9-18-09 Letting, Item 112

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	(0&31) RS-7	LAKE	32	1
	ILLINOIS	CONTRACT NO. 62662		

D-91-023-04

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

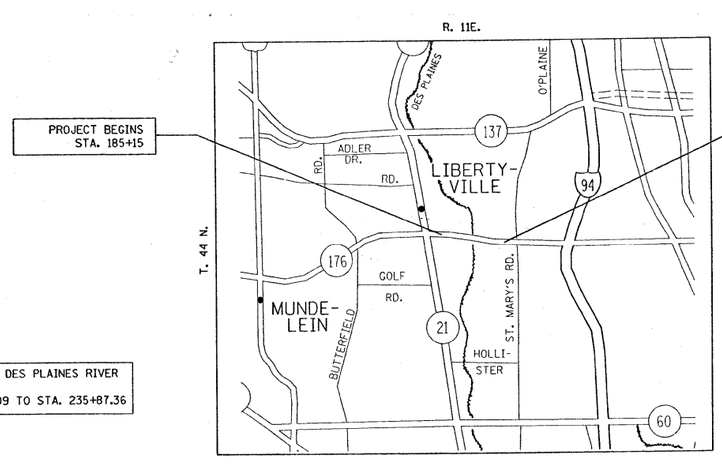
PROPOSED
HIGHWAY PLANS

F.A.U. ROUTE 1238 (IL. RTE. 176)
ILLINOIS ROUTE 21 TO ST. MARY'S ROAD
SECTION (Q & 31) RS–7
RESURFACING (3P),
BRIDGE JOINT REPAIR &
BRIDGE APPROACH ROADWAY
PROJECT: ESP-1238(010)
LAKE COUNTY
C–91–023–04

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROJECT LOCATED IN THE VILLAGE OF LIBERTYVILLE

LOCATION OF SECTION INDICATED THUS: –



PROJECT BEGINS STA. 185+15

PROJECT ENDS STA. 248+42

LIBERTYVILLE TOWNSHIP

OMISSION: AT DES PLAINES RIVER

STA. 234+16.09 TO STA. 235+87.36

IL. 176 @ DES PLAINES RIVER
(SN #049–0068)
JOINT REPAIR

TRAFFIC DATA

2007 ADT = 18,800
SPEED LIMIT = 30 MPH/45 MPH

100' 200' 300' — 1"= 100'
0 10' 20' 30' — 1"= 10'
0 50' 100' — 1"= 50'
0 50' 100' — 1"= 40'
0 50' 100' — 1"= 30'
0 50' 100' — 1"= 20'

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

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

LOCATION MAP

GROSS LENGTH = 6,327.26 FT. = 1.19 MILE
NET LENGTH = 6,155.99 FT. = 1.17 MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED July 2, 2009
Diane M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
August 14, 2009
Charles D. Ingersoll
ENGINEER OF DESIGN AND ENVIRONMENT
August 14, 2009
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

PROJECT ENGINEER: DANIEL WILGREEN (847) 705–4240
PROJECT MANAGER: KEN ENG

CONTRACT NO. 62662

DISTRICT ONE DESIGN PLAN PREPARATION ENGINEER: KEN ENG / DAN WILGREEN (847) 705-4240

SHEET NO.	DESCRIPTION
1.	TITLE SHEET
2.	INDEX OF SHEETS, STATE STANDARDS, AND GENERAL NOTES
3-4.	SUMMARY OF QUANTITIES
5.	TYPICAL SECTIONS
6-8.	ROADWAY & PAVEMENT MARKING PLANS
9-20.	BRIDGE JOINT REPAIR AND BRIDGE APPROACH ROADWAY
21.	DETECTOR LOOP PLANS
22.	DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING
23.	PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT
24.	CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT
25.	BUTT JOINTS AND HMA TAPER DETAILS
26.	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
27.	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)
28.	DISTRICT ONE TYPICAL PAVEMENT MARKINGS
29.	TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)
30.	PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING
31.	ARTERIAL ROAD INFOMATION SIGN
32.	DIST. 1 DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY RESURFACING

STANDARDS

000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
420001-07	CLASS C AND D PATCHES
420401-07	BRIDGE APPROACH PAVEMENT CONNECTOR
604001-03	FRAME AND LIDS, TYPE 1
606001-04	COMBINATION CONC. CURB & GUTTER
606201-02	TYPE B GUTTER (INLET, OUTLET & ENTRANCE)
701011-02	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701201-03	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701301-03	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306-02	LANE CLOSURE, 2L, 2W SLOW MOVING OPERATIONS - DAY ONLY FOR SPEEDS ≥ 45 MPH
701311-03	LANE CLOSURE, 2L, 2W MOVING OPERATIONS- DAY ONLY
701336-05	LANE CLOSURE, 2L, 2W, WORK AREAS IN SERIES, FOR SPEEDS ≥ 45 MPH
701501-05	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
~~720001~~ 701901-01	TRAFFIC CONTROL DEVICES
704001-05	TEMPORARY CONCRETE BARRIER
886001-01	DETECTOR LOOP INSTALLATIONS

GENERAL NOTES

1. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 1-800-892-0123. FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES. (48 HOURS NOTIFICATION IS REQUIRED)
2. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE VILLAGE OF LIBERTYVILLE
3. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
4. BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND BITUMINOUS TAPER DETAILS".
5. EXCEPT TRAFFIC STAGING FOR APPROACH PAVEMENT WORK, NO PERMANENT LANE CLOSURES WILL BE ALLOWED. MILLING, RESURFACING, STRUCTURE ADJUSTMENTS AND PATCHING OPERATIONS WILL BE DONE WITH DAY TIME LANE CLOSURES ONLY.
6. 10' TRANSITIONS SHALL BE USED TO MATCH PROPOSED CURB AND GUTTER AND MEDIAN ITEMS OF WORK TO EXISTING CURB & GUTTER AND MEDIANS IN THE FIELD, UNLESS OTHERWISE SHOWN, THE TRANSITION SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEMS OF WORK SPECIFIED.
7. THE RESIDENT ENGINEER SHALL CONTACT MS. DEBBIE HANLON, AREA TRAFFIC FIELD ENGINEER AT (847) 438-2300 A MINIMUM OF 72 HOURS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
8. WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 40 MM (1¾ INCHES WHERE THE SPEED LIMIT 80 KM/H (45 MPH) OR LESS AND 25 MM 1 (INCH) WHERE THE SPEED LIMIT IS GREATER THAN 80 KM/H (45MPH). WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 75 MM (3 INCHES) MAY BE ALLOWED IN THE EDGE OF THE MILLING IF THE SLOPE A MINIMUM 1:3 (V:H).
9. THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS.

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	PLOT DATE = 7/2/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 176 (IL 21 TO ST. MARY'S ROAD
INDEX OF SHEETS, STATE STANDARDS, AND GENERAL NOTES

SCALE: NONE | SHEET NO. 2 OF 25 SHEETS | STA. | TO STA.

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	(Q & 31) RS-7	LAKE	32	2
		CONTRACT NO. 62662		
		ILLINOIS FED. AID PROJECT		

SUMMARY OF QUANTITIES			URBAN 100% FED.	CONSTRUCTION TYPE CODE					
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	ROADWAY 1000	BRIDGE SFTY-2A				
31101200	SUB-BASE GRANULAR MATERIAL, TYPE B 4"	SQ YD	30		30				
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	22	22					
40600300	AGGREGATE (PRIME COAT)	TON	106	106					
40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	40	40					
40600895	CONSTRUCTING TEST STRIP	EACH	2	2					
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	186	186					
40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	2208	2208					
42001300	PROTECTIVE COAT	SQ YD	34	34					
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	50		50				
44000100	PAVEMENT REMOVAL	SQ YD	160	160					
44000158	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/4"	SQ YD	26276	26276					
44000400	GUTTER REMOVAL	FOOT	20	20					
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	20		20				
44000700	APPROACH SLAB REMOVAL	SQ YD	120		120				
44001700	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	150	150					
44201798	CLASS D PATCHES, TYPE I, 13 INCH	SQ YD	130	130					
44201803	CLASS D PATCHES, TYPE II, 13 INCH	SQ YD	525	525					
44201807	CLASS D PATCHES, TYPE III, 13 INCH	SQ YD	265	265					
44201809	CLASS D PATCHES, TYPE IV, 13 INCH	SQ YD	400	400					
48203021	HOT-MIX ASPHALT SHOULDERS, 6"	SQ YD	123	123					
50102400	CONCRETE REMOVAL	CU YD	10		10				
50300225	CONCRETE STRUCTURES	CU YD	25		25				
50300255	CONCRETE SUPERSTRUCTURE	CU YD	114		114				
50300260	BRIDGE DECK GROOVING	SQ YD	220		220				
50300300	PROTECTIVE COAT	SQ YD	256		256				
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	29,540		29,540				
50800515	BAR SPLICERS	EACH	408		408				
60255500	MANHOLES TO BE ADJUSTED	EACH	2	2					
60265700	VALVE VAULTS TO BE ADJUSTED	EACH	8	8					
60300105	FRAMES AND GRATES TO BE ADJUSTED	EACH	16	16					
60300310	FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)	EACH	60	60					
60406000	FRAMES AND LIDS, TYPE 1, OPEN LID	EACH	5	5					

SUMMARY OF QUANTITIES			URBAN 100% FED.	CONSTRUCTION TYPE CODE					
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	ROADWAY 1000	BRIDGE SFTY-2A				
60602800	CONCRETE GUTTER, TYPE B	FOOT	6	6					
60604400	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.18	FOOT	156	156					
*63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	500	500					
*63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	8	8					
63200310	GUARDRAIL REMOVAL	FOOT	500	500					
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6					
67100100	MOBILIZATION	L SUM	1	1					
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1					
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1					
70100600	TRAFFIC CONTROL AND PROTECTION, STANDARD 701336	L SUM	1	1					
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	1					
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	1725	1725					
70300210	TEMPORARY PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	432	432					
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	20068	20068					
70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	1710	1710					
70300250	TEMPORARY PAVEMENT MARKING - LINE 8"	FOOT	280	280					
70300260	TEMPORARY PAVEMENT MARKING - LINE 12"	FOOT	711	711					
70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	318	318					
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	3640	3640					
70400100	TEMPORARY CONCRETE BARRIER	FOOT	400		400				
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	400		400				
*78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	432	432					
*78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	20068	20068					
*78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	1710	1710					
*78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	280	280					
*78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	711	711					
*78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	318	318					

* Specialty Item

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 176 (IL 21 TO ST. MARY'S ROAD
SUMMARY OF QUANTITIES

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	(Q & 31) RS-7	LAKE	32	3
		CONTRACT NO. 62662		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES			URBAN 100% FED	CONSTRUCTION TYPE CODE					
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	ROADWAY 1000	BRIDGE SF74-2A				
*78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	390	390					
*78200200	BIDIRECTIONAL PRISMATIC BARRIER REFLECTOR	EACH	32		32				
78300100	PAVEMENT MARKING REMOVAL	SQ FT	2400	2400					
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	386	386					
*88600600	DETECTOR LOOP REPLACEMENT	FOOT	672	672					
X0301424	SILICONE JOINT SEALER	FOOT	109		109				
X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	52	52					
X0325775	WET REFLECTIVE TEMPORARY TAPE, TYPE III, 4 INCH	FOOT	11000	11000					
X0325842	WET REFLECTIVE TEMPORARY TAPE, TYPE III, LETTERS AND SYMBOLS	SQ FT	75		75				
X0656100	DRIVEWAY PAVEMENT REMOVAL AND REPLACEMENT	SQ YD	10	10					
X4067107	POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50	TON	1035	1035					
XX006806	HOT-MIX ASPHALT DRIVEWAY PAVEMENT	SQ YD	10	10					
Δ Z0018500	DRAINAGE STRUCTURES TO BE CLEANED	EACH	20	20					
Z0030030	IMPACT ATTENUATORS (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	4		4				
Z0030330	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE), TEST LEVEL 3	EACH	4		4				

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE					
CODE NO	ITEM	UNIT		ROADWAY 1000	BRIDGE				

* SPECIALTY ITEMS
Δ *Non-participating*

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	PLOT DATE = 7/2/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 176 (IL 21 TO ST. MARY'S ROAD
SUMMARY OF QUANTITIES

SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	(0 & 31) RS-7	LAKE	32	4
		CONTRACT NO. 62662		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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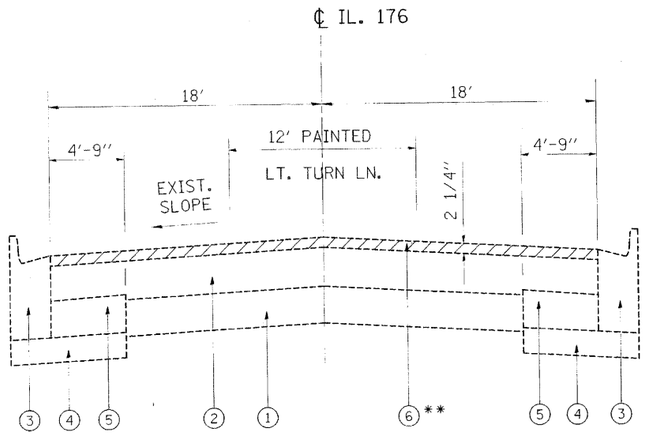
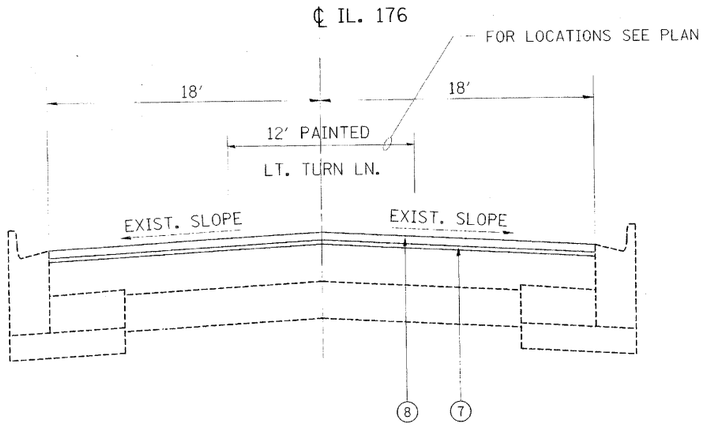


EXISTING TYPICAL CROSS SECTION

STA. 185+15 TO STA. 248+42

** MILLED THE SURFACE FIRST BEFORE PATCHING



PROPOSED TYPICAL CROSS SECTION

STA. 185+15 TO STA. 248+42

LEGEND

1. EXISTING BITUMINOUS PAVEMENT ±7 1/2 ″
2. EXISTING PORTLAND CEMENT CONCRETE PAVEMENT 7″
3. EXISTING COMBINATION CURB AND GUTTER, 6-6.12
4. EXISTING STABILIZED SUBBASE 6″
5. EXISTING BITUMINOUS WIDENING 9″
6. PROPOSED HMA SURFACE REMOVAL (2 1/4 ″)
7. PROPOSED HMA SURFACE COURSE, MIX D, N70 (1 1/2 ″)
8. POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50 (3/4 ″)

MIXTURE USE	AC/PG:	DESIGN AIR VOIDS
HOT MIX ASPHALT SURFACE COURSE, MIX "D", N70, 1 1/2" IL-9.5 MM	PG 64-22	4% @ 70 GYR.
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL 4.75, N50, 3/4"	SBS/SBR PGPG 64-22 76-28/-22	4% @ 50 GYR.
CLASS D PATCHES, BINDER IL-19 MM	PG 64-22 *	4% @ 70 GYR.

NOTE:
THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ.YD.IN"

WHEN RAP EXCEEDS 20%, THEN NEW ASPHALT BINDER IN THE MIX SHALL BE PG58-22"

NOTE: CONTRACTOR IS TO PATCH PRIOR TO MILLLING.

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		DRAWN -	REVISED -
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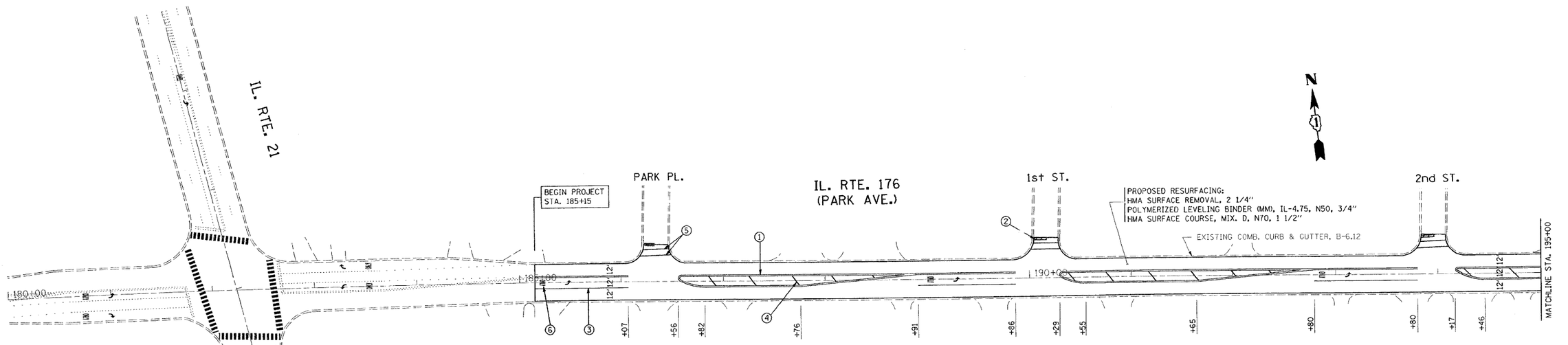
	PLOT DATE = 8/16/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING AND PROPOSED TYPICAL CROSS SECTIONS
IL. ROUTE 176 (IL. RTE. 21–ST. MARY'S RD.)

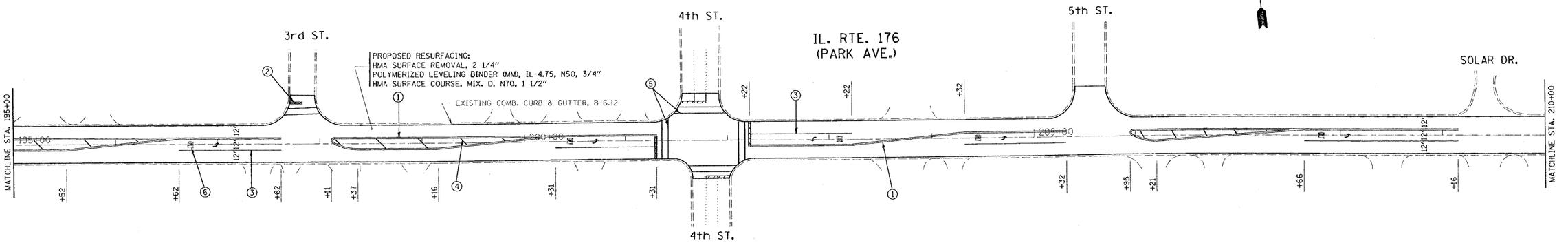
SCALE: 1″=50′ | SHEET NO. OF SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEET NO.
1238	(0&31) RS-7	LAKE	32 | 5
		CONTRACT NO. 62662	
		ILLINOIS FED. AID PROJECT	



LEGEND

1. THERMOPLASTIC PAVEMENT MARKING
   LINE, 4" SOLID YELLOW (DOUBLE), 11" C-C
2. THERMOPLASTIC PAVEMENT MARKING
   STOP BAR, 24" SOLID WHITE
3. THERMOPLASTIC PAVEMENT MARKING
   TURN LANE LINE, 6" WHITE
4. THERMOPLASTIC PAVEMENT MARKING
   12" SOLID YELLOW (RT. 45° DIAGONALS @ 20' C-C)
5. THERMOPLASTIC PAVEMENT MARKING
   6" WHITE CROSSWALK
6. THERMOPLASTIC PAVEMENT MARKING
   LEFT LANE ONLY
   LETTERS AND SYMBOLS, 8" WHITE



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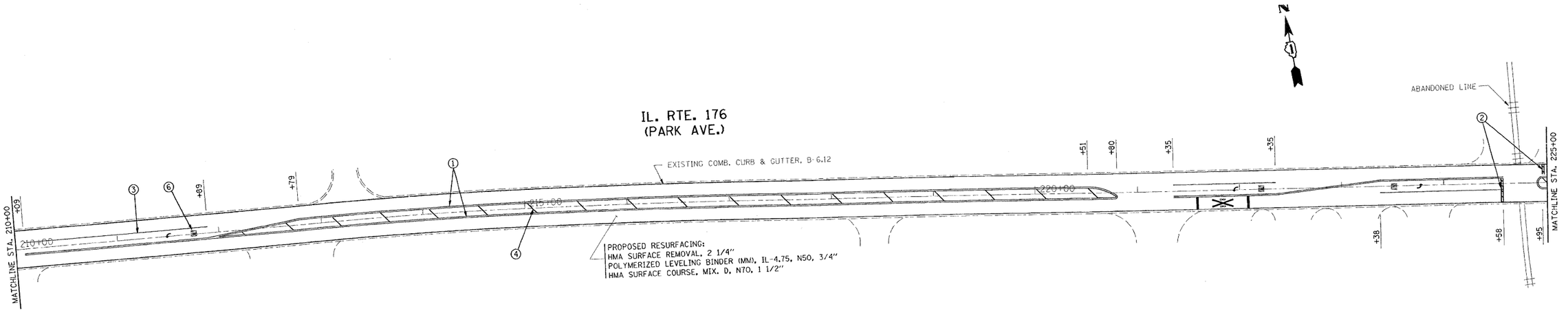
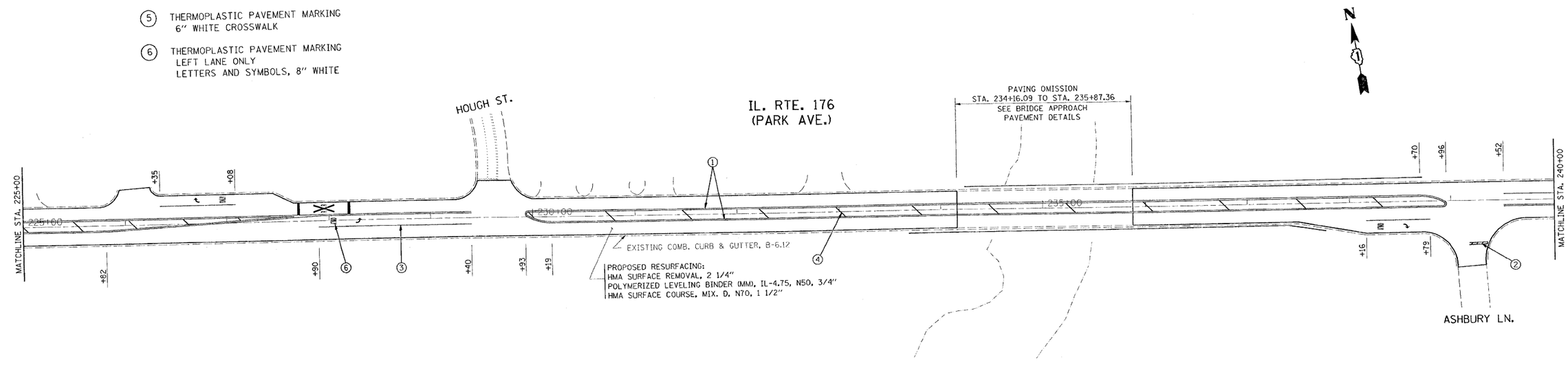
		DRAWN -	REVISED -						1238	(0&31) RS-7	LAKE	32	6
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -								CONTRACT NO. 62662		
	PLOT DATE = 7/2/2009	DATE -	REVISED -		SCALE: 1"=50'	SHEET NO. OF SHEETS	STA. 180+00	TO STA. 210+00			ILLINOIS FED. AID PROJECT		



LEGEND

1. THERMOPLASTIC PAVEMENT MARKING
   LINE, 4" SOLID YELLOW (DOUBLE), 11" C-C
2. THERMOPLASTIC PAVEMENT MARKING
   STOP BAR, 24" SOLID WHITE
3. THERMOPLASTIC PAVEMENT MARKING
   TURN LANE LINE, 6" WHITE
4. THERMOPLASTIC PAVEMENT MARKING
   12" SOLID YELLOW (RT. 45° DIAGONALS @ 20' C-C)
5. THERMOPLASTIC PAVEMENT MARKING
   6" WHITE CROSSWALK
6. THERMOPLASTIC PAVEMENT MARKING
   LEFT LANE ONLY
   LETTERS AND SYMBOLS, 8" WHITE



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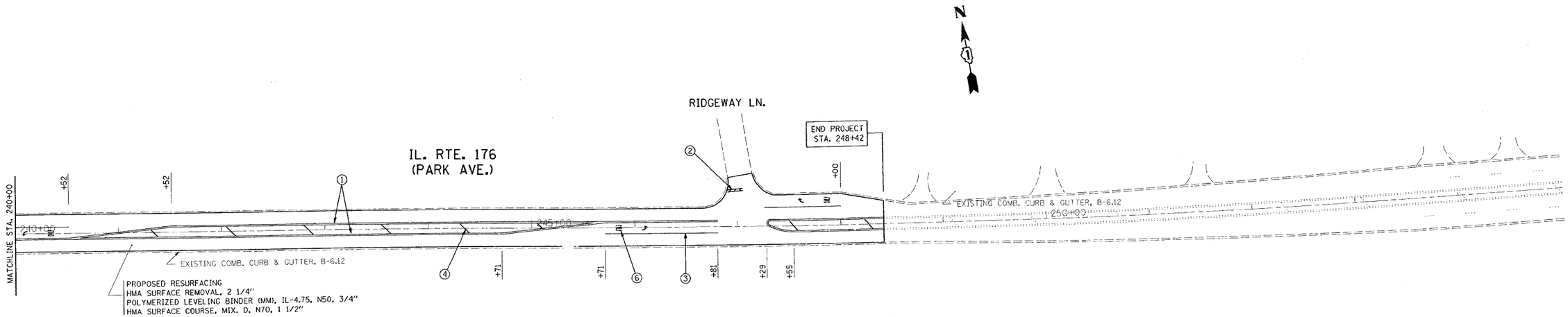
	PLOT DATE = 7/2/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY AND PAVEMENT MARKING PLAN
IL. ROUTE 176 (IL. RTE. 21-ST. MARY'S RD.)

SCALE: 1"=50' | SHEET NO. OF SHEETS | STA. 210+00 TO STA. 240+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	(0&31) RS-7	LAKE	32	7
		CONTRACT NO. 62662		
		ILLINOIS FED. AID PROJECT		



LEGEND

(1) THERMOPLASTIC PAVEMENT MARKING
LINE, 4" SOLID YELLOW (DOUBLE), 11" C-C

(2) THERMOPLASTIC PAVEMENT MARKING
STOP BAR, 24" SOLID WHITE

(3) THERMOPLASTIC PAVEMENT MARKING
TURN LANE LINE, 6" WHITE

(4) THERMOPLASTIC PAVEMENT MARKING
12" SOLID YELLOW (RT. 45° DIAGONALS @ 20' C-C)

(5) THERMOPLASTIC PAVEMENT MARKING
6" WHITE CROSSWALK

(6) THERMOPLASTIC PAVEMENT MARKING
LEFT LANE ONLY
LETTERS AND SYMBOLS, 8" WHITE

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		DRAWN -	REVISED -
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	PLOT DATE = 7/2/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY AND PAVEMENT MARKING PLAN
IL. ROUTE 176 (IL. RTE. 21–ST. MARY'S RD.)

SCALE: 1"=50' | SHEET NO. OF SHEETS | STA. 240+00 TO STA. 255+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	(0&31) RS-7	LAKE	32	8
		CONTRACT NO. 62662		
	ILLINOIS FED. AID PROJECT			

SUGGESTED STAGES OF CONSTRUCTION
IL ROUTE 176 BRIDGE OVER THE DES PLAINES RIVER

STAGE 1

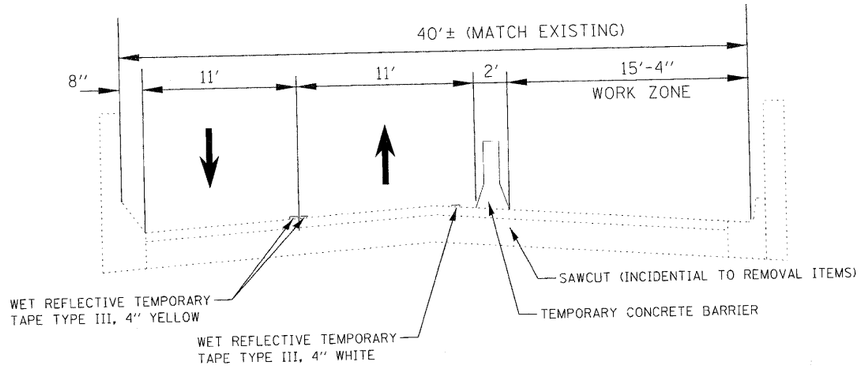
1. TEMPORARY CONCRETE BARRIER INSTALLED AND TRAFFIC MAINTAINED AS PER TYPICAL SECTION AND PLAN DETAILS
2. REMOVE EXISTING APPROACH PAVEMENT AND CURB ON SOUTH SIDE OF BRIDGE
3. CONSTRUCT APPROACH PAVEMENT, CURB, AND CONNECTOR PAVEMENT

STAGE 2

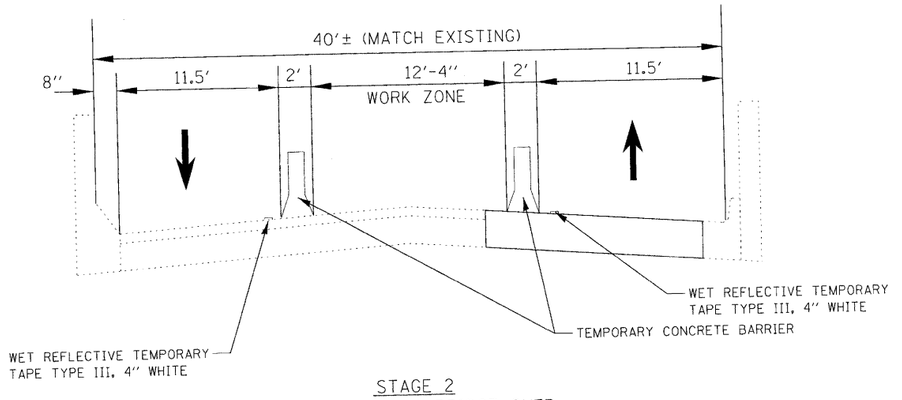
1. TEMPORARY CONCRETE BARRIER INSTALLED AND TRAFFIC MAINTAINED AS PER TYPICAL SECTION AND PLAN DETAILS
2. REMOVE EXISTING APPROACH PAVEMENT ON INSIDE LANE
3. CONSTRUCT APPROACH PAVEMENT AND CONNECTOR PAVEMENT

STAGE 3

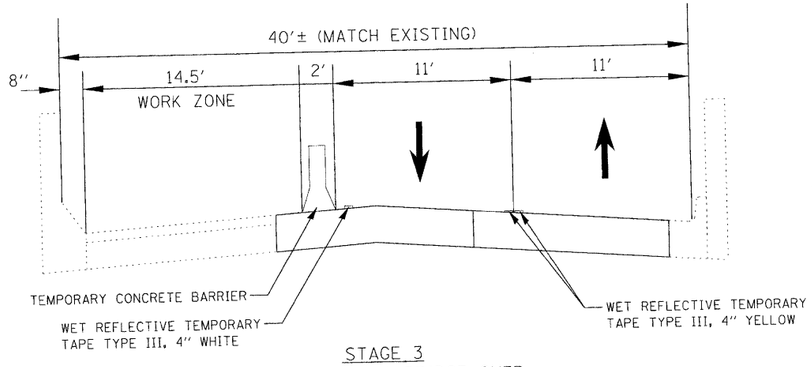
1. TEMPORARY CONCRETE BARRIER INSTALLED AND TRAFFIC MAINTAINED AS PER TYPICAL SECTION AND PLAN DETAILS
2. REMOVE EXISTING APPROACH PAVEMENT AND CURB ON NORTH SIDE OF BRIDGE
3. CONSTRUCT APPROACH PAVEMENT, CURB, AND CONNECTOR PAVEMENT
4. PLACE TEMPORARY TAPE TO MATCH EXISTING PAVEMENT MARKINGS



STAGE 1
IL ROUTE 176 BRIDGE OVER
DES PLAINES RIVER (LOOKING EAST)



STAGE 2
IL ROUTE 176 BRIDGE OVER
DES PLAINES RIVER (LOOKING EAST)



STAGE 3
IL ROUTE 176 BRIDGE OVER
DES PLAINES RIVER (LOOKING EAST)

Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue, Suite 402
Chicago, Illinois 60656
Tel. 773.775.4009 Fax 773.775.4014

USER NAME = cgutowski	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 1.0000 ' / IN.	CHECKED -	REVISED -
PLOT DATE = 6/26/2009	DATE - 06-24-2009	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL ROUTE 176

SUGGESTED STAGES OF CONSTRUCTION

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	(O &31) RS-7	LAKE	32	9
		CONTRACT NO. 62662		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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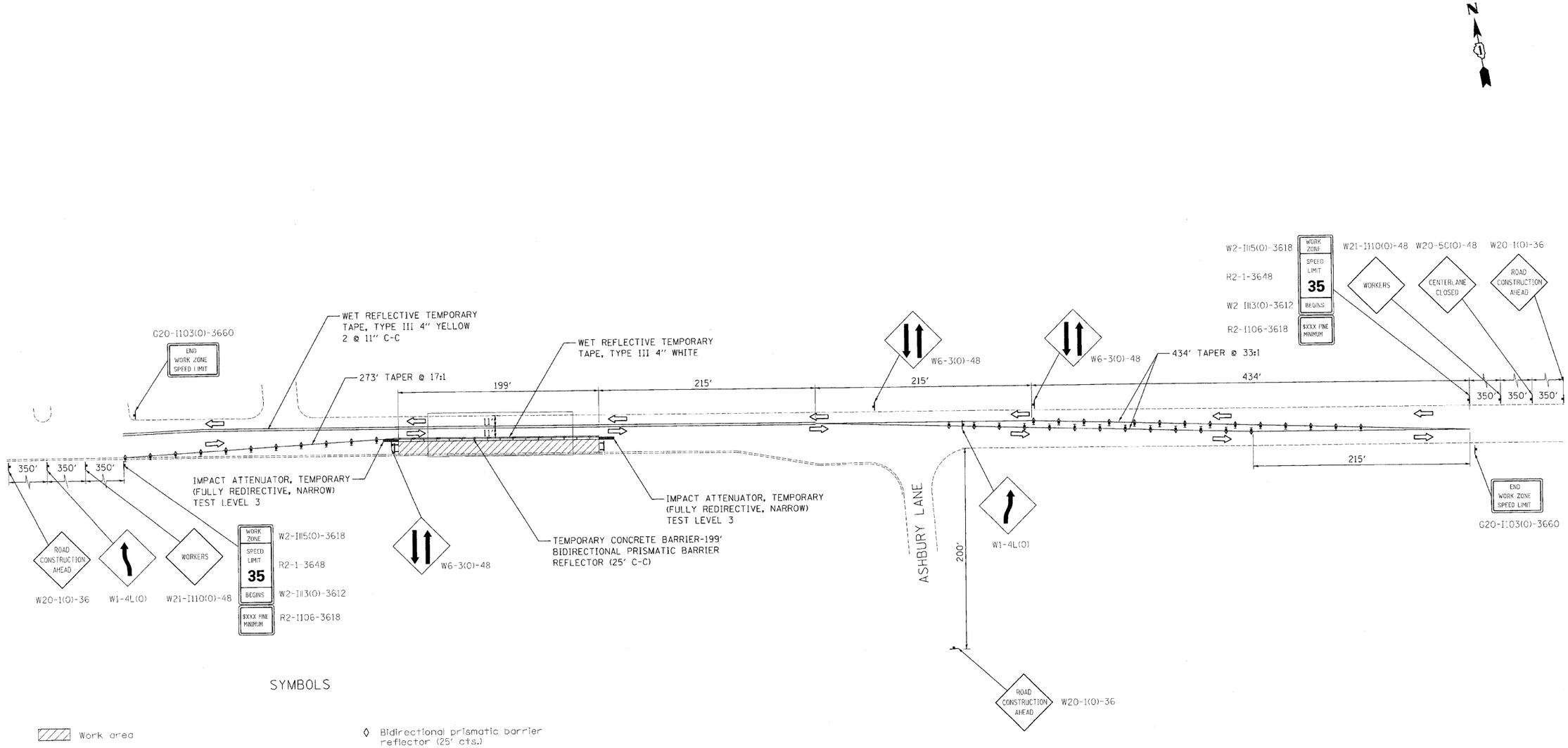

SYMBOLS

- Work area
- Sign
- Drum with steady burn monodirectional light (50' cts.)
- Direction indicator barricade with steady burn monodirectional light (50' cts.)
- Type III barricade with flashing monodirectional lights
- Non-directional flashing beacon
- Bidirectional prismatic barrier reflector (25' cts.)
- Temporary impact attenuator
- Temporary concrete barrier wall

NOTE:

WHEN EXISTING PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS ARE IN CONFLICT WITH THE TRAFFIC CONTROL AND PROTECTION PLAN, EXISTING PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS SHALL BE REMOVED AND PAID FOR AS PAVEMENT MARKING REMOVAL OR AS RAISED REFLECTIVE PAVEMENT MARKING REMOVAL.

Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue, Suite 402
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USER NAME = espino	DESIGNED -		REVISED -
	DRAWN -		REVISED -
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PLOT DATE = 6/24/2009	DATE -	06-24-2009	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL ROUTE 176

SUGGESTED STAGES OF CONSTRUCTION – STAGE 1

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	(0 &31) RS-7	LAKE	32	10
		CONTRACT NO. 62662		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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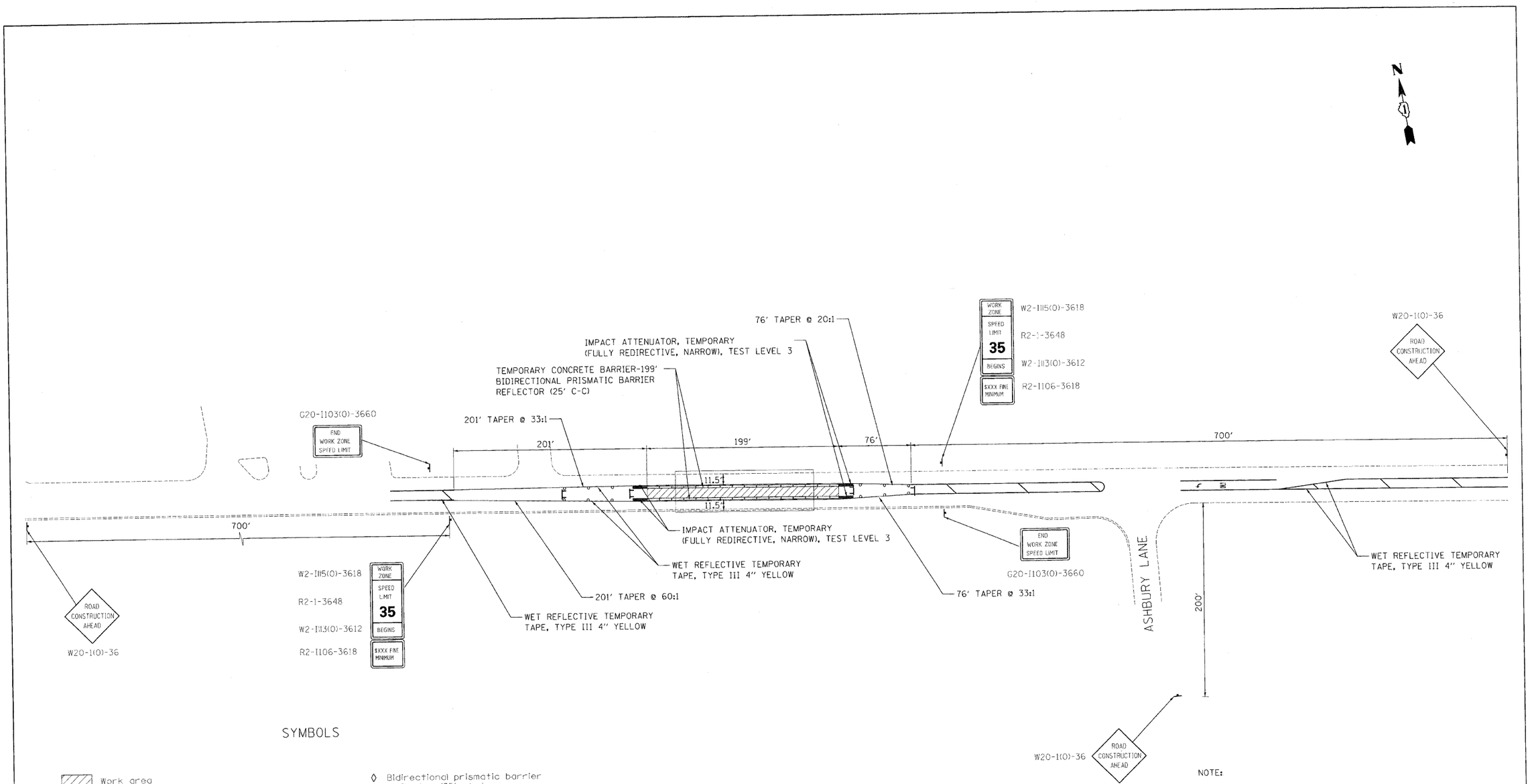

SYMBOLS

- Work area
- Sign
- Drum with steady burn monodirectional light (50' cts.)
- Direction indicator barricade with steady burn monodirectional light (50' cts.)
- Type III barricade with flashing monodirectional lights
- Non-directional flashing beacon
- Bidirectional prismatic barrier reflector (25' cts.)
- Temporary impact attenuator
- Temporary concrete barrier wall

NOTE:

WHEN EXISTING PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS ARE IN CONFLICT WITH THE TRAFFIC CONTROL AND PROTECTION PLAN, EXISTING PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS SHALL BE REMOVED AND PAID FOR AS PAVEMENT MARKING REMOVAL OR AS RAISED REFLECTIVE PAVEMENT MARKING REMOVAL.

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USER NAME = espina	DESIGNED -	REVISED -
	DRAWN -	REVISED -
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PLOT DATE = 6/24/2009	DATE - 06-24-2009	REVISED -

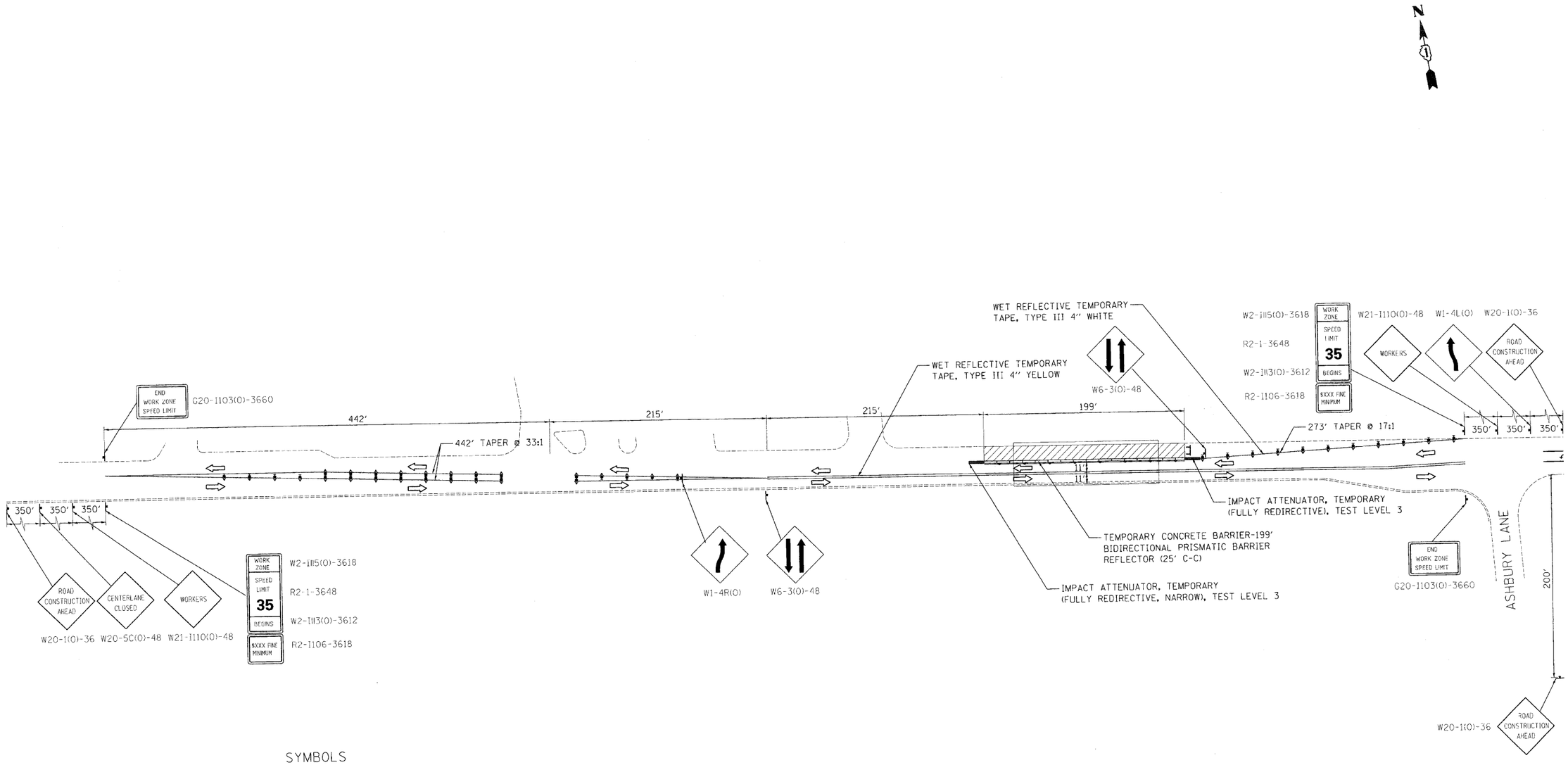
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL ROUTE 176

SUGGESTED STAGES OF CONSTRUCTION – STAGE 2

SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	(0 &31) RS-7	LAKE	32	//
		CONTRACT NO. 62662		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



SYMBOLS

- Work area
- Sign
- Drum with steady burn monodirectional light (50' cts.)
- Direction indicator barricade with steady burn monodirectional light (50' cts.)
- Type III barricade with flashing monodirectional lights
- Non-directional flashing beacon
- Bidirectional prismatic barrier reflector (25' cts.)
- Temporary impact attenuator
- Temporary concrete barrier wall

NOTE:

WHEN EXISTING PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS ARE IN CONFLICT WITH THE TRAFFIC CONTROL AND PROTECTION PLAN, EXISTING PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS SHALL BE REMOVED AND PAID FOR AS PAVEMENT MARKING REMOVAL OR AS RAISED REFLECTIVE PAVEMENT MARKING REMOVAL.

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5507 North Cumberland Avenue, Suite 402
Chicago, Illinois 60656
Tel. 773.775.4009 Fax 773.775.4014

USER NAME = espino	DESIGNED -		REVISED -
	DRAWN -		REVISED -
PLOT SCALE = 50.0000 ' / IN.	CHECKED -		REVISED -
PLOT DATE = 6/24/2009	DATE -	06-24-2009	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL ROUTE 176

SUGGESTED STAGES OF CONSTRUCTION – STAGE 3

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	(0 &31) RS-7	LAKE	32	12
		CONTRACT NO. 62662		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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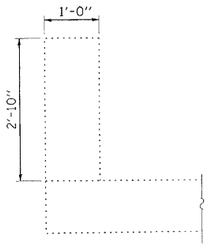
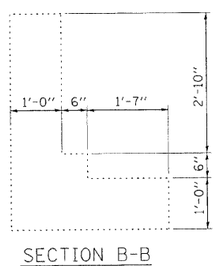
12

LEGEND

- APPROACH SLAB REMOVAL
- PAVEMENT REMOVAL
- COMBINATION CONCRETE CURB AND GUTTER REMOVAL
- GUTTER REMOVAL
- CONCRETE REMOVAL



SECTION A-A



SECTION B-B

• ALL SAW CUTS WILL BE CONSIDERED INCIDENTIAL TO THE REMOVAL

Ciorba Group, Inc.
CONSULTING ENGINEERS
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Chicago, Illinois 60656
Tel 773.775.4009 Fax 773.775.4014

USER NAME = espina	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 8.0000 ' / IN.	CHECKED -	REVISED -
PLOT DATE = 6/24/2009	DATE - 06-24-2009	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL ROUTE 176

APPROACH PAVEMENT REMOVAL DETAIL

SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	(0 &31) RS-7	LAKE	32	13
		CONTRACT NO. 62662		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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13

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CONSULTING ENGINEERS
5507 North Cumberland Avenue, Suite 402
Chicago, Illinois 60656
Tel. 773.775.4009 Fax 773.775.4014

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	DRAWN -	REVISED -
PLOT SCALE = 8.0000 ' / IN.	CHECKED -	REVISED -
PLOT DATE = 6/24/2009	DATE - 06-24-2009	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL ROUTE 176

APPROACH PAVEMENT TRANSISTION DETAIL

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	(Q &31) RS-7	LAKE	32	14
		CONTRACT NO. 62662		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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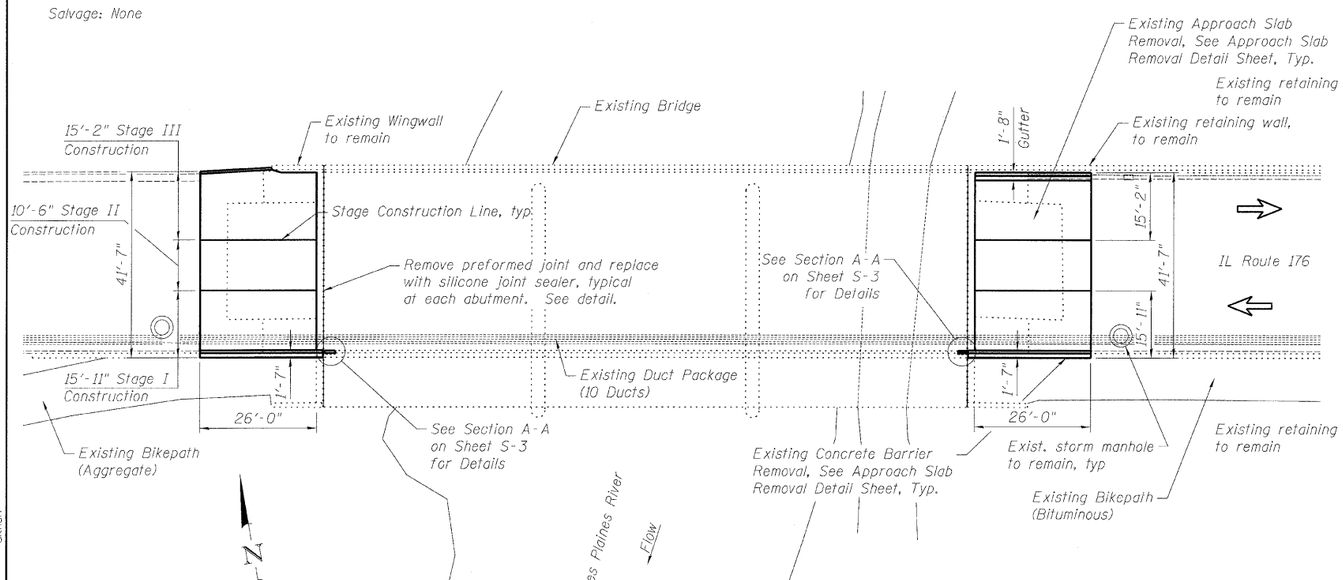
Benchmark: C.G.I # 1- Chiseled "X" on top of curb at SW Corner of IL-176 and Ashbury Lane intersection. Elev 657.77

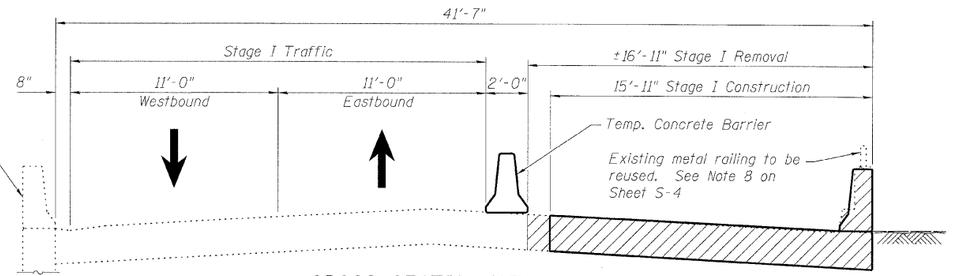
Existing Structure: S.N. 049-0068 built in 1983. Three span (continuous), reinforced concrete deck on steel beams.

Salvage: None

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

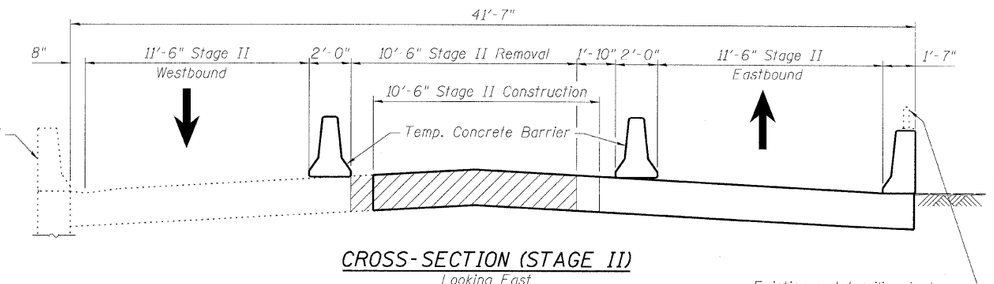


PLAN



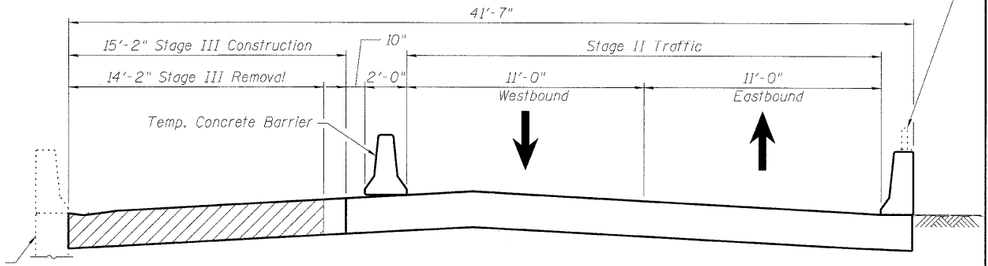
CROSS-SECTION (STAGE I)

Looking East
East approach shown, West approach similar



CROSS-SECTION (STAGE II)

Looking East
East approach shown, West approach similar



CROSS-SECTION (STAGE III)

Looking East
East approach shown, West approach similar

SCOPE OF WORK

1. Remove existing approach pavement, Concrete shoulders and portion of concrete railing; replace with 26' Bridge approach slab.

2. Remove, store and reinstall existing steel railing. Cost included with "Concrete Superstructure."

3. Replace existing preformed joint seal with silicone joint sealer and backer rod at each abutment.

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with 2008 Interims

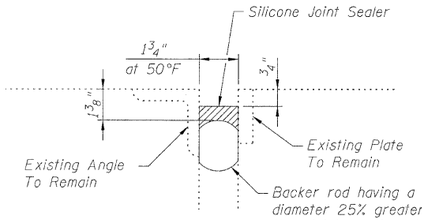
DESIGN STRESSES

FIELD UNITS

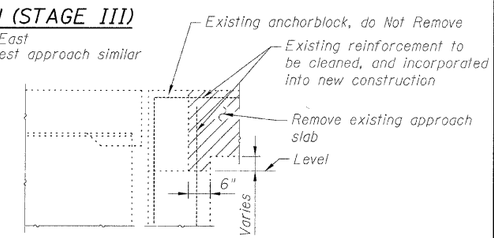
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

LOADING HL-93

Allow 50#/sq.ft. for future wearing surface



SILICONE JOINT SEALER DETAILS



SECTION THRU ABUTMENT

GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

2. Reinforcement bars designated (E) shall be epoxy coated.

3. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

4. Existing reinforcement shall be cleaned and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with "Approach Slab Removal."

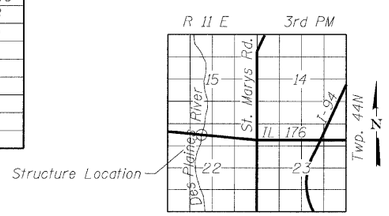
5. See "Approach Slab Removal Detail" Sheet in Roadway plans for concrete removal.

TOTAL BILL OF MATERIAL

	ITEM	UNIT	TOTAL
	Approach Slab Removal	Sq Yd	120
	Concrete Removal	Cu Yd	9.2
	Concrete Structures	Cu Yd	25.0
	Concrete Superstructure	Cu Yd	113.8
	Bridge Deck Grooving	Sq Yd	220
	Protective Coat	Sq Yd	256
	Reinforcment Bars, Epoxy Coated	Pound	29,540
	Bar Splicers	Each	408
*	Silicone Joint Sealer	Foot	109

*- Special provision

INDEX OF SHEETS



LOCATION SKETCH

STATE OF ILLINOIS
EWA K. MROCZEK
081-006067
LICENSED STRUCTURAL ENGINEER
DATE: 7/28/2009
SEAL EXPIRES: 11/30/2010

DESIGNED	AMK
CHECKED	EKM
DRAWN	SAT
CHECKED	EKM

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Tel. 773.775.4009 Fax 773.775.4014 Email chicago@ciorba.com

GENERAL PLAN, NOTES AND DETAILS
ILLINOIS ROUTE 176 OVER DES PLAINES RIVER
STRUCTURE NO. 049-0068

SHEET NO. S-1 S-6 SHEETS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1238	(Q & 31) RS-7	LAKE	-	15
			CONTRACT NO. 62662		
	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

akhan
7/28/2009
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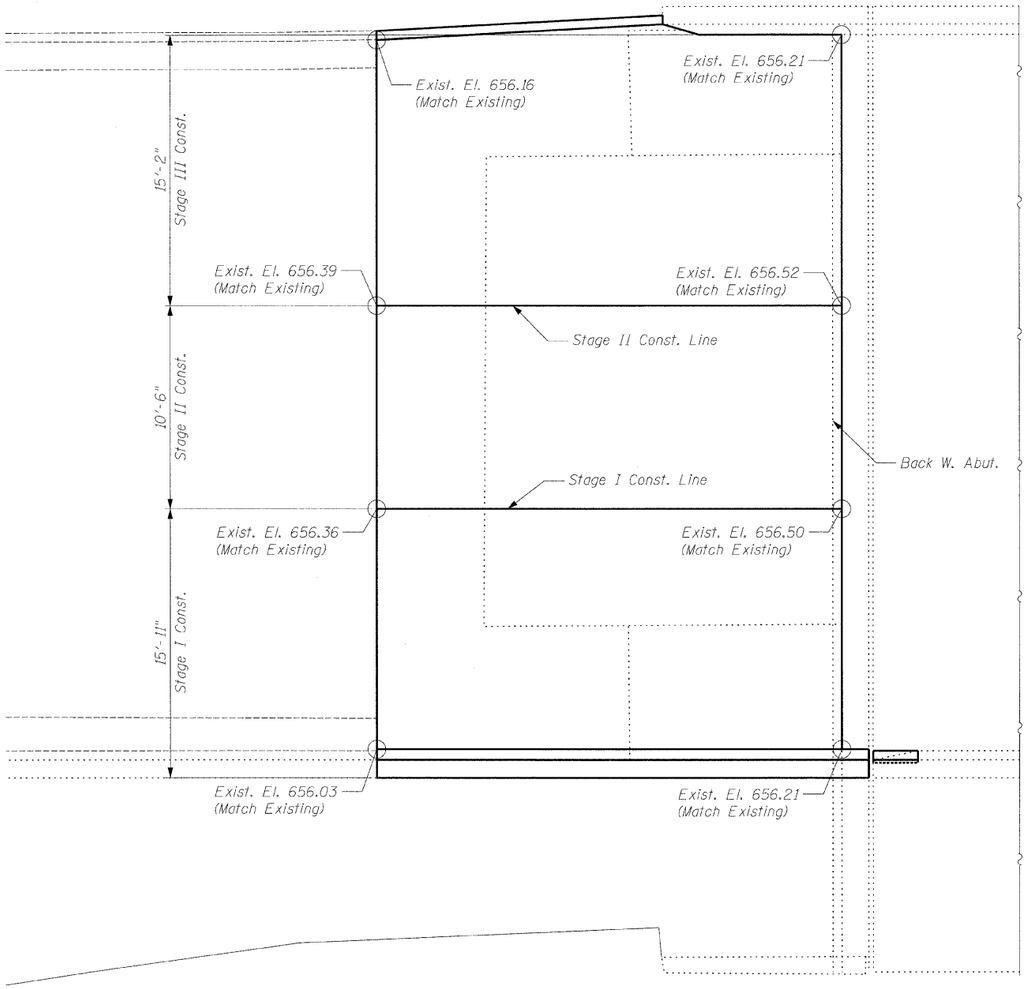
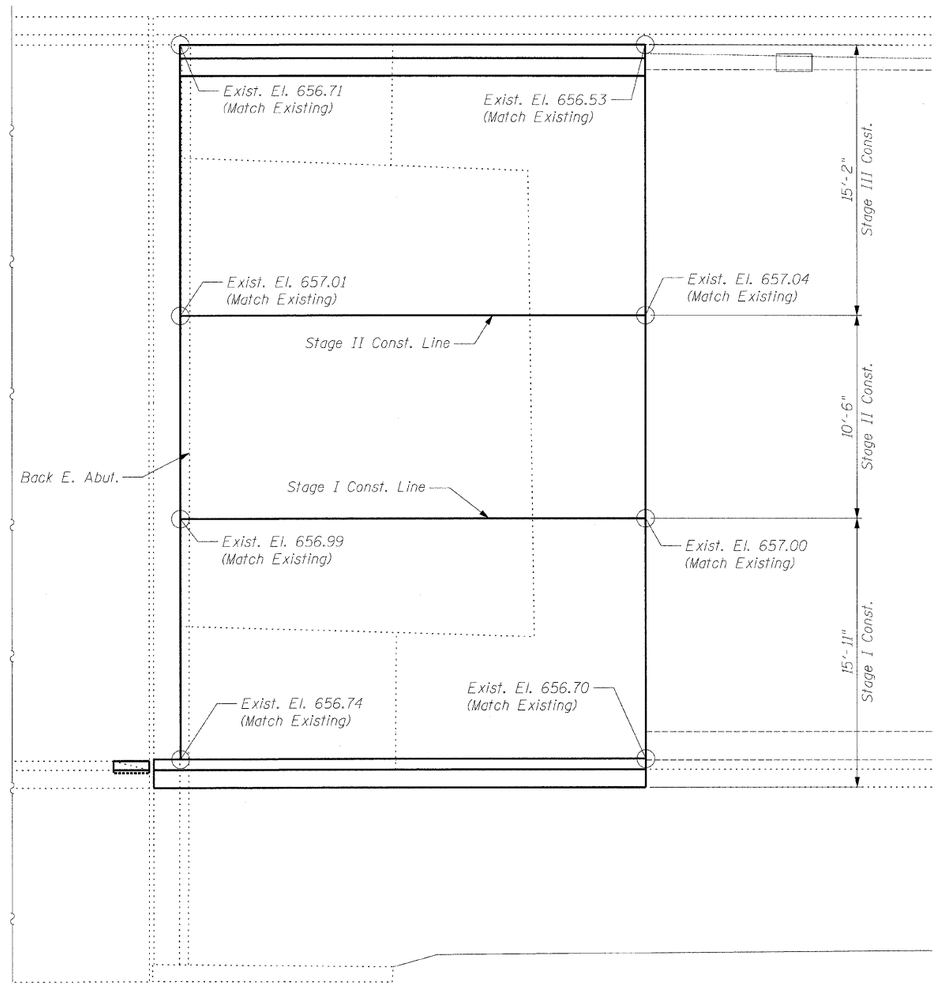
DEPARTMENT OF TRANSPORTATION



PLAN
West Approach



PLAN
East Approach

TOP OF APPROACH
SLAB ELEVATIONS
STRUCTURE NO. 049-0068

DESIGNED	BWS
CHECKED	AMK
DRAWN	BWS
CHECKED	EKM

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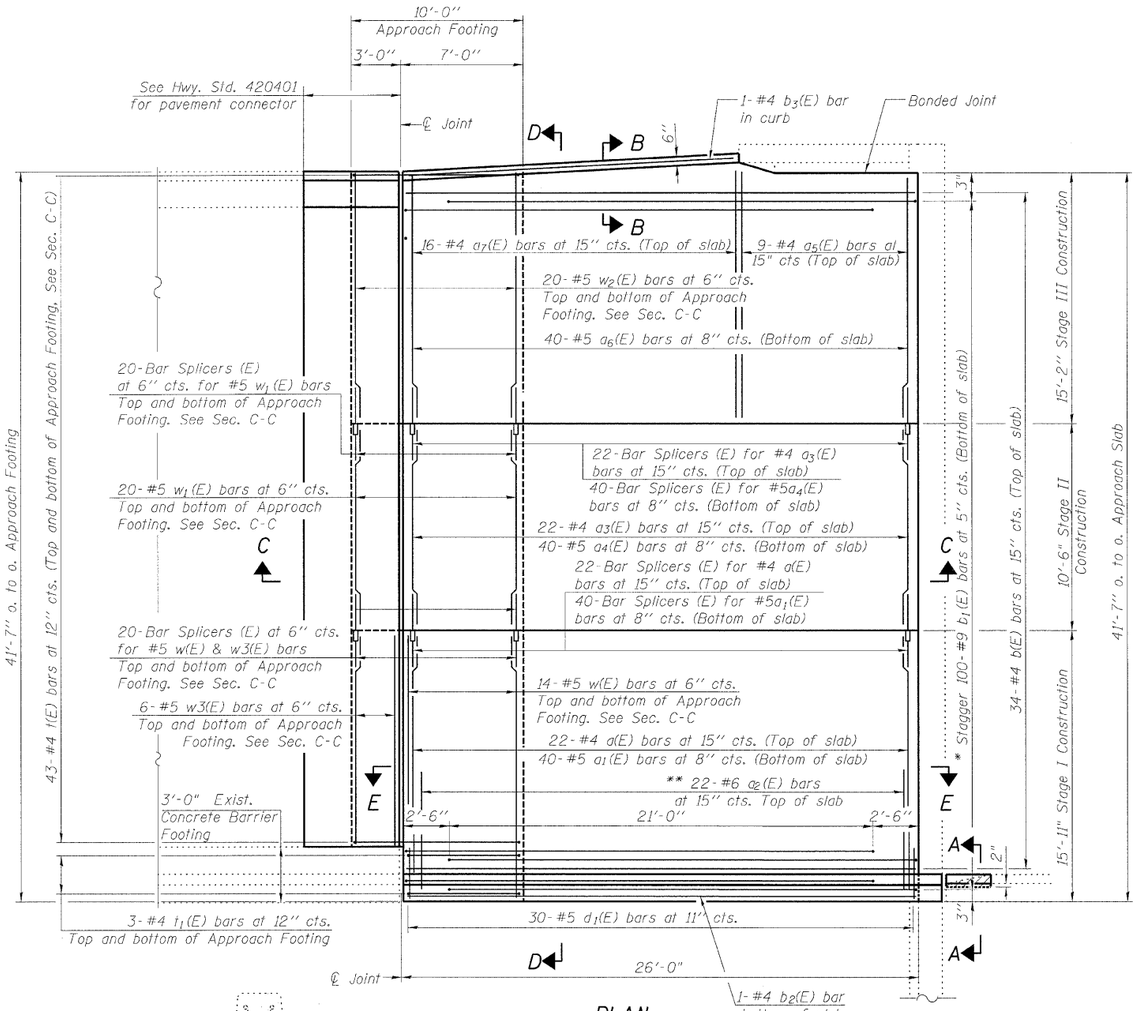
Tel. 773.775.4009 Fax 773.775.4014 Email chicago@ciorba.com

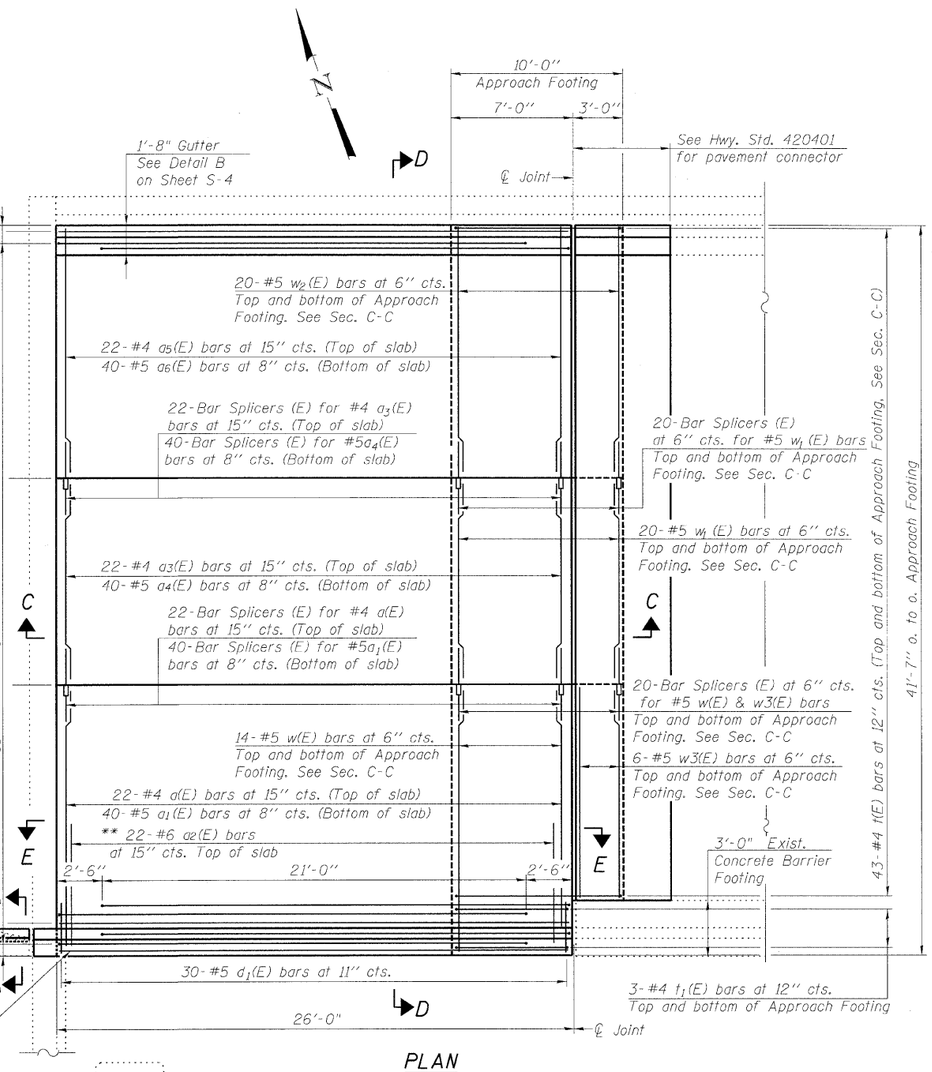
SHEET NO. S-2	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S-6 SHEETS	1238	(Q & 31) RS-7	LAKE	-	16
			CONTRACT NO. 62662		
	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

N:\PROJ\3368\3368_34\Design\Structural\CAD\3368_34_02 West Approach Elevations.dgn 7/29/2009 akhan

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

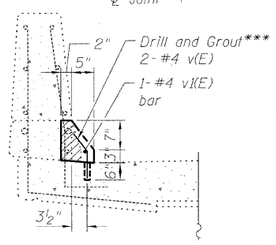


PLAN
West Approach Slab

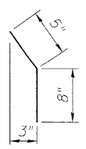


PLAN
East Approach Slab

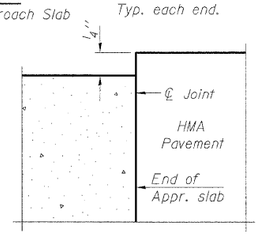
* Tilt #9 b_1(E) bars as required to maintain clearance.
** Alternate with a(E) bars, typ. ea. parapet.
*** Cost included with Concrete Superstructure



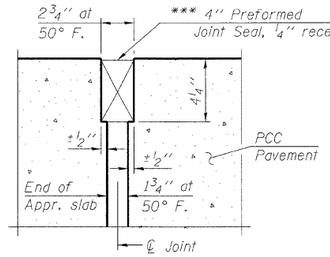
SECTION A-A



BAR v(E)

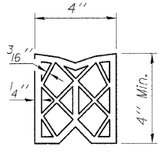


FLEXIBLE PAVEMENT

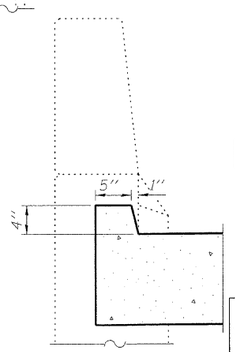


RIGID PAVEMENT

DETAIL A



PREFORMED JOINT SEAL



SECTION B-B

LEGEND

Concrete Removal

Notes:
See sheet S-4 for Sections C-C & D-D and View E-E.

BRIDGE APPROACH SLAB DETAILS I
STRUCTURE NO. 049-0068

SHEET NO. S-3	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S-6 SHEETS	1238	(Q & 31) RS-7	LAKE	-	17
			CONTRACT NO. 62662		
	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

DESIGNED	AMK
CHECKED	BWS
DRAWN	AMK
CHECKED	EKM

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CONSULTING ENGINEERS
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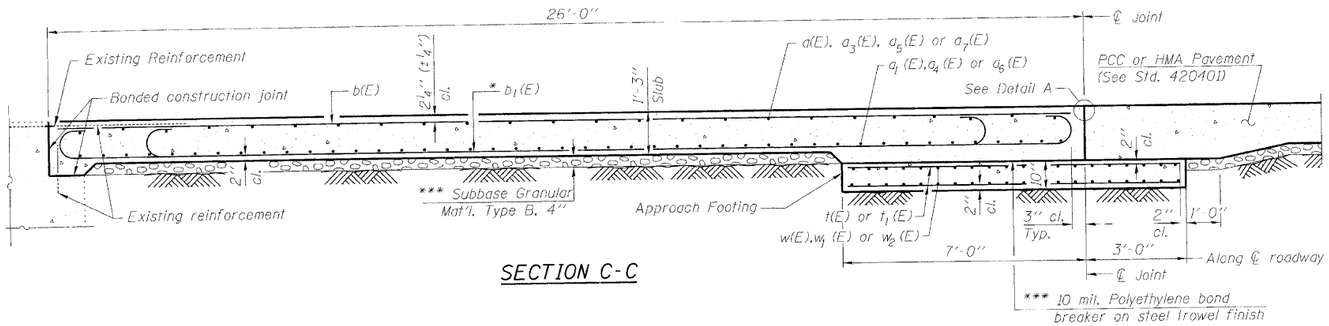
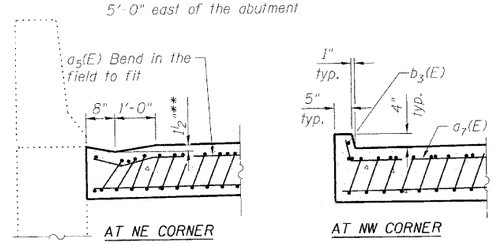
Tel. 773.775.4009 Fax 773.775.4014 Email chicago@ciorba.com

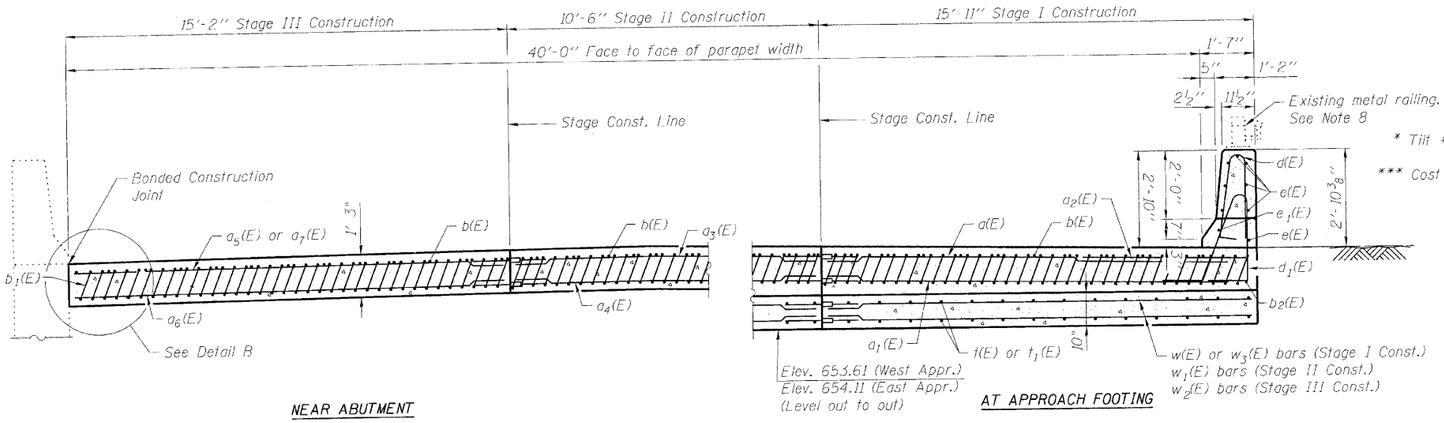
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION C-C



DETAIL B



* Tilt #9 b1(E) bars as required to maintain clearance.

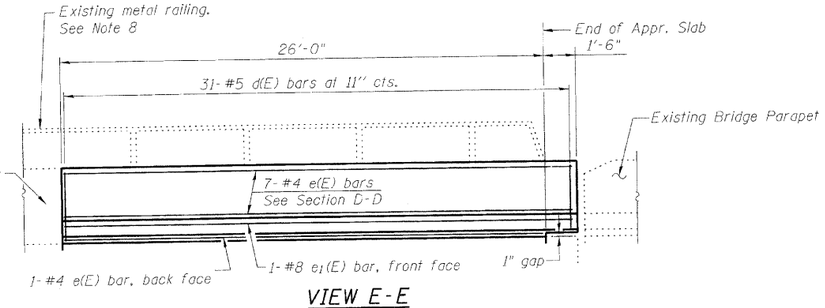
*** Cost included with Concrete Superstructure.

TWO APPROACHES
BILL OF MATERIAL

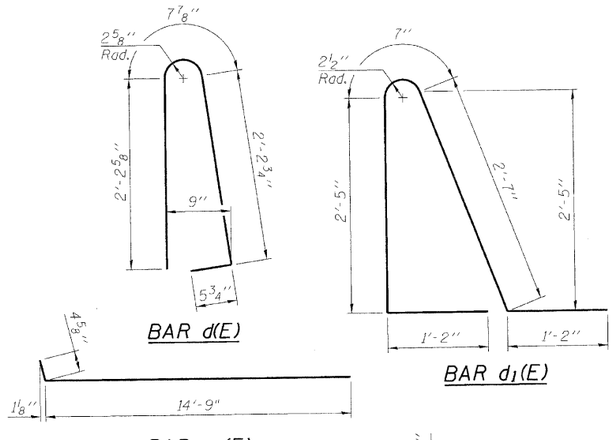
Bar	No.	Size	Length	Shape
a(E)	44	# 4	15'-7"	
a1(E)	80	# 5	15'-7"	
a2(E)	44	# 6	6'-0"	
a3(E)	44	# 4	10'-2"	
a4(E)	80	# 5	10'-2"	
a5(E)	31	# 4	14'-10"	
a6(E)	80	# 5	14'-10"	
a7(E)	16	# 4	15'-2"	
b(E)	68	# 4	25'-8"	
b1(E)	200	# 9	25'-9"	
b2(E)	4	# 4	25'-8"	
b3(E)	1	# 4	15'-8"	
d(E)	62	# 5	5'-7"	
d1(E)	60	# 5	7'-11"	
e(E)	16	# 4	27'-2"	
e1(E)	2	# 8	27'-2"	
t(E)	172	# 4	9'-8"	
t1(E)	12	# 4	6'-8"	
v(E)	4	# 4	1'-1"	
v1(E)	2	# 4	2'-0"	
w(E)	56	# 5	15'-7"	
w1(E)	80	# 5	10'-2"	
w2(E)	80	# 5	14'-10"	
w3(E)	24	# 5	12'-7"	

Concrete Superstructure	Cu. Yd.	113.8
Concrete Structures	Cu. Yd.	25.0
Reinforcement Bars, Epoxy Coated	Pound	29,540
Protective Coat	Sq. Yd.	256
Bridge Deck Grooving	Sq. Yd.	220
Bar Splicers	Each	408

SECTION D-D
(See Plan for dimensions not shown)



VIEW E-E
East Approach shown.
West Approach similar, opposite hand



Notes:

1. See sheet S-3 for Detail A.
2. Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
3. Approach footing concrete shall be paid for as Concrete Structures.
4. Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
5. The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
6. For bar splicer details, see sheet S-5.
7. Cost of excavation for approach footing included with Concrete Structures. Any excavation required for placing Subbase Granular Material, shall be included with Concrete Superstructure.
8. Prior to any removal operations, the existing metal railing above the existing approach parapets shall be removed to the nearest joint beyond the removal limits, and stored. After the new approach parapet has been constructed, the metal railing shall be installed in the original location, using new hardware similar to the existing hardware. This work will not be measured and paid for separately, but shall be included in Concrete Superstructure.

DESIGNED	AMK
CHECKED	EKM
DRAWN	AMK
CHECKED	EKM

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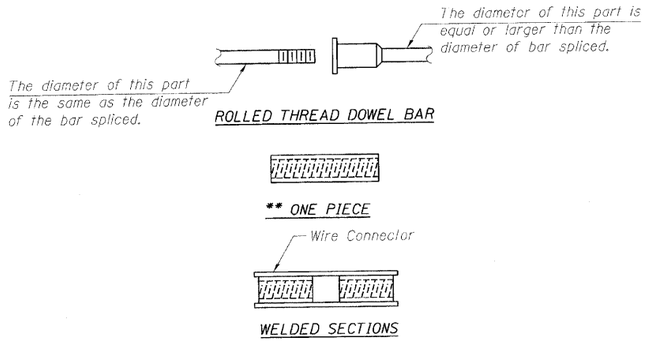
BA-0 10-31-08

BRIDGE APPROACH SLAB DETAILS II
STRUCTURE NO. 049-0068

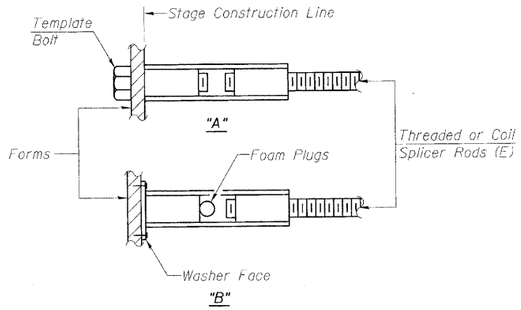
SHEET NO. S-4 S-6 SHEETS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1238	(Q & 31) RS-7	LAKE	32	18
			CONTRACT NO. 62662		
	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



BAR SPLICER ASSEMBLY ALTERNATIVES

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



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.

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:

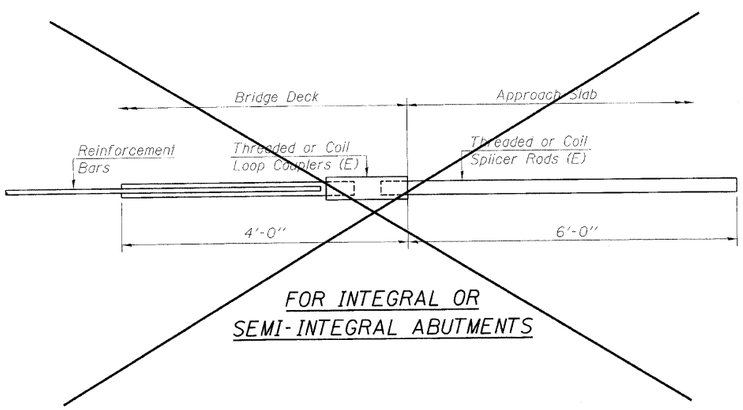
① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$

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

Where f_y = Yield strength of lapped reinforcement bars in ksi.
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

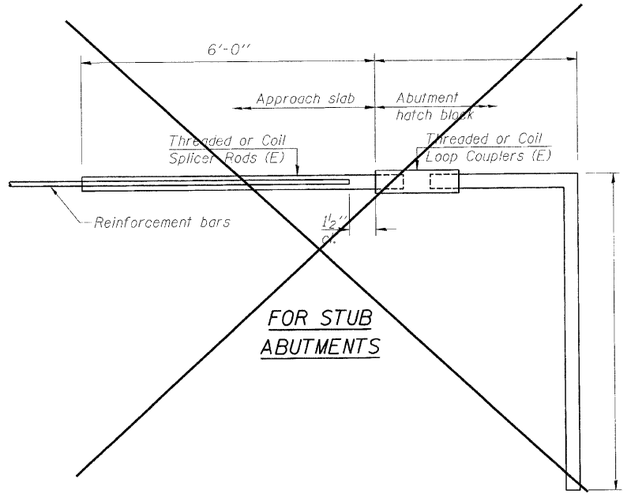
BAR SPLICER ASSEMBLIES

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'-2"	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



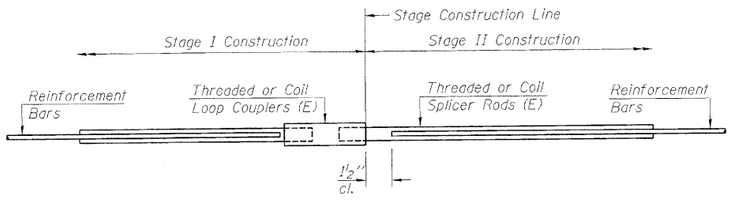
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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



FOR STUB ABUTMENTS

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



STANDARD

Bar Size	No. Assemblies Required	Location
#4	88	Approach Slab
#5	160	Approach Slab
#5	160	Approach Footing

DESIGNED	AMK
CHECKED	EKM
DRAWN	AMK
CHECKED	EKM

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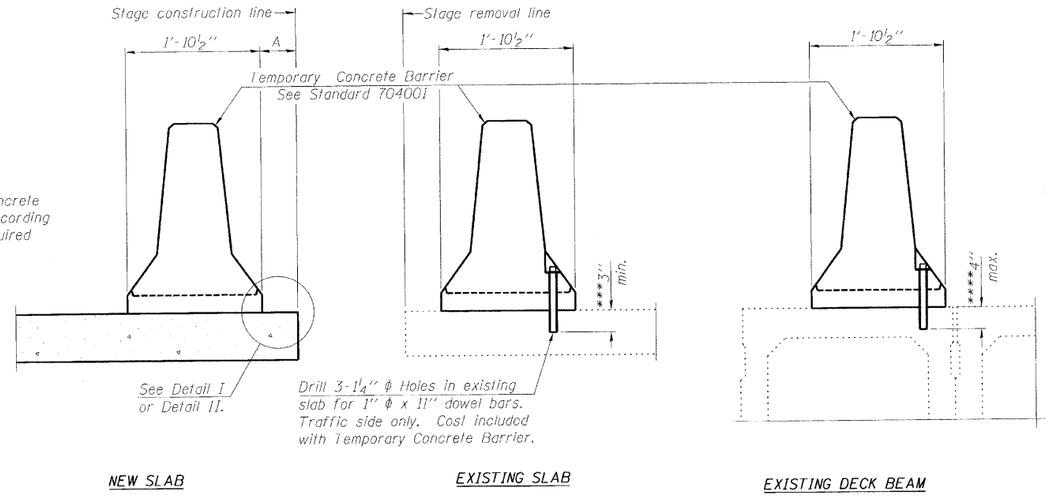
BSD-1 10-1-08

BAR SPLICER ASSEMBLY DETAILS
STRUCTURE NO. 049-0068

SHEET NO. S-5 S-6 SHEETS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1238	(Q & 31) RS-7	LAKE	32	19
			CONTRACT NO. 62662		
	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



NEW SLAB | EXISTING SLAB | EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel ℄ to the top layer of couplers with 2-⅝" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

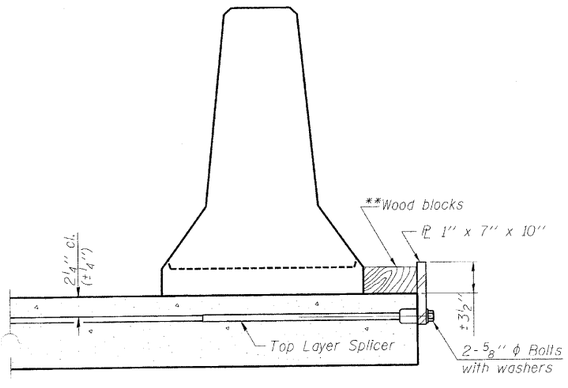
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x 10" steel ℄ to the concrete slab or concrete wearing surface with 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.

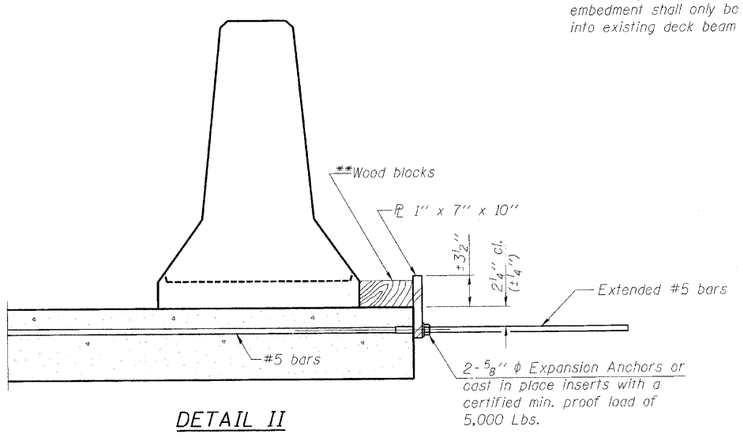
The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.

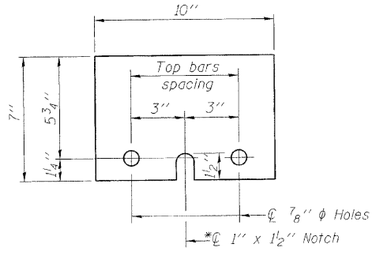


DETAIL I



DETAIL II

**Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.



STEEL RETAINER ℄ 1" x 7" x 10"

* Required only with Detail II

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION STRUCTURE NO. 049-0068

SHEET NO. S-6	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S-6 SHEETS	1238	(Q & 31) RS-7	LAKE	32	20
			CONTRACT NO. 62662		
	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

DESIGNED
CHECKED
DRAWN
CHECKED

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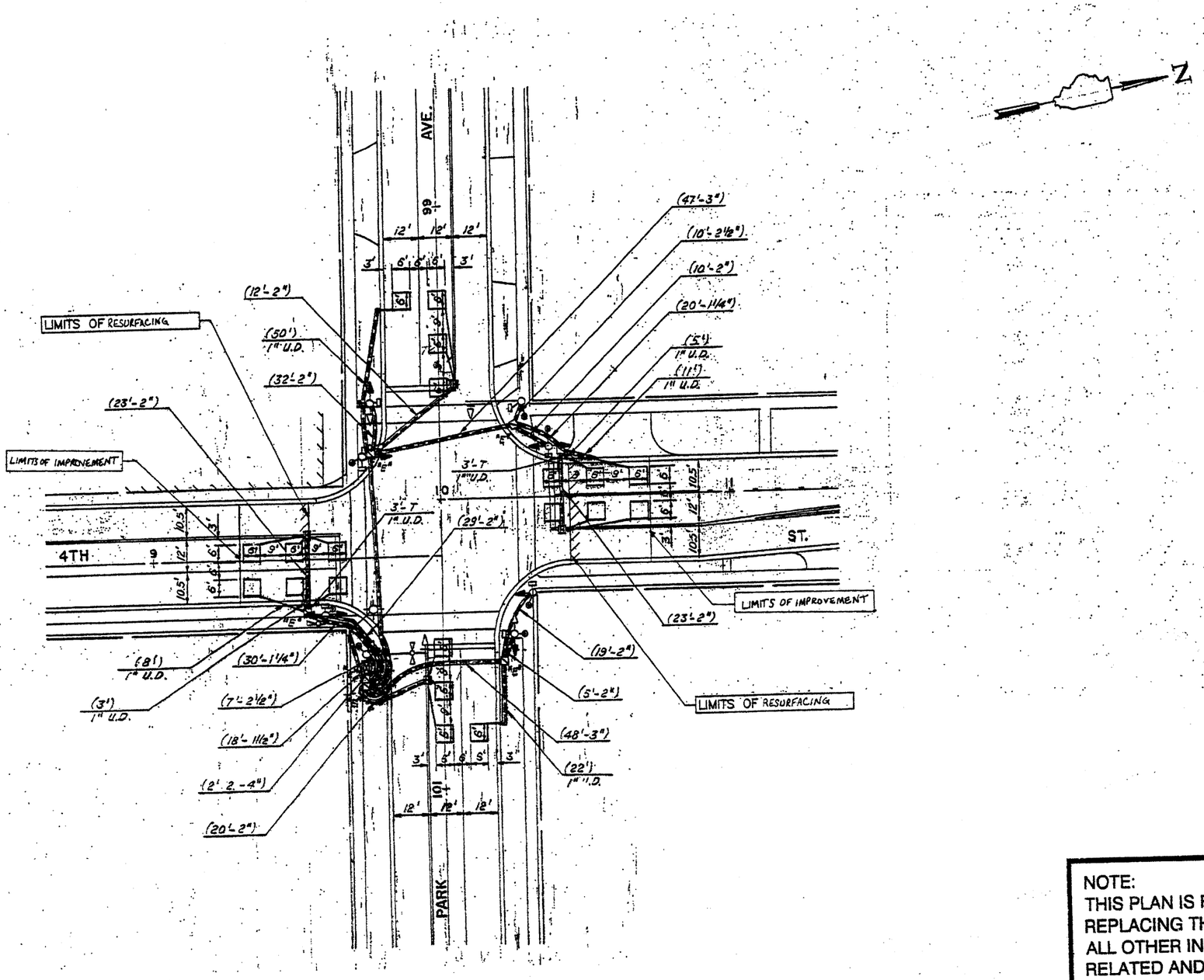
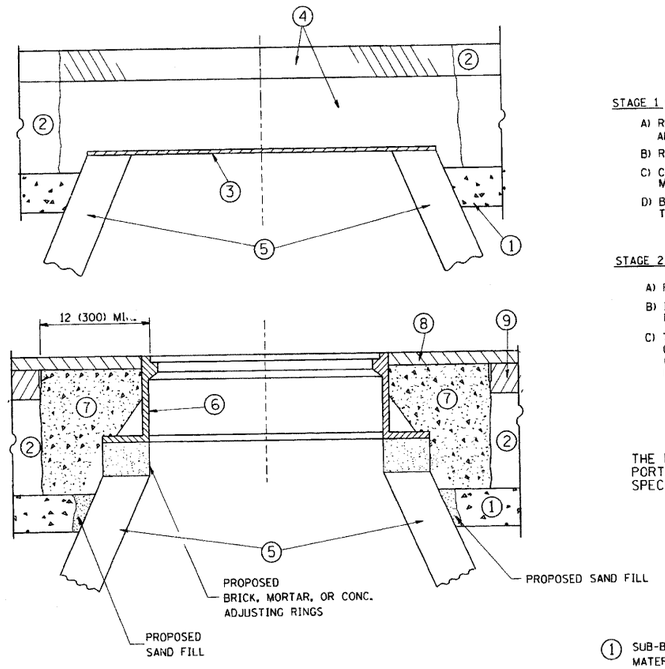
R-27 10-1-08



LACE ALL DETECTOR LOOPS AS SHOWN (WITHIN RESURFACING LIMITS)			
ODE NO.	QUANTITY	UNIT	ITEM
8600800	872	FOOT	DETECTOR LOOP REPLACEMENT

NOTE:
THIS PLAN IS FOR THE PURPOSE OF REPLACING THE DETECTOR LOOPS ONLY. ALL OTHER INFORMATION SHOWN IS NOT RELATED AND WILL BE DISREGARDED.

ILLINOIS DEPARTMENT OF TRANSPORTATION
DETECTOR LOOP REPLACEMENT
IL RTE 176 AND 4TH ST



CONSTRUCTION PROCEDURES

STAGE 1 (BEFORE PAVEMENT MILLING)

A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.

B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.

C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.

D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 1½ (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

STAGE 2 (AFTER PAVEMENT MILLING)

A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE

B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.

C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS SI CONCRETE, OR HMA SURFACE COURSE OR HMA BINDER COURSE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS.

LEGEND

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

NOTES:

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

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

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

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

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

LOCATION OF STRUCTURES:

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

BASIS OF PAYMENT: THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR "FRAMES AND LIDS TO BE ADJUSTED, SPECIAL"

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

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

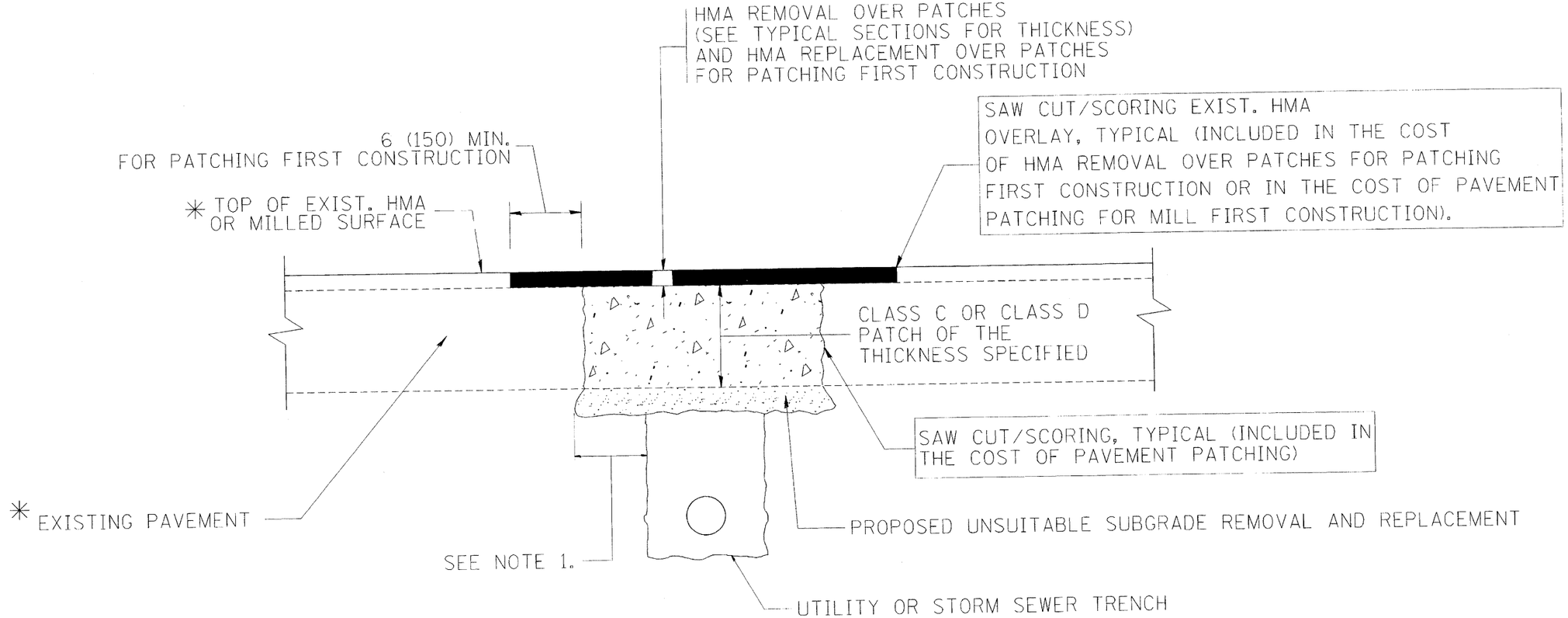
FILE NAME = W:\diststd\22x34\bd08.dgn	USER NAME = gaglianobt	DESIGNED - R. SHAH	REVISED - R. SHAH 03-10-95
		DRAWN -	REVISED - A. ABBAS 03-21-97
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - R. WIEDEMAN 05-14-04
	PLOT DATE = 1/4/2008	DATE - 10-25-94	REVISED - R. BORO 01-01-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS FOR
FRAMES AND LIDS ADJUSTMENT WITH MILLING

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1233	(C-431)RS-7	LAKE	32	22
	BD600-03 (BD-8)	CONTRACT NO. 62662		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

NOTES:

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

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

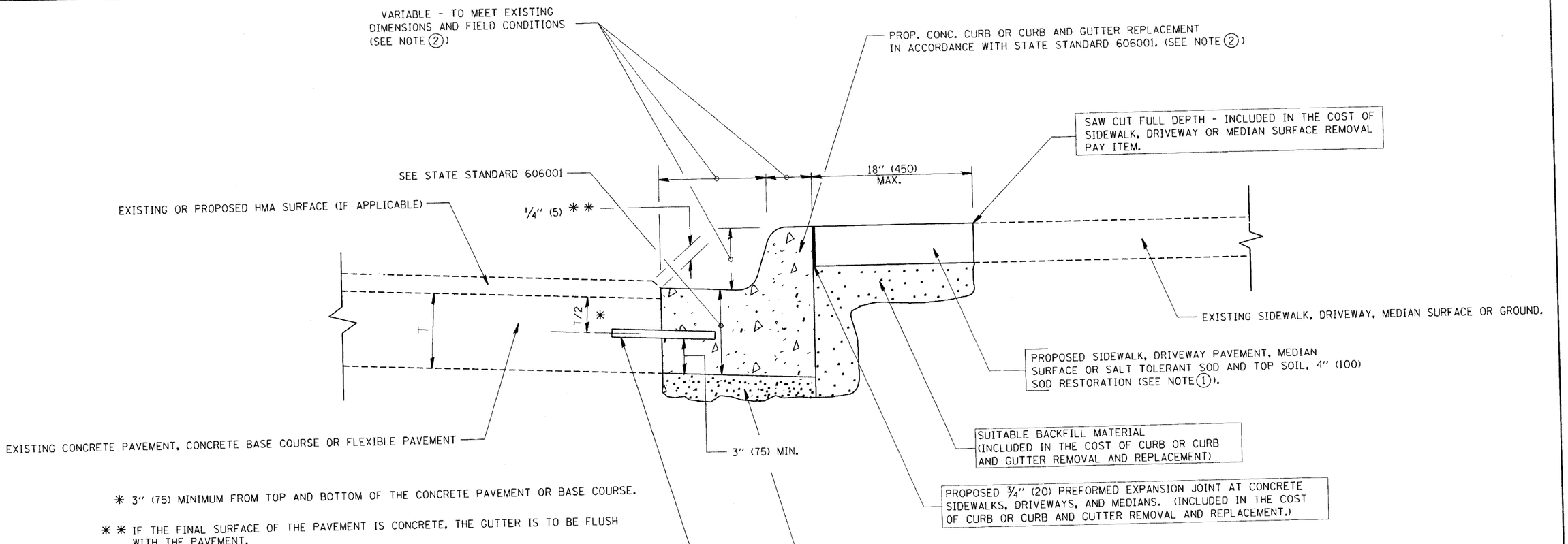
1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

1. MILL HMA FIRST IF THERE IS AT LEAST 4½ INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

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

FILE NAME = c:\projects\diststd22x34\bd22.dgn	USER NAME = bauerdl	DESIGNED - R. SHAH	REVISED - A. ABBAS 04-27-98	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - R. BORO 01-01-07					1055	(4 & 5)RS-7	LAKE	32	23
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - R. BORO 09-04-07					BD400-04 (BD-22)		CONTRACT NO. 61H62		
	PLOT DATE = 10/27/2008	DATE - 10-25-94	REVISED - K. ENG 10-27-08		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



* 3" (75) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.

* * IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.

NOTE: (1) SIDEWALK, DRIVEWAY PAVEMENT OR MEDIAN SURFACE SHALL BE SIMILAR TO THE MATERIAL BEING REMOVED AND WILL BE PAID FOR SEPARATELY.

SALT TOLERANT SOD AND TOP SOIL, 4" (100) RESTORATION WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

(2) CURB OR CURB AND GUTTER REPLACEMENT SHALL MATCH THE SHAPE OF THE EXISTING CURB OR CURB AND GUTTER UNLESS OTHERWISE SPECIFIED.

(3) FOR CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT ADJACENT TO FLEXIBLE PAVEMENT DELETE EPOXY COATED TIE BARS.

(4) LONGITUDINAL BARS, IF ENCOUNTERED IN THE EXISTING CURB OR CURB AND GUTTER, ARE NOT TO BE REPLACED. CUTTING AND REMOVING LONGITUDINAL BARS SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

(5) THE COST OF HMA SURFACE REMOVAL IN THE EXISTING GUTTER FLAG SHALL BE INCLUDED IN THE COST OF THE CURB AND GUTTER REMOVAL AND REPLACEMENT.

(6) THE REMOVAL AND REPLACEMENT OF THE EXISTING CURB OR CURB AND GUTTER SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 440 AND 606 OF THE STANDARD SPECIFICATIONS.

(7) THE LOCATIONS OF REMOVAL AND REPLACEMENT OF EXISTING CURB OR CURB AND GUTTER SHALL BE DETERMINED BY THE RESIDENT ENGINEER AT THE TIME OF CONSTRUCTION.

BASIS OF PAYMENT:

THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT (METER) FOR "CURB REMOVAL AND REPLACEMENT" OR "COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT".

CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

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

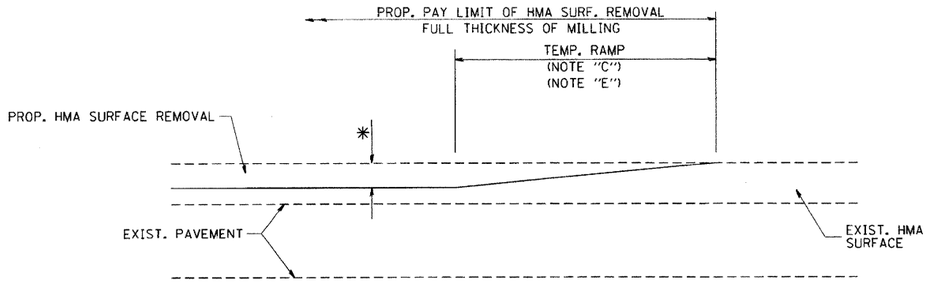
FILE NAME = W:\diststd\22x34\bd24.dgn	USER NAME = geglienobt	DESIGNED - A. HOUSEH	REVISED - R. SHAH 10-03-96
		DRAWN -	REVISED - A. ABBAS 03-21-97
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - M. GOMEZ 01-22-01
	PLOT DATE = 1/4/2008	DATE - 03-11-94	REVISED - R. BORO 01-01-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

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

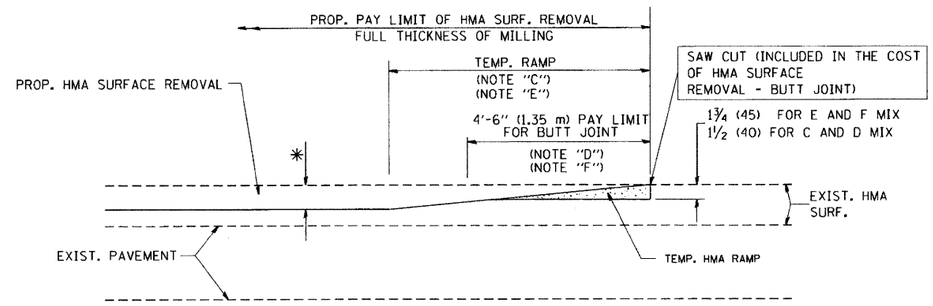
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	(GF 31)RS-9	LAKE	32	24
	BD600-06 (BD-24)	CONTRACT NO. 62662		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



MILLED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 1

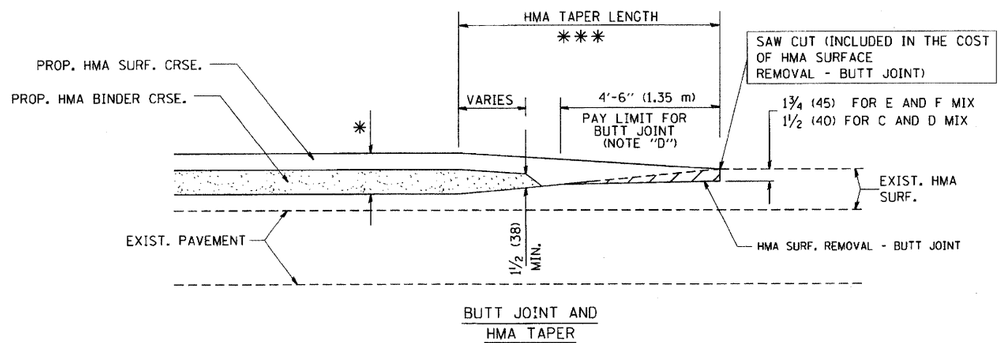


HMA CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

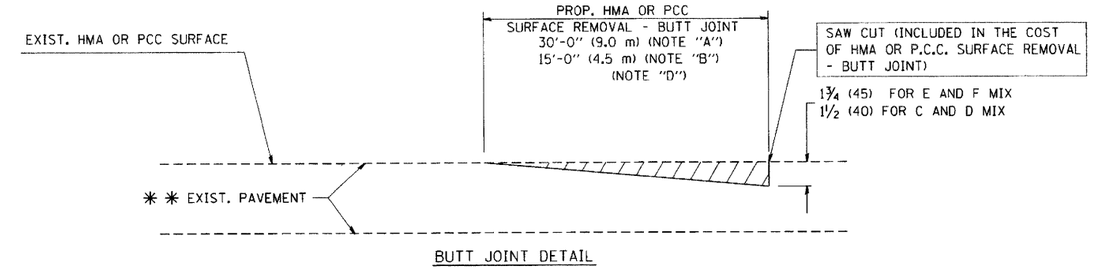
OPTION 2

TYPICAL TEMPORARY RAMP

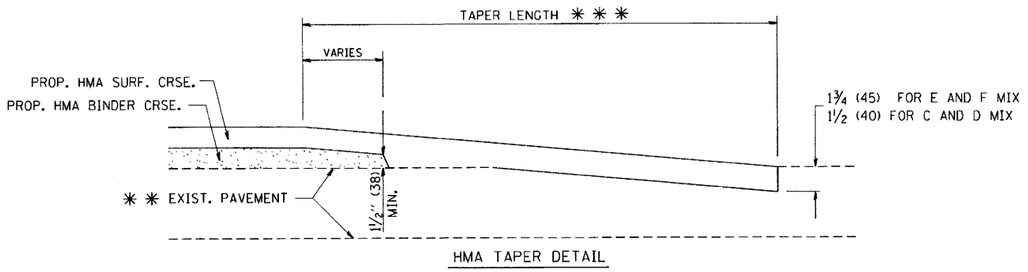


BUTT JOINT AND HMA TAPER

TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.

B: MINOR SIDE ROADS.

C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.

D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.

E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.

F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT

G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".

* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

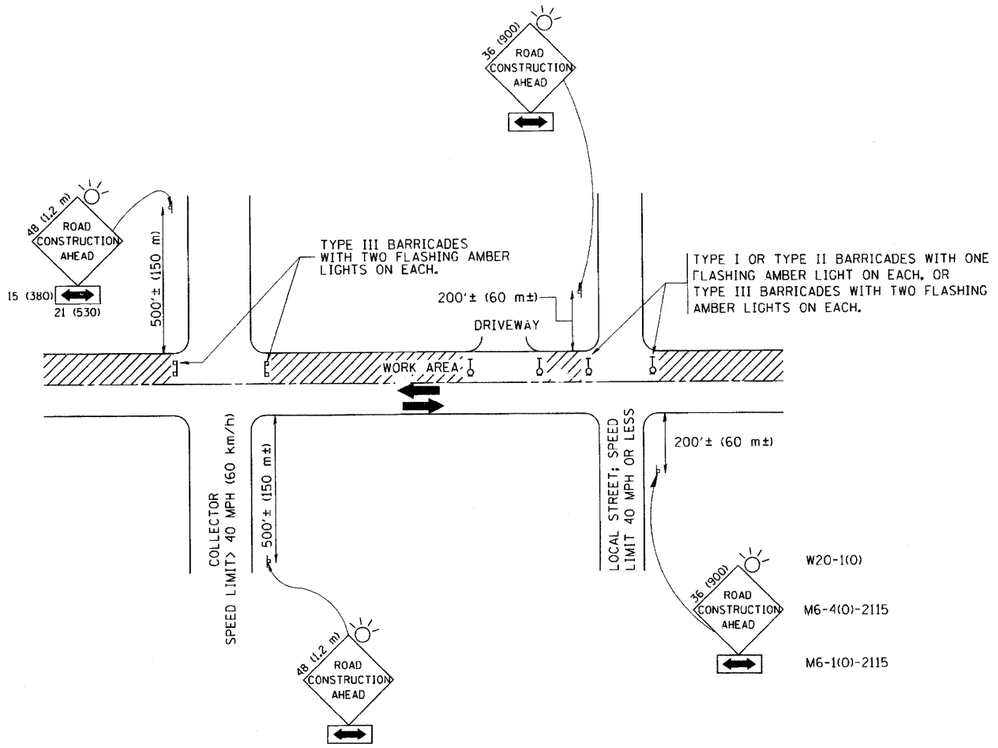
*** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

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

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

FILE NAME = W:\diststd\22x34\bd32.dgn	USER NAME = gaglianobt	DESIGNED - M. DE YONG	REVISED - R. SHAH 10-25-94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BUTT JOINT AND HMA TAPER DETAILS				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - A. ABBAS 03-21-97						1238	(G & 31)RS-7	LAKE	32	25
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - M. GOMEZ 04-06-01							BD400-05 BD32		CONTRACT NO. 62662	
	PLOT DATE = 1/4/2008	DATE - 06-13-90	REVISED - R. BORO 01-01-07		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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

NOTES:

A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

   a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.

   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.

2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

   a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.

   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.

3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.

D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

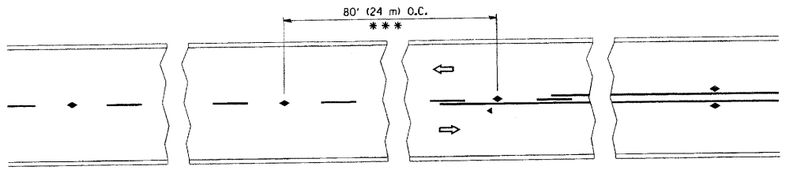
FILE NAME = W:\diststd\22x34\tc10.dgn	USER NAME = gaglianobt	DESIGNED - LHA	REVISED - J. OBERLE 10-18-95
		DRAWN -	REVISED - A. HOUSEH 03-06-96
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - A. HOUSEH 10-15-96
	PLOT DATE = 1/4/2008	DATE - 06-89	REVISED - T. RAMMACHER 01-06-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

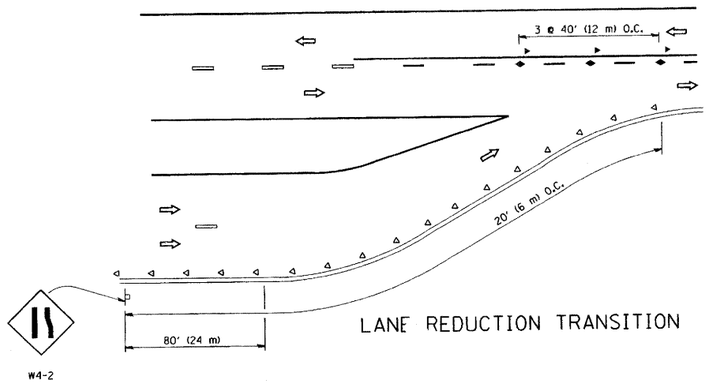
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	(GFJ3)RS-7	LAKE	32	26
	TC-10	CONTRACT NO. 62662		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

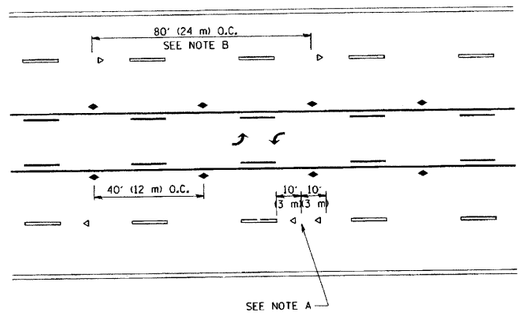


* * * REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

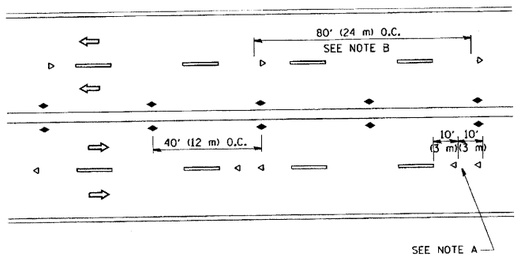
TWO-LANE/TWO-WAY



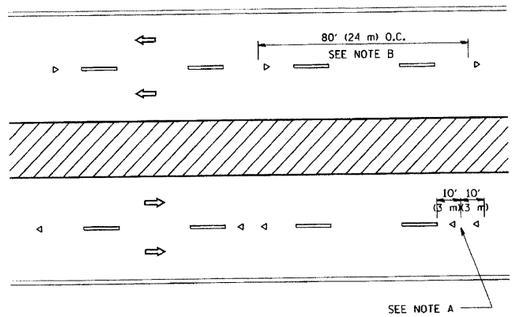
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

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

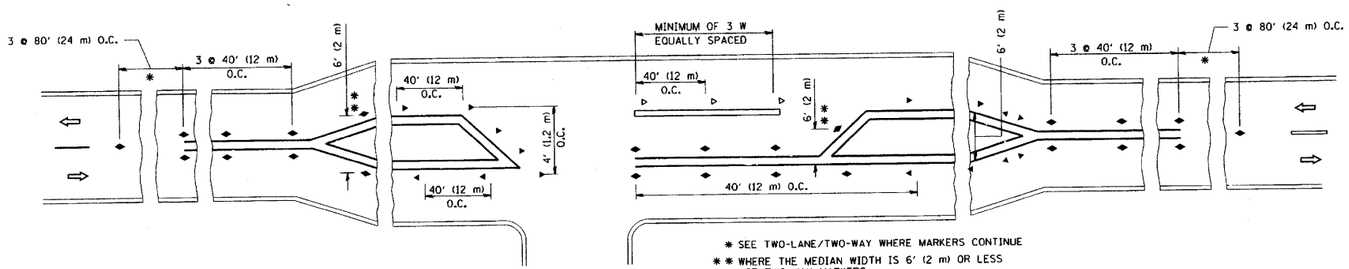
SYMBOLS

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

LANE MARKER NOTES

B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

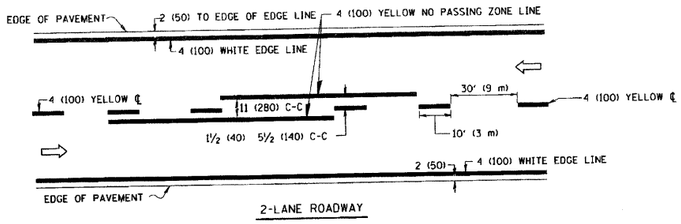


LEFT TURN

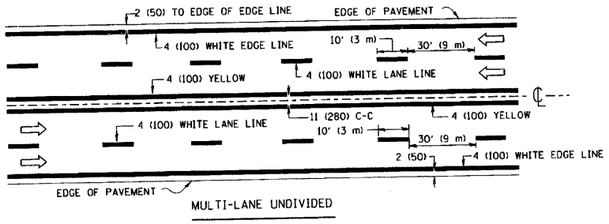
All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME = W:\diststd\22x34\tc11.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - T. RAMMACHER 09-19-94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)
		DRAWN -	REVISED - T. RAMMACHER 03-12-99		
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - T. RAMMACHER 01-06-00		SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.
	PLOT DATE = 1/4/2000	DATE -	REVISED -		

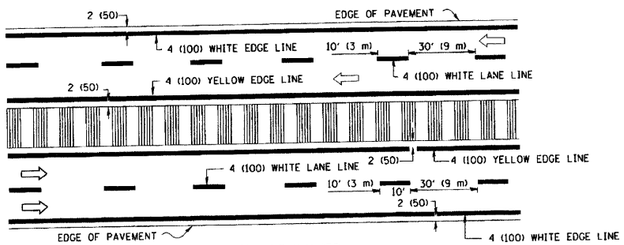
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1558	(C & S) RS-7	LAKE	32	27
	TC-11	CONTRACT NO. 61422		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



2-LANE ROADWAY



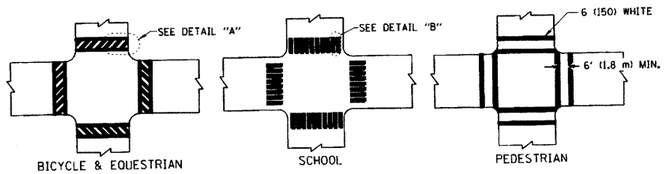
MULTI-LANE UNDIVIDED

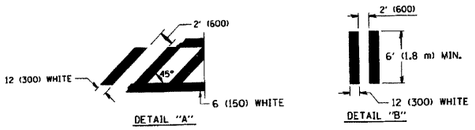


MULTI-LANE DIVIDED
WITH MOUNTABLE MEDIAN

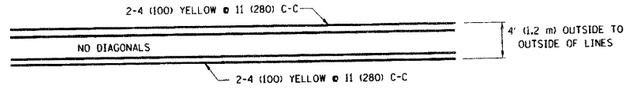
NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING

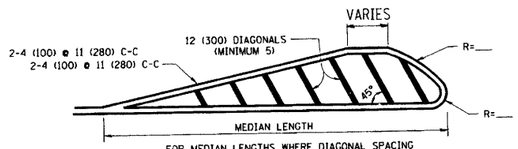




TYPICAL CROSSWALK MARKING



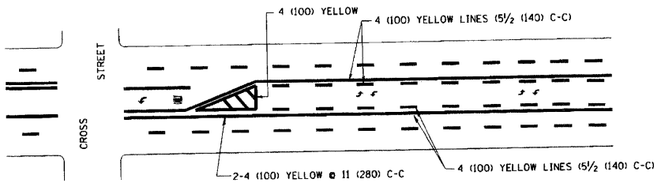
4' (1.2 m) WIDE MEDIANS ONLY



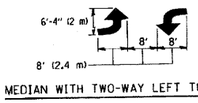
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

AGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

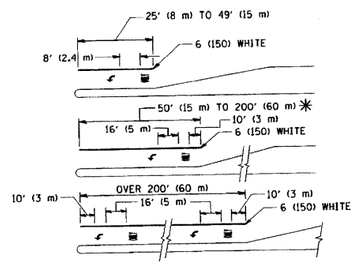


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

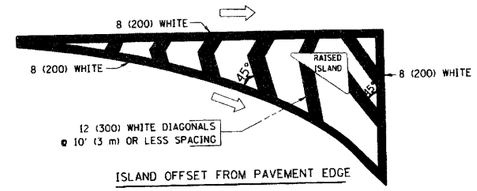


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
AREA = 15.6 SQ. FT. (1.5 m^2) **ONLY** AREA = 20.8 SQ. FT. (1.9 m^2)

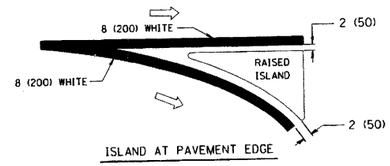
* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



ISLAND OFFSET FROM PAVEMENT EDGE



ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVEDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2,4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m^2) EACH "X"=54.0 SQ. FT. (5.0 m^2)
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

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

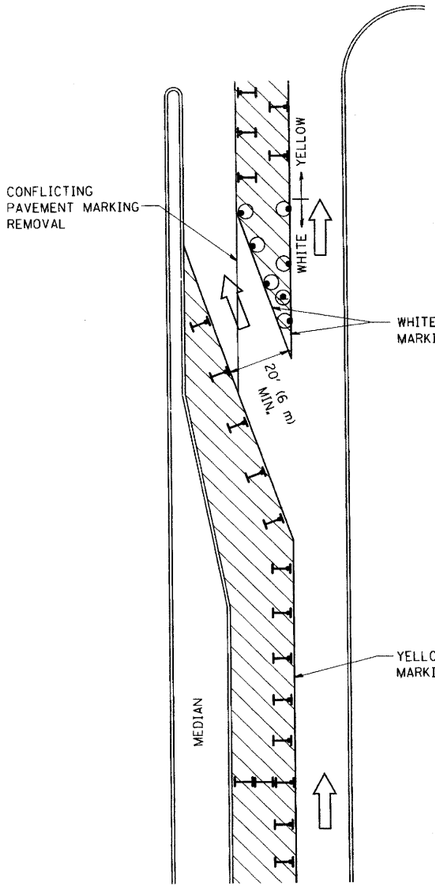
FILE NAME = W:\diststd\22x34\tc13.dgn	USER NAME = gaglianobt	DESIGNED - EVERS	REVISED -T. RAMMACHER 10-27-94
		DRAWN -	REVISED -A. HOUSEH 10-09-96
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -A. HOUSEH 10-17-96
	PLOT DATE = 1/4/2008	DATE - 03-19-90	REVISED -T. RAMMACHER 01-06-00

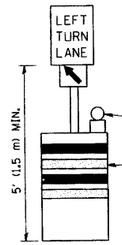
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	(G-31) RS-7	LAKE	32	28
	TC-13	CONTRACT NO. 62662		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		





R 3-1100L 24 x 24 (600 x 600)

M6-2L 21 x 15 (530 x 380)

OPTIONAL FLASHING LIGHT

STANDARD 702001
DRUM FILLED WITH ENOUGH
SAND (BAGS) FOR STABILIZATION

GENERAL NOTES

1. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT. WHEN CONES ARE BEING USED, THE "LEFT TURN LANE" SIGN MAY BE SKID MOUNTED AT A MINIMUM HEIGHT OF 5' (1.5 m).
2. STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
3. REFLECTORIZED TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH TURN BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.
4. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
5. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
6. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
7. FORM BT 725 IS REQUIRED.
8. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

LEGEND

WORK AREA

LANE OPEN TO TRAFFIC

TYPE I OR II BARRICADE WITH
STEADY BURN LIGHT

DRUM WITH STEADY BURN LIGHT

DRUM WITH SIGN (WITH OPTIONAL FLASHING
LIGHT) SEE DETAIL

TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

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

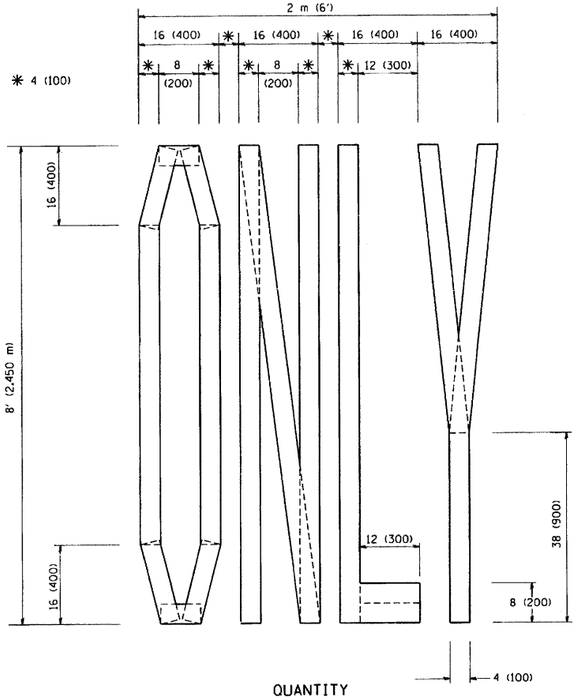
FILE NAME = W:\diststd\22x34\tc14.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED -T. RAMMACHER 09-08-94
		DRAWN -	REVISED - A. HOUSEH 11-07-95
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - A. HOUSEH 10-12-96
	PLOT DATE = 1/4/2000	DATE -	REVISED -T. RAMMACHER 01-06-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

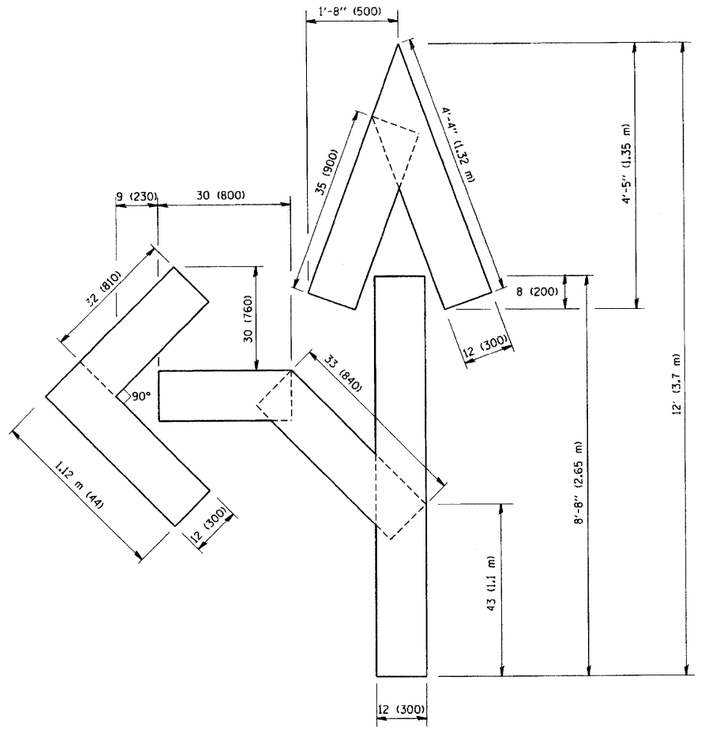
TRAFFIC CONTROL AND PROTECTION AT TURN BAYS
(TO REMAIN OPEN TO TRAFFIC)

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

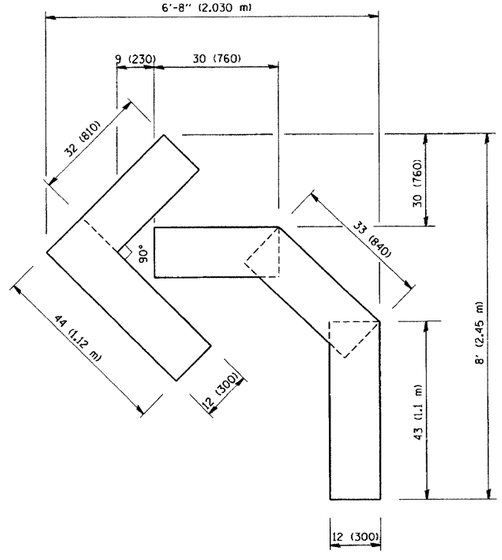
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	(C-431)RS-7	Lake	32	29
	TC-14	CONTRACT NO. 62662		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



QUANTITY
4 (100) LINE = 64.1 ft. (19.7 m)
21.1 sq. ft. (1.97 sq. m)



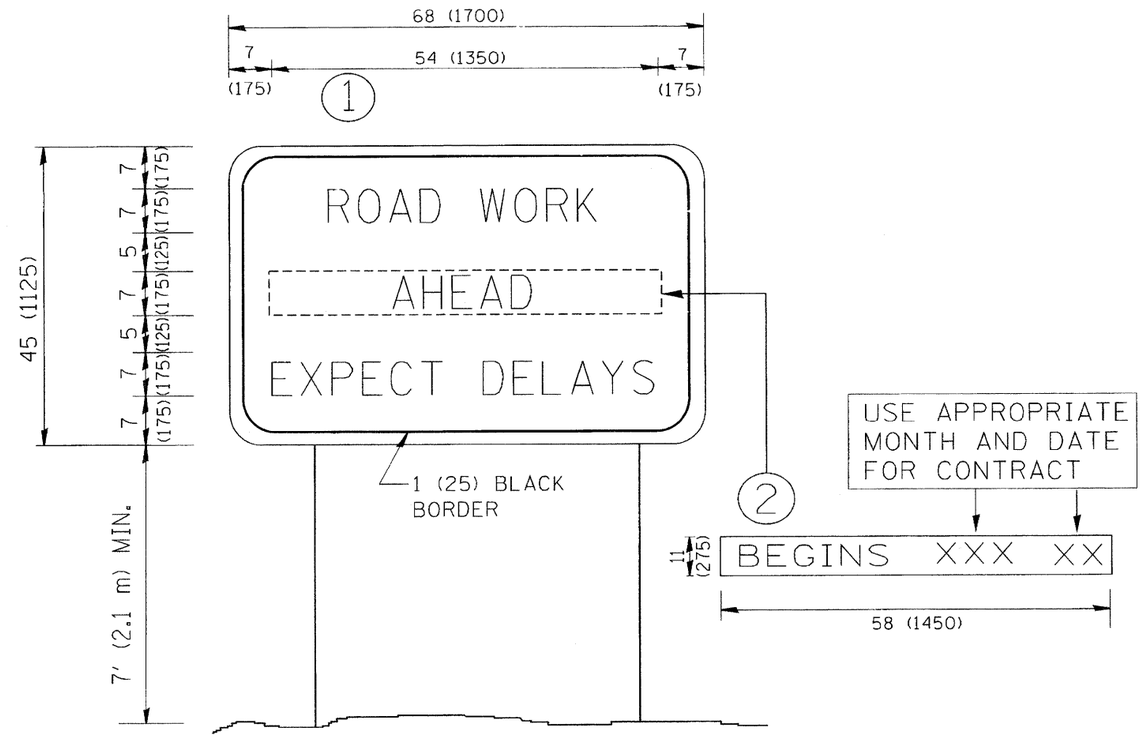
QUANTITY
4 (100) LINE = 82.5 ft. (25.3 m)
27.5 sq. ft. (2.53 sq. m)



QUANTITY
4 (100) LINE = 45.5 ft. (13.9 m)
15.2 sq. ft. (1.39 sq. m)

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

FILE NAME = W:\diststd\22x34\tc16.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED -T. RAMMACHER 06-05-96	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -T. RAMMACHER 11-04-97			1238	(64,31) RS-7	LAKE	32	30
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -T. RAMMACHER 03-02-98				TC-16		CONTRACT NO. 62662	
	PLOT DATE = 1/4/2008	DATE - 09-18-94	REVISED -E. GOMEZ 08-28-00		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.		FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	



NOTES:

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

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

FILE NAME = W:\diststd\22x34\tc22.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - R. MIRS 09-15-97
		DRAWN -	REVISED - R. MIRS 12-11-97
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -T. RAMMACHER 02-02-99
	PLOT DATE = 1/4/2008	DATE -	REVISED - C. JUCIUS 01-31-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

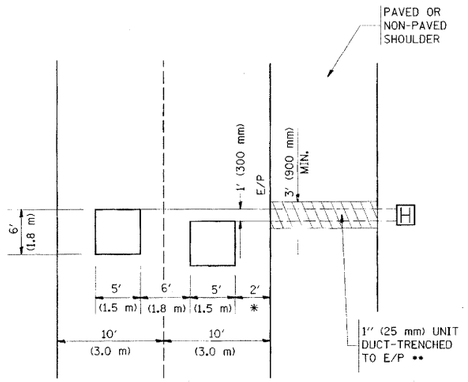
ARTERIAL ROAD INFORMATION SIGN

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1235	(G & SI) RS-7	LAKE	32	31
	TC-22	CONTRACT NO. 62662		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

LOOPS NEXT TO SHOULDERS

PROVIDE A PAVEMENT REPLACEMENT NOTE WHICH SHOULD EQUAL 3' (900 mm) X WIDTH OF PAVED SHOULDER.

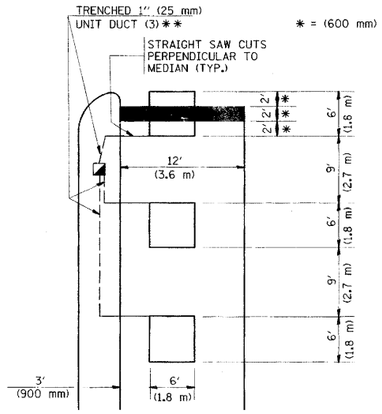


* = (600 mm)

** UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

LEFT TURN LANES WITH MEDIANS
VOLUME DENSITY ("FAR OUT" DETECTION) ON SAME APPROACH
(PROTECTED / PERMITTED LEFT TURN PHASING)

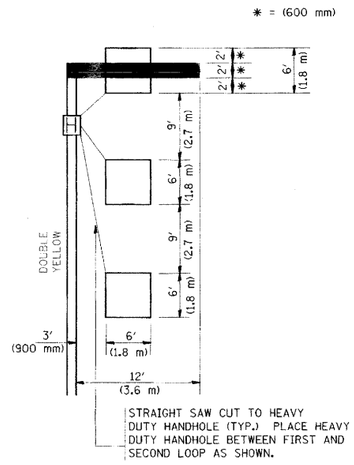
HANDHOLE LOCATION MAY VARY DEPENDING ON GEOMETRICS AND DESIGN OF TRAFFIC SIGNALS. HEAVY-DUTY HANDHOLES TO BE USED WHEN THE MEDIAN IS MOUNTABLE. REFER TO STANDARD 814001 TO ENSURE THAT HANDHOLE FITS IN MEDIAN.



** UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

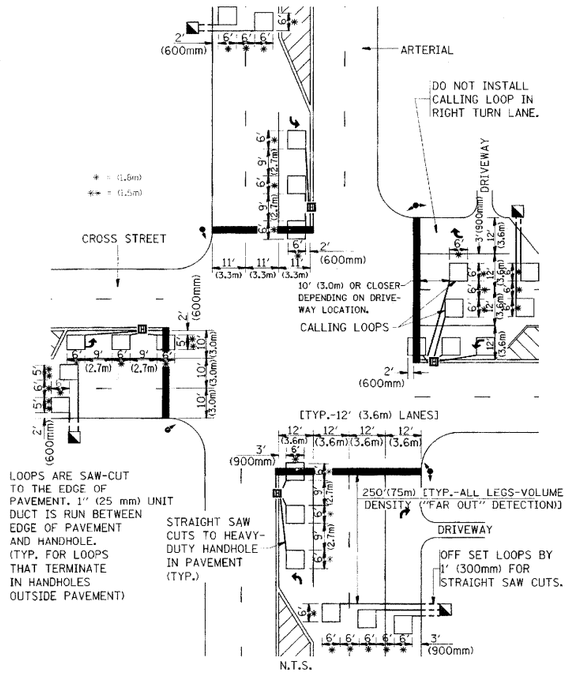
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

LEFT TURN LANES WITHOUT MEDIANS
VOLUME DENSITY ("FAR OUT" DETECTION) ON SAME APPROACH
(PROTECTED / PERMITTED LEFT TURN PHASING)



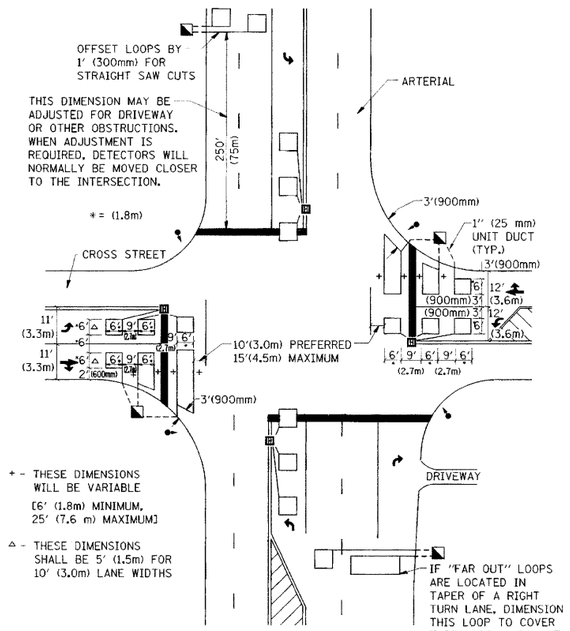
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION) CROSS STREET-VOLUME DENSITY ("FAR OUT" DETECTION)



DETAIL 1
N.T.S.

ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION) CROSS STREET-NON VOLUME DENSITY ("UPTIGHT" PRESENCE DETECTION)



DETAIL 2
N.T.S.

NOTES:

VEHICLES LOOP DETECTORS

* ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED, SHIELDED.
* EACH DETECTOR LOOP SHALL HAVE ITS OWN SAW CUT FROM THE LOOP TO THE EDGE OF PAVEMENT OR TO A HANDHOLE IN THE PAVEMENT.
* EACH DETECTOR LOOP SHALL HAVE ITS OWN ONE INCH (25 mm) UNIT DUCT BETWEEN THE EDGE OF PAVEMENT AND THE FIRST HANDHOLE OR JUNCTION BOX. EACH UNIT DUCT RUN SHALL BE SHOWN ON THE PLANS BY THE DESIGNER, BUT SHALL NOT BE PAID FOR SEPARATLY. THIS ITEM IS INCIDENTAL TO THE PAY ITEM FOR DETECTOR LOOPS.
* ONE DIMENSION OF ALL DETECTOR LOOPS SHALL BE SIX FEET (1.8 m)
* EACH LANE OF NON-LOCKING, PRESENCE DETECTION AND EACH LANE OF A DOUBLE LEFT TURN LANE REQUIRES A SEPARATE INDUCTIVE LOOP DETECTOR AND LEAD IN CABLE.
* WHEN NON-LOCKING, PRESENCE DETECTION IS USED, MORE THAN ONE LOOP PER LANE IS REQUIRED BEHIND THE STOP BAR (i.e. 1-1/2, 1-3/4, 2).
* WHEN SYSTEM LOOPS ARE REQUIRED ON AN APPROACH OF AN INTERSECTION, THE LOOPS USED FOR VOLUME DENSITY AND INTERSECTION TIMING SHALL ALSO BE USED AS SYSTEM DETECTORS. EACH ONE OF THESE TYPE OF LOOPS REQUIRES A SEPARATE TWO CONDUCTOR NO. 14 TWISTED SHIELDED CABLE AND A SEPARATE INDUCTIVE LOOP DETECTOR WHEN NEW CONTROLLERS ARE UTILIZED. THE DESIGNER SHALL LABEL THESE TYPES OF LOOPS AS "INTERSECTION AND SAMPLING (SYSTEM) DETECTORS" ON THE SIGNAL LAYOUT, THE INTERCONNECT PLAN AND THE SYSTEM CABLE PLAN. WHEN AN EXISTING CONTROLLER IS UTILIZED FOR THIS TYPE OF DETECTION, THE PAY ITEM "INDUCTIVE LOOP DETECTOR WITH SYSTEM OUTPUT" SHOULD BE USED.

PLACEMENT OF DETECTORS

THE FOLLOWING FIGURES REPRESENT THE MOST COMMON DETECTOR LOOP LOCATIONS AND SIZES. ADJUSTMENTS WILL BE NECESSARY FOR SPECIFIC GEOMETRIC CONSIDERATIONS.

LOCATIONS AND DEMENSIONS OF DETECTOR LOOPS ARE REQUIRED ON ALL SIGNAL LAYOUT PLAN SHEETS.

"FAR OUT" DETECTION REFERS TO LOCKING, PRESENCE TYPE DETECTION LOCATED IN THRU LANES, RIGHT TURN LANES, AND RIGHT TURN LANE TAPER AREAS (IF APPLICABLE), USUALLY 250' (75 m) IN ADVANCE OF STOP BARS. "UPTIGHT" DETECTION REFERS TO NON-LOCKING PRESENCE TYPE DETECTION LOCATED IN ALL LANES AND 10'-15' (3.0 m-4.5 m) BEHIND THE CROSSING STREET'S EDGE OF PAVEMENT EXTENDED.

NOTE:

ALL DETAILS AND NOTES SHOWN ARE FROM THE I.D.O.T. DISTRICT 1 TRAFFIC SIGNAL DESIGN GUIDELINES DATED JANUARY 1995

THIS DRAWING HAS BEEN PREPARED TO ASSIST THE RESIDENT ENGINEER FOR ALL ROADWAY RESURFACING OR S.M.A.R.T. PROJECTS WHERE THE DIMENSIONS ARE NOT SHOWN ON THE PLANS AND THE FINAL LOCATIONS FOR CROSSWALKS OR STOP BARS ARE NOT DETERMINED.

FILE NAME: c:\pw_work\PWIDOT\ABEBAWA\d0142030\Dist1tdudgn	USER NAME = ababawa	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / IN.	CHECKED - R.K.F.	REVISED -
	PLOT DATE = 6/22/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1 – DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY RESURFACING

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	(Q#31)RS-7	LAKE	32	32
	TS-07	CONTRACT NO. 62662		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		