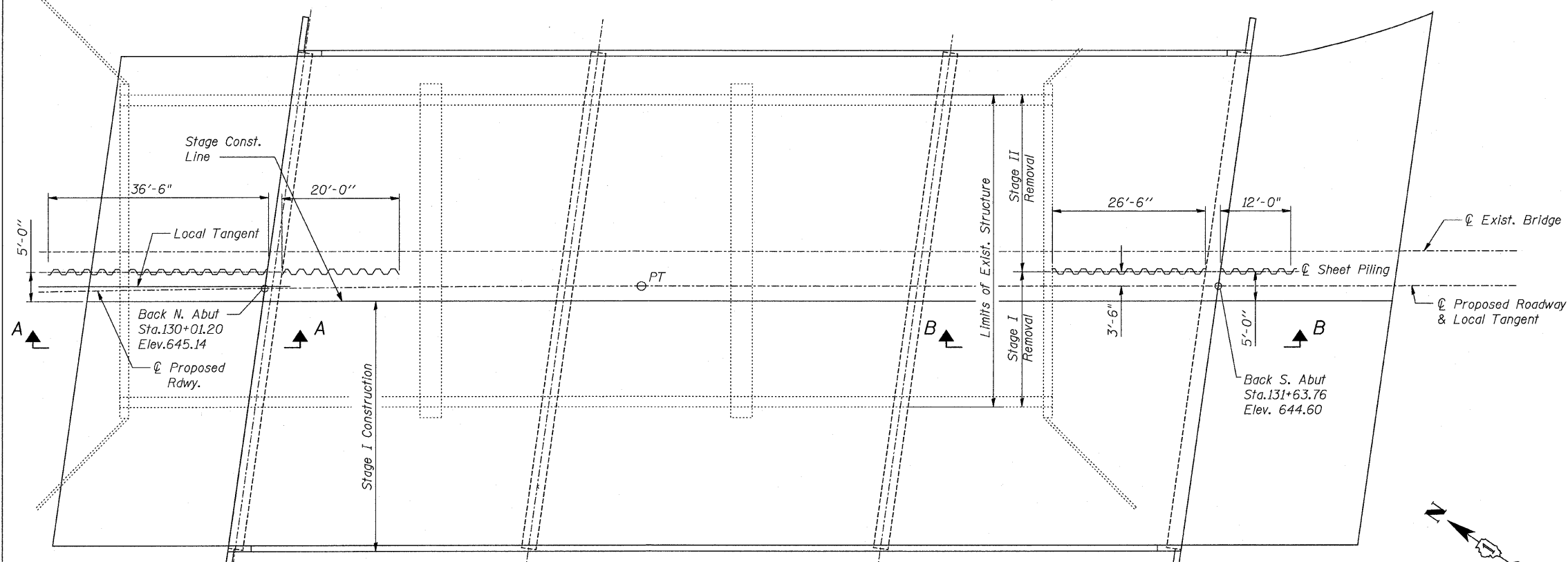
REVISIONS	
NAME	DATE



ILLINOIS DEPARTMENT OF TRANSPORTATION
ILLINOIS ROUTE 21
MILWAUKEE AVE. OVER DES PLAINES RIVER
F.A.P. ROUTE 374 SECTION 3268F-R-1
COOK COUNTY, SN 016-6566
STAGE CONSTRUCTION SECTIONS
DESIGN BY: AWH DRAWN BY: AWH
DATE: 02/05/08 CHECKED BY: JAN CHECKED BY: JAN

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	137
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62387



BILL OF MATERIAL

Item	Unit	Quantity
Temporary Sheet Piling	Sq Ft	2780

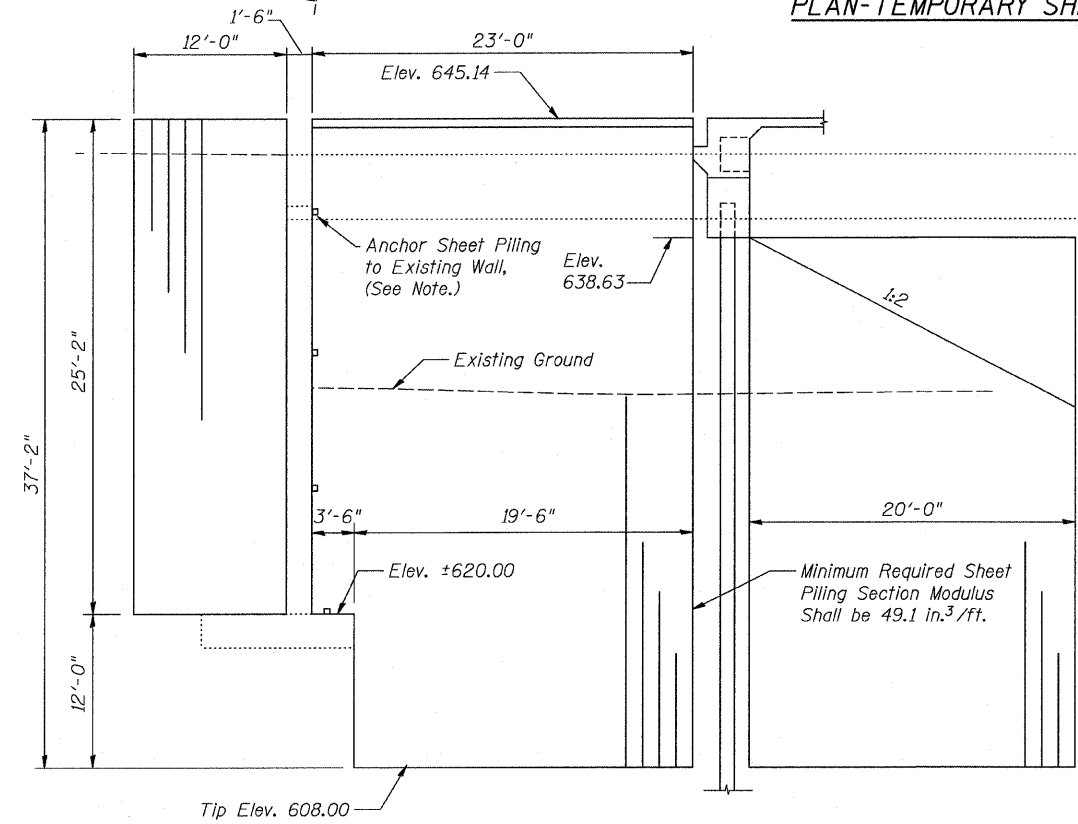
NOTE: TEMPORARY SHEET PILING

* If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

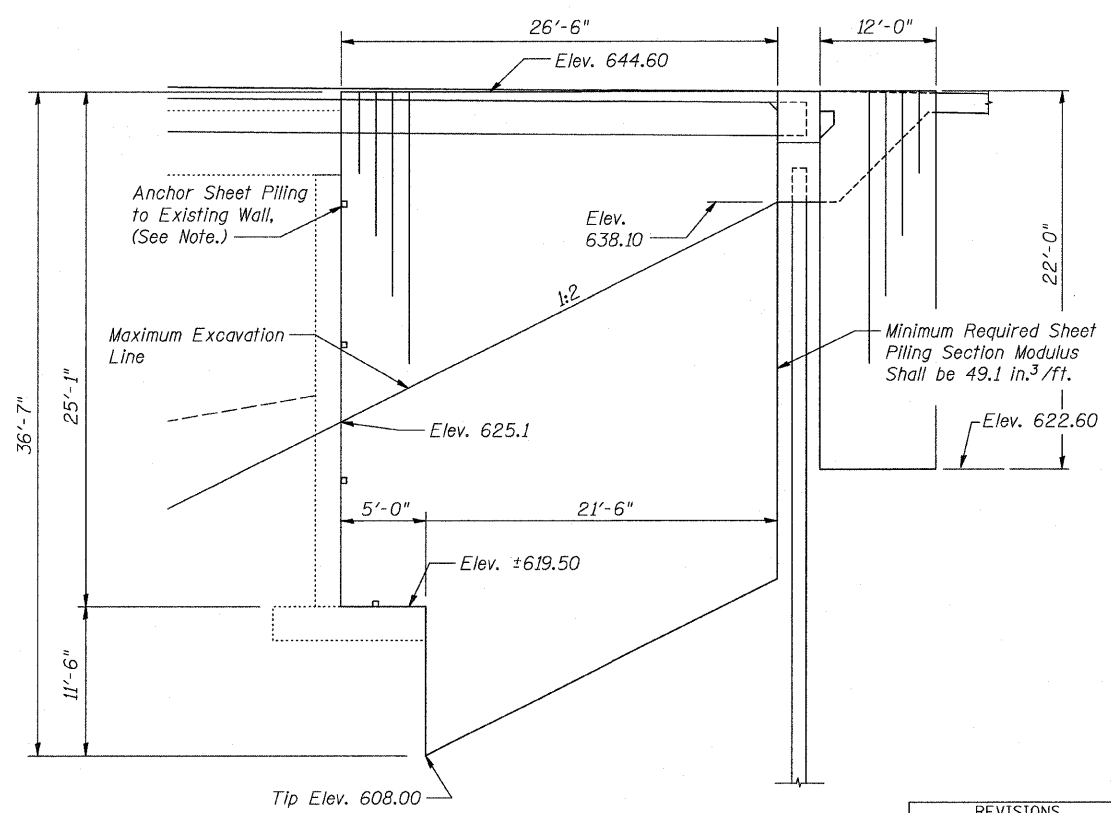
The Contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. The connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Sheet Piling.

Sheet piling within the limits of the existing footing shall have the bottom elevation at the top of the footing. Any sheets not reaching their required embedment due to the abutment footing must be restrained by developing an attachment to the existing abutment backwall. This attachment shall be approved by the Engineer.

PLAN-TEMPORARY SHEET PILING



SECTION A-A



SECTION B-B



REVISIONS	
NAME	DATE

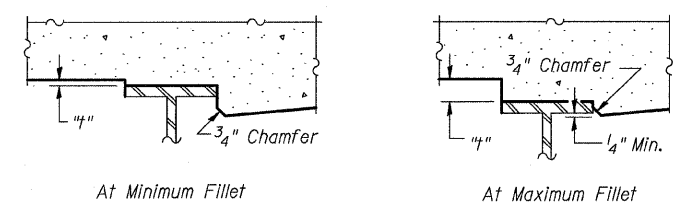
ILLINOIS DEPARTMENT OF TRANSPORTATION
 ILLINOIS ROUTE 21
 MILWAUKEE AVE. OVER DES PLAINES RIVER
 F.A.P. ROUTE 374 SECTION 3268F-R-1
 COOK COUNTY, SN 016-6566

TEMPORARY SHEET PILING

DESIGN BY: JAW DRAWN BY: BTO
 DATE: 02/05/08 CHECKED BY: JAN CHECKED BY: JAW

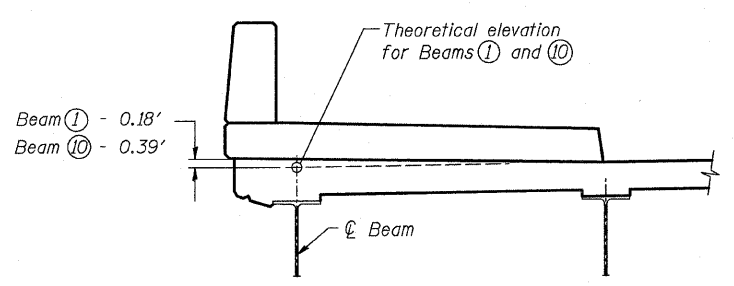
F.A.P. RITE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	138
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

CONTRACT NO. 62387

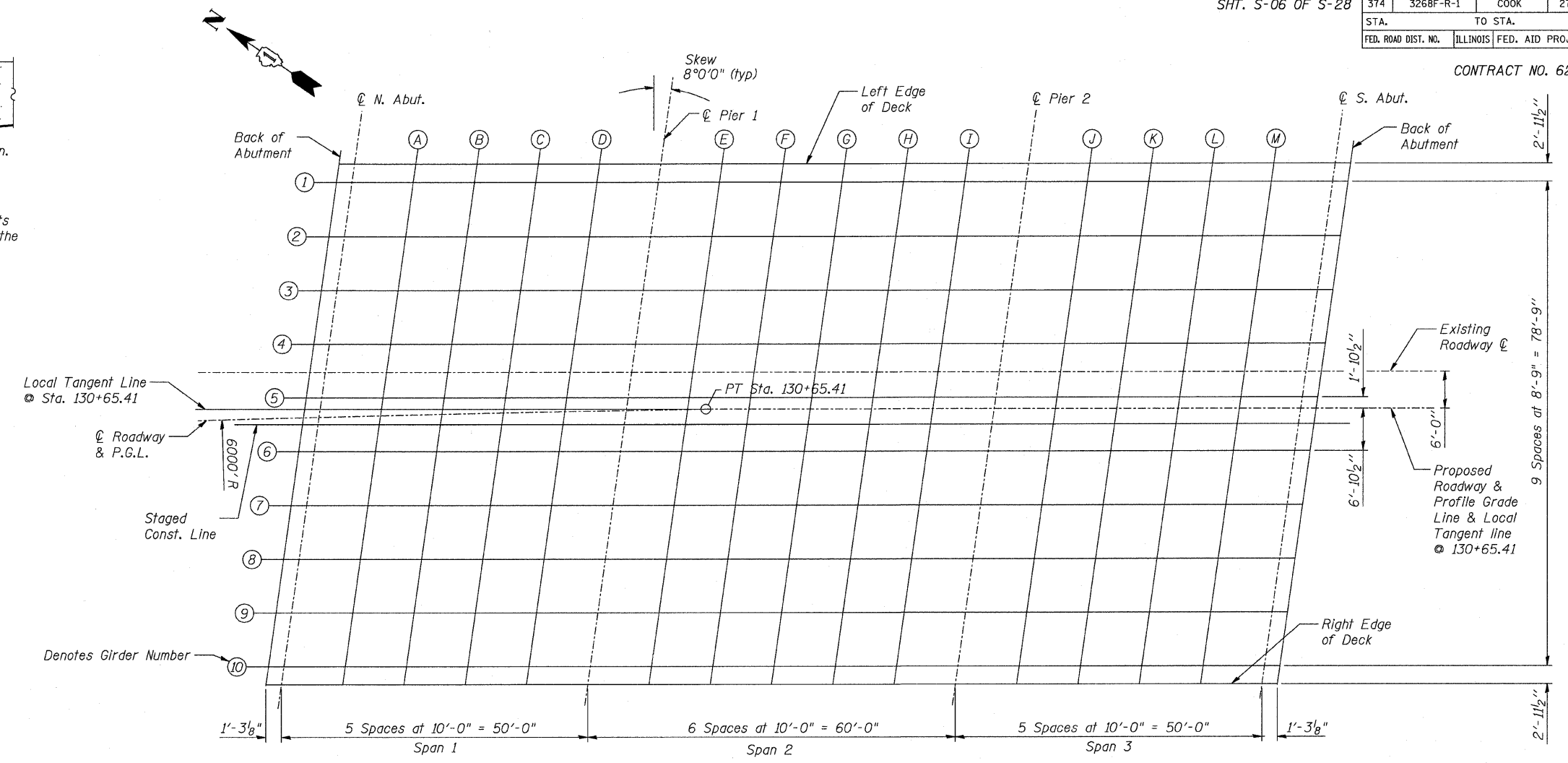


To determine fillet height "f", measure elevations at span quarter points as shown below after all steel has been erected. Add this number to the slab thickness and subtract the sum from the "Theoretical Grade Elev. Adjusted for Dead Load Deflection." This equals the fillet height above the beams.

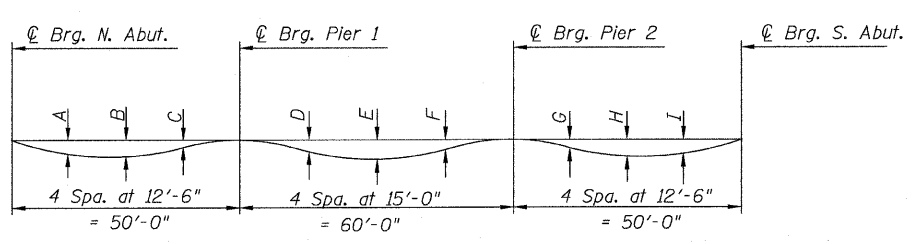
FILLET HEIGHTS



SIDEWALK SECTION



PLAN



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below. All dimensions are in inches except as noted. All offsets are in feet.

BEAM	A	B	C	D	E	F	G	H	I
Beams 1 through 10	0.34	0.42	0.20	0.22	0.39	0.22	0.20	0.42	0.34

Notes: See Sheets S-07 thru S-10 for Deck Elevations

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 ILLINOIS ROUTE 21
 MILWAUKEE AVE. OVER DES PLAINES RIVER
 F.A.P. ROUTE 374 SECTION 3268F-R-1
 COOK COUNTY, SN 016-6566

SCREED PLAN

DESIGN BY: AWH DRAWN BY: BTO
 DATE: 02/05/08 CHECKED BY: JAN CHECKED BY: JAW

STV Incorporated
 Engineers/Architects/Planners/Construction Managers
 200 W. Monroe Street, Suite 1650
 Chicago, IL 60606-5013
 312/853-0655, FAX 312/853-0661

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	139
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62387

Left Edge of Deck

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk.N.Abt.	13007.226	-40.117	644.702	644.702
North Bearing	13008.478	-40.105	644.706	644.706
A	13018.411	-40.018	644.732	644.756
B	13028.345	-39.948	644.749	644.785
C	13038.278	-39.895	644.758	644.787
D	13048.212	-39.858	644.758	644.770
Pier 1	13058.146	-39.837	644.749	644.749
E	13068.098	-39.833	644.732	644.742
F	13078.098	-39.833	644.706	644.732
G	13088.098	-39.833	644.670	644.703
H	13098.098	-39.833	644.626	644.651
I	13108.098	-39.833	644.572	644.582
Pier 2	13118.098	-39.833	644.508	644.508
J	13128.098	-39.833	644.436	644.447
K	13138.098	-39.833	644.354	644.383
L	13148.098	-39.833	644.268	644.303
M	13158.098	-39.833	644.182	644.205
South Bearing	13168.098	-39.833	644.096	644.096
Bk.S.Abt.	13169.358	-39.833	644.085	644.085

Beam 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk.N.Abt.	13006.785	-37.163	644.595	644.595
North Bearing	13008.037	-37.151	644.599	644.599
A	13017.975	-37.064	644.625	644.649
B	13027.913	-36.993	644.643	644.679
C	13037.852	-36.939	644.652	644.682
D	13047.791	-36.901	644.652	644.664
Pier 1	13057.730	-36.880	644.644	644.644
E	13067.682	-36.875	644.628	644.638
F	13077.682	-36.875	644.602	644.627
G	13087.682	-36.875	644.567	644.599
H	13097.682	-36.875	644.522	644.548
I	13107.682	-36.875	644.468	644.478
Pier 2	13117.682	-36.875	644.405	644.405
J	13127.682	-36.875	644.333	644.345
K	13137.682	-36.875	644.252	644.281
L	13147.682	-36.875	644.166	644.201
M	13157.682	-36.875	644.080	644.103
South Bearing	13167.682	-36.875	643.994	643.994
Bk.S.Abt.	13168.942	-36.875	643.983	643.983

Beam 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk.N.Abt.	13005.476	-28.426	644.589	644.589
North Bearing	13006.730	-28.413	644.594	644.594
A	13016.682	-28.324	644.626	644.650
B	13026.635	-28.251	644.649	644.685
C	13036.588	-28.195	644.662	644.692
D	13046.541	-28.155	644.666	644.678
Pier 1	13056.495	-28.132	644.660	644.660
E	13066.453	-28.125	644.645	644.655
F	13076.453	-28.125	644.620	644.646
G	13086.453	-28.125	644.586	644.619
H	13096.453	-28.125	644.543	644.569
I	13106.453	-28.125	644.490	644.500
Pier 2	13116.453	-28.125	644.428	644.428
J	13126.453	-28.125	644.357	644.369
K	13136.453	-28.125	644.277	644.307
L	13146.453	-28.125	644.191	644.227
M	13156.453	-28.125	644.105	644.129
South Bearing	13166.453	-28.125	644.019	644.019
Bk.S.Abt.	13167.713	-28.125	644.008	644.008

Beam 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk.N.Abt.	13004.163	-19.689	644.759	644.759
North Bearing	13005.419	-19.676	644.764	644.764
A	13015.386	-19.584	644.798	644.821
B	13025.353	-19.509	644.822	644.857
C	13035.320	-19.451	644.836	644.866
D	13045.288	-19.409	644.841	644.853
Pier 1	13055.256	-19.384	644.837	644.837
E	13065.224	-19.375	644.822	644.832
F	13075.223	-19.375	644.799	644.824
G	13085.223	-19.375	644.766	644.798
H	13095.223	-19.375	644.724	644.749
I	13105.223	-19.375	644.672	644.682
Pier 2	13115.223	-19.375	644.612	644.612
J	13125.223	-19.375	644.542	644.553
K	13135.223	-19.375	644.462	644.492
L	13145.223	-19.375	644.377	644.412
M	13155.223	-19.375	644.291	644.314
South Bearing	13165.223	-19.375	644.205	644.205
Bk.S.Abt.	13166.483	-19.375	644.194	644.194

Notes:
See Sheet S-06 for Screed Plan.
All Offsets Taken from Centerline of Roadway.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
ILLINOIS ROUTE 21
MILWAUKEE AVE. OVER DES PLAINES RIVER
F.A.P. ROUTE 374 SECTION 3268F-R-1
COOK COUNTY, SN 016-6566
DECK ELEVATIONS
DESIGN BY: BTO DRAWN BY: BTO
DATE: 02/05/08 CHECKED BY: JAN CHECKED BY: JAN



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	140
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62387

Beam 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk.N.Abt.	13002.846	-10.952	644.929	644.929
North Bearing	13004.104	-10.939	644.934	644.934
A	13014.085	-10.845	644.969	644.993
B	13024.067	-10.768	644.994	645.030
C	13034.049	-10.707	645.010	645.039
D	13044.031	-10.663	645.016	645.028
Pier 1	13054.013	-10.636	645.013	645.013
E	13063.996	-10.625	645.000	645.010
F	13073.993	-10.625	644.977	645.003
G	13083.993	-10.625	644.945	644.978
H	13093.993	-10.625	644.904	644.930
I	13103.993	-10.625	644.854	644.864
Pier 2	13113.993	-10.625	644.795	644.795
J	13123.993	-10.625	644.726	644.738
K	13133.993	-10.625	644.648	644.677
L	13143.993	-10.625	644.562	644.598
M	13153.993	-10.625	644.476	644.500
South Bearing	13163.993	-10.625	644.390	644.390
Bk.S.Abt.	13165.253	-10.625	644.379	644.379

Beam 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk.N.Abt.	13001.526	-2.215	645.098	645.098
North Bearing	13002.785	-2.202	645.104	645.104
A	13012.781	-2.106	645.140	645.164
B	13022.778	-2.027	645.166	645.202
C	13032.774	-1.964	645.183	645.213
D	13042.771	-1.918	645.191	645.203
Pier 1	13052.767	-1.888	645.189	645.189
E	13062.764	-1.876	645.177	645.187
F	13072.764	-1.875	645.155	645.181
G	13082.764	-1.875	645.125	645.157
H	13092.764	-1.875	645.085	645.111
I	13102.764	-1.875	645.036	645.046
Pier 2	13112.764	-1.875	644.977	644.977
J	13122.764	-1.875	644.910	644.921
K	13132.764	-1.875	644.833	644.863
L	13142.764	-1.875	644.748	644.784
M	13152.764	-1.875	644.662	644.685
South Bearing	13162.764	-1.875	644.576	644.576
Bk.S.Abt.	13164.024	-1.875	644.565	644.565

Rdwy C

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk.N.Abt.	13001.190	0.000	645.141	645.141
North Bearing	13002.452	0.000	645.146	645.146
A	13012.452	0.000	645.181	645.205
B	13022.452	0.000	645.206	645.242
C	13032.452	0.000	645.222	645.252
D	13042.452	0.000	645.229	645.241
Pier 1	13052.498	0.000	645.227	645.227
E	13062.498	0.000	645.215	645.225
F	13072.498	0.000	645.194	645.219
G	13082.498	0.000	645.163	645.196
H	13092.498	0.000	645.124	645.149
I	13102.498	0.000	645.075	645.085
Pier 2	13112.475	0.000	645.017	645.017
J	13122.475	0.000	644.949	644.961
K	13132.475	0.000	644.873	644.902
L	13142.475	0.000	644.788	644.824
M	13152.475	0.000	644.702	644.725
South Bearing	13162.394	0.000	644.616	644.616
Bk.S.Abt.	13163.651	0.000	644.606	644.606

Stage Const. Line

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk.N.Abt.	13000.864	2.153	645.097	645.097
North Bearing	13002.125	2.166	645.102	645.102
A	13012.128	2.264	645.135	645.159
B	13022.131	2.344	645.159	645.194
C	13032.135	2.408	645.174	645.203
D	13042.139	2.455	645.180	645.192
Pier 1	13052.143	2.485	645.177	645.177
E	13062.147	2.499	645.165	645.175
F	13072.149	2.500	645.145	645.170
G	13082.149	2.500	645.114	645.147
H	13092.149	2.500	645.075	645.101
I	13102.149	2.500	645.027	645.037
Pier 2	13112.149	2.500	644.969	644.969
J	13122.149	2.500	644.902	644.913
K	13132.149	2.500	644.825	644.855
L	13142.149	2.500	644.741	644.776
M	13152.149	2.500	644.655	644.678
South Bearing	13162.149	2.500	644.569	644.569
Bk.S.Abt.	13163.409	2.500	644.558	644.558

Notes:
See Sheet S-06 for Screed Plan.
All Offsets Taken from Centerline of Roadway.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
ILLINOIS ROUTE 21
MILWAUKEE AVE. OVER DES PLAINES RIVER
F.A.P. ROUTE 374 SECTION 3268F-R-1
COOK COUNTY, SN 016-6566
DECK ELEVATIONS
DESIGN BY: BTO DRAWN BY: BTO
DATE: 02/05/08 CHECKED BY: JAN CHECKED BY: JAN



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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	142
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

CONTRACT NO. 62387

Beam 10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk.N.Abt.	12994.866	41.463	644.635	644.635
North Bearing	12996.134	41.478	644.641	644.641
A	13006.204	41.585	644.685	644.709
B	13016.273	41.675	644.719	644.754
C	13026.343	41.749	644.742	644.772
D	13036.413	41.805	644.756	644.768
Pier 1	13046.483	41.845	644.761	644.761
E	13056.553	41.869	644.755	644.765
F	13066.615	41.875	644.739	644.765
G	13076.615	41.875	644.715	644.747
H	13086.615	41.875	644.680	644.706
I	13096.615	41.875	644.637	644.647
Pier 2	13106.615	41.875	644.584	644.584
J	13116.615	41.875	644.522	644.534
K	13126.615	41.875	644.451	644.481
L	13136.615	41.875	644.370	644.406
M	13146.615	41.875	644.284	644.308
South Bearing	13156.615	41.875	644.198	644.198
Bk.S.Abt.	13157.875	41.875	644.188	644.188

Right Edge of Deck

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk.N.Abt.	12994.412	44.416	644.713	644.713
North Bearing	12995.681	44.431	644.719	644.719
A	13005.755	44.539	644.763	644.787
B	13015.830	44.630	644.797	644.833
C	13025.905	44.704	644.821	644.851
D	13035.979	44.761	644.836	644.848
Pier 1	13046.055	44.802	644.840	644.840
E	13056.130	44.826	644.835	644.845
F	13066.199	44.833	644.820	644.846
G	13076.199	44.833	644.795	644.828
H	13086.199	44.833	644.762	644.787
I	13096.199	44.833	644.719	644.729
Pier 2	13106.199	44.833	644.666	644.666
J	13116.199	44.833	644.605	644.616
K	13126.199	44.833	644.534	644.564
L	13136.199	44.833	644.454	644.489
M	13146.199	44.833	644.368	644.391
South Bearing	13156.199	44.833	644.282	644.282
Bk.S.Abt.	13157.459	44.833	644.271	644.271

Notes:
See Sheet S-06 for Screed Plan.
All Offsets Taken from Centerline of Roadway.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
ILLINOIS ROUTE 21
MILWAUKEE AVE. OVER DES PLAINES RIVER
F.A.P. ROUTE 374 SECTION 3268F-R-1
COOK COUNTY, SN 016-6566

DECK ELEVATIONS

DESIGN BY: BTO DRAWN BY: BTO
DATE: 02/05/08 CHECKED BY: JAN CHECKED BY: JAN



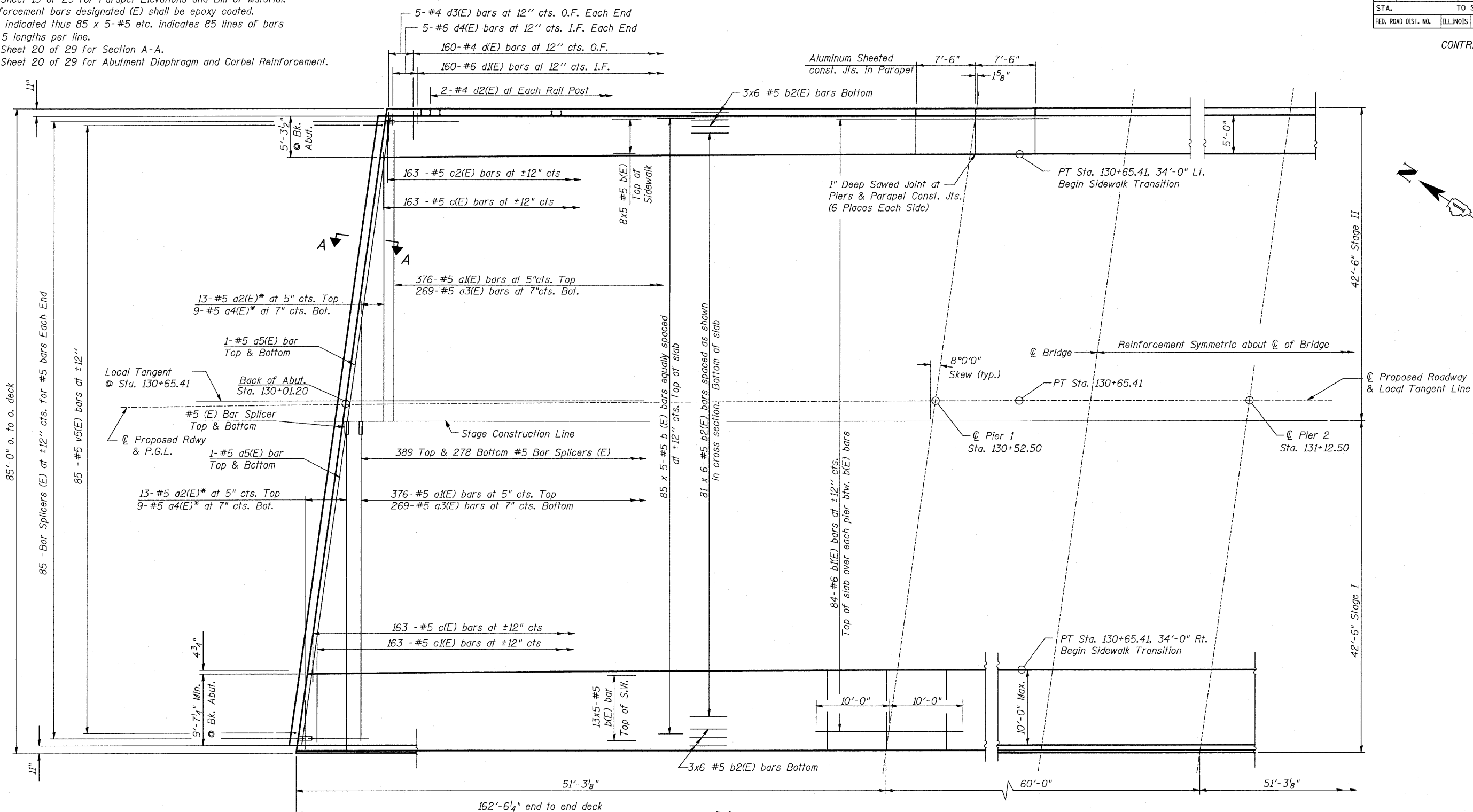
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374	3268F-R-1	COOK	279	143
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHT. S-II OF S-28

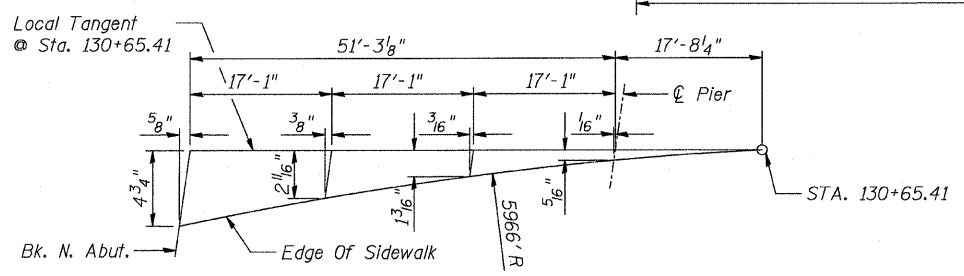
CONTRACT NO. 62387

Notes:
 See Sheet 13 of 29 for Parapet Elevations and Bill of Material.
 Reinforcement bars designated (E) shall be epoxy coated.
 Bars indicated thus 85 x 5-#5 etc. indicates 85 lines of bars with 5 lengths per line.
 See Sheet 20 of 29 for Section A-A.
 See Sheet 20 of 29 for Abutment Diaphragm and Corbel Reinforcement.

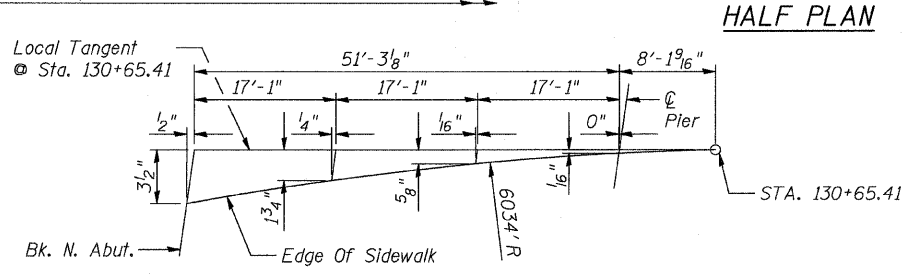


HALF PLAN

* Order a2(E) & a4(E) bars full length.
 Cut to fit skew and use remainder of bars in opposite end.



WEST SIDEWALK OFFSET



EAST SIDEWALK OFFSET

Min. Bar Lap
 #4 = 1'-8"
 #5 = 2'-2"



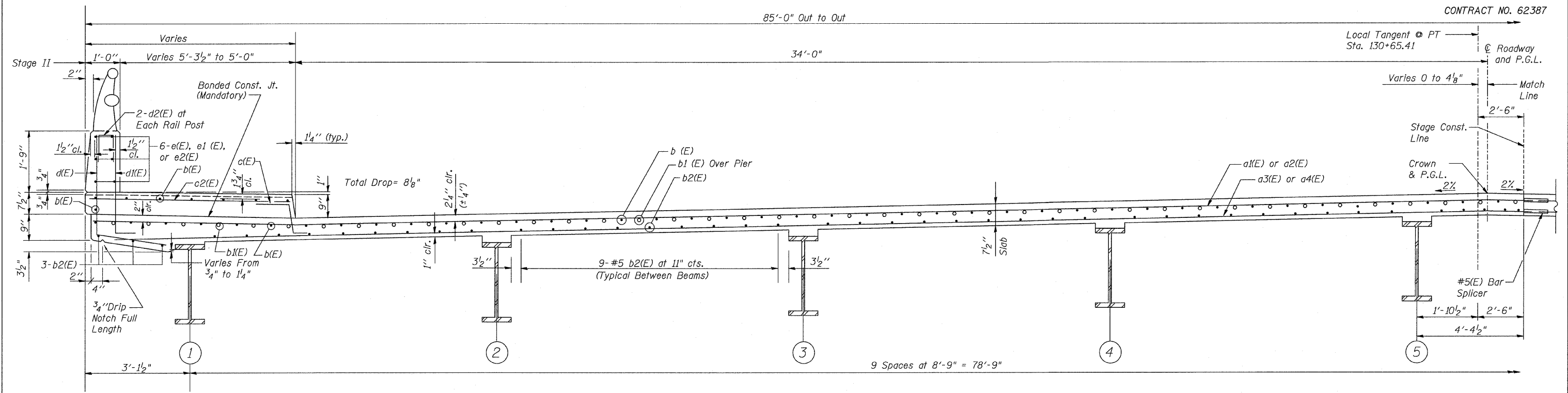
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 ILLINOIS ROUTE 21
 MILWAUKEE AVE. OVER DES PLAINES RIVER
 F.A.P. ROUTE 374 SECTION 3268F-R-1
 COOK COUNTY, SN 016-6566

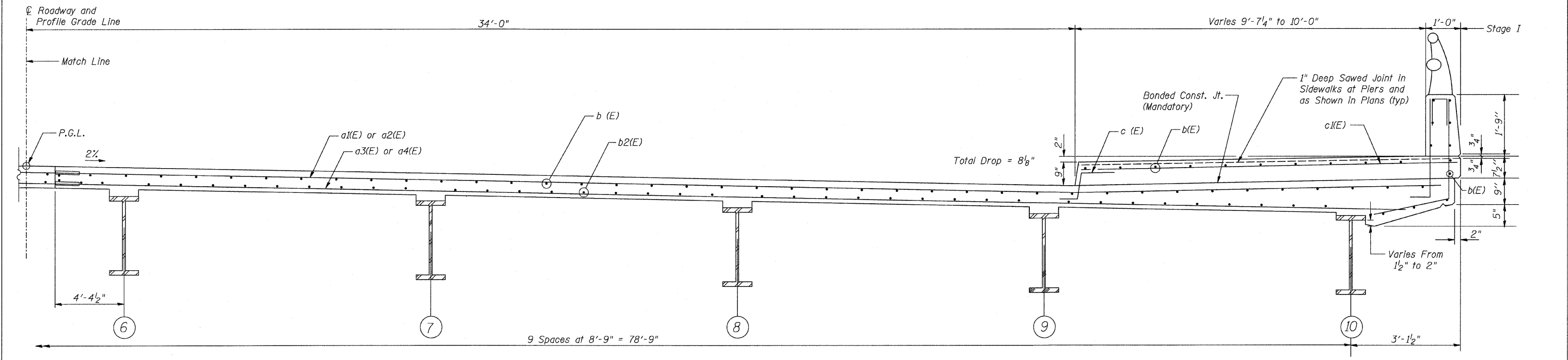
DECK PLAN
 DESIGN BY: AWH DRAWN BY: BTO
 DATE: 02/05/08 CHECKED BY: JAN CHECKED BY: JAW

CONTRACT NO. 62387

85'-0" Out to Out



Near Pier



Near Midspan

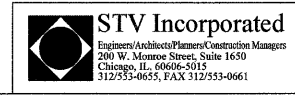
CROSS SECTION
Looking South

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 ILLINOIS ROUTE 21
 MILWAUKEE AVE. OVER DES PLAINES RIVER
 F.A.P. ROUTE 374 SECTION 3268F-R-1
 COOK COUNTY, SN 016-6566

DECK CROSS SECTION

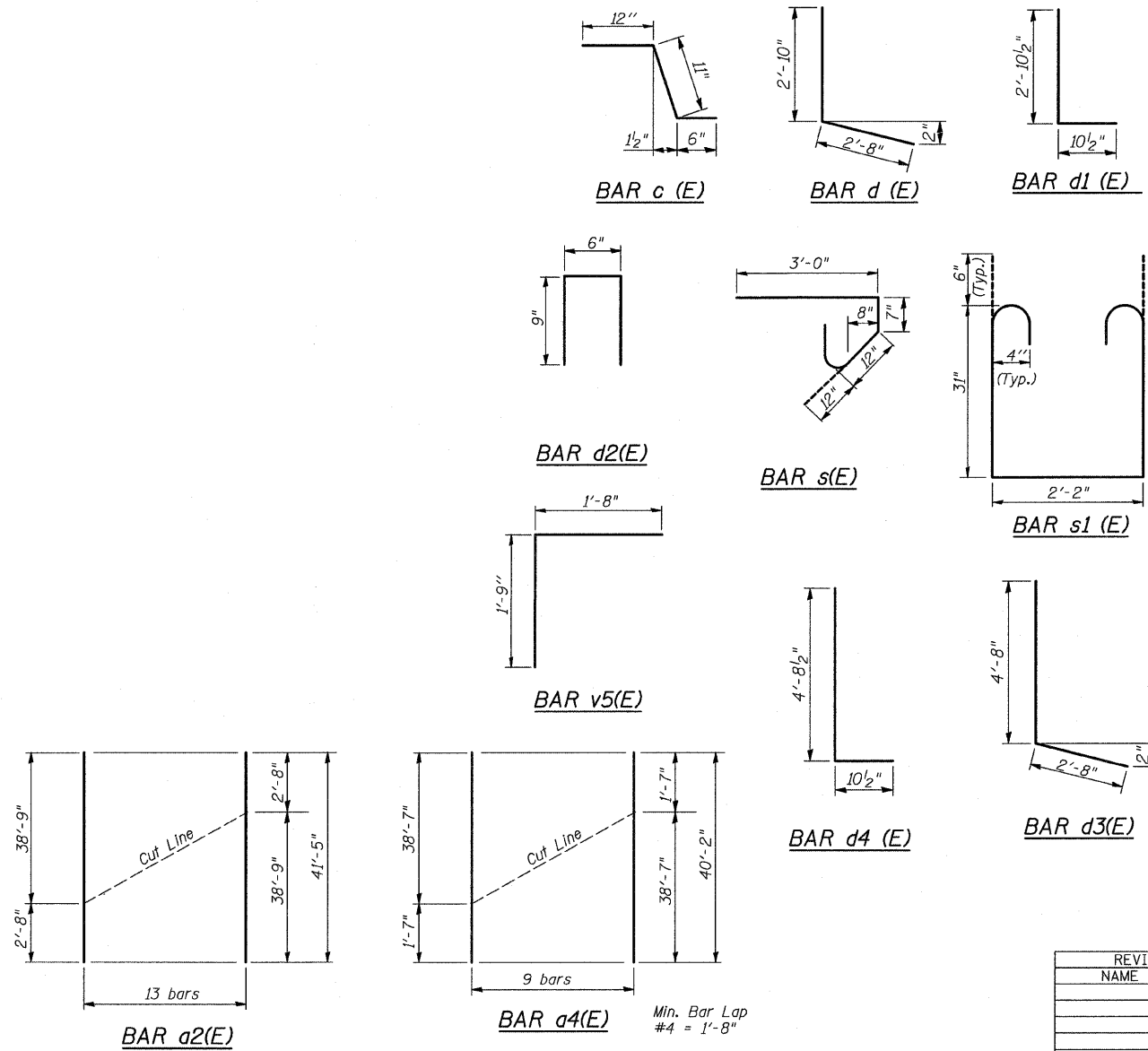
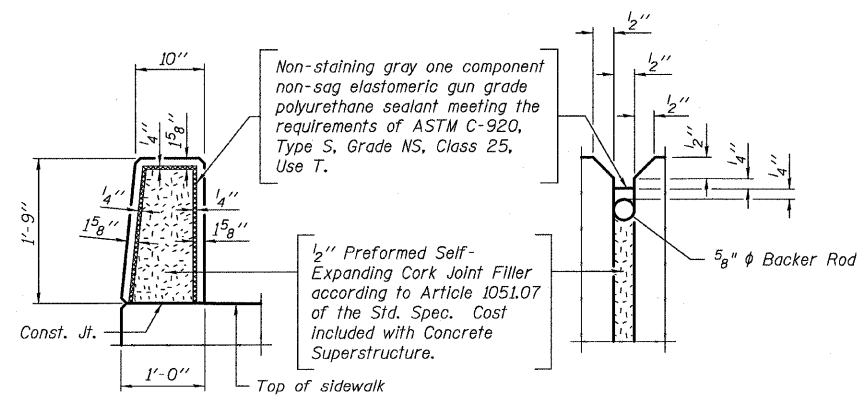
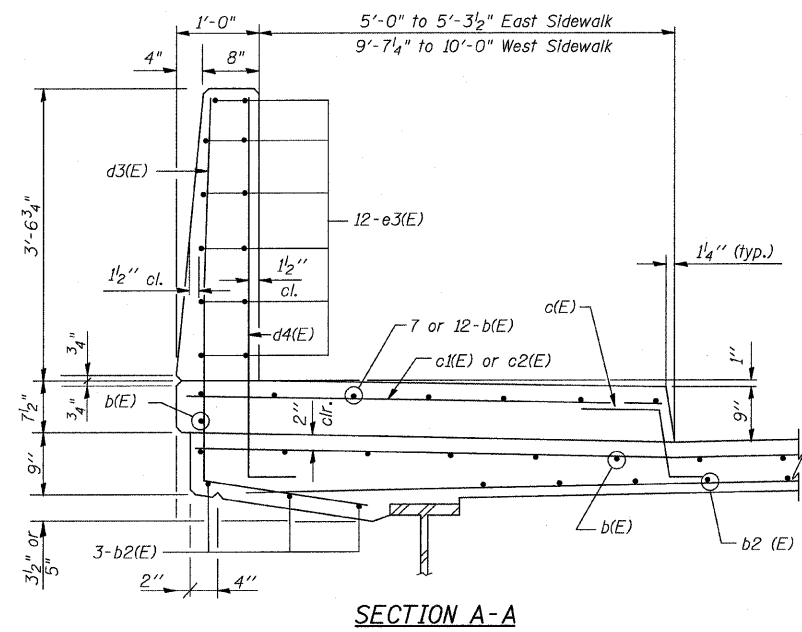
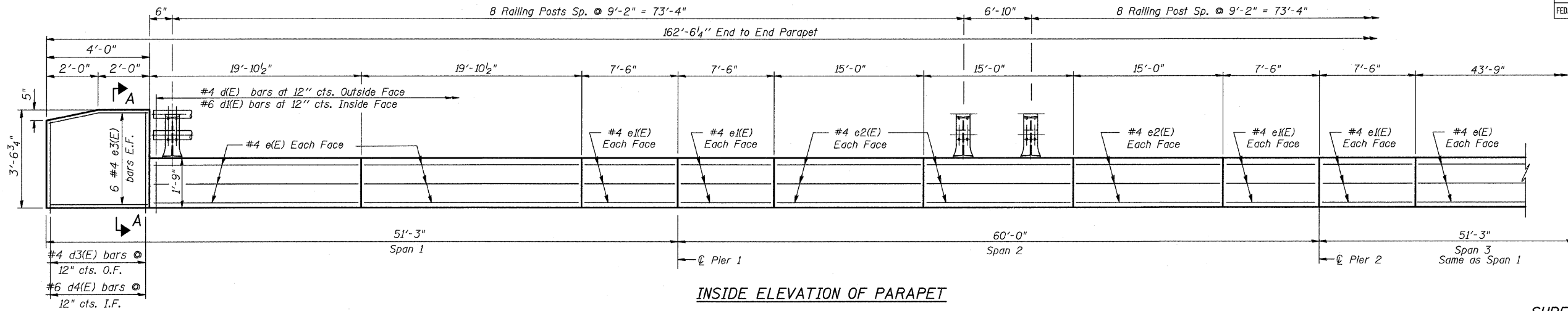
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	145
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS		FED. AID PROJECT	

CONTRACT NO. 62387

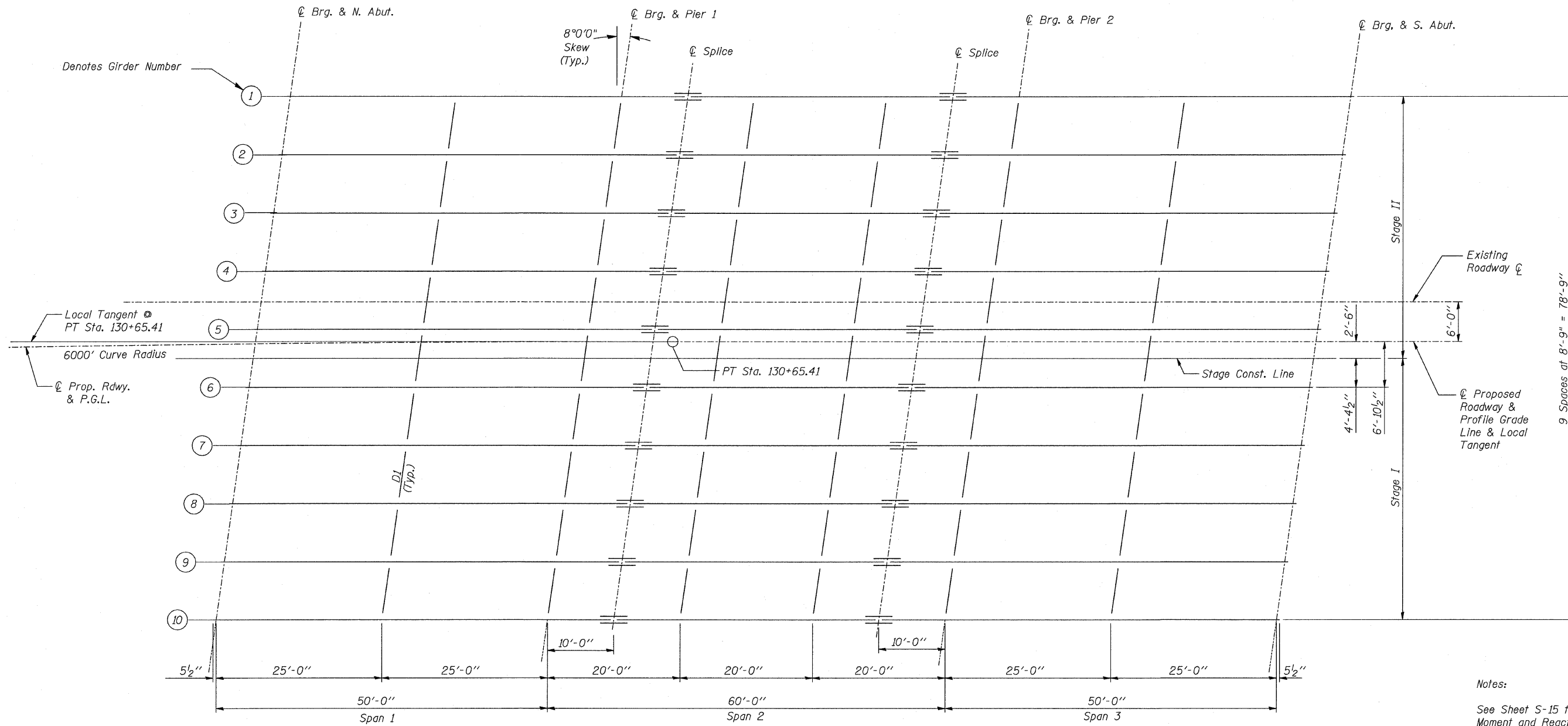


REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 ILLINOIS ROUTE 21
 MILWAUKEE AVE. OVER DES PLAINES RIVER
 F.A.P. ROUTE 374 SECTION 3268F-R-1
 COOK COUNTY, SN 016-6566
 PARAPET ELEVATION & B.O.M.
 DESIGN BY: AWH DRAWN BY: AWH
 DATE: 02/05/08 CHECKED BY: JAW CHECKED BY: JAW

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 200 W. Monroe Street, Suite 1650
 Chicago, IL 60606-5015
 312/253-0653, FAX 312/553-0661

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	146
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



FRAMING PLAN

Notes:

See Sheet S-15 for Girder Moment and Reaction Tables

See Sheet S-16 for Diaphragm and Splice Details

REVISIONS	
NAME	DATE

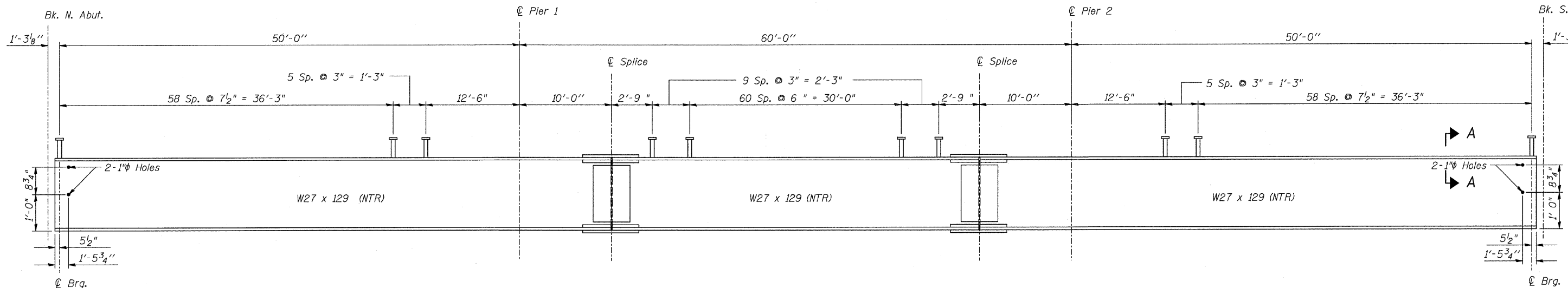
ILLINOIS DEPARTMENT OF TRANSPORTATION
 ILLINOIS ROUTE 21
 MILWAUKEE AVE. OVER DES PLAINES RIVER
 F.A.P. ROUTE 374 SECTION 3268F-R-1
 COOK COUNTY, SN 016-6566
FRAMING PLAN
 DESIGN BY: BTO DRAWN BY: BTO
 DATE: 02/05/08 CHECKED BY: JAW CHECKED BY: JAW

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	147
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

CONTRACT NO. 62387



ELEVATION BEAMS 1-10

TOP OF GIRDER ELEVATIONS

(For Fabrication Only)

Beam	Location					
	℄ Brg. N. Abut.	℄ Brg. Pier 1	℄ Joint Splice 1	℄ Joint Splice 2	℄ Brg. Pier 2	℄ Brg. S. Abut.
1	643.76	643.77	643.77	643.60	643.53	643.17
2	643.93	643.94	643.95	643.78	643.71	643.35
3	644.10	644.12	644.12	643.96	643.89	643.54
4	644.27	644.29	644.30	644.15	644.08	643.72
5	644.44	644.47	644.48	644.33	644.26	643.91
6	644.35	644.37	644.37	644.24	644.17	643.82
7	644.17	644.20	644.20	644.07	644.00	643.65
8	643.99	644.02	644.03	643.90	643.83	643.49
9	643.81	643.85	643.86	643.73	643.66	643.33
10	643.63	643.67	643.68	643.56	643.50	643.16

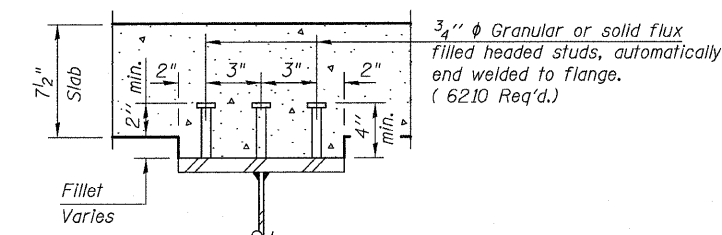
	0.4 Sp.1/0.6 Sp.3	Pier	0.5 Sp.2
I_s	4760	4760	4760
$I_c (n)$	13774		13774
$I_c (3n)$	10064		10064
S_s	345	345	345
$S_c (n)$	572		572
$S_c (3n)$	475		475
Z			
DL	0.99	1.60	0.99
Mdl	178	-444	147
$s DL$	0.61		0.61
$M_s DL$	125		129
M_{LL}	430	-238	444
$M (Imp)$	123	-66	120
$5/3[M_{LL} + M(Imp)]$	922	-508	939
M_a	1592	-1237	1580
M_u	3223		3223
$f_s DL$ non-comp	6.2	15.4	5.1
$f_s DL$ (comp)	3.2		3.3
$f_s 5/3[M_{LL} + M(Imp)]$	21.0	17.7	21.4
f_s (Overload)	30.3	33.1	29.8
f_s (total)		43.0	
VR	62.5		47.7

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total & Overload).
 $I_c(n)$ and $S_c(n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.
 $I_c(3n)$ and $S_c(3n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)
 VR is the maximum Live Load + Impact shear range in span.
 Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.
 M_a (Applied Moment) = $1.3[M_{DL} + M_{SD} + 5/3(M_{LL} + M(Imp))]$.
 The Plastic Moment capacity (M_u) is computed according to AASHTO 10.48.1 and 10.50.1.1.
 f_s (Overload) is the sum of the stresses due to $M_{DL} + M_{SD} + 5/3(M_{LL} + M(Imp))$.
 f_s (Total) (Non-compact section) is the sum of the stresses due to $1.3[M_{DL} + M_{SD} + 5/3(M_{LL} + M(Imp))]$.

BILL OF MATERIAL

Item	Unit	Quantity
Stud Shear Connectors	Each	6210
Furnishing Structural Steel	L. S.	1

FOR INFORMATION ONLY. INCLUDED IN BEAM FABRICATION CONTRACT EXCEPT STUD SHEAR CONNECTORS.



SECTION A-A

	Abutments	Pier
R_{DL}	31.1	96.9
R_{LL}	45.2	53.2
$Imp.$	12.9	14.8
R (Total)	89.2	164.9

NOTES:

- N.T.R. denotes members to which notch toughness requirements are applicable.
- For splice details, see sheet S-16.
- All steel shown on this sheet shall be AASHTO M270 Grade 50W.



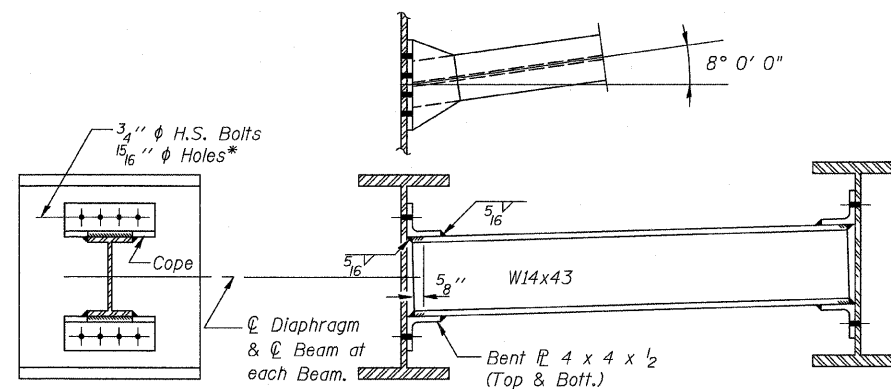
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 ILLINOIS ROUTE 21
 MILWAUKEE AVE. OVER DES PLAINES RIVER
 F.A.P. ROUTE 374 SECTION 3268F-R-1
 COOK COUNTY, SN 016-6566
GIRDER ELEVATION & MOMENT TABLE
 DESIGN BY: AWH DRAWN BY: AWH
 DATE: 02/05/08 CHECKED BY: JAN CHECKED BY: JAN

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	148
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62387

FOR INFORMATION ONLY.
INCLUDED IN BEAM FABRICATION
CONTRACT

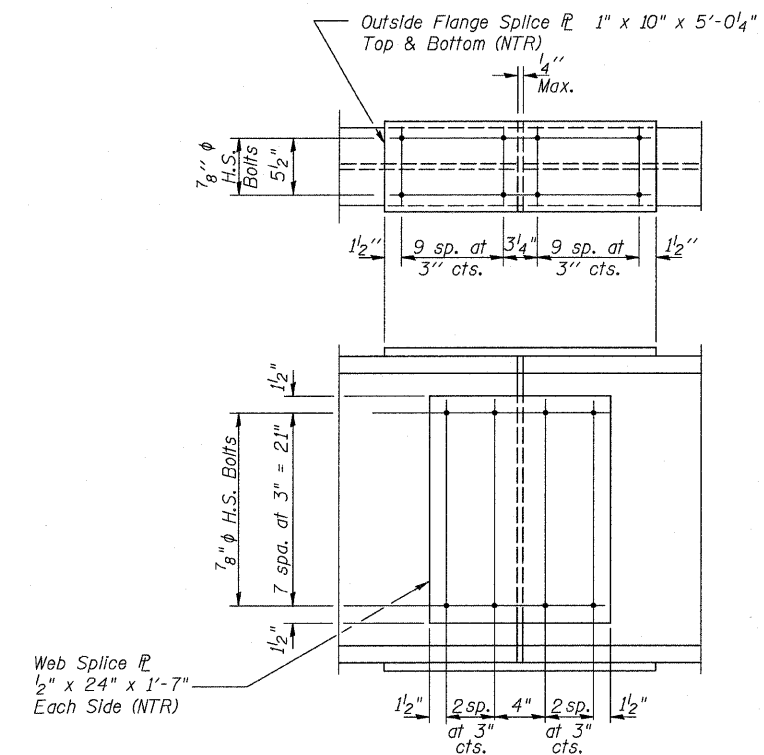


DIAPHRAGM D1
54-Required

* Provide 1 5/16" x 2" vertical slotted holes in angles for diaphragms in stage construction bay (West Side of Beam 5).

Notes:

- 1) Two hardened washers shall be required over all oversize holes for diaphragms.
- 2) All splice plates shall conform to the supplemental requirements for Notch Toughness Zone 2. (NTR) in accordance with the General Notes.
- 3) Structural steel for diaphragms, filler plates and connection angles shall be AASHTO M270 Grade 50W.
- 4) Structural steel for splice plates shall be AASHTO M270 Grade 50W.



SPLICE
20-Required

REVISIONS	
NAME	DATE

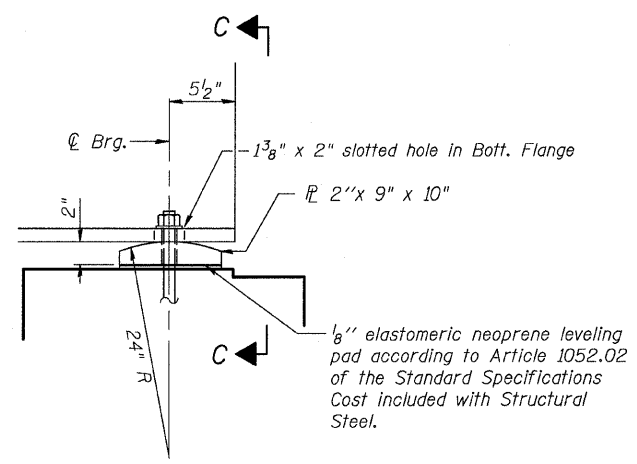
ILLINOIS DEPARTMENT OF TRANSPORTATION
ILLINOIS ROUTE 21
MILWAUKEE AVE. OVER DES PLAINES RIVER
F.A.P. ROUTE 374 SECTION 3268F-R-1
COOK COUNTY, SN 016-6566

DIAPHRAGM/SPLICE DETAILS
DESIGN BY: BTO DRAWN BY: BTO
DATE: 02/05/08 CHECKED BY: JAN CHECKED BY: JAN

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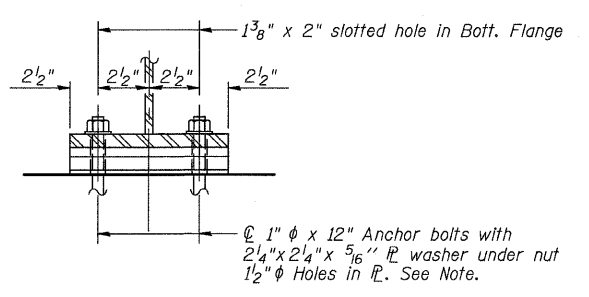
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CONTRACT NO. 62387

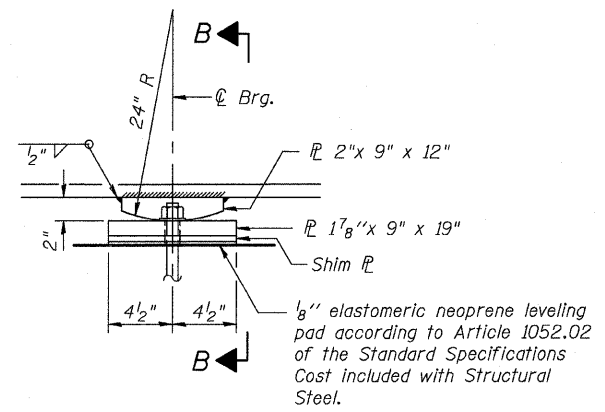


ELEVATION

BEARING AT INTEGRAL ABUTMENT

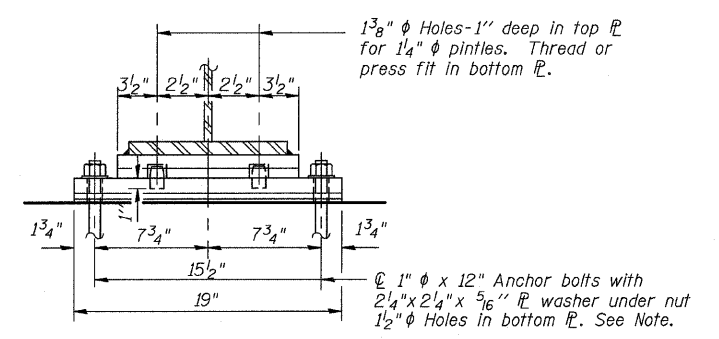


SECTION C-C

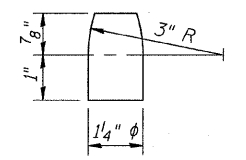


ELEVATION AT PIER

FIXED BEARING



SECTION B-B



PINTLE

FOR INFORMATION ONLY.
INCLUDED IN BEAM FABRICATION
CONTRACT EXCEPT FOR
ANCHORS.

Note:

- Structural steel for bearing plates shall be AASHTO M270, Grade 50W.
- Anchors for bearing plates shall be 1" x 12" A307 Gr C, F 1554 Gr 36 or M314 Gr 36.
- Structural steel for bearing plates shall be AASHTO M270, Grade 50W.

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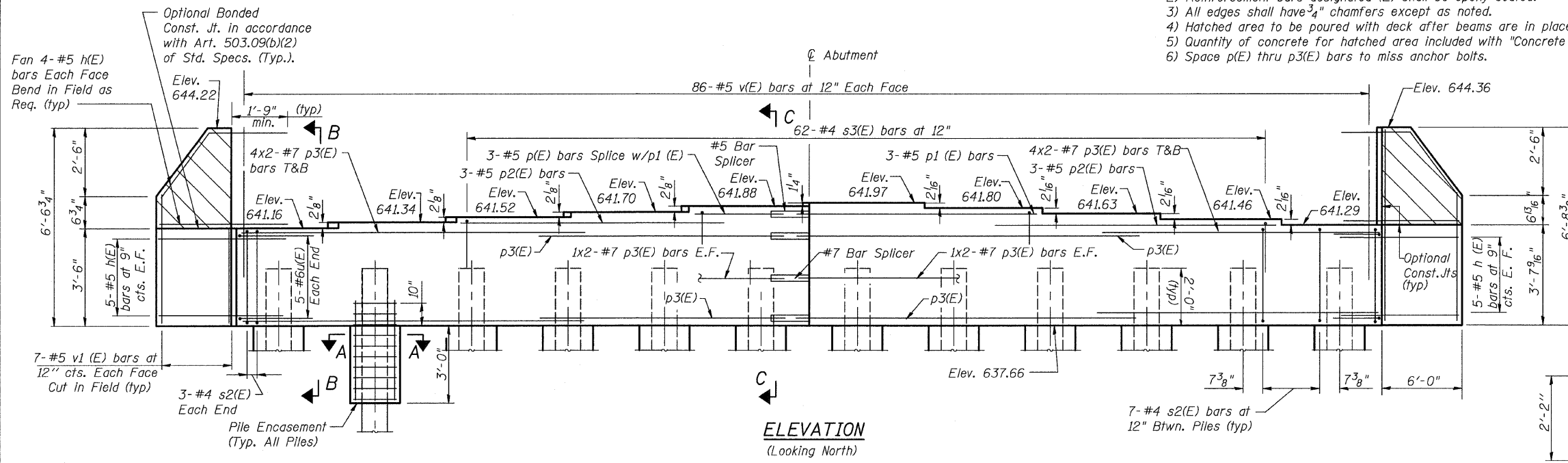
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
ILLINOIS ROUTE 21
MILWAUKEE AVE. OVER DES PLAINES RIVER
F.A.P. ROUTE 374 SECTION 3268F-R-1
COOK COUNTY, SN 016-6566
BEARING DETAILS
DESIGN BY: BTO DRAWN BY: BTO
DATE: 02/05/08 CHECKED BY: JAN CHECKED BY: JAW

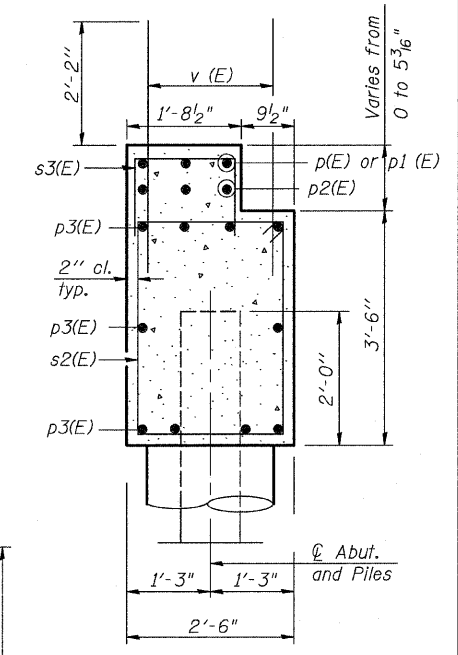
F.A.P. SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374 3268F-R-1	COOK	279	150
STA. TO STA.	ILLINOIS FED. AID PROJECT		
FED. ROAD DIST. NO.	CONTRACT NO. 62387		

SHT. S-18 OF S-28

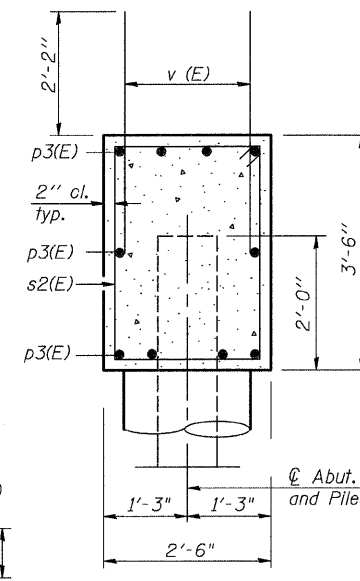
- Notes: 1) Pour steps monolithically with cap.
 2) Reinforcement bars designated (E) shall be epoxy coated.
 3) All edges shall have 3/4" chamfers except as noted.
 4) Hatched area to be poured with deck after beams are in place.
 5) Quantity of concrete for hatched area included with "Concrete Superstructure" on Sheet S-13.
 6) Space p(E) thru p3(E) bars to miss anchor bolts.



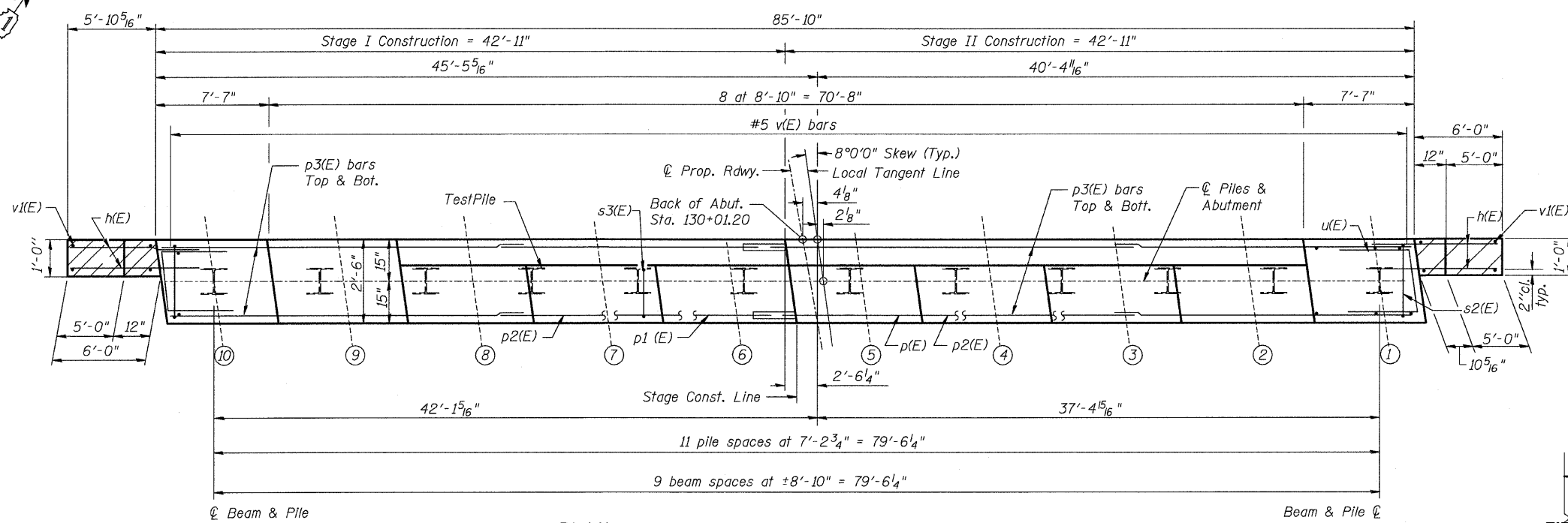
ELEVATION
(Looking North)



SECTION C-C
ABUTMENT



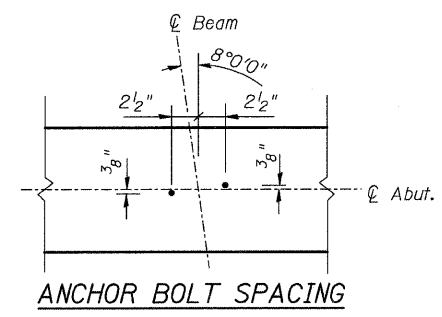
SECTION B-B
ABUTMENT



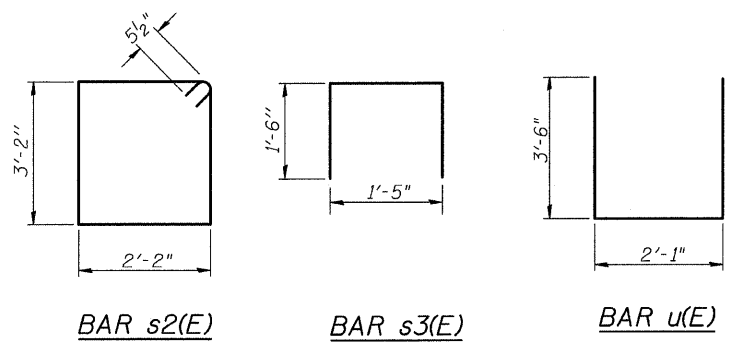
PLAN

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	36	#5	8'-3"	—
p(E)	3	#5	8'-6"	—
p1(E)	3	#5	17'-4"	—
p2(E)	6	#5	19'-10"	—
p3(E)	40	#7	23'-0"	—
s2(E)	83	#4	11'-7"	□
s3(E)	62	#4	4'-5"	□
u(E)	10	#6	9'-1"	□
v(E)	172	#5	3'-3"	—
v1(E)	28	#5	6'-5"	—
Concrete Structures		Cu. Yd.	36.5	
Reinforcement Bars, Epoxy Coated		Pound	4130	
Furnishing Steel Piles HP 10x42		Foot	638	
Driving Piles		Foot	638	
Pile Shoes		Each	11	
Test Pile Steel HP 10x42		Each	1	



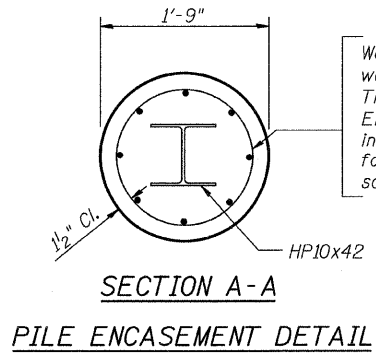
ANCHOR BOLT SPACING



PILE DATA

Type: Steel HP10x42 with Pile Shoes
 Nominal Required Bearing: 498 kips
 Allowable Resistance Available: 110 kips
 Est. Length: 58 Feet
 No. Required: 11
 Plus 1 Test Pile

The Steel H-piles shall be according to AASHTO M270 Grade 50



SECTION A-A
PILE ENCASEMENT DETAIL

STV Incorporated
 Engineers/Architects/Planners/Construction Managers
 200 W. Monroe Street, Suite 1650
 Chicago, IL 60606-3015
 312.533-0633, FAX 312.533-0661

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 ILLINOIS ROUTE 21
 MILWAUKEE AVE. OVER DES PLAINES RIVER
 F.A.P. ROUTE 374 SECTION 3268F-R-1
 COOK COUNTY, SN 016-6566

NORTH ABUTMENT

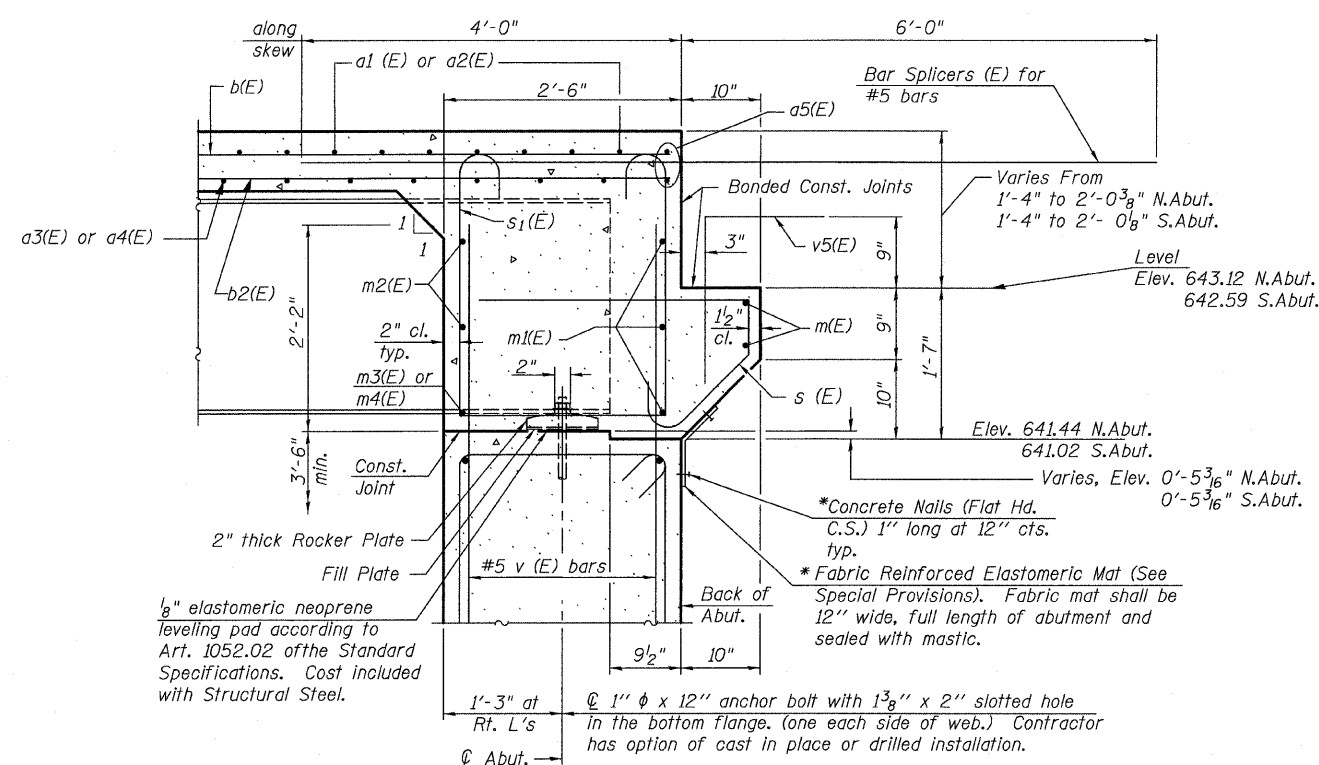
DESIGN BY: AWH DRAWN BY: AWH
 DATE: 02/05/08 CHECKED BY: BTO CHECKED BY: JAW

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	152
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

CONTRACT NO. 62387

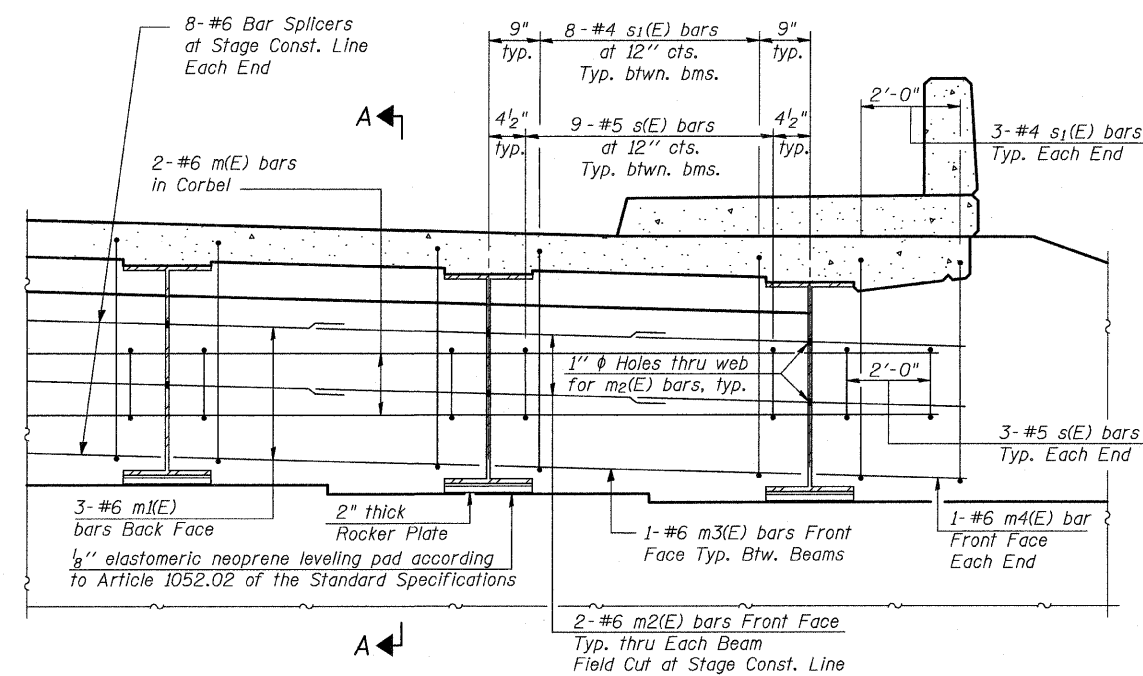
Notes:
 Reinforcement bars in diaphragm are billed with superstructure on sheet 13 of 29.
 Concrete in diaphragm is included with Concrete Superstructure on sheet 13 of 29.
 For details of bars s(E) & s1(E) see sheet 13 of 29.
 The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
 For anchor bolt details see sheet 23 of 29.
 For Abutments see sheets 18 & 19 of 29.
 Dimensions at right angles to abutment, except as shown.
 Cost included with Concrete Superstructure.

Minimum Bar Lap #6 bar = 2'-9"



SECTION A-A

* Included in the cost of Concrete Superstructure



DIAPHRAGM ELEVATION AT ABUTMENT

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 ILLINOIS ROUTE 21
 MILWAUKEE AVE. OVER DES PLAINES RIVER
 F.A.P. ROUTE 374 SECTION 3268F-R-1
 COOK COUNTY, SN 016-6566
 ABUTMENT DIAPHRAGM DETAILS
 DESIGN BY: AWH DRAWN BY: AWH
 DATE: 02/05/08 CHECKED BY: JAW CHECKED BY: JAW

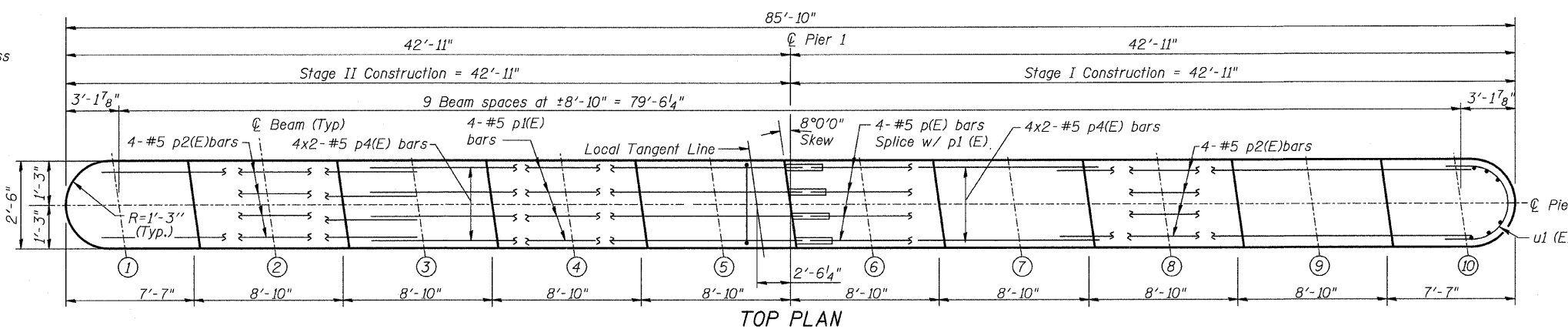
STV Incorporated
 Engineers/Architects/Planners/Construction Managers
 200 W. Monroe Street, Suite 1650
 Chicago, IL 60606-5013
 312/553-0655, FAX 312/553-0661

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	153
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

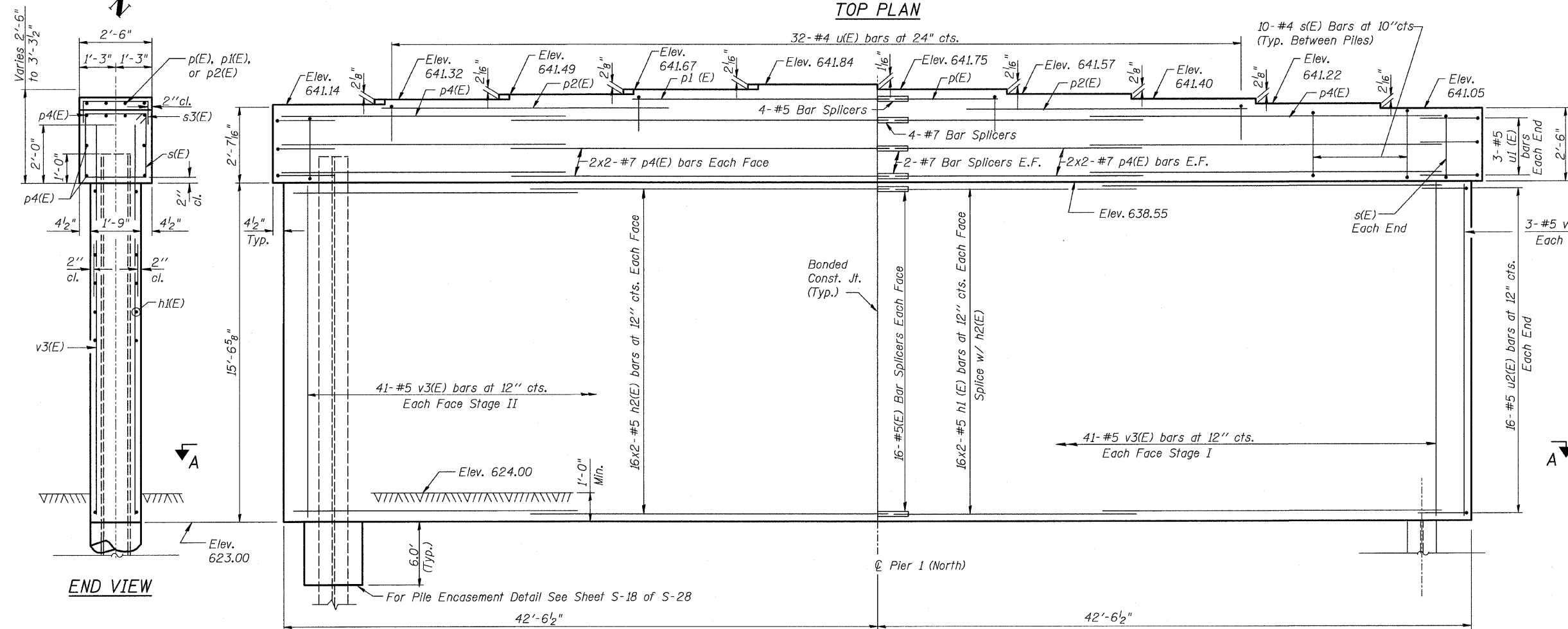
SHT. S-21 OF S-28

CONTRACT NO. 62387

Notes:
 All edges shall have standard 3/4" chamfer except as noted.
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 Minimum Rebar Splice Length:
 #5 - 2'-2"
 #7 - 3'-5"
 Bars indicated thus 16x2-#5 h(E) etc., indicates 16 lines of bars 2 lengths per line.

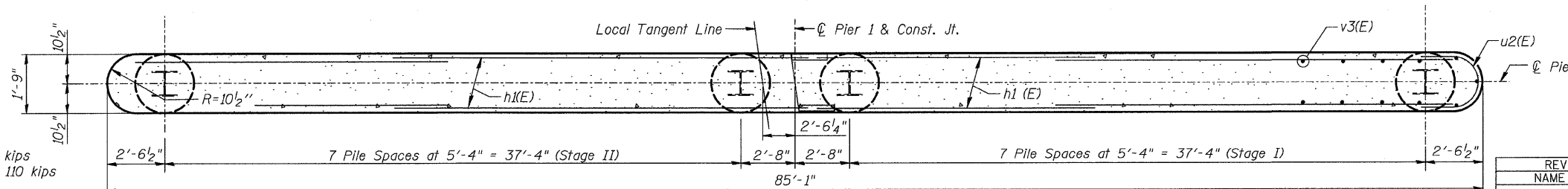


TOP PLAN



ELEVATION

(Looking South)



SECTION A-A

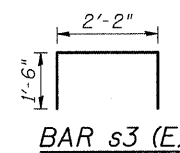
PILE DATA

Type: Steel HP 10x42 with Pile Shoes
 Nominal Required Bearing: 498 kips
 Allowable Resistance Available: 110 kips
 Est. Length: 61 feet
 No. Required: 15
 Plus 1 Steel Test Pile HP 10x42

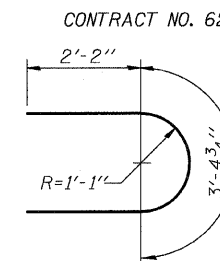
The Steel H-piles shall be according to AASHTO M270 Grade 50.

NOTE:

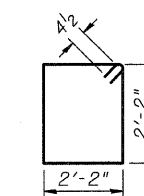
Forms shall be placed below Elev. 623.00 after excavation for pier walls. Reinforcement and Class SI Concrete Encasement shall be placed underwater into forms. The cost of class SI Concrete Encasement, reinforcement, form excavation, and furnishing and placing forms is incidental to furnishing piles. If a portion of the pier wall is underwater, Class SI Concrete shall be tremied underwater into the forms in accordance with Article 503.08(a) of the Standard Specifications. Concrete shall be tremied to an elevation 12" above the water level at the time of construction.



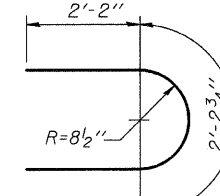
BAR s3 (E)



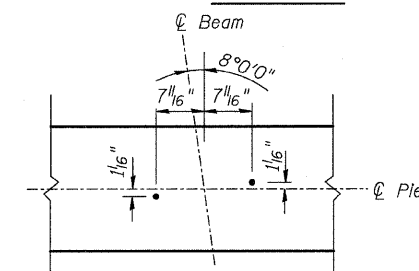
BAR u1 (E)



BAR s(E)



BAR u2(E)



ANCHOR BOLT SPACING

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h1(E)	128	#5	21'-11"	—
p1(E)	4	#5	8'-6"	—
p2(E)	4	#5	17'-4"	—
p4(E)	8	#5	19'-10"	—
p4(E)	32	#7	22'-6"	—
s(E)	92	#4	9'-5"	□
s3(E)	62	#4	5'-2"	□
u1(E)	6	#5	7'-9"	U
u2(E)	32	#5	6'-7"	U
v3(E)	170	#5	17'-5"	—
Reinforcement Bars, Epoxy Coated		Pound		8820
Concrete Structures		Cu. Yd.		116.9
Test Piles Steel HP 10x42		Each		1
Furnishing Steel Piles HP 10x42		Feet		915
Driving Piles		Feet		915
Pile Shoes		Each		15
Underwater Structure Excavation Protection Location 1		Each		1
Structure Excavation		Cu. Yd.		60

Reinforcement bars designated (E) shall be epoxy coated.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 ILLINOIS ROUTE 21
 MILWAUKEE AVE. OVER DES PLAINES RIVER
 F.A.P. ROUTE 374 SECTION 3268F-R-1
 COOK COUNTY, SN 016-6566

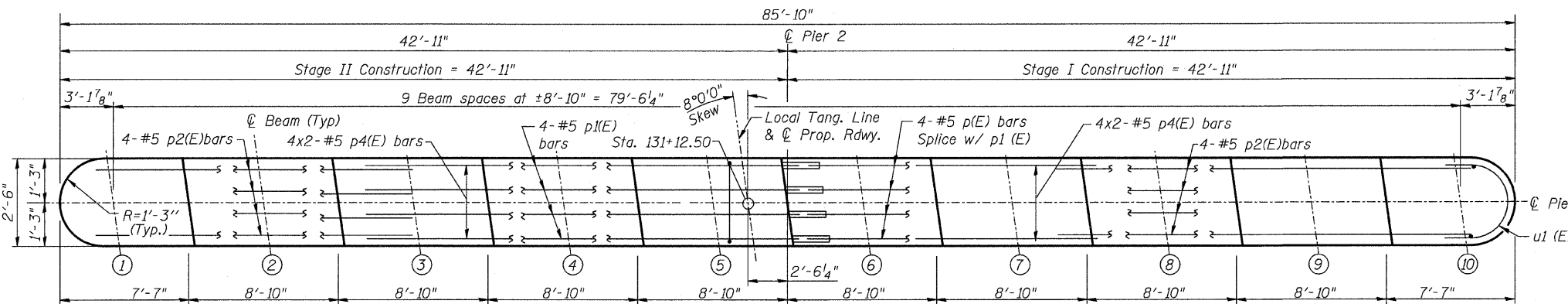
PIER 1 ELEVATION & PLAN

DESIGN BY: AWH DRAWN BY: AWH
 DATE: 02/05/08 CHECKED BY: JAW CHECKED BY: JAW

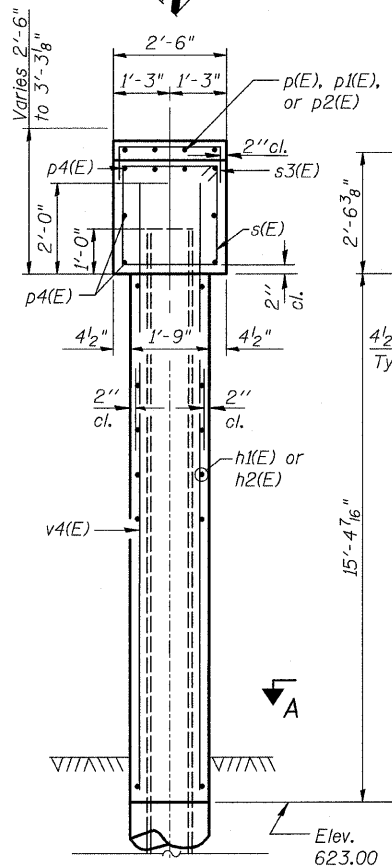


SHT. S-22 OF S-28

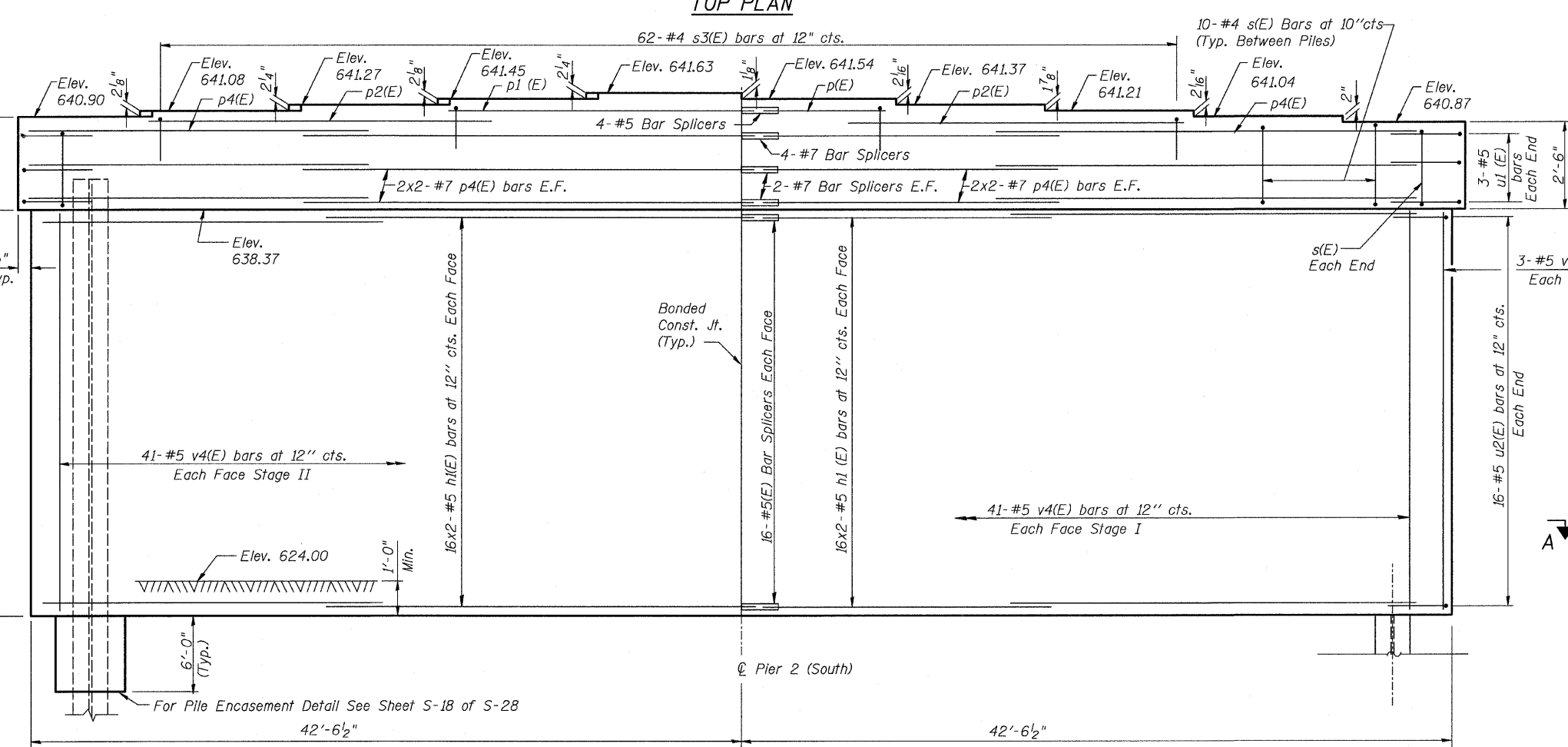
Notes:
 All edges shall have standard 3/4" chamfer except as noted.
 Space reinforcement in cap to miss anchor bolts.
 Four steps monolithically with cap.
 Minimum Rebar Splice Length:
 #5 - 2'-2"
 #7 - 3'-5"
 Bars indicated thus 16x2-#5 h1(E) etc., indicates 16 lines of bars 2 lengths per line.



TOP PLAN

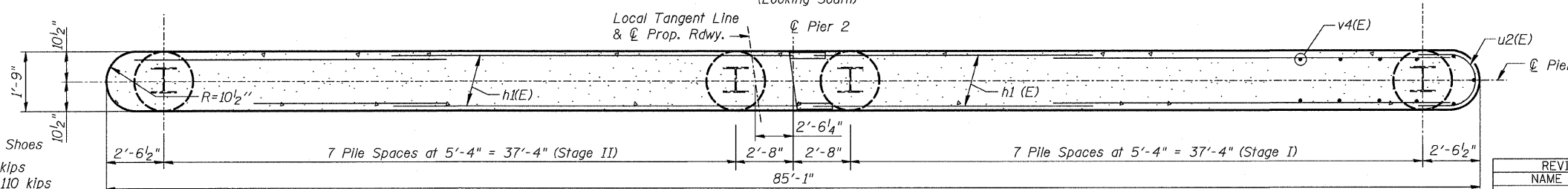


END VIEW



ELEVATION

(Looking South)



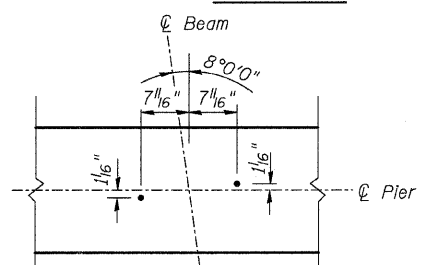
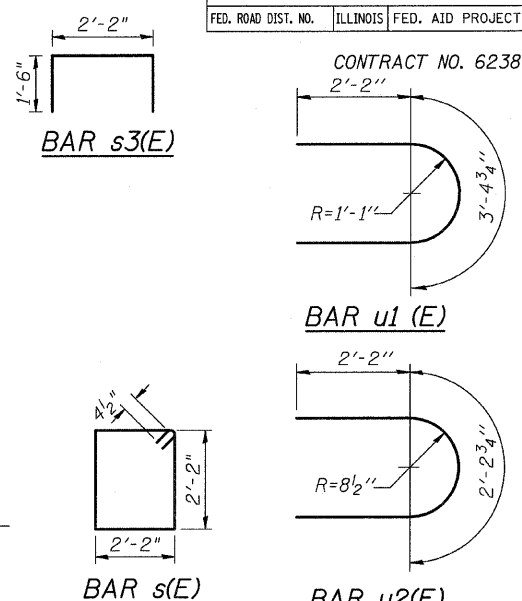
SECTION A-A

PILE DATA

Type: Steel HP 10x42 with Pile Shoes
 Nominal Required Bearing: 498 kips
 Allowable Resistance Available: 110 kips
 Est. Length: 51 Feet
 No. Required: 15 Plus 1 Test Pile

The Steel H-piles shall be according to AASHTO M270 Grade 50.

NOTE:
 Forms shall be placed below Elev. 623.00 after excavation for pler walls. Reinforcement and Class SI Concrete Encasement shall be placed underwater into forms. The cost of class SI Concrete Encasement, reinforcement, form excavation, and furnishing and placing forms is incidental to furnishing piles. If a portion of the pler wall is underwater, Class SI Concrete shall be tremied underwater into the forms in accordance with Article 503.08(a) of the Standard Specifications. Concrete shall be tremied to an elevation 12" above the water level at the time of construction.



ANCHOR BOLT SPACING

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h1(E)	128	#5	21'-11"	—
p1(E)	4	#5	8'-6"	—
p2(E)	8	#5	17'-4"	—
p4(E)	32	#7	22'-6"	—
s(E)	92	#4	9'-5"	□
s3(E)	62	#4	5'-2"	□
u1(E)	6	#5	7'-9"	U
u2(E)	32	#5	6'-7"	U
v4(E)	170	#5	17'-3"	—
Reinforcement Bars, Epoxy Coated		Pound		8800
Concrete Structures		Cu. Yd.		115.7
Test Piles Steel HP 10x42		Each		1
Furnishing Steel Piles HP 10x42		Feet		765
Driving Piles HP 10x42		Feet		765
Pile Shoes		Each		15
Underwater Structure Excavation Protection Location 2.		Each		1
Structure Excavation		Cu. Yd.		32

Reinforcement bars designated (E) shall be epoxy coated.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 ILLINOIS ROUTE 21
 MILWAUKEE AVE. OVER DES PLAINES RIVER
 F.A.P. ROUTE 374 SECTION 3268F-R-1
 COOK COUNTY, SN 016-6566

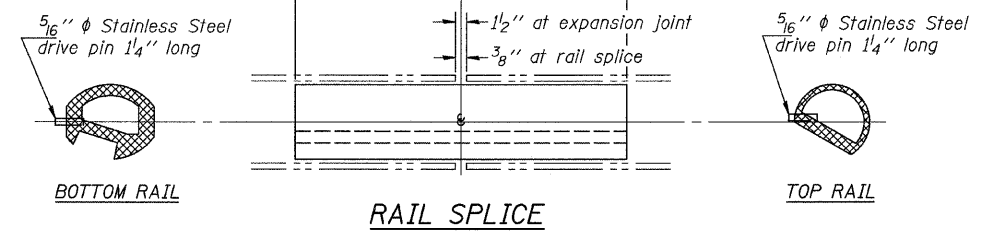
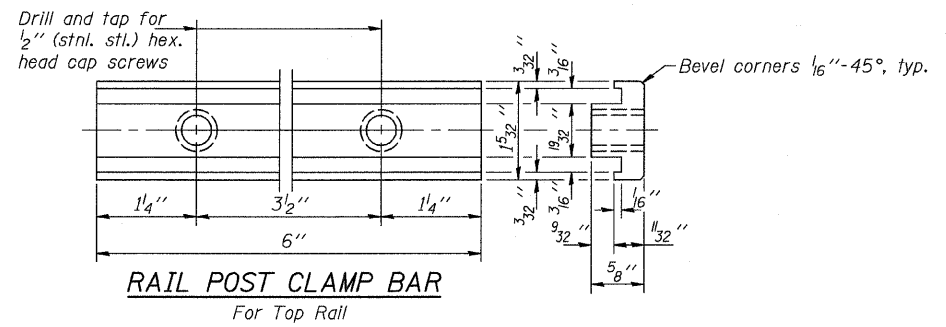
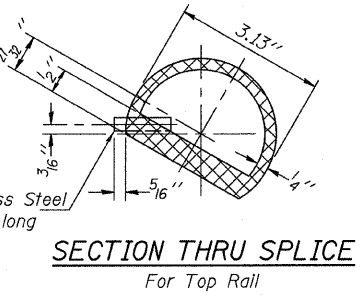
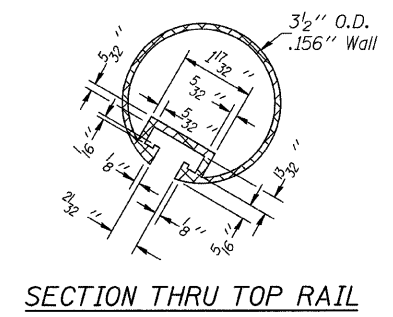
PIER 2 ELEVATION & PLAN

DESIGN BY: AWH DRAWN BY: AWH
 DATE: 02/05/08 CHECKED BY: JAN CHECKED BY: JAW

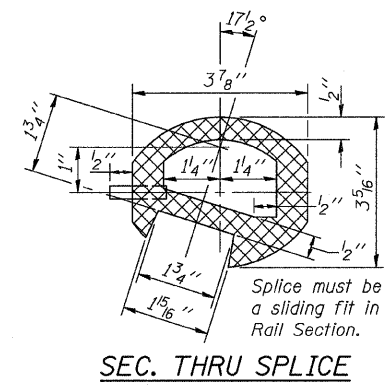
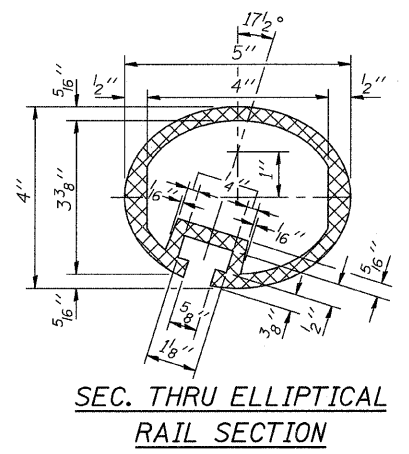
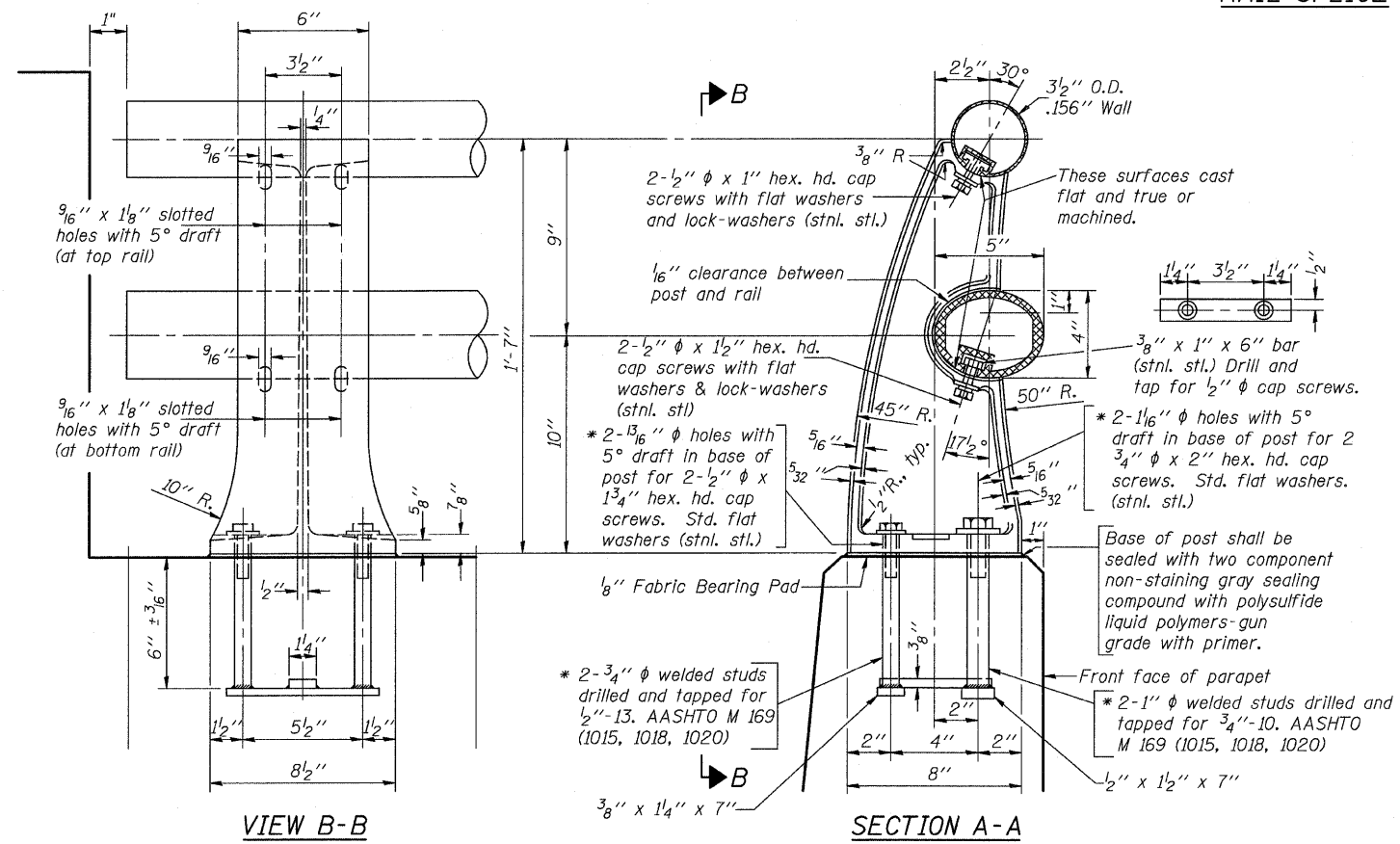
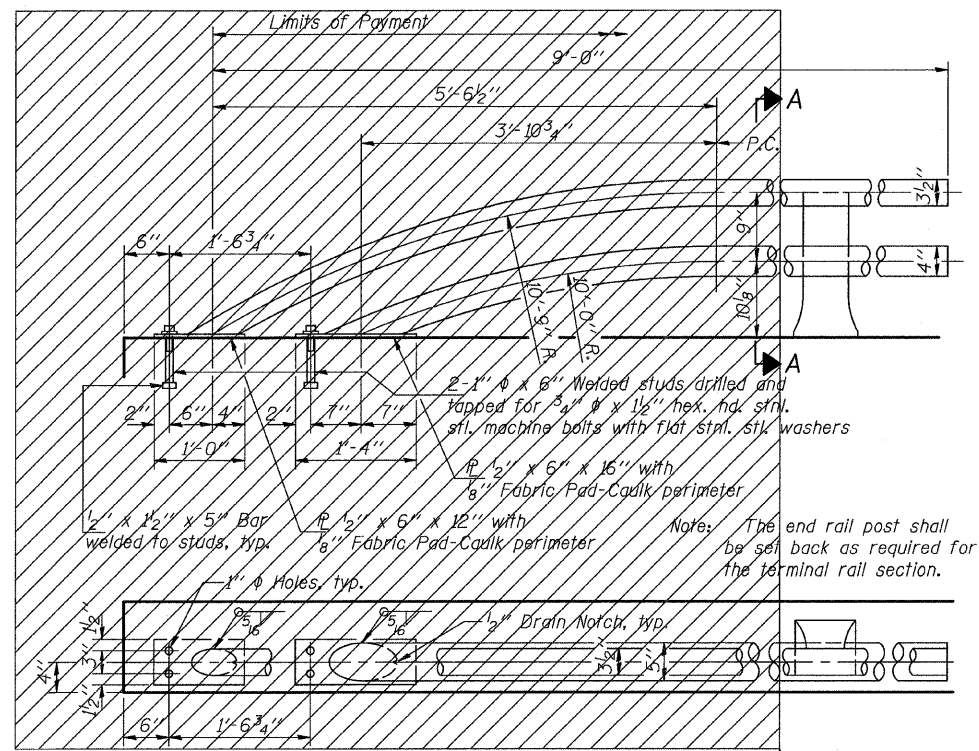


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	155
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62387



Notes:
 All Posts shall be normal to parapet.
 All Aluminum Alloy Extruded Rail shall be supplied in modular lengths of 30 feet, except at the end of bridge or over open joints in bridge deck where the rail shall be attached to a minimum of 2 posts. If the rail is on a horizontal curve of 2300 foot radius or less, the modular lengths may be reduced but shall be attached to a minimum of 2 posts.
 All joints in rail shall be spliced per detail.
 Provide 1-3/8 inch and 2-1/16 inch Aluminum Shims for 25% of the Posts. Rail elements shall be parallel to Grade-high spots will be ground and low spots shimmed.
 Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for ALUMINUM RAILING, TYPE L.
 Aluminum alloy rail shall conform to ASTM B 221 alloy 6061-T6 or 6351-T5 with min. yield 35 ksi, min. tensile 38 ksi, and elongation of 10% in 2 inches.



RAIL TERMINAL SECTION

BILL OF MATERIAL

Item	Unit	Quantity
Aluminum Railing, Type L	Foot	309

TYPE L ALUMINUM RAILING

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 ILLINOIS ROUTE 21
 MILWAUKEE AVE. OVER DES PLAINES RIVER
 F.A.P. ROUTE 374 SECTION 3268F-R-1
 COOK COUNTY, SN 016-6566
 TYPE L RAILING
 DESIGN BY: JAW DRAWN BY: BTO
 DATE: 02/05/08 CHECKED BY: JAN CHECKED BY: JAW

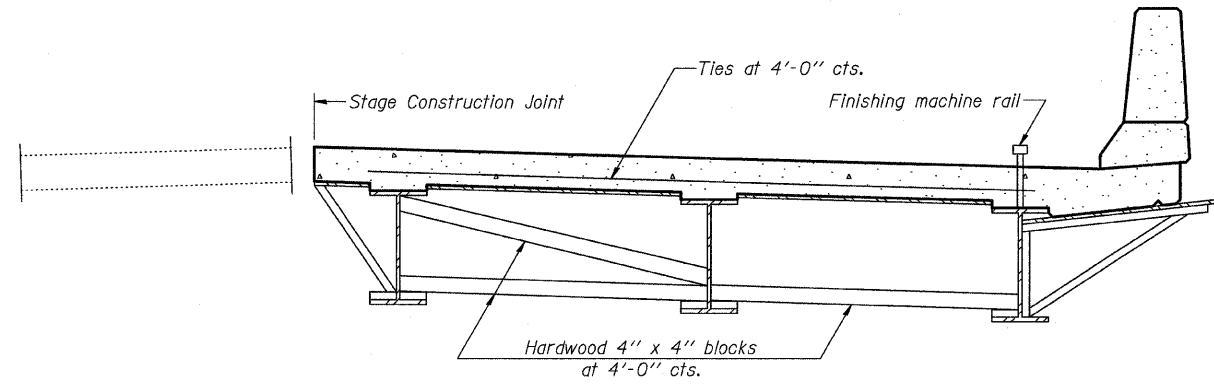


* In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and epoxy grouting stainless steel anchor rods of the same diameter and grade as the specified cap screws. Embedment shall be according to the manufacturer's specifications.

SHT. S-24 OF S-28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	156
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

CONTRACT NO. 62387



**FORM BRACES FOR
STAGE CONSTRUCTION**

When cantilever forming brackets are used, the work shall be done according to Article 503.06, except as modified below and in the details shown on this sheet.

The finishing machine rails shall be placed on the top flange of the exterior beams.

The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.

For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
ILLINOIS ROUTE 21
MILWAUKEE AVE. OVER DES PLAINES RIVER
F.A.P. ROUTE 374 SECTION 3268F-R-1
COOK COUNTY, SN 016-6566

CANTILEVER FORMING BRACKETS

DESIGN BY: BTO DRAWN BY: BTO
DATE: 02/05/08 CHECKED BY: JAN CHECKED BY: JAW

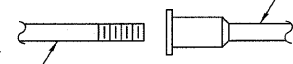


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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	157
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

CONTRACT NO. 62387

The diameter of this part is equal or larger than the diameter of bar spliced.

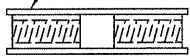


ROLLED THREAD DOWEL BAR



** ONE PIECE

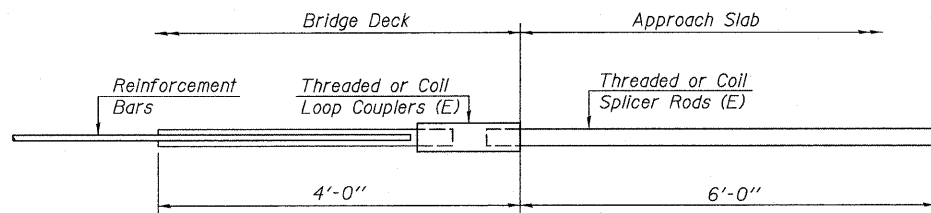
Wire Connector



WELDED SECTIONS

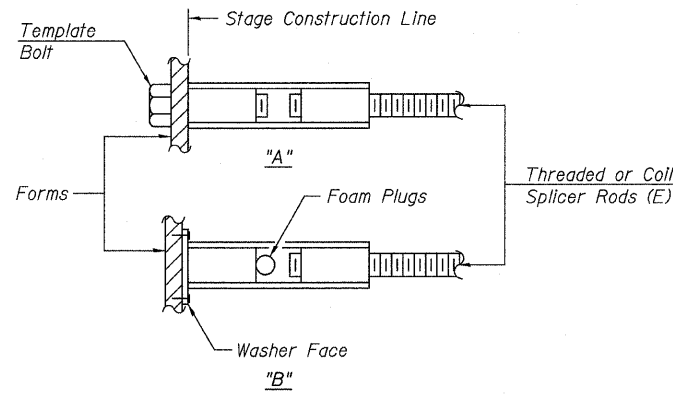
BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



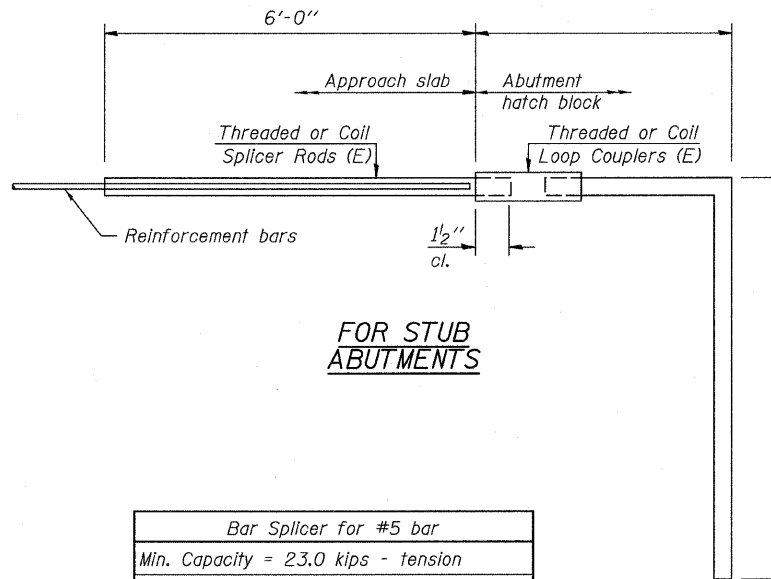
FOR INTEGRAL ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	12.3 kips - tension
No. Required =	170



INSTALLATION AND SETTING METHODS

"A": Set bar splicer assembly by means of a template bolt.
 "B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.



FOR STUB ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	9.2 kips - tension
No. Required =	

Bar Size	No. Assemblies Required	Location
#7	10	N. Abut.
#5	3	N. Abut.
#7	10	S. Abut.
#5	3	S. Abut.
#7	8	Pier 1
#5	36	Pier 1
#7	8	Pier 2
#5	36	Pier 2
#5	671	Deck
#6	16	Diaphragm

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
 All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
 Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity = $1.25 \times f_y \times A_t$
(Tension in kips)
- ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_t$
(Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in ksi.

f_{sallow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)

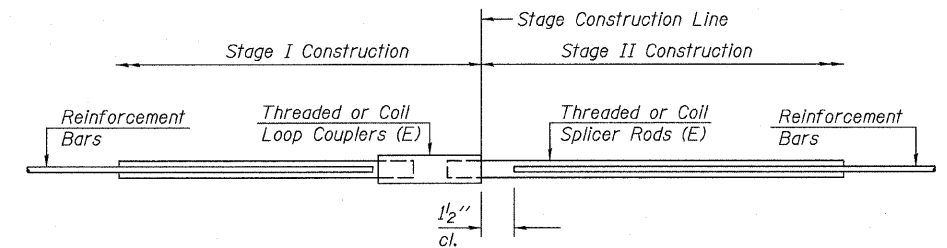
A_t = Tensile stress area of lapped reinforcement bars.

* = 28 day concrete

BAR SPLICER ASSEMBLIES

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



STANDARD

BSD-1 11-1-06



REVISIONS	
NAME	DATE

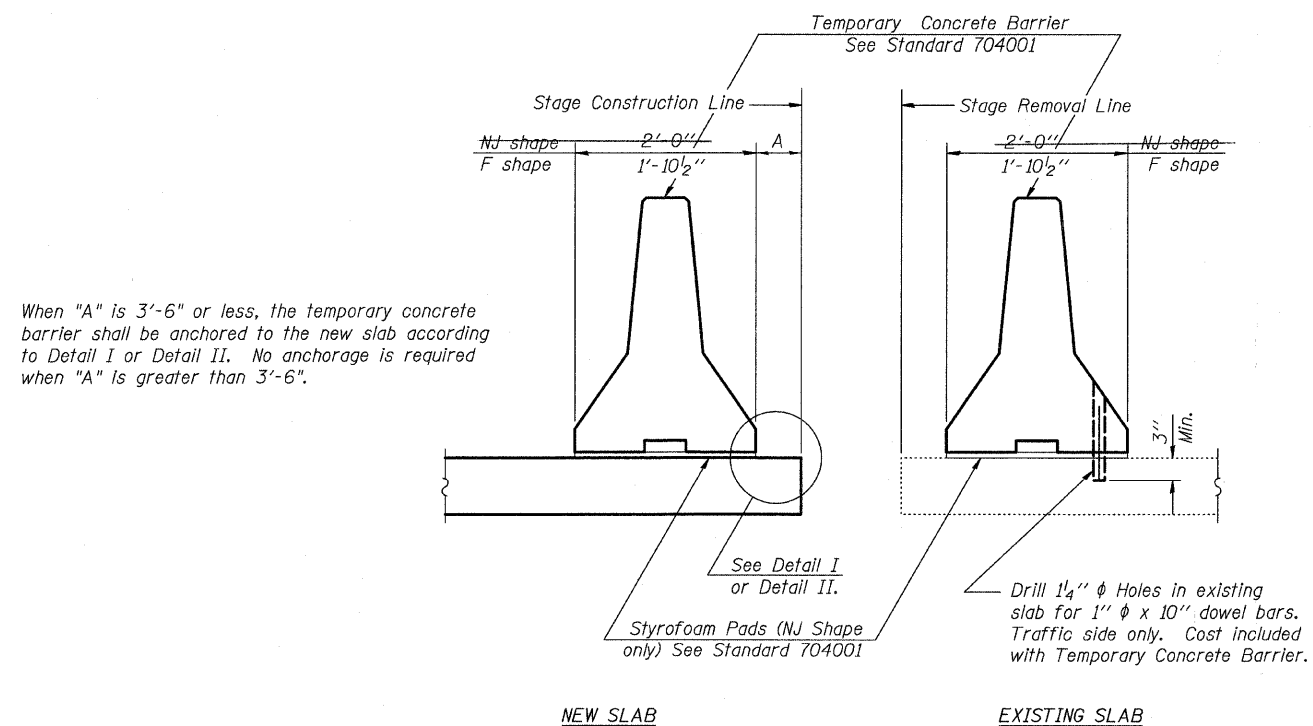
ILLINOIS DEPARTMENT OF TRANSPORTATION
 ILLINOIS ROUTE 21
 MILWAUKEE AVE. OVER DES PLAINES RIVER
 F.A.P. ROUTE 374 SECTION 3268F-R-1
 COOK COUNTY, SN 016-6566

BAR SPLICER ASSEMBLY

DESIGN BY: JAW DRAWN BY: BTO
 DATE: 02/05/08 CHECKED BY: JAN CHECKED BY: JAW

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	158
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

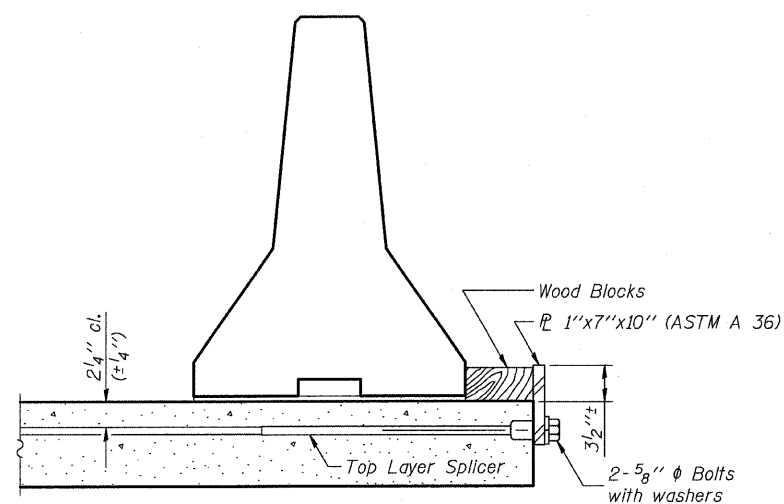
CONTRACT NO. 62387



SECTIONS THRU SLAB

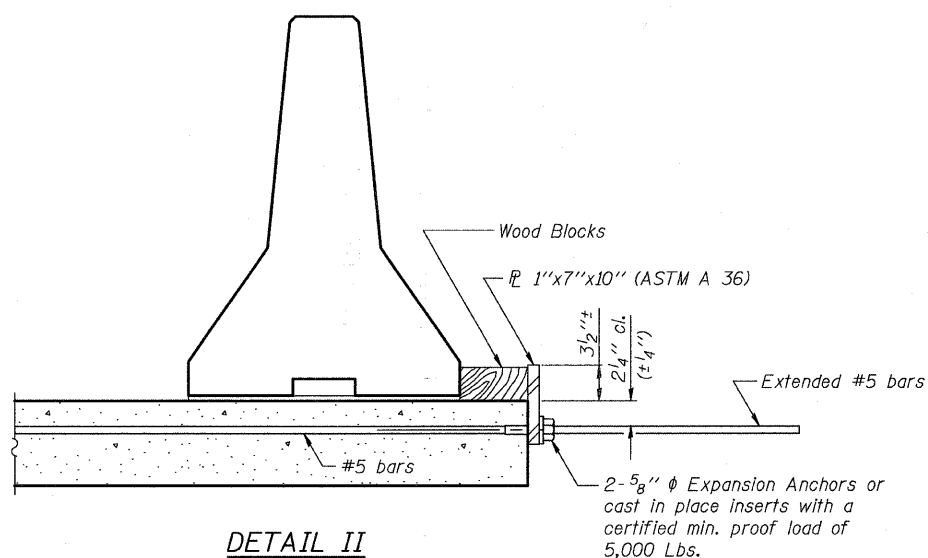
NOTES

- Detail I - With Bar Splicer or Couplers: Connect one (1) 1"x7"x10" steel PL to the top layer of couplers with 2-5/8" φ bolts screwed to coupler at approximate C of each barrier panel.
 - Detail II - With Extended Reinforcement Bars: Connect one (1) 1"x7"x10" steel PL to the concrete slab with 2-5/8" φ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate C of each barrier panel.
- Cost of anchorage is included with Temporary Concrete Barrier.



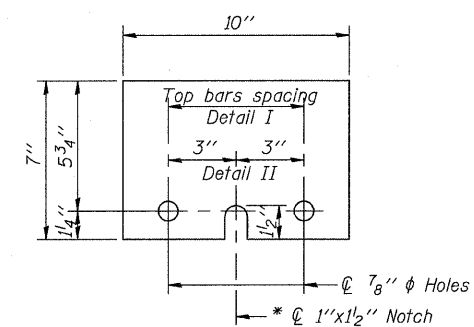
DETAIL I

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



PL 1"x7"x10"

* Required only with Detail II

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 ILLINOIS ROUTE 21
 MILWAUKEE AVE. OVER DES PLAINES RIVER
 F.A.P. ROUTE 374 SECTION 3268F-R-1
 COOK COUNTY, SN 016-6566

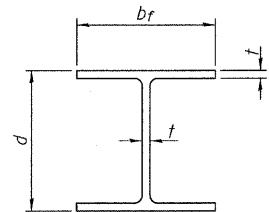
TEMPORARY CONCRETE BARRIER

DESIGN BY: JAW DRAWN BY: BTO
 DATE: 02/05/08 CHECKED BY: JAN CHECKED BY: JAW



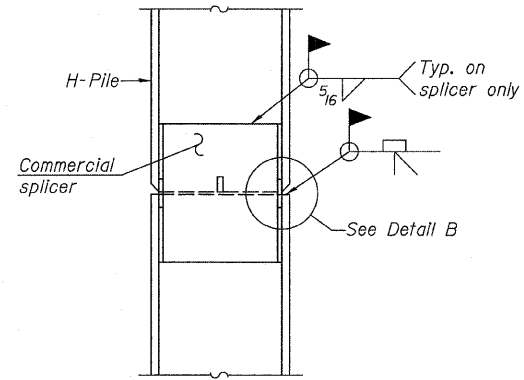
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	158A
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62387

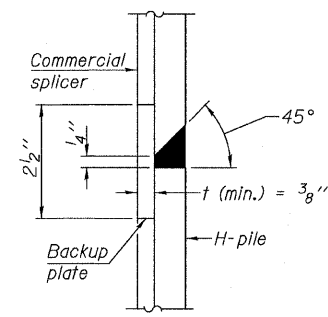


STEEL PILE TABLE

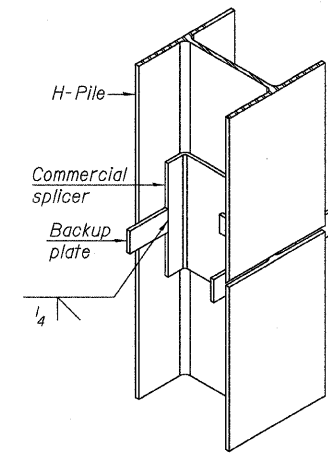
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



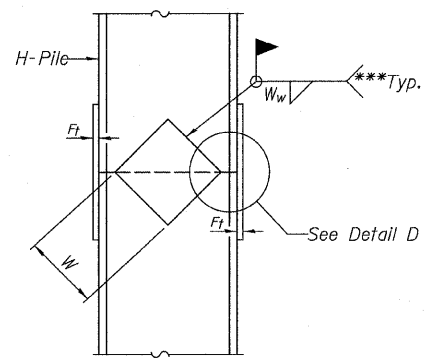
ELEVATION



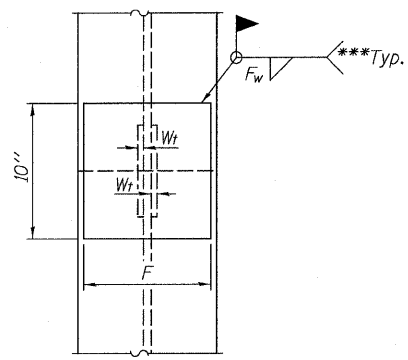
DETAIL "B"



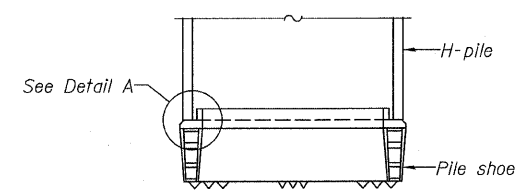
ISOMETRIC VIEW



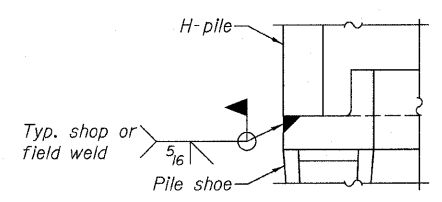
ELEVATION



END VIEW

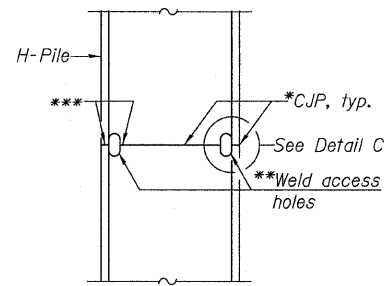


ELEVATION

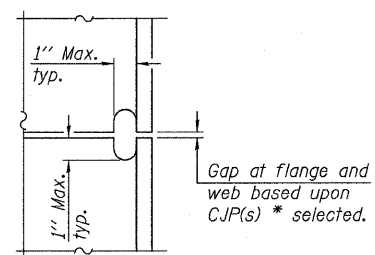


DETAIL A

H-PILE SHOE ATTACHMENT

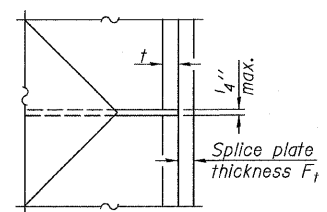


ELEVATION



DETAIL C

COMPLETE PENETRATION WELD SPLICE



DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

- *Use Joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.
- **Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.
- ***Interrupt welds 1/4" from end of each pile.

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
ILLINOIS ROUTE 21
MILWAUKEE AVE. OVER DES PLAINES RIVER
F.A.P. ROUTE 374 SECTION 3268F-R-1
COOK COUNTY, SN 016-6566

PILE BASE SHEET F-HP
DESIGN BY: BTO DRAWN BY: BTO
DATE: 02/05/08 CHECKED BY: JAN CHECKED BY: JAN



TRAFFIC SIGNAL SCHEDULE OF QUANTITIES

ITEM	UNIT	US RTE 45/ILL RTE 21 AT APPLE DRIVE	US RTE 45 AT ILL RTE 21	US RTE 45 AT SEMINOLE LANE/OLD WILLOW ROAD	ILL RTE 21 AT SANDERS ROAD	INTERCONNECT	TOTAL
SIGN PANEL - TYPE 1	SQ FT	13.5	24				37.5
SIGN PANEL - TYPE 2	SQ FT		27.5	30			57.5
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	448	1252	492	130	873	3195
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	100	400	84			584
CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT		5				5
CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	120	126	48	78		372
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	35		90		534	659
CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	192	311	233	66		802
HANDHOLE	EACH	7	8	7	2	2	26
HEAVY-DUTY HANDHOLE	EACH		1	1			2
DOUBLE HANDHOLE	EACH	1	2	1			4
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	750	1585	628	208	873	4044
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH					1	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1	1	1			3
TRANSCEIVER - FIBER OPTIC	EACH	1	1	1			3
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT				290		290
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	291	455	350	600		1696
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1665	3150	1842	840		7497
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	543	800	296	615		2254
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1690	2770	1640	415		6515
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	30		120			150
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	2	5	2			9
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	2	1	1			4
TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH		1	1			2
STEEL MAST ARM ASSEMBLY AND POLE, 22 FT.	EACH		2				2
STEEL MAST ARM ASSEMBLY AND POLE, 24 FT.	EACH	1		2			3
STEEL MAST ARM ASSEMBLY AND POLE, 34 FT.	EACH		1				1
STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	1					1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 34 FT.	EACH		1				1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT.	EACH	1					1
CONCRETE FOUNDATION, TYPE A	FOOT	16	28	16			60
CONCRETE FOUNDATION, TYPE C	FOOT	4	4	4			12
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	23.5	47	20			90.5
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	11					11
DRILL EXISTING HANDHOLE	EACH				2	1	3
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	6	8	4			18
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2	5	3			10
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2	2				4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	1	1	1			3
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH		1	1			2
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH			1			1
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	7	9	5			21
INDUCTIVE LOOP DETECTOR	EACH	7	8	6			21
DETECTOR LOOP, TYPE I	FOOT	183		448			631
LIGHT DETECTOR	EACH	2					5
LIGHT DETECTOR AMPLIFIER	EACH	1	1				2
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1	1	1	1		4
RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH			3			3
RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH			1			1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT				1255	100	1355
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1	1	1			3
REMOVE EXISTING HANDHOLE	EACH	7	12	8	2		29
REMOVE EXISTING CONCRETE FOUNDATION	EACH	7	9	6			22
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT					2828	2828
PREFORMED DETECTOR LOOP	FOOT	298	383	66	79		826
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM - LEVEL II	EACH					1	1
SERVICE INSTALLATION, POLE MOUNT	EACH	1	1	1			3
UNINTERRUPTIBLE POWER SUPPLY	EACH	1	1	1			3
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT					2828	2828
ELECTRIC CABLE IN CONDUIT, GROUNDING NO. 6 1C	FOOT	710	2050	695	185		3640
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	310	455	365	305		1435
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 4, 2/C	FOOT		595				595

(1) BOTH TEMPORARY TRAFFIC SIGNAL CONFIGURATIONS REQUIRED AT THE US RTE 45 + ILL RTE 21 INTERSECTION ARE INCLUDED IN THE COST OF THIS ITEM.

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SPAAN Tech, Inc.
 311 S. Wacker Drive, Suite 2400
 Chicago, Illinois 60606
 phone: 312.277.8800
 fax: 312.277.8808
 web: www.SpaanTech.com

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL SCHEDULE OF QUANTITIES
 MILWAUKEE AVENUE (ILL RTE 21)
 SOUTH OF WILLOW ROAD TO SANDERS ROAD

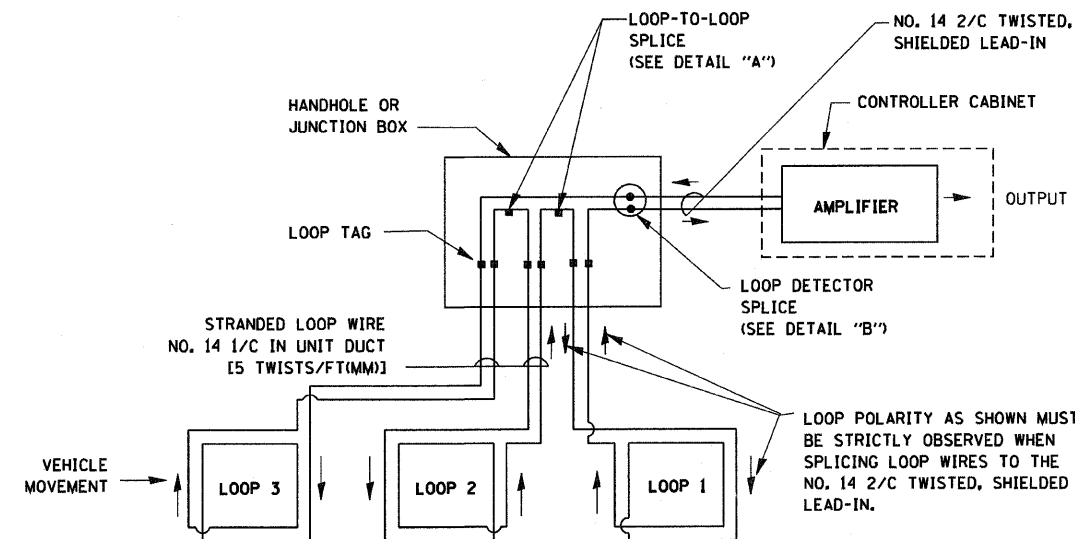
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DRAWN BY: RAS
 DESIGN BY: RAS
 CHECKED BY: ADD

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	162
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

LOOP DETECTOR NOTES

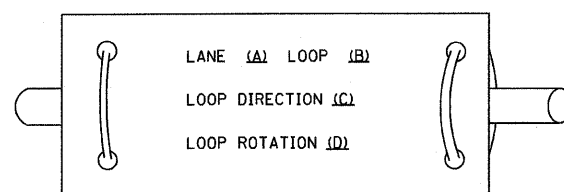
1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.



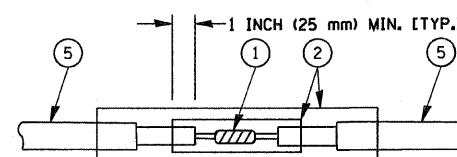
DETECTOR LOOP WIRING SCHEMATIC

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.

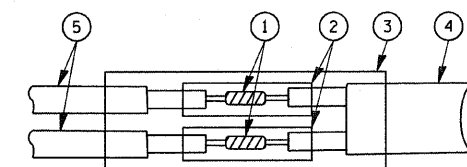
LOOP LEAD-IN CABLE TAG



- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.



**DETAIL "A"
LOOP-TO-LOOP SPLICE**



**DETAIL "B"
LOOP-TO-CONTROLLER SPLICE**

LOOP DETECTOR SPLICE

- 1 WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.
- 2 WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- 3 WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- 4 NO. 14 2/C TWISTED, SHIELDED CABLE.
- 5 LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

PLOT DATE = 2/15/2006
FILE NAME = w:\district1\std_sgn.dgn
PLOT SCALE = 50.0000 / IN.
USER NAME = geglennob

REVISIONS	
NAME	DATE
CADD	5/30/00
ADD NOTE NO. 8	11/12/01
BUREAU OF TRAFFIC	1-01-02

ILLINOIS DEPARTMENT OF TRANSPORTATION

**DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS**

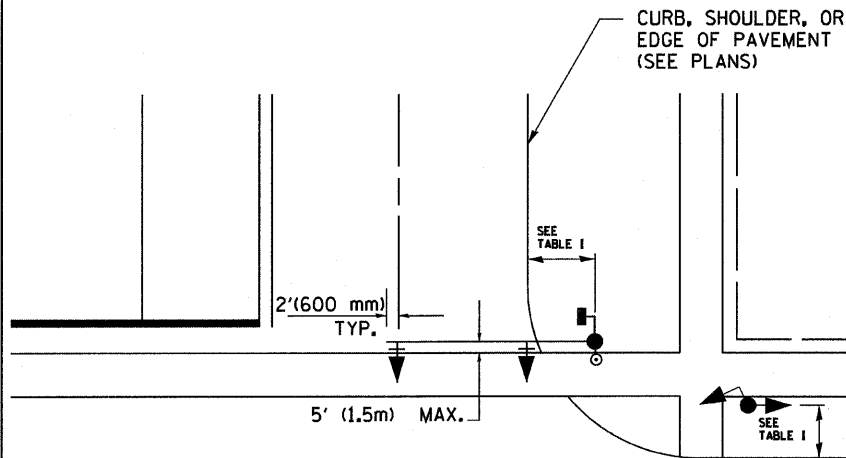
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DESIGNED BY: DAD
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SHEET 1 OF 4

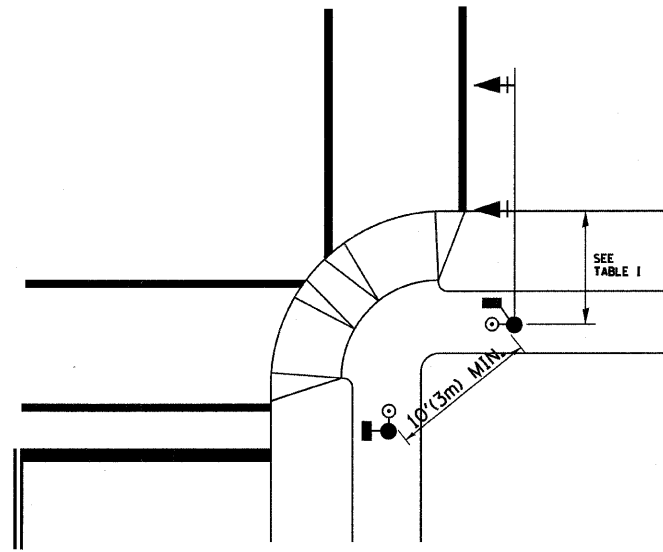
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	163
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

TRAFFIC SIGNAL MAST ARM AND POST

MAST ARM MOUNTED SIGNAL IN PROPOSED & FUTURE SIDEWALK AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNAL AND PUSHBUTTON DETECTOR



PEDESTRIAN SIGNAL PUSHBUTTON



RECOMMENDED PUSHBUTTON LOCATIONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHALL BE IN ACCORDANCE WITH THE CURRENT MUTCD (SEE NOTE 1). TO MEET MUTCD REQUIREMENTS, PEDESTRIAN SIGNAL PUSHBUTTONS MAY HAVE TO BE MOUNTED ON A SEPARATE POST.

NOTES:

- AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS WITH PEDESTRIAN ACTUATION. EACH PUSHBUTTON SHALL ACTIVATE BOTH THE WALK INTERVAL AND THE ACCESSIBLE PEDESTRIAN SIGNALS.

AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS, PUSHBUTTONS SHOULD CLEARLY INDICATE WHICH CROSSWALK SIGNAL IS ACTUATED BY EACH PUSHBUTTON. PUSHBUTTONS AND TACTILE ARROWS SHOULD HAVE HIGH VISUAL CONTRAST (SEE THE DEPARTMENT OF JUSTICE'S AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN, 1991). TACTILE ARROWS SHOULD POINT IN THE SAME DIRECTION AS THE ASSOCIATED CROSSWALK. AT CORNERS OF SIGNALIZED LOCATIONS WITH ACCESSIBLE PEDESTRIAN SIGNALS WHERE PEDESTRIAN PUSHBUTTONS ARE PROVIDED, THE PUSHBUTTONS SHOULD BE SEPARATED BY THE DISTANCE OF AT LEAST 10 FT (3m). THIS ENABLES PEDESTRIANS WHO HAVE VISUAL DISABILITIES TO DISTINGUISH AND LOCATE THE APPROPRIATE PUSHBUTTON.

PUSHBUTTONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHOULD BE LOCATED AS FOLLOWS:
 A: ADJACENT TO A LEVEL ALL-WEATHER SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS AN ALL WEATHER SURFACE, WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.
 B: WITHIN 5 FT (1.5m) OF THE CROSSWALK EXTENDED.
 C: WITHIN 10 FT (3m) OF THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
 D: PARALLEL TO THE CROSSWALK TO BE USED (SEE MUTCD FIGURE 4E-2).
 E: NORMAL PEDESTRIAN PUSHBUTTON MOUNTING HEIGHT SHOULD BE 3.5 FT (1.05m) ABOVE ADJACENT SIDEWALK
- PEDESTRIAN SIGNAL FACES SHALL BE MOUNTED WITH THE BOTTOM OF THE HOUSING NOT LESS THAN 8 FT (2.4m) NOR MORE THAN 10 FT (3.0m) ABOVE THE SIDEWALK LEVEL AND SO THERE IS A PEDESTRIAN INDICATION IN THE LINE OF PEDESTRIANS' VISION WHICH PERTAINS TO THE CROSSWALK BEING USED.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, NOT MOUNTED OVER A ROADWAY, SHALL BE AT LEAST 10 FT (3.0m) BUT NOT MORE THAN 15 FT (4.5m) ABOVE THE SIDEWALK OR, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALKS EXIST.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, MOUNTED OVER A ROADWAY, SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001 AND 877006. (16 FT (5m) MIN., 18 FT (5.5m) MAX., FROM HIGHEST POINT OF PAVEMENT)

PEDESTRIAN SIGNAL POST

PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON DETECTOR LOCATION

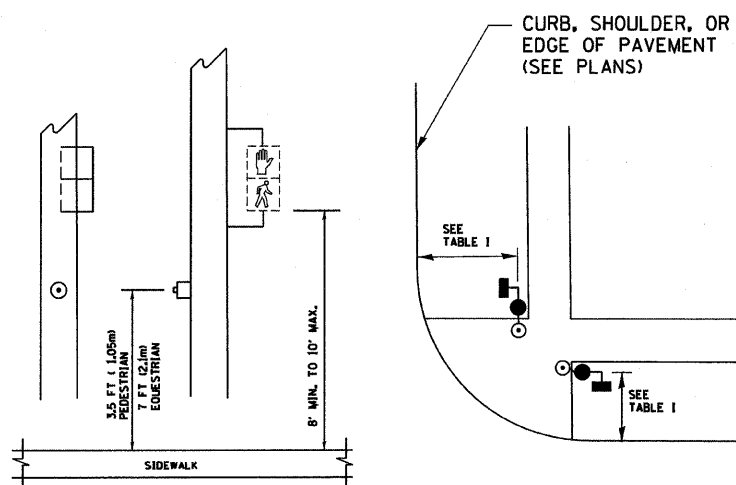


TABLE I

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MIN. DIST. FROM BACK OF CURB)	SHOULDER/NON-CURBED AREA (MIN. DIST. FROM EDGE OF PAVEMENT)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN PUSHBUTTON	SEE NOTE 1	SEE NOTE 1

PLOT DATE = 1/17/2007
 FILE NAME = K:\dassada\va02.dgn
 PLOT SCALE = 50.0000 / IN.
 USER NAME = legno

REVISIONS	
NAME	DATE
BUREAU OF TRAFFIC	1/01/02

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1
 STANDARD TRAFFIC SIGNAL
 DESIGN DETAILS

SCALE: NONE
 DATE: 1/17/2007

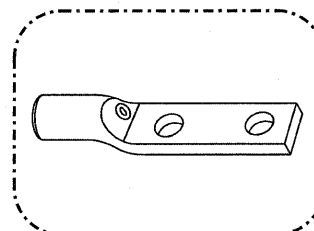
DRAWN BY: RWP
 DESIGNED BY: DAD
 CHECKED BY: DAZ
 SHEET 2 OF 4

F.A. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	164
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

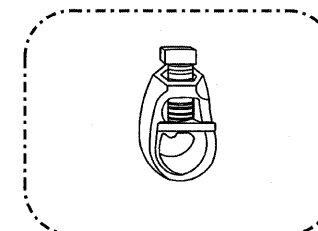
NOTES:

GROUNDING SYSTEM

1. 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 PROVIDED. 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.
2. 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.
3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



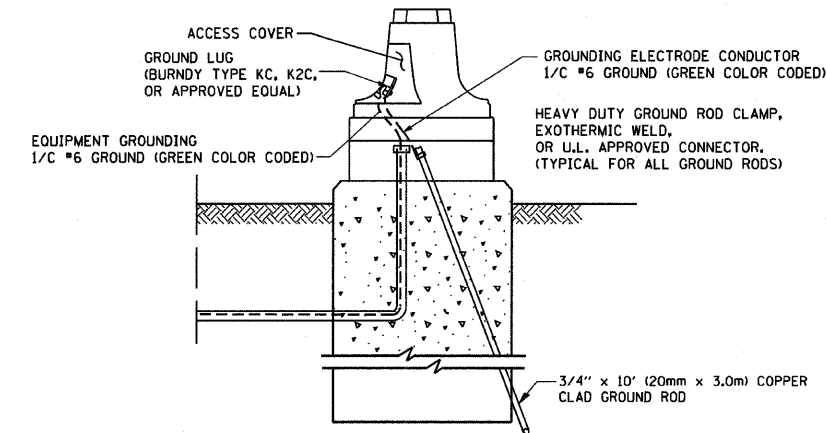
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EQUAL)

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.



MAST ARM POLE / POST-GROUNDING DETAIL

(NOT TO SCALE) TS-4 of 39

REVISIONS		
NAME	DATE	
CADD	5/30/00	
CADD	3/15/01	
BUREAU OF TRAFFIC	1/01/02	

ILLINOIS DEPARTMENT OF TRANSPORTATION

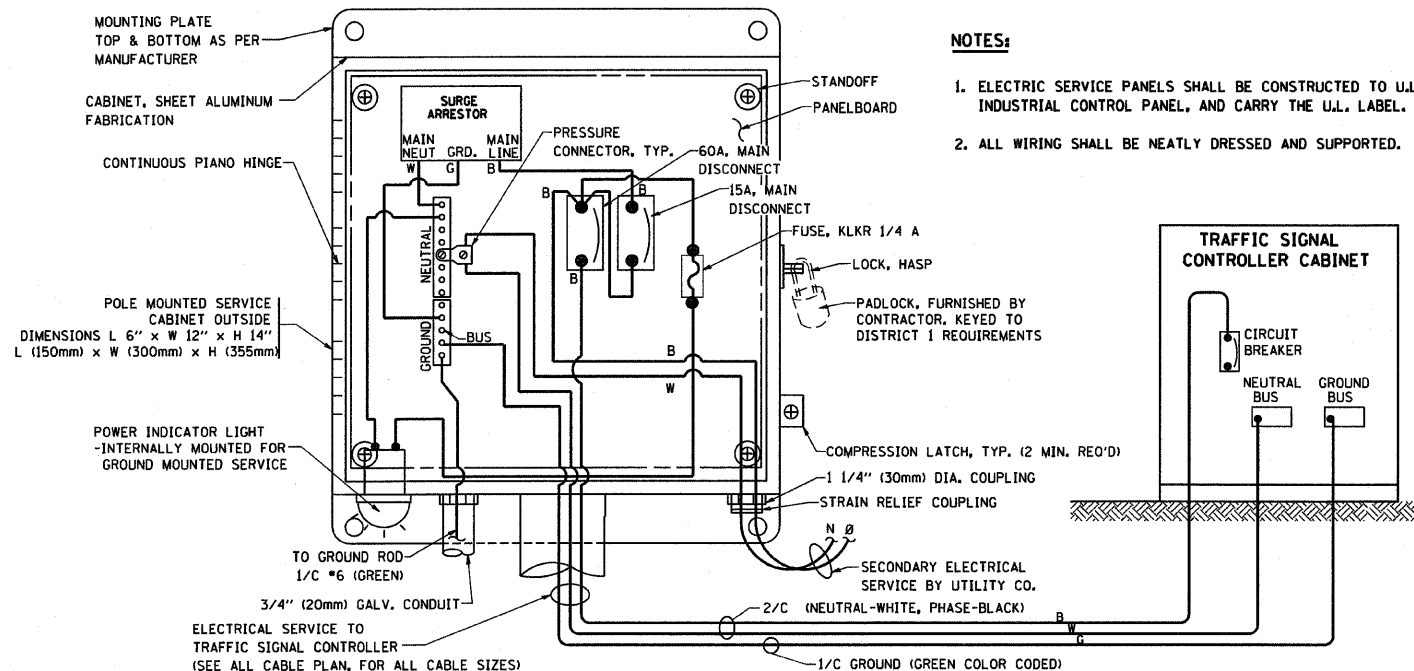
**DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS**

SCALE: NONE
DATE: 2/15/2006

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 3 OF 4

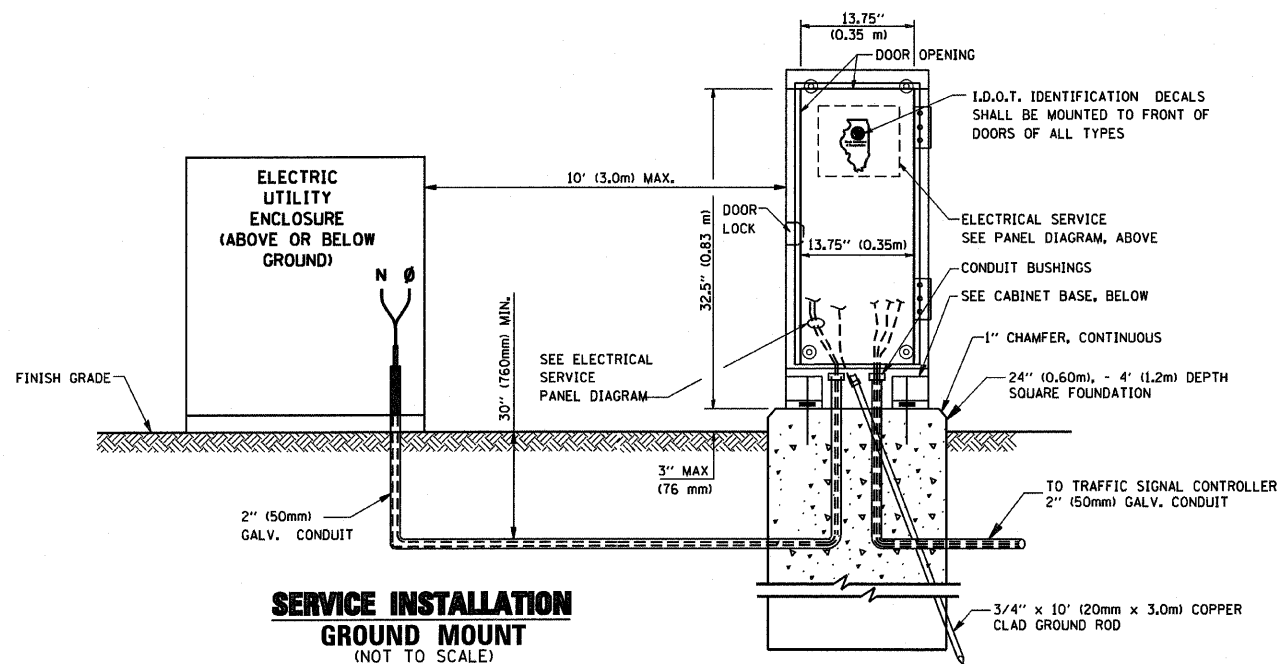
NOTES:

1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

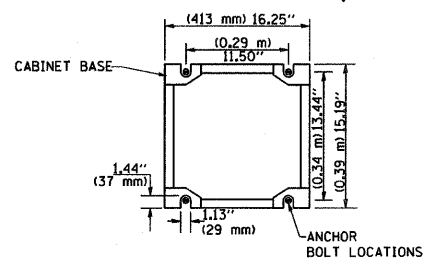


ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

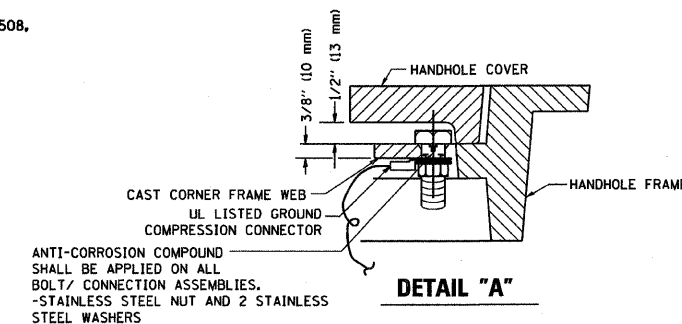
SERVICE INSTALLATION POLE MOUNT (SHOWN)
(NOT TO SCALE)



**SERVICE INSTALLATION
GROUND MOUNT**
(NOT TO SCALE)

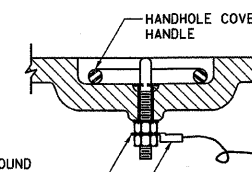


CABINET - BASE BOLT PATTERN
(NOT TO SCALE)

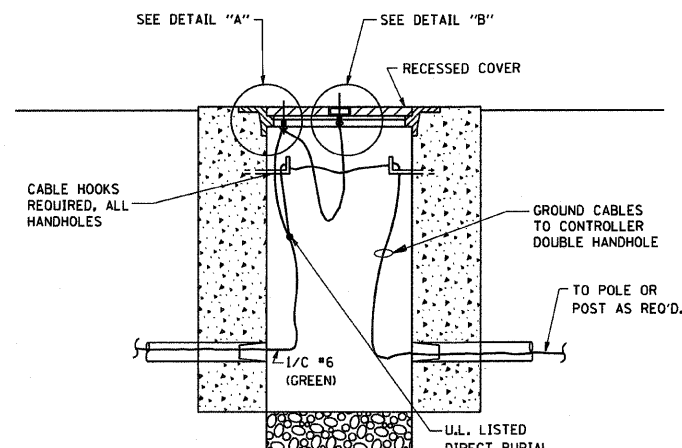


DETAIL "A"

ANTI-CORROSION COMPOUND SHALL BE APPLIED ON ALL BOLT/ CONNECTION ASSEMBLIES. -STAINLESS STEEL NUT AND 2 STAINLESS STEEL WASHERS



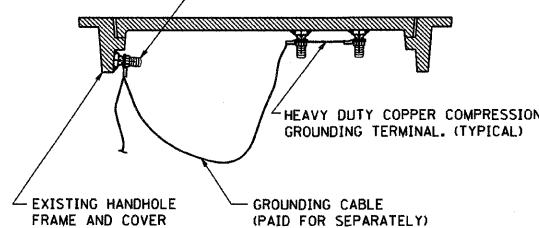
DETAIL "B"



HANDHOLE COVER & FRAME - GROUNDING DETAIL

(NOT TO SCALE)

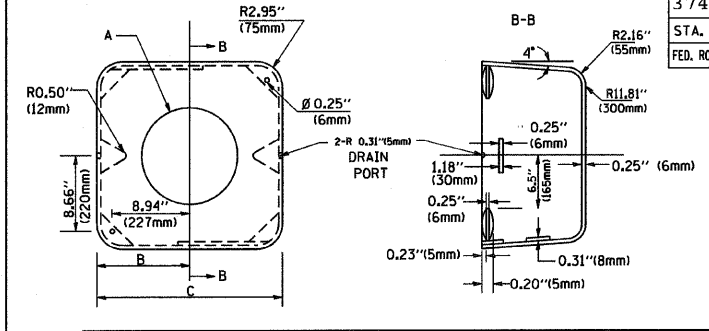
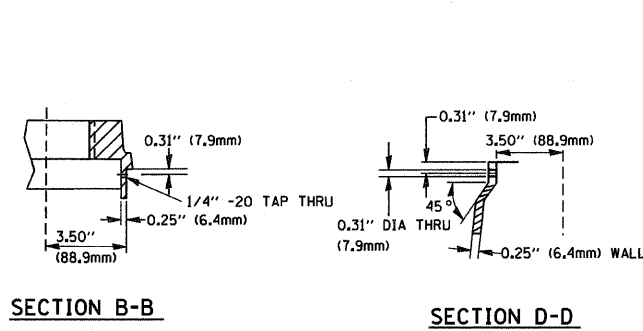
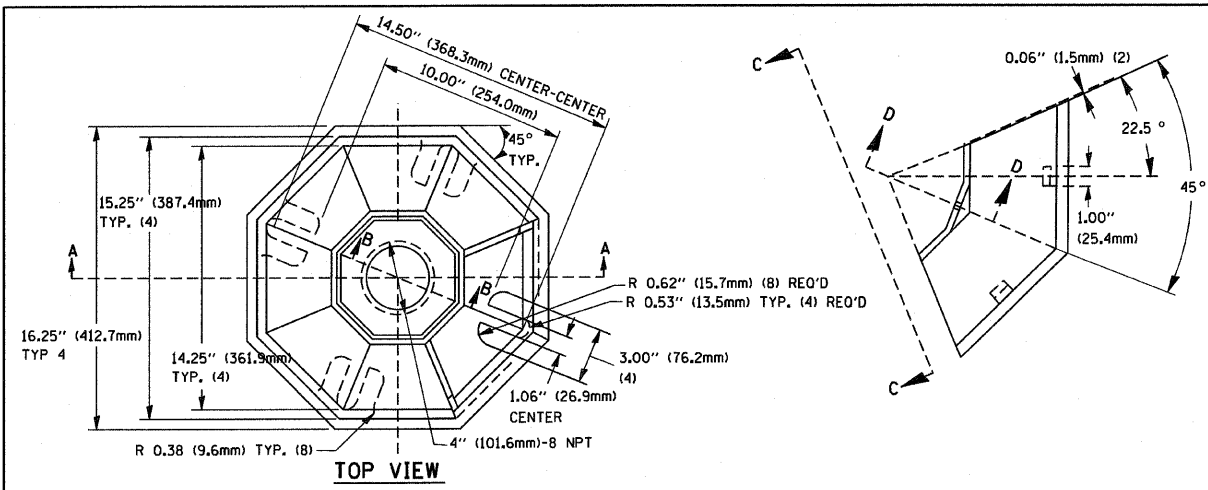
(2) 1/2" x 1 1/4" STAINLESS STEEL BOLT WITH SPLIT LOCK WASHER AND NYLON INSERT LOCKOUT WELDED TO FRAME AND TO COVER. (TYPICAL)



EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL

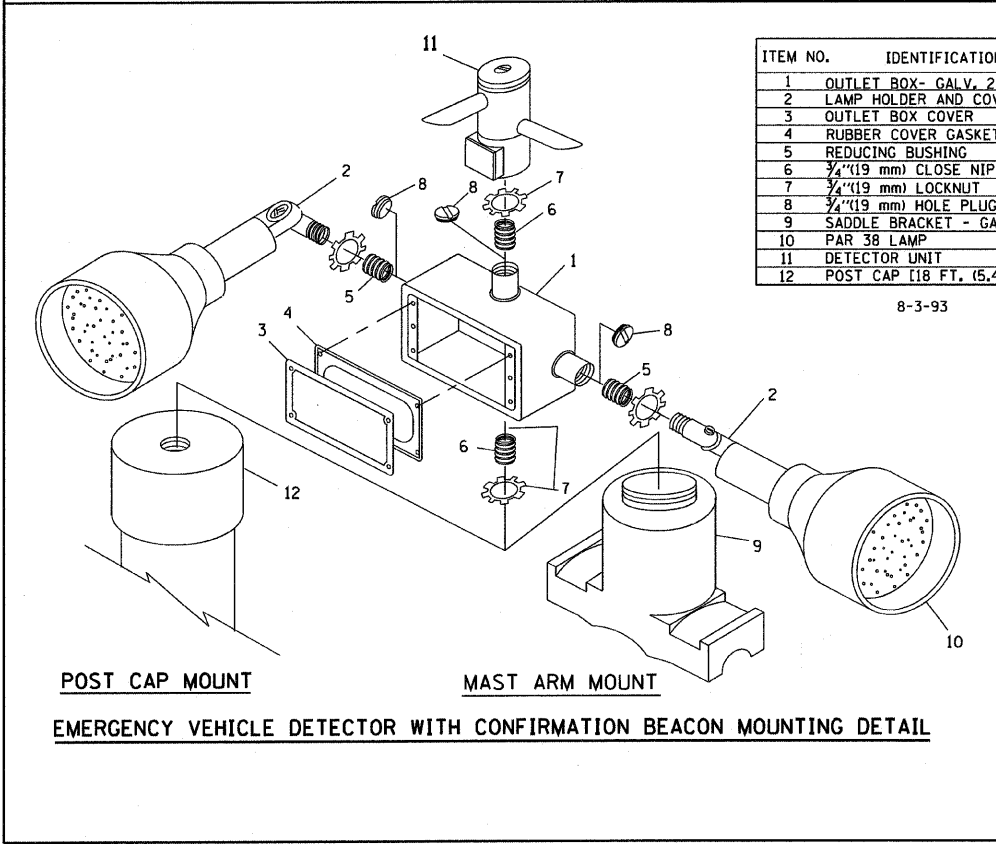
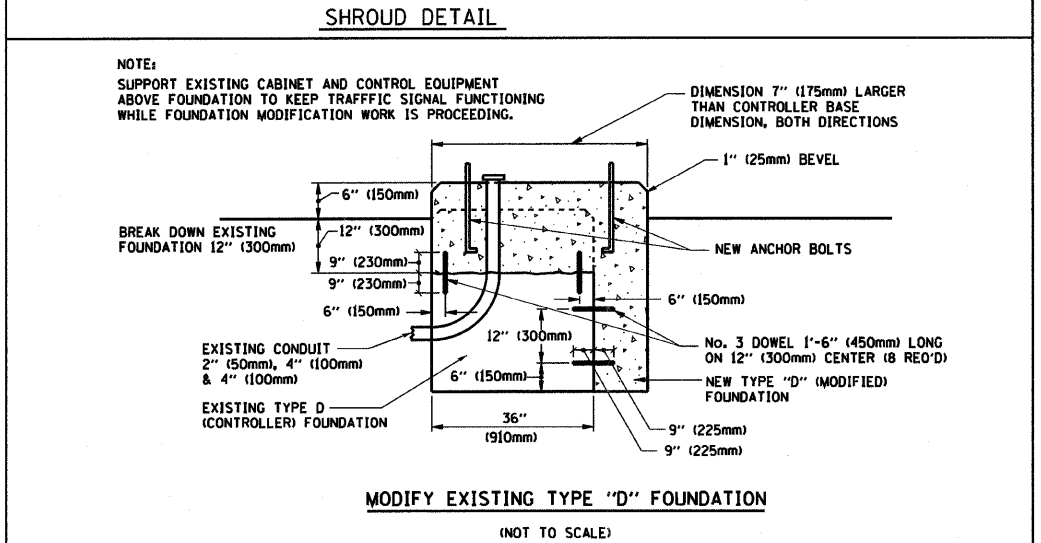
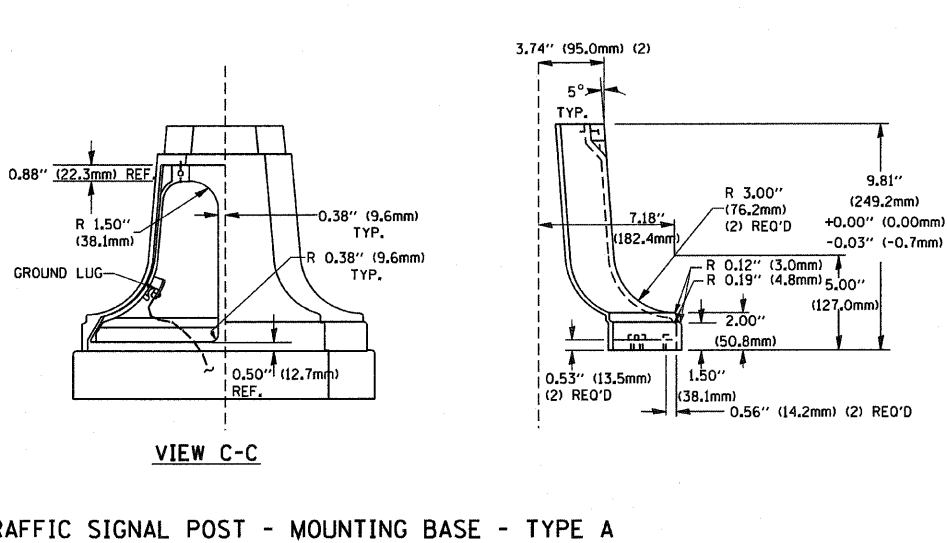
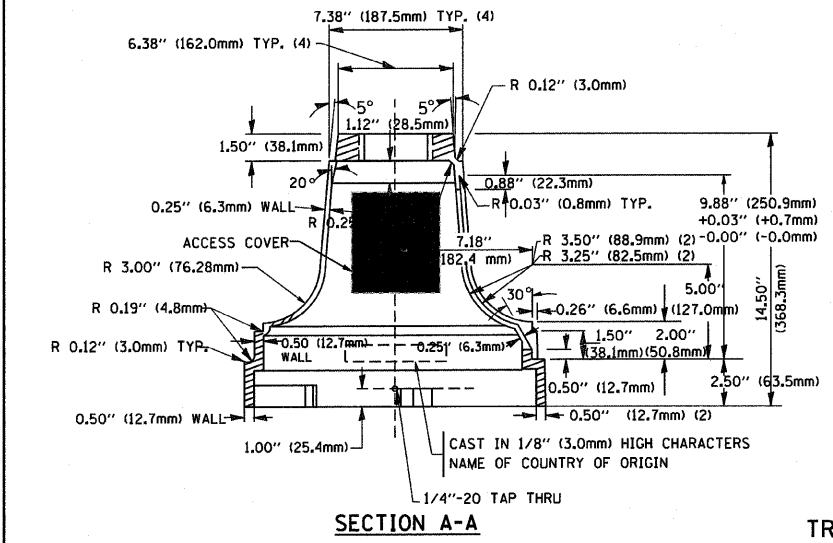
(NOT TO SCALE)

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	165
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



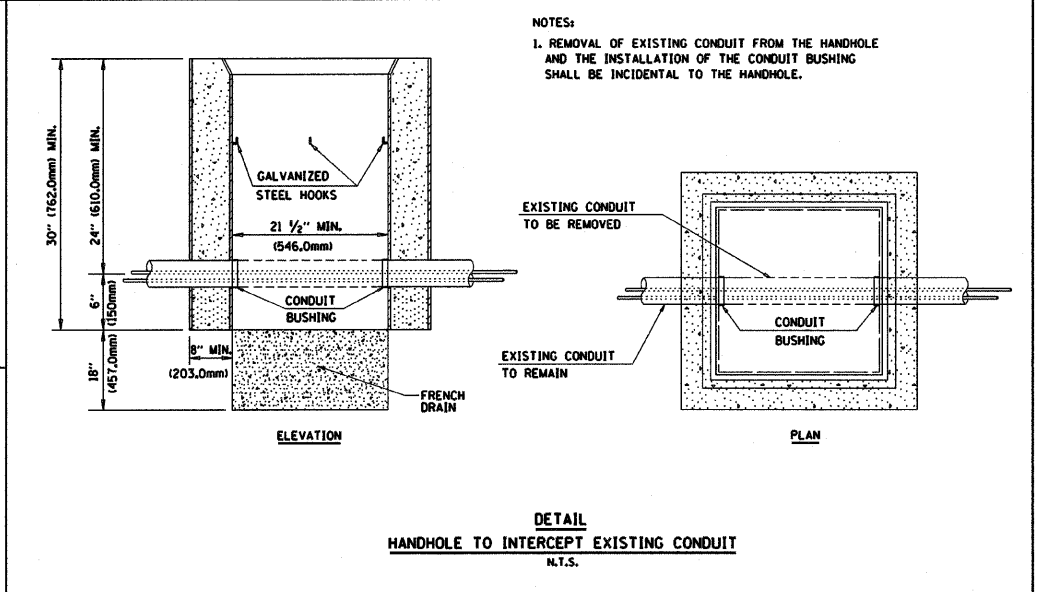
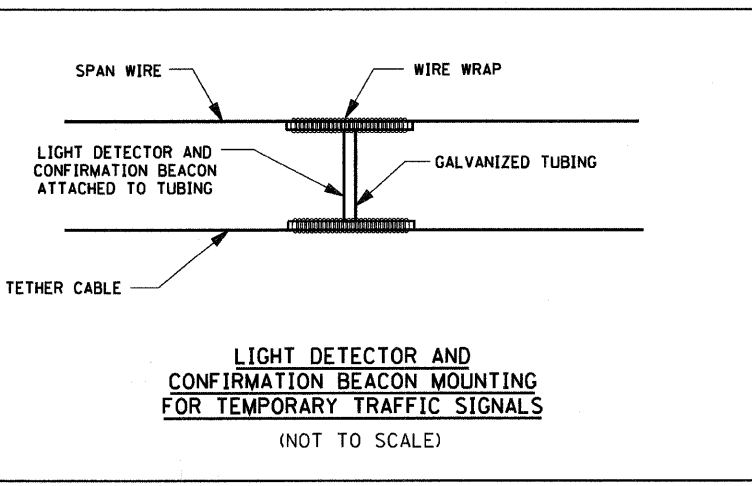
TYPE	A	B	C	HEIGHT	WEIGHT
I	Ø 10.125\"(257mm)	9.5\"(241mm)	19\"(483mm)	12\"(300mm)	24kg
II	Ø 11.125\"(283mm)	10.75\"(273mm)	21.5\"(546mm)	12\"(300mm)	26kg

MATERIAL:
 - ASTM A48 CLASS 30 GREY IRON
 - ASTM A123 HOT DIPPED GALVANIZED



ITEM NO.	IDENTIFICATION
1	OUTLET BOX - GALV. 21 CU.IN. (0.00344 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	PAR 38 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/GEENEY FSX-1-50 OR EQUIVALENT
 ITEM #2- MULBERRY CON-O-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.



REVISIONS	
NAME	DATE
BUREAU OF TRAFFIC	5/30/00
BUREAU OF TRAFFIC	3/15/01
BUREAU OF TRAFFIC	11/12/01
BUREAU OF TRAFFIC	1-01-02

ILLINOIS DEPARTMENT OF TRANSPORTATION
 DISTRICT ONE
 STANDARD TRAFFIC SIGNAL
 DESIGN DETAILS
 SCALE: NONE
 DATE: 2/15/2006
 DRAWN BY: RWP
 DESIGNED BY: DAD
 CHECKED BY: DAZ
 SHEET 4 OF 4

PLOT DATE = 2/15/2006
 FILE NAME = w:\address\ts5\std.dgn
 PLOT SCALE = 66.666667 / IN.
 USER NAME = geglennob

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	166
STA. 103+37.51		TO STA. 110+07.73		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 62387

TEMPORARY WOOD POLE LOCATIONS

STATION	OFFSET
106+26	48' LT
106+29	54' RT
107+19	51' RT
107+34	52' LT

TEMPORARY TRAFFIC SIGNAL LEGEND

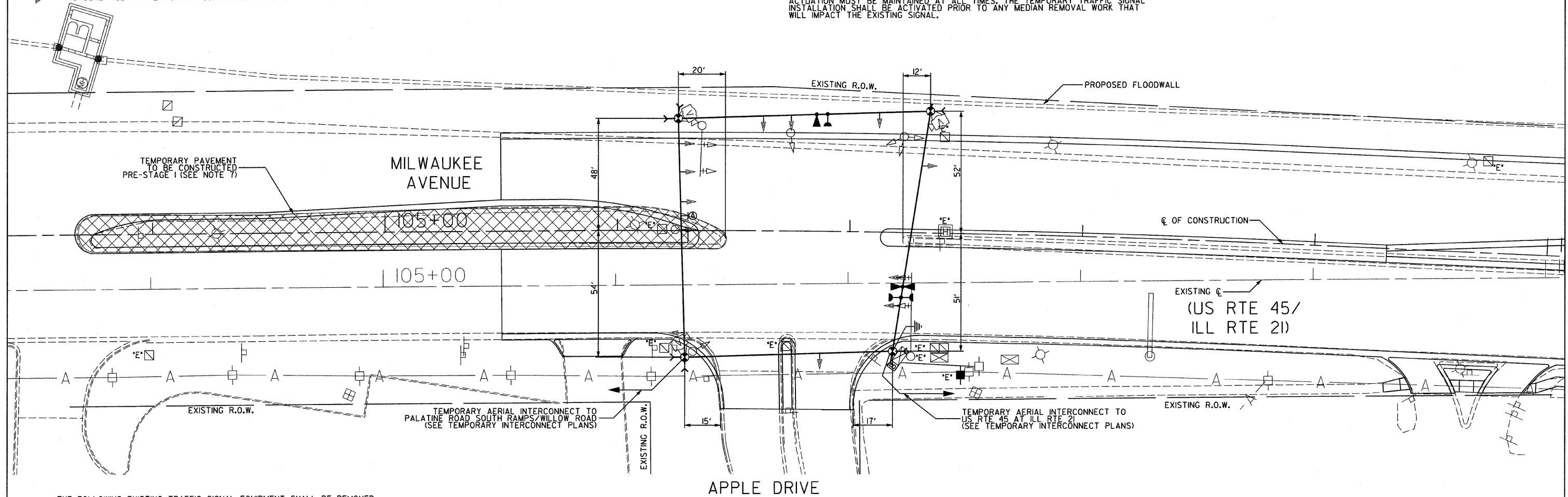
- ◀ TEMPORARY TRAFFIC SIGNAL HEAD, SPAN WIRE MOUNTED
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT MINIMUM
- ⊠ TEMPORARY CONTROLLER CABINET
- ⊞ TEMPORARY UNINTERRUPTIBLE POWER SUPPLY
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- Ⓜ VIDEO VEHICLE DETECTOR
- ⊙ PEDESTRIAN PUSH-BUTTON DETECTOR
- ⚡ EMERGENCY VEHICLE LIGHT DETECTOR
- ⚡ CONFIRMATION BEACON
- ⚡ GROUND ROD AT TEMPORARY CONTROLLER CABINET

EXISTING EQUIPMENT TO BE REMOVED LEGEND

- ◀ EXISTING SIGNAL HEAD TO BE REMOVED
- *E* EXISTING SERVICE INSTALLATION TO BE REMOVED
- EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- ⚡ EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
- ⊠ *E* EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- ⊞ *E* EXISTING HANDHOLE TO BE REMOVED
- ⊞ *E* EXISTING DOUBLE HANDHOLE TO BE REMOVED
- EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- ⊙ EXISTING PEDESTRIAN PUSH-BUTTON TO BE REMOVED
- ⊞ *E* EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED
- EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED

NOTES FOR TEMPORARY TRAFFIC SIGNALS

- ALL CONTROL EQUIPMENT INCLUDING EMERGENCY VEHICLE PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
- ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS1OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
- ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12" (300 mm). HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
- ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
- ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
- THE TEMPORARY SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
- THE EXISTING SIGNAL MAY REMAIN IN OPERATION DURING PRE-STAGE 1, BUT FULL ACTUATION MUST BE MAINTAINED AT ALL TIMES. THE TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL BE ACTIVATED PRIOR TO ANY MEDIAN REMOVAL WORK THAT WILL IMPACT THE EXISTING SIGNAL.



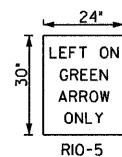
THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE, AND SHALL BE DELIVERED TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS

- 1 EACH CONTROLLER AND CABINET (COMPLETE)

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY HIM OUTSIDE THE RIGHT-OF-WAY AT HIS EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

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

SIGN (A)
(INCLUDED IN COST OF TEMPORARY TRAFFIC SIGNAL INSTALLATION)



NOTE:
THE TEMPORARY TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS INTERSECTION SHALL BE 'ECONOLITE' BRAND TO MATCH THE EXISTING SYSTEM.

SPAAN Tech, Inc.
311 S. Wacker Drive, Suite 2400
Chicago, Illinois 60606
phone: 312.277.8800
fax: 312.277.8808
web: www.SpaanTech.com

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT MILWAUKEE AVENUE (US RTE 45/ILL RTE 21) AT APPLE DRIVE PRE-STAGE 1














SCALE: 1" = 20'
DATE: 02/05/08

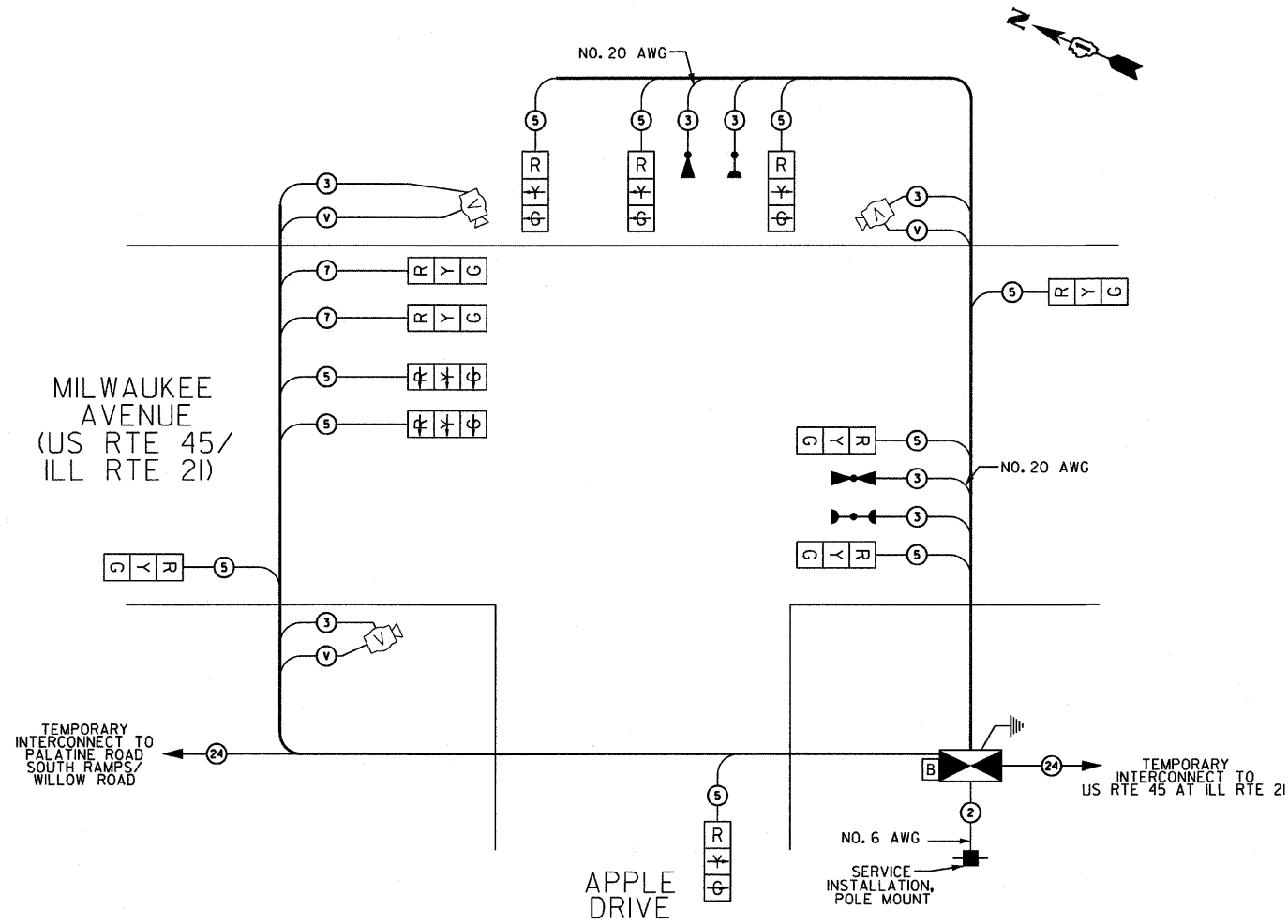
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DESIGN BY: RAS
CHECKED BY: ADD

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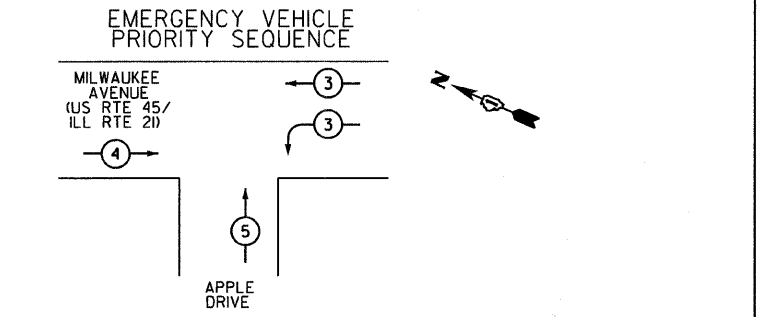
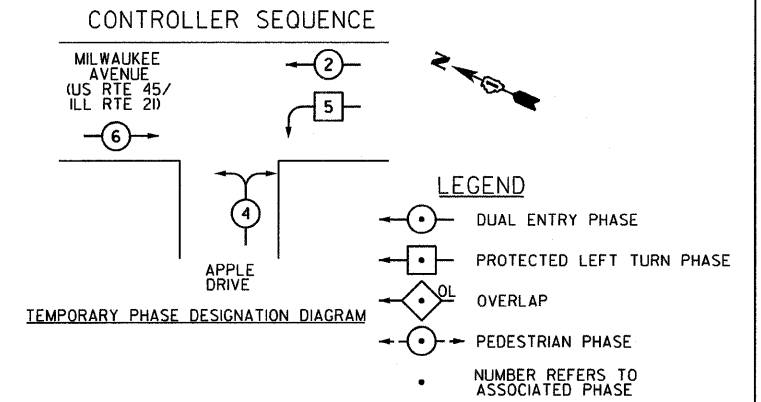
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	326BF-R-1	COOK	279	167
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62387				




TEMPORARY CABLE PLAN LEGEND

-  TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12" (300mm)
-  12" (300mm) PEDESTRIAN SIGNAL SECTION
-  TEMPORARY CONTROLLER CABINET
-  TEMPORARY UNINTERRUPTIBLE POWER SUPPLY
-  TEMPORARY SERVICE INSTALLATION
-  EMERGENCY VEHICLE LIGHT DETECTOR
-  CONFIRMATION BEACON
-  PUSH-BUTTON DETECTOR
-  VIDEO VEHICLE DETECTOR
-  DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED ALL LOOP DETECTOR CABLE TO BE SHIELDED
-  FIBER OPTIC CABLE NO. 62.5/125 MMI2F SMI2F
-  VIDEO DETECTOR CABLE PER VIDEO SYSTEM MANUFACTURER'S RECOMMENDATION
-  GROUND ROD



TEMPORARY CABLE PLAN



EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE	INCAND.	LED % OPERATION	
SIGNAL (RED)	12	135	17	0.50	102
(YELLOW)	10	135	25	0.25	62.5
(GREEN)	10	135	15	0.25	37.5
ARROW	4	135	12	0.10	4.8
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252		0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	306.8

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2' (6m+L-0.6m)=
E - M. ARM POLE		SIGNAL POST	2 (0.6)	BRACKET MOUNTED	13 (4.0)
24" (600 mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	PED PUSHBUTTON	4 (1.2)
30" (750 mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	ELECTRIC SERVICE	13.5 (4.1)
		ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

NOTE: THE TEMPORARY TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS INTERSECTION SHALL BE 'ECONOLITE' BRAND TO MATCH THE EXISTING SYSTEM.

SPAAN Tech, Inc.
 311 S. Wacker Drive, Suite 2400
 Chicago, Illinois 60606
 phone: 312.277.8800
 fax: 312.277.8808
 web: www.SpaanTech.com

ILLINOIS DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM MILWAUKEE AVENUE (US RTE 45/ILL RTE 21) AT APPLE DRIVE PRE-STAGE I

SCALE: NONE
 DATE: 02/05/08

REVISIONS

NAME	DATE

DRAWN BY: RAS
 DESIGN BY: RAS
 CHECKED BY: ADD

default
 untitle
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 07167.000 - ILL Rte 21 - IDOT Dist 1
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






CITY OF PROSPECT HEIGHTS
 8 NORTH ELMHURST ROAD
 PROSPECT HEIGHTS, ILLINOIS 60070

ENERGY SUPPLY CONTACT: MS. JUDY SCHOMER
 PHONE: (847) 870-2056
 COMPANY: COMED

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	168
STA. 103+37.51		TO STA. 110+07.73		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62387				



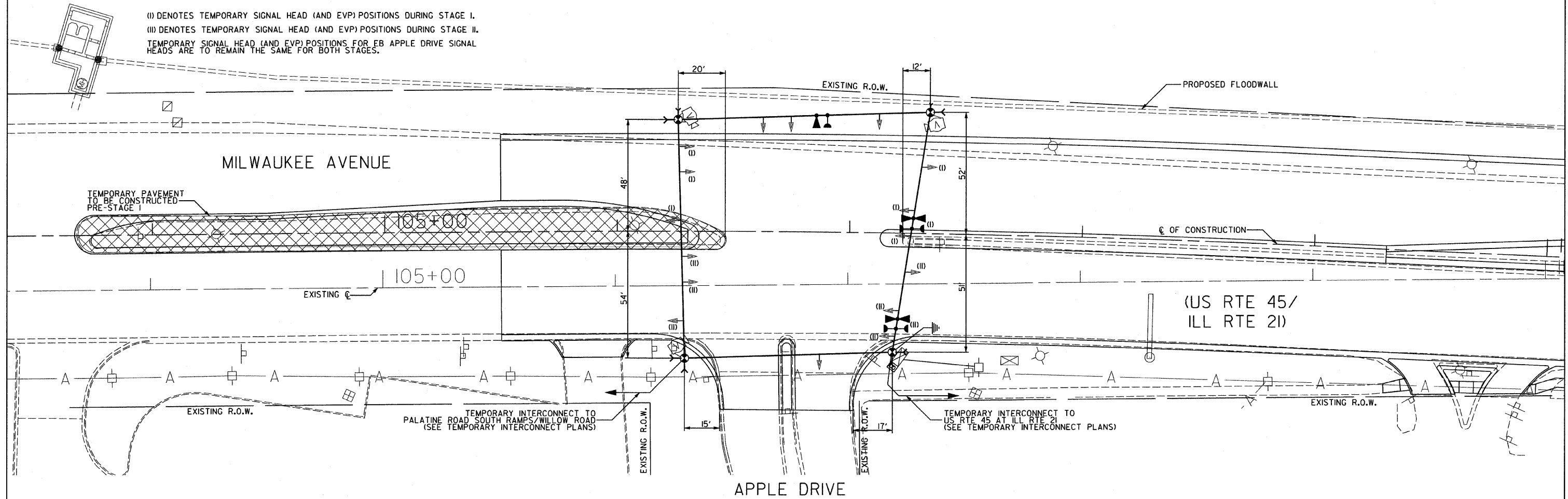
TEMPORARY TRAFFIC SIGNAL LEGEND

-  TEMPORARY TRAFFIC SIGNAL HEAD, SPAN WIRE MOUNTED
-  TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT MINIMUM
-  TEMPORARY CONTROLLER CABINET
-  TEMPORARY UNINTERRUPTIBLE POWER SUPPLY
-  TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
-  TEMPORARY SERVICE INSTALLATION
-  TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
-  VIDEO VEHICLE DETECTOR
-  PEDESTRIAN PUSH-BUTTON DETECTOR
-  EMERGENCY VEHICLE LIGHT DETECTOR
-  CONFIRMATION BEACON
-  GROUND ROD AT TEMPORARY CONTROLLER CABINET

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY VEHICLE PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS1OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12" (300 mm). HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.

(i) DENOTES TEMPORARY SIGNAL HEAD (AND EVP) POSITIONS DURING STAGE I.
 (ii) DENOTES TEMPORARY SIGNAL HEAD (AND EVP) POSITIONS DURING STAGE II.
 TEMPORARY SIGNAL HEAD (AND EVP) POSITIONS FOR EB APPLE DRIVE SIGNAL HEADS ARE TO REMAIN THE SAME FOR BOTH STAGES.



NOTE:
 THE TEMPORARY TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS INTERSECTION SHALL BE "ECONOLITE" BRAND TO MATCH THE EXISTING SYSTEM.

SPAAN Tech, Inc.
 311 S. Wacker Drive, Suite 2400
 Chicago, Illinois 60606
 phone: 312.277.8800
 fax: 312.277.8808
 web: www.SpaanTech.com

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**TEMPORARY TRAFFIC SIGNAL INSTALLATION
 MILWAUKEE AVENUE (US RTE 45/ILL RTE 21)
 AT APPLE DRIVE
 STAGES I AND II**














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 DATE: 02/05/08

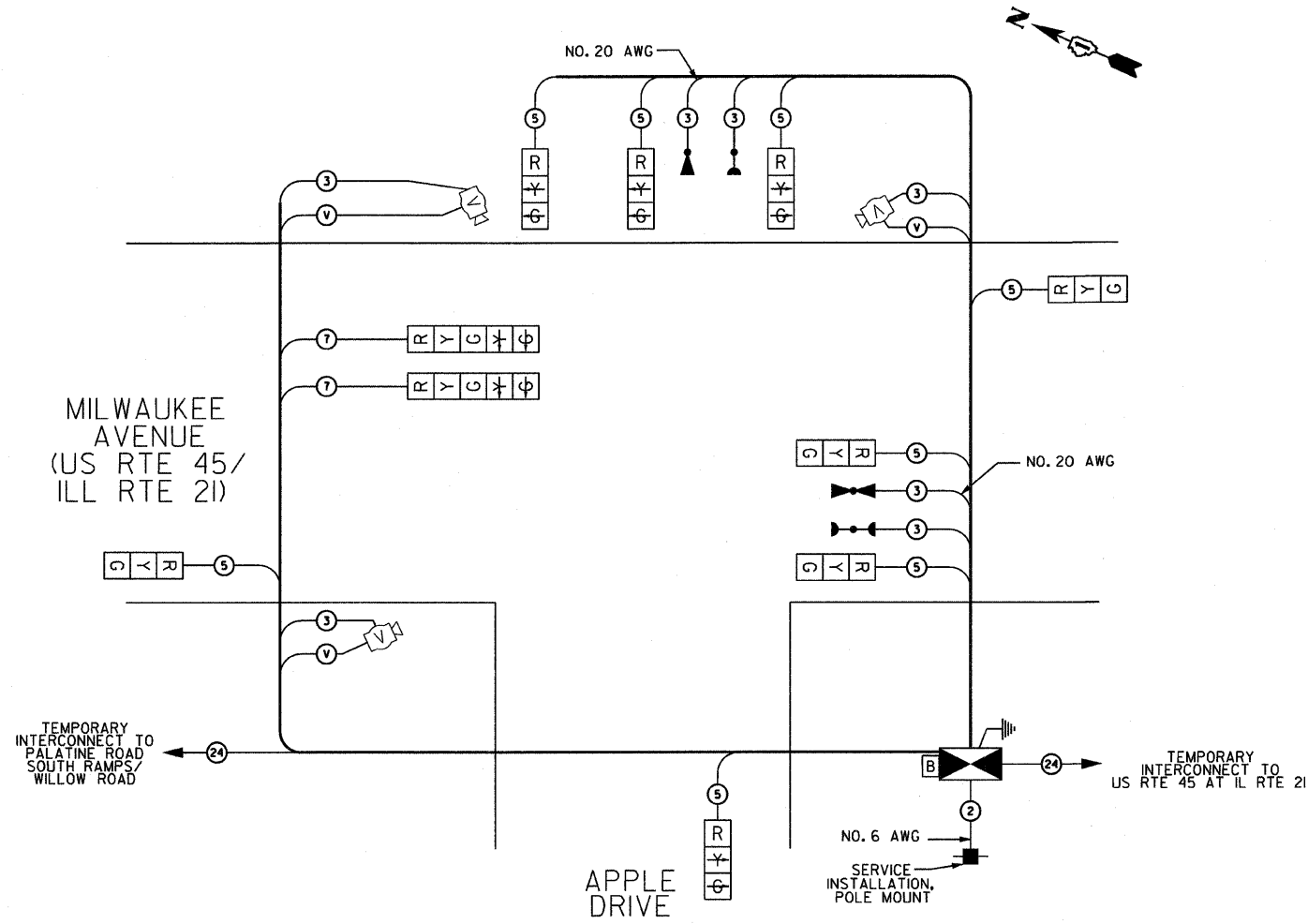
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 DESIGN BY: RAS
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	169
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62387				

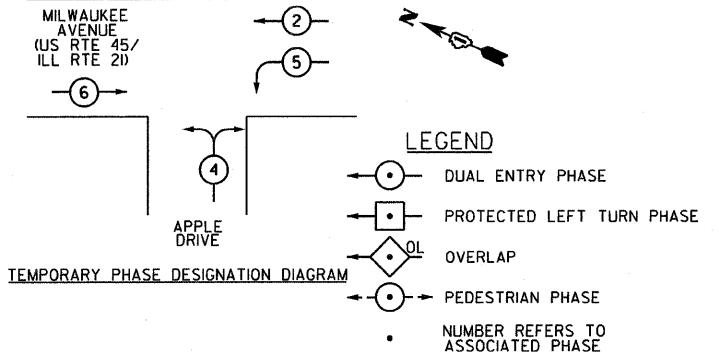
TEMPORARY CABLE PLAN LEGEND

-  TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12" (300mm)
-  12" (300mm) PEDESTRIAN SIGNAL SECTION
-  TEMPORARY CONTROLLER CABINET
-  TEMPORARY UNINTERRUPTIBLE POWER SUPPLY
-  TEMPORARY SERVICE INSTALLATION
-  EMERGENCY VEHICLE LIGHT DETECTOR
-  CONFIRMATION BEACON
-  PUSH-BUTTON DETECTOR
-  VIDEO VEHICLE DETECTOR
-  DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED
-  FIBER OPTIC CABLE NO. 62.5/125 MM12F SMI2F
-  VIDEO DETECTOR CABLE PER VIDEO SYSTEM MANUFACTURER'S RECOMMENDATION
-  GROUND ROD

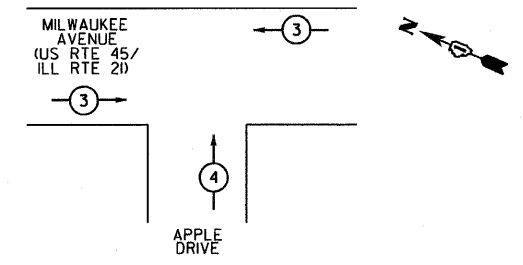


TEMPORARY CABLE PLAN

CONTROLLER SEQUENCE



EMERGENCY VEHICLE PRIORITY SEQUENCE



EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↑

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE	INCAND.	LED % OPERATION	
SIGNAL (RED)	10	135	17	0.50	85
(YELLOW)	10	135	25	0.25	62.5
(GREEN)	10	135	15	0.25	37.5
ARROW	4	135	12	0.10	4.8
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252		0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	289.8

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2= (6m+L-0.6m)=
E - M. ARM POLE		SIGNAL POST	2 (0.6)		
24" (600 mm)	10 (3.0)	CONTROLLER CAB.	1 (0.3)	BRACKET MOUNTED	13 (4.0)
30" (750 mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED PUSHBUTTON	4 (1.2)
		ELECTRIC SERVICE	1 (0.3)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.3)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

NOTE: THE TEMPORARY TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS INTERSECTION SHALL BE 'ECONOLITE' BRAND TO MATCH THE EXISTING SYSTEM.

SPAAN Tech, Inc.
 311 S. Wacker Drive, Suite 2400
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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM MILWAUKEE AVENUE (US RTE 45/ILL RTE 21) AT APPLE DRIVE STAGES I AND II

SCALE: NONE
 DATE: 02/05/08

DRAWN BY: RAS
 DESIGN BY: RAS
 CHECKED BY: ADO

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








CITY OF PROSPECT HEIGHTS
 8 NORTH ELMHURST ROAD
 PROSPECT HEIGHTS, ILLINOIS 60070

ENERGY SUPPLY CONTACT: MS. JUDY SCHOMER
 PHONE: (847) 870-2056
 COMPANY: COMED

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	170
STA. 103+37.51		TO STA. 110+07.73		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

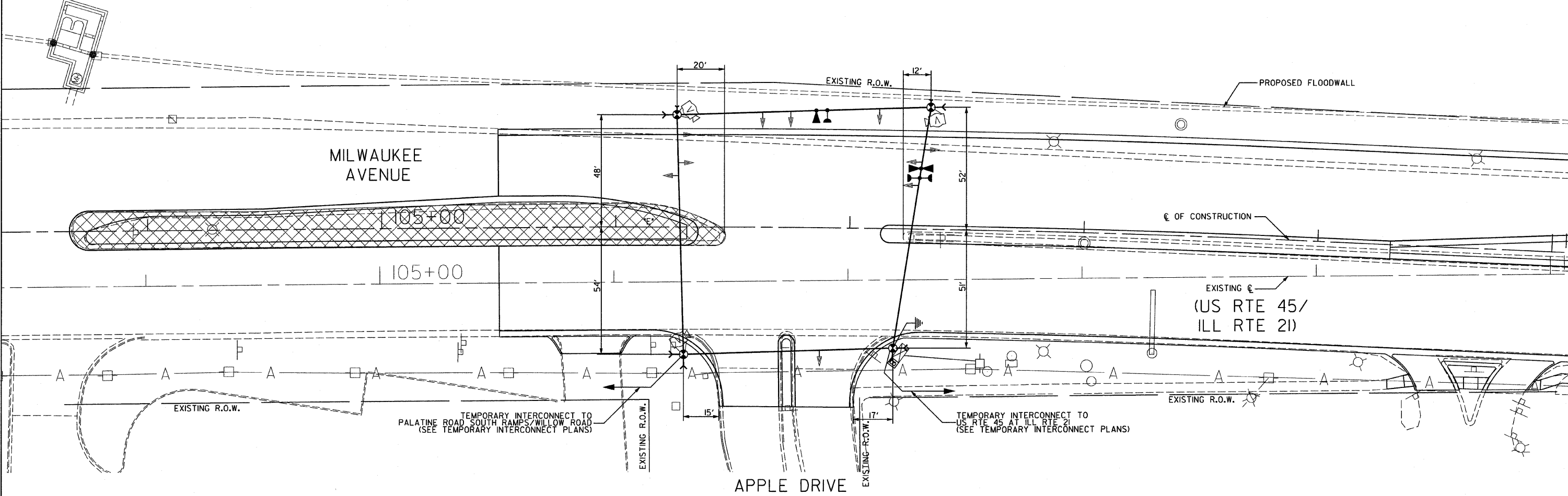
CONTRACT NO. 62387

TEMPORARY TRAFFIC SIGNAL LEGEND

-  TEMPORARY TRAFFIC SIGNAL HEAD, SPAN WIRE MOUNTED
-  TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT MINIMUM
-  TEMPORARY CONTROLLER CABINET
-  TEMPORARY UNINTERRUPTIBLE POWER SUPPLY
-  TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
-  TEMPORARY SERVICE INSTALLATION
-  TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
-  VIDEO VEHICLE DETECTOR
-  PEDESTRIAN PUSH-BUTTON DETECTOR
-  EMERGENCY VEHICLE LIGHT DETECTOR
-  CONFIRMATION BEACON
-  GROUND ROD AT TEMPORARY CONTROLLER CABINET

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY VEHICLE PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT I, INSTALLED IN A NEMA TS1OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12" (300 mm). HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
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6. THE TEMPORARY SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL. AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.



NOTE:
THE TEMPORARY TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS INTERSECTION SHALL BE "ECONOLITE" BRAND TO MATCH THE EXISTING SYSTEM.

SPAAN Tech, Inc.

311 S. Wacker Drive, Suite 2400
Chicago, Illinois 60606

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web: www.SpaanTech.com

REVISIONS	
NAME	DATE

TS-10 OF 39

ILLINOIS DEPARTMENT OF TRANSPORTATION

**TEMPORARY TRAFFIC SIGNAL INSTALLATION
MILWAUKEE AVENUE (US RTE 45/ILL RTE 21)
AT APPLE DRIVE
POST STAGE II**

SCALE: 1" = 20'
DATE: 02/05/08

DRAWN BY: RAS
DESIGN BY: RAS
CHECKED BY: ADO

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	171
STA. TO STA.				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62387				

TEMPORARY CABLE PLAN LEGEND

- TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12" (300mm)
- 12" (300mm) PEDESTRIAN SIGNAL SECTION
- TEMPORARY CONTROLLER CABINET
- TEMPORARY UNINTERRUPTIBLE POWER SUPPLY
- TEMPORARY SERVICE INSTALLATION
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- PUSH-BUTTON DETECTOR
- VIDEO VEHICLE DETECTOR
- DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED
- FIBER OPTIC CABLE NO. 62.5/125 MM12F SMI2F
- VIDEO DETECTOR CABLE PER VIDEO SYSTEM MANUFACTURER'S RECOMMENDATION
- GROUND ROD

① THE SIGNAL HEADS FOR STAGE II SHALL REMAIN IN PLACE. LEFT-TURN ARROW SECTIONS SHALL BE BAGGED AND DEACTIVATED.

MILWAUKEE AVENUE (US RTE 45/ ILL RTE 21)

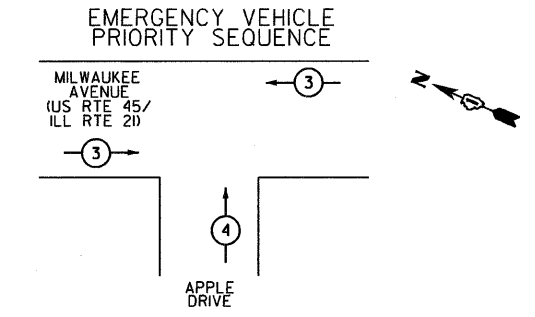
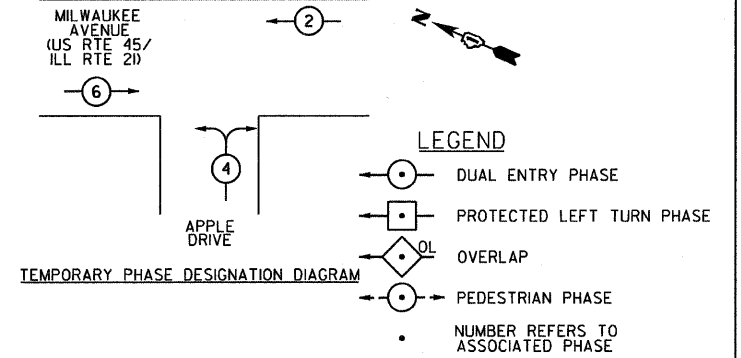
TEMPORARY INTERCONNECT TO PALATINE ROAD SOUTH RAMPS/ WILLOW ROAD

APPLE DRIVE

TEMPORARY INTERCONNECT TO US RTE 45 AT ILL RTE 21

TEMPORARY CABLE PLAN

CONTROLLER SEQUENCE



EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	←	↑

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I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE	INCAND. LED % OPERATION		
SIGNAL (RED)	10	135	17	0.50	85
(YELLOW)	10	135	25	0.25	62.5
(GREEN)	10	135	15	0.25	37.5
ARROW		135	12	0.10	
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252		0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	285

CITY OF PROSPECT HEIGHTS
 8 NORTH ELMHURST ROAD
 PROSPECT HEIGHTS, ILLINOIS 60070

ENERGY SUPPLY CONTACT: MS. JUDY SCHOMER
 PHONE: (847) 870-2056
 COMPANY: COMED

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2'±
E - M. ARM POLE		SIGNAL POST	2 (1.0)	(6m+L-0.6m)±	
24" (600 mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750 mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED PUSHBUTTON	4 (1.2)
		ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

NOTE:
 THE TEMPORARY TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS INTERSECTION SHALL BE 'ECONOLITE' BRAND TO MATCH THE EXISTING SYSTEM.

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 311 S. Wacker Drive, Suite 2400
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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN AND
 TEMPORARY PHASE DESIGNATION DIAGRAM
 MILWAUKEE AVENUE (US RTE 45/ILL RTE 21)
 AT APPLE DRIVE
 POST STAGE II













SCALE: NONE
 DATE: 02/05/08

DRAWN BY: RAS
 DESIGN BY: RAS
 CHECKED BY: ADD

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	172
STA. 103+37.51		TO STA. 110+07.73		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62387				

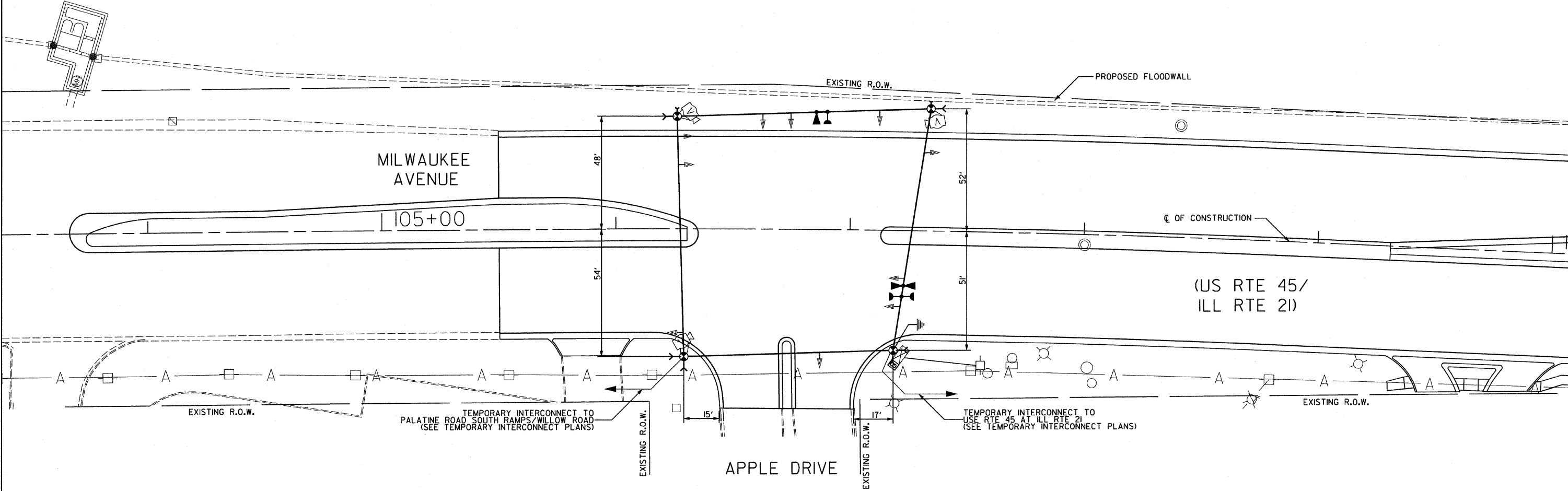


TEMPORARY TRAFFIC SIGNAL LEGEND

-  TEMPORARY TRAFFIC SIGNAL HEAD, SPAN WIRE MOUNTED
-  TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT MINIMUM
-  TEMPORARY CONTROLLER CABINET
-  TEMPORARY UNINTERRUPTIBLE POWER SUPPLY
-  TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
-  TEMPORARY SERVICE INSTALLATION
-  TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
-  VIDEO VEHICLE DETECTOR
-  PEDESTRIAN PUSH-BUTTON DETECTOR
-  EMERGENCY VEHICLE LIGHT DETECTOR
-  CONFIRMATION BEACON
-  GROUND ROD AT TEMPORARY CONTROLLER CABINET

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY VEHICLE PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
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3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12" (300 mm). HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.



NOTE:
THE POST-CONSTRUCTION STAGE IS THE PERIOD AFTER ALL LANES HAVE BEEN CONSTRUCTED AND OPENED TO TRAFFIC, BUT BEFORE THE NEW PERMANENT TRAFFIC SIGNAL HAS BEEN ACTIVATED.

TS-12 OF 39

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION
MILWAUKEE AVENUE (US RTE 45/ILL RTE 21)
AT APPLE DRIVE
POST-CONSTRUCTION

SCALE: 1" = 20'

DATE: 02/05/08

DRAWN BY: RAS
DESIGN BY: RAS
CHECKED BY: ADO

NOTE:
THE TEMPORARY TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS INTERSECTION SHALL BE "ECONOLITE" BRAND TO MATCH THE EXISTING SYSTEM.

SPAAN Tech, Inc.

311 S. Wacker Drive, Suite 2400
Chicago, Illinois 60606

phone: 312.277.8800
fax: 312.277.8808
web: www.SpaanTech.com

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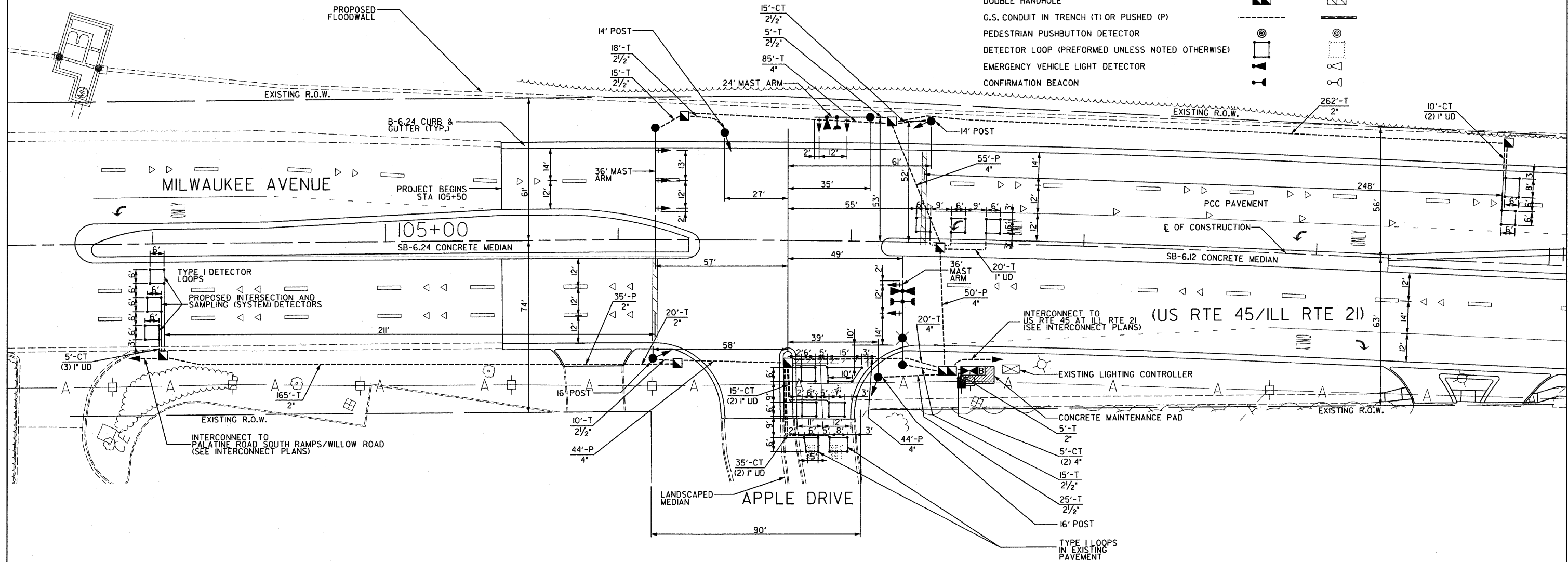
TRAFFIC SIGNAL EQUIPMENT LOCATIONS

ITEM	LOCATION
HANDHOLE	STA 104+04, 48' RT
TYPE A FOUNDATION	STA 106+15, 51' RT
TYPE E FOUNDATION (30" DIA.)	STA 106+16, 48' LT
HANDHOLE	STA 106+25.5, 53' RT
HANDHOLE	STA 106+28.5, 53' LT
TYPE A FOUNDATION	STA 106+45.5, 46' LT
HANDHOLE	STA 106+73.5, 52' RT
TYPE E FOUNDATION (30" DIA.)	STA 107+07.5, 53' LT
TYPE A FOUNDATION	STA 107+12.5, 58' RT
HANDHOLE	STA 107+17, 51.5' LT
TYPE E FOUNDATION (36" DIA.)	STA 107+23, 53' RT
TYPE A FOUNDATION	STA 107+33, 52' LT
HANDHOLE	STA 107+38.5, 2' RT
DOUBLE HANDHOLE	STA 107+42.5, 55' RT
TYPE C FOUNDATION	STA 107+53, 55' RT
HANDHOLE	STA 109+80, 52' LT

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER		
UNINTERRUPTIBLE POWER SUPPLY		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY-DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)	T/P	
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP (PERFORMED UNLESS NOTED OTHERWISE)		
EMERGENCY VEHICLE LIGHT DETECTOR		
CONFIRMATION BEACON		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	174
STA. 103+37.51		TO STA. 110+07.73		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 62387				



NOTE:
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS INTERSECTION SHALL BE "ECONOLITE" BRAND TO MATCH THE EXISTING SYSTEM.

SPAN Tech, Inc.
311 S. Wacker Drive, Suite 2400
Chicago, Illinois 60606
phone: 312.277.8800
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web: www.SpanTech.com

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION PLAN
MILWAUKEE AVENUE (US RTE 45/ILL RTE 21)
AT APPLE DRIVE

SCALE: 1" = 20'
DATE: 02/05/08

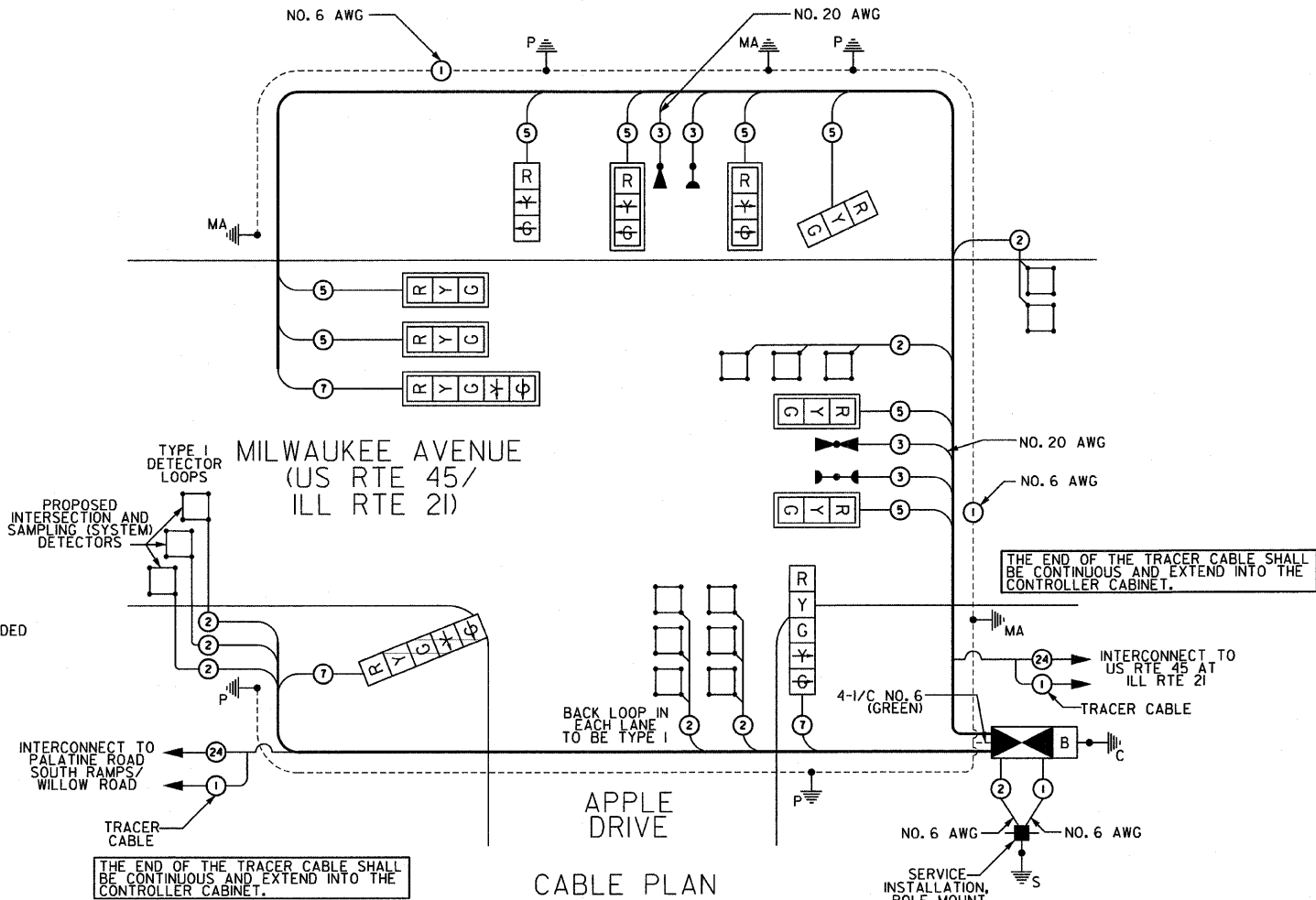
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	175
STA. TO STA.		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		
CONTRACT NO. 62387				

CABLE PLAN LEGEND

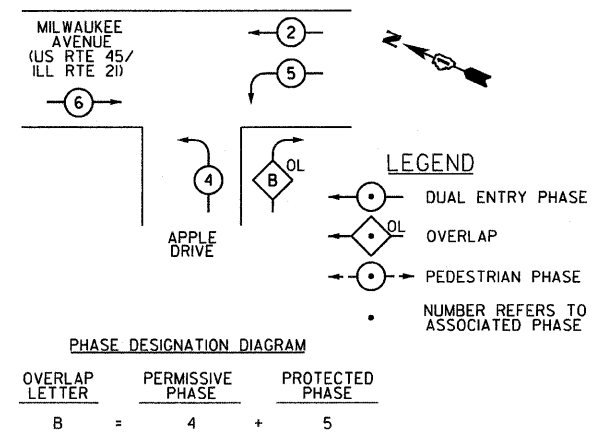
EXISTING	PROPOSED	DESCRIPTION
		8" (200mm) TRAFFIC SIGNAL SECTION
		12" (300mm) TRAFFIC SIGNAL SECTION
		12" (300mm) PEDESTRIAN SIGNAL SECTION
		12" (300mm) PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
		TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSH-BUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP (PERFORMED UNLESS NOTED OTHERWISE)
		MICROWAVE VEHICLE SENSOR
		SIGNAL FACE WITH BACKPLATE *P* INDICATES PROGRAMMED HEAD
		RAILROAD CONTROL CABINET
		ILLUMINATED SIGN "NO LEFT TURN"
		ILLUMINATED SIGN "NO RIGHT TURN"
		GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C)
		GROUND ROD AT POST (P), OR MAST ARM POLE (MA)
		GROUND ROD AT ELECTRIC SERVICE INSTALLATION
		GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
		FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM2F SMI2F
		UNINTERRUPTIBLE POWER SUPPLY



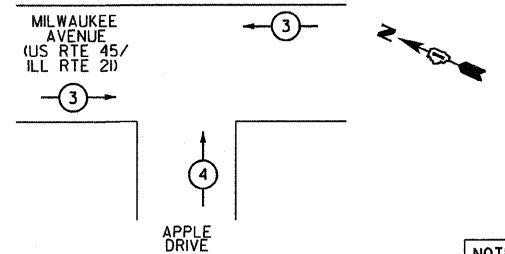
SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
SIGN PANEL - TYPE 1	SQ FT	13.5
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	448
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	100
CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	120
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	35
CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	192
HANDHOLE	EACH	7
DOUBLE HANDHOLE	EACH	1
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	750
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	291
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1665
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	543
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1690
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	30
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	2
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 24 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	16
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	23.5
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	11
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	6
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	1
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	7
INDUCTIVE LOOP DETECTOR	EACH	7
DETECTOR LOOP, TYPE I	FOOT	183
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	7
REMOVE EXISTING CONCRETE FOUNDATION	EACH	7
PERFORMED DETECTOR LOOP	FOOT	298
SERVICE INSTALLATION, POLE MOUNT	EACH	1
UNINTERRUPTIBLE POWER SUPPLY	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING NO. 6 1C	FOOT	710
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	310

PROPOSED CONTROLLER SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	←	↑

NOTE: THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS INTERSECTION SHALL BE "ECONOLITE" BRAND TO MATCH THE EXISTING SYSTEM.

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE	INCAND.	LED % OPERATION	
SIGNAL (RED)	11	135	17	0.50	93.5
(YELLOW)	11	135	25	0.25	68.75
(GREEN)	11	135	15	0.25	41.25
ARROW	6	135	12	0.10	7.2
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252		0.05	
FLASHER					0.50
ENERGY COSTS TO:					TOTAL = 310.7

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2' (6m+L-0.6m)
E - M. ARM POLE		SIGNAL POST	2 (0.6)		
24" (600 mm)	10 (3.0)	CONTROLLER CAB.	1 (0.3)	BRACKET MOUNTED	13 (4.0)
30" (750 mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED PUSHBUTTON	4 (1.2)
		ELECTRIC SERVICE	1 (0.3)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.3)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

CITY OF PROSPECT HEIGHTS
8 NORTH ELMHURST ROAD
PROSPECT HEIGHTS, ILLINOIS 60070

ENERGY SUPPLY CONTACT: MS. JUDY SCHOMER
PHONE: (847) 870-2056
COMPANY: COMED

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311 S. Wacker Drive, Suite 2400
Chicago, Illinois 60606

phone: 312.277.8800
fax: 312.277.8808
web: www.SpaanTech.com

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE		
		SCHEDULE OF QUANTITIES, CABLE PLAN, AND PHASE DESIGNATION DIAGRAM MILWAUKEE AVENUE (US RTE 45/ILL RTE 21) AT APPLE DRIVE	
		SCALE: NONE	DRAWN BY: RAS
		DATE: 02/05/08	DESIGN BY: RAS
			CHECKED BY: ADD

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TEMPORARY WOOD POLE LOCATIONS

STATION	OFFSET	STATION	OFFSET
I13+35	50' RT	I15+38	41' LT
I14+29	56' RT	I15+73.5	107' RT
I14+89	67' RT	I16+65	41.5' LT
I15+35	83' RT	I16+66	65' RT

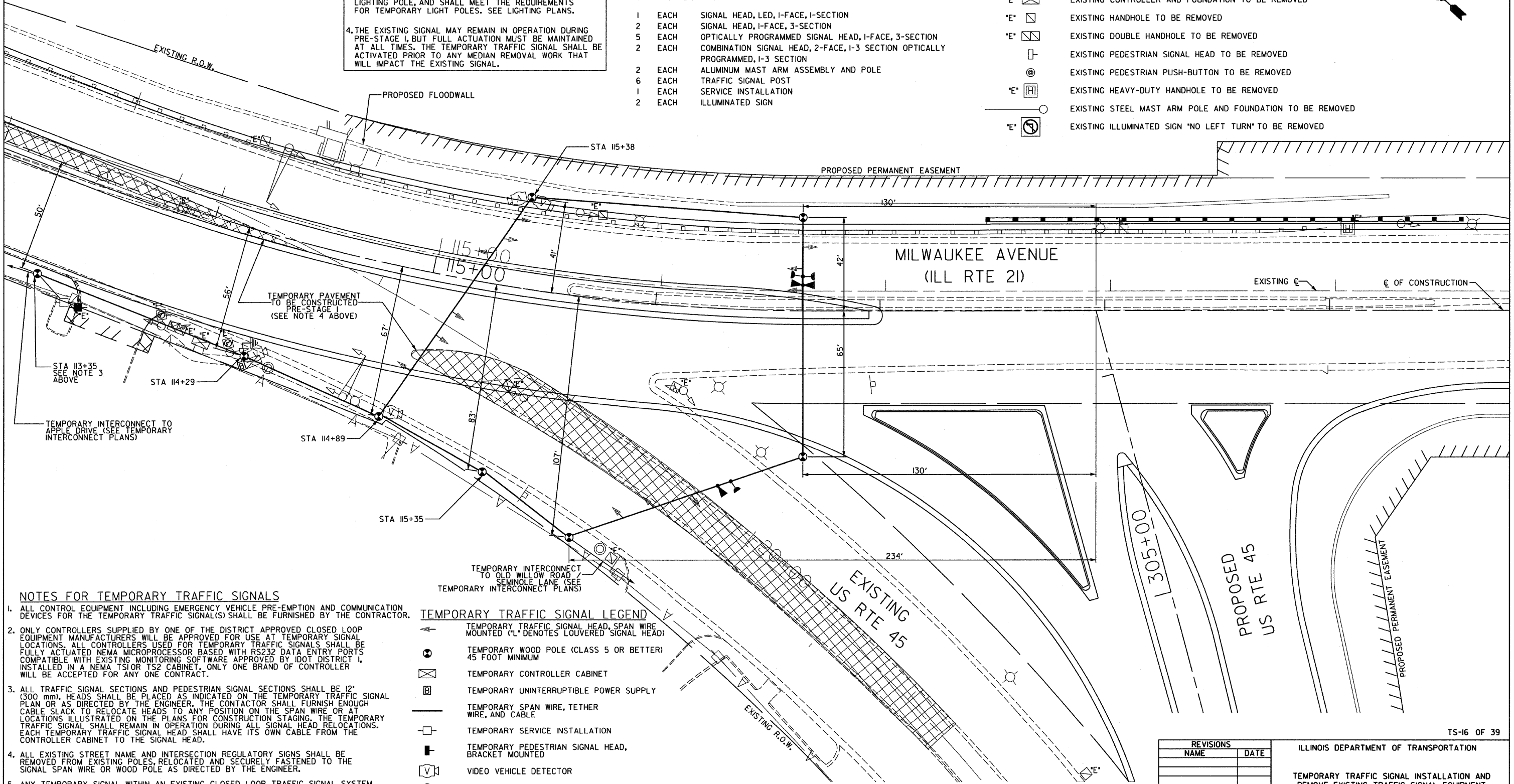
- NOTES:**
- THE TEMPORARY TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS INTERSECTION SHALL BE 'ECONOLITE' BRAND TO MATCH THE EXISTING SYSTEM.
 - THE EXISTING HANDHOLES AT STA 303+36.36, 17.75' L AND STA 303+52, 110' L US 45 (NOT SHOWN ON PLAN) ARE TO BE REMOVED.
 - THIS WOOD POLE IS ALSO USED AS A TEMPORARY LIGHTING POLE, AND SHALL MEET THE REQUIREMENTS FOR TEMPORARY LIGHT POLES. SEE LIGHTING PLANS.
 - THE EXISTING SIGNAL MAY REMAIN IN OPERATION DURING PRE-STAGE I, BUT FULL ACTUATION MUST BE MAINTAINED AT ALL TIMES. THE TEMPORARY TRAFFIC SIGNAL SHALL BE ACTIVATED PRIOR TO ANY MEDIAN REMOVAL WORK THAT WILL IMPACT THE EXISTING SIGNAL.

- THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE, AND SHALL BE DELIVERED TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS
- 1 EACH CONTROLLER AND CABINET (COMPLETE)
- THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY HIM OUTSIDE THE RIGHT-OF-WAY AT HIS EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.
- 1 EACH SIGNAL HEAD, LED, 1-FACE, 1-SECTION
 - 2 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
 - 5 EACH OPTICALLY PROGRAMMED SIGNAL HEAD, 1-FACE, 3-SECTION
 - 2 EACH COMBINATION SIGNAL HEAD, 2-FACE, 1-3 SECTION OPTICALLY PROGRAMMED, 1-3 SECTION
 - 2 EACH ALUMINUM MAST ARM ASSEMBLY AND POLE
 - 6 EACH TRAFFIC SIGNAL POST
 - 1 EACH SERVICE INSTALLATION
 - 2 EACH ILLUMINATED SIGN

EXISTING EQUIPMENT TO BE REMOVED LEGEND

- EXISTING SIGNAL HEAD TO BE REMOVED
- EXISTING SERVICE INSTALLATION TO BE REMOVED
- EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
- EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- EXISTING HANDHOLE TO BE REMOVED
- EXISTING DOUBLE HANDHOLE TO BE REMOVED
- EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- EXISTING PEDESTRIAN PUSH-BUTTON TO BE REMOVED
- EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED
- EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED
- EXISTING ILLUMINATED SIGN 'NO LEFT TURN' TO BE REMOVED

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	176
STA. I12+99.63		TO STA. I19+80.09		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 62387				



NOTES FOR TEMPORARY TRAFFIC SIGNALS

- ALL CONTROL EQUIPMENT INCLUDING EMERGENCY VEHICLE PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
- ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS1OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
- ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12" (300 mm). HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
- ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
- ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
- THE TEMPORARY SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON. IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.

TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD, SPAN WIRE MOUNTED ('L' DENOTES LOUVERED SIGNAL HEAD)
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT MINIMUM
- TEMPORARY CONTROLLER CABINET
- TEMPORARY UNINTERRUPTIBLE POWER SUPPLY
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- VIDEO VEHICLE DETECTOR
- PEDESTRIAN PUSH-BUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- GROUND ROD AT TEMPORARY CONTROLLER CABINET

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT MILWAUKEE AVENUE (US RTE 45/ILL RTE 21) AT DES PLAINES RIVER ROAD (US RTE 45) PRE-STAGE I AND STAGE I

SCALE: 1" = 20'

DATE: 02/05/08

DRAWN BY: RAS
DESIGN BY: RAS
CHECKED BY: ADO

SPAAN Tech, Inc.

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Robert Swanson
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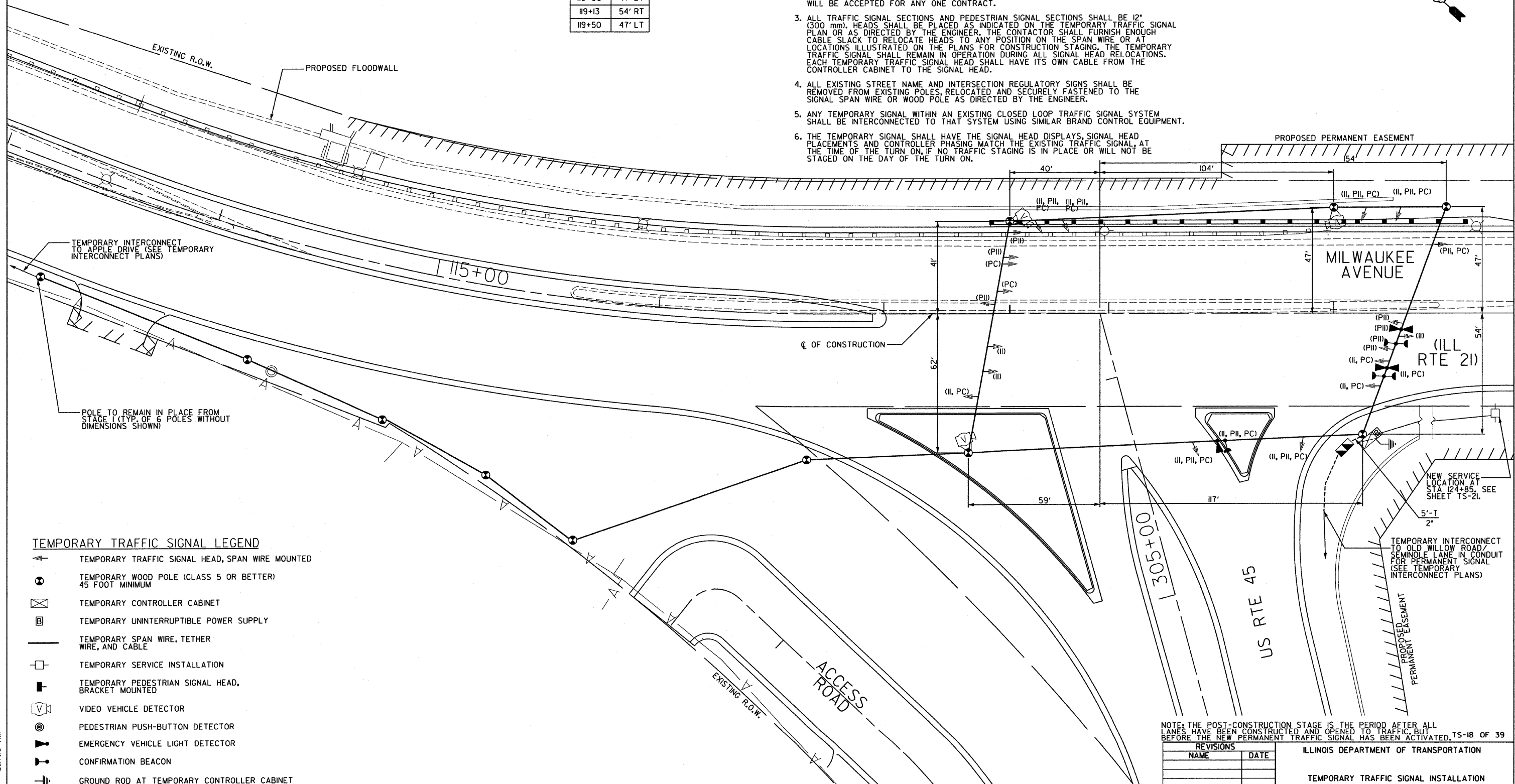
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	178
STA. 112+99.63		TO STA. 119+80.09		
FED. ROAD DIST. NO.	ILLNOIS	FED. AID PROJECT		
CONTRACT NO. 62387				

TEMPORARY WOOD POLE LOCATIONS
(FOR POLES NOT REQUIRED IN PREVIOUS STAGES)

STATION	OFFSET
117+37.5	62' RT
117+56	41' LT
119+00	47' LT
119+13	54' RT
119+50	47' LT

NOTES FOR TEMPORARY TRAFFIC SIGNALS

- ALL CONTROL EQUIPMENT INCLUDING EMERGENCY VEHICLE PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
- ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS1 OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
- ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12" (300 mm). HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
- ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
- ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
- THE TEMPORARY SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.



TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD, SPAN WIRE MOUNTED
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT MINIMUM
- TEMPORARY CONTROLLER CABINET
- TEMPORARY UNINTERRUPTIBLE POWER SUPPLY
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- VIDEO VEHICLE DETECTOR
- PEDESTRIAN PUSH-BUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- GROUND ROD AT TEMPORARY CONTROLLER CABINET

(I) DENOTES TEMPORARY SIGNAL HEAD (AND EVP) POSITIONS DURING STAGE II
 (P1) DENOTES TEMPORARY SIGNAL HEAD (AND EVP) POSITIONS DURING POST STAGE II
 (PC) DENOTES TEMPORARY SIGNAL HEAD (AND EVP) POSITIONS DURING THE POST-CONSTRUCTION STAGE

NOTE:
 THE TEMPORARY TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS INTERSECTION SHALL BE "ECONOLITE" BRAND TO MATCH THE EXISTING SYSTEM.

SPAAN Tech, Inc.
 311 S. Wacker Drive, Suite 2400
 Chicago, Illinois 60606
 phone: 312.277.8800
 fax: 312.277.8808
 web: www.SpaanTech.com

NOTE: THE POST-CONSTRUCTION STAGE IS THE PERIOD AFTER ALL LANES HAVE BEEN CONSTRUCTED AND OPENED TO TRAFFIC, BUT BEFORE THE NEW PERMANENT TRAFFIC SIGNAL HAS BEEN ACTIVATED. TS-18 OF 39

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION
 MILWAUKEE AVENUE (US RTE 45/ILL RTE 21)
 AT DES PLAINES RIVER ROAD (US RTE 45)
 STAGE II, POST STAGE II, AND
 POST-CONSTRUCTION

SCALE: 1" = 20'
 DATE: 02/05/08

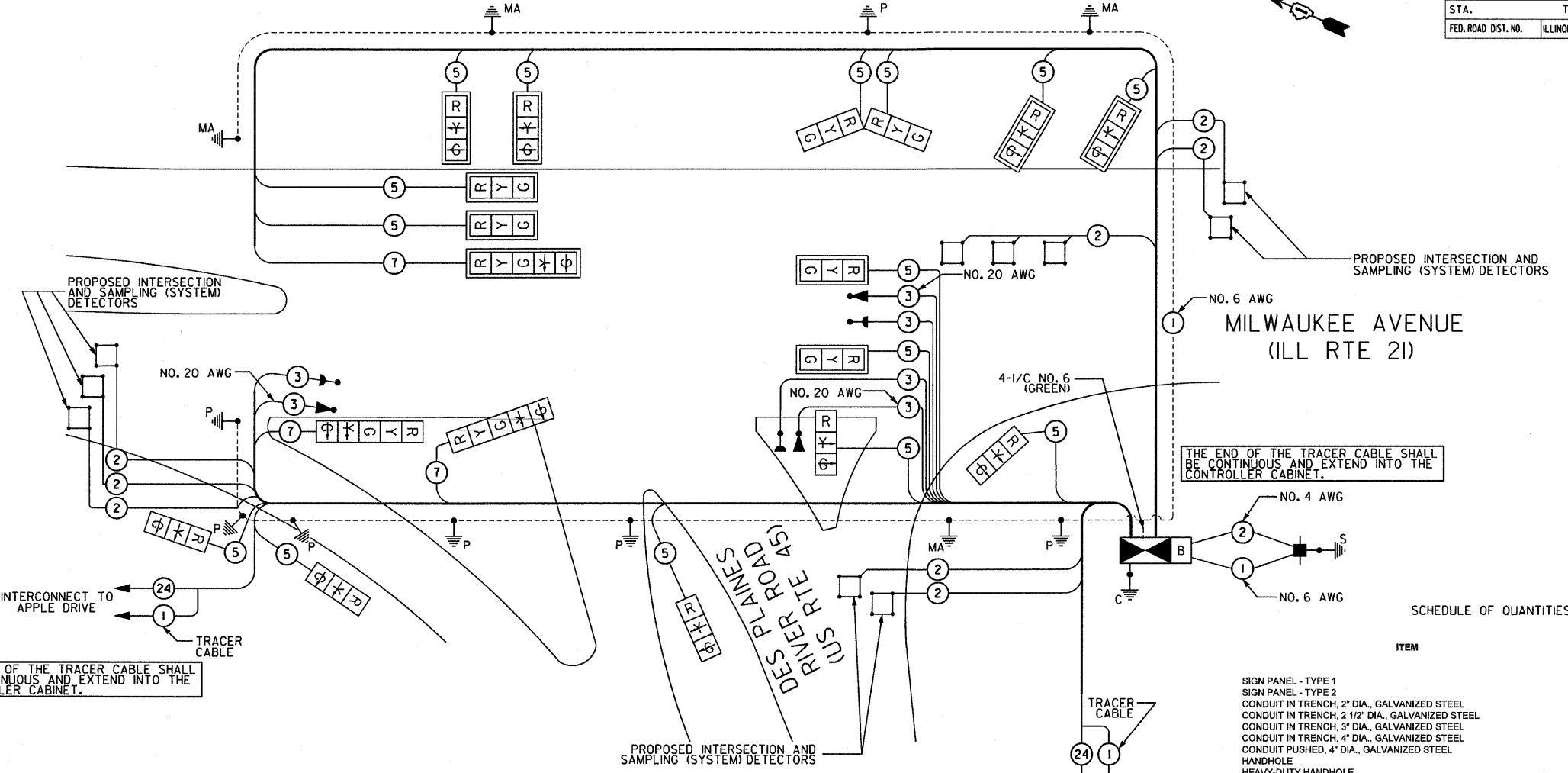
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	326BF-R-1	COOK	279	182
STA. TO STA.		FED. AID PROJECT		
FED. ROAD DIST. NO.		ILLINOIS		
CONTRACT NO. 62387				

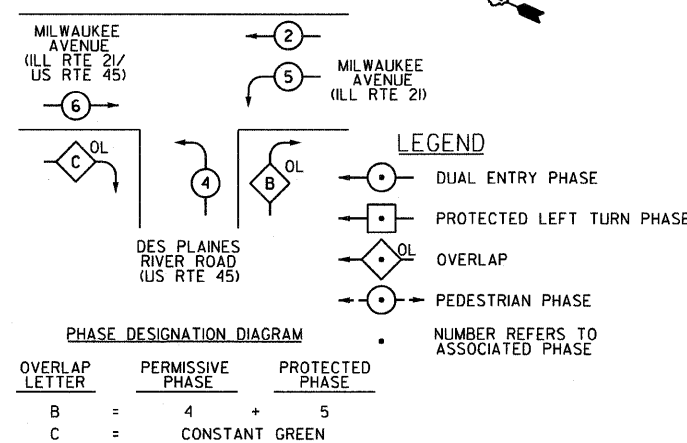
CABLE PLAN LEGEND

EXISTING	PROPOSED	DESCRIPTION
		8" (200mm) TRAFFIC SIGNAL SECTION
		12" (300mm) TRAFFIC SIGNAL SECTION
		12" (300mm) PEDESTRIAN SIGNAL SECTION
		12" (300mm) PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
		TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSH-BUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP (PERFORMED UNLESS NOTED OTHERWISE)
		MICROWAVE VEHICLE SENSOR
		SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
		RAILROAD CONTROL CABINET
		ILLUMINATED SIGN "NO LEFT TURN"
		ILLUMINATED SIGN "NO RIGHT TURN"
		GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C)
		GROUND ROD AT POST (P), OR MAST ARM POLE (MA)
		GROUND ROD AT ELECTRIC SERVICE INSTALLATION
		GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
		FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM/2F SMI2F
		UNINTERRUPTIBLE POWER SUPPLY

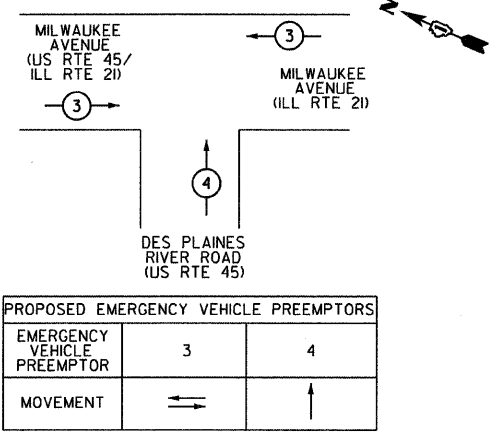


CABLE PLAN

PROPOSED CONTROLLER SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
SIGN PANEL - TYPE 1	SQ FT	24
SIGN PANEL - TYPE 2	SQ FT	27.5
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	1252
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	400
CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	5
CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	128
CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	311
HANDHOLE	EACH	8
HEAVY-DUTY HANDHOLE	EACH	1
DOUBLE HANDHOLE	EACH	2
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	1585
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	455
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	3150
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	800
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	2770
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	5
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 22 FT.	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE 34 FT.	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 34 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	28
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	47
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	8
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	5
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	1
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8
INDUCTIVE LOOP DETECTOR	EACH	8
LIGHT DETECTOR	EACH	3
LIGHT DETECTOR AMPLIFIER	EACH	1
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	12
REMOVE EXISTING CONCRETE FOUNDATION	EACH	9
PERFORMED DETECTOR LOOP	FOOT	383
SERVICE INSTALLATION, POLE MOUNT	EACH	1
UNINTERRUPTIBLE POWER SUPPLY	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING NO. 6 1C	FOOT	2050
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	455
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 4, 2/C	FOOT	595

NOTE: 100% OF THE COST OF ITEMS DENOTED WITH A * IS PAYABLE BY THE PROSPECT HEIGHTS FIRE PROTECTION DISTRICT. TS-22 OF 39

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE	INCAND. LED % OPERATION		
SIGNAL (RED)	18	135	17	0.50	153
(YELLOW)	18	135	25	0.25	112.5
(GREEN)	18	135	15	0.25	67.5
ARROW	6	135	12	0.10	7.2
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252		0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	440.2

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2' (6m+L-0.6m)=
E - M. ARM POLE		SIGNAL POST	2 (1.0)		
24" (600 mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750 mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED PUSHBUTTON	4 (1.2)
		ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

NOTE: THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS INTERSECTION SHALL BE 'ECONOLITE' BRAND TO MATCH THE EXISTING SYSTEM.

SPAAN Tech, Inc.
 311 S. Wacker Drive, Suite 2400
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REVISIONS	
NAME	DATE

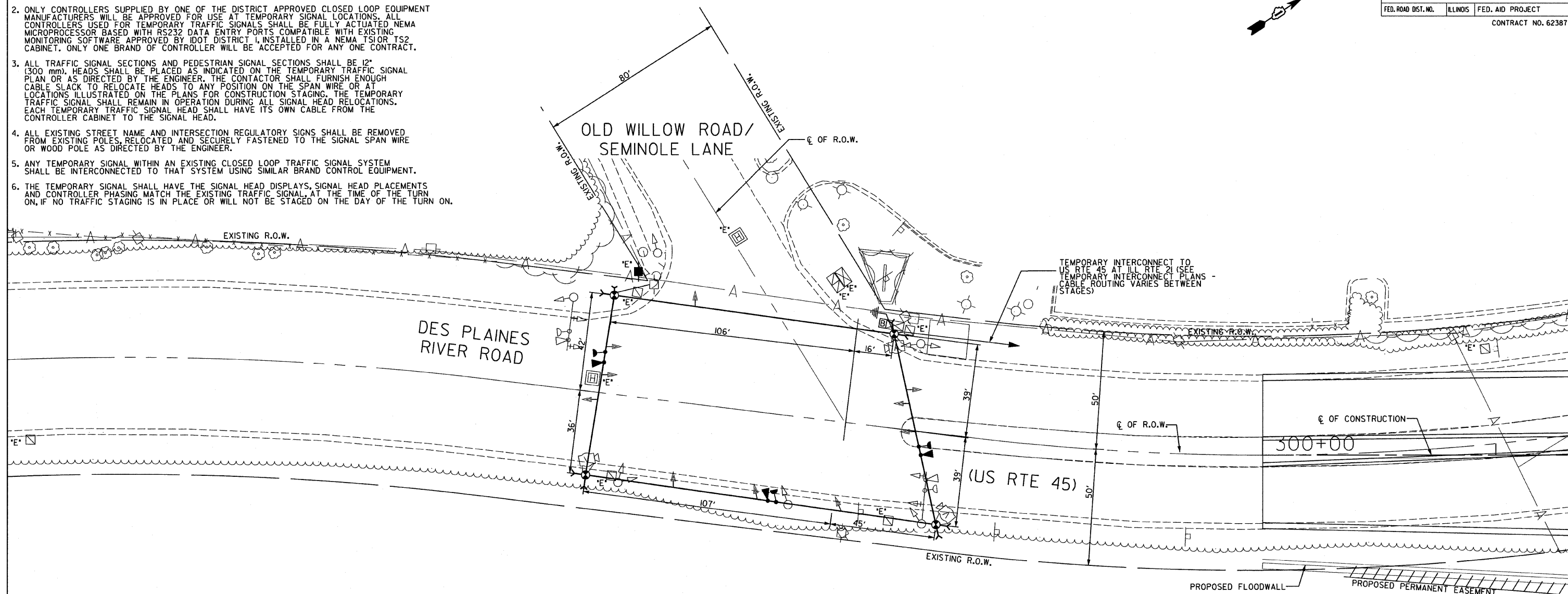
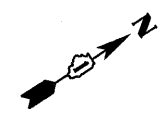
ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF QUANTITIES, CABLE PLAN, AND PHASE DESIGNATION DIAGRAM
 MILWAUKEE AVENUE (US RTE 45/ILL RTE 21) AT DES PLAINES RIVER ROAD (US RTE 45)
 SCALE: NONE
 DATE: 02/05/08
 DRAWN BY: RAS
 DESIGN BY: RAS
 CHECKED BY: ADD

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NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY VEHICLE PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT I, INSTALLED IN A NEMA TSIOR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12" (300 mm). HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	183
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62387				



NOTE:
THE TEMPORARY TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS INTERSECTION SHALL BE "ECONOLITE" BRAND TO MATCH THE EXISTING SYSTEM.

TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD, SPAN WIRE MOUNTED
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT MINIMUM
- TEMPORARY CONTROLLER CABINET
- TEMPORARY UNINTERRUPTIBLE POWER SUPPLY
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- VIDEO VEHICLE DETECTOR
- PEDESTRIAN PUSH-BUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- GROUND ROD AT TEMPORARY CONTROLLER CABINET

EXISTING EQUIPMENT TO BE REMOVED LEGEND

- EXISTING SIGNAL HEAD TO BE REMOVED
- EXISTING SERVICE INSTALLATION TO BE REMOVED
- EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
- EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- EXISTING HANDHOLE TO BE REMOVED
- EXISTING DOUBLE HANDHOLE TO BE REMOVED
- EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- EXISTING PEDESTRIAN PUSH-BUTTON TO BE REMOVED
- EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED
- EXISTING STEEL MAST ARM ASSEMBLY AND POLE TO BE REMOVED

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

- 1 EACH CONTROLLER AND CABINET (COMPLETE EXCEPT EVP EQUIPMENT)
- (NOTE: THE EXISTING EVP SYSTEM IS TO BE STORED AND RELOCATED TO THE NEW TRAFFIC SIGNAL INSTALLATION. THE CONTRACTOR SHALL CONTACT THE VILLAGE OF MT. PROSPECT FIRE DEPARTMENT AT (847) 870-5660 TO ARRANGE FOR STORAGE OF THE EXISTING EVP SYSTEM WHILE THE TEMPORARY TRAFFIC SIGNAL IS IN OPERATION.)

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY HIM OUTSIDE THE RIGHT-OF-WAY AT HIS EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

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

NOTE:
THE POST-CONSTRUCTION STAGE IS THE PERIOD AFTER ALL LANES HAVE BEEN CONSTRUCTED AND OPENED TO TRAFFIC, BUT BEFORE THE NEW PERMANENT TRAFFIC SIGNAL HAS BEEN ACTIVATED.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT AT OLD WILLOW ROAD/SEMINOLE LANE PRE-STAGE I, POST STAGE II, AND POST-CONSTRUCTION
 SCALE: 1" = 20'
 DATE: 02/05/08
 DRAWN BY: RAS
 DESIGN BY: RAS
 CHECKED BY: ADO

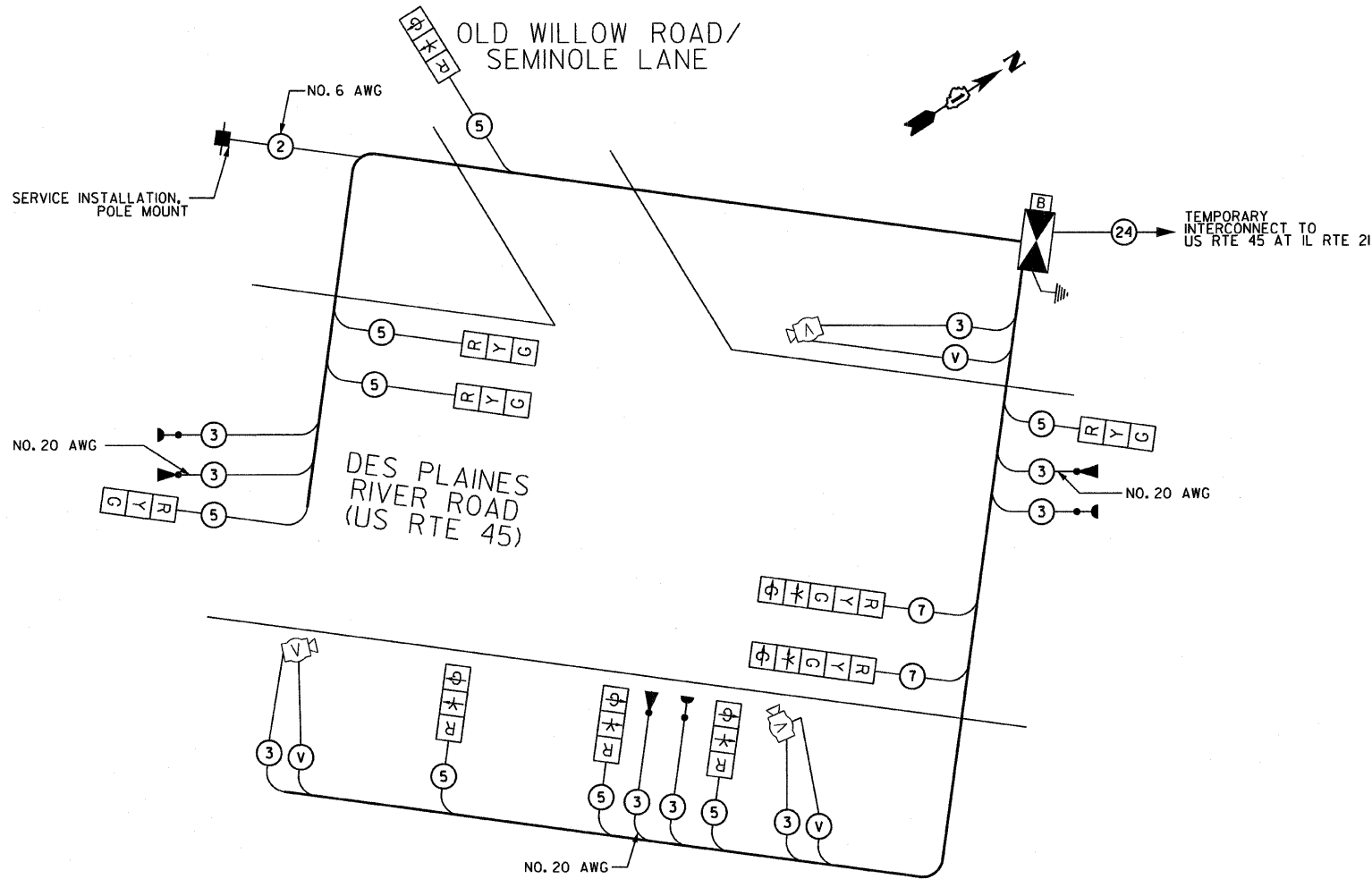
SPAAN Tech, Inc.
 311 S. Wacker Drive, Suite 2400
 Chicago, Illinois 60606
 phone: 312.277.8800
 fax: 312.277.8808
 web: www.SpaanTech.com

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	184
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62387				

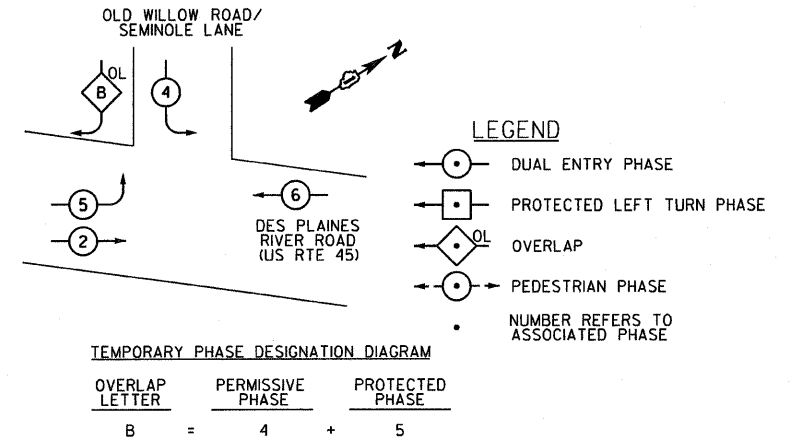
TEMPORARY CABLE PLAN LEGEND

- R TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12" (300mm)
- 12" (300mm) PEDESTRIAN SIGNAL SECTION
- TEMPORARY CONTROLLER CABINET
- TEMPORARY UNINTERRUPTIBLE POWER SUPPLY
- TEMPORARY SERVICE INSTALLATION
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- PUSH-BUTTON DETECTOR
- VIDEO VEHICLE DETECTOR
- 2 DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED ALL LOOP DETECTOR CABLE TO BE SHIELDED
- 24 FIBER OPTIC CABLE NO. 62.5/125 MM12F SM12F
- V VIDEO DETECTOR CABLE PER VIDEO SYSTEM MANUFACTURER'S RECOMMENDATION
- GROUND ROD

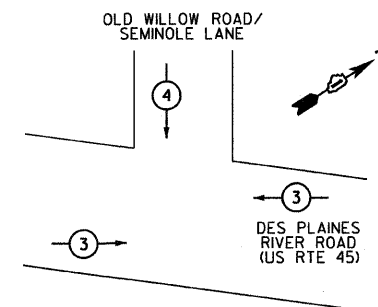


TEMPORARY CABLE PLAN

CONTROLLER SEQUENCE



EMERGENCY VEHICLE PRIORITY SEQUENCE



EMERGENCY VEHICLE PREEMPTORS	
EMERGENCY VEHICLE PREEMPTOR	3 4
MOVEMENT	← → ↓

NOTE: THE POST-CONSTRUCTION STAGE IS THE PERIOD AFTER ALL LANES HAVE BEEN CONSTRUCTED AND OPENED TO TRAFFIC, BUT BEFORE THE NEW PERMANENT TRAFFIC SIGNAL HAS BEEN ACTIVATED.

TS-24 OF 39

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE	INCAND. LED x % OPERATION		
SIGNAL (RED)	10	135	17	0.50	85
(YELLOW)	10	135	25	0.25	62.5
(GREEN)	10	135	15	0.25	37.5
ARROW	4	135	12	0.10	4.8
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252		0.05	
FLASHER				0.50	
TOTAL =					289.8

NOTE: THE TEMPORARY TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS INTERSECTION SHALL BE "ECONOLITE" BRAND TO MATCH THE EXISTING SYSTEM.

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2' (6m+L-0.6m)
E - M. ARM POLE		SIGNAL POST	2 (0.6)	BRACKET MOUNTED	13 (4.0)
24" (600 mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	PED PUSHBUTTON	4 (1.2)
30" (750 mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	ELECTRIC SERVICE	13.5 (4.1)
		ELECTRIC SERVICE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
		GROUND CABLE	1 (0.5)	POST MOUNTED	6 (1.8)

ENERGY COSTS TO:
 VILLAGE OF MOUNT PROSPECT (50%) 60056
 50 SOUTH EMERSON STREET/MOUNT PROSPECT, ILLINOIS
 CITY OF PROSPECT HEIGHTS (50%) 60070
 8 NORTH ELMHURST ROAD/PROSPECT HEIGHTS, ILLINOIS
 ENERGY SUPPLY CONTACT: **MS. JUDY SCHOMER**
 PHONE: (847) 870-2056
 COMPANY: COMED

SPAAN Tech, Inc.
 311 S. Wacker Drive, Suite 2400
 Chicago, Illinois 60606
 phone: 312.277.8800
 fax: 312.277.8808
 web: www.SpaanTech.com

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM DES PLAINES RIVER ROAD (US RTE 45) AT OLD WILLOW ROAD/SEMINOLE LANE PRE-STAGE I, POST STAGE II, AND POST-CONSTRUCTION SCALE: NONE DATE: 02/05/08 DRAWN BY: RAS DESIGN BY: RAS CHECKED BY: ADD

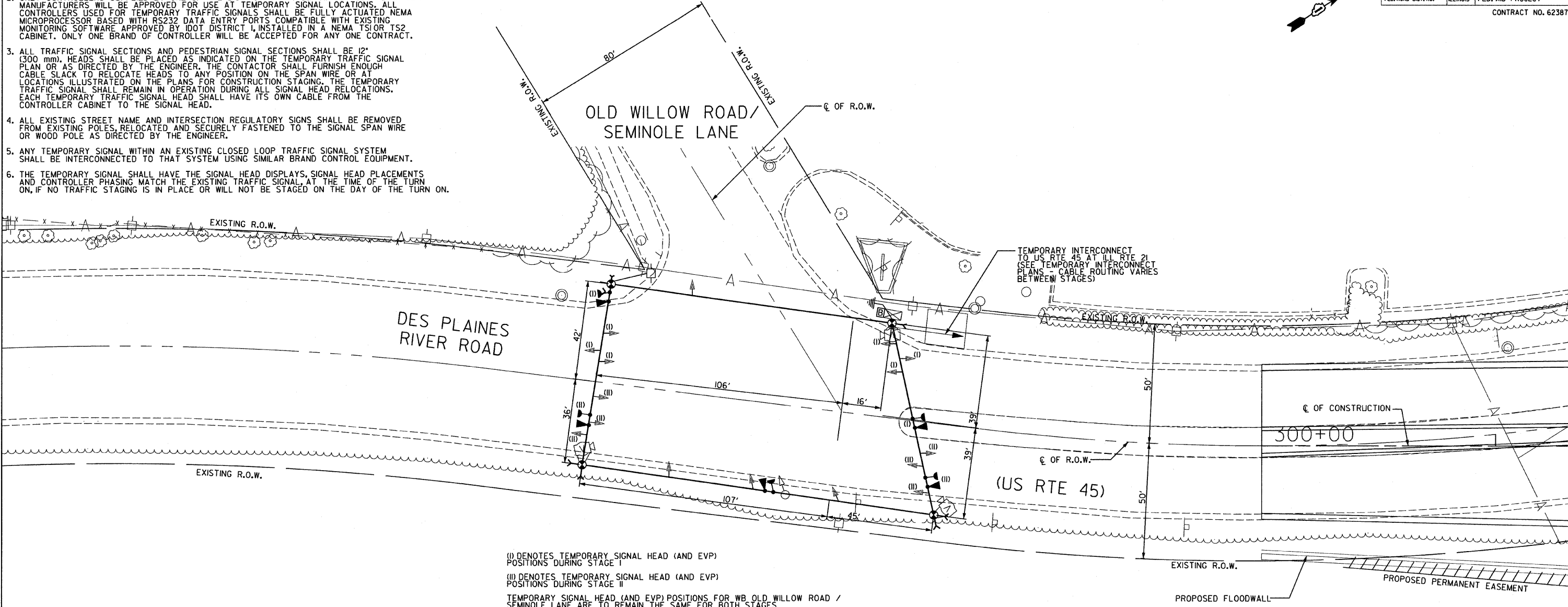
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	326BF-R-1	COOK	279	185
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62387				



NOTES FOR TEMPORARY TRAFFIC SIGNALS

- ALL CONTROL EQUIPMENT INCLUDING EMERGENCY VEHICLE PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
- ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT I, INSTALLED IN A NEMA TS1OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
- ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12" (300 mm). HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
- ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
- ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
- THE TEMPORARY SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.



(I) DENOTES TEMPORARY SIGNAL HEAD (AND EVP) POSITIONS DURING STAGE I
 (II) DENOTES TEMPORARY SIGNAL HEAD (AND EVP) POSITIONS DURING STAGE II
 TEMPORARY SIGNAL HEAD (AND EVP) POSITIONS FOR WB OLD WILLOW ROAD / SEMINOLE LANE ARE TO REMAIN THE SAME FOR BOTH STAGES

TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD, SPAN WIRE MOUNTED
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT MINIMUM
- TEMPORARY CONTROLLER CABINET
- TEMPORARY UNINTERRUPTIBLE POWER SUPPLY
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- VIDEO VEHICLE DETECTOR
- PEDESTRIAN PUSH-BUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- GROUND ROD AT TEMPORARY CONTROLLER CABINET

NOTE:
 THE TEMPORARY TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS INTERSECTION SHALL BE 'ECONOLITE' BRAND TO MATCH THE EXISTING SYSTEM.

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 311 S. Wacker Drive, Suite 2400
 Chicago, Illinois 60606
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 fax: 312.277.8808
 web: www.SpaanTech.com

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION
 DES PLAINES RIVER ROAD (US RTE 45)
 AT OLD WILLOW ROAD/SEMINOLE LANE
 STAGES I AND II

SCALE: 1" = 20'
 DATE: 02/05/08

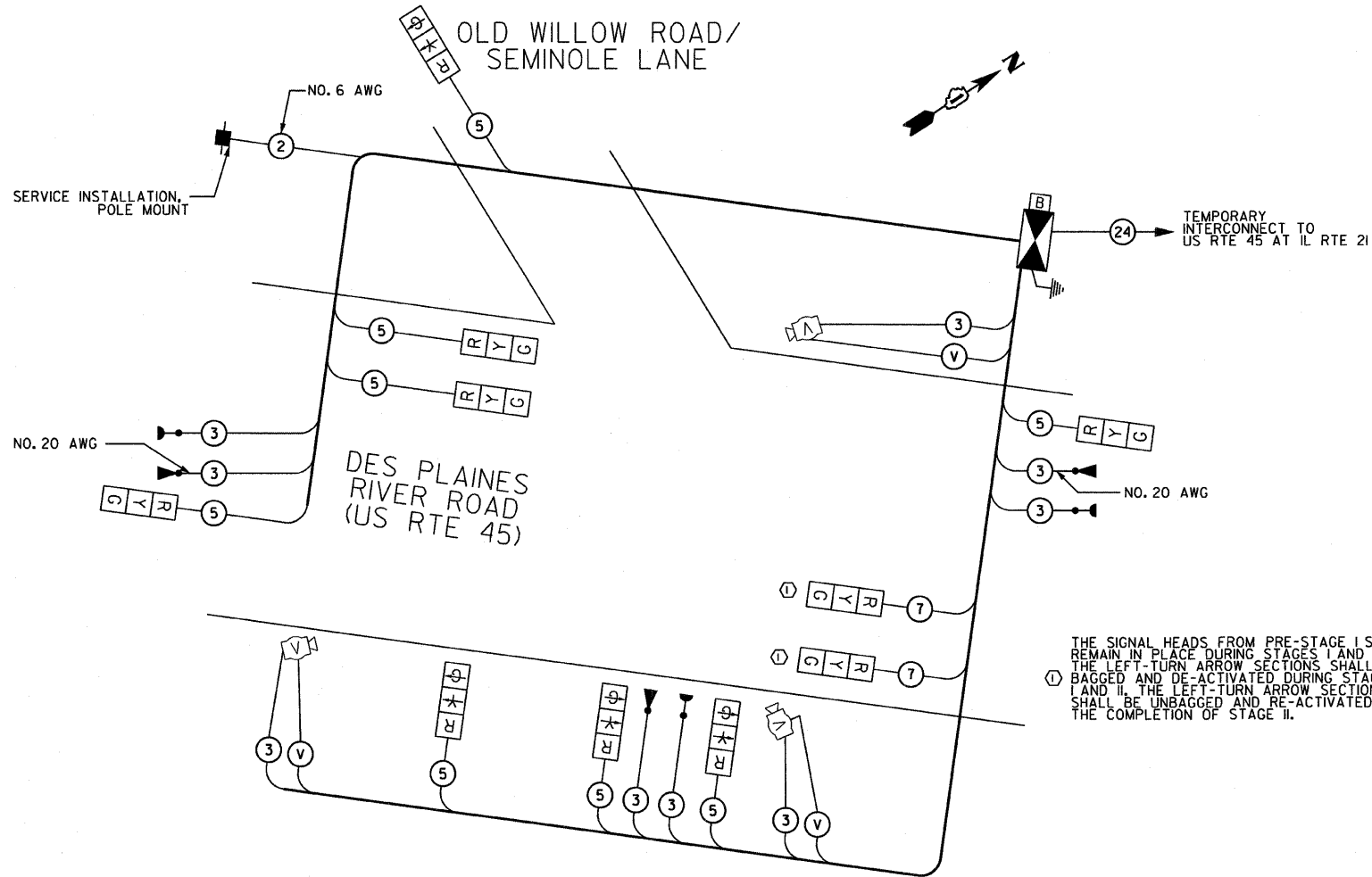
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 DESIGN BY: RAS
 CHECKED BY: ADO

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	326BF-R-1	COOK	279	186
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62387				

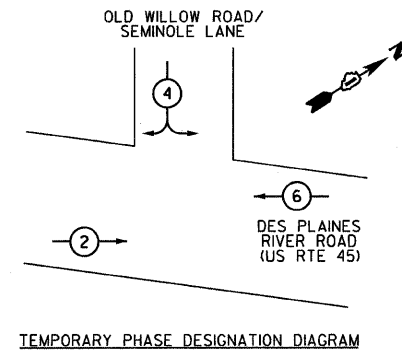
TEMPORARY CABLE PLAN LEGEND

- R TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12" (300mm)
- 12" (300mm) PEDESTRIAN SIGNAL SECTION
- TEMPORARY CONTROLLER CABINET
- TEMPORARY UNINTERRUPTIBLE POWER SUPPLY
- TEMPORARY SERVICE INSTALLATION
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- PUSH-BUTTON DETECTOR
- VIDEO VEHICLE DETECTOR
- 2 DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED ALL LOOP DETECTOR CABLE TO BE SHIELDED
- 24 FIBER OPTIC CABLE NO. 62.5/125 MM2F SMI2F
- V VIDEO DETECTOR CABLE PER VIDEO SYSTEM MANUFACTURER'S RECOMMENDATION
- GROUND ROD



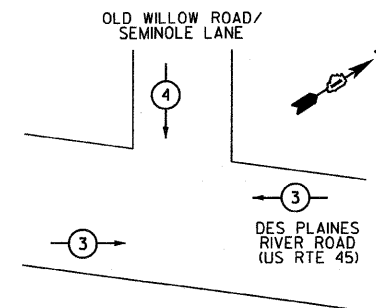
TEMPORARY CABLE PLAN

CONTROLLER SEQUENCE



TEMPORARY PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PRIORITY SEQUENCE



NOTE: THE TEMPORARY TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS INTERSECTION SHALL BE "ECONOLITE" BRAND TO MATCH THE EXISTING SYSTEM.

TS-26 OF 39

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE	% OPERATION		
SIGNAL (RED)	10	135	17	0.50	85
(YELLOW)	10	135	25	0.25	62.5
(GREEN)	10	135	15	0.25	37.5
ARROW		135	12	0.10	
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252		0.05	
FLASHER				0.50	
TOTAL =					285

ENERGY COSTS TO:
 VILLAGE OF MOUNT PROSPECT (50%)
 50 SOUTH EMERSON STREET/MOUNT PROSPECT, ILLINOIS 60056
 CITY OF PROSPECT HEIGHTS (50%)
 8 NORTH ELMHURST ROAD/PROSPECT HEIGHTS, ILLINOIS 60070
 ENERGY SUPPLY CONTACT: MS. JUDY SCHOMER
 PHONE: (847) 870-2056
 COMPANY: COMED

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2' (6m+L-0.6m)
E - M. ARM POLE		SIGNAL POST	2 (1.0)	BRACKET MOUNTED	13 (4.0)
24" (600 mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	PED PUSHBUTTON	4 (1.2)
30" (750 mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	ELECTRIC SERVICE	13.5 (4.1)
		ELECTRIC SERVICE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
		GROUND CABLE	1 (0.5)	POST MOUNTED	6 (1.8)

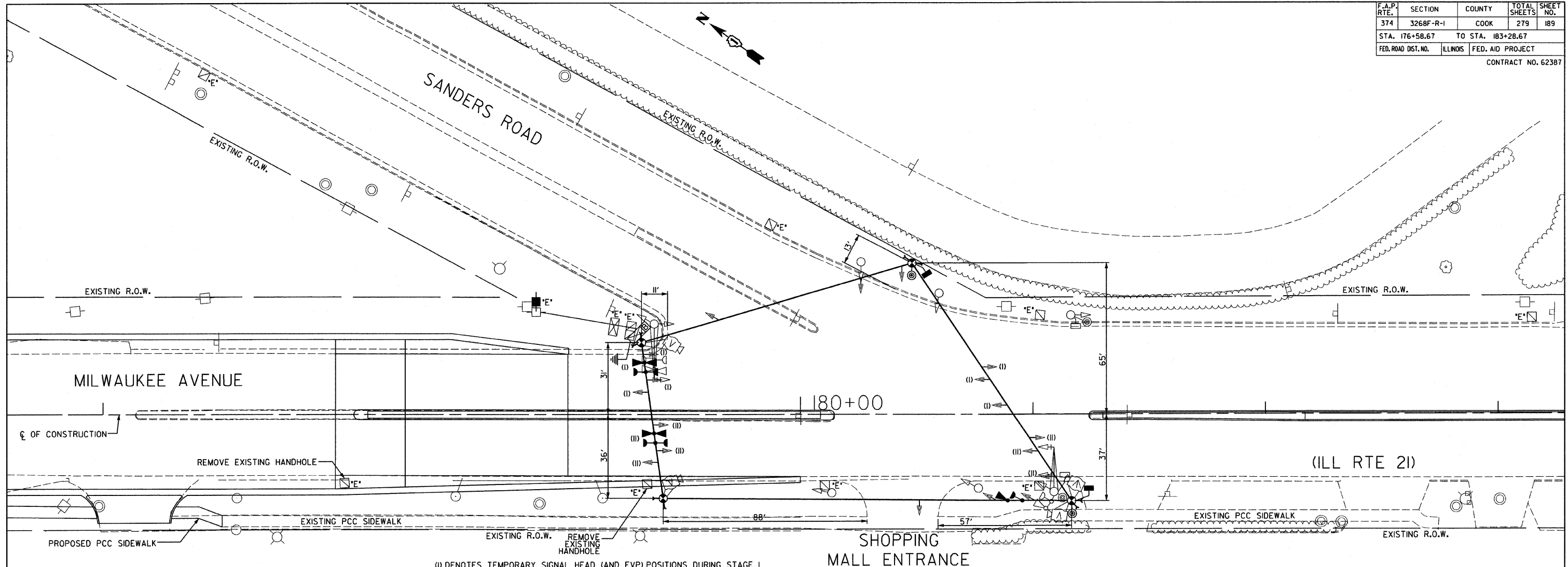
SPAAN Tech, Inc.
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 fax: 312.277.8808
 web: www.SpaanTech.com

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 TEMPORARY CABLE PLAN AND
 TEMPORARY PHASE DESIGNATION DIAGRAM
 DES PLAINES RIVER ROAD (US RTE 45)
 AT OLD WILLOW ROAD/SEMINOLE LANE
 STAGES I AND II
 SCALE: NONE
 DATE: 02/05/08
 DRAWN BY: RAS
 DESIGN BY: RAS
 CHECKED BY: ADD

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	326BF-R-1	COOK	279	189
STA. 176+58.67		TO STA. 183+28.67		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62387				



(I) DENOTES TEMPORARY SIGNAL HEAD (AND EVP) POSITIONS DURING STAGE I
 (II) DENOTES TEMPORARY SIGNAL HEAD (AND EVP) POSITIONS DURING STAGE II
 TEMPORARY SIGNAL HEADS (AND EVP) POSITIONS FOR SANDERS ROAD AND THE SHOPPING MALL ENTRANCE ARE TO REMAIN THE SAME FOR BOTH STAGES.

IN THE PERIODS PRIOR TO THE PLACEMENT OF STAGE I TRAFFIC STAGING AND AFTER THE REMOVAL OF STAGE II TRAFFIC STAGING, THE SIGNAL HEADS FOR NB MILWAUKEE AVENUE SHALL BE PLACED IN THEIR STAGE I POSITIONS. THE SIGNAL HEADS FOR SB MILWAUKEE AVENUE SHALL BE PLACED IN THEIR STAGE II POSITIONS.

NOTES FOR TEMPORARY TRAFFIC SIGNALS

- ALL CONTROL EQUIPMENT INCLUDING EMERGENCY VEHICLE PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
- ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS1 OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
- ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12" (300 mm). HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
- ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
- ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
- THE TEMPORARY SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
- IF EXISTING MAST ARMS ARE IN CONFLICT WITH THE TEMPORARY TRAFFIC SIGNAL, THE MAST ARMS SHALL BE ROTATED TO ELIMINATE THE CONFLICT. THE COST OF THIS WORK IS INCLUDED IN THE COST OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.

TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD, SPAN WIRE MOUNTED
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT MINIMUM
- TEMPORARY CONTROLLER CABINET
- TEMPORARY UNINTERRUPTIBLE POWER SUPPLY
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- VIDEO VEHICLE DETECTOR
- PEDESTRIAN PUSH-BUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- GROUND ROD AT TEMPORARY CONTROLLER CABINET

EXISTING EQUIPMENT LEGEND

- EXISTING SIGNAL HEAD
- EXISTING SERVICE INSTALLATION
- EXISTING SIGNAL POST AND FOUNDATION
- EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION
- EXISTING CONTROLLER AND FOUNDATION
- EXISTING HANDHOLE
- EXISTING DOUBLE HANDHOLE
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING PEDESTRIAN PUSH-BUTTON
- EXISTING HEAVY-DUTY HANDHOLE
- EXISTING STEEL MAST ARM POLE AND FOUNDATION

NOTE: ALL EXISTING TRAFFIC SIGNAL EQUIPMENT IS TO REMAIN IN PLACE UNLESS NOTED OTHERWISE.

TS-29 OF 39

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 TEMPORARY TRAFFIC SIGNAL INSTALLATION
 MILWAUKEE AVENUE (ILL. RTE 21)
 AT SANDERS ROAD
 SCALE: 1" = 20'
 DATE: 02/05/08
 DRAWN BY: RAS
 DESIGN BY: RAS
 CHECKED BY: ADD

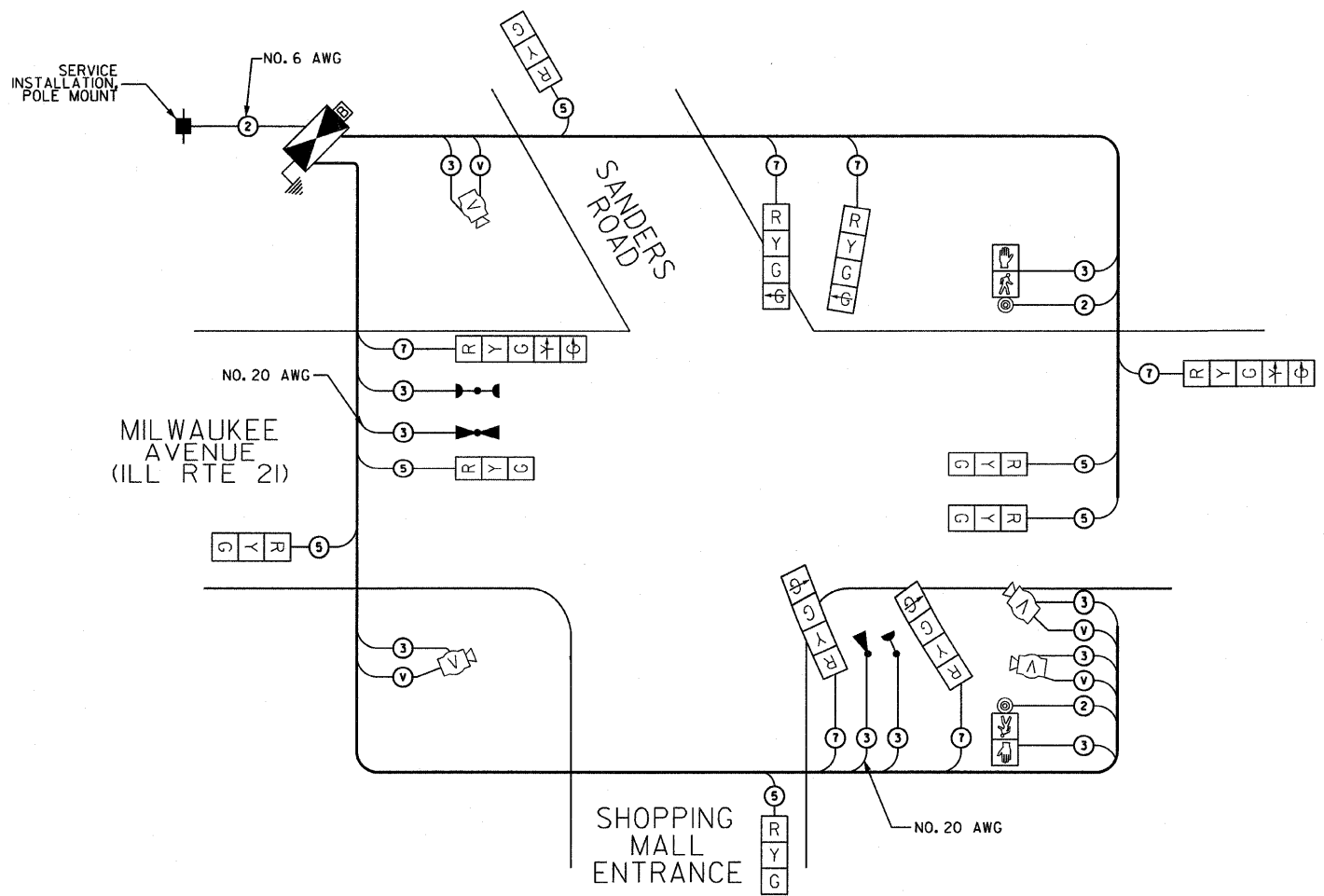
SPAN Tech, Inc.
 311 S. Wacker Drive, Suite 2400
 Chicago, Illinois 60606
 phone: 312.277.8800
 fax: 312.277.8808
 web: www.SpanTech.com

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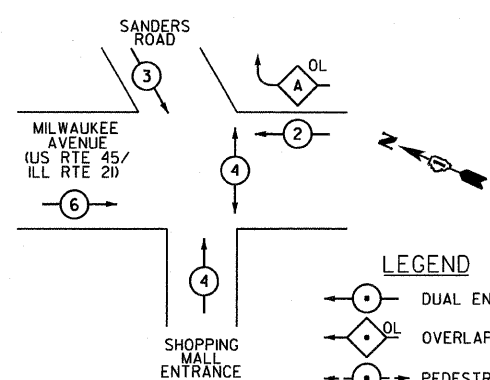
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	326BF-R-1	COOK	279	190
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62387				

TEMPORARY CABLE PLAN LEGEND

- TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12" (300mm)
- 12" (300mm) PEDESTRIAN SIGNAL SECTION
- TEMPORARY CONTROLLER CABINET
- TEMPORARY UNINTERRUPTIBLE POWER SUPPLY
- TEMPORARY SERVICE INSTALLATION
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- PUSH-BUTTON DETECTOR
- VIDEO VEHICLE DETECTOR
- DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED ALL LOOP DETECTOR CABLE TO BE SHIELDED
- FIBER OPTIC CABLE NO. 62.5/125 MM12F SM12F
- VIDEO DETECTOR CABLE PER VIDEO SYSTEM MANUFACTURER'S RECOMMENDATION
- GROUND ROD

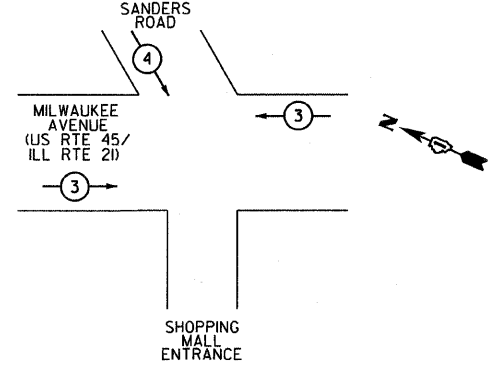


CONTROLLER SEQUENCE



TEMPORARY CABLE PLAN

EMERGENCY VEHICLE PRIORITY SEQUENCE



EMERGENCY VEHICLE PREEMPTORS	
EMERGENCY VEHICLE PREEMPTOR	3 4
MOVEMENT	← → ↓

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE	INCAND. LED % OPERATION		
SIGNAL (RED)	12	135	17	0.50	102
(YELLOW)	12	135	25	0.25	75
(GREEN)	14	135	15	0.25	52.5
ARROW	4	135	12	0.10	4.8
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252		0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	334.3

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A	= 2	+ 3

NOTE: OVERLAP "A" SHALL BE DEACTIVATED DURING STAGES I AND II. THE RIGHT TURN ARROW SIGNAL SECTIONS CORRESPONDING TO OVERLAP "A" SHALL BE BAGGED WHILE THE OVERLAP IS DEACTIVATED.

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2' (6m+L-0.6m)=
E - M. ARM POLE		SIGNAL POST	2 (0.6)	BRACKET MOUNTED	13 (4.0)
24" (600 mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	PED PUSHBUTTON	4 (1.2)
30" (750 mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	ELECTRIC SERVICE	13.5 (4.1)
		ELECTRIC SERVICE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
		GROUND CABLE	1 (0.5)	POST MOUNTED	6 (1.8)

IDOT DIVISION OF HIGHWAYS / DISTRICT 1 (75%)
 201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196
 ANGELOPOULOUST AND GIANNOS (25%)
 ENERGY SUPPLY CONTACT: MS. JUDY SCHOMER
 PHONE: (847) 870-2056
 COMPANY: COMED

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 Chicago, Illinois 60606
 phone: 312.277.8800
 fax: 312.277.8808
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REVISIONS	
NAME	DATE

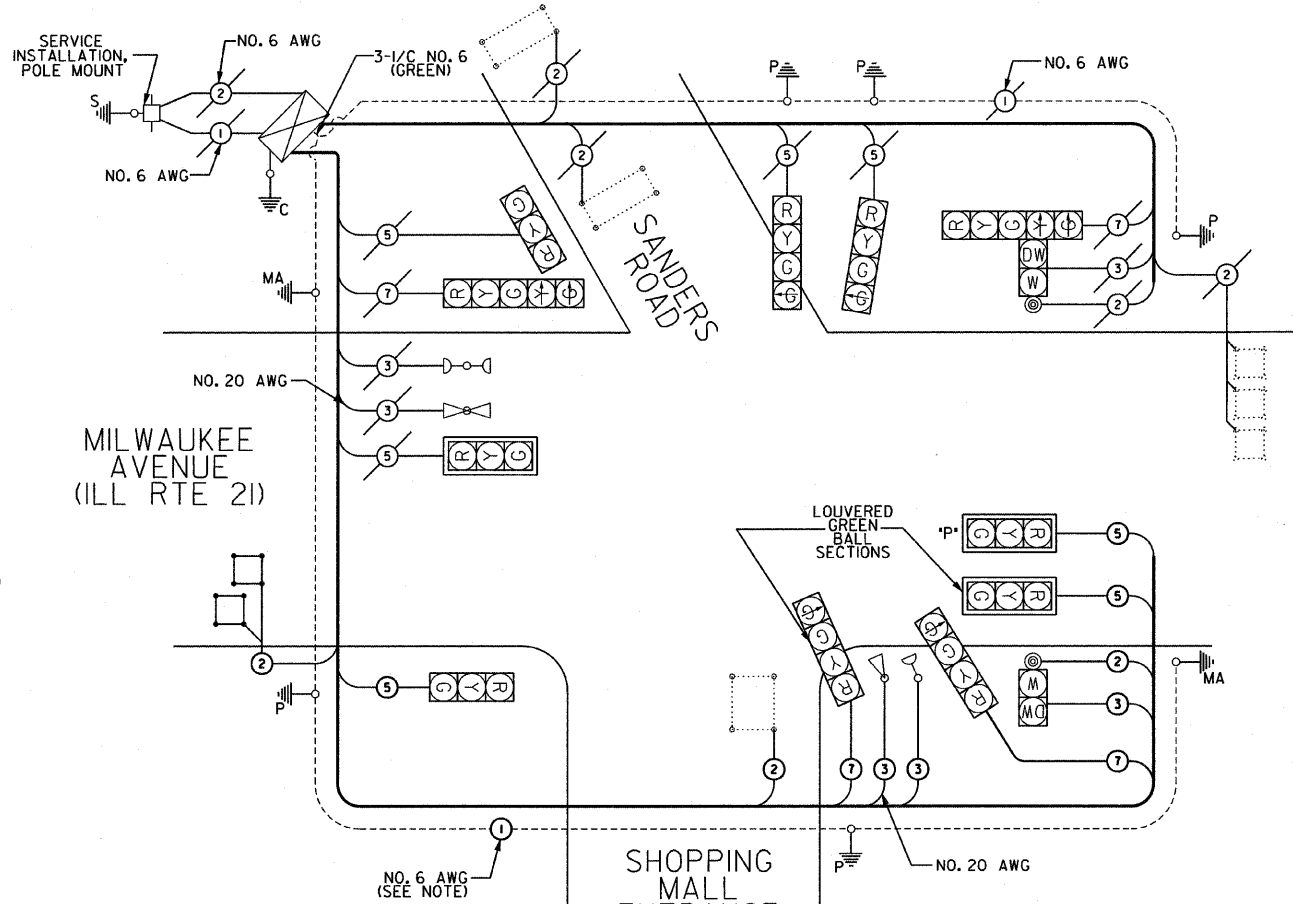
ILLINOIS DEPARTMENT OF TRANSPORTATION
 TEMPORARY CABLE PLAN AND
 TEMPORARY PHASE DESIGNATION DIAGRAM
 MILWAUKEE AVENUE (ILL RTE 21)
 AT SANDERS ROAD
 SCALE: NONE
 DATE: 02/05/08
 DRAWN BY: RAS
 DESIGN BY: RAS
 CHECKED BY: ADO

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	192
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62387				

CABLE PLAN LEGEND

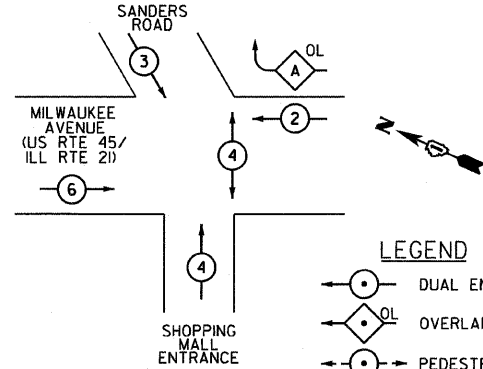
EXISTING	PROPOSED	
		8" (200mm) TRAFFIC SIGNAL SECTION
		12" (300mm) TRAFFIC SIGNAL SECTION
		12" (300mm) PEDESTRIAN SIGNAL SECTION
		12" (300mm) PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
		TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSH-BUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP (PERFORMED UNLESS NOTED OTHERWISE)
		DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
		MICROWAVE VEHICLE SENSOR
		SIGNAL FACE WITH BACKPLATE. *P* INDICATES PROGRAMMED HEAD.
		RAILROAD CONTROL CABINET
		ILLUMINATED SIGN "NO LEFT TURN"
		ILLUMINATED SIGN "NO RIGHT TURN"
		GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C)
		GROUND ROD AT POST (P), OR MAST ARM POLE (MA)
		GROUND ROD AT ELECTRIC SERVICE INSTALLATION
		GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
		FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM12F
		UNINTERRUPTIBLE POWER SUPPLY



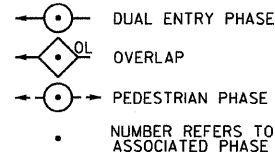
NOTE: INSTALL NEW GROUND CABLE IN NEW CONDUIT RUNS CARRYING SIGNAL CABLE. SPLICING THE NEW GROUND CABLES TO EXISTING GROUND CABLES AT EXISTING HANDHOLES IS INCLUDED IN THE COST OF THE GROUND CABLE.

CABLE PLAN

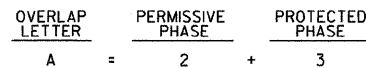
EXISTING CONTROLLER SEQUENCE



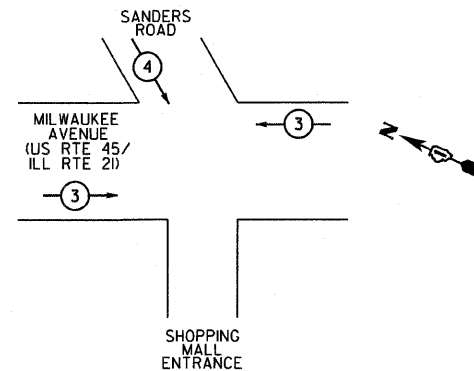
LEGEND



PHASE DESIGNATION DIAGRAM



EXISTING EMERGENCY VEHICLE PRIORITY SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	←	↓

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I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE	INCAND. LED % OPERATION		
SIGNAL (RED)	11	135	17	0.50	742.5
(YELLOW)	11	135	25	0.25	371.25
(GREEN)	15	135	15	0.25	506.25
ARROW	4	135	12	0.10	54
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252		0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	1774

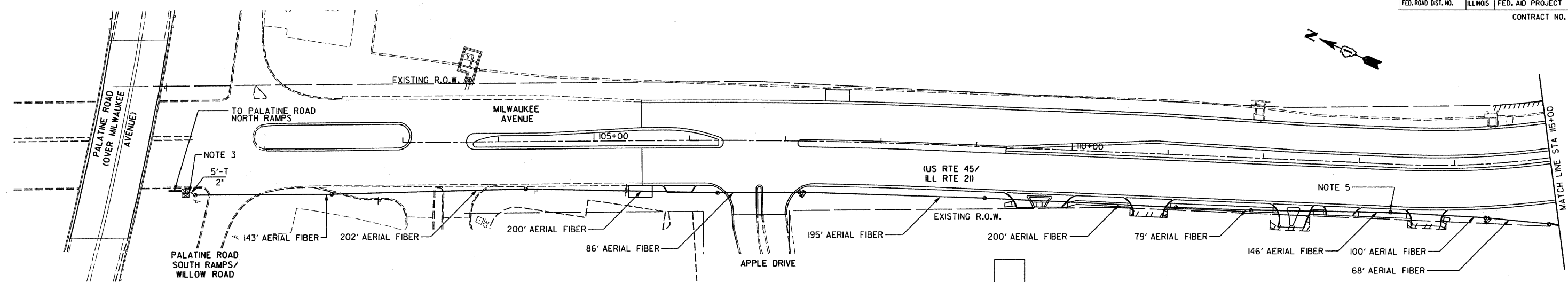
IDOT DIVISION OF HIGHWAYS / DISTRICT 1 (75%)
 201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196
 ANGELOPOULOST AND GIANNOS (25%)
 ENERGY SUPPLY CONTACT: MS. JUDY SCHOMER
 PHONE: (847) 870-2056
 COMPANY: COMED

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2=
E - M. ARM POLE		SIGNAL POST	2 (1.0)	(6m+L-0.6m)=	
24" (600 mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750 mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED PUSHBUTTON	4 (1.2)
		ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

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REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		SCHEDULE OF QUANTITIES, CABLE PLAN, AND PHASE DESIGNATION DIAGRAM MILWAUKEE AVENUE (ILL RTE 21) AT SANDERS ROAD

SCALE: NONE
 DATE: 02/05/08
 DRAWN BY: RAS
 DESIGN BY: RAS
 CHECKED BY: ADD

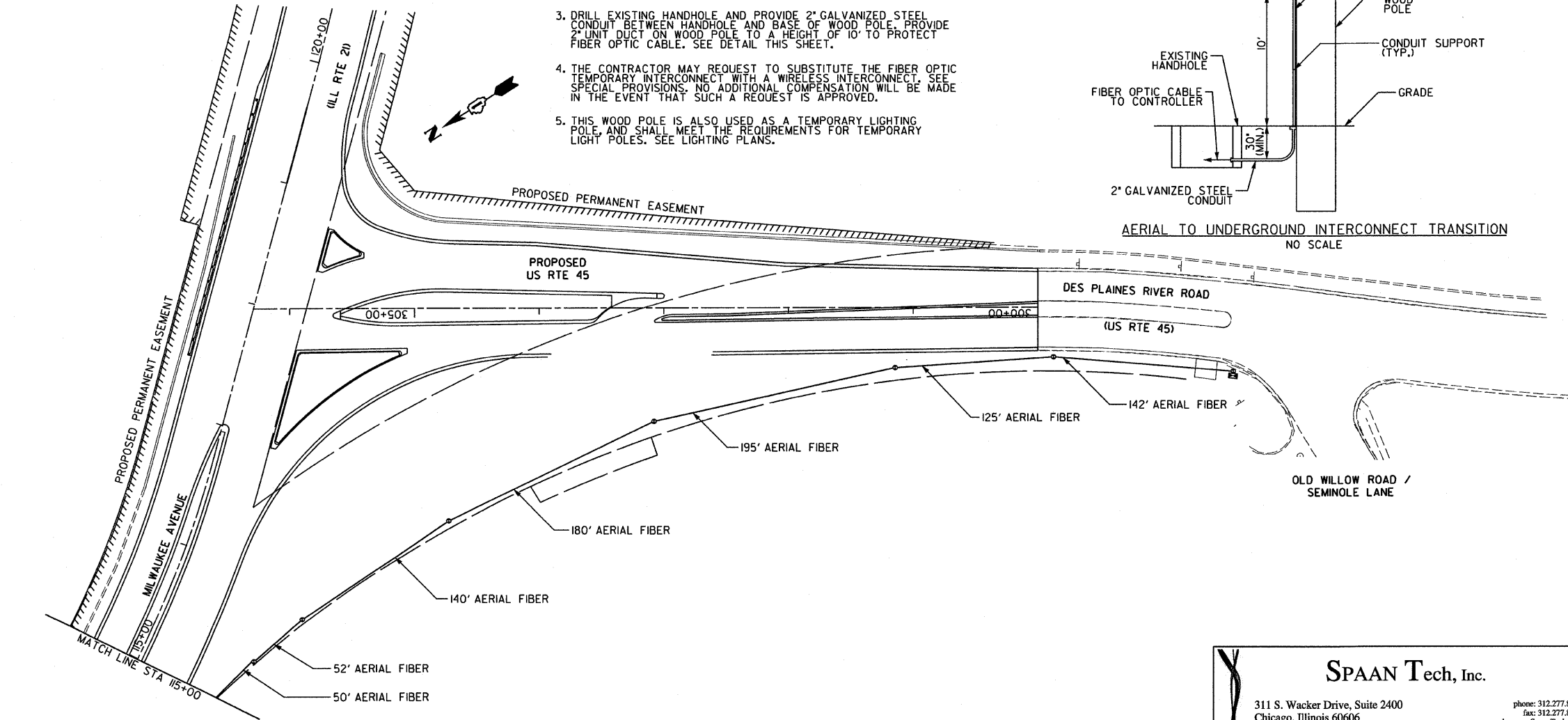
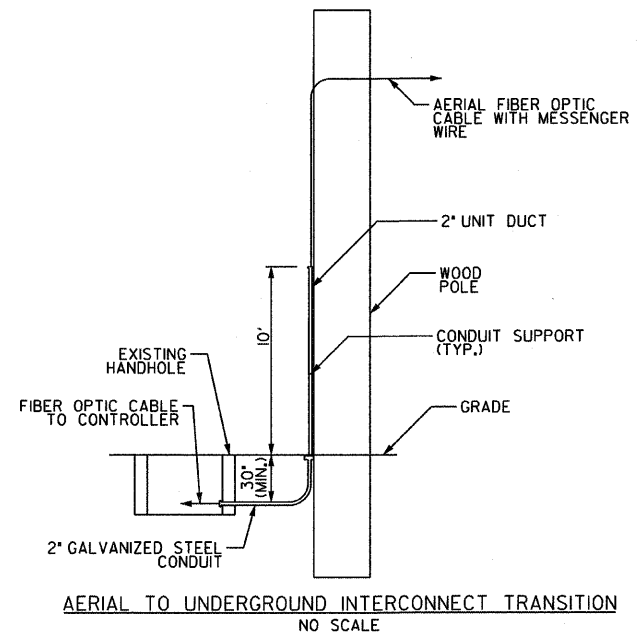


TEMPORARY INTERCONNECT NOTES

- ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO INSTALL AND MAINTAIN THE TEMPORARY INTERCONNECT ARE INCLUDED IN THE COST OF THE ITEM "TEMPORARY TRAFFIC SIGNAL INSTALLATION."
- THE EXISTING INTERCONNECT CABLE MAY BE USED AS THE TEMPORARY INTERCONNECT CABLE. IF ADDITIONAL CABLE IS REQUIRED, IT SHALL BE SPLICED TO THE EXISTING CABLE INSIDE BOXES MOUNTED 10' HIGH ON THE WOOD POLES. THE COST OF ANY ADDITIONAL CABLE REQUIRED TO IMPLEMENT THE TEMPORARY INTERCONNECT IS INCLUDED IN THE COST OF THE ASSOCIATED TEMPORARY TRAFFIC SIGNAL INSTALLATIONS.
- DRILL EXISTING HANDHOLE AND PROVIDE 2" GALVANIZED STEEL CONDUIT BETWEEN HANDHOLE AND BASE OF WOOD POLE. PROVIDE 2" UNIT DUCT ON WOOD POLE TO A HEIGHT OF 10' TO PROTECT FIBER OPTIC CABLE. SEE DETAIL THIS SHEET.
- THE CONTRACTOR MAY REQUEST TO SUBSTITUTE THE FIBER OPTIC TEMPORARY INTERCONNECT WITH A WIRELESS INTERCONNECT. SEE SPECIAL PROVISIONS. NO ADDITIONAL COMPENSATION WILL BE MADE IN THE EVENT THAT SUCH A REQUEST IS APPROVED.
- THIS WOOD POLE IS ALSO USED AS A TEMPORARY LIGHTING POLE, AND SHALL MEET THE REQUIREMENTS FOR TEMPORARY LIGHT POLES. SEE LIGHTING PLANS.

TEMPORARY WOOD POLE LOCATIONS
(FOR POLES NOT INSTALLED AS PART OF INTERSECTION TEMPORARY TRAFFIC SIGNAL INSTALLATIONS)

STATION	OFFSET
100+83.5 (EX ILL RTE 21)	29' RT
102+26 (EX ILL RTE 21)	29' RT
104+28	49' RT
109+11	53' RT
111+11	54.5' RT
111+89	54' RT
304+72.5 (US RTE 45)	169.5' LT
303+08 (US RTE 45)	90.5' LT
301+14.5 (US RTE 45)	48' LT
26+18 (EX US RTE 45)	38.5' RT



TEMPORARY INTERCONNECT PLAN LEGEND

- TEMPORARY CONTROLLER
- EXISTING PERMANENT CONTROLLER
- EXISTING HANDHOLE
- EXISTING HEAVY-DUTY HANDHOLE
- EXISTING DOUBLE HANDHOLE
- TEMPORARY WOOD POLE
- AERIAL FIBER OPTIC CABLE WITH MESSENGER WIRE
- G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)
- EXISTING G.S. CONDUIT

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TEMPORARY INTERCONNECT PLAN
MILWAUKEE AVENUE (US RTE 45/ILL RTE 21)
PRE-STAGE I AND STAGE I

SCALE: 1" = 50'
DATE: 02/05/08

DRAWN BY: RAS
DESIGN BY: RAS
CHECKED BY: ADO

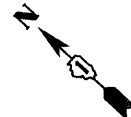
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Chicago, Illinois 60606

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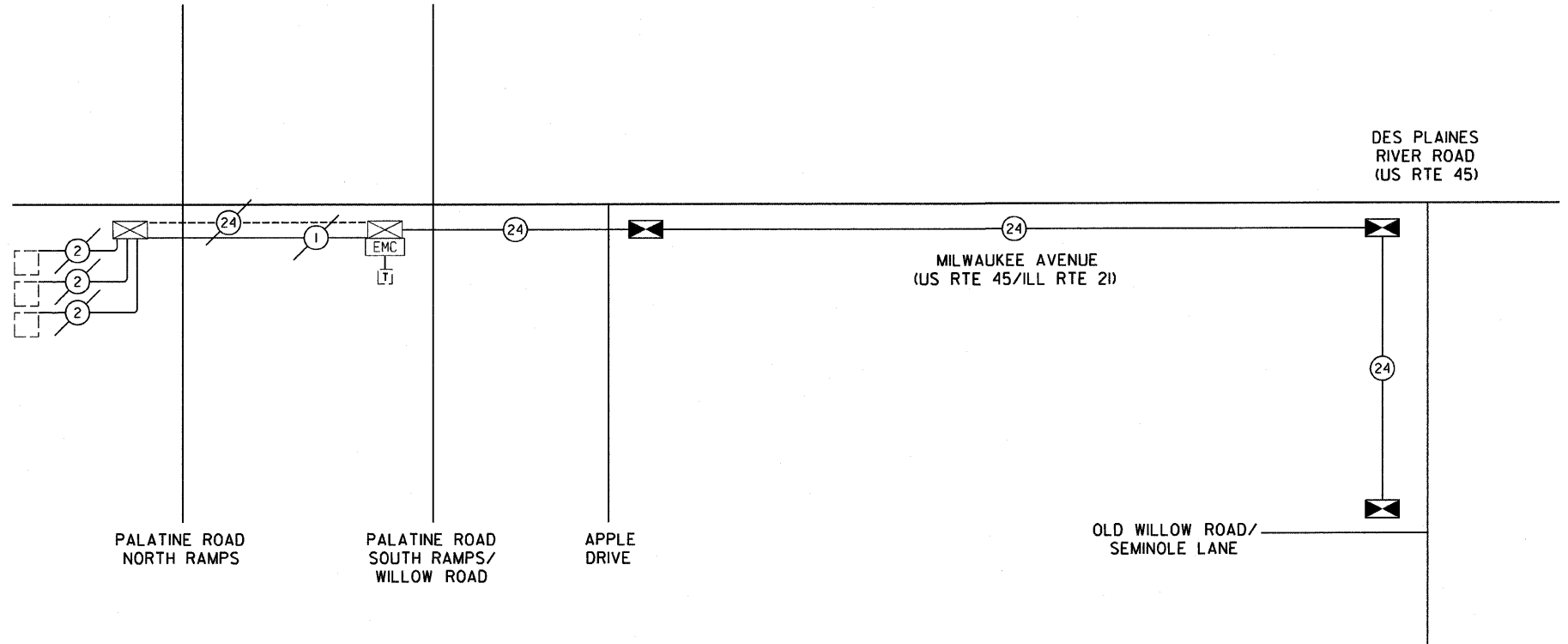
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	194
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62387				



TEMPORARY INTERCONNECT SCHEMATIC LEGEND

- EXISTING INTERSECTION CONTROLLER
- TEMPORARY INTERSECTION CONTROLLER
- EXISTING MASTER CONTROLLER
- EXISTING INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- EXISTING FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SMI2F
- TEMPORARY FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SMI2F
- TEMPORARY AERIAL FIBER OPTIC CABLE, NO. 62.5/125, MM12F SMI2F
- EXISTING LOOP DETECTOR CABLE 2/C, TWISTED, SHIELDED
- EXISTING ELECTRIC CABLE I/C (AS SPECIFIED)
- EXISTING TELEPHONE CONNECTION



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311 S. Wacker Drive, Suite 2400
Chicago, Illinois 60606

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fax: 312.277.8808
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REVISIONS	
NAME	DATE

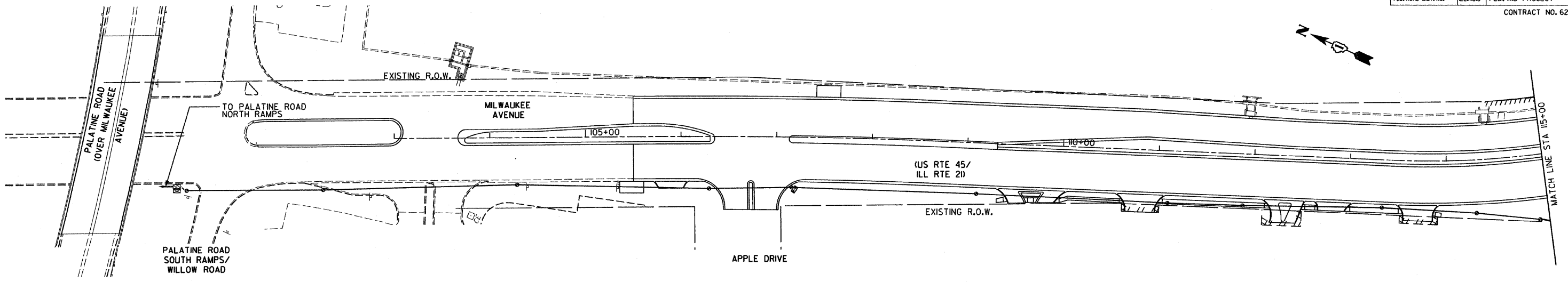
ILLINOIS DEPARTMENT OF TRANSPORTATION

TEMPORARY INTERCONNECT SCHEMATIC
MILWAUKEE AVENUE
(US RTE 45/ILL RTE 21)
PRE-STAGE 1 AND STAGE 1

SCALE: NONE
DATE: 02/05/08

DRAWN BY: RAS
DESIGN BY: RAS
CHECKED BY: ADO

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	195
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62387				

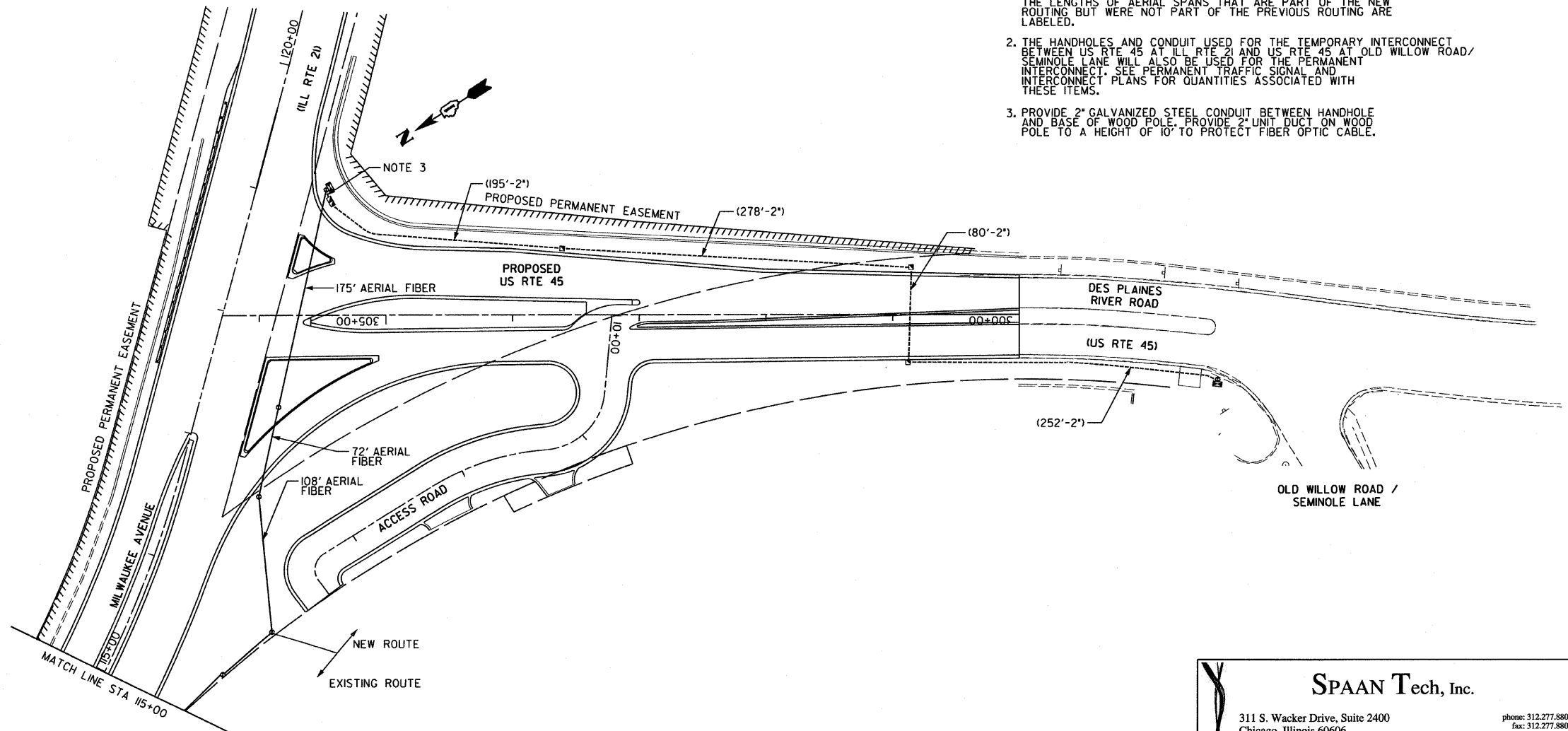


TEMPORARY INTERCONNECT NOTES

1. ALL WORK REQUIRED TO RE-ROUTE THE TEMPORARY INTERCONNECT BETWEEN STAGES I AND II IS INCLUDED IN THE COST OF THE ASSOCIATED TEMPORARY TRAFFIC SIGNAL INSTALLATIONS. ONLY THE LENGTHS OF AERIAL SPANS THAT ARE PART OF THE NEW ROUTING BUT WERE NOT PART OF THE PREVIOUS ROUTING ARE LABELED.
2. THE HANDHOLES AND CONDUIT USED FOR THE TEMPORARY INTERCONNECT BETWEEN US RTE 45 AT ILL RTE 21 AND US RTE 45 AT OLD WILLOW ROAD/ SEMINOLE LANE WILL ALSO BE USED FOR THE PERMANENT INTERCONNECT. SEE PERMANENT TRAFFIC SIGNAL AND INTERCONNECT PLANS FOR QUANTITIES ASSOCIATED WITH THESE ITEMS.
3. PROVIDE 2" GALVANIZED STEEL CONDUIT BETWEEN HANDHOLE AND BASE OF WOOD POLE. PROVIDE 2" UNIT DUCT ON WOOD POLE TO A HEIGHT OF 10' TO PROTECT FIBER OPTIC CABLE.

TEMPORARY INTERCONNECT PLAN LEGEND

TEMPORARY CONTROLLER	☒
EXISTING PERMANENT CONTROLLER	☒
EXISTING HANDHOLE	☐
PROPOSED HANDHOLE	☐
EXISTING HEAVY-DUTY HANDHOLE	☐
PROPOSED HEAVY-DUTY HANDHOLE	☐
EXISTING DOUBLE HANDHOLE	☐
PROPOSED DOUBLE HANDHOLE	☐
TEMPORARY WOOD POLE	⊙
AERIAL FIBER OPTIC CABLE WITH MESSENGER WIRE	—
G.S. CONDUIT IN GROUND	---
EXISTING G.S. CONDUIT	---



TS-35 OF 39

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TEMPORARY INTERCONNECT PLAN
MILWAUKEE AVENUE (US RTE 45/ILL RTE 21)
STAGE II, POST STAGE II, AND POST-CONSTRUCTION

SCALE: 1" = 50'
DATE: 02/05/08

DRAWN BY: RAS
DESIGN BY: RAS
CHECKED BY: ADO

SPAAN Tech, Inc.

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Chicago, Illinois 60606











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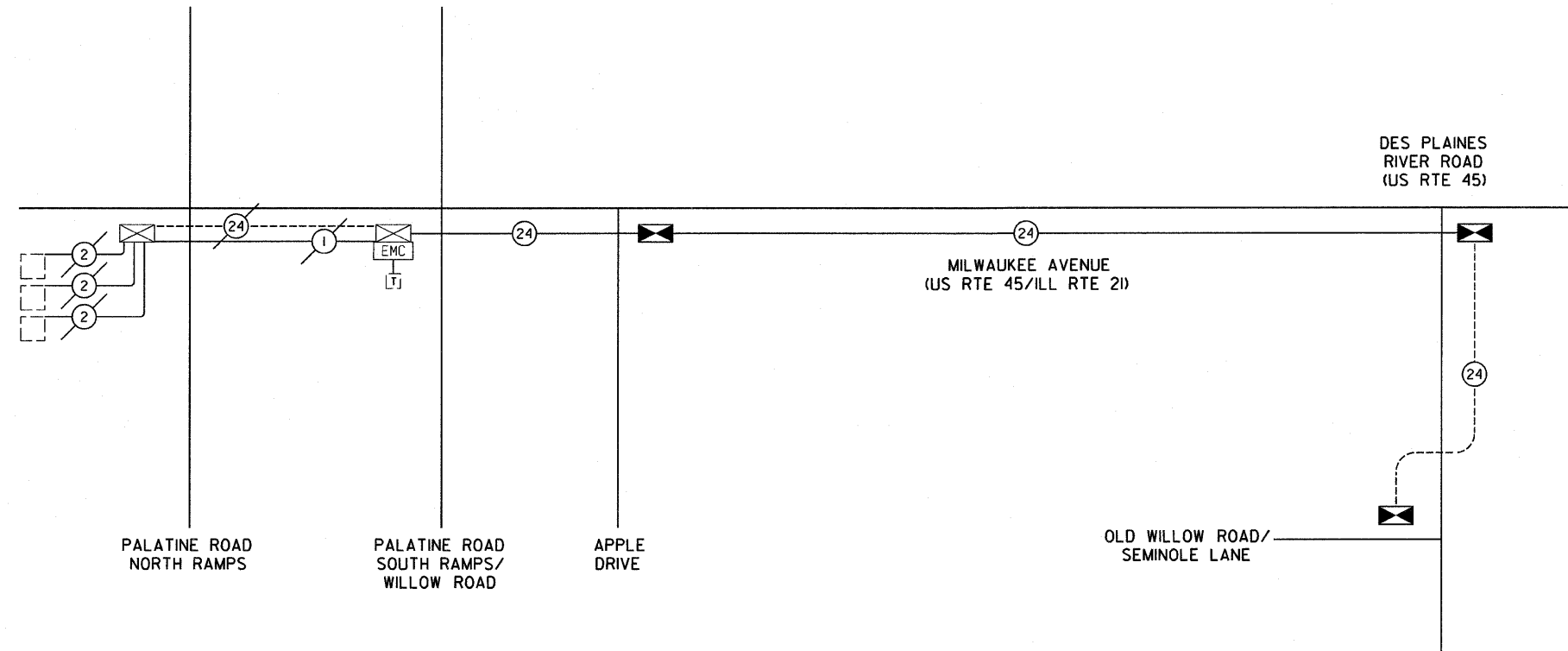
Robert Swanson
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	196
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62387				



TEMPORARY INTERCONNECT SCHEMATIC LEGEND

- EXISTING INTERSECTION CONTROLLER 
- TEMPORARY INTERSECTION CONTROLLER 
- EXISTING MASTER CONTROLLER 
- EXISTING INTERSECTION & SAMPLING (SYSTEM) DETECTORS 
- EXISTING FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SMI2F 
- TEMPORARY FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SMI2F 
- TEMPORARY AERIAL FIBER OPTIC CABLE, NO. 62.5/125, MM12F SMI2F 
- EXISTING LOOP DETECTOR CABLE 2/C, TWISTED, SHIELDED 
- EXISTING ELECTRIC CABLE I/C (AS SPECIFIED) 
- EXISTING TELEPHONE CONNECTION 



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REVISIONS	
NAME	DATE

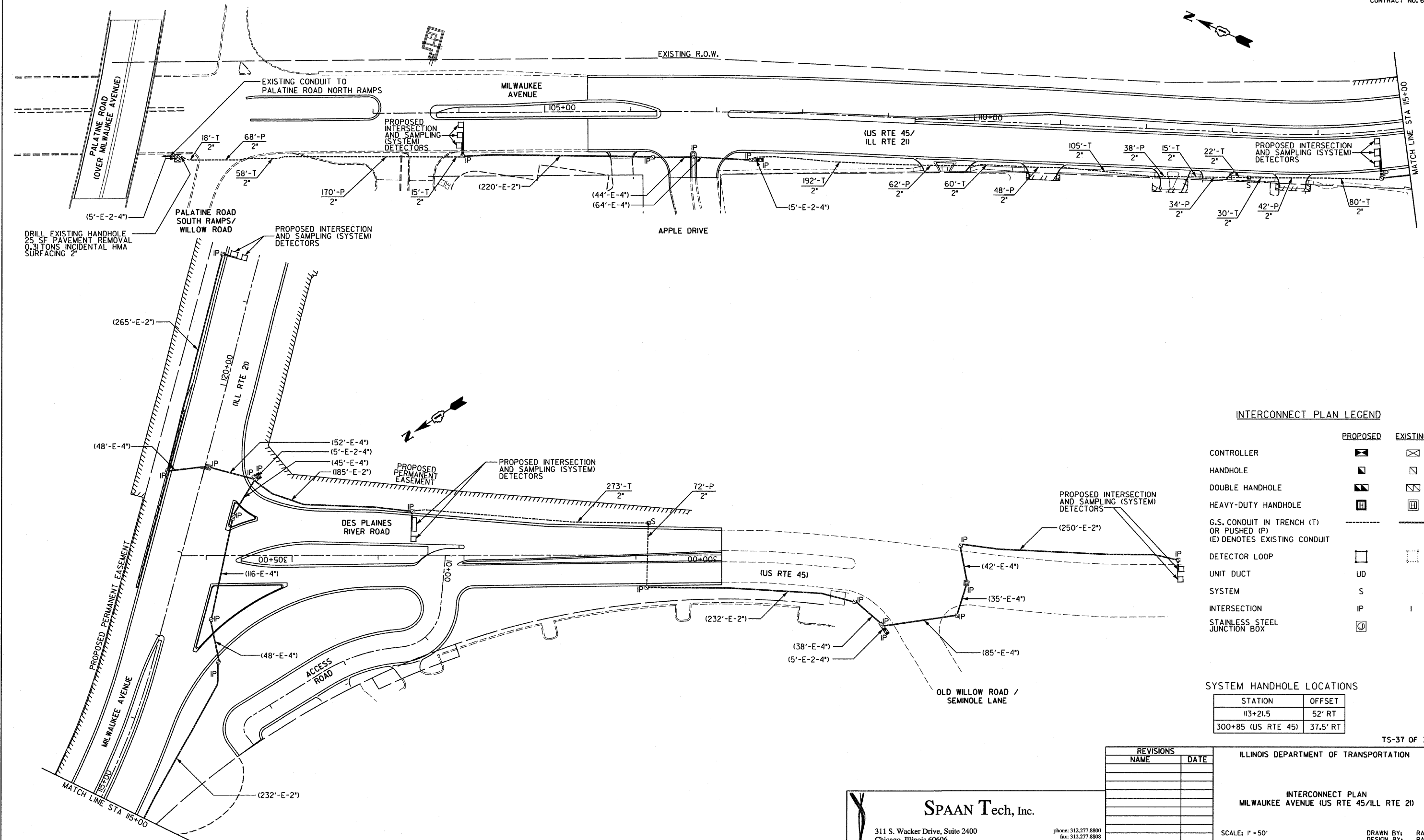
ILLINOIS DEPARTMENT OF TRANSPORTATION

TEMPORARY INTERCONNECT SCHEMATIC
MILWAUKEE AVENUE
(US RTE 45/ILL RTE 21)
STAGE II, POST STAGE II, AND POST-CONSTRUCTION

SCALE: NONE
 DATE: 02/05/08

DRAWN BY: RAS
 DESIGN BY: RAS
 CHECKED BY: ADD

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	3268F-R-1	COOK	279	197
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62387				



INTERCONNECT PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER		
HANDHOLE		
DOUBLE HANDHOLE		
HEAVY-DUTY HANDHOLE		
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)		
(E) DENOTES EXISTING CONDUIT		
DETECTOR LOOP		
UNIT DUCT	UD	
SYSTEM	S	
INTERSECTION	IP	I
STAINLESS STEEL JUNCTION BOX		

SYSTEM HANDHOLE LOCATIONS

STATION	OFFSET
113+21.5	52' RT
300+85 (US RTE 45)	37.5' RT

TS-37 OF 39

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

INTERCONNECT PLAN
MILWAUKEE AVENUE (US RTE 45/ILL RTE 21)

SCALE: 1" = 50'
DATE: 02/05/08

DRAWN BY: RAS
DESIGN BY: RAS
CHECKED BY: ADO

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




























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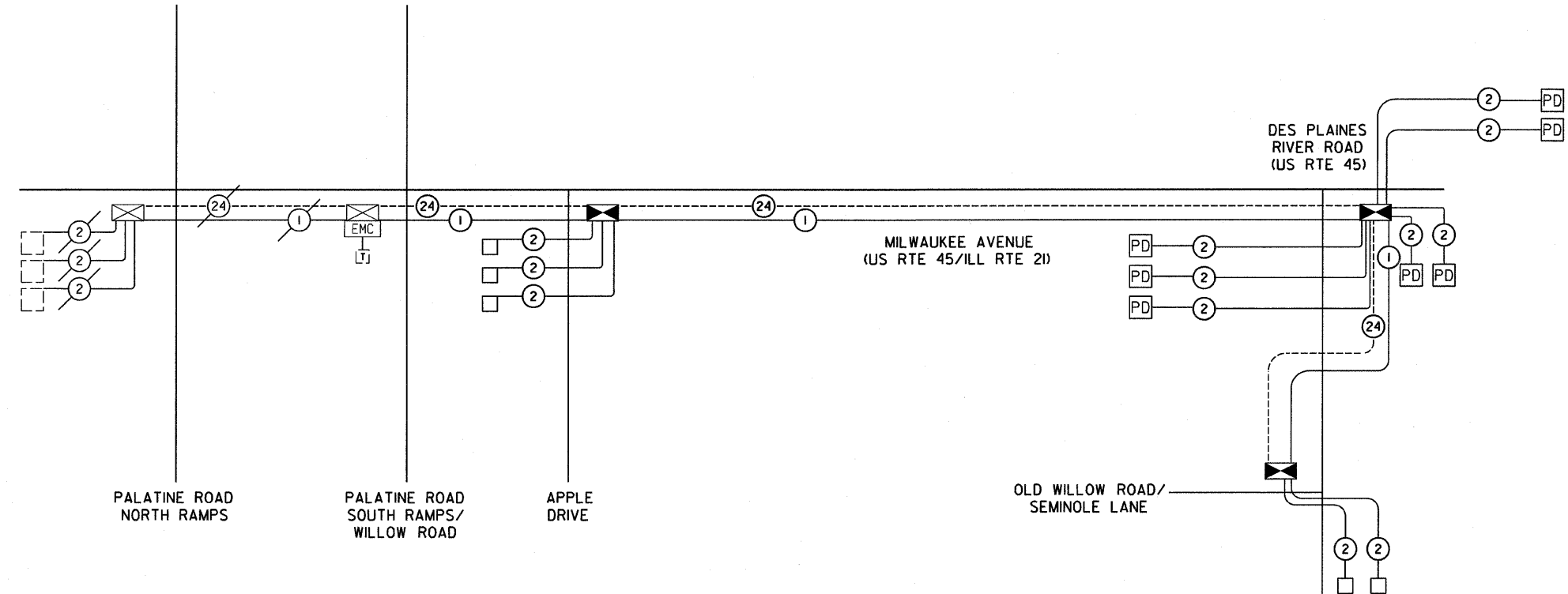
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web: www.SpaanTech.com

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	326BF-R-1	COOK	279	198
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
		CONTRACT NO. 62387		

INTERCONNECT SCHEMATIC LEGEND

- EXISTING INTERSECTION CONTROLLER 
- PROPOSED INTERSECTION CONTROLLER 
- EXISTING MASTER CONTROLLER 
- PROPOSED MASTER CONTROLLER 
- MASTER MASTER CONTROLLER 
- EXISTING INTERSECTION & SAMPLING (SYSTEM) DETECTORS 
- PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTORS 
- EXISTING INTERSECTION LOOP DETECTORS (SYSTEM) DETECTORS 
- PROPOSED SAMPLING (SYSTEM) DETECTORS 
- EXISTING SAMPLING (SYSTEM) DETECTORS 
- PROPOSED SAMPLING (SYSTEM) DETECTORS 
- EXISTING SAMPLING (SYSTEM) DETECTORS AND SAMPLING (SYSTEM) DETECTORS 
- PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTORS 
- EXISTING SAMPLING (SYSTEM) DETECTORS AND SAMPLING (SYSTEM) DETECTORS 
- PROPOSED SAMPLING (SYSTEM) DETECTORS 
- EXISTING PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS 
- PROPOSED PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS 
- EXISTING SAMPLING (SYSTEM) PREFORMED DETECTORS 
- PROPOSED SAMPLING (SYSTEM) PREFORMED DETECTORS 
- EXISTING FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SMI2F 
- PROPOSED FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SMI2F 
- EXISTING INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE 
- PROPOSED INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE 
- EXISTING INTERCONNECT CABLE - NO. 18 3 PAIR, TWISTED, SHIELDED 
- PROPOSED INTERCONNECT CABLE - NO. 18 3 PAIR, TWISTED, SHIELDED 
- EXISTING LOOP DETECTOR CABLE 2/C, TWISTED, SHIELDED 
- PROPOSED LOOP DETECTOR CABLE 2/C, TWISTED, SHIELDED 
- EXISTING ELECTRIC CABLE 1/C (AS SPECIFIED) 
- PROPOSED ELECTRIC CABLE 1/C (AS SPECIFIED) 
- EXISTING TELEPHONE CONNECTION 
- PROPOSED TELEPHONE CONNECTION 



- NOTES:
1. THE ITEM "MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION" IS PROVIDED FOR USE AT THE INTERSECTION OF MILWAUKEE AVENUE (US RTE 45/ILL RTE 21) AT PALATINE ROAD SOUTH RAMP/WILLOW ROAD.
 2. THE EXISTING INTERCONNECT CABLE AND TRACER CABLE IS TO BE REMOVED FROM ALL EXISTING CONDUIT BETWEEN APPLE DRIVE AND PALATINE ROAD SOUTH RAMP/WILLOW ROAD THAT WILL REMAIN IN USE AS PART OF THE PROPOSED INTERCONNECT.

INTERCONNECT SCHEDULE OF QUANTITIES

CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	873
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	534
HANDHOLE	EACH	2
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	873
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
DRILL EXISTING HANDHOLE	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	100
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 IC	FOOT	2828
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM - LEVEL II	EACH	1
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SMI2F	FOOT	2828

TS-38 OF 39

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

INTERCONNECT SCHEMATIC AND SCHEDULE OF QUANTITIES
MILWAUKEE AVENUE
(US RTE 45/ILL RTE 21)

SCALE: NONE
DATE: 02/05/08

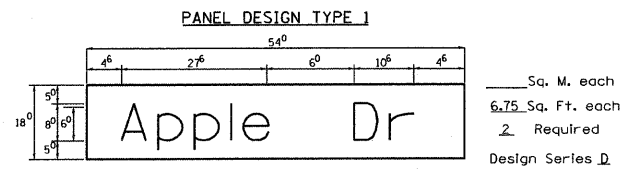
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DESIGN BY: RAS
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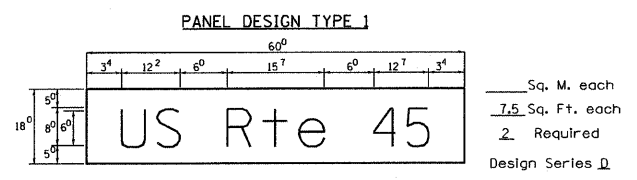
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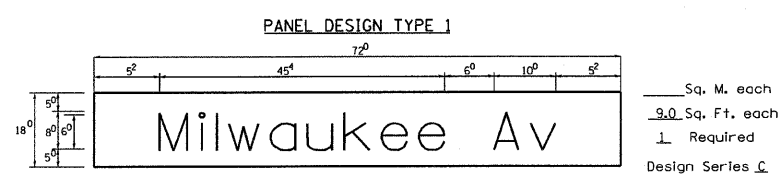
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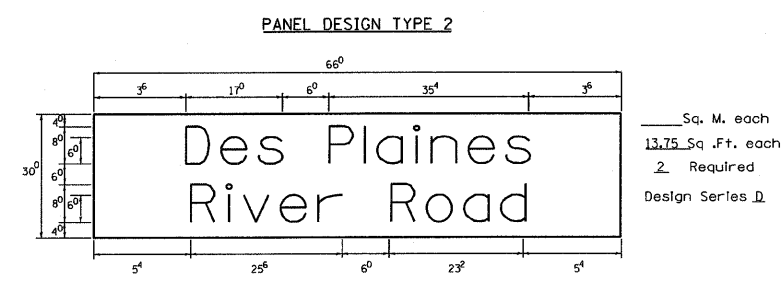
Sq. M. each
6.75 Sq. Ft. each
2 Required
Design Series D



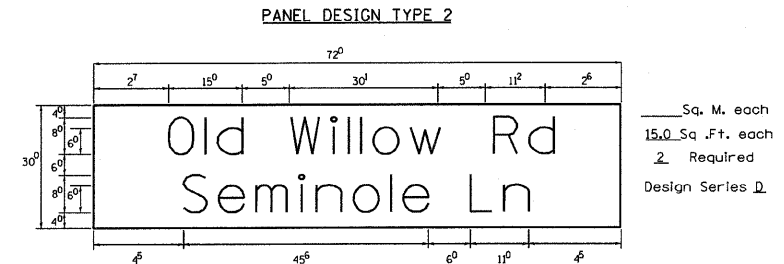
Sq. M. each
7.5 Sq. Ft. each
2 Required
Design Series D



Sq. M. each
9.0 Sq. Ft. each
1 Required
Design Series C



Sq. M. each
13.75 Sq. Ft. each
2 Required
Design Series D



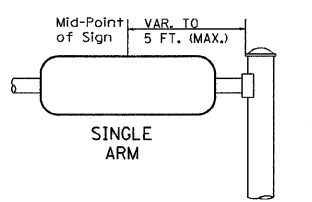
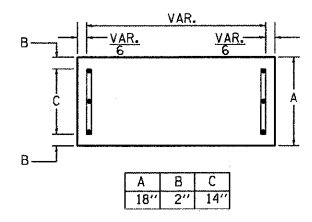
Sq. M. each
15.0 Sq. Ft. each
2 Required
Design Series D

GENERAL NOTES

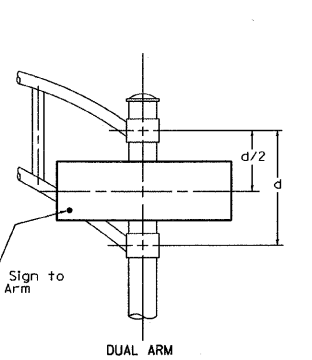
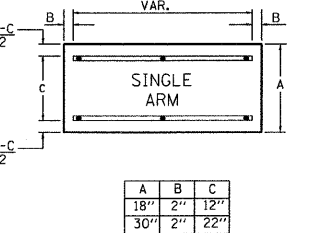
- WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 877001, 877006 AND 877011, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 6'-0" MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS 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 HAVE A WHITE REFLECTORIZED LEGEND AND BORDER ON A GREEN REFLECTORIZED BACKGROUND, TYPE A SHEETING.
- THE SIGN LENGTH SHOULD BE INCREASED IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHOULD NOT EXCEED 6'-0".
- ALL BORDERS SHALL BE 3/4" WIDE AND CORNER RADIUS SHALL BE 2-1/4".
- SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS. LOCAL SUPPLIERS OF THE SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM ARE:
 - A.K.T. CORPORATION, SCHAUMBURG, IL
 - AMERICAN FABRICATION CO., CHICAGO HEIGHTS, IL
 - TUCKER COMPANY, INC., WAUWATOSA, WI
 - WESTERN TRAFFIC CONTROL INC., CICERO, IL

PARTS LISTING:
SIGN CHANNEL PART #HPN053 (MED. CHANNEL)
SIGN SCREWS 1/4" x 14 x 1" H.W.H., #3
BRACKETS PART #HPN034 (UNIVERSAL)
CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING
OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BACKET OF THE ABOVE PRODUCT.

SUPPORTING CHANNELS



SUPPORTING CHANNELS



SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM
Shall be used. See Note #5.

Upper Case To Lower Case Spacing Chart 8-6 Inch Series "C & D"

SERIES	SECOND LETTER															
	acde	g	h	i	k	l	f	w	j	s	t	v	y	x	z	
A W X	12	14	14	15	12	14	06	10	11	14	06	10	11	12	12	14
B	14	15	20	21	14	15	11	12	14	15	12	14	12	14	16	17
C E G	14	15	20	21	12	14	06	10	12	14	12	14	14	15	14	15
D O Q R	14	15	20	21	14	15	06	10	12	14	12	14	14	15	14	15
F	05	06	14	15	06	10	05	06	10	06	10	06	10	11	12	
H I M N	20	21	22	24	20	21	14	15	16	17	16	17	20	21	20	21
J U	20	21	20	21	16	17	14	15	16	17	16	17	16	17	20	21
K L	11	12	16	17	11	12	05	06	11	12	11	12	11	12	12	14
P	12	14	14	15	12	14	05	06	11	12	11	12	12	14	12	14
S	12	14	16	17	12	14	06	10	12	14	12	14	12	14	12	14
T	11	12	16	17	06	10	06	10	11	12	11	12	11	12	12	14
V	06	10	14	15	12	06	10	12	14	12	14	12	14	12	14	
Y	05	06	14	15	06	10	05	06	05	07	05	06	10	11	12	
Z	16	17	22	24	16	17	12	14	16	17	16	17	16	17	20	21

Lower Case To Lower Case Spacing Chart 6 Inch Series "C & D"

SERIES	SECOND LETTER															
	acde	g	h	i	k	l	f	w	j	s	t	v	y	x	z	
ad h g i j	16	17	22	24	16	17	12	14	14	15	14	15	16	17	16	17
l m n q u	12	14	16	17	11	12	05	06	11	12	11	12	12	14	12	14
b f k o p s	12	14	16	17	12	14	06	10	12	14	12	14	12	14	12	14
c e	12	14	16	17	12	14	06	10	12	14	12	14	12	14	12	14
r	06	10	12	14	06	10	03	05	06	05	06	06	10	06	10	
t z	12	14	16	17	12	14	06	10	11	12	11	12	12	14	12	14
v y	11	12	14	15	11	12	05	06	10	06	10	11	12	11	12	
w	11	12	14	15	11	12	05	06	11	12	11	12	11	12	12	14
x	12	14	16	17	11	12	05	06	11	12	11	12	11	12	12	14

Number To Number Spacing Chart 8 Inch Series "C & D"

SERIES	SECOND NUMBER															
	0	1	2	3	4	5	6	7	8	9						
0 9	16	17	16	17	14	15	12	14	14	15	16	17	12	14	16	17
1	20	21	20	21	16	17	14	15	20	21	20	21	14	15	20	21
2 3 4	14	15	14	15	12	14	12	14	14	15	14	15	11	12	16	17
5	14	15	14	15	11	12	11	12	14	15	14	15	11	12	14	15
6	16	17	14	15	12	14	12	14	14	15	14	15	11	12	14	15
7	12	14	12	14	14	15	12	14	05	06	12	14	14	15	12	14
8	16	17	16	17	14	15	12	14	14	15	16	17	12	14	16	17

UPPER AND LOWER CASE LETTER WIDTHS

LETTERS	6 INCH UPPER CASE LETTERS		8 INCH UPPER CASE LETTERS		LETTERS	6 INCH LOWER CASE LETTERS	
	C	D	C	D		C	D
A	36	50	50	65	a	35	42
B	32	40	43	53	b	35	42
C	32	40	43	53	c	35	41
D	32	40	43	53	d	35	42
E	30	35	40	47	e	35	42
F	30	35	40	47	f	23	26
G	32	40	43	53	g	35	42
H	32	40	43	53	h	35	42
I	07	07	11	12	i	11	11
J	30	36	40	50	j	20	22
K	32	41	43	54	k	35	42
L	30	35	40	47	l	11	11
M	37	45	51	61	m	60	70
N	32	40	43	53	n	35	42
O	34	42	45	55	o	36	43
P	32	40	43	53	p	35	42
Q	34	42	45	55	q	35	42
R	32	40	43	53	r	26	32
S	32	40	43	53	s	36	42
T	30	35	40	47	t	27	32
U	32	40	43	53	u	35	42
V	35	44	47	60	v	42	47
W	44	52	60	70	w	55	64
X	34	40	45	53	x	44	51
Y	36	50	50	66	y	46	53
Z	32	40	43	53	z	36	43

NUMBER	6 INCH SERIES		8 INCH SERIES	
	C	D	C	D
1	12	14	15	20
2	32	40	43	53
3	32	40	43	53
4	35	43	47	57
5	32	40	43	53
6	32	40	43	53
7	32	40	43	53
8	32	40	43	53
9	32	40	43	53
0	34	42	45	55

EXAMPLE, 2 (3) DENOTES 3/8"

def:aut
 07167.000 - ILL Rte 21 - IDOT Dist 1
 P:\07167.000 - ILL Rte 21 - IDOT Dist 1\Working Files\Drawing Files\Shrt\Final\TS\TS-39.dgn
 1/30/2008 12:20:47 PM
 010 f:tin / IN.

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 311 S. Wacker Drive, Suite 2400
 Chicago, Illinois 60606
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 fax: 312.277.8808
 web: www.SpaanTech.com

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT I
NAME	DATE	
		MAST ARM MOUNTED STREET NAME SIGNS SCALE: NONE DATE: 02/05/08 DRAWN BY: RAS DESIGN BY: RAS CHECKED BY: ADO

