# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PLANS FOR PROPOSED FEDERAL AID HIGHWAY LOCAL AGENCY PAVEMENT PRESERVATION (LAPP) FAU ROUTE 1419 (MADISON STREET) 21ST AVENUE TO 2ND AVENUE SECTION NO. 08-00127-00-RS

**PROJECT M-9003(050)** 

**VILLAGE OF MAYWOOD** 

**COOK COUNTY** 

**DESIGN DESIGNATION** 

POSTED SPEED LIMIT: 30 MPH

COLLECTOR

PROJECT LOCATED IN THE VILLAGE OF MAYWOOD

TRAFFIC DATA

**DESIGN SPEED 30 MPH** 

2030 ADT = 12,000

0 10' 20' 30'

SCALE: 1" = 10'

0 50' 100'

SCALE: 1" = 40'

0 50' 100'

SCALE: 1" = 30'

0 50' 100'

SCALE: 1" = 30'

SCALE: 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.

STATION 3+50

MADISON STREET



Know what's **below**. **Call** before you dig.

CONTRACT NO. 63102

LOCATION MAP
TOWNSHIP 39 NORTH, RANGE 12 EAST, SECTION 19, 11, 14, 15

HANDS PARSENT OF THE PROJECT OMMISION BEGINS STATION 594-37 MADISON STREET

HANDS PARSENT OF THE PROJECT OMMISION ENDS STATION 694-37 MADISON STREET

HANDS PARSENT OF THE PROJECT OMMISION ENDS STATION 694-37 MADISON STREET

HANDS PARSENT OF THE PROJECT OMMISION ENDS STATION 694-37 MADISON STREET

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HANDS PARSENT OF THE PROJECT OMMISION ENDS STATION 694-37 MADISON STREET

HANDS PARSENT OF THE PROJECT OMMISION ENDS STATION 694-37 MADISON STREET

- AREA OF IMPROVEMENT

NOT TO SCALE

GROSS LENGTH OF IMPROVEMENT = 6,587 FT. = 1.248 MI.

NET LENGTH OF IMPROVEMENT = 6.424 FT. = 1.217 MI.

CENTRACT NO. 63102

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1419 08-00127-00-RS COOK 15

ILLINGIS PROJECT M-9003(050)

LOCATION OF SECTION INDICATED THUS:

STATE OF ILLINOIS
ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED NOVEMBER 18 20 0 8

WILLAGE OF MAYWOOD, PRESIDENT

PASSED JANUARY 7 2009

DISTRICT ENGINEER OF LOCAL ROADS & STREETS

RELEASED FOR BID
BASED ON LIMITED
REVIEW

JANUARY 8 2009

DISTRICT PROPERTY OF MICHAELES

(PRINTED BY AUTHORITY OF THE STATE OF ILLINOIS

62-060382 ULICENSED PROFESSIONAL ENGINEER OF

DATE SIGNED: 11-13-08

LICENSE EXPIRES

EDWIN HANCOCK ENGINEERING COMPANY 9933 ROOSEVELT ROAD PHONE: (708) 865-0300 WESTCHESTER, ILLINOIS 60154

CONTRACT NO. 63102

# **INDEX OF SHEETS**

# SHEET NO. DESCRIPTION COVER SHEET, LOCATION MAP

INDEX OF SHEETS, LEGEND OF SYMBOLS, & I.D.O.T. STANDARD DRAWINGS GENERAL NOTES

SUMMARY OF QUANTITIES **EXISTING & PROPOSED** TYPICAL CROSS SECTIONS

PAVING PLANS

**DETAILS & NOTES** 

7-10

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING (BD08)

BUTT JOINT AND HMA TAPER DETAILS (BD32)

TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS (TC10)

DISTRICT ONE TYPICAL PAVEMENT MARKINGS (TC13)

DISTRICT 1 - DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY RESURFACING (TS07)

# **HIGHWAY STANDARDS**

STANDARD NO.	TITLE OR DESCRIPTION				
000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS				
442201-03	CLASS C&D PATCHES				
701501-05	URBAN LANE CLOSURE, 2-LANE, 2-WAY, UNDIVIDED				
701606-06	URBAN LANE CLOSURE, MULTILANE, 2-WAY, WITH MOUNTABLE MEDIAN				
701701-06	URBAN LANE CLOSURE, MULTILANE INTERSECTION				
701801-04	LANE CLOSURE, MULTILANE, 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE				
701901-01	TRAFFIC CONTROL DEVICES				

# **LEGEND OF SYMBOLS**

(TO BE USED IN CONJUNCTION WITH I.D.O.T. STANDARD 000001-05)

	•
SYMBOL	DESCRIPTION
В	EXISTING HOT-MIX ASPHALT CONCRETE AREA
С	EXISTING CONCRETE AREA
+ + +	PROPOSED HOT-MIX ASPHALT BUTT JOINT
	HOT-MIX ASPHALT SURFACE REMOVAL
	PROPOSED HOT-MIX ASPHALT PAVING AREA
A	STRUCTURE TO BE ADJUSTED
F	FILLING VALVE VAULTS
1C	CLOSED LID TYPE 1
RC-1C	STRUCTURE TO BE RECONSTRUCTED WITH A NEW TYPE 1 FRAME & LID (C = CLOSED, P = OPEN LID)
	EXISTING HANDHOLE
"E"H	EXISTING HEAVY DUTY HANDHOLE
$\bowtie$	TRAFFIC SIGNAL CONTROLER
	DOUBLE HANDHOLE
$\otimes$	EXISTING WATER VALVE BOX
	EXISTING CURB AND GUTTER

MAYWOOD MADISON STREET IMPROVEMENT (LAPP) INDEX OF SHHETS, I.D.O.T. STANDARDS DRAWINGS AND LEGEND OF SYMBOLS

> CHECKED BY: JGG DATE: 11/10/2008

**ANCOCK**† Civil Engineers

† Municipal Consultants

† Established 1911

9933 Roosevelt Road ster, Illinois 60154-2780 Phone: 708/865-0300 Fax: 708/865-1212

DRAWN BY: MK SCALE: NONE

E.H.E. PROJECT NO.: 565-08-20601

ROUTE NO. SECTION

# **GENERAL NOTES**

## **STANDARDS**

ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED TO BE THE LATEST STANDARD OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION AS SHOWN ON THE INDEX OF SHEETS IN THE PLANS. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JANUARY 1, 2007, THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS" ADOPTED JANUARY 1, 2009, THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS," "THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS" MAY 1996 FIFTH EDITION, AND THE "DETAILS" IN THE PLANS AND THE "SPECIAL PROVISIONS" INCLUDED IN THE CONTRACT DOCUMENTS.

#### **UNDERGROUND UTILITIES**

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 811 FOR FIELD LOCATIONS OF BURIED ELECTRICAL, TELEPHONE AND GAS FACILITIES. (48 HOURS NOTIFICATION

THE LOCATIONS OF THE UNDERGROUND UTILITIES IF SHOWN ON THE PLANS HAVE BEEN OBTAINED BY FIELD SURVEYS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT DATA IS ESSENTIALLY CORRECT, BUT THE VILLAGE OF MAYWOOD, THE ILLINOIS DEPARTMENT OF TRANSPORTATION AND/OR OTHER OFFICES AND AGENCIES ASSOCIATED WITH THE DEVELOPMENT OF THESE PLANS DO NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS. THE CONTRACTOR WILL BE REQUIRED TO VERIFY THE EXACT LOCATION OF EACH FACILITY WITH THE UTILITY COMPANY, AND SHALL TAKE DUE CARE IN ALL PHASES OF THE CONSTRUCTION TO PROTECT ANY SUCH FACILITIES WHICH MAY BE AFFECTED BY THE WORK. ANY DAMAGE TO **EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE** 

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE VILLAGE OF MAYWOOD.

#### FRAMES AND GRATES

THE TYPE OF FRAMES AND GRATES REQUIRED FOR ALL MANHOLES AND VALVE VAULTS LISTED IN THE SUMMARY OF QUANTITIES MAY BE FOUND ON THE PLANS AT THEIR RESPECTIVE LOCATIONS. WHERE LIDS ARE CALLED FOR ON THE PLANS, THEY SHALL BE IN ACCORDANCE WITH ARTICLE 604.04 OF THE STANDARD SPECIFICATIONS AND THE TERM LID IS USED IN LIEU OF GRATE. ALL LIDS ON SANITARY MANHOLES, COMBINED SEWER MANHOLES, AND VALVE VAULTS SHALL BE OF THE SELF SEALING TYPE.

ON ALL IMPROVEMENTS, THE FRAMES AND LIDS OF EXISTING CATCH BASINS, INLETS, MANHOLES, AND VALVE VAULTS WHICH ARE TO BE ABANDONED DUE TO CONSTRUCTION OF THIS IMPROVEMENT ARE TO REMAIN THE PROPERTY OF THE VILLAGE OF MAYWOOD AND BE SALVAGED. THESE ITEMS SHALL BE DELIVERED TO THE VILLAGE OF MAYWOOD.

## MANHOLE OR VALVE COVERS

THE WORD "WATER", "SANITARY", OR "STORM" SHALL BE CAST INTO THE LID OF EACH RESPECTIVE MANHOLE OR VALVE VAULT.

# **MAINTENANCE OF SEWER FLOWS**

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS AS TO MAINTAIN AT ALL TIMES FLOW THROUGH EXISTING STORM AND SANITARY SEWER SYSTEMS. HE SHALL ALSO PROVIDE AND MAINTAIN AN EFFICIENT PUMPING PLANT IF NECESSARY AND A TEMPORARY OUTLET AND BE PREPARED AT ALL TIMES TO DISPOSE OF THE WATER COLLECTED IN A SAFE MANNER WITHOUT DAMAGE OF ANY KIND TO ADJACENT PROPERTIES. THE ENDS OF EXISTING DRAINAGE LINES WHICH ARE NOT TO BE INCORPORATED INTO THE PROJECT ARE TO BE SEALED AS SPECIFIED IN THE SPECIAL PROVISIONS. EXISTING STRUCTURES ARE TO BE INSPECTED BEFORE CONSTRUCTION STARTS - ANY ACCUMULATION OF MATERIAL IN THE STRUCTURE DUE TO CONSTRUCTION OPERATIONS SHALL BE REMOVED BY THE CONTRACTOR AT HIS EXPENSE.

# MAINTENANCE OF EXISTING DRAINAGE STRUCTURES

WHEN DURING THE CONSTRUCTION OPERATIONS, ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE OF ANY GUTTERS AND DRAINAGE STRUCTURE SO THAT THE NATURAL FLOW OF WATER IS OBSTRUCTED, IT SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF THE CONSTRUCTION OPERATIONS, ALL DRAINAGE FACILITIES SHALL BE CLEAN AND FREE OF ALL OBSTRUCTIONS DUE TO CONSTRUCTION OPERATIONS. THE COST OF THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT.

#### SAW CUTTING

THE CONTRACTOR SHALL SAW CUT ASPHALT PAVEMENT AS INDICATED ON THE PLANS TO SEPARATE THE EXISTING PAVEMENT TO BE REMOVED BY APPROVED MEANS OR AN APPROVED CONCRETE SAW TO A DEPTH AS DIRECTED BY THE ENGINEER. SUITABLE GUIDELINES OR DEVICES SHALL BE USED TO ASSURE CUTTING A NEAT, STRAIGHT LINE AS SHOWN ON THE PLANS. CARE SHALL BE TAKEN BY THE CONTRACTOR AS NOT TO DAMAGE THE REMAINING PAVEMENT DIRECTLY ADJACENT TO THE PAVEMENT TO BE REMOVED. ANY DAMAGE TO THE EXISTING PAVEMENT RESULTING FROM PAVEMENT REMOVAL OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. THE COST OF SAW CUTTING DESCRIBED ABOVE SHALL BE INCLUDED IN THE ITEM BEING REMOVED. SAW CUTS FOR PAVEMENT PATCHING WILL BE PAID FOR IN THE CONTRACT

# FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)

THIS ITEM ONLY PERTAINS TO STRUCTURES LOCATED IN THE CONCRETE OR HOT-MIX ASPHALT ROADWAY PAVEMENT AREAS THAT WILL REQUIRE CONCRETE OR HOT-MIX SURFACE REMOVAL. THE ENGINEER WILL MARK IN THE FIELD ALL STRUCTURES TO BE DONE UNDER THIS ITEM. SEE "DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING."

#### PRIME COAT

PRIME COAT MUST BE INSTALLED NO EARLIER THAN TWENTY-FOUR (24) HOURS PRIOR TO PLACEMENT OF HOT-MIX ASPHALT.

### FIELD OFFICE

THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE OR VILLAGE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT OR THE VILLAGE

#### **BARRICADES**

THE CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) WEIGHTED SANDBAGS ON EACH TYPE I OR TYPE II BARRICADE USED, ONE (1) WEIGHTED SANDBAG ACROSS EACH BOTTOM RAIL

#### **BUTT JOINTS**

BUTT JOINT WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT). IN ACCORDANCE WITH THE "BUTT JOINT AND HMA TAPER DETAILS" SHEET INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED.

# **MILLED PAVEMENT OPEN TO TRAFFIC**

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 (80 KM/H) OR LESS AND 1 INCH (25 MM) WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH (80 KM/H). WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES (75 MM) MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H)

#### **PAVING OPERATIONS**

CONTRACTOR MUST PAVE MADISON STREET IN A MAXIMUM OF 2 PASSES. IF THE CONTRACTOR IS NOT ABLE TO COMPLETE ALL PAVING ONE (1) DAY, THE CENTERLINE JOINT SHALL BE SEALED.

#### PAVEMENT PATCHING

EXACT LOCATIONS OF CLASS D PATCHES WILL BE DETERMINED IN FIELD BY ENGINEER.

# **ADA RAMPS**

LOCAL AGENCY RESPONSIBLE FOR MAKING SIDEWALK CORNERS ADA COMPLIANT BEFORE PROJECT START. RESIDENT ENGINEER TO VERIFY.

> MAYWOOD **MADISON STREET IMPROVEMENT (LAPP) GENERAL NOTES**

> > DRAWN BY: MK CHECKED BY: JGG DATE: 11/10/2008

ENGINEERING \$ Established 1911

9933 Roosevelt Road Phone: 708/865-0300

SCALE: NONE

CONTRACT NO. 63102

# **SUMMARY OF QUANTITIES**

			QUANTITY 1000 80% FEDERAL
CODE	PAYITEM	UNIT	20% VILLAGE
			-
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GAL	3,600
40600300	AGGREGATE (PRIME COAT)	TON	70
40600895	CONSTRUCTING TEST STRIP	EACH	2
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQYD	500
40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX D, N70	TON	3,350
44000198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQYD	34,000
44201737	CLASS D PATCHES, TYPE I, 8 INCH	SQYD	680
44201741	CLASS D PATCHES, TYPE II, 8 INCH	SQYD	1,360
44201745	CLASS D PATCHES, TYPE III, 8 INCH	SQYD	680
44201747	CLASS D PATCHES, TYPE IV, 8 INCH	SQYD	680
60257900	MANHOLES TO BE RECONSTRUCTED	EACH	19
60266100	VALVE VAULTSTO BE RECONSTRUCTED	EACH	19
60300310	FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)	EACH	68
60406100	FRAMES AND LIDS, TYPE 1, CLOSED LID	EACH	57
67100100	MOBILIZATION	L SUM	1
70101700	TRAFFIC CONTROL AND PROTECTION	L SUM	1
70106800	CHANGEABLE MESSAGE SIGN	CAL-MO	2
70300100	SHORT TERM PAVEMENT MARKING	FOOT	3,500
70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	1,700
78000100	THERMOPLASTIC PAVEMENT MARKING - LETERS AND SYMBOLS	SQFT.	150
78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	19,000
78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	3,200
78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	125
78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	800
78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	700
88600600	DETECTOR LOOP REPLACEMENT	FOOT	80
X4067107	POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50	TON	1,600
XX005195	COMBINED SEWER MANHOLE, 4' DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	11
Z0076600	TRAINEES	HOUR	500
DENOTES SP	ECIALTY ITEM		

DENOTES SPECIALTY ITEM

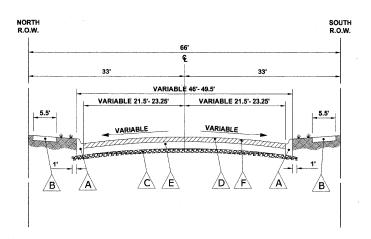
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MAYWOOD
MADISON STREET IMPROVEMENT (LAPP)
SUMMARY OF QUANTITIES

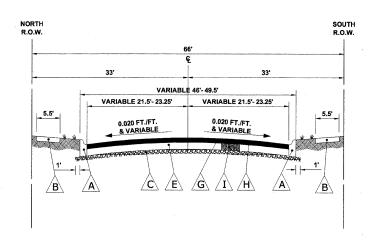
DRAWN BY: MK CHECKED BY: JGG DATE: 11/10/2008

H.E. PROJECT NO.: 565-08-20601

CONTRACT NO. 63102



# EXISTING TYPICAL CROSS SECTION MADISON STREET



# PROPOSED TYPICAL CROSS SECTION MADISON STREET

# **LEGEND OF SYMBOLS**

SYMBOL

DESCRIPTION

A

EXISTING COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.12

В

EXISTING PORTLAND CEMENT CONCRETE SIDEWALK

EXISTING SUB-BASE GRANULAR MATERIAL

Ď

EXISTING HOT-MIX ASPHALT SURFACE COURSES, VARIABLE

<u>E</u>

EXISTING BASE COURSE

F

PROPOSED HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH

# HOT-MIX ASPHALT (HMA) MIXTURE REQUIREMENTS

ITEM	A C TYPE	VOIDS
HMA SURFACE COURSE, MIX D, N70, (IL - 9.5 mm)	PG 64-22	4% @ 70 GYR.
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50	SBS/SBR PG 76-28/22	4% @ 50 GYR.
CLASS D PATCHES (HMA BINDER IL-19mm)	PG 64-22*	4% @ 70 GYR.

THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE COURSE IS 112 LBS/SQYD/IN

\* WHEN RAP EXCEEDS 20%, THE NEW HMA BINDER IN THE MIX SHALL BE PG 58-22.

# LEGEND OF SYMBOLS

SYMBOL

DESCRIPTION

A

EXISTING COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.12

B

EXISTING PORTLAND CEMENT CONCRETE SIDEWALK, 5"

<u>c</u>

EXISTING SUB-BASE GRANULAR MATERIAL, 4"

E G EXISTING CONCRETE BASE COURSE, 8"

Ĥ.

PROPOSED POLYMERIZED LEVELING BINDER (MACHINE METHOD) IL-4.75, N50, MINIMUM 3/4"

PROPOSED HOT-MIX ASPHALT SURFACE COURSE, MIX D, N70, 1-1/2"

<u>I</u>

PROPOSED CLASS D PATCH, 8"

MAYWOOD
MADISON STREET IMPROVEMENT (LAPP)
TYPICAL SECTIONS

9933 Roosevelt Road
Westchester, Illinois 60154-2780
Phone: 708/865-0300
Fax: 708/865-1212

SCALE: NONE

DRAWN BY: MK
CHECKED BY: JGG
DATE: 11/10/2008

DATE: 11/1

I.E. PROJECT NO.: 565-08-20601

WORKING DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION AT (708) 450-4482.

3. THE CONTRACTOR SHALL SAW CUT ALL BUTT JOINTS TO ADJOINING PAVEMENTS NOT MORE THAN 24 HOURS PRIOR TO PLACING SURFACE COURSE.

4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO TAKE PRECAUTIONS SO AS NOT TO DAMAGE PARKWAYS AND CURB OUTSIDE THE PRESCRIBED LIMITS OF RESTORATION. NO PARKWAY OR CURB RESTORATION IS INCLUDED FOR PAYMENT EXCEPT AS NECESSARY FOR STRUCTURE ADJUSTMENTS AND REPLACEMENT, OR AS DIRECTED BY ENGINEER.

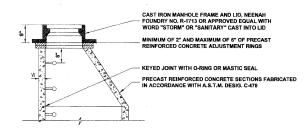
5. STOCKPILING OF MATERIALS ON THE PARKWAYS OR CURB WILL NOT BE ALLOWED, INCLUDING EXCAVATED MATERIAL OR TRENCH BACKFILL MATERIAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ANY DAMAGE TO THE PARKWAY OR SOD OUTSIDE OF THE PRESCRIBED LIMITS TO THE SATISFACTION OF THE ENGINEER AND THE VILLAGE AT HIS OWN EXPENSE



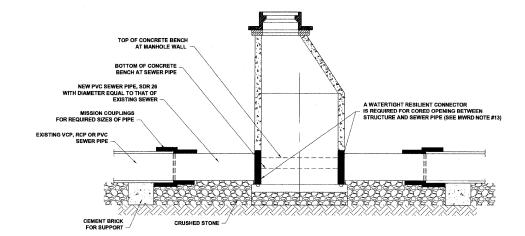
STRUCTURE ADJUSTMENT DETAIL WITH FRAME AND LID



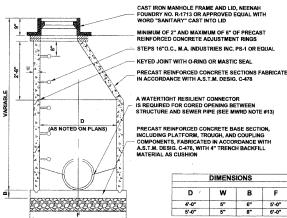
STRUCTURE ADJUSTMENT DETAIL WITHOUT FRAME AND LID



### STRUCTURE RECONSTRUCTION DETAIL



PROPSED COMBINED MANHOLE INSTALLED **ON EXISTING SEWER MAIN** 



# PROPOSED COMBINED MANHOLE DETAIL

M.W.R.D.G.C. GENERAL NOTES

THE MWRD SEWER SYSTEMS SECTION FIELD OFFICE MUST BE NOTIFIED AT LEAST TWO (2) WORKING DAYS PRIOR TO THE COMMENCEMENT OF WORK AT (708) 588-4055

SECTION

08-00127-00-RS

ILLINOIS PROJECT M-9003 (050)

CONTRACT NO. 63102

COUNTY

COOK 15

ROUTE NO.

1419

ELEVATION DATUM IS U.S.G.S.

ALL FLOOR DRAINS SHALL DISCAHARGE TO THE SANITARY SEWER SYSTEM.

ALL DOWNSPOUTS AND FOOTING DRAINS SHALL DISCHARGE INTO THE STORM SEWER SYSTEM.

ALL PVC SEWER PIPE SHALL BE SDR 26. ALL PVC SEWER PIPE JOINTS SHALL CONFORM TO ASTM D-3139 FOR PVC PIPE 12" IN DIAMETER OR LESS. ALL PVC SEWER PIPE JOINTS SHALL CONFORM TO ASTM D-3212 FOR PVC PIPE 15" IN DIAMETER OR MORE. ALL PVC SEWER PIPE 12" IN DIAMETER OR LESS SHALL CONFORM TO ASTM D-2241 (WATER QUALITY PIPE). ALL PVC SEWER PIPE 15" IN DIAMETER OR MORE SHALL CONFORM TO ASTM D-3034.

ALL D.I.P. STORM, COMBINED AND SANITARY SEWER PIPE JOINTS SHALL CONFORM TO ANSI A-21.11. ALL D.I.P. SEWER PIPE SHALL CONFORM TO ASTM A-21.51. ALL D.I.P. SEWER PIPE SHALL BE CLASS 52.

SHALL BE CLASS 52.

ALL SANITARY, COMBINED, AND STORM SEWER CONSTRUCTION IN COMBINED SEWER
AREAS, REQUIRES STONE BEDDING 1/4" TO 1" IN SIZE, WITH A MINIMUM THICKNESS EQUAL
TO 1/4 THE OUTSIDE DIAMETER OF THE SEWER PIPE, BUT NOT LESS THAN FOUR INCHES (4")
NOR MORE THÂN EIGHT INCHES (8"). MATERIAL SHALL BE CA-11 OR CA-13 AND SHALL BE
EXTENDED AT LEAST 12" ABOVE THE TOP OF THE PIPE.

"BAND SEAL" OR SIMILAR FLEXIBLE-TYPE COUPLINGS SHALL BE USED IN THE CONNECTION OF SEWER PIPE OF DISSIMILAR MATERIALS.

WHEN CONNECTING TO AN EXISTING SEWER MAIN BY MEANS OTHER THAN AN EXISTING WYE, TEE, OR AN EXISTING MANHOLE, ONE OF THE FOLLOWING METHODS SHALL BE USED:

CIRCULAR SAW-CUT OF SEWER MAIN BY MECHANICAL CORING MACHINE, AND PROPER INSTALLATION OF HUB-WYE SADDLE OR HUB-TEE SADDLE, IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

REMOVE AN ENTIRE SECTION OF PIPE (BREAKING ONLY THE TOP OF ONE BELL) AND REPLACE WITH A WYE OR TEE BRANCH SECTION. AFTER THE WYE OR TEE BRANCH IS INSERTED, CONCRETE SHALL BE PLACED OVER THE BROKEN AREA TO A MINIMUM THICKNESS OF 4" AND TO A DIMENSION OF 8" IN ALL DIRECTIONS.

USING PIPE CUTTER, NEATLY AND ACCURATELY CUT OUT DESIRED LENGTH OF PIPE FOR INSERTION OF PROPER FIITING. USE "BAND SEAL" OR SIMILAR COUPLINGS TO HOLD FIRMLY IN PLACE. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR THE INSTALLATION

WHEREVER A SEWER CROSSES UNDER A WATER MAIN. THE MINIMUM VERTICAL DISTANCE WHEREVER A SEWER CROSSES UNDER A WATER MAIN, THE MINIMUM VERTICAL DISTANCE FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATER MAIN SHALL BE 18 INCHES. FURTHERMORE, A MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN SANITARY/COMBINED SEWERS AND WATER MAINS SHALL BE MAINTAINED UNLESS: THE SEWER IS LAID IN A SEPARATE TRENCH, KEEPING A MINIMUM 18" VERTICAL SEPARATION; OR THE SEWER IS LAID IN THE SAME TRENCH WITH THE WATER MAIN LOCATED AT THE OPPOSITE SIDE ON A BENCH OF UNDISTURBED EARTH, KEEPING A MINIMUM 18" VERTICAL SEPARATION. IF EITHER THE VERTICAL OF HORIZONTAL DISTANCES DESCRIBED ABOVE CANNOT BE MAINTAINED, OR THE SEWER CROSSES ABOVE THE WATER MAIN, THE SEWER SHALL BE CONSTRUCTED TO WATER MAIN STANDARDS.

ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE A MINIMUM INSIDE DIAMETER OF 48 INCHES, AND SHALL BE PRE-CAST REINFORCED

ALL ABANDONED SEWERS SHALL BE PLUGGED AT BOTH ENDS WITH A MINIMUM OF TWO (2) FEET LONG, NON-SHRINK CONCRETE/MORTAR PLUG.

ALL INLET AND OUTLET PIPES OF SANITARY SEWER MANHOLES AND OTHER UNDERGROUND STRUCTURES (AND IN COMBINED SEWER AREAS, ALSO ALL COMBINED/STORM SEWER MANHOLES, CATCH BASINS, INLETS, AND UNDERGROUND DETENTION STORAGE STRUCTURES) SHALL BE JOINED WITH WATERTIGHT FLEXIBLE RUBBER CONNECTORS CONFORMING TO A.S.T.M. C-443 & C-923 WITH STAINLESS STEEL BANDS

THE MAXIMUM ALLOWABLE INFILTRATION OR EXFILTRATION IS 100 GAL/DAY/MILF/INCH DIA

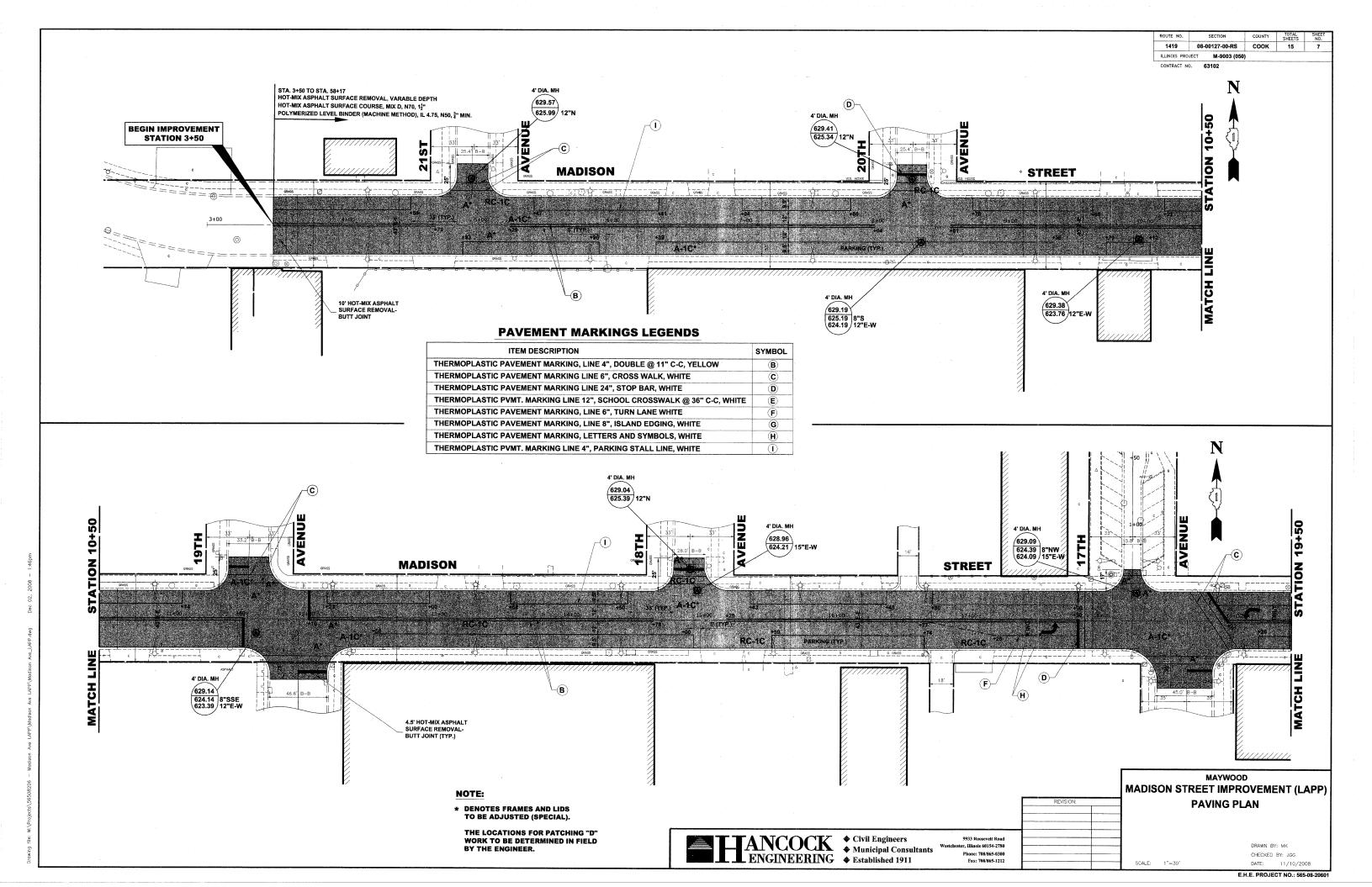
MAYWOOD MADISON STREET IMPROVEMENT (LAPP) **DETAILS** 

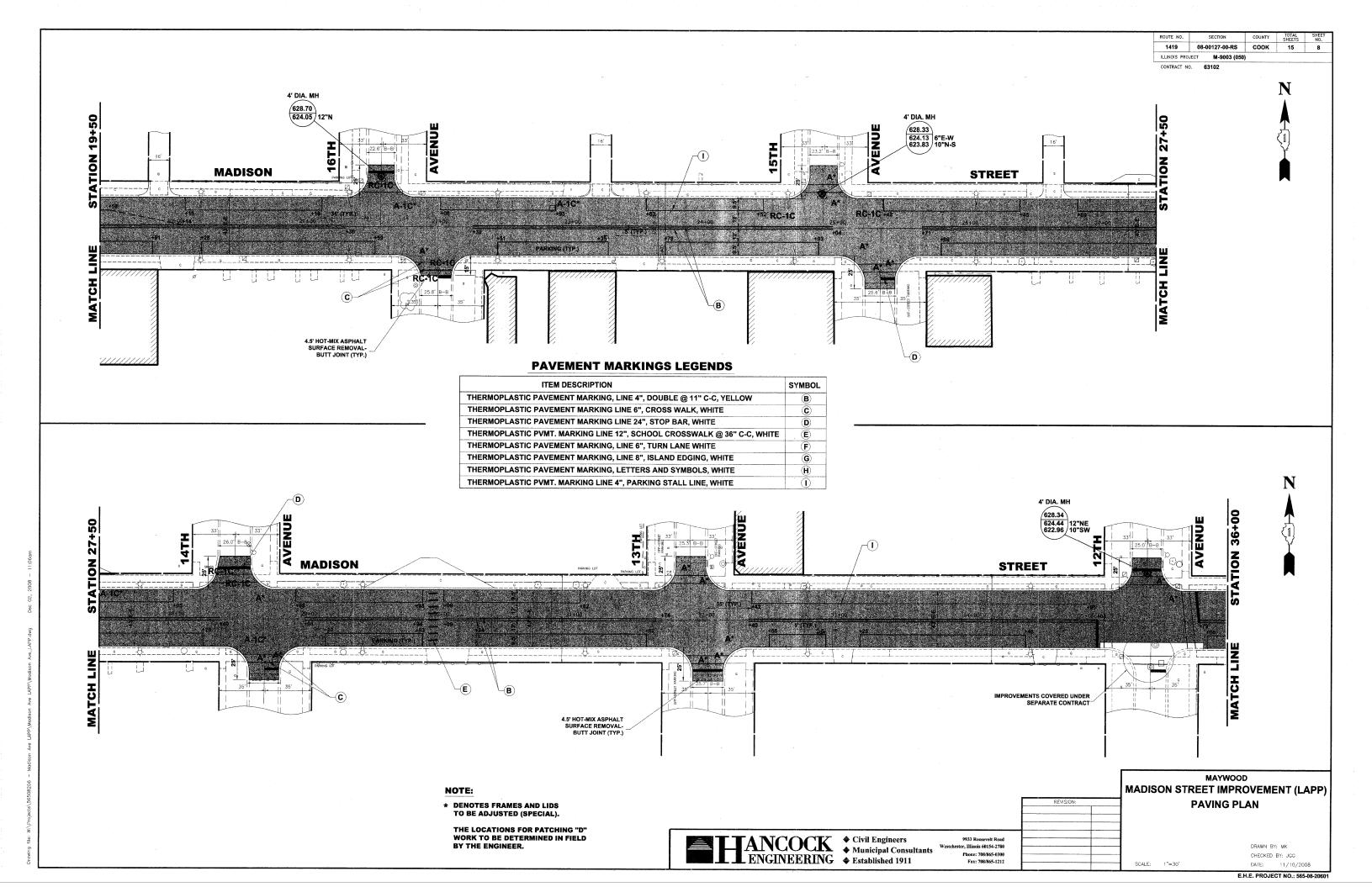
ANCOCK Civil Engineers

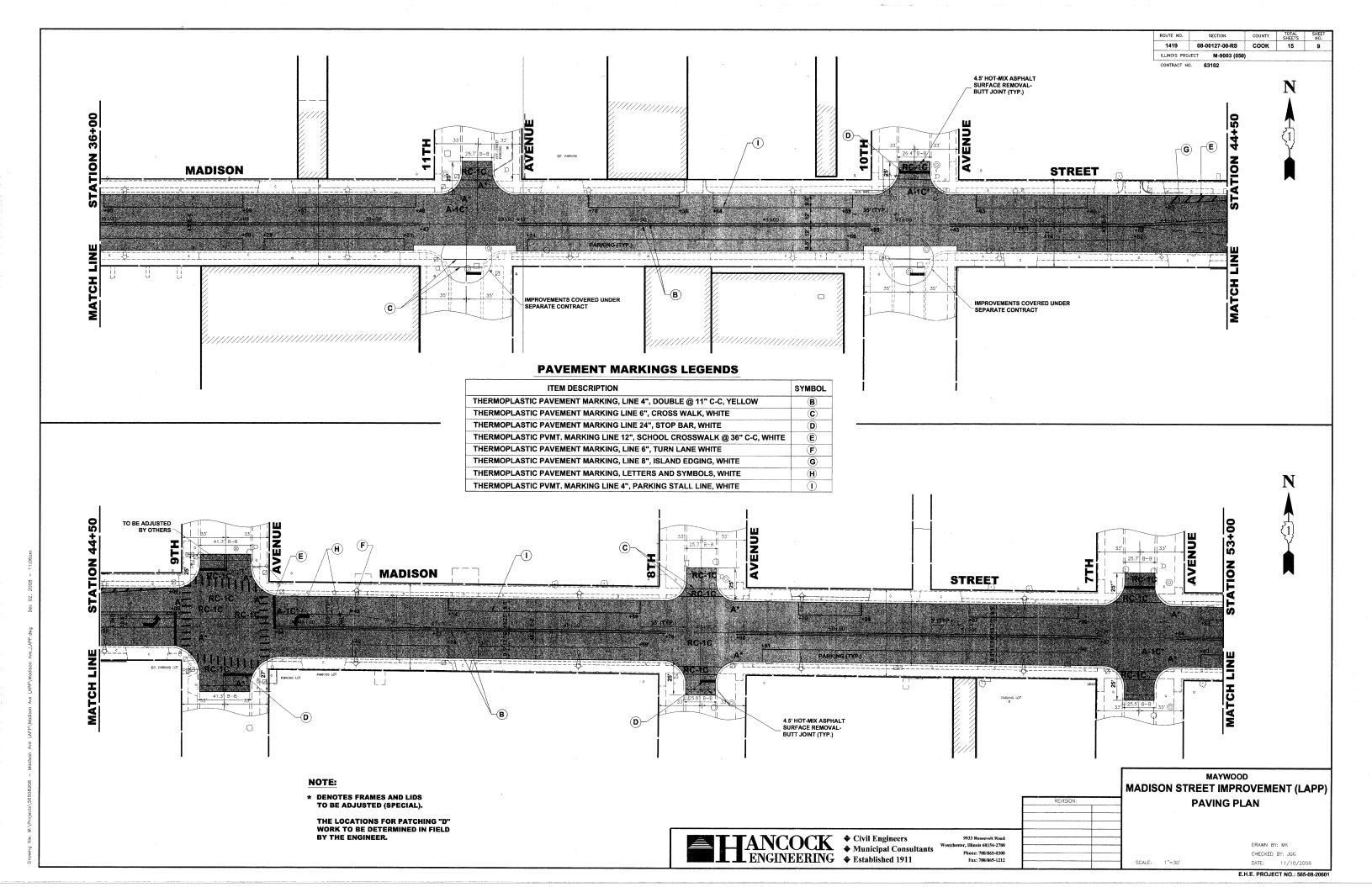
Municipal Consultants ENGINEERING \$ Established 1911

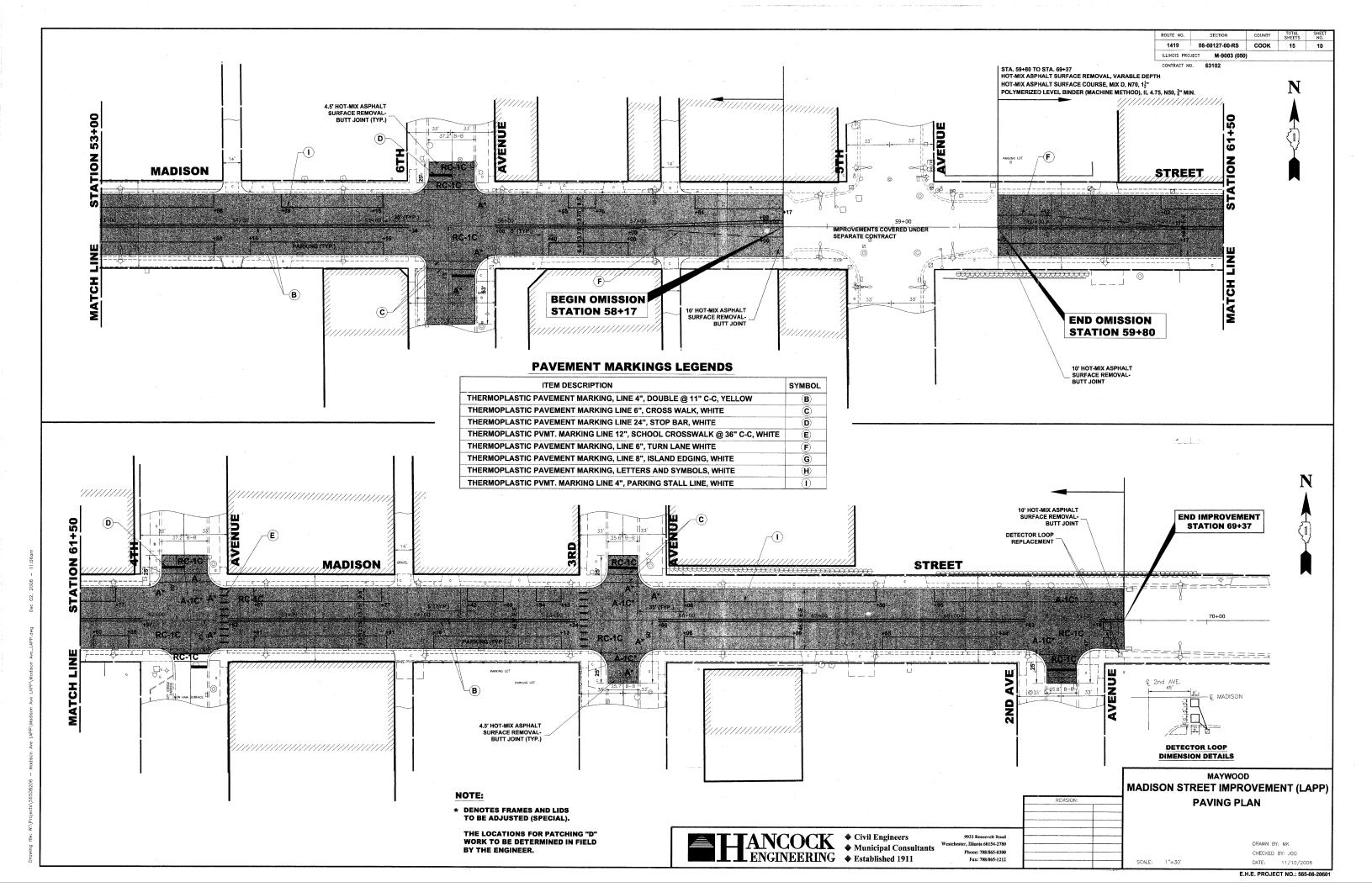
9933 Roosevelt Road Phone: 708/865-0300

E.H.E. PROJECT NO.: 565-08-2060









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 & (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
- 6 FRAME AND LID (SEE NOTES)
- ② EXISTING PAVEMENT
- CLASS SI CONCRETE, HMA SURFACE COURSE OR HMA BINDER COURSE
- 3 36 (900) DIAMETER METAL PLATE
- PROPOSED CRUSHED STONE AND HMA SURFACE MIX
- (5) EXISTING STRUCTURE
- 8 PROPOSED HMA SURFACE COURSE
- 9 PROPOSED HMA BINDER COURSE

# LOCATION OF STRUCTURES:

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

BASIS OF PAYMENT:
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

USER NAME = gagliandot. FILE NAME = DESIGNED - R. SHAH REVISED - R. SHAH 03-10-95 .dststd\22x34\bd86.dgr 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

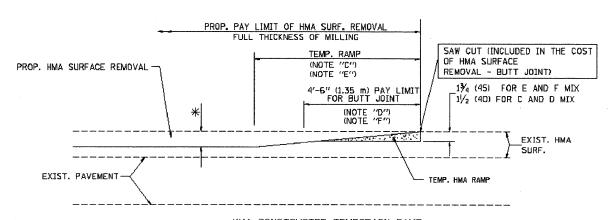
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

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

COUNTY 1419 08-00127-00-RS COOK 15 11 CONTRACT NO. 63102 FEG. RDAG DIST. NO. 1 | ILLINOIS FED. AID PROJECT E.H.E. PROJECT NO. 565-08-20601

# OPTION 1

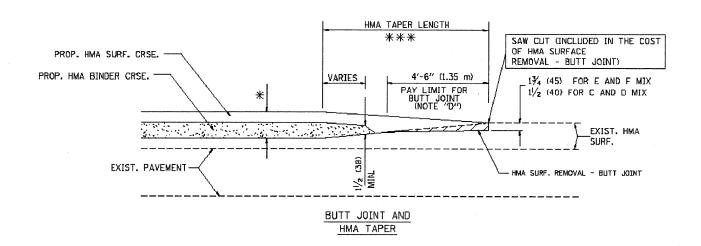
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)



HMA CONSTRUCTED TEMPORARY RAMP (FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

# OPTION 2

# TYPICAL TEMPORARY RAMP



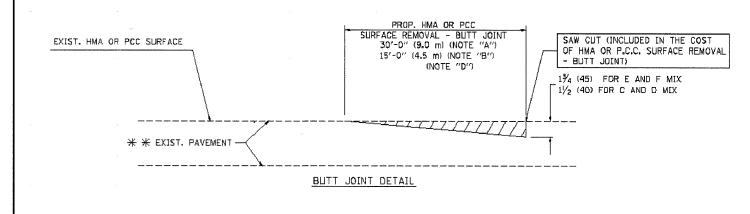
# TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING

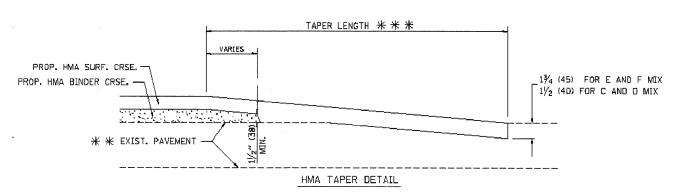
DESIGNED - M. DE YONG USER NAME = gaglianabt REVISED - R. SHAH 10-25-94 REVISED - A. ABBAS 03-21-97 CHECKED -PLOT SCALE = 50.0000 '/ IN. REVISED - M. GOMEZ 04-06-01 PLOT DATE = 1/4/2008 DATE - 05-13-90 REVISED - R. BORO 01-01-07

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

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

SECTION COUNTY SHEETS NO. 1419 08-00127-00-RS соок





# 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) DF 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 SCULARE 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.

BD400-05 BD32

FEG. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT

E.H.E. PROJECT NO. 565-08-2060

CONTRACT NO. 63102

FILE NAME =

# 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:
- O) ONE NOAD CONSTRUCTION AMEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE
- 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 MADA 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
- 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.

SCALE: NONE

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

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

ROAD CONSTRUCTION AHEAD

- USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701505 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.

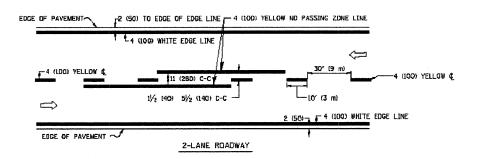
All dimensions are in millimaters (inches) unless otherwise shown.

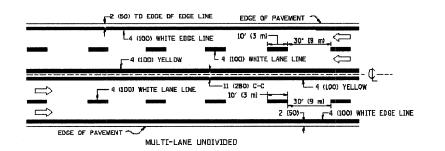
FILE NAME = USER NAME = geglienobt DESIGNED - LHA REVISED - J. 08ERLE 10-18-95 Wi\dastard\22x34\to18.dgn DRAWN REVISED - A. HOUSEH 03-06-96 PLOT SCALE = 60.000 '/ IN. CHECKED -REVISED - A. HOUSEH 10-15-96 PLOT DATE = 1/4/2008 DATE - 06-89 REVISED -T. RAMMACHER 01-06-00

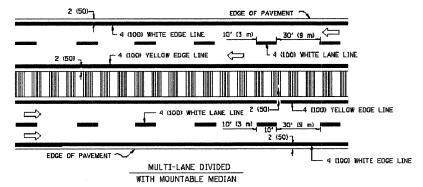
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWIAYS SHEET NO. 1 OF 1 SHEETS STA.

SECTION COUNTY TOTAL SHEE COOK 15 13 08-00127-00-RS CONTRACT NO. 63102 TC-10 FEG. RIDAG DIST. NG. 1 ILLINOIS FED. AID PROJECT NO. 565-08-2060

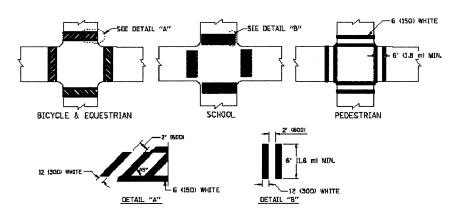




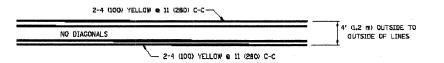


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

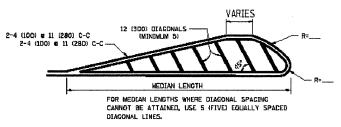
# TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



4' (1.2 m) WIDE MEDIANS ONLY

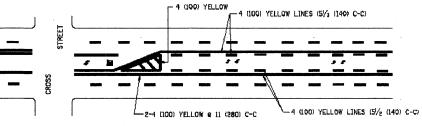


DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))

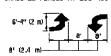
75' (25 m) C-C 30MPH (60 km/h) TO 45MPH (TO km/h))

150' (45 m) C-C (MORE THAN 45MPH (TO km/h)]

#### MEDIANS OVER 4' (1.2 m) WIDE

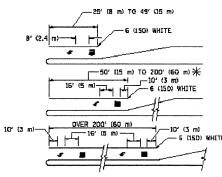


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR, ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

# TYPICAL PAINTED MEDIAN MARKING

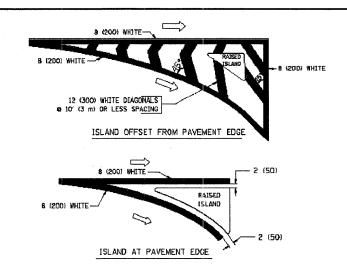


FULL SIZE LETTERS B' (2.4 m) AND ARROWS SHALL BE USED.  $\P$  AREA = 15.6 SQ. FT. (1.5 m² ) [11] AREA = 20.8 SQ. FT. (1.9 m²)

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

TYPICAL LEFT (OR RIGHT) TURN LANE

# TYPICAL TURN LANE MARKING



# TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	1D' (3 m) LINE WITH 3O' (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	SI/c (14D) C-C FROM SKIP-DASH CENTERLINE 11 (28G) 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 LEXTENSIONS 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)	SOLIO	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW: EDGE LINES ARE NDT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE, FULL SIZE LETTERS & SYMBOLS (B' (Z.4m))	SOLIO	WHITE	SEE TYPICAL TURN LAME MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 og 4 (100) EACH DIRECTION	SKIP-DASH AND SOLID	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE
	8' (2.4m) LEFT ARROW	IN PAIRS	WHITE	SEE TYPICAL TWD-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45" 12 (300) @ 30"	SOLID SOLID	WHITE WHITE WHITE	NDT LESS THAN 6' (1.8 m) APART 2' (500) APART 2' (500) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLIO	WHITE	PLACE 4' IL2 ni IN ADVANCE OF AND PARALLEL TO EROSSHALL, IF PRESENT. OTHERWISE, PLACE AT DESIRED STIPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS	SOLID	YELLOW: TWO WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE
	ND DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS		WHITE: DNE WAY TRAFFIC	SEE TYPICAL PAINTED MEDIAN MARKING.
CORE MARKING AND CHANNELIZING LINES	B (200) WITH 12 (500) DIAGONALS & 45"	SOLID	WHITE	DIAGDNALS: 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 IDVER 45MPH (70 km/h))
RAILROAD CROSSING	Z4 (600) TRANSVERSE LINES; "RR" IS 5' (1.8 m) LETTERS; 18 (400) LINE FOR "X"	50LID	WHITE	SEE STATE STANDARD 78000L AREA OF: "R"=3.5 SO. FT. (0.33 m <sup>2</sup> ) EACH "X"=54.0 SO. FT. (5.0 m <sup>2</sup> )
SHOULDER DIAGONALS	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))

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

All dimensions are in inches imilimeters? unless otherwise shown.

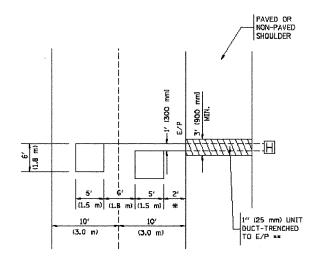
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	PLOT SCALE = 60.000 '/ IN.	CHECKED	-		REVISED	-A. HOUSEH 10-17-96
	PLOT DATE = 1/4/2008	DATE	_	03-19-90	REVISED	-T. RAMMACHER 01-06-0

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE						F.A RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	TYPICAL PAVEMENT MARKINGS						1419	08-00127-00-RS	соок	15	14
								TC-13	CONTRACT	NO. 6	3102
	SCALE: NONE	SHEET NO. 1	OF 1	SHEETS	STA.	TO STA.	FEO. ROA	FEG. RDAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			
	E.H.E. PROJECT NO. 565-08-20601										

# LOOPS NEXT TO SHOULDERS

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



\* \* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS

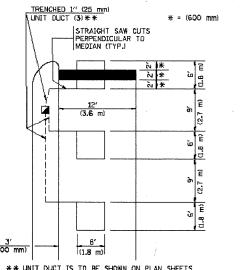
BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

\* = (600 mm)

# 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
BI400L TO ENSURE THAT HANDHOLE
FITS IN MEDIAN.



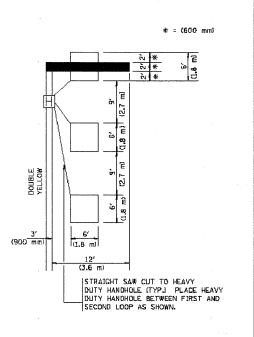
\*\* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO

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

(PROTECTED / PERMITTED LEFT TURN PHASING)

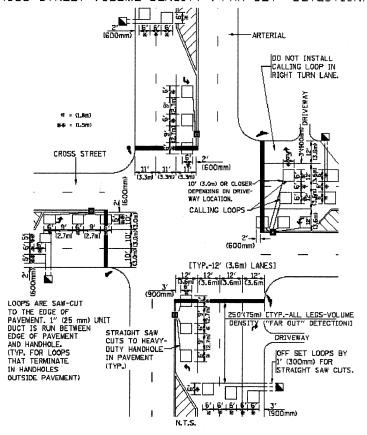


NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

SCALE: NONE

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

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



DETAIL 1

OFFSET LOOPS BY STRAIGHT SAW CLITS - ARTERIAL THIS DIMENSION MAY BE ADJUSTED FOR DRIVEWAY OR OTHER OBSTRUCTIONS. WHEN ADJUSTMENT IS REQUIRED, DETECTORS WILL NORMALLY BE MOVED CLOSE TO THE INTERSECTION. -CROSS STREET (TYP.) 13\*(900mm) EN 3. E. -10'(3.0m) PREFERRED-15'(4.5m) MAXIMUM + - THESE DIMENSIONS WILL BE VARIABLE DRIVEWA (6' (L8m) MINIMUM. 4 25' (7.6 m) MAXIMUMD △ - THESE DIMENSIONS SHALL BE 5' (1.5m) FOR -IF 'FAR OUT" LOOPS ARE LOCATED IN TAPER OF A RIGHT TURN LANE, DIMENSION THIS LOOP TO COVER TAPER AREA. DO NOT DETAIL 2 LANE OR LEFT TURN LANE TAPER.

NOTES

VEHICLES LOOP DETECTORS

- \* ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED, SHIELDED.
- \* EACH DETECTOR LOOP SHALL HAVE ITS DWN 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 <u>ALL</u> 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. <u>EACH</u> ONE OF THESE TYPE OF LOOPS REQUIRES A <u>SEPARATE</u> TWO CONDUCTOR NO. 14 TWISTED SHIELDED CABLE AND A <u>SEPARATE</u> 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  $\underline{\mathsf{ALL}}$  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.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT 1 - DETECTOR LOOP INSTALLATION
DETAILS FOR ROADWAY RESURFACING

SHEET NO. 1 OF 1 SHEETS STA. TO STA.

| FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT | NO. 63102

E.H.E. PROJECT NO. 565-08-20601