

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
631	111 N-B-I	WILL	20	1
FED. ROAD DIST. NO. 1		ILLINOIS	CONTRACT NO. 60D73	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

F.A.P. 631 / IL. RTE. 102
SECTION: 111 N-B-I
OVER RAYNS CREEK
BRIDGE DECK OVERLAY
PROJECT: ESP-0631(015)
WILL COUNTY
C-91-092-08

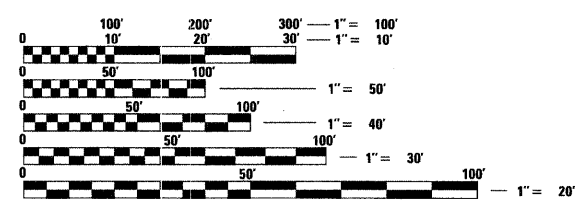
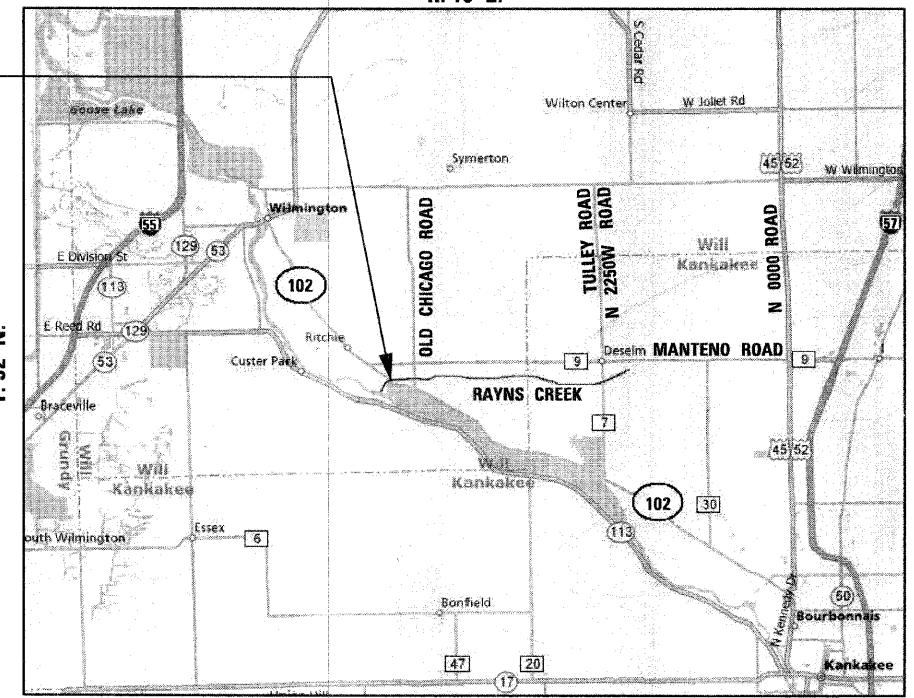
WESLEY TOWNSHIP
R. 10 E.

FOR INDEX OF SHEETS, SEE SHEET NO. 2

DESIGN DESIGNATION:
DESIGN SPEED : 55 M.P.H.
2005 ADT = 2,050

PROJECT LOCATED IN
UNINCORPORATED WILL COUNTY

PROJECT LOCATION:
IL. RTE. 102
OVER RAYNS CREEK
S.N. 099-0170



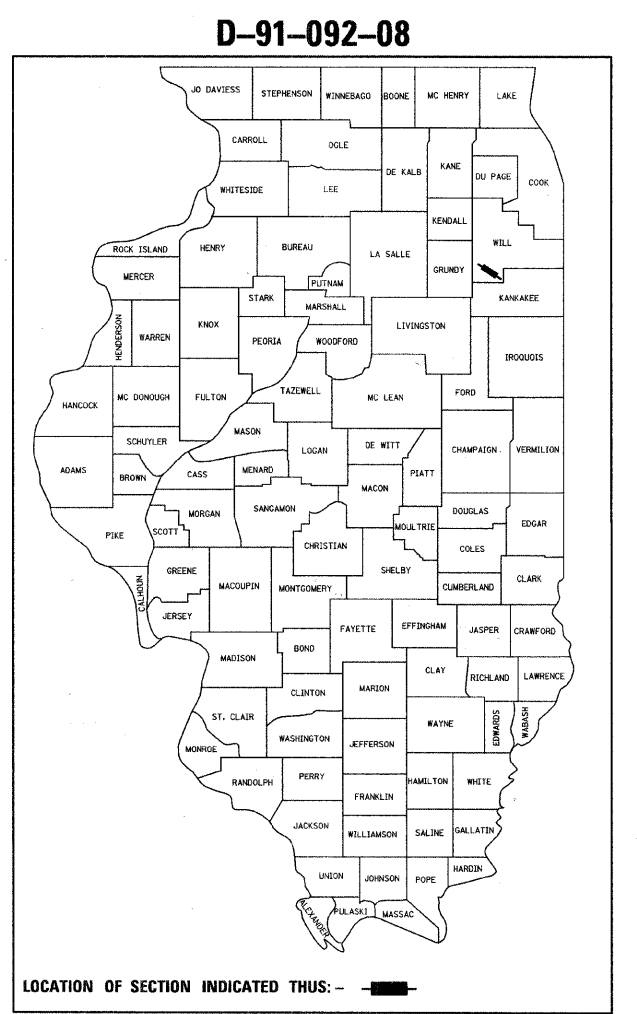
FULL SIZE PLANS: HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

GROSS LENGTH OF PROJECT = 180.00 FEET = 0.034 MILES
NET LENGTH OF PROJECT = 180.00 FEET = 0.034 MILES

DESIGN SECTION ENGINEER :

CHRISTIAN-ROGE & ASSOCIATES, INC.
 ENGINEERS - PLANNERS - SURVEYORS
 211 W. WACKER DRIVE CHICAGO, IL. 60606
 TELEPHONE: 312-372-2023



STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED JANUARY 8, 2009

Diana M. O'Keefe
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ONE ENGINEER
March 13, 2009

Charles J. Ingersoll
 ENGINEER OF DESIGN AND ENVIRONMENT
March 13, 2009

Christina M. Reed
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER



Birinder S. Sachdeva
BIRINDER S. SACHDEVA, P.E.
 EXPIRES: 11-30-2009
 January 06, 2009
 DATE

Bhadresh N. Shah
BHADRESH N. SHAH, S.E., P.E.
 EXPIRES: 11-30-2010
 JAN. 06, 2009
 DATE

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

DISTRICT ONE - DESIGN PROJECT MANAGER: ISAAC KWARTENG (847) 705-4230

CONTRACT NO. 60D73

INDEX OF SHEETS

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2	INDEX OF SHEETS, LIST OF STATE STANDARDS AND GENERAL NOTES IL. RTE. 102
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4	TYPICAL SECTIONS AND DETAILS IL. RTE. 102
5	ALIGNMENT, TIES AND PAVEMENT MARKINGS IL. RTE. 102
6	EXISTING CONDITIONS AND PROPOSED PLAN AND PROFILE PLAN AND PROFILE IL. RTE. 102
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16	BUTT JOINT AND HMA TAPER DETAILS
17	TEMPORARY LIGHT POLE DETAILS
18	TEMPORARY AERIAL CABLE INSTALLATION
19	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)
20	DISTRICT ONE TYPICAL PAVEMENT MARKINGS

LIST OF STATE STANDARDS

STANDARD NO.	DESCRIPTION
000001 - 05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
701201 - 03	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH
701316 - 04	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR, FOR SPEEDS > 45 MPH
701901- 01	TRAFFIC CONTROL DEVICES
780001 - 02	TYPICAL PAVEMENT MARKINGS
880001 - 01	SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION

GENERAL NOTES

1. THESE PLANS HAVE BEEN PREPARED FROM NOTES RECEIVED FROM IDOT FIELD MAINTENANCE ENGINEERS.
2. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PLANS ARE SUBJECT TO ROUTINE VARIATIONS. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS AND DETAILS AFFECTING NEW CONSTRUCTION AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED BASED UPON THE UNIT PRICE.
3. FORTY-EIGHT HOURS BEFORE STARTING EXCAVATION, THE CONTRACTOR WILL CALL J.U.L.I.E. (1-800-892-0123) OR 811 TO HAVE THE LOCATION OF EXISTING UTILITIES STAKED.
4. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
5. SAW CUTTING PRIOR TO ANY REMOVAL ITEMS NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER SHALL BE CONSIDERED INCLUDED IN THE COST OF THE ITEMS BEING REMOVED.
6. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
7. THE CONTRACTOR SHALL USE CARE IN REMOVING OR EXCAVATING NEAR ALL EXISTING ITEMS WHICH WILL REMAIN. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
8. WHEN ARTIFICIAL LIGHTING IS UTILIZED IN NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AS WELL AS ADJOINING RESIDENTIAL AREAS.
9. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, AS REQUIRED, PRIOR TO COMMENCING WITH CONSTRUCTION.
10. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO ASSURE THAT NO DEBRIS FALLS IN THE CREEK. THE COST OF THIS WORK SHALL BE INCLUDED IN THE VARIOUS PAY ITEMS.
11. THE CONTRACTOR SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS PRIOR TO THE PLACEMENT OF ANY TEMPORARY TRAFFIC CONTROL DEVICES.
12. THE CONTRACTOR SHALL CONTACT CORA MATHIS, THE AREA TRAFFIC FIELD ENGINEER, AT (815) 485-6475 TWO (2) WEEKS PRIOR TO THE PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
13. ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OUTSIDE THE REMOVAL LINE SHOWN ON THE PLANS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

NOTE: BOXED ITEMS ARE INCLUDED IN THE COST OF THE WORK INVOLVED.

FILE NAME = 60D73 index.dgn
PLOT DATE = 1/12/2009



CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
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DESIGNED -	S.J.P.	REVISED -	
DRAWN -	A.C.S.	REVISED -	
CHECKED -	E.J.M.	REVISED -	
DATE -	JANUARY 12, 2009	REVISED -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INDEX OF SHEETS, LIST OF STATE STANDARDS AND GENERAL NOTES
IL. RTE. 102**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. 741+40 TO STA. 743+20

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
631	111 N-B-I	WILL	20	2
			CONTRACT NO. 60D73	

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

SUMMARY OF QUANTITIES			URBAN	100% FED
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE
				IL. RTE. 102 BRIDGE SFTY-2A
40300200	BITUMINOUS MATERIALS (PRIME COAT)	TON	1	1
40600300	AGGREGATE (PRIME COAT)	TON	1	1
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	26	26
40600990	TEMPORARY RAMP	SQ YD	268	268
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	60	60
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	40	40
42001300	PROTECTIVE COAT	SQ YD	107	107
44000086	HOT-MIX ASPHALT SURFACE REMOVAL COMPLETE	SQ YD	107	107
44000198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	474	474
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	6	6
50300260	BRIDGE DECK GROOVING	SQ YD	102	102
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1,340	1,340
50800515	BAR SPLICERS	EACH	24	24
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3	3
67100100	MOBILIZATION	L SUM	1	1
70101800	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1
70106700	TEMPORARY RUMBLE STRIP	EACH	6	6
* 78008210	POLYUREA PAVEMENT MARKING TYPE I - LINE 4"	FOOT	1,430	1,430
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	8	8
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	2	2
78300100	PAVEMENT MARKING REMOVAL	SQ FT	184	184
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	10	10

* SPECIALTY ITEM

SUMMARY OF QUANTITIES			URBAN	100% FED
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE
				IL. RTE. 102 BRIDGE SFTY-2A
80400100	ELECTRIC SERVICE INSTALLATION	EACH	1	1
80400200	ELECTRIC UTILITY SERVICE CONNECTION	L SUM	1	1
* 81800300	AERIAL CABLE, 3-1/2 NO. 2 WITH MESSENGER WIRE	FOOT	1,370	1,370
* 82103400	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, PHOTO-CELL CONTROL, 400 WATT	EACH	7	7
* 83057120	LIGHT POLE, WOOD, 25 FOOT, CLASS 4	EACH	1	1
* 83057355	LIGHT POLE, WOOD, 60 FOOT, CLASS 4, WITH 15FT MAST ARM	EACH	7	7
* 84100110	REMOVAL OF TEMPORARY LIGHTING UNITS	EACH	7	7
X0322467	TEMPORARY INFORMATION SIGNING FOR LANE CLOSURE	SQ FT	48	48
* X0323574	MAINTENANCE OF LIGHTING SYSTEM	CAL MO	3	3
X0325303	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 INCHES)	SQ FT	6	6
X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	108	108
X0325775	WET REFLECTIVE TEMPORARY TAPE, TYPE III, 4 INCH	FOOT	1,440	1,440
* X0325867	COMBINATION POLE MOUNTED ELECTRIC SERVICE BOX	EACH	1	1
X5030305	CONCRETE WEARING SURFACE, 5"	SQ YD	107	107
* X8900005	TEMPORARY BRIDGE TRAFFIC SIGNAL INSTALLATION	EACH	1	1
* XX006937	GROUND ROD, 5/8" DIA. x 10 FT.	EACH	2	2
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1
* X0326135	ELECTRIC SERVICE DISCONNECT, LIGHTING AND TRAFFIC SIGNAL	EACH	1	1

* SPECIALTY ITEM

FILE NAME = 60073 summary.dgn
PLOT DATE = 1/12/2009



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ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5278

DESIGNED - S.J.P.
DRAWN - A.C.S.
CHECKED - E.J.M.
DATE - JANUARY 12, 2009

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
IL. RTE. 102

F.A.P.
RTE.
631

SECTION
111 N-B-1

COUNTY
WILL

TOTAL SHEETS
20

SHEET NO.
3

CONTRACT NO. 60D73

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. 741+60 TO STA. 743+20

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

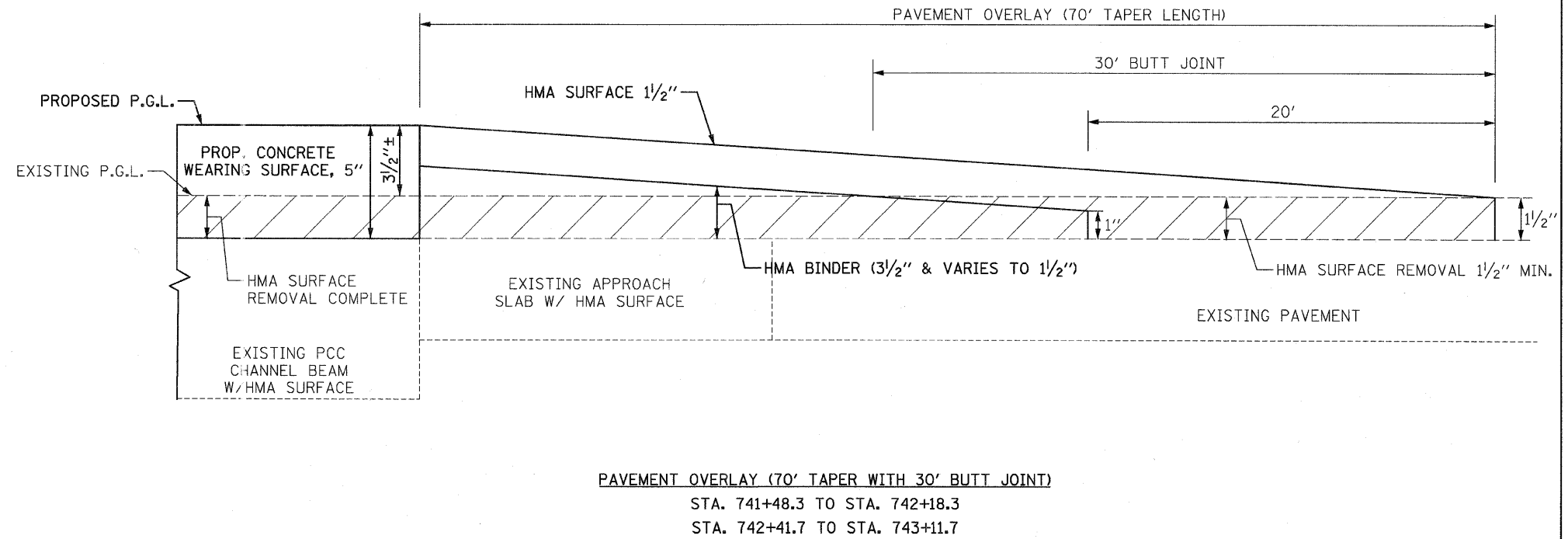
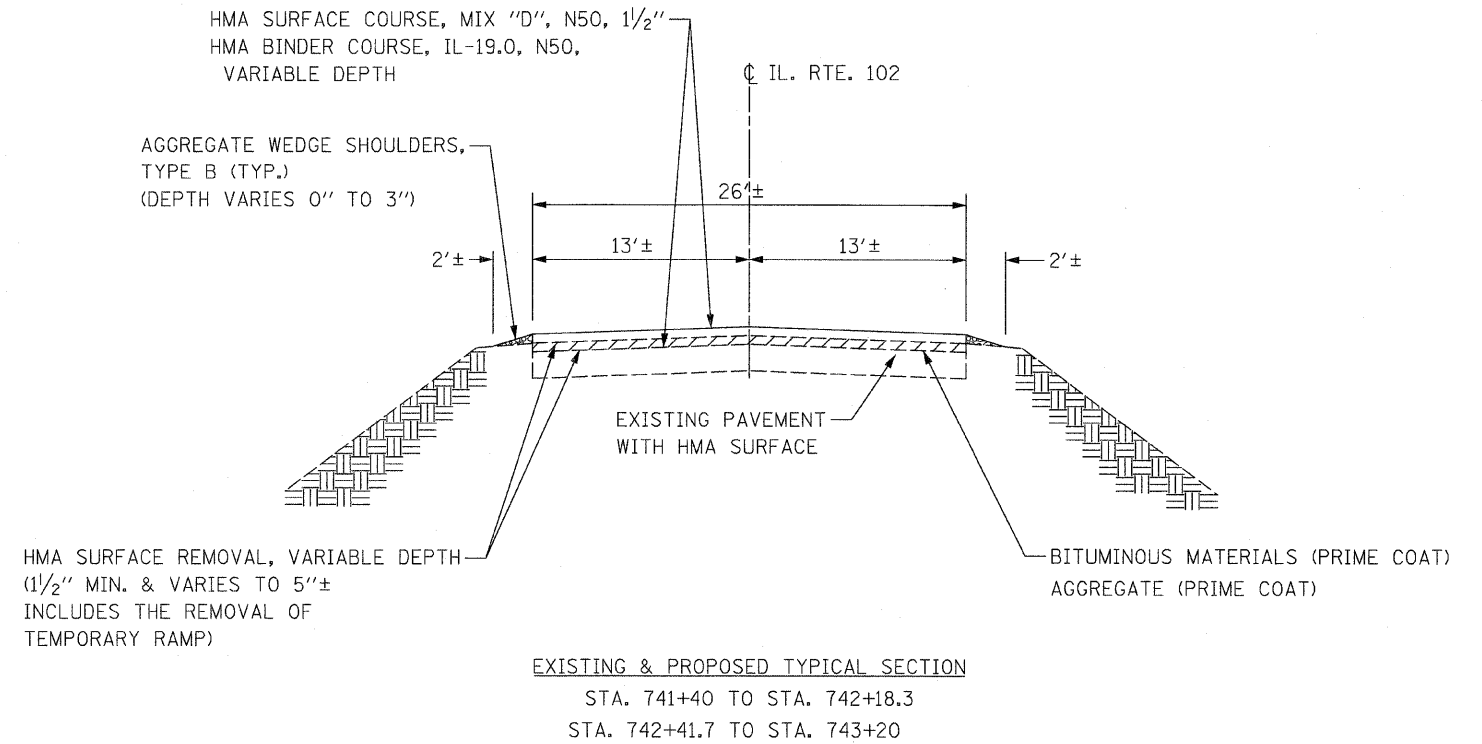
HOT-MIX ASPHALT MIXTURE REQUIREMENTS		
MIXTURE TYPE	AC TYPE	AIR VOIDS
PAVEMENT RESURFACING		
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 (IL 9.5 mm)	PG 64-22	4% @ 50 Gyr.
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	*PG 64-22	4% @ 50 Gyr.
TEMPORARY RAMP		
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50; 0"-3 1/2"	*PG 64-22	4% @ 50 Gyr.

THE UNIT WEIGHT USED TO CALCULATE HMA MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN.

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

NOTES:

- EXISTING PAVEMENT TO BE OVERLAID WILL BE CLEANED AND PRIMED PER ARTICLE 407.06 OF THE 2007 STANDARD SPECIFICATIONS.
- SEE SHEET NO. 16 - BUTT JOINT AND HMA TAPER DETAILS FOR ADDITIONAL NOTES AND DETAILS.



FILE NAME = 60D73 typ.dgn
PLOT DATE = 1/12/2009

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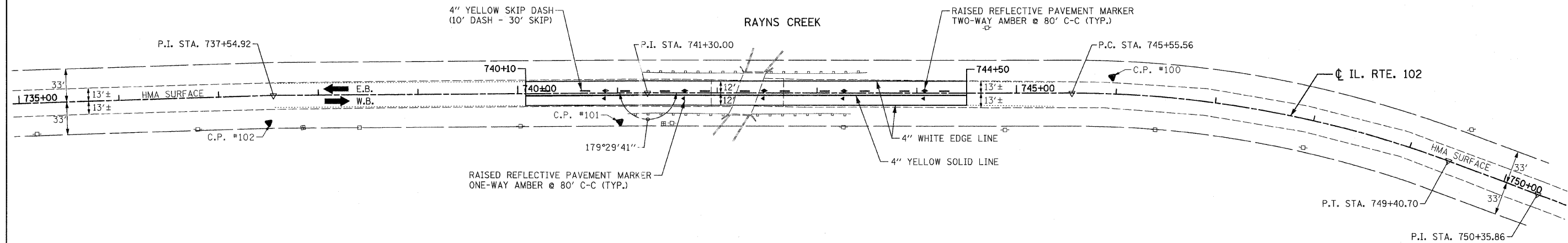
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS & DETAILS
IL. RTE. 102**

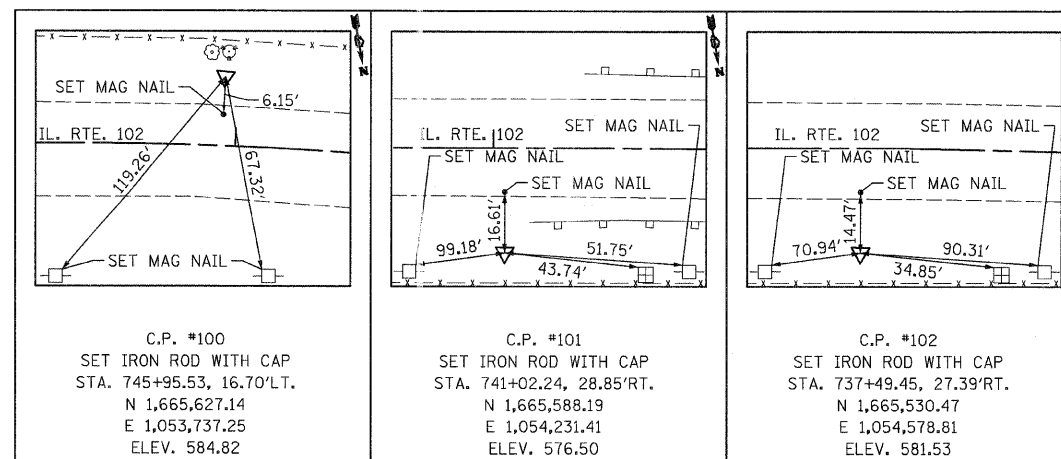
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. 741+40 TO STA. 743+20

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
631	111 N-B-I	WILL	20	4
CONTRACT NO. 60D73				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



PAVEMENT MARKING NOTES:

1. ALL PAVEMENT MARKINGS ON BRIDGE DECK AND PAVEMENT SHALL BE POLYUREA, TYPE I.



CENTERLINE ALIGNMENT			
	NORTHING	EASTING	STATION
P. I.	1, 665, 504. 09	1, 054, 569. 63	737+54. 92
P. I.	1, 665, 564. 16	1, 054, 199. 39	741+30. 00
CL BRIDGE	1, 665, 581. 05	1, 054, 100. 83	742+30. 00
P. C.	1, 665, 636. 02	1, 053, 779. 94	745+55. 56
P. T.	1, 665, 766. 08	1, 053, 419. 55	749+40. 70
P. I.	1, 665, 813. 61	1, 053, 337. 11	750+35. 86

FILE NAME = 60D73 align pm.dgn
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

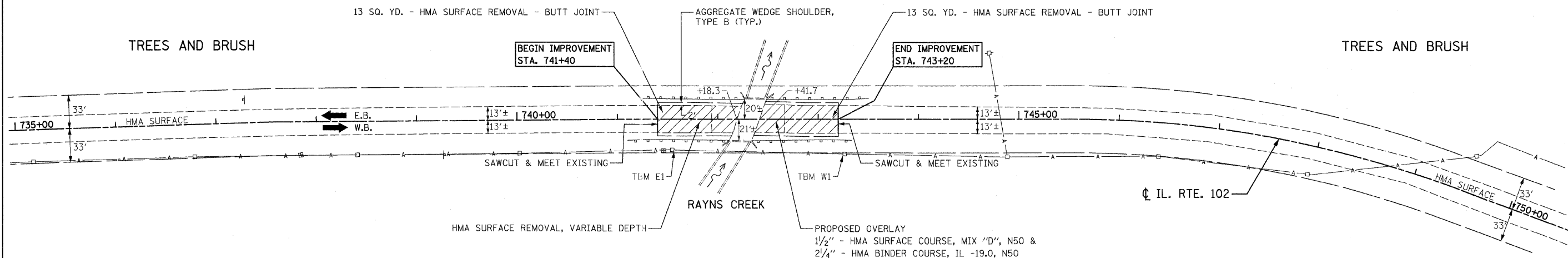
**ALIGNMENT, TIES AND PAVEMENT MARKINGS
IL. RTE. 102**

SCALE: 1" = 50' SHEET NO. 1 OF 1 SHEETS STA. 741+40 TO STA. 743+20

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
631	111 N-B-I	WILL	20	5
CONTRACT NO. 60D73				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



WILL COUNTY

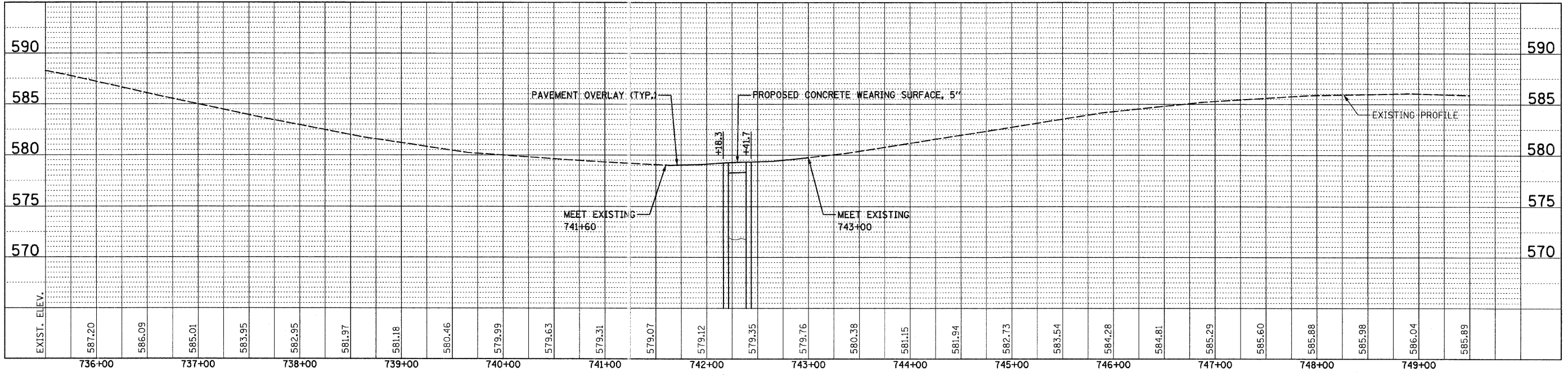


AGRICULTURAL FIELD

AGRICULTURAL FIELD

EXISTING CONDITIONS & PROPOSED PLAN

TBM W1	ELEV. 578.71
RAILROAD SPIKE IN POWER POLE STA. 743+26.32, 34.15' RT.	
TBM E1	ELEV. 576.57
RAILROAD SPIKE IN POWER POLE STA. 741+54.23, 30.07' RT.	
BM ME1548	ELEV. 691.09
BRONZE TABLET LOCATED IN MANTENO, ILLINOIS NEAR WALNUT STREET & FIRST STREET	



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING CONDITIONS AND PROPOSED PLAN AND PROFILE
IL. RTE. 102

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F.A.P. RTE. 631	SECTION 111 N-B-I	COUNTY WILL	TOTAL SHEETS 20	SHEET NO. 6
CONTRACT NO. 60D73				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

SUGGESTED STAGING AND MAINTENANCE OF TRAFFIC

CONSTRUCTION STAGING

STAGE I

- REMOVE HMA WEARING SURFACE ON WESTBOUND HALF OF BRIDGE AND PLACE PROPOSED CONCRETE WEARING SURFACE.
- PLACE TEMPORARY HMA RAMP TO MEET NEW CONCRETE WEARING SURFACE AT THE END OF THIS STAGE.

STAGE II

- REMOVE HMA WEARING SURFACE ON EASTBOUND HALF OF BRIDGE AND PLACE PROPOSED CONCRETE WEARING SURFACE.
- PLACE TEMPORARY HMA RAMP TO MEET NEW CONCRETE WEARING SURFACE AT THE END OF THIS STAGE.
- RESURFACE BOTH LANES OF PAVEMENT.

MAINTENANCE OF TRAFFIC

STAGE I

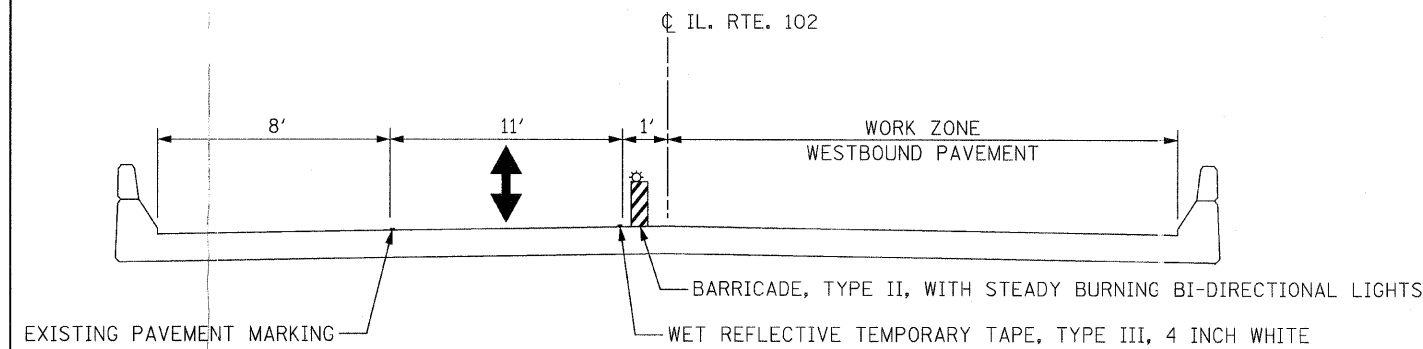
- INSTALL TEMPORARY BRIDGE TRAFFIC SIGNALS AND TEMPORARY LIGHTING.
- CLOSE WESTBOUND LANE AS SHOWN ON THE TRAFFIC CONTROL PLAN.
- MAINTAIN ONE-LANE TWO-WAY TRAFFIC ON EASTBOUND PAVEMENT ACROSS BRIDGE.

STAGE II

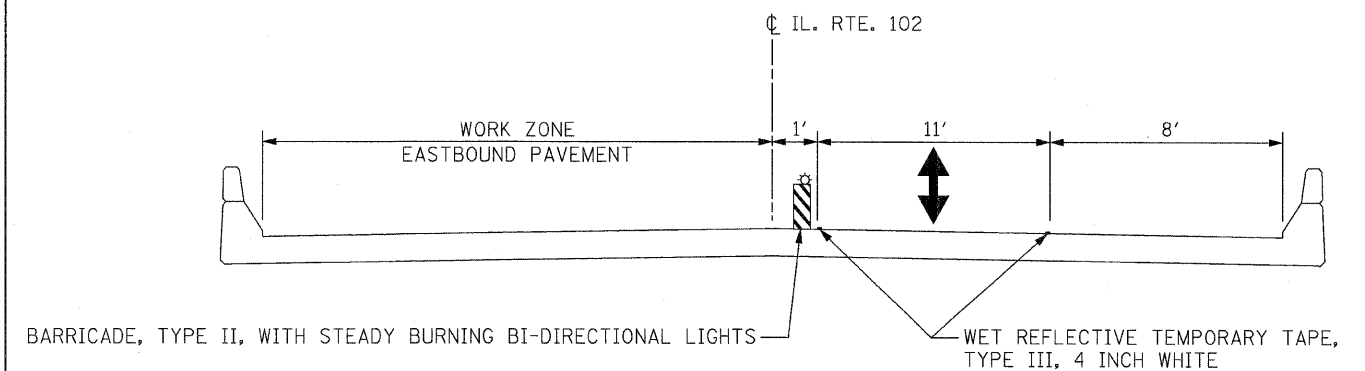
- SHIFT ONE-LANE TWO-WAY TRAFFIC TO WESTBOUND PAVEMENT ACROSS BRIDGE.
- REMOVE TEMPORARY BRIDGE TRAFFIC SIGNALS AND USE DAILY LANE CLOSURES TO RESURFACE THE PAVEMENT ADJACENT TO THE BRIDGE.
SEE IDOT STANDARD 701201 - LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH.

TRAFFIC CONTROL GENERAL NOTES

1. THE CONTRACTOR SHALL NOT MOUNT SIGNS ON EXISTING SIGNS.
2. FLUORESCENT VESTS: ALL CONSTRUCTION PERSONNEL WILL BE REQUIRED TO WEAR FLUORESCENT VESTS AT ALL TIMES WHILE ON THE CONSTRUCTION SITE. COMPLIANCE WITH THIS REQUIREMENT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
3. CONTRACTOR SHALL MAINTAIN SATISFACTORY INGRESS AND EGRESS TO ADJACENT PROPERTIES THROUGHOUT THE CONSTRUCTION.
4. INSTALL TEMPORARY SIGN PANEL ASSEMBLY AS SHOWN IN PLANS AND AS DIRECTED BY THE ENGINEER. TO BE PAID FOR BY ITEM "TEMPORARY INFORMATION SIGNING FOR LANE CLOSURE".
5. EACH DETECTOR LOOP SHALL BE CONNECTED TO A SEPARATE DETECTOR AMPLIFIER.
6. ALL TEMPORARY PAVEMENT MARKING SHALL BE WET REFLECTIVE TEMPORARY TAPE, TYPE III.
7. THE FIRST TWO SIGNS ENTERING THE WORK ZONE SHALL HAVE MONO-DIRECTIONAL FLASHING BEACONS.
8. USE SUGGESTED TRAFFIC CONTROL AND STAGING PLAN IN CONJUNCTION WITH STANDARD 701316.
9. EMERGENCY PREEMPTION WILL BE REQUIRED FOR THE TEMPORARY BRIDGE TRAFFIC SIGNALS. THE COST OF THIS WILL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR TEMPORARY BRIDGE TRAFFIC SIGNAL INSTALLATION.



DECK CROSS SECTION - STAGE I



DECK CROSS SECTION - STAGE II

FILE NAME = 60073 staging1.dgn
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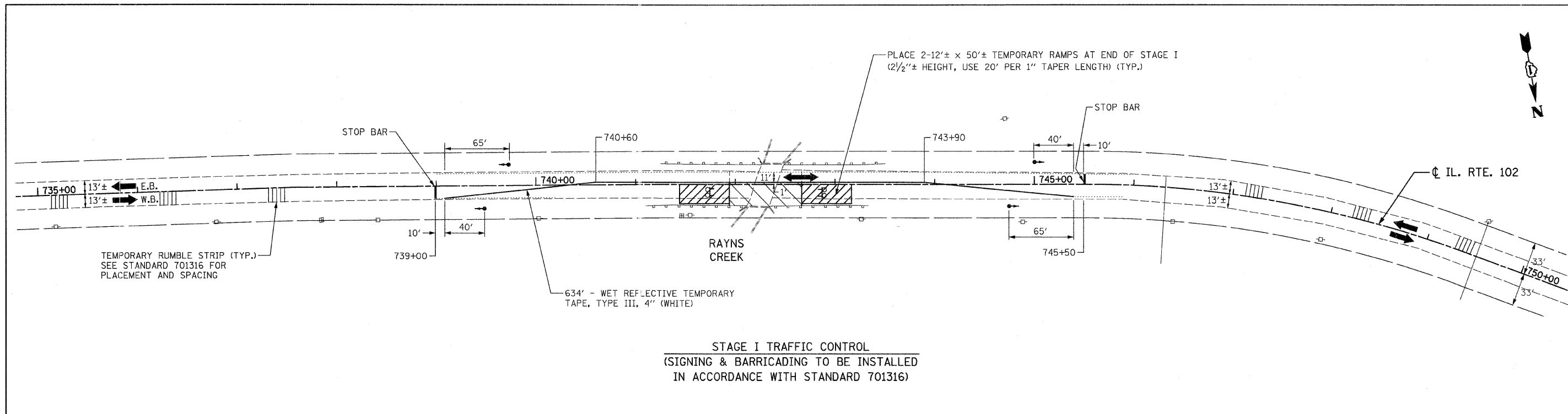
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUGGESTED MAINTENANCE OF TRAFFIC NOTES AND DETAILS
IL. RTE. 102**






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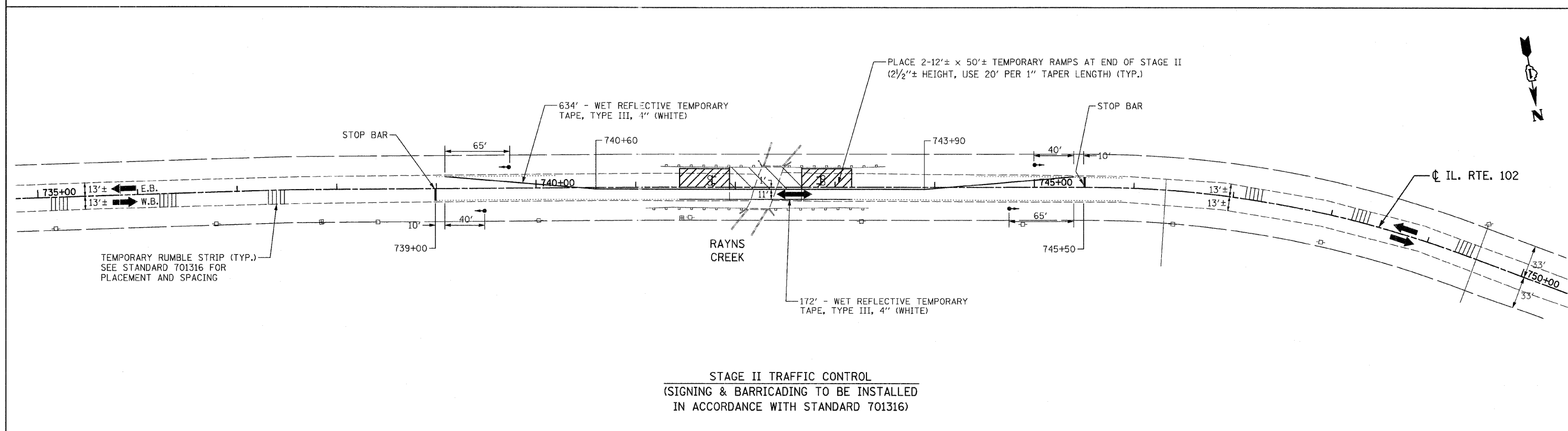
F.A.P. RTE. 631	SECTION 111 N-B-1	COUNTY WILL	TOTAL SHEETS 20	SHEET NO. 7
CONTRACT NO. 60D73				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



STAGE I TRAFFIC CONTROL
 (SIGNING & BARRICADING TO BE INSTALLED
 IN ACCORDANCE WITH STANDARD 701316)

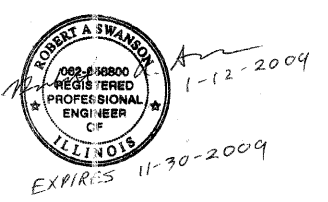
TRAFFIC CONTROL AND STAGING LEGEND

-  WORK ZONE
-  DIRECTION OF TRAFFIC
-  TEMPORARY RUMBLE STRIP
-  TYPE III BARRICADES WITH FLASHING LIGHTS
-  TRAFFIC SIGNAL



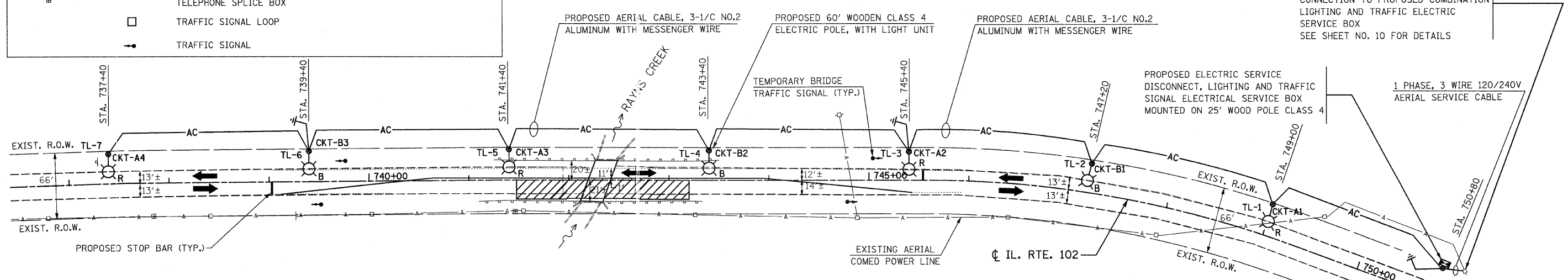
STAGE II TRAFFIC CONTROL
 (SIGNING & BARRICADING TO BE INSTALLED
 IN ACCORDANCE WITH STANDARD 701316)

LEGENDS	DESCRIPTION
EXISTING	PROPOSED
○	400W, 120V, MCIII HPS. WITH PHOTO CELL 15' MA, 50 MH ON WOOD POLE.
—A—	AERIAL LINE (COMED/TELEPHONE)
—AC—	AERIAL ELECTRIC CABLE (OF SIZE NOTED) WITH MESSENGER WIRE
⊗	WOODEN POLE
TL-1	TEMPORARY LIGHTING UNIT NUMBER - ONE
⊥	5/8" x 10' GROUND ROD
⊥	COMBINATION LIGHTING AND TRAFFIC POLE MOUNTED ELECTRICAL SERVICE BOX
⊕	COMED POWER POLE
⊕	TELEPHONE SPLICE BOX
□	TRAFFIC SIGNAL LOOP
⬆	TRAFFIC SIGNAL



ITEM DESCRIPTION	UNIT	QUANTITY
ELECTRIC SERVICE INSTALLATION	EACH	1
ELECTRIC UTILITY SERVICE CONNECTION	L SUM	1
AERIAL CABLE, 3-1/C NO. 2 WITH MESSENGER WIRE	FOOT	1,370
LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, PHOTO-CELL CONTROL, 400 WATT	EACH	7
LIGHT POLE, WOOD, 25 FOOT, CLASS 4	EACH	1
LIGHT POLE, WOOD, 60 FOOT, CLASS 4, WITH 15FT MAST ARM	EACH	7
REMOVAL OF TEMPORARY LIGHTING UNITS	EACH	7
MAINTENANCE OF LIGHTING SYSTEM	CAL MO	3
COMBINATION POLE MOUNTED ELECTRICAL SERVICE BOX	EACH	1
GROUND ROD, 5/8" DIA. x 10 FT.	EACH	2

**MAINTENANCE OF TRAFFIC STAGE I CONSTRUCTION SHOWN
TEMPORARY LIGHTING TO REMAIN ACTIVE DURING STAGE I & II**



- NOTES:**
1. THE MATERIALS AND INSTALLATION METHODS SHALL COMPLY WITH THE LATEST CODES, STANDARDS AND ORDINANCES OF FEDERAL, STATE AND LOCAL GOVERNING BODIES HAVING JURISDICTION. ALL WORKS SHOWN ON THE PLANS AND DESCRIBED ELSEWHERE SHALL ALSO CONFORM TO THE LATEST NATIONAL ELECTRICAL CODE.
 2. ALL MATERIAL PARTS OF THE LIGHT POLES SHALL BE GROUNDED AND BONDED CONFORMING TO NEC ARTICLE 250. THE EQUIPMENT GROUND SHALL BE CONTINUOUS AND CONNECTED UP TO THE ELECTRICAL SYSTEM GROUND. THIS WORK SHALL BE INCLUDED IN THE LIGHT POLE PAY ITEM.
 3. THE LIGHT POLE SETBACK FROM THE EDGE OF TRAVEL PAVEMENT SHALL BE 18' UNLESS THE LIGHT POLE IS BEHIND GUARDRAIL. THE LIGHT POLES WHEN INSTALLED BEHIND THE GUARDRAIL SHALL HAVE AT LEAST EIGHT FOOT SETBACK FROM THE BACK OF THE SHOULDER AND OR AS DIRECTED BY THE ENGINEER.
 4. THE TEMPORARY LIGHT POLES SHALL HAVE IDENTIFICATION NUMBERS AS SHOWN ON THE PLANS.
 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE LIGHTING AND TRAFFIC SIGNAL INSTALLATION. THE CONTRACTOR SHALL NOT INSTALL DAMAGED EQUIPMENT OR DEFECTIVE DEVICES, INSTEAD THE CONTRACTOR SHALL REPLACE IT WITH NEW ONES AT NO COST TO IDOT AND/OR AS DIRECTED BY THE ENGINEER.
 6. THE CONTRACTOR SHALL SPLICE AERIAL CABLE AT THE LIGHT POLE USING HEAT SHRINKABLE CAPS WITH THE FACTORY APPLIED WATERPROOF SEALANT. THE INSTALLATION AND REQUIRED MATERIAL SHALL BE INCLUDED IN THE LIGHT POLE PAY ITEM.

7. THE CONTRACTOR SHALL FOLLOW THE CONSTRUCTION AND STAGING AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. FURTHERMORE, THE CONTRACTOR SHALL COORDINATE ALL SUCH ACTIVITIES BEING DONE IN THE SAME AREA BY THE UTILITY COMPANIES OR OTHER CONTRACTORS AND SETUP COORDINATION MEETINGS IF NECESSARY WITHOUT ANY ADDITIONAL FINANCIAL COMPENSATION.
8. THE PROPOSED TEMPORARY LIGHTING SHALL BE COMPLETED, TESTED, OPERATIONAL AND VERIFIED BY IDOT BEFORE STAGE I TRAFFIC CONTROL IS IN PLACE. THE CONTRACTOR SHALL SUBMIT A STAGING SCHEDULE IDENTIFYING THE STARTING AND COMPLETION DATES PRIOR TO THE COMMENCEMENT OF WORK FOR PROCUREMENT, INSTALLATION AND/OR REMOVAL OF EXISTING MATERIAL AND/OR EQUIPMENT.
9. ALL AREAS DISTURBED UNDER THIS CONTRACT SHALL BE RESTORED TO THE ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE ENGINEER.
10. LIGHTING SHALL BE KEPT OPERATIONAL AND ACTIVE FROM ONE HOUR BEFORE SUNSET TO ONE HOUR AFTER SUNRISE. AS PER "NATIONAL ELECTRIC CODE", OVERHEAD SPANS OF AERIAL CABLE AND MESSENGER WIRE MUST HAVE A VERTICAL CLEARANCE OF 18' MINIMUM ABOVE THE GROUND AT ALL TIMES AND AT ALL LOCATIONS ON THE PROJECT.
11. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT SO AS TO COMPLY WITH REQUIRED ELECTRICAL CLEARANCES PER NATIONAL ELECTRICAL CODE (NEC) SECTION 225-18, NATIONAL ELECTRICAL SAFETY CODE AND COMED REQUIREMENTS.
12. GROUND RODS SHALL BE INSTALLED AT EVERY THIRD TEMPORARY LIGHT POLE AND SHALL BE PAID UNDER THE ITEM "GROUND ROD, 5/8" DIA. x 10 FT.", EXCEPT FOR THE GROUND ROD AT THE LIGHT POLE WITH SERVICE DISCONNECT BOX. THE LATTER (GROUND ROD) SHALL BE INCLUDED IN THE PAY ITEM "ELECTRIC SERVICE DISCONNECT, LIGHTING AND TRAFFIC SIGNAL".

13. THE QUANTITIES AS SHOWN IN THE BILL OF MATERIALS FOR THE TEMPORARY LIGHTING IS APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL QUANTITIES PRIOR TO ORDERING ANY MATERIALS OR EQUIPMENT.
14. THE TEMPORARY LIGHTING SHALL USE AERIAL CABLES AS SHOWN ON THE PLANS. HOWEVER, THE UNDERGROUND NEW ELECTRICAL INSTALLATION, IF ANY, SHALL BE AT A MINIMUM 30 INCHES BELOW GRADE AND SHALL HAVE ELECTRICAL WARNING TAPE CONFORMING TO IDOT STANDARDS.
15. THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANY AS SOON AS POSSIBLE CONCERNING PENDING ELECTRICAL SERVICE INSTALLATION AND CONNECTION TO ENSURE THE AVAILABILITY OF ELECTRICAL POWER SUPPLY IN A TIMELY MANNER.
16. THE CONTRACTOR MAY MODIFY ELECTRICAL IDOT STANDARD DETAILS AS NECESSARY TO SUIT SPECIFIC SITE CONDITIONS. HOWEVER, THE CONTRACTOR SHALL OBTAIN THE ENGINEER'S APPROVAL PRIOR TO THE INSTALLATION.
17. THE REMOVAL OF TEMPORARY LIGHTING SHALL INCLUDE, BUT NOT LIMITED TO: ALL WOODEN POLES, LUMINAIRES WITH MAST ARMS, MESSENGER WIRES / CABLES, COMED SERVICE CABLES, CONDUITS AND/OR SERVICE BOXES AND HAULING AWAY OF THESE ITEMS FROM THE PROJECT SITE. ALL TEMPORARY LIGHTING EQUIPMENT AND MATERIAL REMOVED FROM THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
18. THE EXACT LOCATION OF EXISTING POWER POLES WITH COMED TRANSFORMERS TO BE DETERMINED IN THE FIELD. COMED CONTACT INFORMATION FOR THIS PROJECT IS AS FOLLOWS:
FIELD REPRESENTATIVE: LUCILLE JONES (815) 724-5607, ACCOUNT NO. 4707143079

FILE NAME = 60073 lightngl.dgn
PLOT DATE = 1/12/2009

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

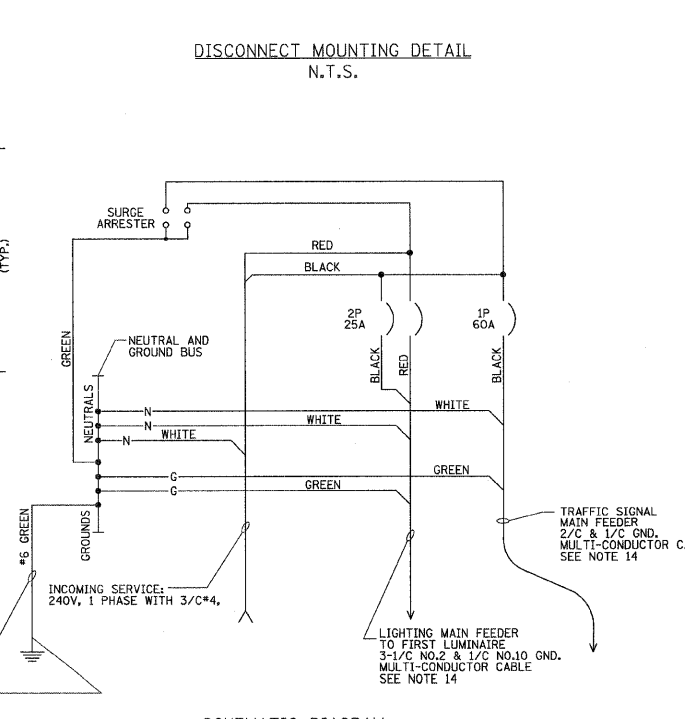
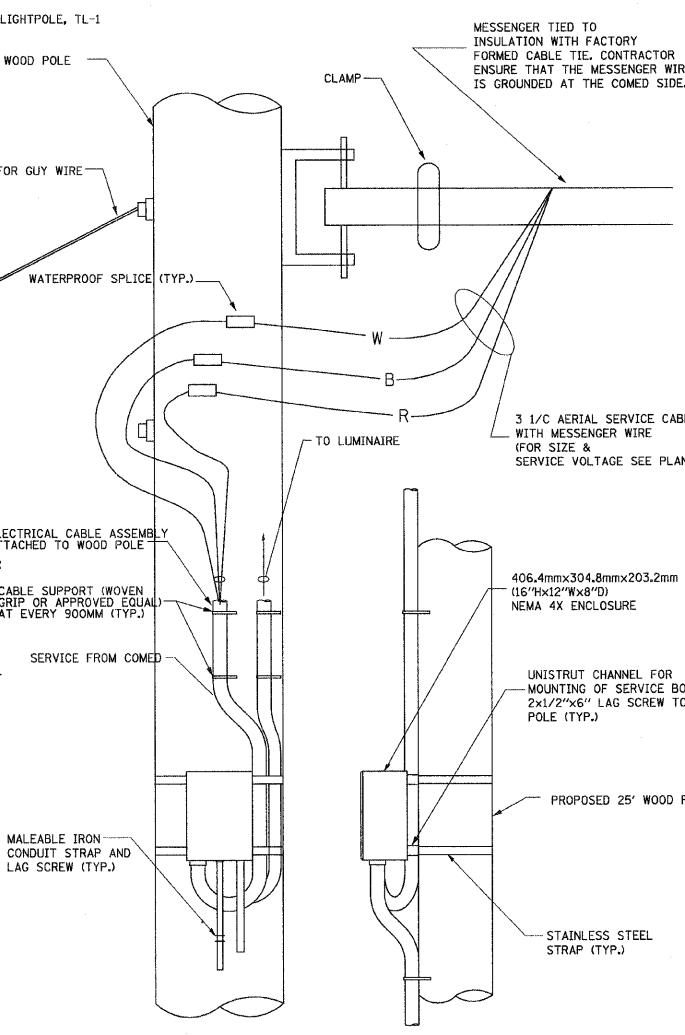
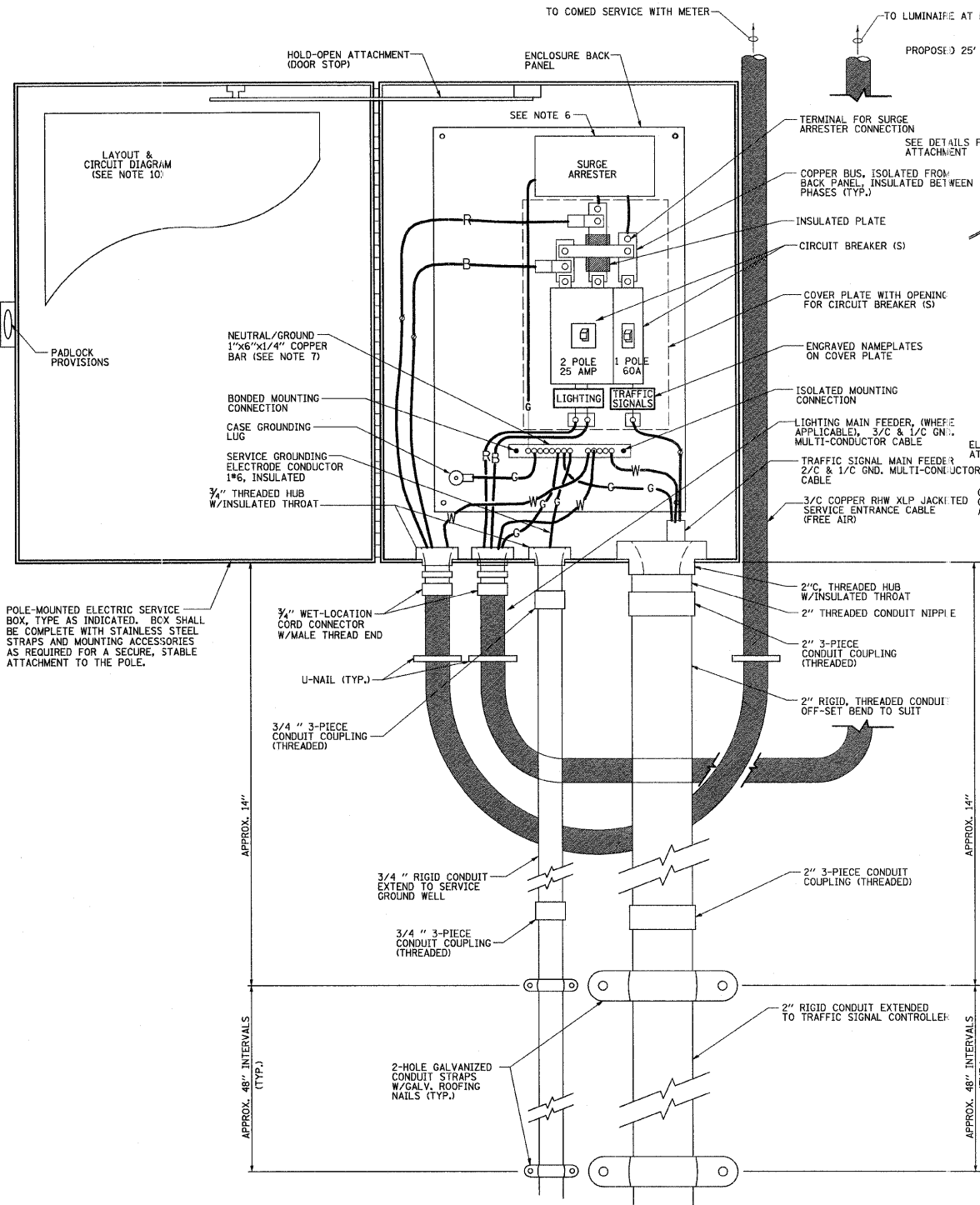
DESIGNED - M.A.	REVISED -
DRAWN - M.A.	REVISED -
CHECKED - E.J.M.	REVISED -
DATE - JANUARY 12, 2009	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY LIGHTING PLAN
IL. RTE. 102**

SCALE: 1" = 50' SHEET NO. 1 OF 2 SHEETS STA. 741+40 TO STA. 743+20

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
631	111 N-B-I	WILL	20	9
CONTRACT NO. 60D73				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



NOTES

- ELECTRIC SERVICE SHALL BE OF THE VOLTAGE INDICATED OR DESIGNATED BY THE ENGINEER, AND SERVICE DROP CABLE SHALL BE COMPATIBLE WITH THE SERVICE ACCORDINGLY. SOME INSTALLATIONS MAY CALL FOR SERVICE ENTRANCE EQUIPMENT SUITABLE FOR 3-WIRE SERVICE EVEN THOUGH INITIALLY WIRED FOR 2-WIRE SERVICE.
- THE POLE-MOUNTED ELECTRIC SERVICE BOX DETAIL DEPICTS THE BASIC CONSTRUCTION OF THE EQUIPMENT. SLIGHT MODIFICATIONS APPLY FOR DIFFERING SERVICES AND APPLICATIONS AS FOLLOWS:
 FULLY EQUIPPED FOR 240/120V. 3W SERVICE, COMPLETE WITH LIGHTING MAIN BREAKER
 FULLY EQUIPPED FOR 240/120V. 3W SERVICE, BLANK COVER IN LIEU OF LIGHTING MAIN BREAKER
 EQUIPPED FOR 120V. SERVICE, COMPLETE WITH 1P, 60A. TRAFFIC SIGNALS MAIN BREAKER
 EQUIPPED FOR 120V. SERVICE, COMPLETE WITH 1P, 40A. TRAFFIC SURVEILLANCE MAIN BREAKER
- THE ELECTRIC SERVICE EQUIPMENT ASSEMBLY SHALL BE UL LISTED AS SUITABLE FOR USE AS SERVICE ENTRANCE EQUIPMENT.
- THE ELECTRIC SERVICE EQUIPMENT ENCLOSURE SHALL BE NEMA 4X STAINLESS STEEL, NOMINALLY 12" W X 16" H X 8" D, WITH A PIANO-HINGED DOOR, STEEL BACK PANEL, FAST-ACTING STAINLESS STEEL ENCLOSURE CLAMPS, PADLOCK PROVISIONS AND DOOR STOP, HOFFMAN CATALOG NO. A-16H1208SS6LP/A-16, P12/A-DSTOPK/C-PMK12, OR APPROVED EQUAL.
- CIRCUIT BREAKERS SHALL BE THERMAL MAGNETIC BOLT-ON TYPE WITH A MINIMUM INTERRUPTING CAPACITY OF 25,000 SYMMETRICAL AMPERES AT 120 VOLTS. THEY SHALL BE LOCKABLE IN THE "OFF" POSITION FOR COMPLIANCE WITH OSHA LOCK-OUT/TAG-OUT REQUIREMENTS. HANDLES SHALL BE TRIP FREE.
- THE SURGE PROTECTOR SHALL BE SUITABLE FOR 240/120 VOLT SINGLE PHASE 60HZ AC ELECTRICAL SERVICE, WITH A SURGE ENERGY CAPABILITY OF 2160 JOULES OR BETTER AT 8/20 MICRO-SECONDS, RATED -40 TO 60 DEGREES C., WITH LED OPERATING INDICATORS, AND SHALL BE UL LISTED PER UL 1449, CUTLER-HAMMER CMOV230L065XST OR APPROVED EQUAL.
- BUS BARS, CONNECTORS, AND LUGS SHALL BE COPPER, INSULATED AND ISOLATED, AND CONFIGURED TO PREVENT SHORTED CONDITIONS FROM TIGHTENING TERMINATIONS, ETC. THE OVERALL BUS SECTION SHALL BE CONFIGURED BEHIND AN INSULATING BARRIER SHIELD WHICH IS REMOVABLE FOR ACCESS TO CONNECTIONS, OR THE ASSEMBLY SHALL BE A MANUFACTURED SPECIALTY PANELBOARD, CUTLER-HAMMER PRL2A OR APPROVED EQUAL.
- THE COMBINATION GROUND AND NEUTRAL BAR SHALL BE CONFIGURED WITH SEPARATE GROUND AND NEUTRAL SECTIONS AND SPARE TERMINALS AS INDICATED. THE HEADS OF GROUND SCREWS SHALL BE PAINTED GREEN. THE HEADS OF NEUTRAL SCREWS SHALL BE PAINTED WHITE. THE SERVICE NEUTRAL AND SERVICE GROUNDING ELECTRODE CONDUCTOR SHALL BE TERMINATED ADJACENT TO EACH OTHER AT THE DIVIDE BETWEEN THE SECTIONS AND WIRING SHALL BE TERMINATED ONLY UPON THE APPROPRIATE SECTION.
- THE WIRING TERMINALS, INCLUDING THE GROUND/NEUTRAL BAR SHALL BE ARRANGED TO PROVIDE ADEQUATE ROOM FOR PERFORMING FIELD TERMINATIONS.
- A PLASTIC LAMINATED LAYOUT AND CIRCUIT DIAGRAM SHALL BE MECHANICALLY SECURED TO THE INTERIOR SIDE OF THE ENCLOSURE DOOR.
- A 2-COLOR ENGRAVED PLASTIC NAMEPLATE, ATTACHED WITH SCREWS, AND ENGRAVED AS INDICATED, SHALL BE PROVIDED FOR EACH MAIN BREAKER.
- LUGS AND CONNECTORS SHALL BE RATED FOR 75 C CONDUCTOR.
- THE EXACT MOUNTING HEIGHT OF THE BOX SHALL BE FIELD DETERMINED TO AVOID OBSTRUCTIONS AND PUBLIC ACCESS. TYPICAL HEIGHT SHALL BE APPROXIMATELY 10 FEET ABOVE GRADE.
- THE FEEDER CABLE (MATERIAL & INSTALLATION) FROM SERVICE DISCONNECT TO THE FIRST LIGHT POLE, AS SHOWN ON PLANS IS INCLUDED UNDER THE PAY ITEM "ELECTRIC SERVICE DISCONNECT, LIGHTING AND TRAFFIC SIGNAL".

CIRCUIT NO.	CIRCUIT BREAKER / POLES	UTILITY DESCRIPTION	LOAD ¹ (WATTS)	CURRENT ² (AMPERES)
A	25A / 2P	(4) 400W HPS POLE NOS.TL-1, TL-3, TL-5, & TL-7	1,920	16.84
B		(3) 400W HPS POLE NOS.TL-2, TL-4, & TL-6	1,440	12.63
TOTAL			3,360	29.47

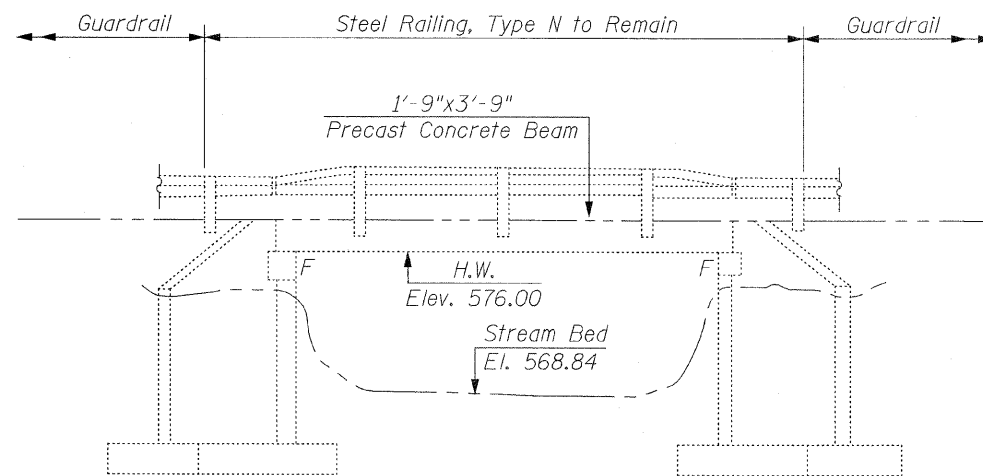
NOTE:

- LOAD INCLUDES 20% BALLAST LOSSES FOR LUMINAIRES
- CURRENT CALCULATIONS INCLUDE A POWER FACTOR OF 0.95.

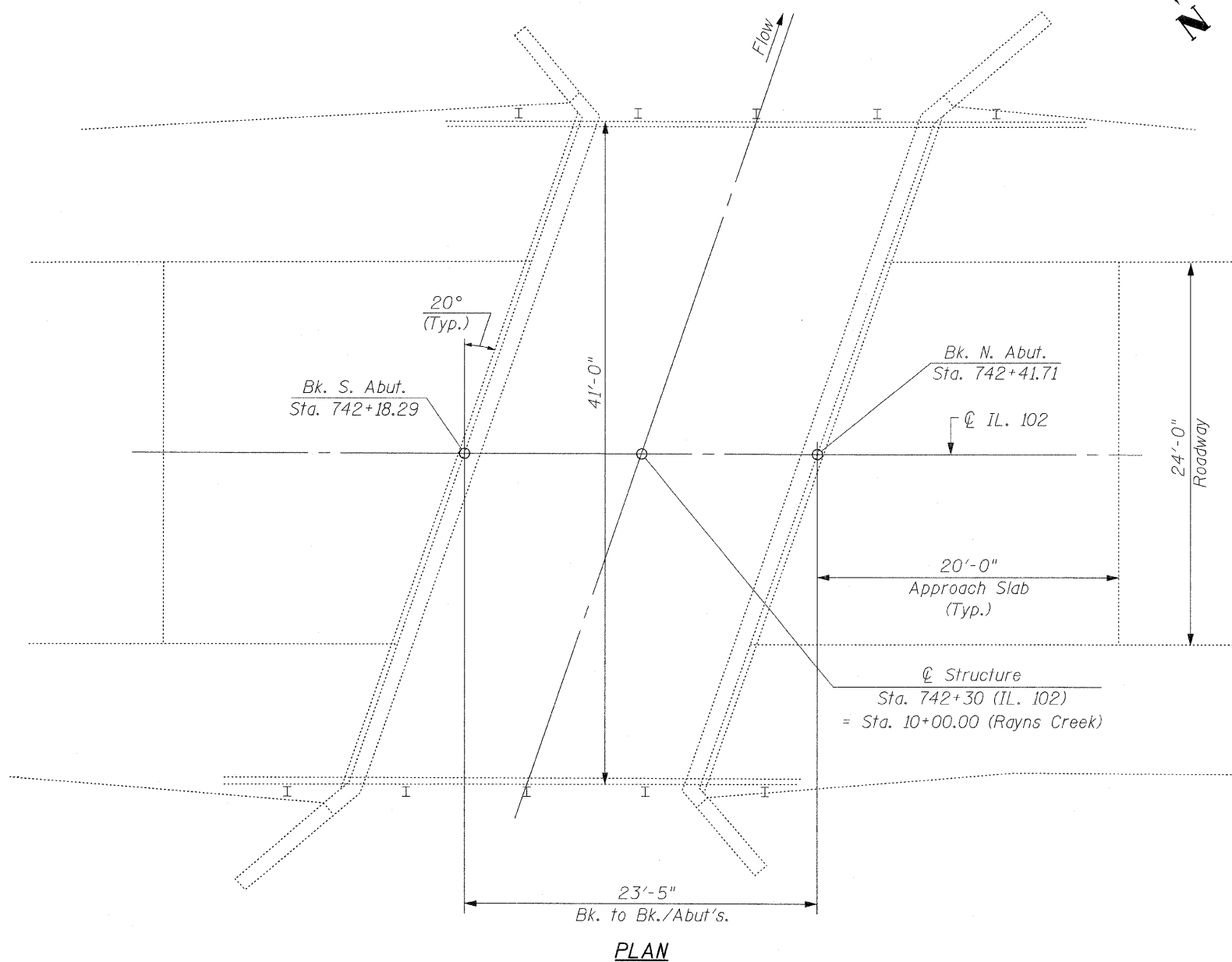


6" DECAL ON FRONT COVER

ROBERT A SWANSON
 084-069900
 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS
 1-12-2009
 EXPIRES 11-30-2009



ELEVATION



PLAN

GENERAL NOTES:

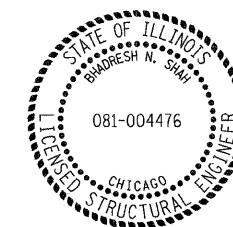
1. Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.
2. The Reinforced Concrete Overlay, as specified on the plan details, shall be paid for at the Contract Unit Price Bid per Square Yard for "Concrete Wearing Surface" and pounds for "Reinforcement Bars, Epoxy Coated".
3. The minimum thickness of the Concrete Overlay shall be 5 inches and varies as required to adjust for the Profile Grade and Beam Camber.
4. Reinforcement Bars shall conform to the requirements of ASTM A706 GR. 60 See Special Provisions.
5. Reinforcement Bars designated (E) shall be epoxy coated.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Hot-Mix Asphalt Surface Removal (Complete)	Sq. Yd.	107
Concrete Wearing Surface, 5"	Sq. Yd.	107
Reinforcement Bars, Epoxy Coated	Lb.	1,340
Bar Splicers	Each	24
Bridge Deck Grooving	Sq. Yd.	102
Protective Coat	Sq. Yd.	107
Structural Repair of Concrete (Depth Equal to or Less Than 5 In.)	Sq. Ft.	108
Structural Repair of Concrete (Depth Greater Than 5 In.)	Sq. Ft.	6

**DESIGN STRESSES
FIELD UNITS**

$f'_c = 3,500$ psi
 $f'_c = 5,000$ psi (Concrete Wearing Surface)
 $f_y = 60,000$ psi (Reinforcement)



BHADRESH N. SHAH
 LICENSED STRUCTURAL ENGINEER
 STATE OF ILLINOIS LIC. No. 081-004476
 EXPIRES: 11-30-08



CHRISTIAN-ROGE & ASSOCIATES, INC.
 ENGINEERS / PLANNERS / SURVEYORS
 211 W. WACKER DRIVE CHICAGO, IL 60606
 PHONE: (312)372-2023 FAX: (312)372-5274

FILE NAME = plan_elev.sht	USER NAME = IDOT	DESIGNED - B.N.S.	REVISED -
		DRAWN - R.E.S./D.L./F.M.	REVISED -
		CHECKED - B.N.S./J.C.N./S.J.P.	REVISED -
		DATE - JANUARY 12, 2009	REVISED -

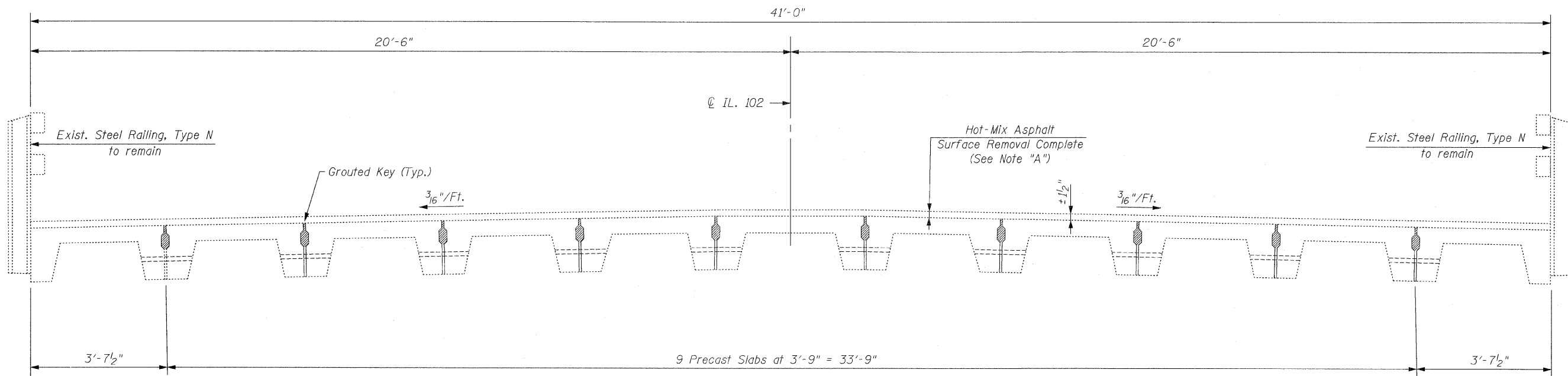
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
 IL. RTE. 102 OVER RAYNS CREEK

S.N. 099-0170

SCALE: SHEET NO. S1 OF S5 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
631	111 N-B-I	WILL	20	11
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60D73	



EXISTING TYPICAL CROSS SECTION
(Looking North)

NOTE "A"

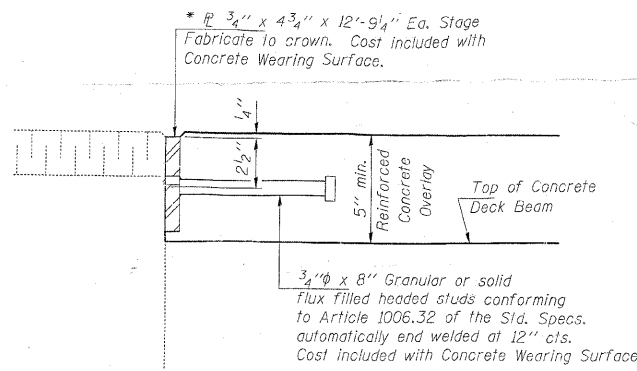
The Contractor must not use Milling Equipment for Hot-Mix Asphalt Surface Removal.
 The Contractor must not scarify any portion of the Precast Slab Beams.
 The Contractor must remove the existing Wearing Surface, Waterproofing and any Foreign Materials using Hand Methods or Shotblasting.
 Cost is included with Hot-Mix Asphalt Surface Removal Complete.

CR & A
 CHRISTIAN-ROGE & ASSOCIATES, INC.
 ENGINEERS / PLANNERS / SURVEYORS
 211 W. WACKER DRIVE CHICAGO, IL 60606
 PHONE: (312)372-2023 FAX: (312)372-5274

FILE NAME = deck cross section.sht	USER NAME = IDOT	DESIGNED - B.N.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DECK CROSS SECTION IL. RTE. 102 OVER RAYNS CREEK		F.A.P. RTE. 631	SECTION 111 N-B-1	COUNTY WILL	TOTAL SHEETS 20	SHEET NO. 12
	PLOT SCALE = 50.0000' / IN.	DRAWN - R.E.S./D.L./F.M.	REVISED -		S.N. 099-0170				CONTRACT NO. 60D73		
	PLOT DATE = 1/12/2009	CHECKED - B.N.S./J.C.N./S.J.P.	REVISED -		SCALE:	SHEET NO. S2 OF S5 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	

BILL OF MATERIAL

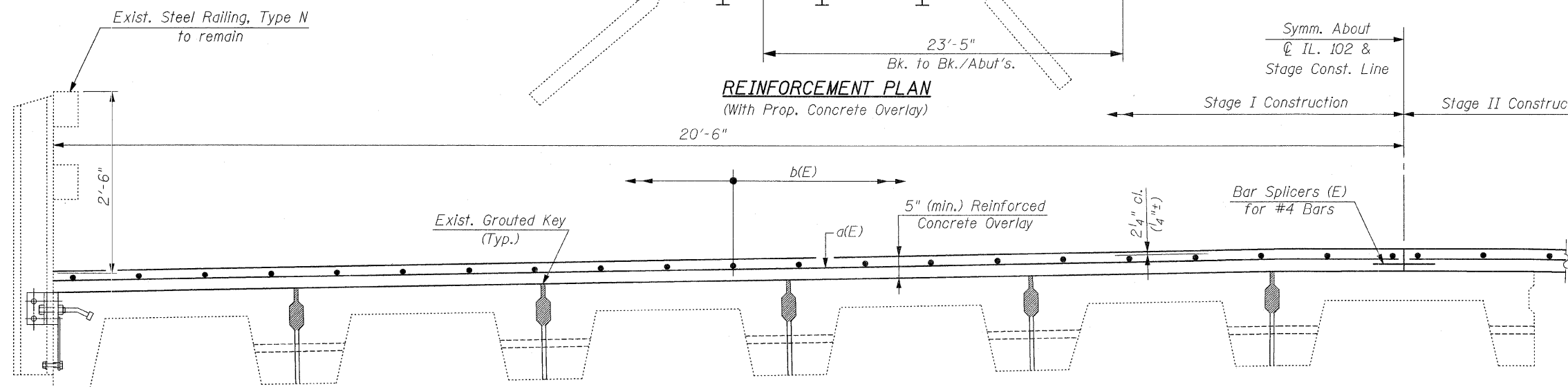
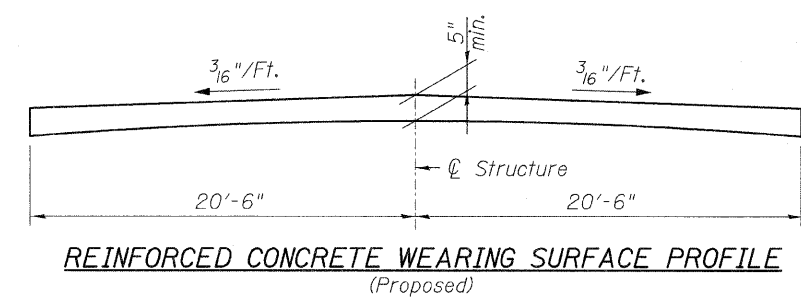
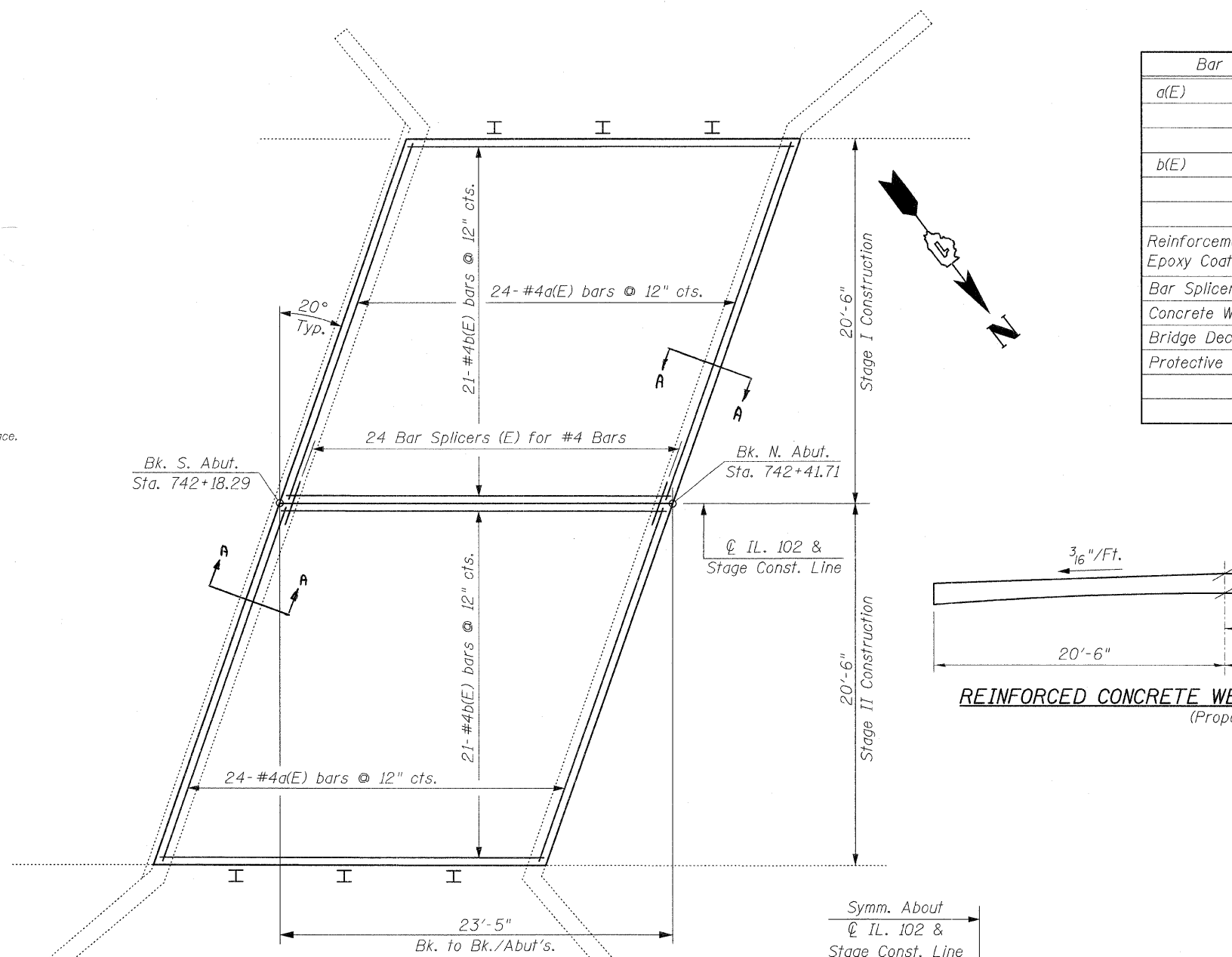
Bar	No.	Size	Length	Shape	
a(E)	48	#4	21'-6"	—	
b(E)	42	#4	23'-1"	—	
Reinforcement Bars, Epoxy Coated				Pound	1,340
Bar Splicers				Each	24
Concrete Wearing Surface, 5"				Sq. Yd.	107
Bridge Deck Grooving				Sq. Yd.	102
Protective Coat				Sq. Yd.	107



SECTION A-A

* Maximum space between installed segments shall be 3/16". Seal space with Silicone Sealant suitable for Structural Steel.

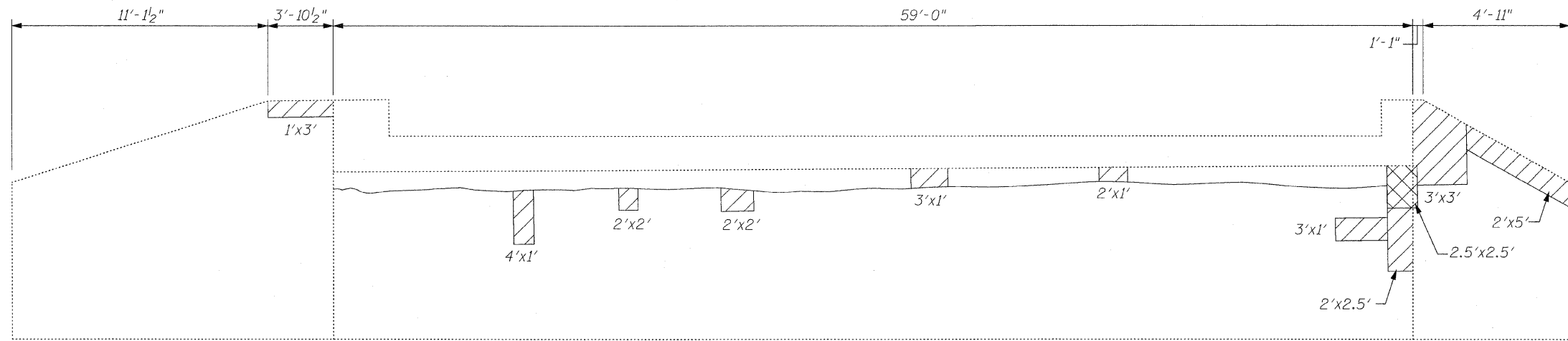
Joint plates and attached bars shall be shop painted with the inorganic zinc rich primer. No field paint required.



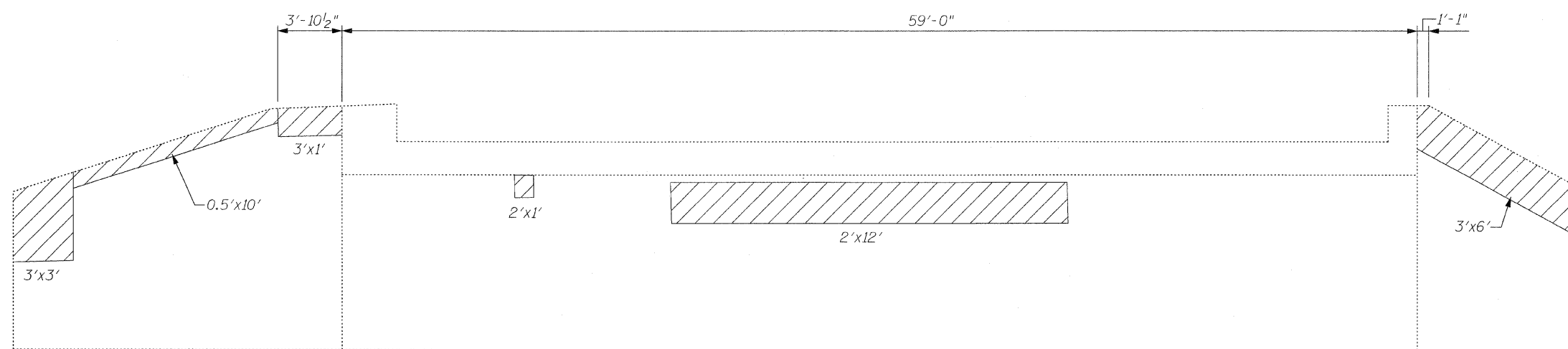
EXISTING TYPICAL CROSS SECTION
(With Prop. Concrete Overlay)
(Looking North)

FILE NAME = reinforcement_pln.sht	USER NAME = IDOT	DESIGNED - B.N.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REINFORCEMENT PLAN IL. RTE. 102 OVER RAYNS CREEK		F.A.P. RTE. 631	SECTION 111 N-B-I	COUNTY WILL	TOTAL SHEETS 20	SHEET NO. 13	
	PLOT SCALE = 5/8" = 1' / IN.	DRAWN - R.E.S./D.L./F.M.	REVISED -		SCALE:	SHEET NO. S3 OF S5 SHEETS	STA. TO STA.	S.N. 099-0170				
	PLOT DATE = 1/12/2009	CHECKED - B.N.S./J.C.N./S.J.P.	REVISED -		CONTRACT NO. 60D73							
		DATE - JANUARY 12, 2009	REVISED -		ILLINOIS FED. AID PROJECT							

CR & A CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS / PLANNERS / SURVEYORS
211 W. WACKER DRIVE CHICAGO, IL. 60606
PHONE: (312)372-2023 FAX: (312)372-5274



SOUTH ABUTMENT



NORTH ABUTMENT

LEGEND

- Structural Repair of Concrete
(Depth Equal to or Less Than 5 In.)
= 108 S.F.
- Structural Repair of Concrete
(Depth Greater Than 5 In.)
= 6 S.F.

CR & A	CHRISTIAN-ROGE & ASSOCIATES, INC. ENGINEERS / PLANNERS / SURVEYORS 211 W. WACKER DRIVE CHICAGO, IL 60606 PHONE: (312)372-2023 FAX: (312)372-6274		

FILE NAME = abutment_repairs.sht	USER NAME = IDOT	DESIGNED - B.N.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ABUTMENT REPAIRS IL. RTE. 102 OVER RAYNS CREEK S.N. 099-0170	F.A.P. RTE. 631	SECTION 111 N-B-I	COUNTY WILL	TOTAL SHEETS 20	SHEET NO. 14
PLOT SCALE = 50,000 1/ IN.		DRAWN - R.E.S./D.L./F.M.				SCALE:		SHEET NO. S4 OF S5 SHEETS		STA. TO STA.
PLOT DATE = 1/12/2009		CHECKED - B.N.S./J.C.N./S.J.P.				FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
		DATE - JANUARY 12, 2009				CONTRACT NO. 60D73				

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

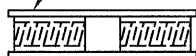
The diameter of this part is the same as the diameter of the bar spliced.

ROLLED THREAD DOWEL BAR



**** ONE PIECE**

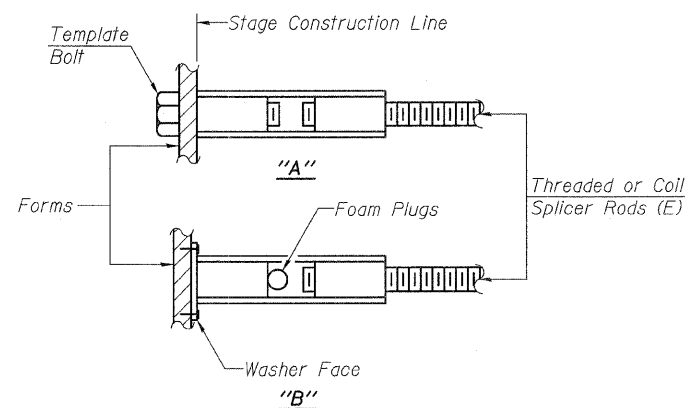
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

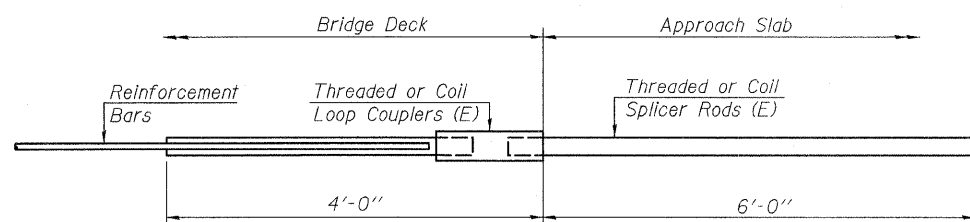
"A" :Set bar splicer assembly by means of a template bolt.
 "B" :Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.

NOTES

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

- ① Minimum Capacity = $1.25 \times f_y \times A_t$
 (Tension in kips)
 - ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_t$
 (Tension in kips)
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_t = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

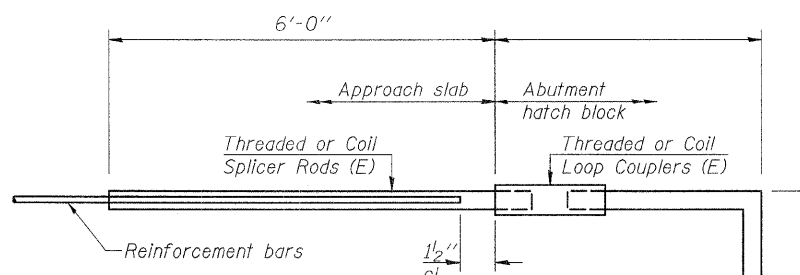
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

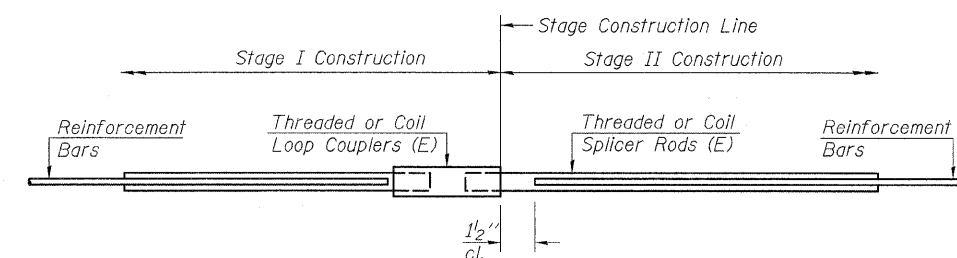
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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



FOR STUB ABUTMENTS

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



STANDARD

Bar Size	No. Assemblies Required	Location
#4	24	Deck Overlay

BSD-1 5-16-08

FILE NAME = bar_splicer_assembly.sht	USER NAME = IDOT	DESIGNED - B.N.S.	REVISED -
		DRAWN - R.E.S./D.L./F.M.	REVISED -
		CHECKED - B.N.S./J.C.N./S.J.P.	REVISED -
		DATE - JANUARY 12, 2009	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

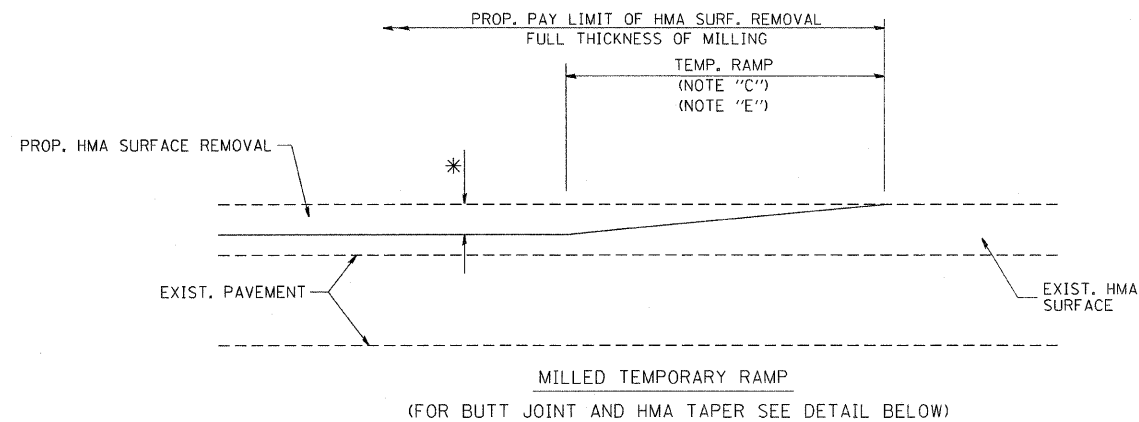
**BAR SPLICER ASSEMBLY DETAILS
IL. RTE. 102 OVER RAYNS CREEK**

S.N. 099-0170

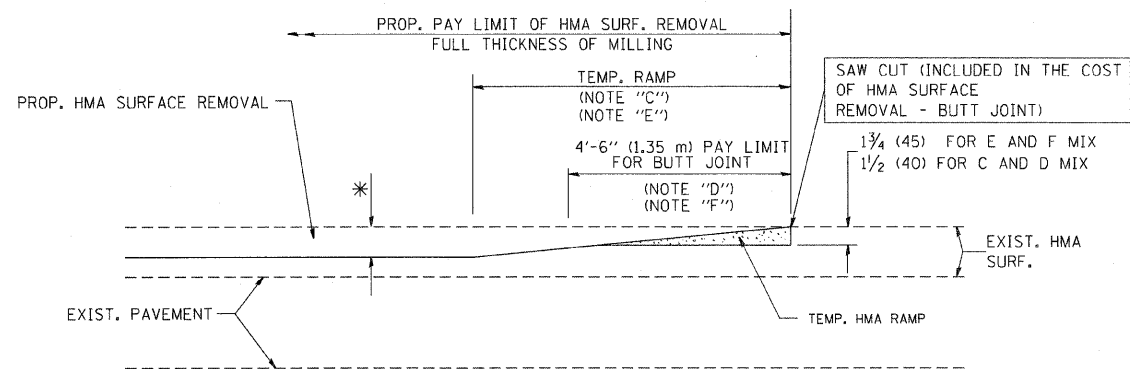
SCALE:	SHEET NO. 55 OF 55 SHEETS	STA.	TO STA.	F.A.P. RTE. 631	SECTION 111 N-B-1	COUNTY WILL	TOTAL SHEETS 20	SHEET NO. 15
				CONTRACT NO. 60D73				
				ILLINOIS FED. AID PROJECT				



CHRISTIAN-ROGE & ASSOCIATES, INC.
 ENGINEERS / PLANNERS / SURVEYORS
 211 W. WACKER DRIVE CHICAGO, IL. 60606
 PHONE: (312)372-2023 FAX: (312)372-5274

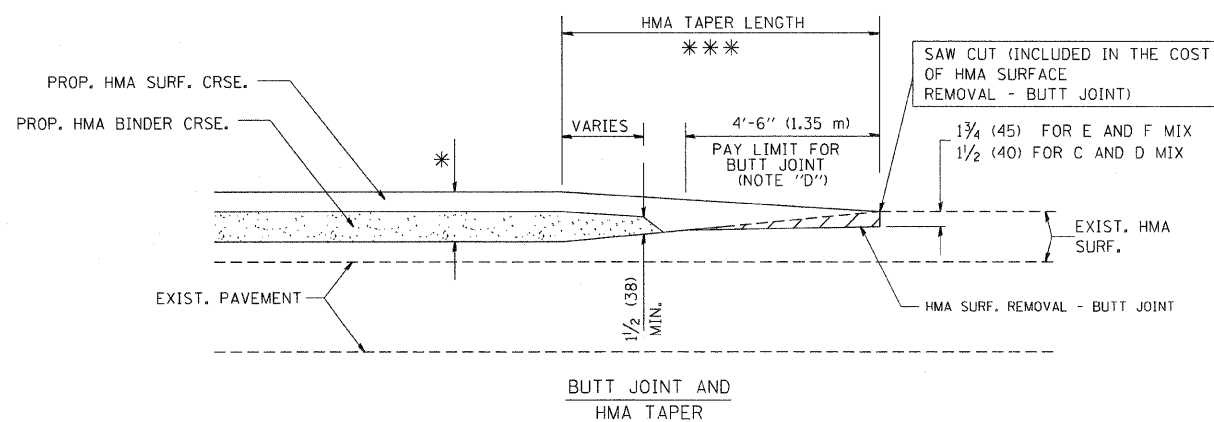


OPTION 1

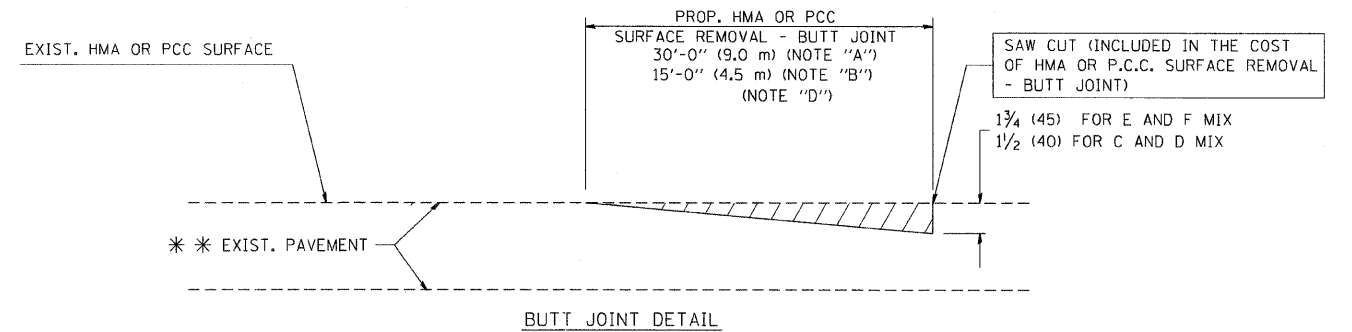


OPTION 2
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

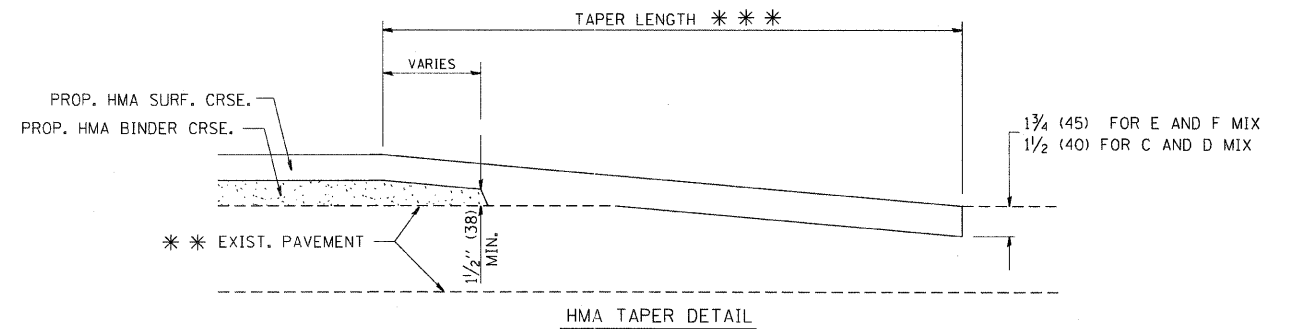
TYPICAL TEMPORARY RAMP



TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

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

NOTES

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
 - B: MINOR SIDE ROADS.
 - C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
 - D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
 - E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
 - F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
 - G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- *** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

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

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

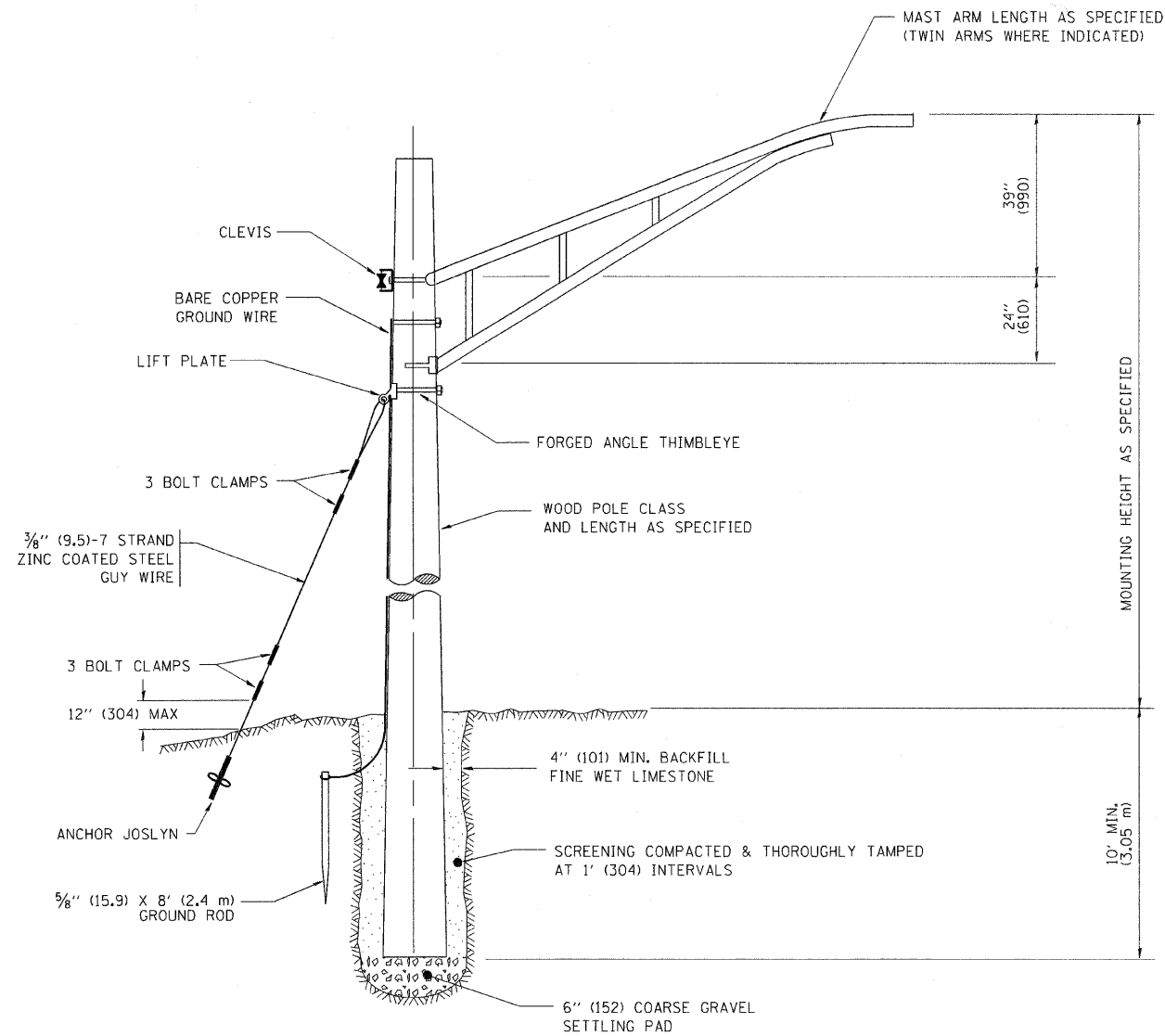
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		DRAWN -	REVISED - A. ABBAS 03-21-97
	PLOT SCALE = 50.0000 "/ IN.	CHECKED -	REVISED - M. GOMEZ 04-06-01
	PLOT DATE = 1/4/2008	DATE - 06-13-90	REVISED - R. BORO 01-01-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

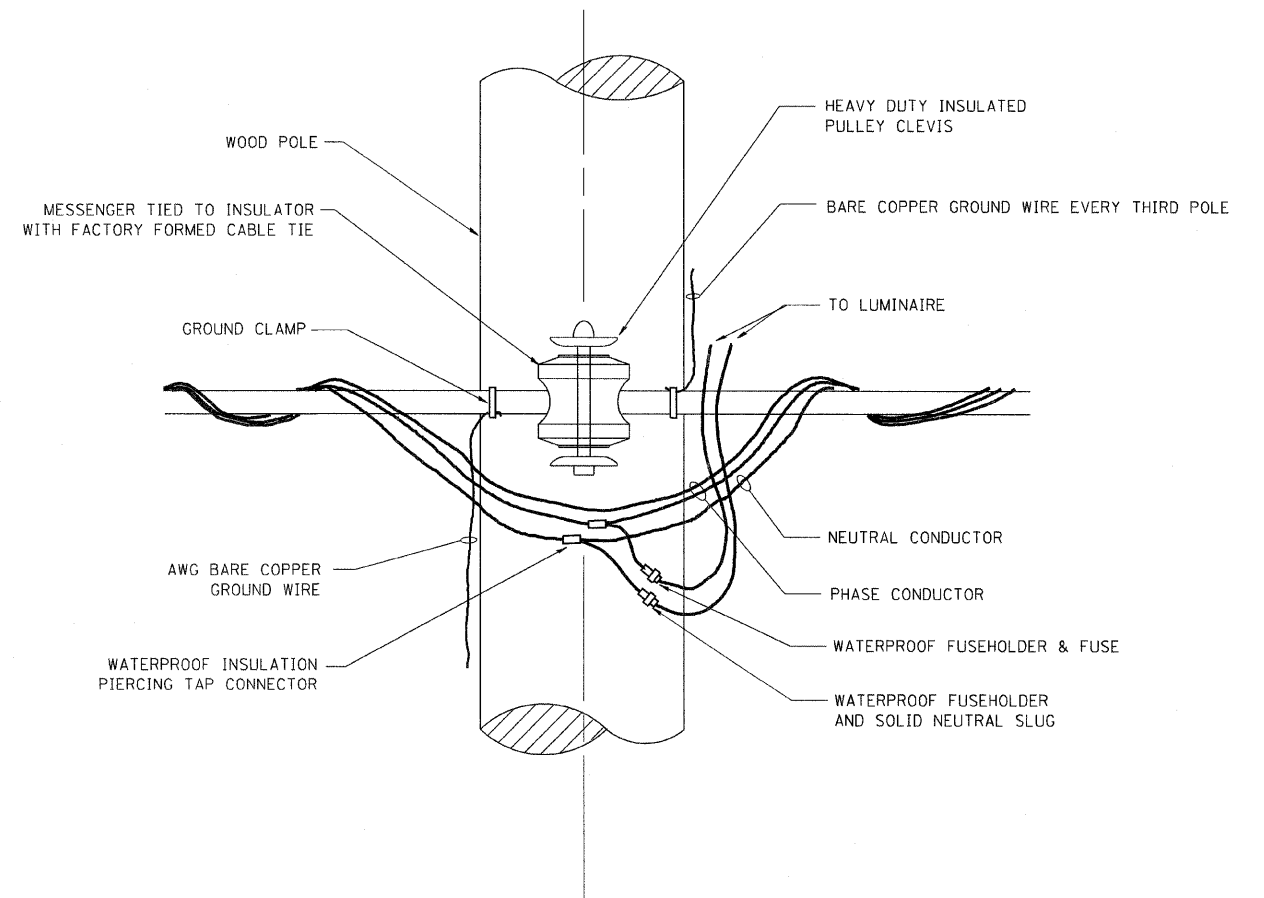
**BUTT JOINT AND
HMA TAPER DETAILS**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. 735+00 TO STA. 750+00

F.A.P. RTE. 631	SECTION 111 N-B4	COUNTY WILL	TOTAL SHEETS 20	SHEET NO. 16
BD400-05 BD32			CONTRACT NO. 60D73	
FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT				



TEMPORARY LIGHT POLE DETAIL

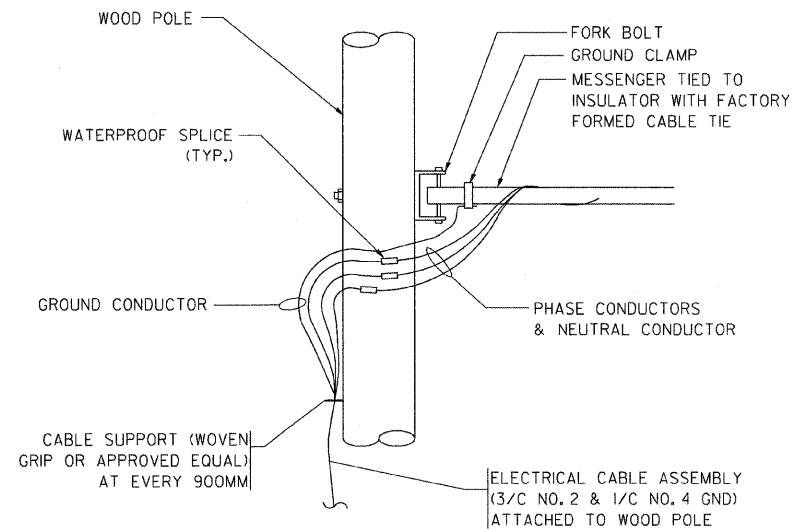


TEMPORARY LIGHT POLE ATTACHMENT DETAIL

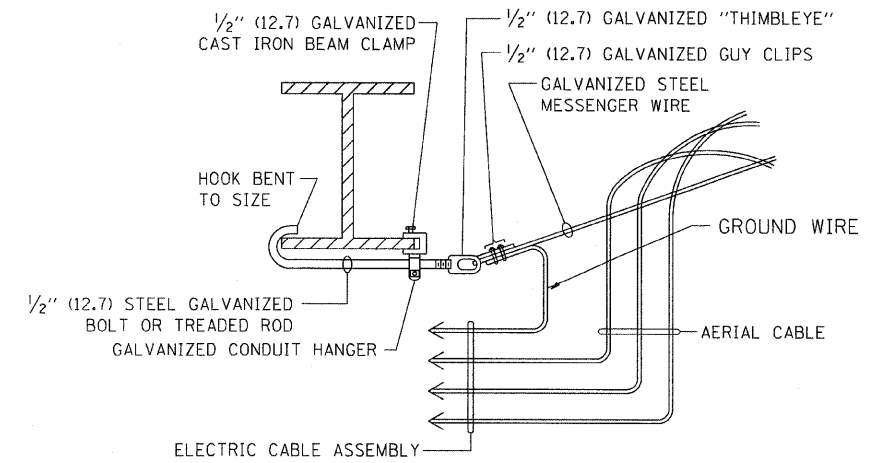
NOTES:

1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED

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	PLOT SCALE = 50,000' / IN.	DRAWN -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. 735+00	TO STA. 750+00	BE-800			
	PLOT DATE = 1/4/2008	CHECKED -	REVISED -		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							
		DATE -	REVISED -		CONTRACT NO. 60D73							



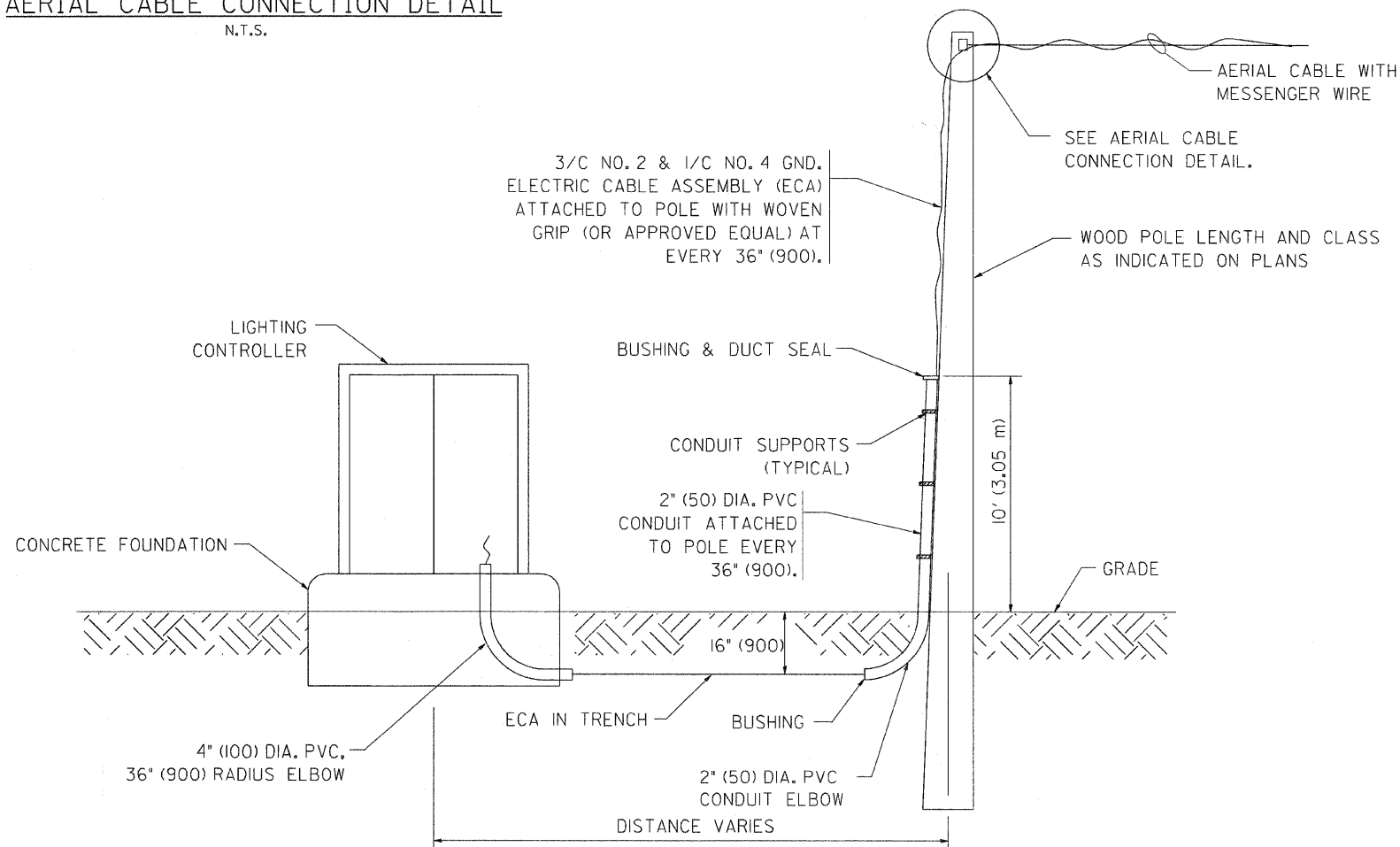
AERIAL CABLE CONNECTION DETAIL
N.T.S.



AERIAL CABLE ATTACHED TO STRUCTURE
NOT TO SCALE

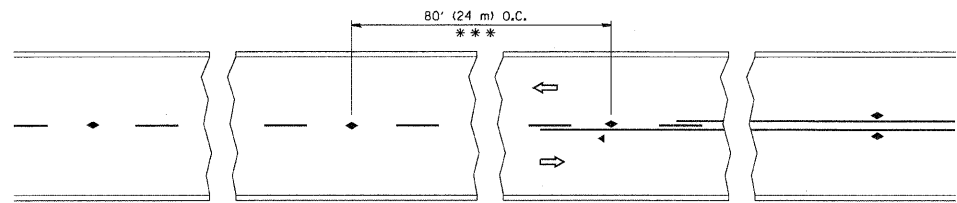
NOTES:

1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED.
2. SEE PROPOSED LIGHTING PLAN FOR CONDUIT, CABLE AND ROUTING.
3. THE CONTRACTOR SHALL PROVIDE INTERMEDIATE SUPPORTS TO MAINTAIN MINIMUM CLEARANCES. REFER TO AERIAL AERIAL CABLE ATTACHED TO STRUCTURE DETAIL.
4. COST OF SPLICES AND MOUNTING HARDWARE SHALL BE INCLUDED IN THE UNIT PRICE FOR AERIAL CABLE.

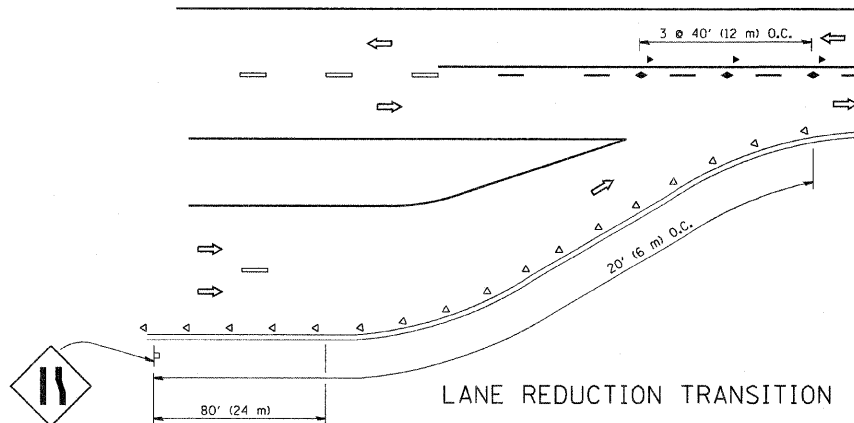


WOOD POLE TO LIGHTING CONTROLLER WIRING CONNECTION DETAIL
N.T.S.

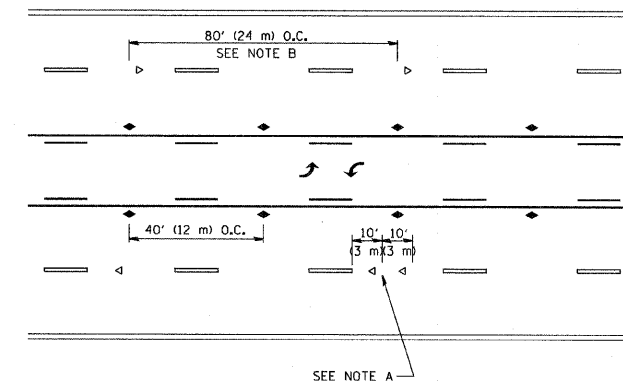
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PLOT SCALE = 50,000 ' / IN.	CHECKED -	DATE -	REVISED -			SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. 735+00 TO STA. 750+00	BE-801				
PLOT DATE = 1/4/2008	DATE -	REVISED -				CONTRACT NO. 60D73							
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT													



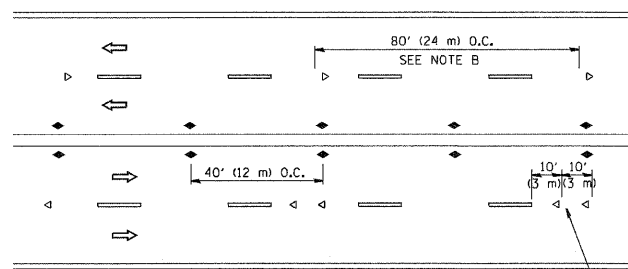
TWO-LANE/TWO-WAY



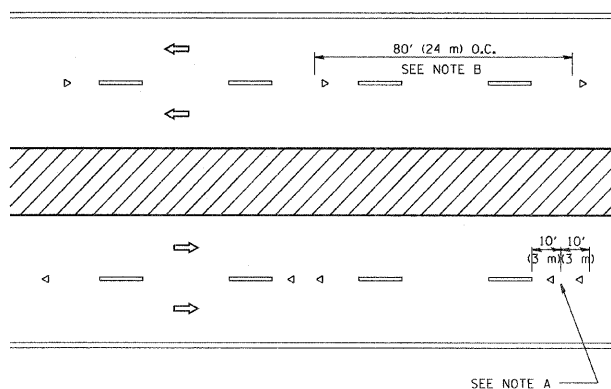
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

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

SYMBOLS

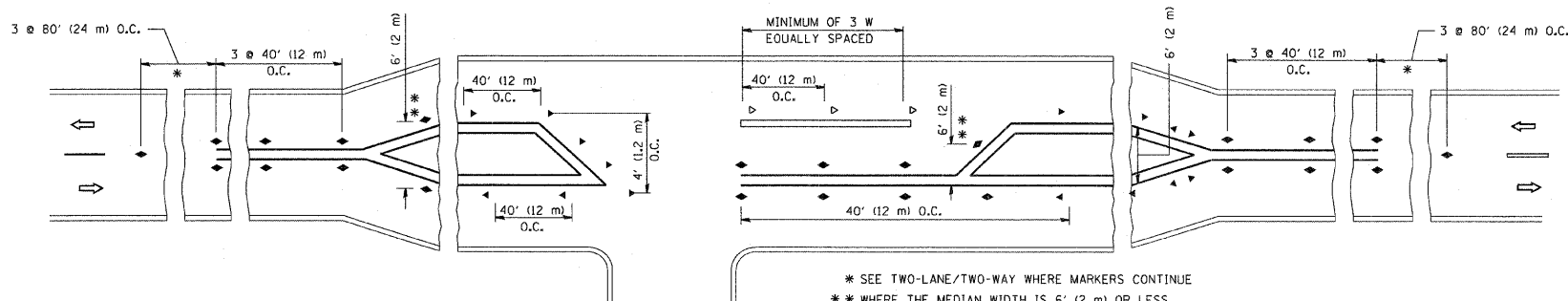
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.
- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

DESIGN NOTES

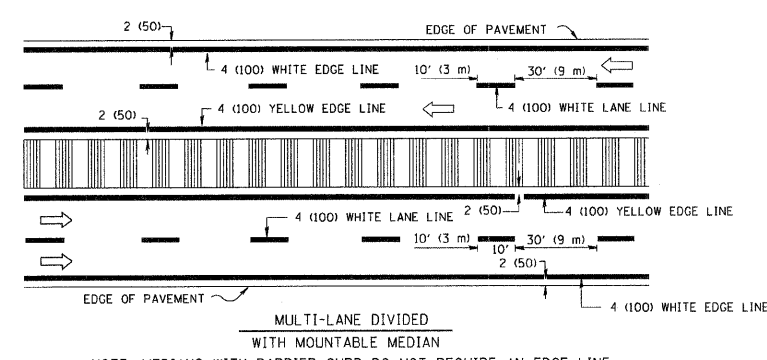
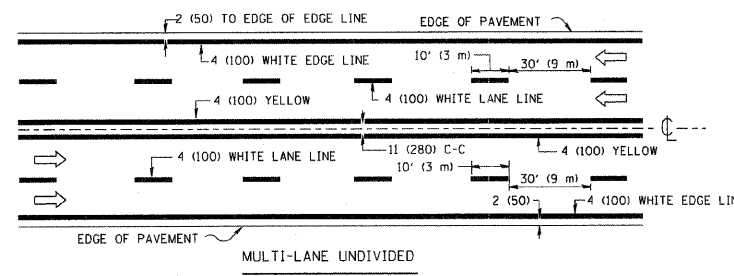
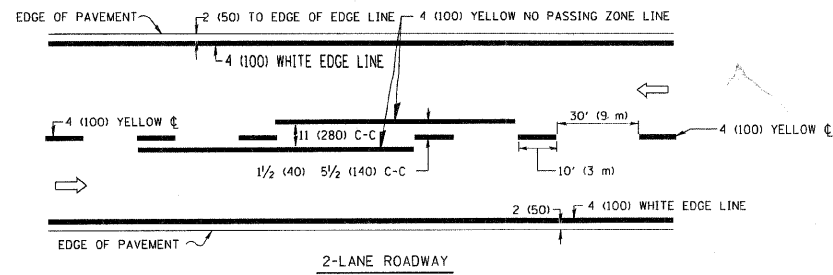
1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
4. MARKERS SHOULD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



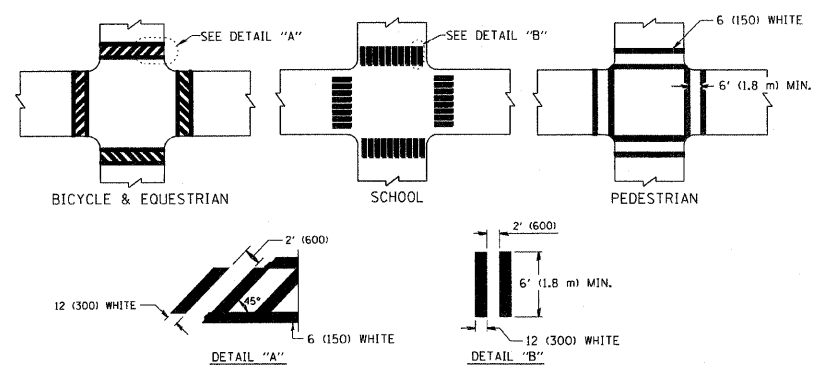
LEFT TURN

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

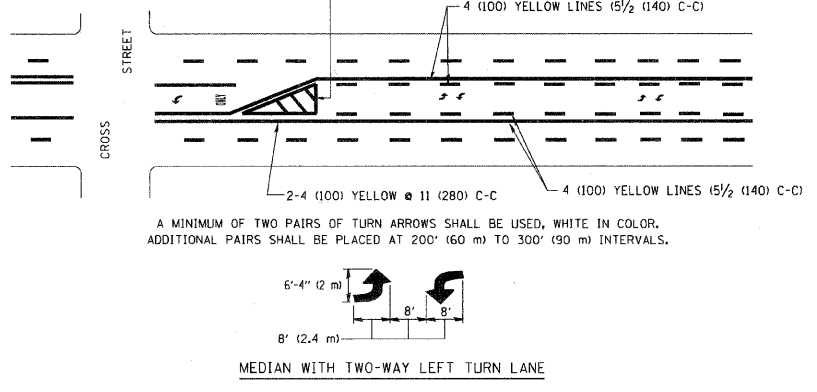
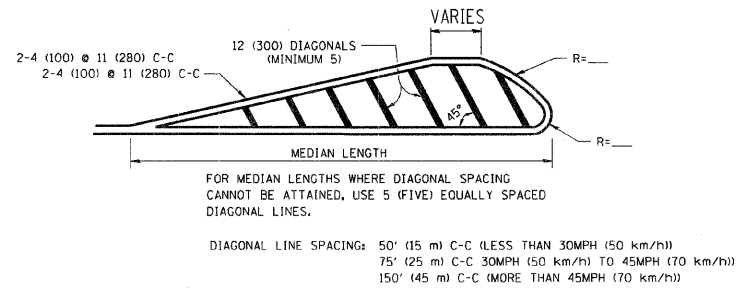
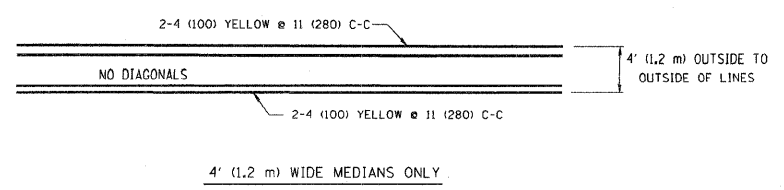
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	PLOT SCALE = 58,000' / IN.	DRAWN -	REVISED - T. RAMMACHER 03-12-99		RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)		631	111 N-BJ	WILL	20	19	
	PLOT DATE = 1/4/2008	CHECKED -	REVISED - T. RAMMACHER 01-06-00		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. 735+00 TO STA. 750+00	TC-11		CONTRACT NO. 60D73		
		DATE -	REVISED -				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					



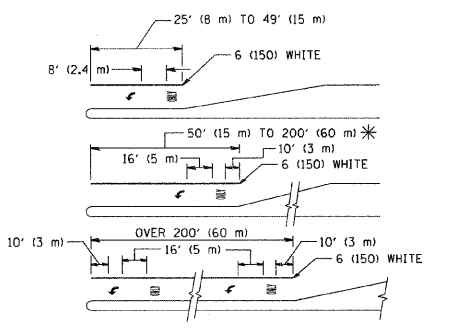
TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



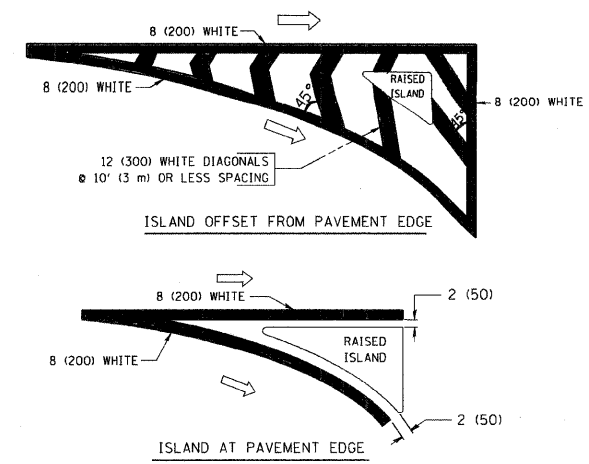
TYPICAL PAINTED MEDIAN MARKING



FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
 AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)
 * TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED 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	5 1/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5 1/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C (30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m ²) EACH "X"=54.0 SQ. FT. (5.0 m ²)
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

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

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