

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-045-RS	COOK	23	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 62L17		

# PROPOSED HIGHWAY PLANS

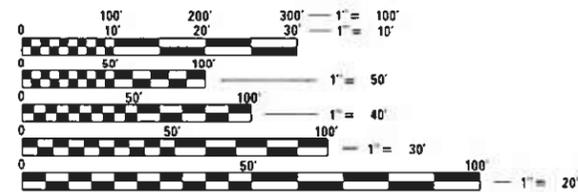
F.A.P. ROUTE 332: IL 394  
N OF 186TH ST. TO S OF JOE ORR RD.  
SMART OVERLAY  
SECTION 2020-045-RS  
PROJECT: NHPP- NW8M(249)  
COOK COUNTY  
C-91-235-20

FOR INDEX OF SHEETS, SEE SHEET NO. 2

THE PROJECT IS LOCATED WITHIN  
THE VILLAGES OF LANSING, GLENWOOD, LYNWOOD AND  
FORD HEIGHTS

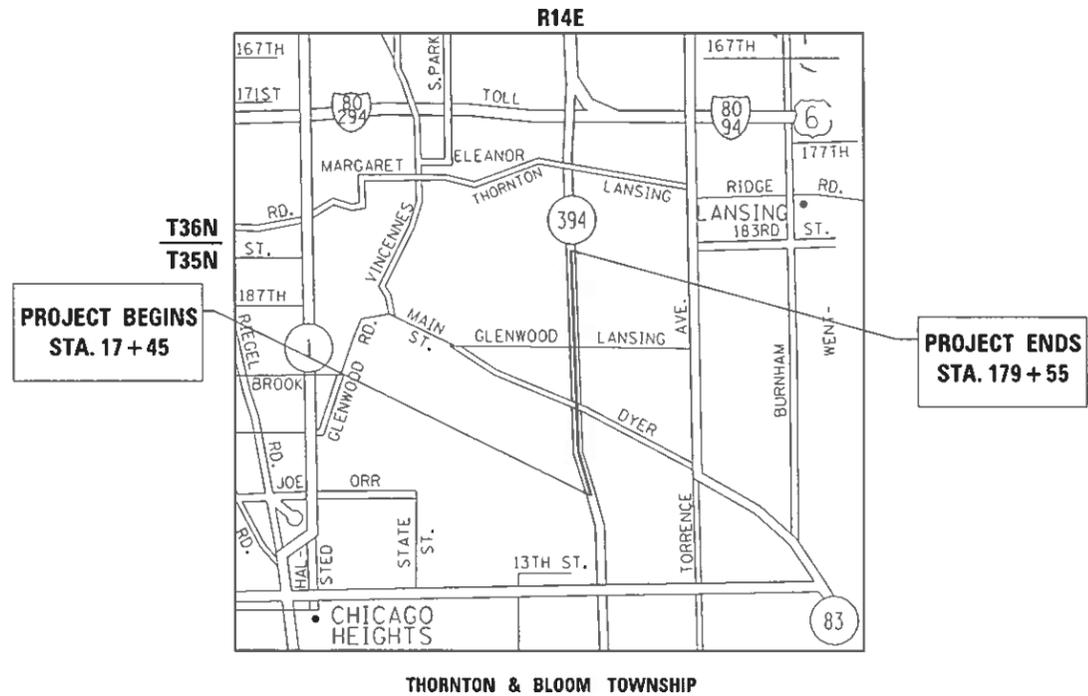
**TRAFFIC DATA**

MAINLINE  
2019 ADT - 77,400  
POSTED SPEED LIMIT - 55 MPH



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

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



PROJECT ENGINEER: VESELIN VELICHKOV (847) 705-4432  
PROJECT MANAGER: FAWAD AQUEEL (847) 702-4247

GROSS & NET LENGTH OF PROJECT = 16,210 FT = 3.07 MI.

CONTRACT NO. 62L17

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED June 28 2020  
*Anthony Dingley* REGIONAL ENGINEER  
October 2, 2020  
*Scott A. Elk*  
ENGINEER OF DESIGN AND ENVIRONMENT  
October 2, 2020  
*James J. ...*  
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS

INDEX OF SHEETS

LIST OF STATE STANDARDS

GENERAL NOTES

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	INDEX OF SHEETS, STANDARDS, AND GENERAL NOTES
3-4	SUMMARY OF QUANTITIES
5	EXISTING & PROPOSED TYPICAL SECTIONS
6-11	ROADWAY & PAVEMENT MARKINGS PLANS
12	BD-8: DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING
13	BD-22: PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT
14	BD-32: BUTT JOINT AND HMA TAPER DETAILS
15	BD-33: HMA TAPER AT EDGE OF P.C.C. PAVEMENT
16	TC 08: ENTRANCE AND EXIT RAMP CLOSURE DETAILS
17	TC 09: SINGLE LANE WEAVE AND MULTI-LANE WEAVE
18	TC-10: TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
19-20	TC-12: MULTILANE FREEWAY PAVEMENT MARKING DETAILS
21	TC-16: PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING
22	TC-17: TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES
23	TC-18: SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

STANDARD NO.	DESCRIPTION
000001-07	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
420001-09	PAVEMENT JOINTS
442201-03	CLASS C AND D PATCHES
604001-05	FRAME AND LIDS, TYPE 1
642001-02	SHOULDER RUMBLE STRIPS, 16 IN.
701400-09	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-12	LANE CLOSURE, FREEWAY/EXPRESSWAY
701411-09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS > 45 MPH
701428-01	TRAFFIC CONTROL SETUP & REMOVAL FREEWAY/EXPRESSWAY
701901-08	TRAFFIC CONTROL DEVICES
780001-05	TYPICAL PAVEMENT MARKING

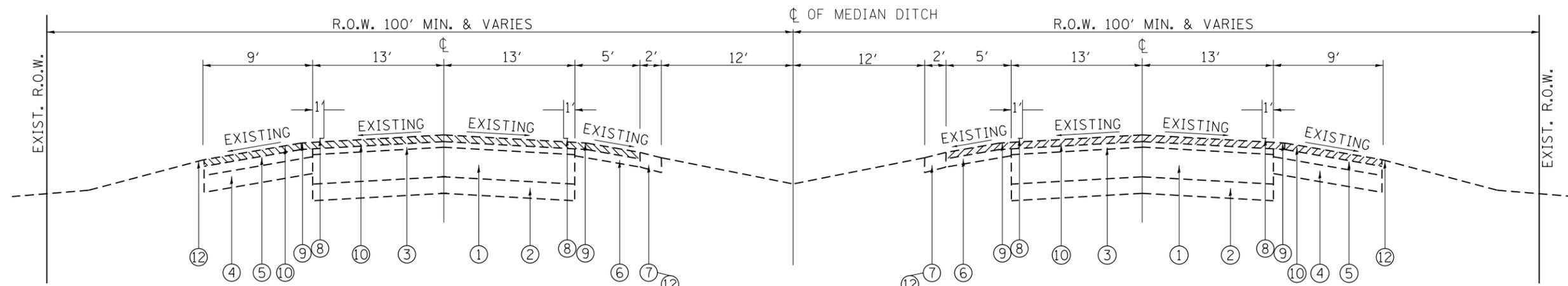
- 1) BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 800-892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES. (48 HOUR NOTIFICATION IS REQUIRED).
- 2) THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE VILLAGES OF LANSING, GLENWOOD, LYNWOOD AND FORD HEIGHTS.
- 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) WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1 1/2 INCHES (40 MM) WHERE THE SPEED LIMIT IS 45 MPH (45 KM/H) OR LESS AND 1 INCH WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH (45 KM/H). WITH WRITTEN APPROVAL FROM THE ENGINEER. A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H).
- 5) BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND HOT-MIX ASPHALT TAPER DETAILS" SHEET INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED.
- 6) THE RESIDENT ENGINEER SHALL CONTACT THE AREA TRAFFIC FIELD ENGINEER, MS. REGINA COOPER, AT REGINA.COOPER2@ILLINOIS.GOV A MINIMUM OF TWO (2) WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
- 7) THE RESIDENT ENGINEER SHALL VERIFY ALL EXISTING PAVEMENT MARKINGS BEFORE MILLING.
- 8) DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS
- 9) DOUBLE LANE MARKERS ARE TO BE USED AS SHOWN ON THE DISTRICT ONE DETAIL "TYPICAL APPLICATIONS - RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)" SHOWN IN THE PLANS.
- 10) ALL PAVEMENT PATCHING LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 11) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
- 12) THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT CARLOS.MUNOZ@ILLINOIS.GOV A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
- 13) TYPE III TAPE IS TO BE USED ON THE FINAL WEARING SURFACE
- 14) THE CONTRACTOR SHALL REQUEST AND GAIN APPROVAL FROM THE ILLINOIS DEPARTMENT OF TRANSPORTATION'S EXPRESSWAY TRAFFIC OPERATIONS ENGINEER AT WWW.IDOTLCS.COM TWENTY-FOUR (24) HOURS IN ADVANCE OF ALL PERMANENT AND WEEKEND CLOSURES ON ALL FREEWAYS AND/OR EXPRESSWAYS IN DISTRICT ONE. THIS ADVANCE NOTIFICATION IS CALCULATED BASED ON WORKWEEK OF MONDAY THROUGH FRIDAY AND SHALL NOT INCLUDE WEEKENDS OR HOLIDAYS.

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE					SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE				
CODE NO	ITEM	UNIT		0005 ROADWAY 80% FED 20% STATE	0005 ROADWAY 100% STATE					CODE NO	ITEM		UNIT	0005 ROADWAY 80% FED 20% STATE	0005 ROADWAY 100% STATE		
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	68374	68374					64200116	SHOULDER RUMBLE STRIPS, 16 INCH	FOOT	64840	64840				
40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	226	226					67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6				
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SO YD	150	150					67100100	MOBILIZATION	L SUM	1	1				
40601005	HOT-MIX ASPHALT REPLACEMENT OVER PATCHES	TON	1523	1523					70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	64840	64840				
40604062	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70	TON	5924	5924					70300230	TEMPORARY PAVEMENT MARKING - LINE 5"	FOOT	8105	8105				
40605036	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, 12.5, MIX "F", N80	TON	11098	11098					70300250	TEMPORARY PAVEMENT MARKING - LINE 8"	FOOT	2586	2586				
44000157	HOT-MIX ASPHALT SURFACE REMOVAL, 2"	SO YD	150438	150438					70300260	TEMPORARY PAVEMENT MARKING - LINE 12"	FOOT	7048	7048				
44002217	HOT-MIX ASPHALT REMOVAL OVER PATCHES, 4 1/4"	SO YD	4985	4985					70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	1800	1800				
44201765	CLASS D PATCHES, TYPE II, 10 INCH	SO YD	808	808					*78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	64840	64840				
44201769	CLASS D PATCHES, TYPE III, 10 INCH	SO YD	520	520					*78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	2586	2586				
44201771	CLASS D PATCHES, TYPE IV, 10 INCH	SO YD	3203	3203					*78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	7048	7048				
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	2341	2341					* 78004354	PREFORMED PLASTIC PAVEMENT MARKING, TYPE D - INLAID - LINE 4"	FOOT	550	550				
									* 78004355	PREFORMED PLASTIC PAVEMENT MARKING, TYPE D - INLAID - LINE 5"	FOOT	8105	8105				

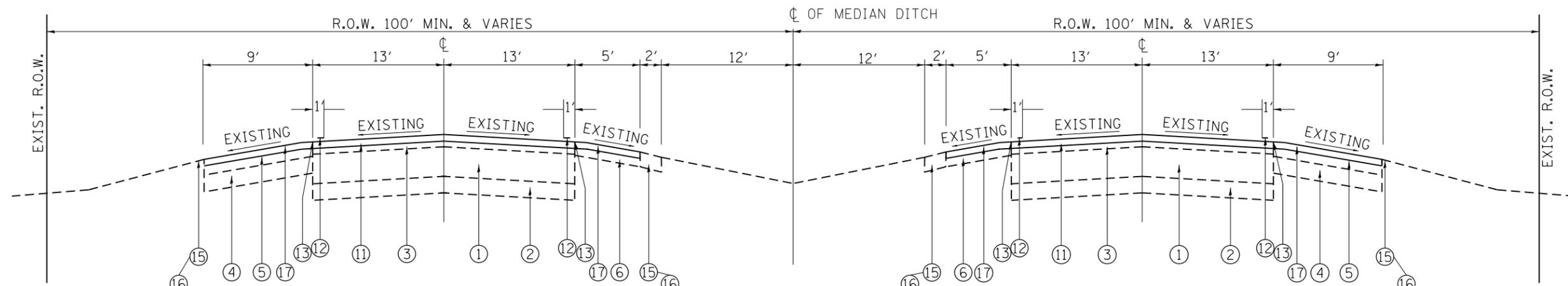
REV-SEP

\* SPECIALTY ITEM  
# NON PARTICIPATING ITEM





IL-394  
EXISTING TYPICAL CROSS SECTION  
STA. 17+45 TO STA. 179+55



IL-394  
PROPOSED TYPICAL CROSS SECTION  
STA. 17+45 TO STA. 179+55

**LEGEND**

1. EXISTING P.C. CONCRETE PAVEMENT ± 10"
2. EXISTING GRANULAR SUB BASE, 6"
3. EXISTING HMA SURFACE (AFTER MILLING), 2 1/4"
4. EXISTING HMA BINDER COURSE
5. EXISTING HMA SURFACE COURSE, 3/4" (AFTER MILLING)
6. EXISTING HMA SHOULDER, 8"
7. EXISTING AGGREGATE SHOULDER TYPE "B"
8. EXISTING PAVEMENT MARKING
9. EXISTING SHOULDER RUMBLE STRIP, 16"
10. PROPOSED HMA SURFACE REMOVAL, 2"
11. PROPOSED POLY. HMA SURFACE COURSE, STONE MATRIX ASPHALT, 12.5, MIX "F", N80, 2"
12. PROPOSED PAVEMENT MARKING
13. PROPOSED SHOULDER RUMBLE STRIP, 16"
14. PROPOSED AGGREGATE SHOULDER REMOVAL
15. PROPOSED GRADING AND SHAPING SHOULDER
16. PROPOSED AGGREGATE WEDGE SHOULDER, TYPE "B"
17. PROPOSED HMA SURFACE COURSE, IL-9.5, MIX "D", N70, 2"

**NOTE**

THE CONTRACTOR SHALL PATCH FIRST BEFORE MILLING

HOT-MIX ASPHALT MIXTURE REQUIREMENTS		QUALITY MANAGEMENT PROGRAM (QMP)
MIXTURE TYPE	AIR VOIDS(%) @ Ndes	
<b>PAVEMENT RESURFACING</b>		
POLY. HMA SURFACE COURSE, STONE MATRIX ASPHALT, 12.5, MIX "F", N80; 2"	3.5% @ 80 GYR.	PFP
<b>SHOULDER RESURFACING</b>		
HMA SURFACE COURSE, MIX "D", IL-9.5 N70; 2"	4% @ 70 GYR.	QC/OA
<b>PATCHING</b>		
CLASS D PATCHES (HMA BINDER IL-19 mm)	4% @ 70 GYR.	QC/OA
HMA REPLACEMENT OVER PATCHES (HMA BINDER IL-19 MM)	4% @ 70 GYR.	QC/OA
<b>QMP DESIGNATION: QUALITY CONTROL/QUALITY ASSURANCE (QC/OA); QUALITY CONTROL FOR PERFORMANCE (QCP); PAY FOR PERFORMANCE (PFP)</b>		

NOTE 1: THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN.

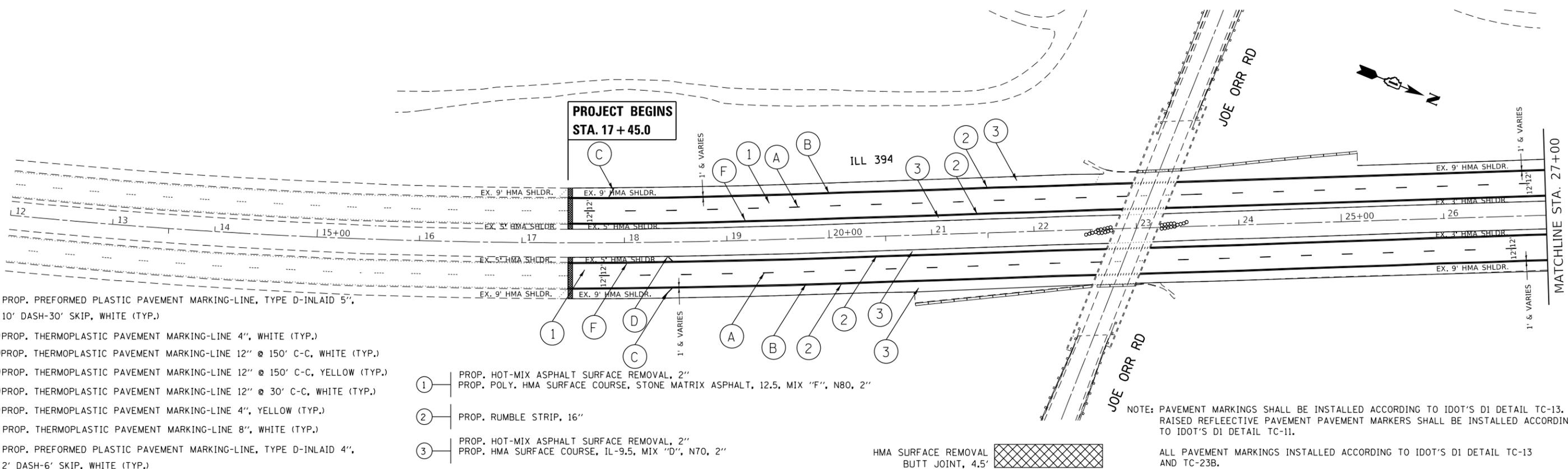
NOTE 2: THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76 -22" AND AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64 -22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS.

FOR USE OF RECYCLED MATERIALS SEE DISTRICT ONE SPECIAL PROVISIONS.

NOTE 3: QUALITY MANAGEMENT PROGRAM (QMP) IDENTIFIES THE PARTICULAR QUALITY CONTROL SPECIFICATION THAT APPLIES TO THE HMA MIXTURE

NOTE 4: LONGITUDINAL JOINT SEALANT SHALL BE PLACED OVER THE MILLED SURFACE

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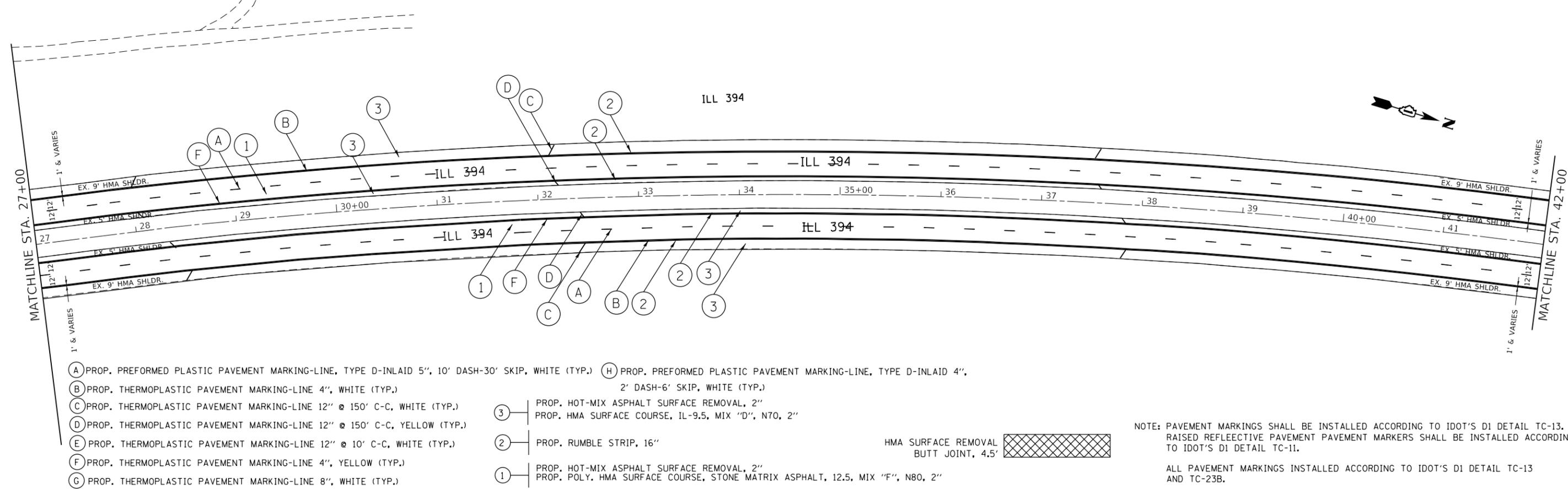
- (A) PROP. PREFORMED PLASTIC PAVEMENT MARKING-LINE, TYPE D-INLAID 5", 10' DASH-30' SKIP, WHITE (TYP.)
- (B) PROP. THERMOPLASTIC PAVEMENT MARKING-LINE 4", WHITE (TYP.)
- (C) PROP. THERMOPLASTIC PAVEMENT MARKING-LINE 12" @ 150' C-C, WHITE (TYP.)
- (D) PROP. THERMOPLASTIC PAVEMENT MARKING-LINE 12" @ 150' C-C, YELLOW (TYP.)
- (E) PROP. THERMOPLASTIC PAVEMENT MARKING-LINE 12" @ 30' C-C, WHITE (TYP.)
- (F) PROP. THERMOPLASTIC PAVEMENT MARKING-LINE 4", YELLOW (TYP.)
- (G) PROP. THERMOPLASTIC PAVEMENT MARKING-LINE 8", WHITE (TYP.)
- (H) PROP. PREFORMED PLASTIC PAVEMENT MARKING-LINE, TYPE D-INLAID 4", 2' DASH-6' SKIP, WHITE (TYP.)

- (1) PROP. HOT-MIX ASPHALT SURFACE REMOVAL, 2"  
PROP. POLY. HMA SURFACE COURSE, STONE MATRIX ASPHALT, 12.5, MIX "F", N80, 2"
- (2) PROP. RUMBLE STRIP, 16"
- (3) PROP. HOT-MIX ASPHALT SURFACE REMOVAL, 2"  
PROP. HMA SURFACE COURSE, IL-9.5, MIX "D", N70, 2"

HMA SURFACE REMOVAL BUTT JOINT, 4.5'

NOTE: PAVEMENT MARKINGS SHALL BE INSTALLED ACCORDING TO IDOT'S D1 DETAIL TC-13. RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE INSTALLED ACCORDING TO IDOT'S D1 DETAIL TC-11.

ALL PAVEMENT MARKINGS INSTALLED ACCORDING TO IDOT'S D1 DETAIL TC-13 AND TC-23B.



- (A) PROP. PREFORMED PLASTIC PAVEMENT MARKING-LINE, TYPE D-INLAID 5", 10' DASH-30' SKIP, WHITE (TYP.)
- (B) PROP. THERMOPLASTIC PAVEMENT MARKING-LINE 4", WHITE (TYP.)
- (C) PROP. THERMOPLASTIC PAVEMENT MARKING-LINE 12" @ 150' C-C, WHITE (TYP.)
- (D) PROP. THERMOPLASTIC PAVEMENT MARKING-LINE 12" @ 150' C-C, YELLOW (TYP.)
- (E) PROP. THERMOPLASTIC PAVEMENT MARKING-LINE 12" @ 10' C-C, WHITE (TYP.)
- (F) PROP. THERMOPLASTIC PAVEMENT MARKING-LINE 4", YELLOW (TYP.)
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ALL PAVEMENT MARKINGS INSTALLED ACCORDING TO IDOT'S D1 DETAIL TC-13 AND TC-23B.

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	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 8/3/2020	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ROADWAY PLAN IL. RTE. 394  
SOUTH OF 186th ST. TO SOUTH OF JOE ORR RD.**

SCALE: 1"=50'      SHEET      OF      SHEETS      STA.      TO STA. 42+00

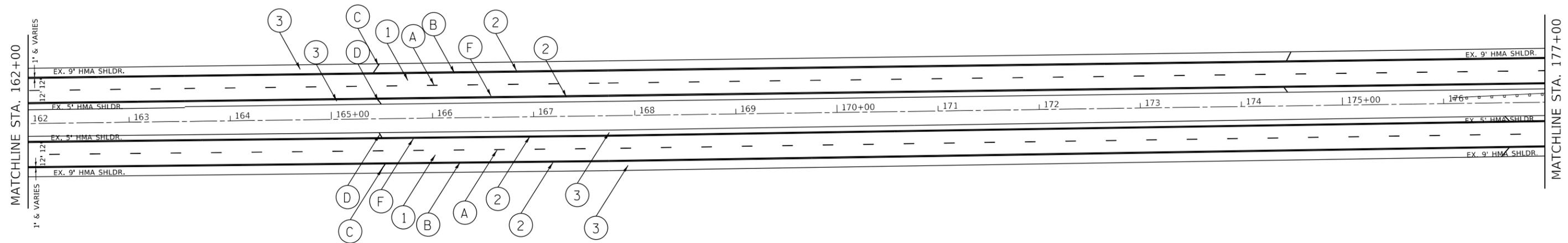
F.A.P. RTE. 332	SECTION 2020-045-R5	COUNTY COOK	TOTAL SHEETS 23	SHEET NO. 6
CONTRACT NO. 62L17				
ILLINOIS FED. AID PROJECT				











- (A) PROP. PREFORMED PLASTIC PAVEMENT MARKING-LINE, TYPE D-INLAID 5", 10' DASH-30' SKIP, WHITE (TYP.)
- (B) PROP. THERMOPLASTIC PAVEMENT MARKING-LINE 4", WHITE (TYP.)
- (C) PROP. THERMOPLASTIC PAVEMENT MARKING-LINE 12" @ 150' C-C, WHITE (TYP.)
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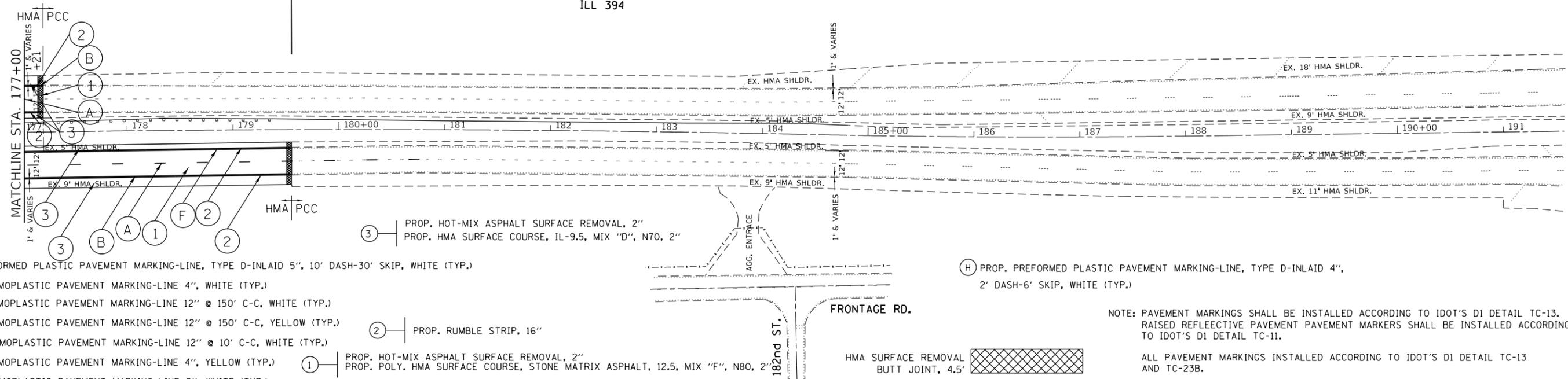
NOTE: PAVEMENT MARKINGS SHALL BE INSTALLED ACCORDING TO IDOT'S D1 DETAIL TC-13. RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE INSTALLED ACCORDING TO IDOT'S D1 DETAIL TC-11.

ALL PAVEMENT MARKINGS INSTALLED ACCORDING TO IDOT'S D1 DETAIL TC-13 AND TC-23B.



**PROJECT ENDS  
STA. 179 + 55**

ILL 394



- (A) PROP. PREFORMED PLASTIC PAVEMENT MARKING-LINE, TYPE D-INLAID 5", 10' DASH-30' SKIP, WHITE (TYP.)
- (B) PROP. THERMOPLASTIC PAVEMENT MARKING-LINE 4", WHITE (TYP.)
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- (3) PROP. HOT-MIX ASPHALT SURFACE REMOVAL, 2" PROP. HMA SURFACE COURSE, IL-9.5, MIX "D", N70, 2"

NOTE: PAVEMENT MARKINGS SHALL BE INSTALLED ACCORDING TO IDOT'S D1 DETAIL TC-13. RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE INSTALLED ACCORDING TO IDOT'S D1 DETAIL TC-11.

ALL PAVEMENT MARKINGS INSTALLED ACCORDING TO IDOT'S D1 DETAIL TC-13 AND TC-23B.



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PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -
PLOT DATE = 8/3/2020	CHECKED -	REVISED -
	DATE -	REVISED -

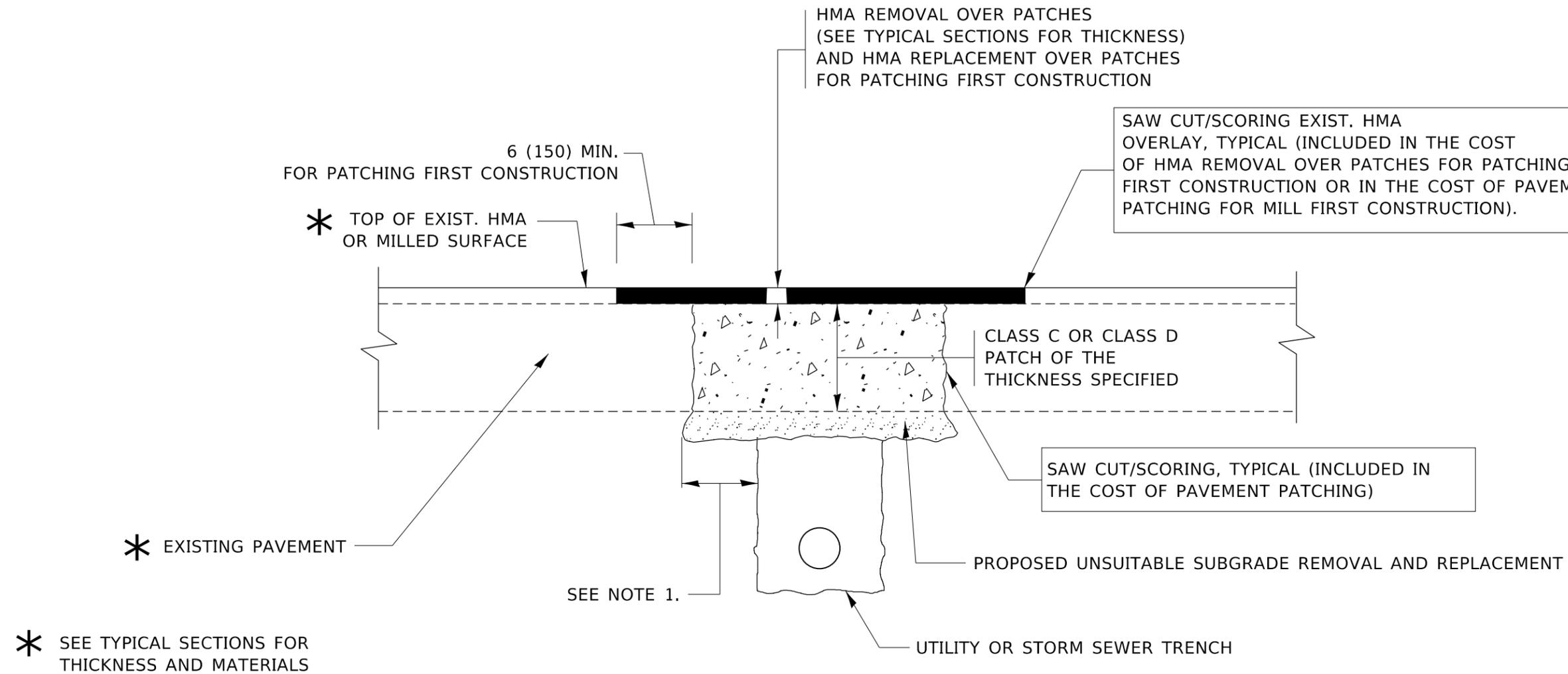
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ROADWAY PLAN IL. RTE. 394  
SOUTH OF 186th ST. TO SOUTH OF JOE ORR RD.**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-045-R5	COOK	23	11
CONTRACT NO. 62L17				
ILLINOIS FED. AID PROJECT				





**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.

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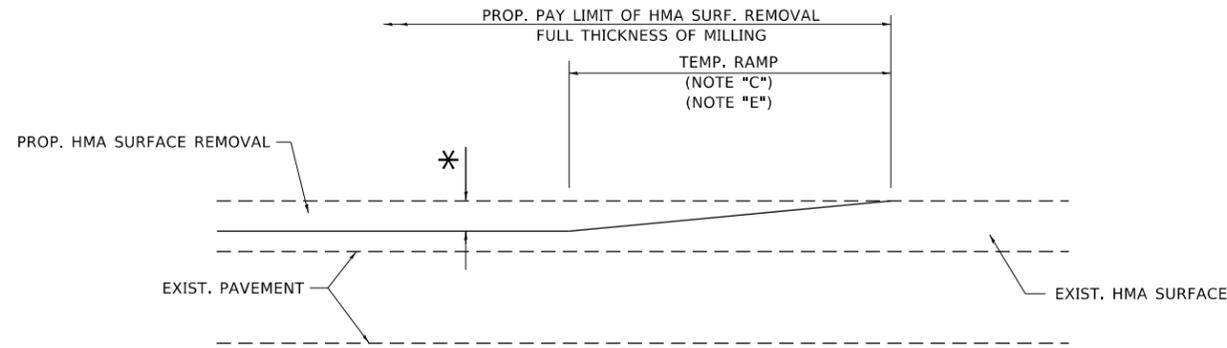
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	DRAWN -	REVISED - R. BORO 01-01-07
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED - R. BORO 09-04-07
PLOT DATE = 8/3/2020	DATE - 10-25-94	REVISED - K. ENG 10-27-08

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PAVEMENT PATCHING FOR  
HMA SURFACED PAVEMENT

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

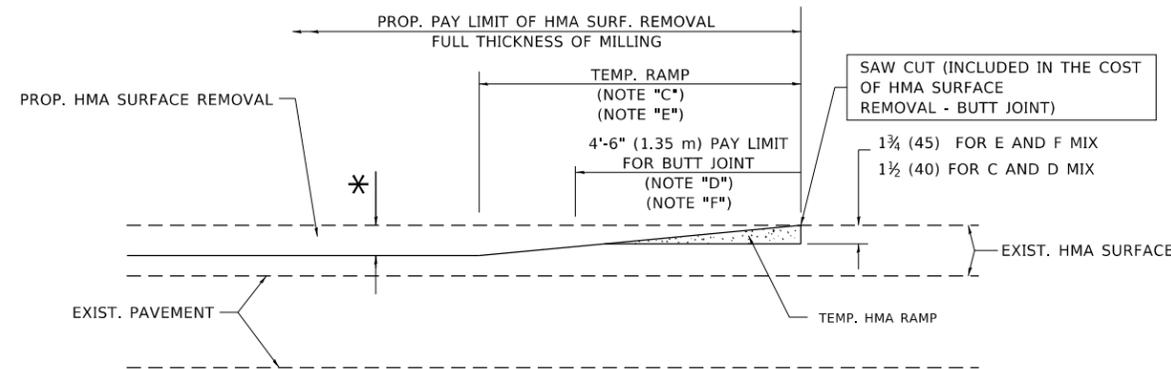
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-045-R5	COOK	23	13
BD400-04 (BD-22)			CONTRACT NO. 62L17	
ILLINOIS FED. AID PROJECT				



**MILLED TEMPORARY RAMP**

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

**OPTION 1**

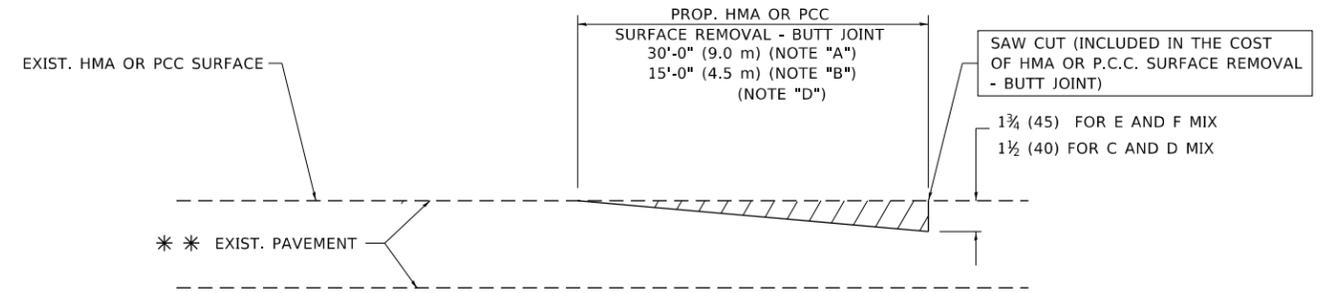


**HMA CONSTRUCTED TEMPORARY RAMP**

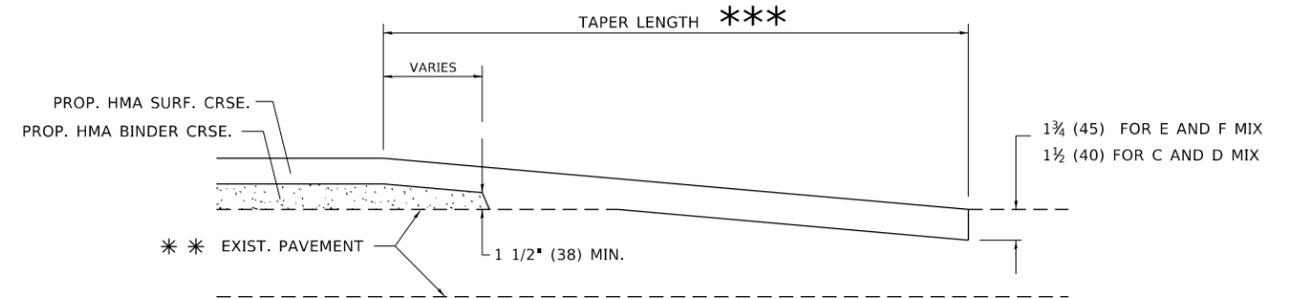
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

**OPTION 2**

**TYPICAL TEMPORARY RAMP**



**BUTT JOINT DETAIL**



**HMA TAPER DETAIL**

**TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY**

\*\*\* PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

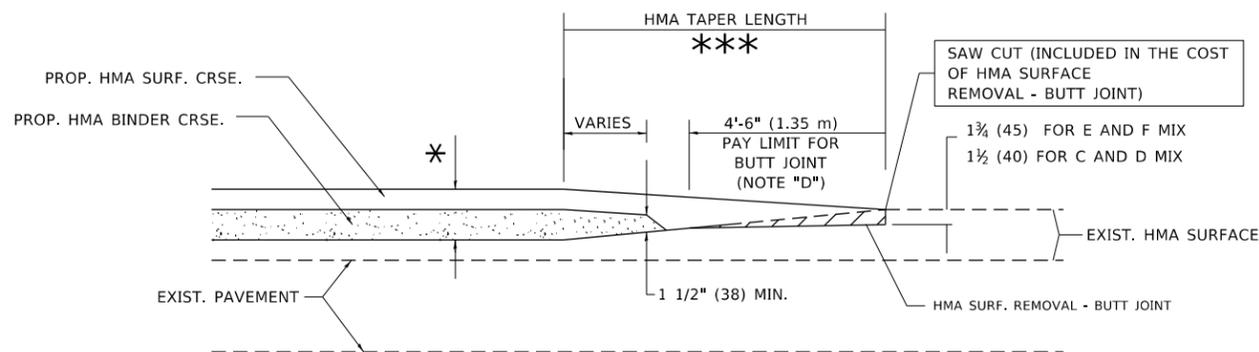
**NOTES**

- 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.  
\* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- G. SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".  
\*\*\* 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.



**BUTT JOINT AND HMA TAPER**

**TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING**

MODEL: Default  
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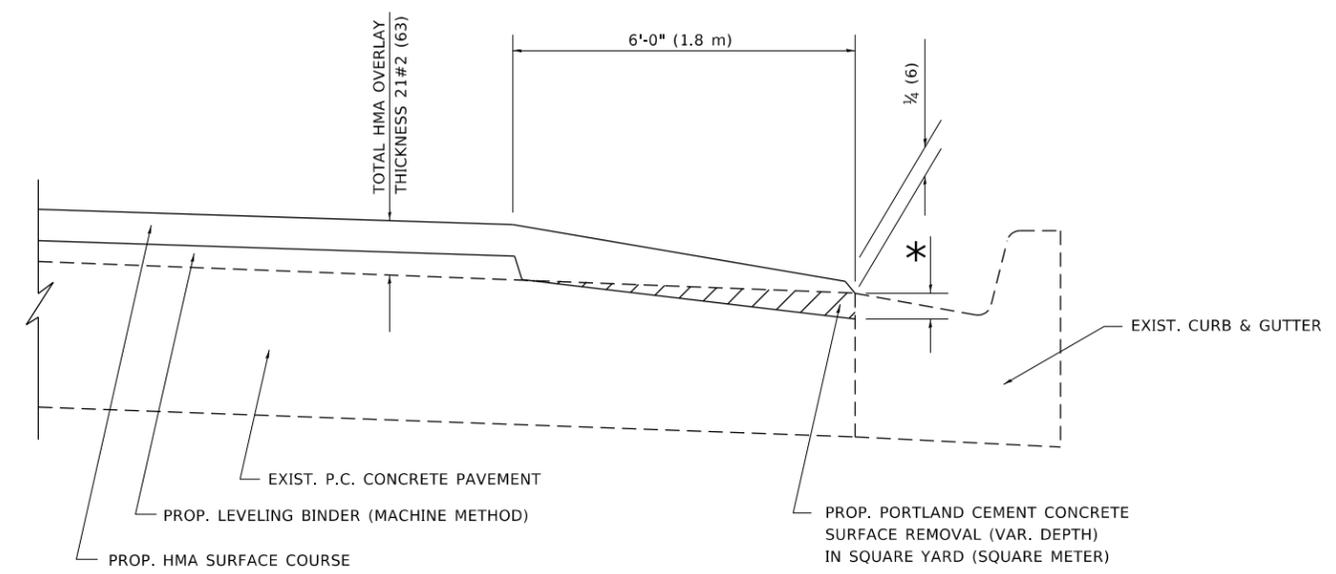
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PLOT SCALE = 100.0000' / in.	DRAWN -	REVISED - A. ABBAS 03-21-97
PLOT DATE = 8/3/2020	CHECKED -	REVISED - M. GOMEZ 04-06-01
	DATE - 06-13-90	REVISED - R.BORO 01-01-07

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND  
HMA TAPER DETAILS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-045-R5	COOK	23	14
BD400-05 BD32		CONTRACT NO. 62L17		
ILLINOIS FED. AID PROJECT				



**HMA TAPER AT  
EDGE OF P.C.C PAVEMENT**

HMA SURFACE	THICKNESS	LEVELING BINDER THICKNESS	* MILLING AT GUTTER FLAG
C OR D	1 1/2 (38)	1 (25)	1 1/4 (33)
E	1 3/4 (44)	3/4 (19)	1 1/2 (38)

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

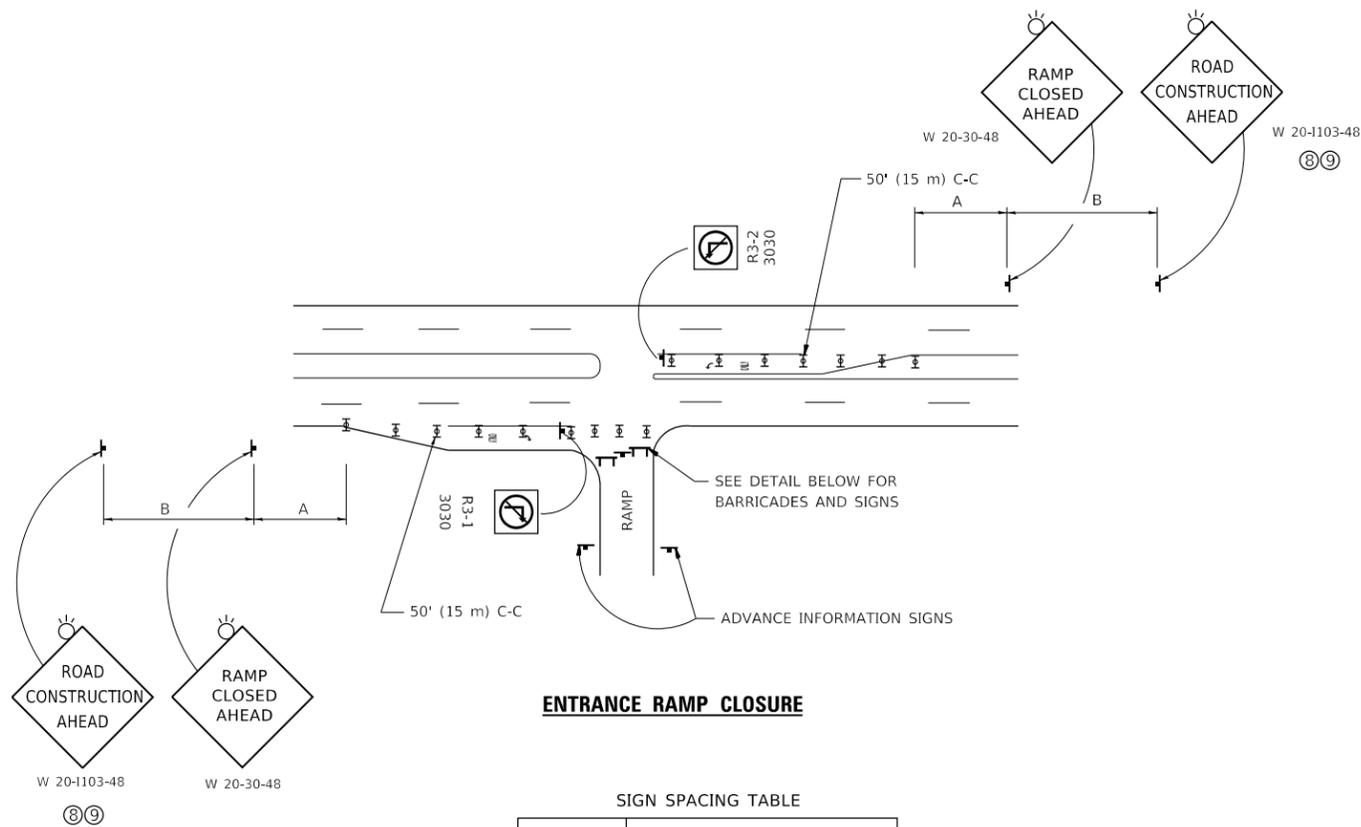
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USER NAME = qureshya	DESIGNED - R. SHAH	REVISED - A. ABBAS 05-05-9
	DRAWN - JIS	REVISED - E. GOMEZ 12-21-00
PLOT SCALE = 100.0000' / in.	CHECKED - A. ABBAS	REVISED - R. BORO 01-01-07
PLOT DATE = 8/3/2020	DATE - 09-10-94	REVISED - JP CHANG 07-08-16

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>HMA TAPER AT EDGE OF P.C.C PAVEMENT</b>			
SCALE: NONE	SHEET 1 OF 1 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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BD400-06 (BD33)		CONTRACT NO. 62L17		
ILLINOIS FED. AID PROJECT				

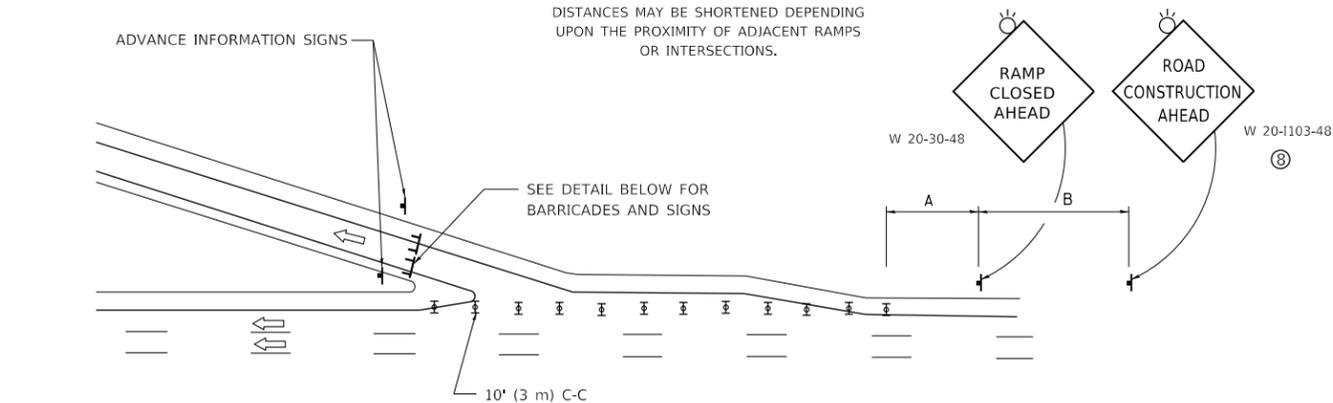


**ENTRANCE RAMP CLOSURE**

SIGN SPACING TABLE

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

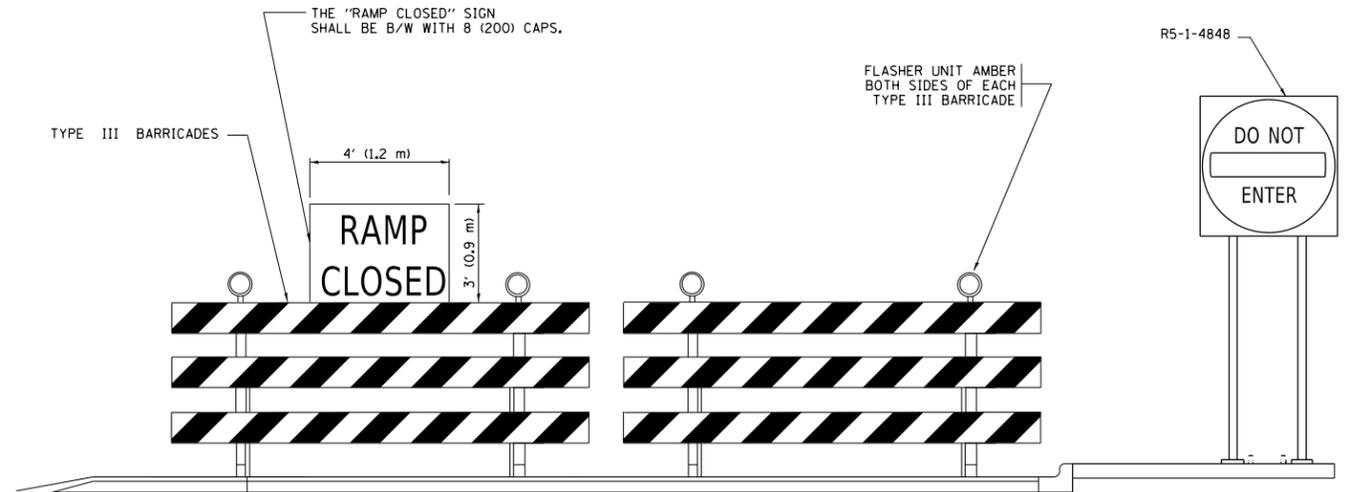
DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.



**EXIT RAMP CLOSURE**

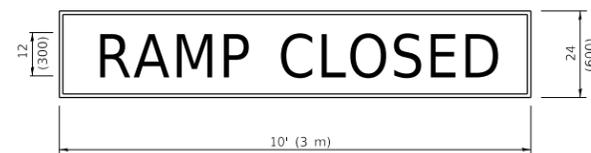
**SYMBOLS**

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



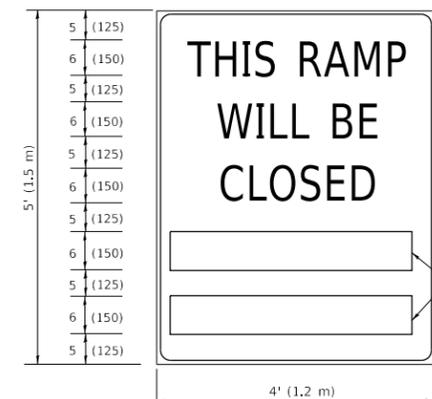
**DETAIL FOR REQUIRED BARRICADES & SIGNS**

**RAMP CLOSURE ADVANCE WARNING SIGN**



BLACK LEGEND ON ORANGE BACKGROUND MOUNTED DIAGONALLY E MOD FONT 1 (25) BORDER  
 THESE SIGNS ARE REQUIRED ON ALL THE EXIT GUIDE SIGNS FOR EXIT RAMPS THAT WILL BE CLOSED FOR MORE THAN FOUR (4) CONSECUTIVE DAYS.

**RAMP CLOSURE ADVANCE INFORMATION SIGN**



BLACK LEGEND ON WHITE BACKGROUND  
 1/2 (12) BORDER  
 E MOD FONT

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

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

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

**GENERAL NOTES:**

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

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

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PLOT DATE = 8/3/2020	DATE - 02-83	REVISED - M.D_06-13
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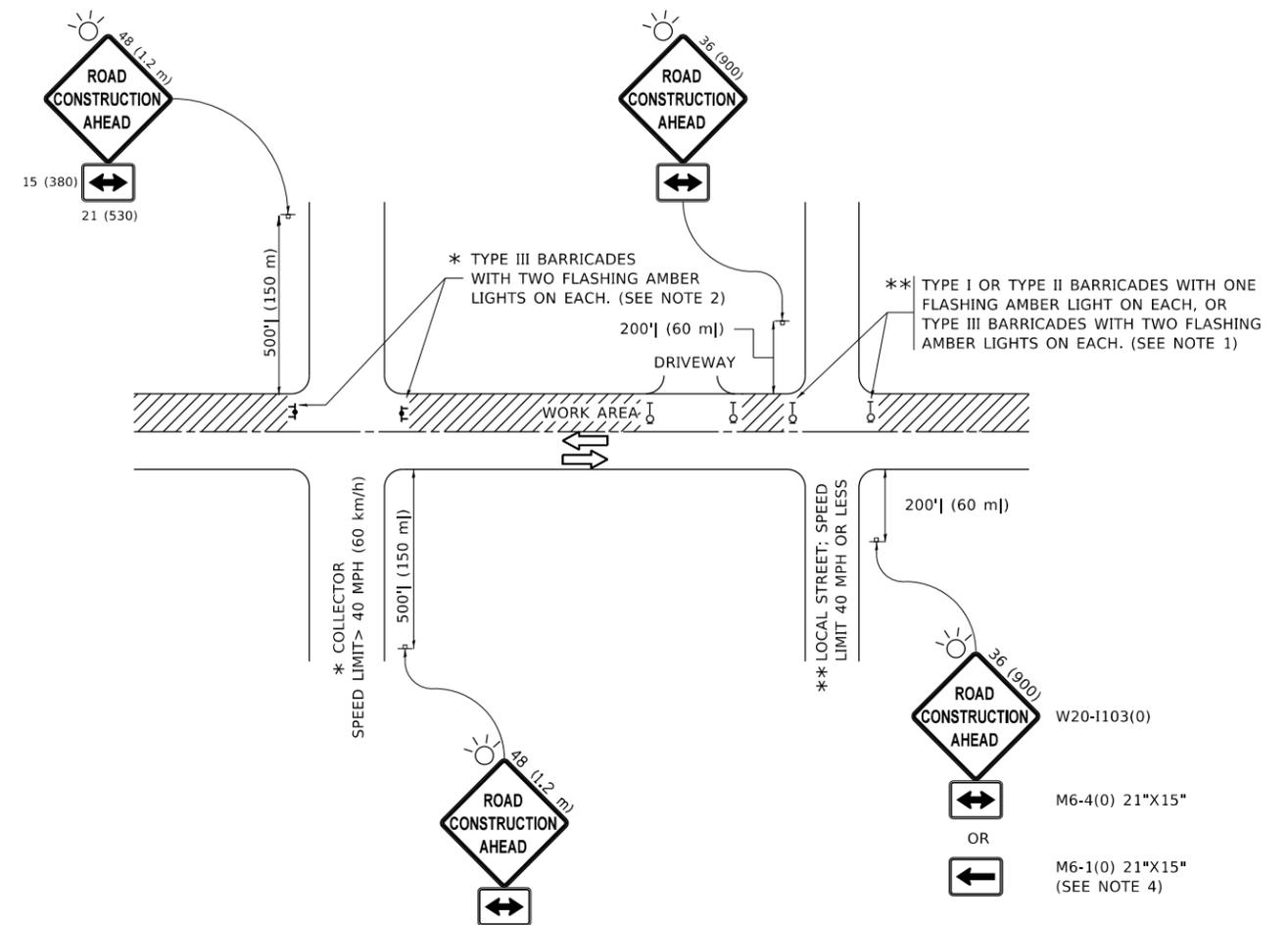
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**ENTRANCE AND EXIT RAMP  
 CLOSURE DETAILS**

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

F.A.P. RTE. 332	SECTION 2020-045-RS	COUNTY COOK	TOTAL SHEETS 23	SHEET NO. 16
TC-08		CONTRACT NO. 62L17		
ILLINOIS FED. AID PROJECT				





**NOTES:**

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

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

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PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED - T. RAMMACHER 01-06-00
PLOT DATE = 8/3/2020	DATE - 06-89	REVISED - A. SCHUETZE 07-01-13
		REVISED - A. SCHUETZE 09-15-16

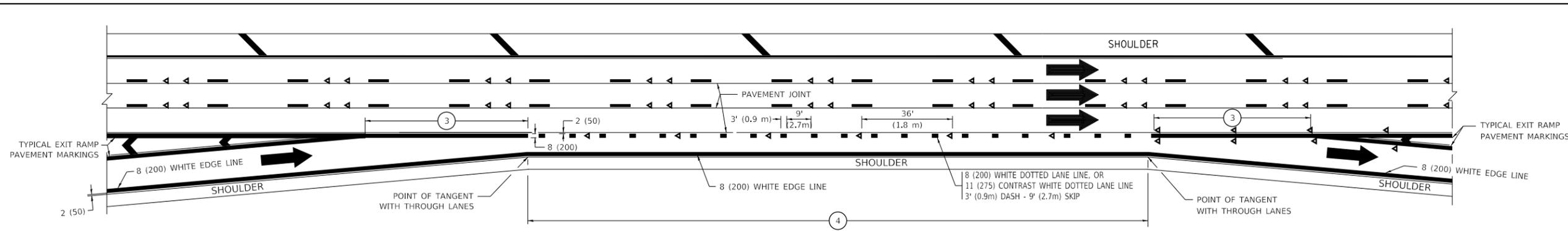
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

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

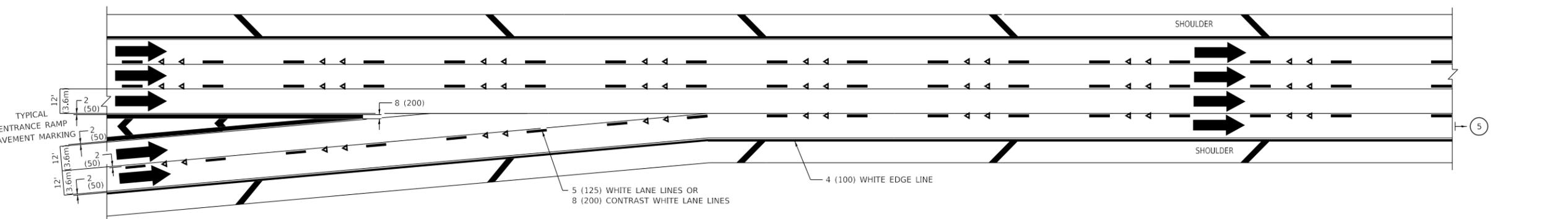
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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<b>TC-10</b>			CONTRACT NO. 62L17	
ILLINOIS FED. AID PROJECT				

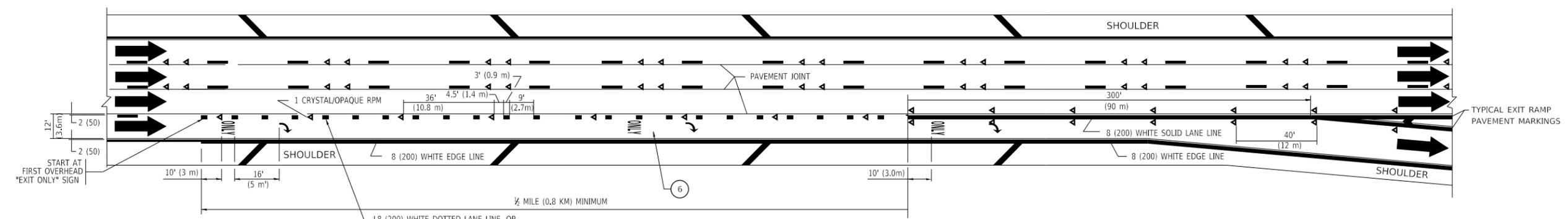




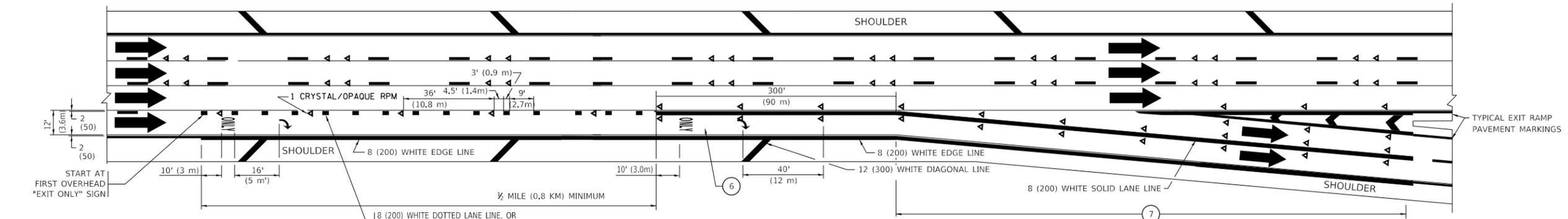
**AUXILIARY LANE MARKINGS**



**TWO LANE ENTRANCE RAMP WITH MERGE MARKINGS**



**EXIT ONLY LANE MARKINGS**



**EXIT ONLY WITH OPTION LANE MARKINGS**

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

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 DATE: 8/3/2020

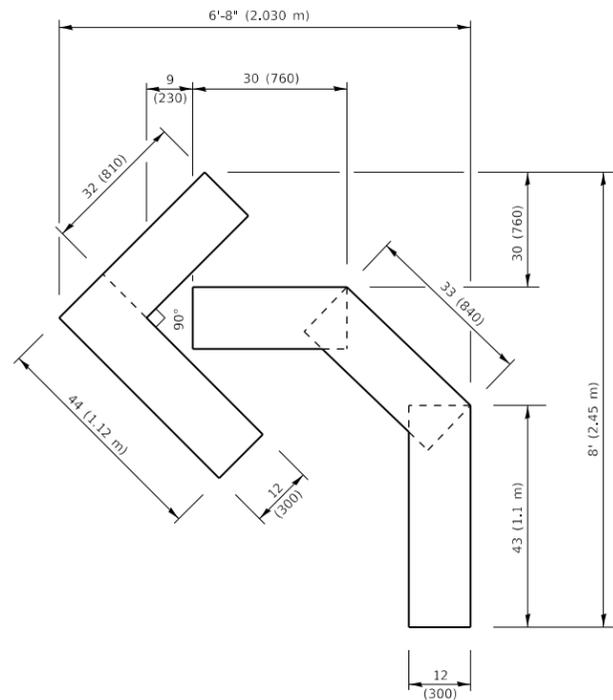
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PLOT DATE = 8/3/2020	DATE - 01-90	REVISED - S.P.B. 01-10
		REVISED - M.D. 09-17

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**MULTI-LANE FREEWAY  
PAVEMENT MARKING DETAILS**

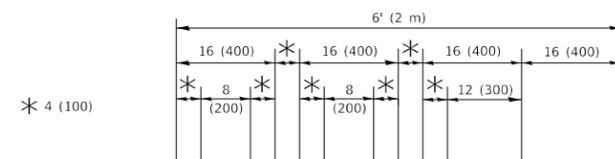
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F.A.P. RTE. 332	SECTION 2020-045-RS	COUNTY COOK	TOTAL SHEETS 23	SHEET NO. 20
TC-12		CONTRACT NO. 62L17		
ILLINOIS FED. AID PROJECT				



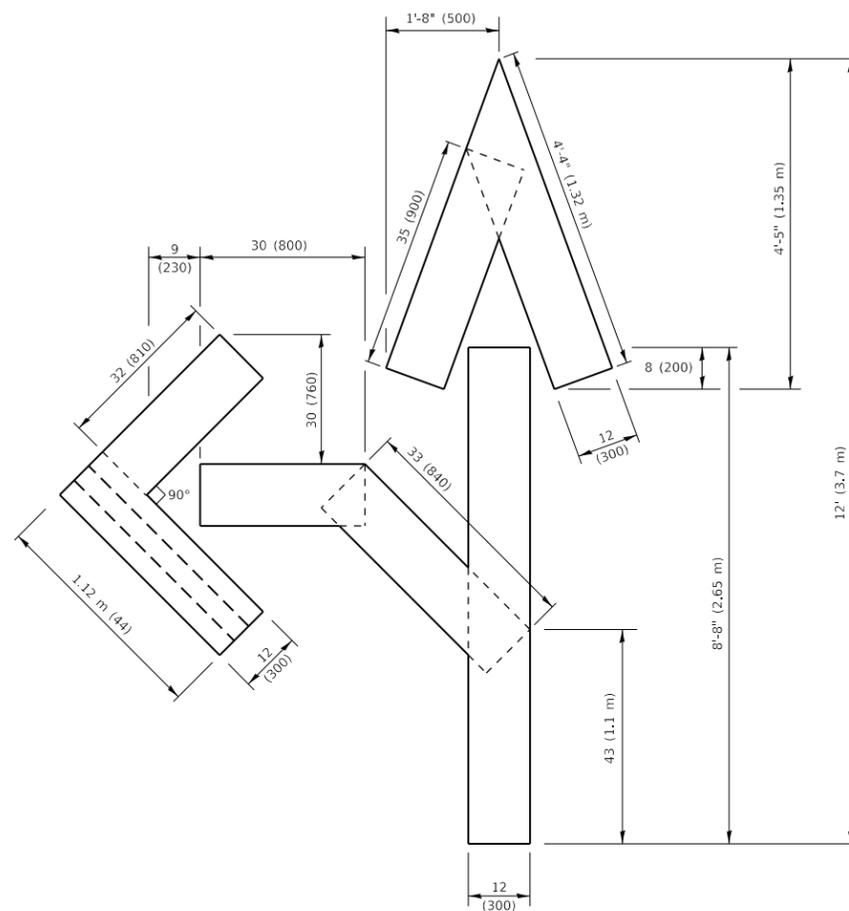
**QUANTITY**

4 (100) LINE = 45.5 ft. (13.9 m)  
15.2 sq. ft. (1.41 sq. m)



**QUANTITY**

4 (100) LINE = 64.1 ft. (19.5 m)  
21.4 sq. ft. (1.99 sq. m)

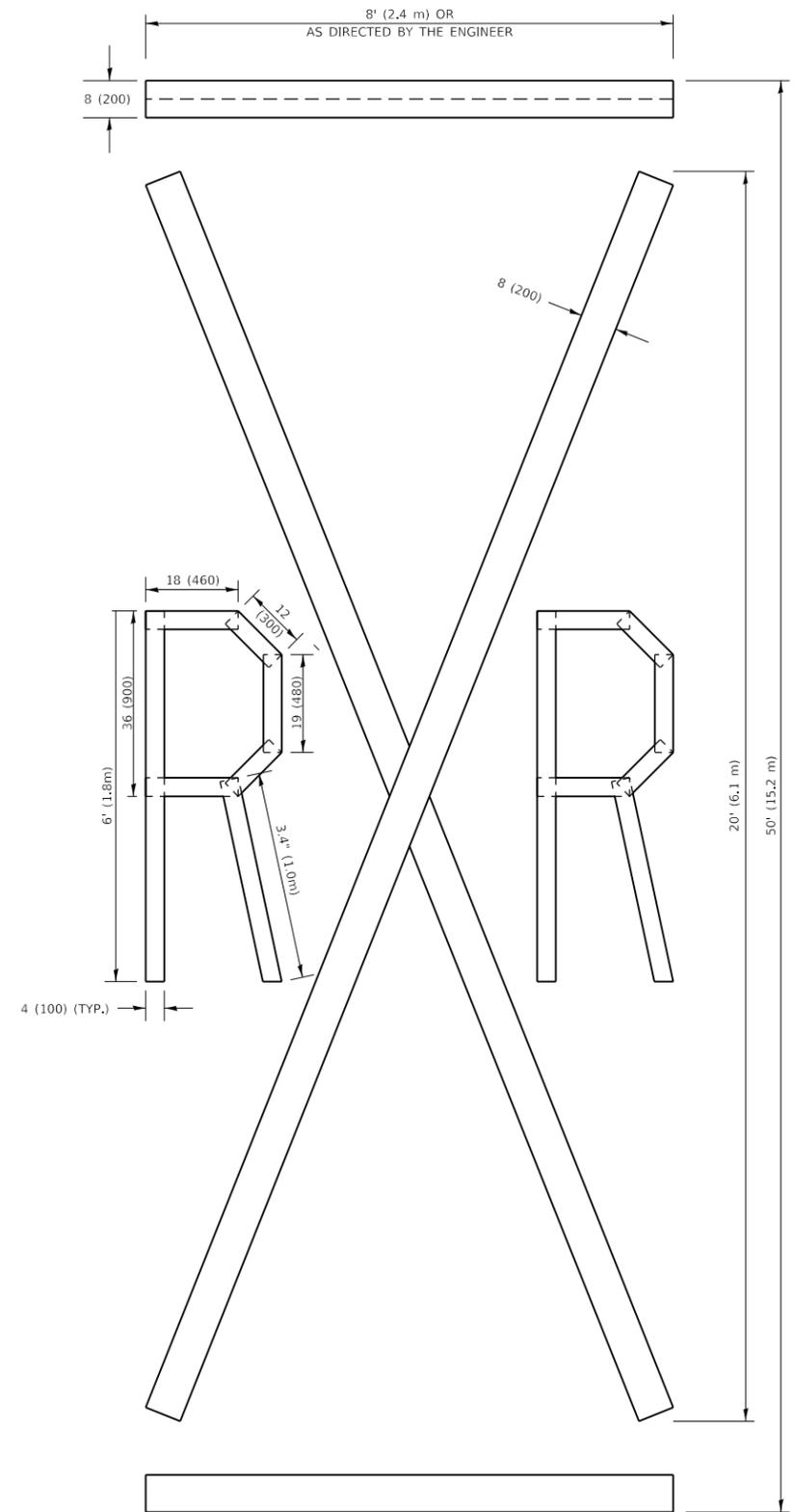


**QUANTITY**

4 (100) LINE = 82.5 ft. (25.1 m)  
27.5 sq. ft. (2.53 sq. m)

**NOTE:**

ALL QUANTITIES OF PLACEMENT ARE REPRESENTED IN LINEAR FEET OF 4" LINES TO MATCH THE 4" TEMPORARY TAPE PAY ITEM AND REPRESENTS THE TOTAL QUANTITY OF 4" TAPE REQUIRED.



**QUANTITY**

4 (100) LINE = 225.9 ft. (68.9 m)  
75.3 sq. ft. (6.99 sq. m)

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

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USER NAME = qureshya	DESIGNED -	REVISED - T. RAMMACHER 03-02-98
PLOT SCALE = 100,0010 ' / In.	DRAWN -	REVISED - E. GOMEZ 08-28-00
PLOT DATE = 8/3/2020	CHECKED -	REVISED - E. GOMEZ 08-28-00
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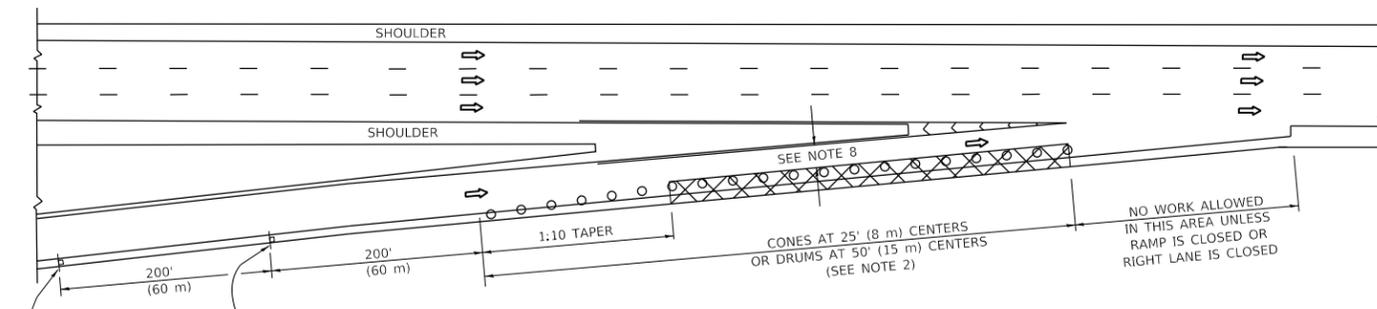
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SHORT TERM PAVEMENT MARKING LETTERS AND SYMBOLS**

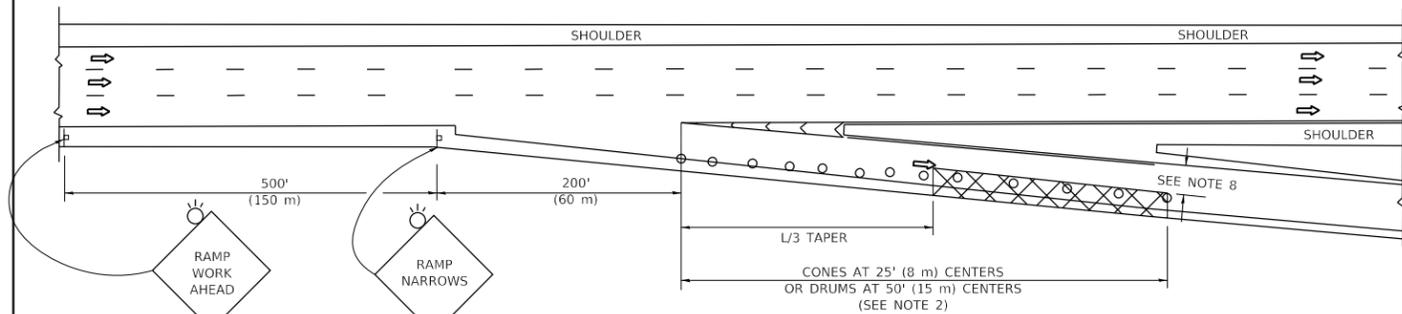
SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-045-RS	COOK	23	21
<b>TC-16</b>			CONTRACT NO. 62L17	
ILLINOIS FED. AID PROJECT				

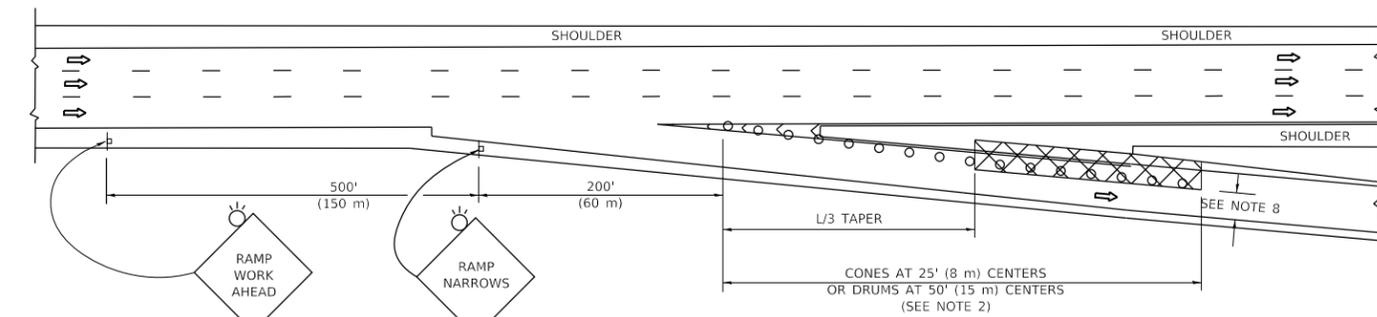
**PARTIAL RAMP CLOSURE DETAILS**



**TYPICAL ENTRANCE RAMP**



**TYPICAL EXIT RAMP**



**TYPICAL EXIT RAMP**

**SYMBOLS**

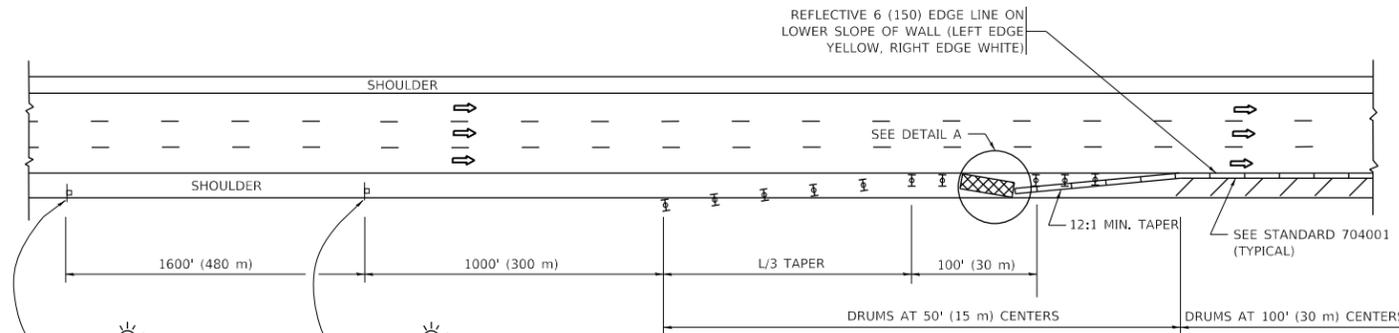
- ACTIVE WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE OR DRUM
- CONE, DRUM OR BARRICADE
- IMPACT ATTENUATOR OF TYPE AND TEST LEVEL SPECIFIED

**GENERAL NOTES:**

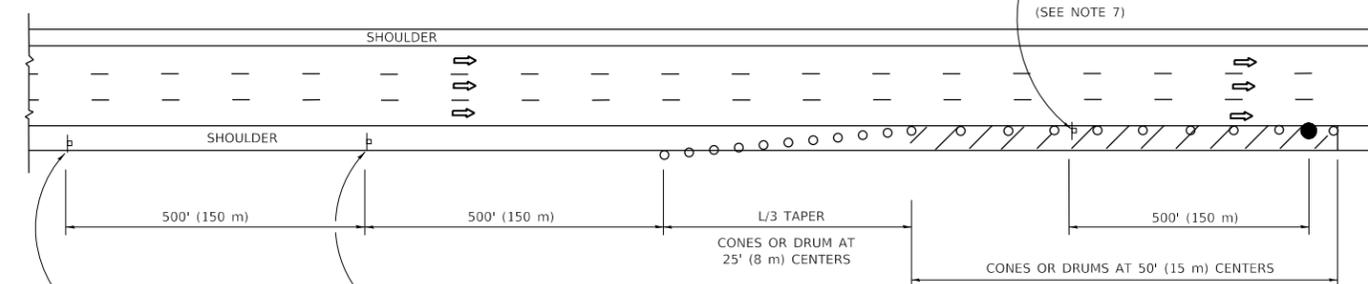
- THE "L" DISTANCE EQUALS:  

SPEED LIMIT	FORMULAS
45 mph (80 km/h)	METRIC ENGLISH
OR GREATER:	$L=0.65(WXS)$ $L=(WXS)$
	W = WIDTH OF OFFSET IN FEET (METERS)
	S = NORMAL POSTED SPEED MPH (KM/H)
- TYPE II BARRICADES OR DRUMS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES. TYPE II BARRICADES OR DRUMS WITH MONODIRECTIONAL STEADY BURN LIGHTS ARE REQUIRED FOR DELINEATING OBSTACLES, EXCAVATIONS, OR HAZARDS EXCEEDING 100 FT (30m) IN LENGTH AT NIGHT.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.

**SHOULDER CLOSURE DETAILS**

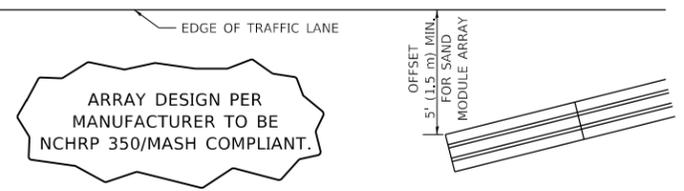


**PERMANENT SHOULDER CLOSURE**



**DAYTIME SHOULDER CLOSURE**

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



ARRAY DESIGN PER MANUFACTURER TO BE NCHRP 350/MASH COMPLIANT.

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

- THE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS PROTECTED BY OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE NARROW USE TYPE DEVICE TO MEET NCHRP350/MASH.
- AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
- THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
  - FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
  - THE WORK AVTIVITY REQUIRES FREQUENT ENCROACHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.
- 12' MIN. WIDTH TANGENT SECTION  
 16' MIN. WIDTH CURVE SECTION.

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

MODEL: Default  
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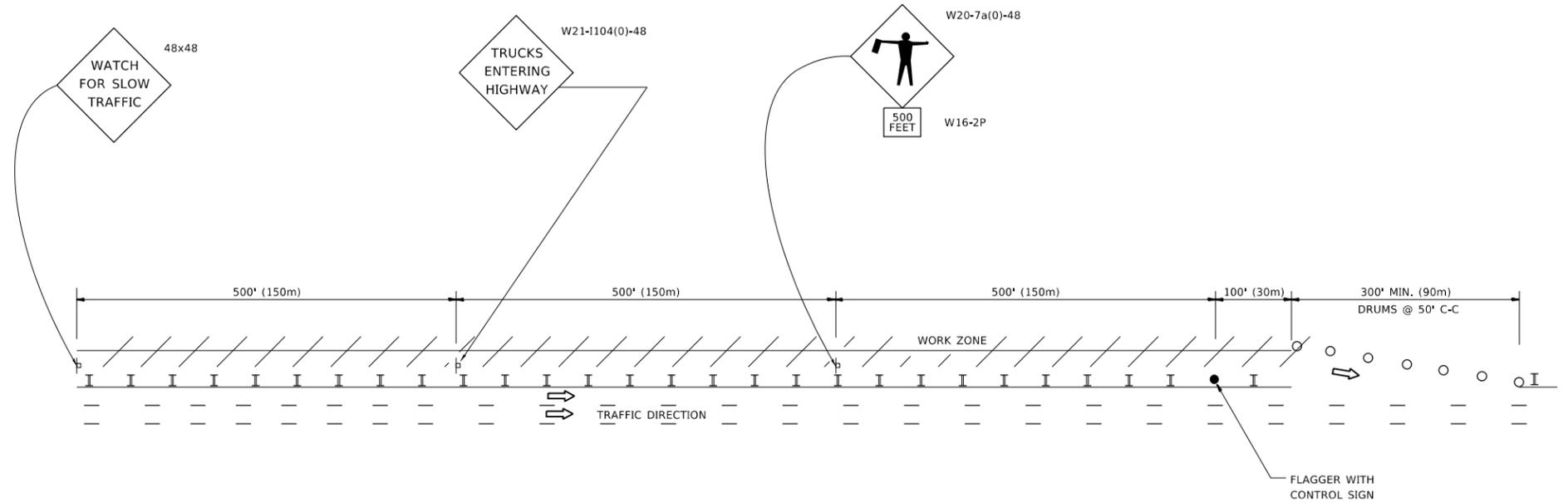
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

<b>TRAFFIC CONTROL DETAILS FOR FREEWAY</b>			
<b>SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES</b>			
SCALE: NONE	SHEET 1	OF 1 SHEETS	STA. TO STA.

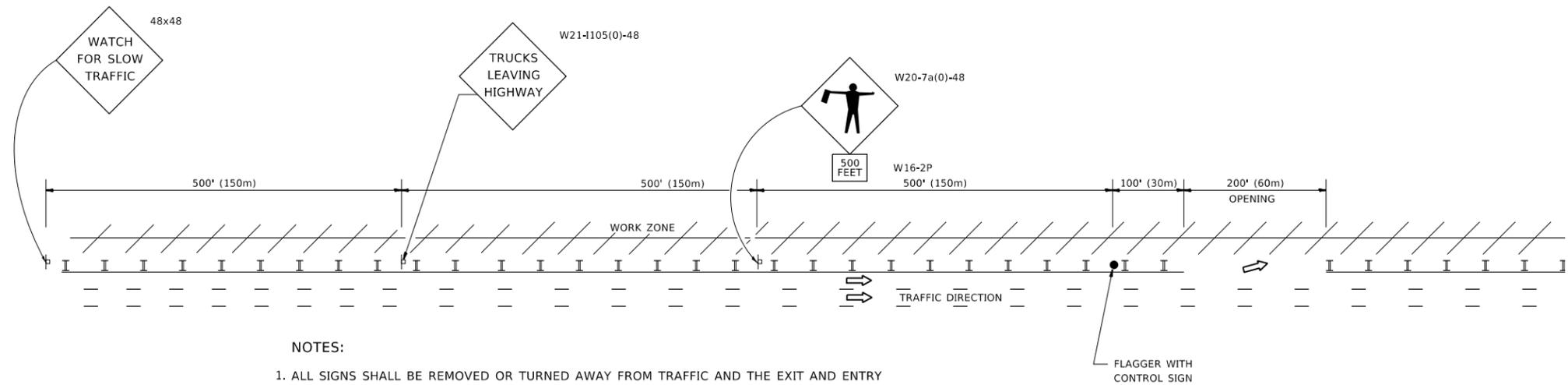
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-045-R5	COOK	23	22
<b>TC-17</b>		CONTRACT NO. <b>62L17</b>		
ILLINOIS FED. AID PROJECT				

# SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

## WORK ZONE EXIT OPENING



## WORK ZONE ENTRY OPENING



### NOTES:

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

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

MODEL: Default  
FILE: \\nas101.psu.edu\pub\haronom.dar\illinois.gov\PWIDOT\Documents\IDOT\_Offices\IDOT\1\Projects\142820\CADD\Design\Design\DESIGN.dgn

USER NAME = qureshiya	DESIGNED -	REVISED - J.A.F. 02-06
	DRAWN -	REVISED - S.P.B. 01-07
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED - S.P.B. 12-09
PLOT DATE = 8/3/2020	DATE -	REVISED - M.D.06-13

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

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

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-045-R5	COOK	23	23
<b>TC-18</b>			CONTRACT NO. <b>62L17</b>	
ILLINOIS FED. AID PROJECT				