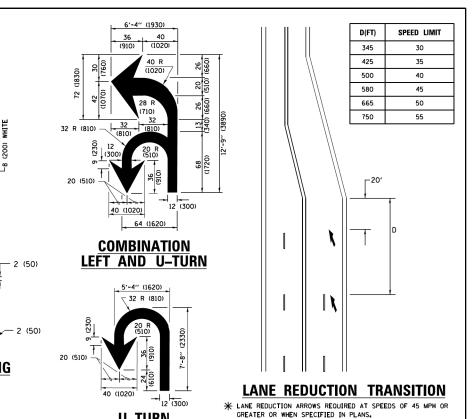


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED. \P AREA = 15.6 SO. FT. (1.5 m²)

 \divideontimes 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

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



		<u>U-1</u>	UKN	or Every or men or East 125 In Fernis
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 UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 e 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 MEDIANS IN YELLOW
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	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 e 6 (150) 12 (300) e 45° 12 (300) e 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 CROSSMALK, 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 OF1 "R"23.6 SO. FT. (0.33 m ²) EACH "X"=54.0 SO. FT. (5.0 m ²)
SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS > 8')	12 (300) e 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 (0VER 45MPH (70 km/h))
U TURN ARROW	SEE DETAIL	SOLID	WHITE	16.3 SF
2 ARROW COMBINATION LEFT AND U TURN	SEE DETAIL	SOLID	WHITE	30.4 SF

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

8 (200) WHITE -

ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING

8 (200) WHITE-

RAISED

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



BICYCLE & EQUESTRIAN

USER NAME = nick_becker	DESIGNED	-	JLM	REVISED -
	DRAWN	-	BWL, EKS	REVISED -
PLOT SCALE = 40.0000 '/ in.	CHECKED	-	NJB	REVISED -
PLOT DATE = 3/23/2016	DATE	-	02/05/2016	REVISED -

PEDESTRIAN

2' (600)

DETAIL "B"

-12 (300) WHITE

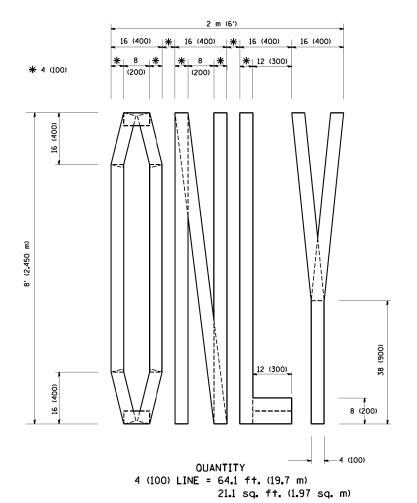
TYPICAL CROSSWALK MARKING

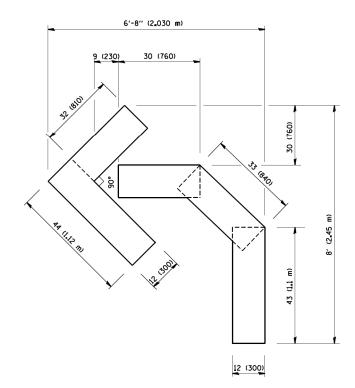
 $oldsymbol{*}$ MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES

- 6 (150) WHITE

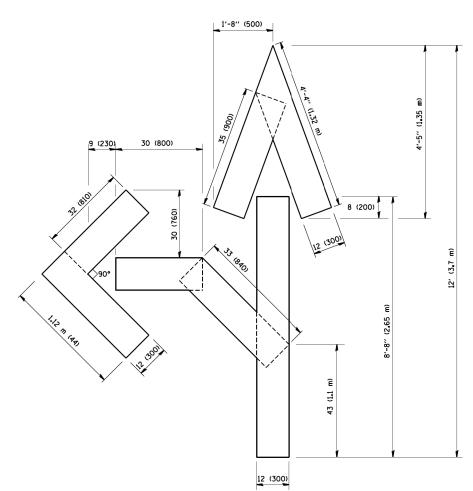
DETAIL "A"

			DIS	TRICT 0	NE				F.A.P. RTE.	SECTION	COUNTY	TOTAL	SHEET NO.
		TVD	ICAI DAY	/EMENT	MARK	INGS			846	D1HSRR2016-02&03	WILL	580	101
	TYPICAL PAVEMENT MARKINGS									TC-13	CONTRACT	NO. 6	2B33
SCALE:	NTS	SHEET 2	OF 14	SHEETS	STA.	N/A	TO STA.	N/A		ILLINOIS FE	ED. AID PROJECT		





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



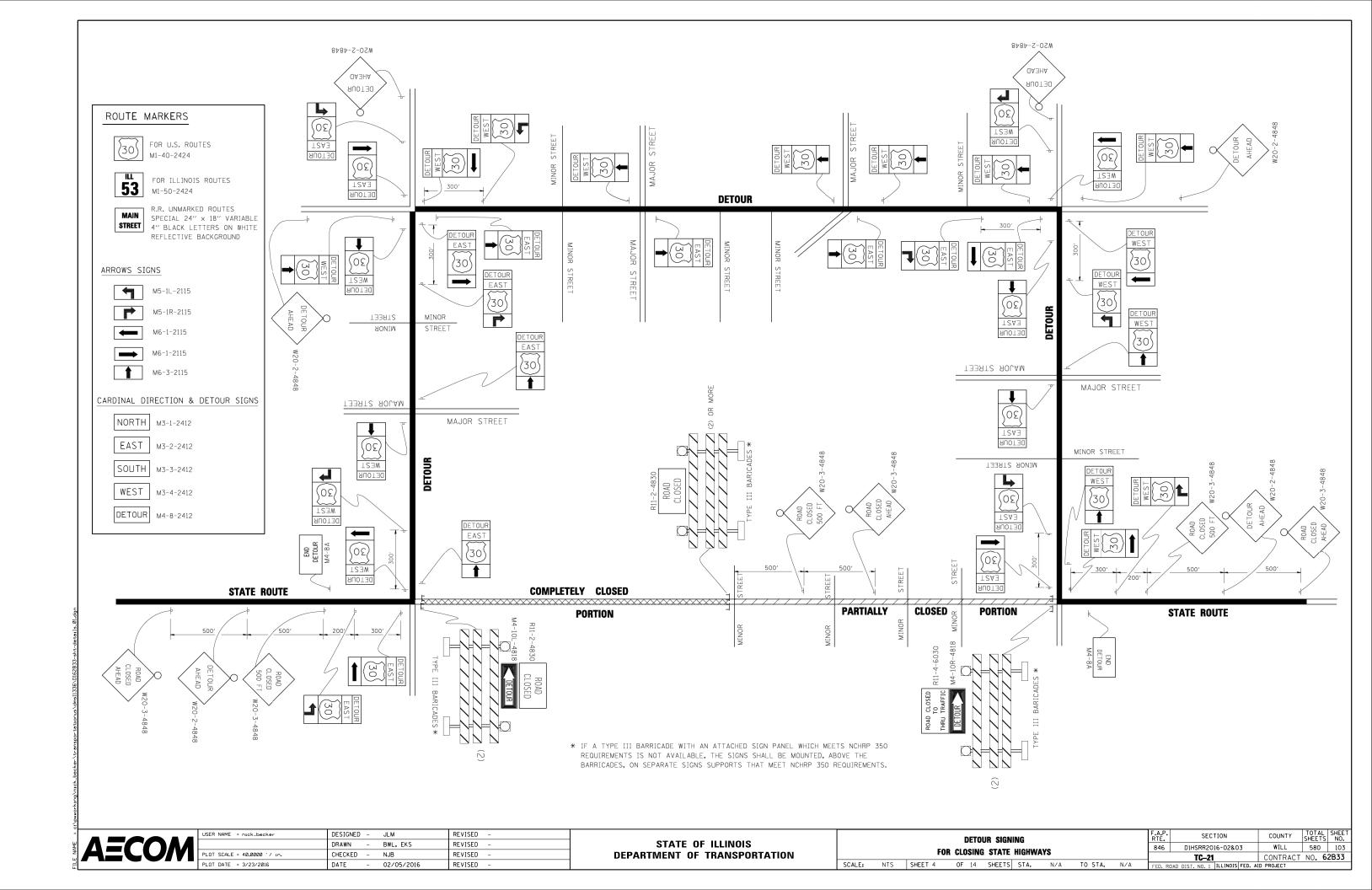
OUANTITY 4 (100) LINE = 82.5 ft. (25.3 m) 27.5 sq. ft. (2.53 sq. m)

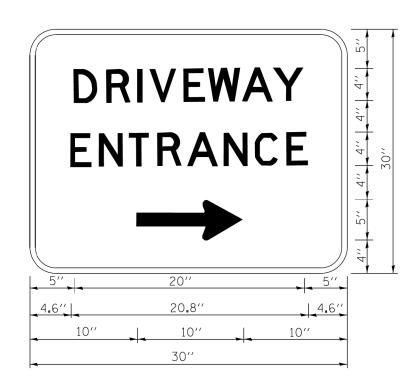
All dimensions are in inches (millimeters) unless otherwise shown.



USER NAME = nick_becker	DESIGNED	-	JLM	REVISED -	
	DRAWN	-	BWL, EKS	REVISED -	
PLOT SCALE = 40.0000 '/ in.	CHECKED	-	NJB	REVISED -	
PLOT DATE = 3/23/2016	DATE	-	02/05/2016	REVISED -	

	PAVEMENT MARKING LETTERS AND SYMBOLS								F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	7,10-11-11 112-11-11-11 7,112 01 112-12									D1HSRR2016-02&03	WILL	580	102
	FOR TRAFFIC STAGING									TC-16	CONTRACT	NO. 6	2B33
SCALE: NTS SHEET 3 OF 14 SHEETS STA. N/A TO STA. N/A								FED. RC	AD DIST. NO. 1 ILLINOIS FED. A	D PROJECT			



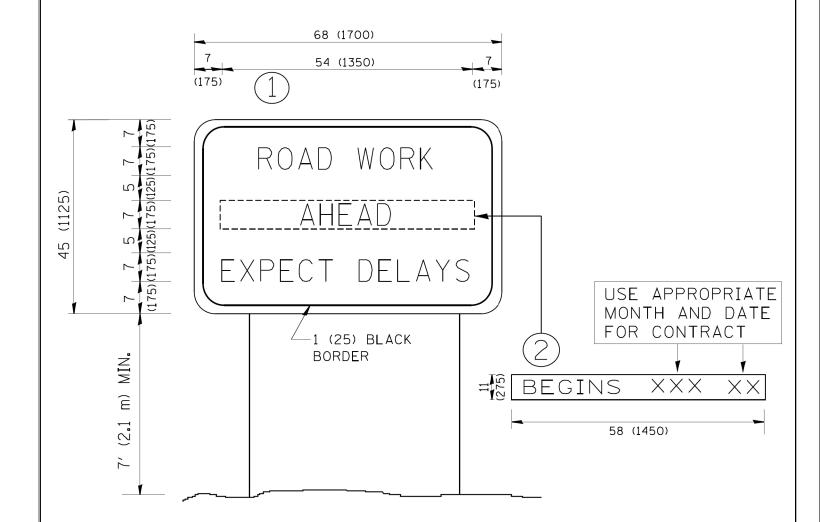


3.0" RADIUS, 0.5" BORDER, WHITE ON GREEN; REFLECTORIZED "'DRIVEWAY" D; "ENTRANCE" D; STANDARD ARROW CUSTOM 12.0" x 5.0"

NOTES:

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

DRIVEWAY ENTRANCE SIGNING TC-26



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 () 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.

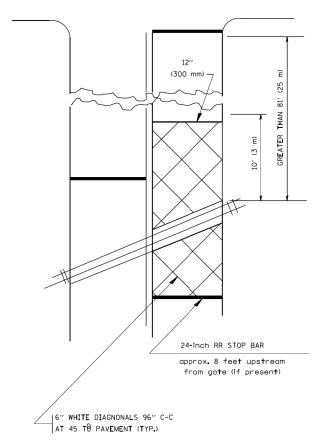
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.



	USER NAME = nick_becker	DESIGNED	-	JLM	REVISED -
		DRAWN	-	BWL, EKS	REVISED -
	PLOT SCALE = 40.0000 '/ in.	CHECKED	-	NJB	REVISED -
	PLOT DATE = 3/23/2016	DATE	-	02/05/2016	REVISED -
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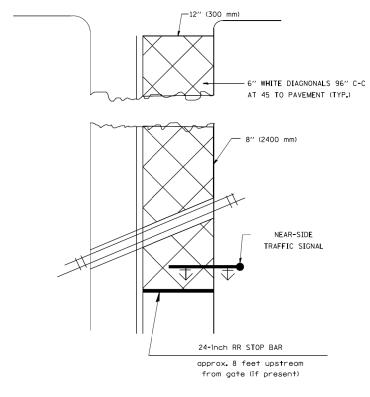
				AR	TERIAL RO	AD				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
										846	D1HSRR2016-02&03	WILL	580	104
	INFORMATION SIGN									TC-22	CONTRACT	NO. 6	2B33	
SCA	LE:	NTS	SHEET 5	OF 14	SHEETS	STA.	N/A	TO STA.	N/A	FED. RC	DAD DIST. NO. 1 ILLINOIS FED.	AID PROJECT		

WITH INTERSECTION TRAFFIC SIGNALS



WITH NEAR-SIDE TRAFFIC SIGNALS

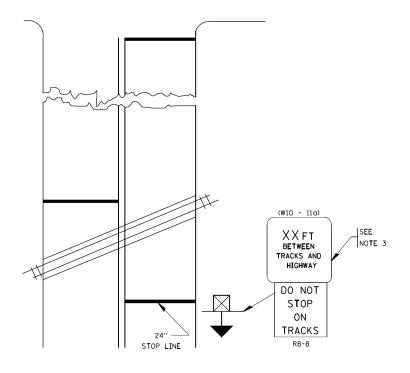
(SEE NOTE 1 & 2)



PLAN N.T.S

WITH NONSIGNALIZED INTERSECTION

81' (25 m) OR LESS TO CLOSEST RAIL



PLAN

NOTES

- 1. PAVEMENT MARKINGS TO BE INSTALLED ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.
- WHERE NEAR-SIDE TRAFFIC SIGNALS ARE USED, THE PAVEMENT MARKINGS EXTENDS TO THE INTERSECTION.
- 3. DISTANCE TO BE SHOWN ON SIGN MEASURED FROM A POINT 6 FEET (1,8 m) FROM THE RAIL CLOSEST TO THE INTERSECTION TO THE STOP LINE OR CROSSWALK, WHICHEVER IS CLOSEST, ROUNDED DOWN TO THE NEAREST 5 FEET (1,5 m). WHERE THERE IS NO STOP LINE, MEASURE TO POINT WHERE THE DRIVER HAS A VIEW OF APPROACHING TRAFFIC.

THE CLEARANCE SIGN IS ALSO TO BE USED AS AN INTERIM MEASURE AT LOCATIONS WITH INTERCONNECTED INTERSECTION TRAFFIC SIGNALS WHERE IT IS PLANNED TO CHANGE THEM TO NEAR-SIDE SIGNALS AT A FUTURE TIME. IN THIS CASE, THE DISTANCE TO BE SHOWN ON THE SIGN IS MEASURED FROM THE EDGE OF THE STRIPED-OUT AREA INSTEAD OF 6-FEET FROM THE RAIL. THE SIGN IS TO BE REMOVED WHEN THE NEAR-SIDE SIGNALS ARE INSTALLED AND THE PAVEMENT MARKINGS EXTEND TO THE INTERSECTION.

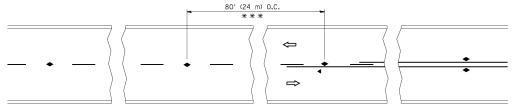
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
UNLESS OTHERWISE SHOWN.



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	DRAWN	-	BWL, EKS	REVISED -
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PLOT DATE = 3/23/2016	DATE	-	02/05/2016	REVISED -

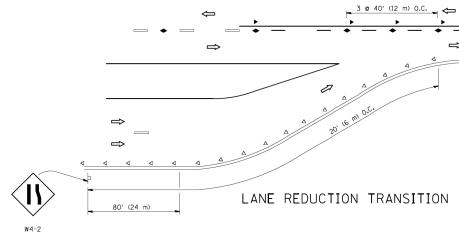
SCALE: NTS

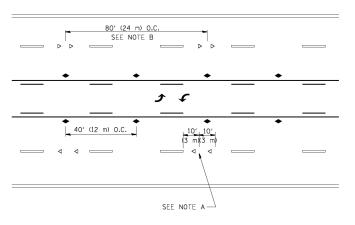
TYPIC	TYPICAL SUPPLEMENTAL SIGNING AND PAVEMENT MARKING TREATMENT FOR RAILROAD CROSSINGS								SECTION	COUNTY	SHEETS	SHEET NO.
									D1HSRR2016-02&03	WILL	580	105
	TREATMENT FUR KAILKUAD CRUSSINGS								TC-23	CONTRACT	NO. 6	2B33
NTS	NTS SHEET 6 OF 14 SHEETS STA. N/A TO STA.						N/A	FED. RO	DAD DIST. NO. 1 ILLINOIS FED.	AID PROJECT		



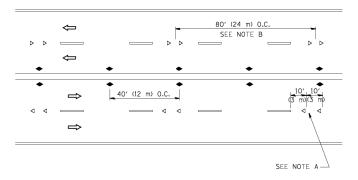
*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

TWO-LANE/TWO-WAY

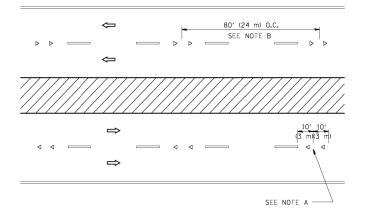




TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

- 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.

LANE MARKER NOTES

A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

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

SYMBOLS

---- YELLOW STRIPE

── WHITE STRIF

- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER (₩/O)
- ◆ TWO-WAY AMBER MARKER

DESIGN NOTES

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

LEFT TURN

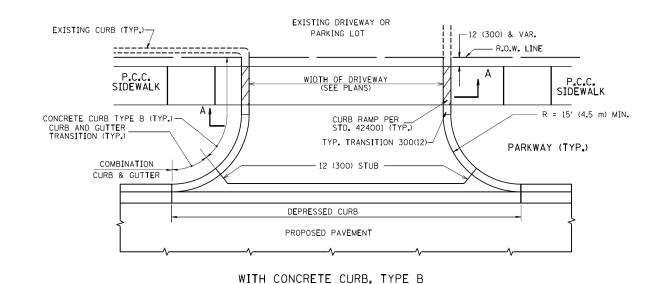
All dimensions are in inches (millimeters) unless otherwise shown.

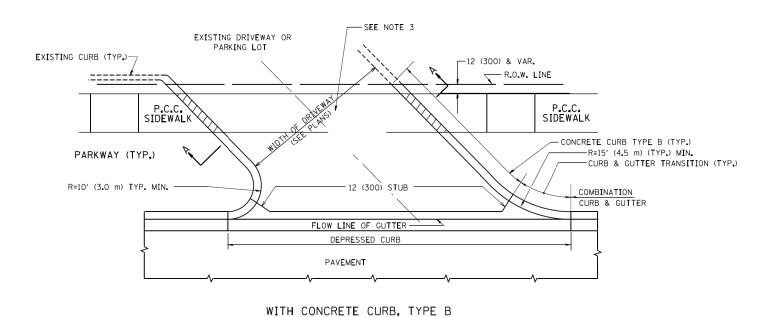


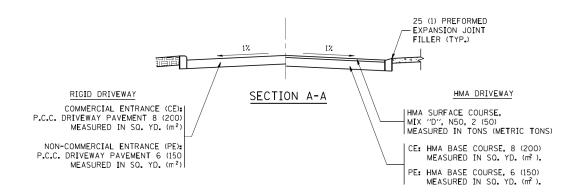
USER NAME = nick_becker	DESIGNED	-	JLM	REVISED -
	DRAWN	-	BWL, EKS	REVISED -
PLOT SCALE = 40.0000 '/ in.	CHECKED	-	NJB	REVISED -
PLOT DATE = 3/23/2016	DATE	-	02/05/2016	REVISED -

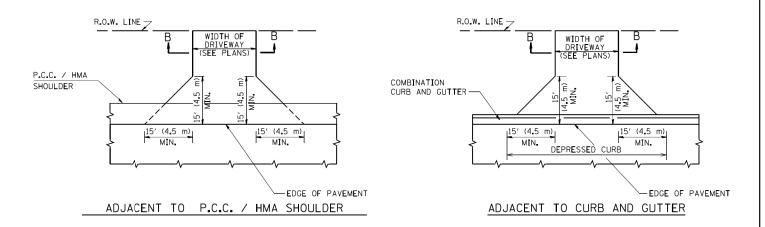
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

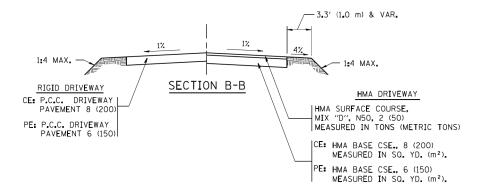
	TYPICAL APPLICATIONS										
	RAISED	REFLECTIVE	PAVEMENT	MARKER	S (SNC	W-PLOW	RESISTAN	T)			
SCALE:	NTS	SHEET 7	OF 14	SHEETS	STA.	N/A	TO STA.	N/A			











RURAL FIELD ENTRANCE (FE)

HMA SURFACE COURSE, MIX "D", N50, 2 (50) MEASURED IN TONS (METRIC TONS)

AGGREGATE BASE CSE., TYPE B, 8 (200) MEASURED IN SQ. YD. (m²).

GENERAL NOTES:

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

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

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

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

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

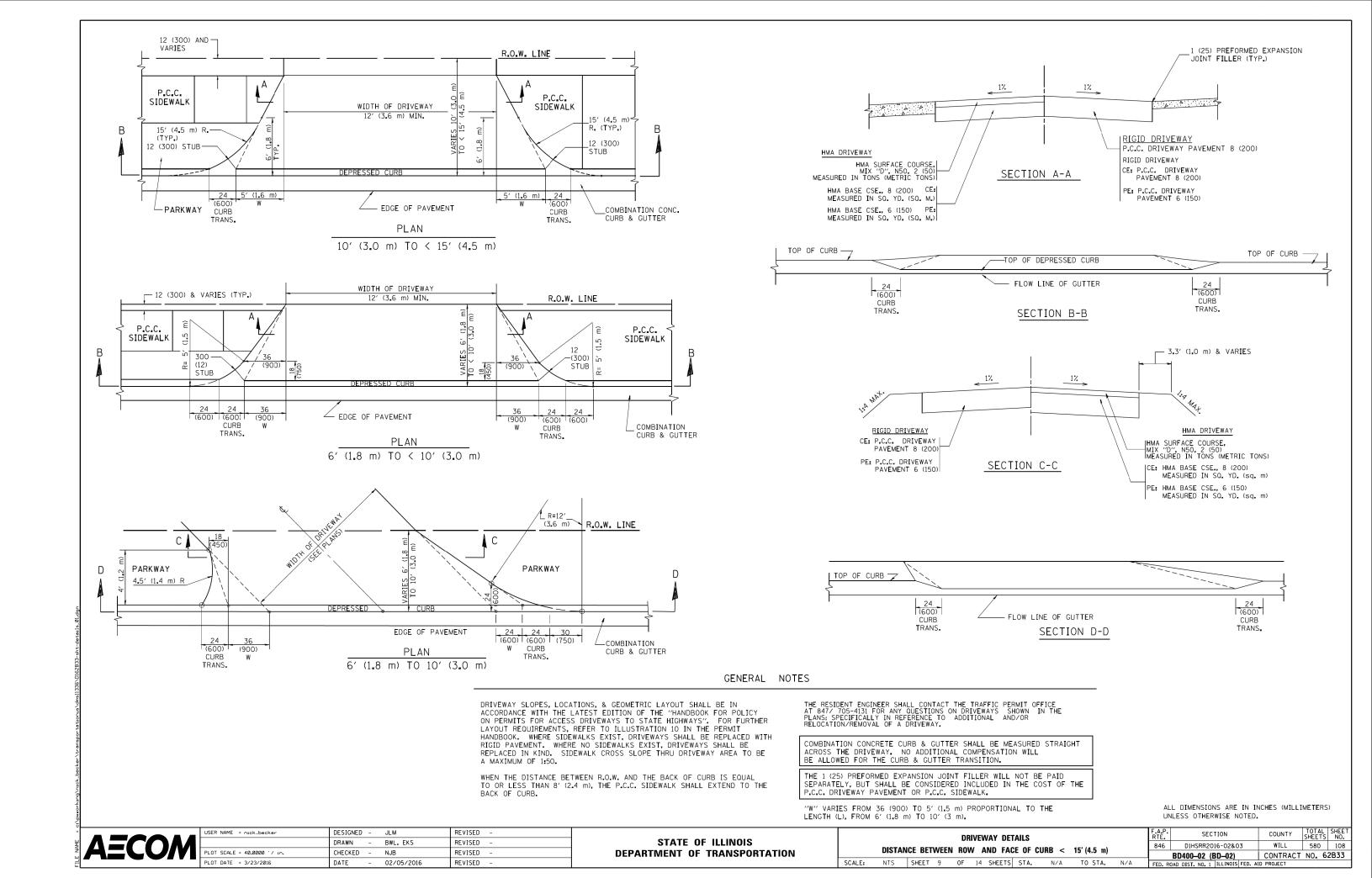
WHEN THE P.C.C. SIDEWALK EXTENDS THROUGH THE DRIVEWAY, THE THICKNESS OF THE SIDEWALK IN THE DRIVEWAY AREA SHALL BE THE SAME AS THE DRIVEWAY THICKNESS. SIDEWALK WILL BE PAID FOR AS P.C.C. SIDEWALK OF THE THICKNESS SPECIFIED. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

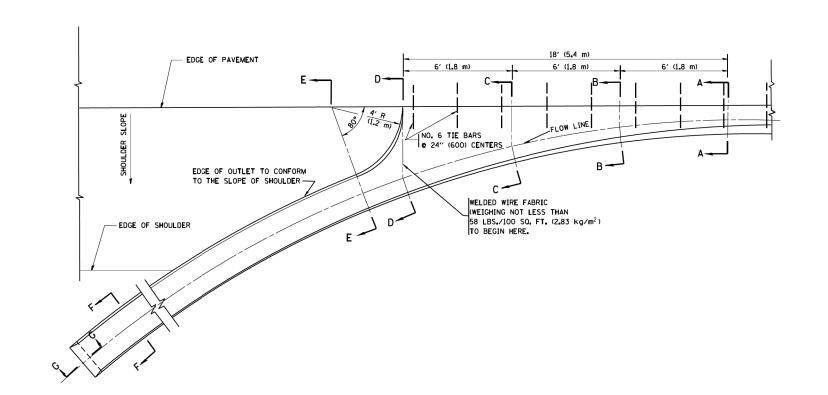
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.	USER NAME = nick_becker	DESIGNED	-	JLM	REVISED -
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	PLOT DATE = 3/23/2016	DATE	-	02/05/2016	REVISED -

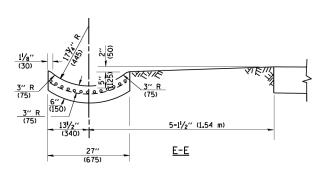
DR	IVEWAY DET	AILS – D	ISTANCE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.					
AND	FACE OF CUI	DD 0 ED	CE OE CL	INIII DED		1E' // E\		846	D1HSRR2016-02&03	WILL	580	107
	TACE OF CO	חם מ בטי	JE UF SF	IUULDEN	/=	15 (4.5 111)			BD0156-07 (BD-01)	CONTRACT	NO. 6	2B33
NTS	SHEET 8	OF 14	SHEETS	STA.	N/A	TO STA.	N/A	FED. RC	DAD DIST. NO. 1 ILLINOIS FED. A	D PROJECT		

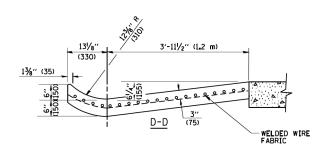


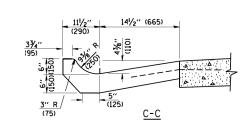


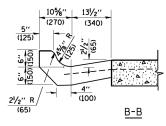


* DIMENSIONS OF THE CURB & GUTTER AT SECTION A-A
ARE SHOWN ON STATE STANDARD 606001.
FOR DETAILS OF OUTLET FOR CONCRETE CURB & GUTTER,
TYPE B-6,24 (B-15,60) SEE STATE STANDARD 606006.









GENERAL NOTES

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

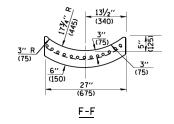
TIE BARS SHALL BE NO. 20 (NO.6) AT 24" (600) CENTERS UNLESS OTHERWISE SHOWN.

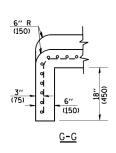
IF THE AVERAGE GRADE OF PAVEMENT FOR THE DISTANCE FROM SECTION A-A TO D-D EXCEEDS 2%, THIS DISTANCE SHALL BE INCREASED 6' (1.8 m) FOR EACH 1% INCREASE IN GRADE.

QUANTITIES

FOR SECTION A-A TO E-E AND CURTAIN WALL=
1.25 CU, YDS, (0,96 m³) CLASS SI CONCRETE (OUTLET) FOR 9" (225) PAV'T,
1.27 CU, YDS, (0,96 m³) CLASS SI CONCRETE (OUTLET) FOR 10" (250) PAV'T,
FOR SECTION F-F=
0.045 CU, YDS, (0,03 m³) CLASS SI CONCRETE PER ft, (m),

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



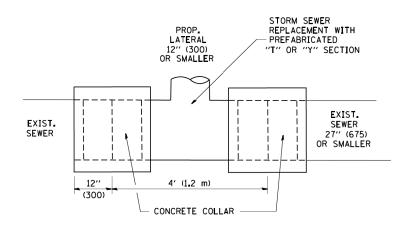


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USER NAME = nick_becker	DESIGNED	-	JLM	REVISED -	
	DRAWN	-	BWL, EKS	REVISED -	
PLOT SCALE = 40.0000 '/ in.	CHECKED	-	NJB	REVISED -	
PLOT DATE = 3/23/2016	DATE	-	02/05/2016	REVISED -	

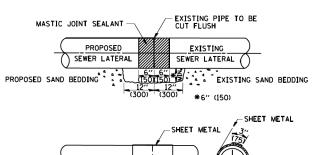
STATE OF ILLINOIS	
DEPARTMENT OF TRANSPORTATION	

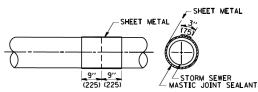
CURR AND GITTER	I				OUTLET	F.A.P. RTE.	SEC	TION	COUNTY	TOTAL SHEETS						
BD600-01 (BD-03) CONTRACT NO. 62B.	١	CURR AND GUTER										D1HSRR20	16-02&03	WILL	580	109
SCALE: NTS SHEET 10 OF 14 SHEETS STA. N/A TO STA. N/A FFD. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	ı				COND	AND G	, i LN				В	D600-01	(BD-03)	CONTRACT	NO. 6	52B33
		SCALE:	NTS	SHEET 10	OF 14	SHEETS	STA.	N/A	TO STA.	N/A	FED. RO	DAD DIST. NO. 1	ILLINOIS FED. A	D PROJECT		

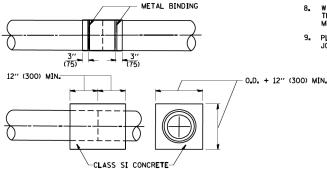


DETAIL "A"

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



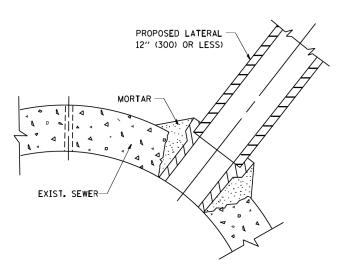




DETAIL "B" CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

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



DETAIL "C"

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

NOTES

MATERIAL

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

CONSTRUCTION METHODS

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

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

GENERAL

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

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

BASIS OF PAYMENT

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

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

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

SCALE: NTS SHEET 11

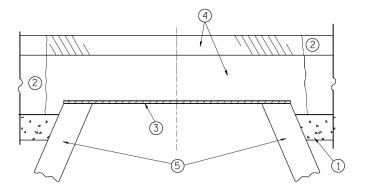
CONCRETE COLLAR FOR CONNECTING A PROPOSED STORM SEWER TO AN EXISTING STORM SEWER WILL NOT BE PAID PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER.

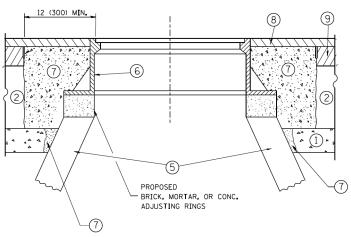
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.



USER NAME = nick_becker	DESIGNED	-	JLM	REVISED -
	DRAWN	-	BWL, EKS	REVISED -
PLOT SCALE = 40.0000 '/ in.	CHECKED	-	NJB	REVISED -
PLOT DATE = 3/23/2016	DATE	-	02/05/2016	REVISED -

DETA	IL O	F STORM	SEWER	1			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
INECT	ION	TO EXIST	TIME CE	AVED			846	D1HSRR2016-02&03	WILL	580	110
INECI	IUN	IO EVIS	IING SE	WEN				BD500-01 (BD-7)	CONTRACT	NO. 6	2B33
OF	14	SHEETS	STA.	N/A	TO STA.	N/A	FED. RO	DAD DIST. NO. 1 ILLINOIS FED.	AID PROJECT		





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.

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 11/2 (40)
- THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

STAGE 2 (AFTER PAVEMENT MILLING)

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

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

LEGEND

- 1 SUB-BASE GRANULAR MATERIAL
- 6 FRAME AND LID (SEE NOTES)
- 2 EXISTING PAVEMENT

(5) EXISTING STRUCTURE

- (7) CLASS PP-1* CONCRETE
- 3 36 (900) DIAMETER METAL PLATE
- (8) PROPOSED HMA SURFACE COURSE
- PROPOSED CRUSHED STONE AND HMA SURFACE MIX
- 9 PROPOSED HMA BINDER COURSE

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

BASIS OF PAYMENT:

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

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

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

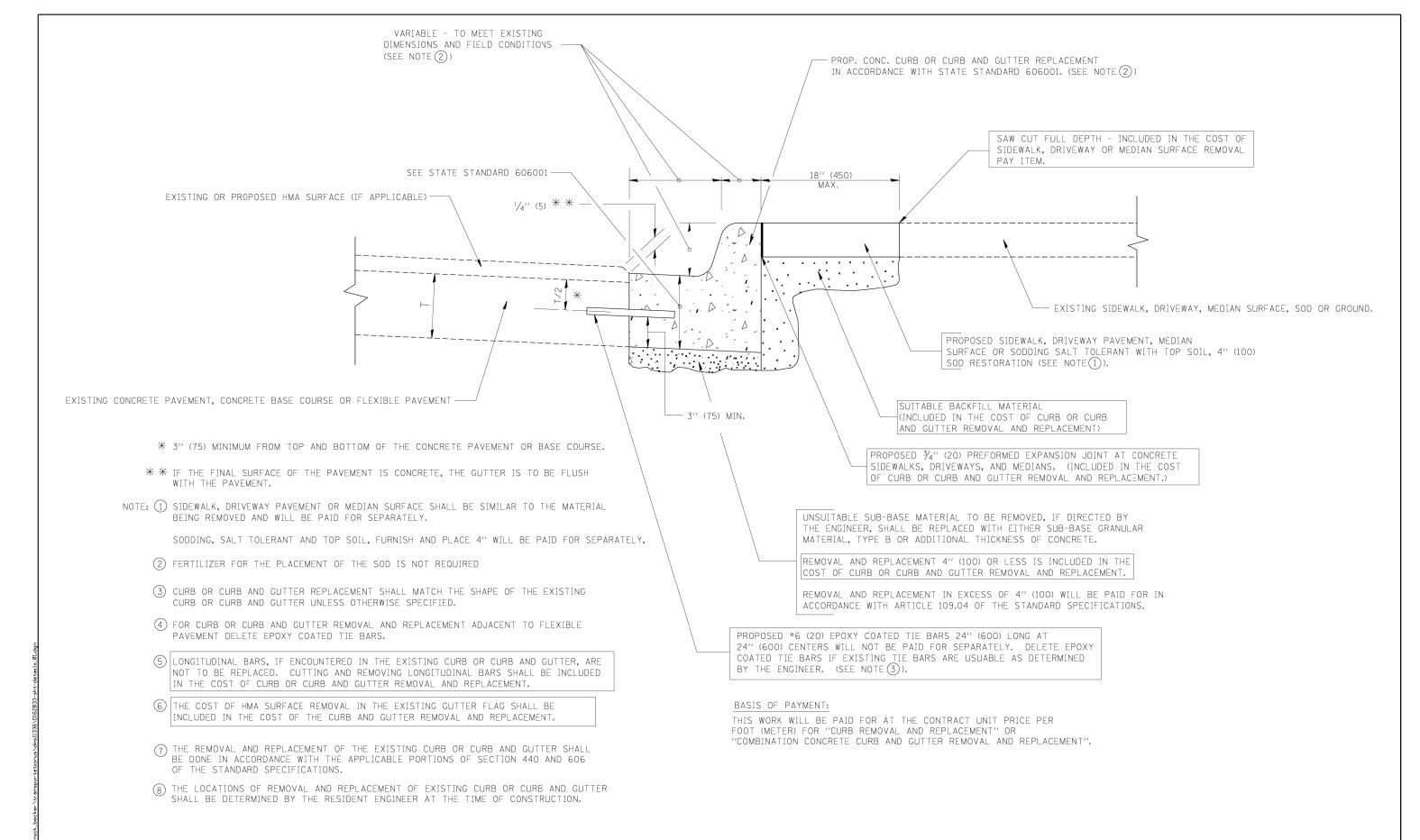
DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

580 111



DRAWN - BWL, EKS REVISED - PLOT SCALE = 40.0000 '/ in. CHECKED - NJB REVISED -	USER NAME = nick_becker	DESIGNED - JLM	REVISED -
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CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

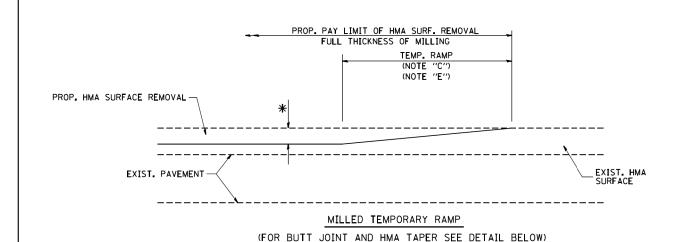
SCALE: NTS

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

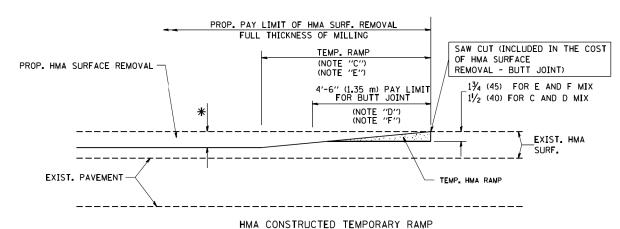


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PLOT SCALE = 40.0000 '/ in.	CHECKED	-	NJB	REVISED	=
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	DEMOV		AND REPI	ACEME	NT			846	D1HSRR2016-02&03	WILL	580	112
	NEIVIUV	AL F	AND NEP	ACEIVIE	MI				BD600-06 (BD-24)	CONTRACT	NO. 6	2B33
SHEET 13	OF	14	SHEETS	STA.	N/A	TO STA.	N/A	FED. R	OAD DIST. NO. 1 ILLINOIS FED. A	D PROJECT		



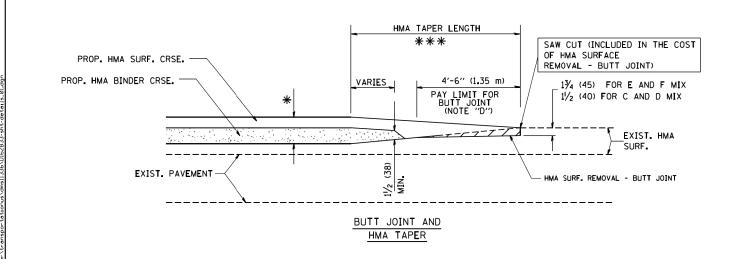
OPTION 1



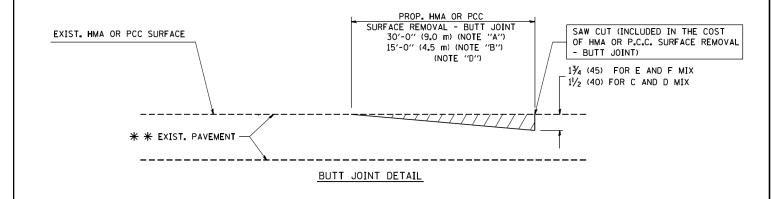
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

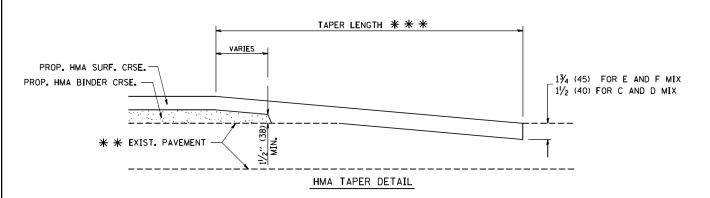
OPTION 2

TYPICAL TEMPORARY RAMP



TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING





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:

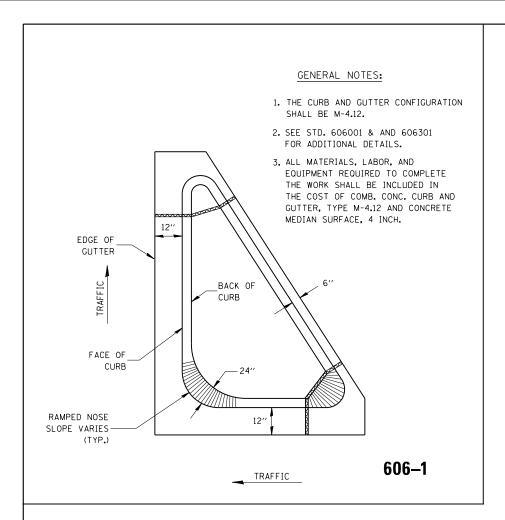
THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER)
FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL- BUTT JOINT".

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



USER NAME = nick_becker	DESIGNED	-	JLM	REVISED	-
	DRAWN	-	BWL, EKS	REVISED	-
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PLOT DATE = 3/23/2016	DATE	-	02/05/2016	REVISED	-

	BUTT JOINT AND HMA TAPER DETAILS									F.A.P. SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
										846 D1HSRR2016-02&03		WILL	580	113
L										BD400-05 BD32 CONTRACT NO. 62B33				
	SCALE:	E: NTS SHEET 14 OF 14 SHEETS STA. N/A TO STA. N/A					N/A	FED. RO	DAD DIST. NO. 1 ILLINOIS FED. A	ID PROJECT				



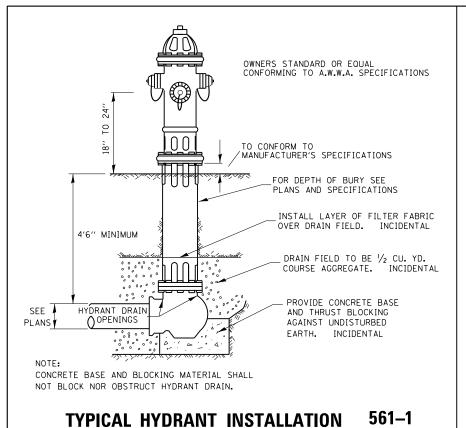
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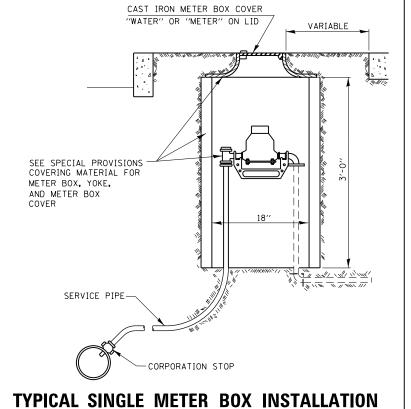
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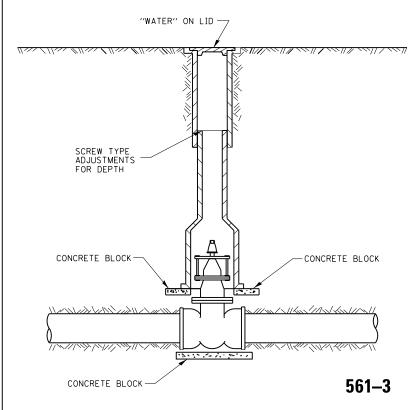
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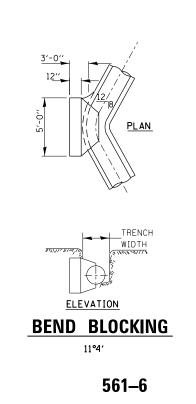
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	CONSTRUCTION DETAILS										D1HSRR2016-	02&03	WILL	580	114
													CONTRACT	NO. 6	52B33
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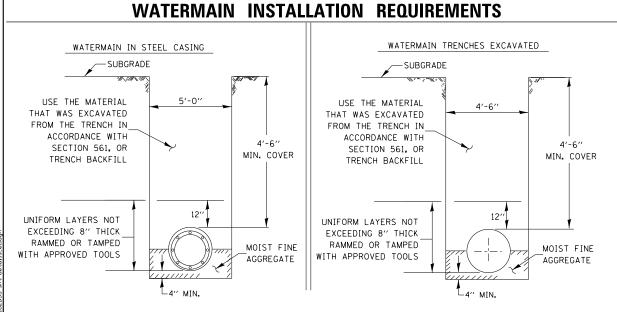








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GENERAL NOTES

1. ANY SOFT OR SPONGY MATERIAL ENCOUNTERED BELOW THE ELEVATION OF THE PIPE SHALL BE REMOVED AND REPLACED WITH WELL COMPACTED MOIST FINE AGGREGATE.

- 2. ANY ROCK ENCOUNTERED IN THE TRENCH SHALL BE REMOVED TO A DEPTH OF AT LEAST 8 INCHES BELOW THE PIPE GRADE AND REPLACED WITH WELL COMPACTED MOIST FINE AGGREGATE.
- 3. THE SIDES OF THE TRENCH MAY BE SLOPED OR BENCHED ABOVE A 5 FT. TRENCH DEPTH OR ABOVE THE ELEVATION OR THE TOP OF PIPE, WHICHEVER IS GREATER, IN LIEU OF CONPLETE SHORING OR SHEETING OF THE FULL TRENCH DEPTH.

BACKETH OPTIONS:

METHOD 1: UNIFORM LAYERS NOT EXCEEDING 12" THICK RAMMED OR TAMPED WITH APPROVED TOOLS

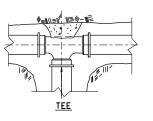
METHOD 2: UNIFORM LAYERS NOT EXCEEDING 12" THICK INUNDATED OR DEPOSITED IN WATER METHOD 3: FILL TRENCH WITH LOOSE MATERIAL THEN JET WITH WATER, 6 FT MANIMUM SPACING OF HOLES

561–4

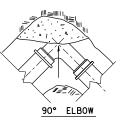


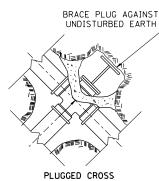
PLUGGED TEE

ARTH VERTICAL BEND



TYPICAL VALVE BOX INSTALLATION





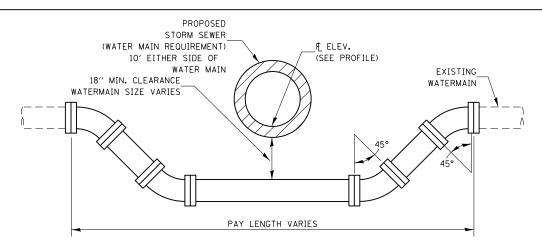
NOTES:

ALL BLOCKS BEAR AGAINST UNDISTRUBED EARTH.
ALL BLOCKING SHALL BE 3,000 P.S.I. POURED CONCRETE.
ARROWS INDICATE DIRECTION OF THRUST.
ALL FITTINGS SHOWN IN PLAN EXCEPT VERTICLE BEND.

561-2

TYPICAL THRUST BLOCK INSTALLATIONS

561-5



ADJUSTING WATERMAIN DETAIL

561-7

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.	USER NAME = nick_becker	DESIGNED	-	JLM	REVISED -
		DRAWN	-	BWL, EKS	REVISED -
	PLOT SCALE = 40.0000 '/ in.	CHECKED	-	NJB	REVISED -
	PLOT DATE = 3/23/2016	DATE	-	02/05/2016	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS													
SCALE:	NTS	SHEET 2	0F 3	SHEETS	STA.	N/A	TO STA.	N/A					

