THE VILLAGE OF TINLEY PARK
Cook County, Illinois
Will County, Illinois

RESOLUTION
NO. 2018-R-047

A RESOLUTION APPROVING A CONTRACT BETWEEN THE VILLAGE OF TINLEY PARK AND IROQUOIS PAVING CORPORATION FOR THE 183RD STREET RESURFACING PROJECT

JACOB C. VANDENBERG, PRESIDENT
KRISTIN A. THIRION, VILLAGE CLERK

MICHAEL J. PANNITTO
BRIAN H. YOUNKER
CYNTHIA A. BERG
WILLIAM P. BRADY
MICHAEL W. GLOTZ
JOHN A. CURRAN
Board of Trustees

Published in pamphlet form by authority of the President and Board of Trustees of the Village of Tinley Park

RESOLUTION NO. 2018-R-047

A RESOLUTION APPROVING A CONTRACT BETWEEN THE VILLAGE OF TINLEY PARK AND IROQUOIS PAVING CORPORATION FOR THE 183RD STREET RESURFACING PROJECT

WHEREAS, the Village of Tinley Park, Cook and Will Counties, Illinois, is a Home Rule Unit pursuant to the Illinois Constitution of 1970; and

WHEREAS, the Corporate Authorities of the Village of Tinley Park, Cook and Will Counties, Illinois, have considered entering into an Agreement with Iroquois Paving Corporation., a true and correct copy of such Agreement being attached hereto and made a part hereof as **EXHIBIT 1**; and

WHEREAS, the Corporate Authorities of the Village of Tinley Park, Cook and Will Counties, Illinois, have determined that it is in the best interests of said Village of Tinley Park that said Agreement be entered into by the Village of Tinley Park;

NOW, THEREFORE, Be It Resolved by the President and Board of Trustees of the Village of Tinley Park, Cook and Will Counties, Illinois, as follows:

Section 1: The Preambles hereto are hereby made a part of, and operative provisions of, this Resolution as fully as if completely repeated at length herein.

Section 2: That this President and Board of Trustees of the Village of Tinley Park hereby find that it is in the best interests of the Village of Tinley Park and its residents that the aforesaid "Agreement" be entered into and executed by said Village of Tinley Park, with said Agreement to be substantially in the form attached hereto and made a part hereof as **EXHIBIT 1**.

Section 3: That the President and Clerk of the Village of Tinley Park, Cook and Will Counties, Illinois are hereby authorized to execute for and on behalf of said Village of Tinley Park the aforesaid Agreement.

Section 4: That this Resolution shall take effect from and after its adoption and approval.

ADOPTED this 17th day of July, 2018, by the Corporate Authorities of the Village of Tinley Park on a roll call vote as follows:

AYES: Younker, Pannitto, Berg, Brady, Glotz, Curran

NAYS: None

ABSENT: None

APPROVED this 17th day of July, 2018, by the President of the Village of Tinley Park.

Village President

ATTEST:

Deputy Village Clerk

STATE OF ILLINOIS)
COUNTY OF COOK) SS
COUNTY OF WILL)

CERTIFICATE

I, KRISTIN A. THIRION, Village Clerk of the Village of Tinley Park, Counties of Cook and Will and State of Illinois, DO HEREBY CERTIFY that the foregoing is a true and correct copy of Resolution No. 2018-R-047, "A RESOLUTION APPROVING A CONTRACT BETWEEN THE VILLAGE OF TINLEY PARK AND IROQUOIS PAVING CORPORATION FOR THE 183RD STREET RESURFACING PROJECT," which was adopted by the President and Board of Trustees of the Village of Tinley Park on July 17, 2018.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal of the Village of Tinley Park this _____ day of _____ 2018.

_____
VILLAGE CLERK

EXHIBIT 1

IROQUOIS PAVING CORPORATION AGREEMENT

VILLAGE OF TINLEY PARK

183rd Street Resurfacing

Harlem Avenue to Oak Park Avenue

REL Project 18-R0455-03

VILLAGE OF TINLEY PARK
COOK & WILL COUNTIES, ILLINOIS
NOTICE TO CONTRACTORS

The Village of Tinley Park will receive sealed proposals for the following improvements at the Clerk's office, 16250 South Oak Park Avenue, Tinley Park, Illinois 60477, until 9:30 AM on Thursday July 5, 2018.

183RD STREET RESURFACING
HARLEM AVENUE TO OAK PARK AVENUE

Proposals will be publicly read aloud on Thursday July 5, 2018 after 9:31 AM. No bid shall be withdrawn after the opening of the proposals without the consent of the President and Board of Trustees for a period of ninety days after the scheduled time of closing bids.

All proposals shall be sealed in an envelope, addressed to the Village of Tinley Park, attention Clerk's office. The name and address of the bidder and the name of the project shall also appear on the outside of the envelope. Proposals must be submitted on the forms provided by the Engineer.

The Bid Documents, including specifications, are on file at the office of the Engineer, Robinson Engineering, Ltd., 17000 South Park Avenue South Holland, Illinois 60473, (phone 708-331-6700), and may be obtained from the Engineer's office upon payment of Fifty Dollars ($50.00) for each paper copy and/or Ten Dollars ($10.00) per CD format. The bid documents will be issued until 4:30 PM on the last business day preceding the bid. No refund will be made for documents received from the Engineer.

A certified check/bank draft drawn on a solvent bank or a bid bond, payable without condition to the Village of Tinley Park in an amount not less than ten percent (10%) of the bid shall be submitted with each proposal, as a guarantee that, if the proposal is accepted, a contract will be entered into and the performance of the contract is properly secured.

A performance bond in a sum equal to one hundred percent (100%) of the amount of the bid, with sureties to be approved by the President and Board of Trustees for the faithful performance of the contract must be furnished by the successful bidder. All bids or proposals shall contain an offer to furnish bond upon acceptance of such bid or proposal.

The right is reserved to reject any or all proposals, to waive technicalities, to postpone the bid opening, or to advertise for new proposals, if in the judgment of the President and Board of Trustees their best interests will be promoted thereby.

The contractor will be required to pay not less than the prevailing wage rates on this project as established by the United States Department of Labor. He shall also comply with all applicable Federal, State and local regulations.

The Village of Tinley Park Local Vendor Purchasing Policy provides local vendors with preferential treatment when competing for contracts with the Village. A local vendor is defined as a business that has an actual business location within the Village of Tinley Park and is licensed by the Village. As such, when considering contracts, the Village of Tinley Park reserves the right to forego the lowest and responsible bid in favor of a local vendor under the following circumstances:

Contract Value	Range (up to a maximum of)
$0-$250,000	5%
$250,000-$500,000	4%
$500,000-$750,000	3%
$750,000-$1,000,000	2%
$1,000,000-$2,000,000	1%

Responsible bidders are determined pursuant to the criteria set forth pursuant to the criteria set forth in the Village's Responsible Bidder Ordinance No. 2009-O-002.

Bidder qualifications and experience will also be included in the basis for determining the lowest responsible bidder. Prequalifications will be required to be submitted to the engineer by all potential bidders. If in the opinion of the engineer and the President and Board of Trustees, an applicant would not be able to serve the best interest of the Village, a proposal will not be issued to the applicant.

President and Board of Trustees
Village of Tinley Park

Cook & Will Counties, Illinois

PROPOSAL and CONTRACT

PROPOSAL

TO THE OWNER, Village of Tinley Park

1. Proposal of Iroquois Paving Corporation
(name and address of bidder)
1889 E US Hwy 24, PO Box 466, Watseka IL 60970

curtis.luecke@iroqpavcorp.com
(email address of bidder)

for the improvement described in the NOTICE TO CONTRACTORS.

2. In submitting this proposal, the undersigned declares that the only persons or parties interested in the proposal as principals are those named herein; and that proposal is made without collusion with any other person, firm or corporation.

3. The undersigned further declares that he has carefully examined the proposal, plans, specifications, form of contract and contract bond, and special provisions (if any), and that he has inspected in detail the site of the proposed work, and that he has familiarized himself with all of the local conditions affecting the contract and the detailed requirements of construction, and understands that in making this proposal he waives all right to plead any misunderstanding regarding the same.

4. The undersigned further understands and agrees that if this proposal is accepted, he is to furnish and provide all necessary machinery, tools, apparatus and other means of construction, and to do all of the work, and to furnish all of the materials specified in the contract, except such materials as are to be furnished by the Owner, in the manner and at the time therein prescribed, and in accordance with the requirements therein set forth, and is fully responsible for the construction means, methods, techniques, sequences and safety procedures and programs incident thereto.

5. The undersigned declares that he understands that the quantities mentioned are approximate only and that they are subject to increase or decrease; that he will take in full payment therefore the amount and the summation of the actual quantities, as finally determined, multiplied by the unit prices shown in the schedule of prices contained herein.

6. The undersigned further agrees that the unit prices submitted herewith are for the purpose of obtaining a gross sum, and for use in computing the value of extras and deductions; if there is a discrepancy between the gross sum bid and that resulting from the summation of the quantities multiplied by their respective unit prices, the latter shall apply.

7. The undersigned further agrees that if the Owner decides to extend or shorten the improvement, or otherwise alter it by extras or deductions, including the elimination of any one or more of the items, as provided in the specifications, he will perform the work as altered, increased or decreased at the contract unit prices.

8. The undersigned further agrees that the Owner may at any time during the progress of work covered by this contract order other work or materials incidental thereto and that all such work and materials as do not appear in the proposal or contract as a specific item accompanied by a unit price, and which are not included under the bid price for other items in this contract, shall be performed as extra work, and that he will accept as full compensation therefore the actual cost plus fifteen per cent (15%), the actual cost to be determined as provided in the specifications.

9. The undersigned further agrees to execute a contract for this work and present the same to the Owner within fifteen (15) days after the date of notice of the award of the contract to him.

10. The undersigned further agrees that he and his surety will execute and present within fifteen (15) days after the date of notice of the award of contract, a contract bond satisfactory to and in the form prescribed by the Owner, in the penal sum of the full amount of the contract, guaranteeing the faithful performance of the work in accordance with the terms of the contract.

11. The undersigned further agrees to begin work not later than ten (10) days after the execution and approval of the contract and contract bond, unless otherwise provided, and to prosecute the work in such manner and with sufficient materials, equipment, labor and safety precautions as will insure its completion within the time limit specified herein, it being understood and agreed that the completion within the time limit is an essential part of the contract. The undersigned agrees to complete the work within _____ calendar days after the date of the execution of the contract by both parties, or by 11/1/18 if this is a completion day contract, unless additional time shall be granted by the Engineer in accordance with the provisions of the specifications. In case of failure to complete the work within the time names herein or within such extra time as may have been allowed by extensions, the undersigned agrees that the Owner shall withhold from such sums as may be due him under the terms of this contract, the costs set forth in the specifications, which cost shall be considered and treated not as a penalty, but as damages due the Owner form the undersigned by reason of inconvenience to the public, added cost of engineering and construction observation, maintenance of detours, and other items which have caused an expenditure of public funds resulting from the failure of the undersigned to complete the work within the time specified in the contract.

12. Accompanying this proposal is a bank draft, bank cashier's check, certified check or bid bond, complying with the requirements of the specifications, made payable to:_____

_____

The amount of the bond, check or draft is_____

bid bond ($ bid bond).

If the proposal and the undersigned shall fail to execute a contract and contract bond as required herein, it is hereby agreed that the amount of the check or draft substituted in lieu thereof, shall become the property of the Owner, and shall be considered as payment of damages due to delay and other causes suffered by the Owner because of the failure to execute said contract and contract bond; otherwise said check or draft substituted in lieu thereof shall be returned to the undersigned.

ATTACH BANK DRAFT, BID BOND, BANK CASHIER'S
CHECK OR CERTIFIED CHECK HERE

In the event that one check, bond, or draft is intended to cover two or more proposals, the amount must be equal to the sum of the proposal guarantees of the individual sections covered.

13. The undersigned submits herewith his schedule of prices covering the work to be performed under this contract; he understands that he must show in the schedule the unit prices for which he proposes to perform each item of work; that the extensions must be made by him; and that if not so done, his proposal may be rejected as irregular.

14. The undersigned firm certifies that it is not barred from bidding on this contract as a result of a conviction for the violation of State laws prohibiting bid-rigging or bid-rotating.

AIA Document A310tm - 2010

Bid Bond

Contractor:
(Name, Legal Status and Address)
Iroquois Paving Corporation
P O Box 466
Watseka IL 60970

Surety:
(Name, Legal Status and Principal Place of Business)
Travelers Casualty and Surety Company of America
One Tower Square
Hartford CT 06183-6014

Owner:
(Name, Legal Status and Address)
Village of Tinley Park
16250 South Oak Park Avenue
Tinley Park, IL 60477

Bond Amount: Ten percent of bid
Project:
(Name, location or address, and Project number, if any)
183rd Street Resurfacing Harlem Avenue to Oak Park Avenue

ADDITIONS AND DELETIONS: The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

The document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and give such bond or bonds as may be Specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waived any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 5th day of July, 2018

Iroquois Paving Corporation
(Contractor as Principal) *(Seal)*

(Witness)

(Title) President

Travelers Casualty and Surety Company of America
(Surety) *(Seal)*

Linda Hoffman
(Witness)

(Title) Tim R Patton Attorney-in-Fact

State of Illinois
} ss:
County of Macon

On 5th day of July, 2018 before me, a Notary Public in and for said County and State, residing therein, duly commissioned and sworn, personally appeared Tim R Patton

known to me to be Attorney-in-Fact of Travelers Casualty and Surety Company of America
the corporation described in and that executed the within and foregoing instrument, and known to me to be the person who executed the said instrument in behalf of the said corporation, and he duly acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year stated in this certificate above.

Glenda Hoffman
(Notary Public)

"OFFICIAL SEAL"
GLENDA HOFFMAN
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 07-16-2021

CONTRACTOR'S STATEMENT

1. Do you have sufficient knowledge of Drawings and Specifications of the work covered by this Contract to warrant submitting a Proposal for this work? Yes

2. (a) Have you done work of this nature? Yes

   (b) To what extent? (Dollar value) $10,000,000+

   (c)For whom? State of Illinois

3. Do you have sufficient equipment to perform this work? Yes

   If so, list major items: Asphalt plant, paver, roller, milling machine, excavators, semi trucks, pick up trucks

4. Give Bank reference: Prospect Bank,

   Address: 177 W Wood St, Paris, IL 61944

5. List names and addresses of major suppliers:

   BP Products North America Inc., 12713 Collections Center Drive Chicago, IL 60693

   County Materials Corporation P.O. Box 100 Marathon, WI 54448--0100

   VCNA Prairie LLC - 5185 Paysphere Circle Chicago, IL 60674

6. Have you ever had, or do you now have, funds withheld for non-completion of work to the satisfaction of any municipality? No

   (a) If so where? N/A

   (b) For what reason? N/A

7. Have you ever been disqualified by a Governmental Agency for failure to satisfactorily complete a public improvement? No

CONTRACTOR'S STATEMENT (cont.)

8. Have you ever been cited for failing to withhold or report payroll deductions for Federal Income Tax? No

9. Have you ever been cited by the Federal Government for any violation of the Copeland Act (Anti-kick-back Law)? No

10. If awarded contract, work will begin in _____ calendar days.
within 30 days of contract execution

CERTIFICATE OF ELIGIBILITY TO BID

I, Iroquois Paving Corporation (contractor), pursuant to section 33E-11 of the Illinois Criminal Code of 1961 as amended, hereby certifies that neither (he, she, it) nor any of (his, her, its) partners, officers, or owners of (his, her, its) business has been convicted in the past five (5) years of the offense of bid-rigging under section 33E-3 of the Illinois Criminal Code of 1961 as amended and that neither (he , she, it) nor any of (his, her, its) business has ever been convicted of the offense of bid-rotating under section 33E-4 of the Illinois Criminal Code of 1961 as amended.

IROQUOIS PAVING CORPORATION

Date: 7/5/18

By: _____
(Name of Contractor)

President
(Title)

SCHEDULE OF PRICES

Local Agency Village of Tinley Park

Location 183rd Street Resurfacing - Harlem Avenue to Oak Park Avenue

Description Option 1 - Modified Urethane

The undersigned submits herewith his schedule of prices covering the work to be performed under this contract; he understands that he must show in the schedule the unit prices for which he proposes to perform each item of work; that the extensions must be made by him, and if not so done, his proposal may be rejected as irregular.

Schedule for Single Bid

(For complete information covering these items, see plans and specifications.)

Bidder's Proposal for making Entire Improvements $350,167.95

Item No.	Items	Unit	Quantity	Unit Price	Total
1	EARTH EXCAVATION	CU YD	25	40.00	$1000.00
2	PREPARATION OF BASE	SQ YD	75	3.00	225.00
3	AGGREGATE BASE REPAIR	TON	75	20.00	1500.00
4	BITUMINOUS MATERIALS (TACK COAT)	POUND	12,000	0.01	120.00
5	LEVELING BINDER (MACHINE METHOD), N70	TON	1,250	64.50	80,625.00
6	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	175	0.01	1.75
7	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	2,000	62.50	125,000.00
8	HOT-MIX ASPHALT SURFACE REMOVAL, 3"	SQ YD	17,700	1.80	31,860.00
9	DRIVEWAY PAVEMENT REMOVAL	SQ YD	15	15.00	225.00
10	COMBINATION CURB AND GUTTER REMOVAL	FOOT	275	15.00	4125.00
11	CLASS B PATCHES, TYPE IV, 10 INCH	SQ YD	90	165.00	14,850.00
12	CLASS D PATCHES, TYPE IV, 10 INCH	SQ YD	220	70.00	15,400.00
13	AGGREGATE SHOULDERS, TYPE B	TON	60	45.00	2,700.00
14	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	275	35.00	9625.00
15	SHORT TERM PAVEMENT MARKING	FOOT	2,100	0.01	21.00
16	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	700	0.01	7.00
17	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	6,500	0.40	2600.00
18	MODIFIED URETHANE PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	600	2.50	1500.00
19	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	8,000	0.65	5200.00
20	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"	FOOT	2,400	1.20	2880.00
21	MODIFIED URETHANE PAVEMENT MARKING - LINE 12"	FOOT	700	2.40	1680.00
22	MODIFIED URETHANE PAVEMENT MARKING - LINE 24"	FOOT	200	4.80	960.00
23	GROOVING FOR RECESSED PAVEMENT MARKING, LETTERS AND SYMBOLS	SQ FT	600	1.25	750.00

Item No.	Items	Unit	Quantity	Unit Price	Total
24	GROOVING FOR RECESSED PAVEMENT MARKING 5"	FOOT	8,000	0.35	2800.00
25	GROOVING FOR RECESSED PAVEMENT MARKING 7"	FOOT	2,400	0.55	1320.00
26	GROOVING FOR RECESSED PAVEMENT MARKING 13"	FOOT	700	1.05	735.00
27	GROOVING FOR RECESSED PAVEMENT MARKING 25"	FOOT	200	2.05	410.00
28	RAISED REFLECTIVE PAVEMENT MARKER	EACH	230	38.50	8855.00
29	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	170	0.01	1.70
30	DETECTOR LOOP REPLACEMENT	FOOT	1,200	15.05	18060.00
31	RUBBER ADJUSTING RINGS	EACH	24	36.50	876.00
32	TOPSOIL FURNISH AND PLACE, 4" (SPECIAL)	SQ YD	300	12.00	3600.00
33	SODDING, SPECIAL	SQ YD	300	14.00	4200.00
34	HOT-MIX ASPHALT DRIVEWAY PAVEMENT, 6"	SQ YD	15	62.50	937.50
35	DRAINAGE & UTILITY STRUCTURES TO BE ADJUSTED	EACH	8	425.00	3400.00
36	DRAINAGE & UTILITY STRUCTURES TO BE RECONSTRUCTED	EACH	1	1200.00	1200.00
37	TEMPORARY INFORMATION SIGNING	SQ FT	51	18.00	918.00

SIGNATURES

(If an individual)

Signature of Bidder .....

Business Address .....

(If a co-partnership)

Firm Name ..... (SEAL)

Signed by ..... (SEAL)

Business Address .....

Insert Names and Addresses of All Members of the Firm .....

.....

.....

(If a corporation)

Corporate Name Iroquois Paving Corporation

Signed By .....
President

Business Address 1889 E US Hwy 24, PO Box 466
Watseka IL 60970

(Corporate Seal)

Insert Names of Officers

President Joseph A. Cowan

Secretary John D. Lynch

Treasurer John D. Lynch

Attest: .....
Secretary

Phone Number 815-432-5211

BIDDER'S CERTIFICATE

The undersigned, having executed the attached bid for the construction of:

Village of Tinley Park 183rd St Resurfacing Harlem Ave to Oak Park Ave

Name of Project

for the Village/City/Town of Tinley Park. County of Cook.

State of Illinois hereby certifies that he has read all of the Contract Documents, including the Notice to Bidders, Instructions to Bidders, Proposal Forms, General conditions of the contract, Detail Specifications, Forms of contract, Form of Performance Bond and Form of Maintenance Bond, and that he has examined the plans and that his proposal for the work is based on the conditions and requirements therein; and should the contract be awarded to him, he agrees to execute the work in strict accordance therewith, including compliance with the Insurance Requirements of the General Conditions.

Name of Bidder
IROQUOIS PAVING CORPORATION
By: _____
Company Name

Date: 7/5/18

CONTRACT

1. THIS AGREEMENT, made and concluded this 17th day of July, 2018, between the Village of Tinley Park (city/village/town of), acting by and through its Mayor & Board of Trustees (President-Board of Trustees/Mayor-City Council) known as the party of the first part, and Iroquois paving Corporation (Contractor), his/their executors, administrators, successors or assigns, known as the party of the second part.

2. WITNESSETH: That for and in consideration of the payment and agreements mentioned in the Proposal hereto attached, to be made and performed by the party of the first part, and according to the terms expressed in the Bond referring to these presents, the party of the second part agrees with said party of the first part at his/their own proper cost and expense to do all the work, furnish all materials and all labor necessary to complete the work in accordance with the plans and specifications hereinafter described, and in full compliance with all of the plans of this agreement and the requirements of the Engineer under it.

3. And it is also understood and agreed that the Notice to Contractors, proposals, contract bond, General Requirements and Covenants (Division I), Technical Specifications (Division II), Special Provisions (Division III) and Standard drawings (Division IV), in addition to any specific plans and specifications upon which the contractor's proposal is based, are all incorporated by reference into this contract and are therefore made a part hereof.

4. IN WITNESS WHEREOF, the said parties have executed these presents on the date above mentioned.

FOR THE VILLAGE OF TINLEY PARK, IL
(Party of the First Part)

By: _____

Title: Jacob C. Vandenberg, Mayor

Attest: _____

Title: Kristin A. Thirion, Clerk

MUNICIPAL SEAL

Executed by Municipality

FOR THE CONTRACTOR
(Party of the Second Part)

Iroquois Paving Corporation

By: _____

Title: President

Attest: _____

Title: Vice-President

CORPORATE SEAL

Executed by Contractor

CONTRACT BOND Bond #106941797

KNOWN ALL MEN BY THESE PRESENTS, that we, Iroquois Paving Corporation, a corporation organized under the laws of the State of Delaware, and licensed to do business in the State of Illinois, as principal, and Travelers Casualty and Surety Company of America, a corporation organized and existing under the laws of the State of Connecticut, with authority to do business in the State of Illinois, as Surety, are held and firmly bound unto the Village of Tinley Park, State of Illinois, in the penal sum of Three Hundred Fifty Thousand One Hundred Sixty Seven Dollars and 95/100's Dollars ($ 350,167.95), lawful money of the United States, well and truly to be paid unto said Village of Tinley Park, for the payment of which we bind ourselves, our successors and assigns, jointly, severally, and firmly by these presents.

Executed by Contractor

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH that whereas, the said Principal has entered into a written contract with an Owner which is the Village of Tinley Park and acts through its Mayor and Board of Trustees or the construction of the work designated RELTD# 18-R0455.02 183rd Street Resurfacing, which contract hereby is referred to and made a part hereof, as if written herein in length, and whereby the said Principal has promised and agreed to perform said work in accordance with the terms of said Contract, and has promised to pay all sums of money due for any labor, materials, apparatus, fixtures or machinery furnished to such Principal for the purpose of performing such work and has further agreed to pay all direct and indirect damages to any person, firm, company, or corporation suffered or sustained on account of the performance of such work, for any reason whatsoever, during the time thereof and until such work is completed and accepted; and has further agreed that this bond shall inure to the benefit of any person, firm, company or corporation, to whom any money may be due from the Principal, subcontractor or otherwise, for any such labor, materials, apparatus, fixtures or machinery so furnished, and that suit may be maintained on such bond by any such person, firm, company or corporation, for the recovery of any such money.

NOW, THEREFORE, if the said Principal shall well and truly perform said work in accordance with the terms of said contract, and shall pay all sums of money due or to become due for any labor, materials, apparatus, fixtures or machinery furnished to him for the purpose of constructing such work, and shall commence and complete the work within the time prescribed in said contract, and shall pay and discharge all damages, direct and indirect, that may be suffered or sustained on account of

such work, for any reason whatsoever, during the time of the performance thereof and until the said work shall have been accepted, and shall hold the aforesaid Owner and its or his agents harmless on account of any such damages, and shall in all respects fully and faithfully comply with all the provisions, conditions and requirements of said contract, then this obligation to be void, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, we have duly executed the foregoing obligation this 24th day of July A.D. 20 18

Executed by Contractor

Contractor's corporate name: Iroquois Paving Corporation

CORPORATE SEAL

By: _____
President

Attest: _____

Attestor's Title: VP

Executed by Surety for Contractor

Surety's corporate name: Travelers Casualty and Surety Company of America

CORPORATE SEAL

By: _____
Attorney-in-fact Blake E Allison

By: _____
Attorney-in-fact

Executed by Municipality

APPROVED THIS 17th DAY OF JULY A.D. 20 18

VILLAGE OF TINLEY PARK, IL

By: _____

Title: Jacob C. Vandenberg, Mayor

ATTEST FOR VILLAGE OF TINLEY PARK , IL

MUNICIPAL SEAL

By: _____

Title: Kristin A. Thirion , Clerk

STATE OF Illinois)
) SS
COUNTY OF Macon)

I, Stacy R Standley (Notary), a Notary Public in and for said County in the State aforesaid, do hereby certify that Joseph A Cowan (President) and John D Lynch (Attestor), to me personally known to be president and secretary, respectively, of Iroquois Paving Corporation (Contractor), a corporation, and also known to me to be the persons whose names are subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that as such president and secretary respectively they signed, sealed and delivered the said instrument as the free and voluntary act of said Corporation, for the uses and purposes therein set forth, and that they were duly authorized to execute the same by the Board of Directors of said Corporation.

Executed by Contractor

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS 24th DAY OF July A.D. 20 18

SEAL

Stacy R. Standley
Notary Public

"OFFICIAL SEAL"
STACY R STANDLEY
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 05-25-2021

STATE OF Illinois)
) SS
COUNTY OF Macon)

I, Stacy R Standley (Notary), a Notary Public in and for said County in the State aforesaid, do hereby certify that Blake E Allison (Attorney-in-Fact) who is personally known to me to be the same person who signed the above and foregoing instrument as the Attorney in Fact for Travelers Casualty and Surety Company of America (Surety) appeared before me this day in person and acknowledged that he signed the name of Blake E Allison (Principal) thereto, as his Principal, and his own name as Attorney in Fact, as the free and voluntary act of his said Principal for the uses and purposes therein set forth, and that he executed the said instrument under authority given him by said Principal.

Executed by Surety

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS 24th DAY OF July A.D. 20 18

SEAL

Stacy R. Standley
Notary Public

"OFFICIAL SEAL"
STACY R STANDLEY
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 05-25-2021

TRAVELERS	Travelers Casualty and Surety Company of America Travelers Casualty and Surety Company St. Paul Fire and Marine Insurance Company

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **Blake E. Allison,** of **Forsyth, Illinois**, their true and lawful Attorney-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this **3rd** day of **February, 2017.**

State of Connecticut

City of Hartford ss.

By: _____
Robert L. Raney, Senior Vice President

On this the **3rd** day of **February, 2017**, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

In Witness Whereof, I hereunto set my hand and official seal.

My Commission expires the **30th** day of **June, 2021**

Marie C. Tetreault, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, **Kevin E. Hughes**, the undersigned, Assistant Secretary of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this 24th day of July, 2018

Kevin E. Hughes, Assistant Secretary

To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney-in-Fact and the details of the bond to which the power is attached.

IROQPAV-01 HSCHOREY

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 07/24/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
J.L. Hubbard Insurance and Bonds
1090 South Route 51
Forsyth, IL 62535

CONTACT NAME: Holli Schorey
PHONE (A/C, No, Ext): (217) 877-3344 3244 FAX (A/C, No): (217) 877-0795
E-MAIL ADDRESS: hschorey@jlhubbard.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : West Bend Mutual Insurance Company	15350
INSURER B : Great American Insurance Group	16691
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED
Iroquois Paving Corporation & Interstate Asphalt LLC
P. O. Box 466
Watseka, IL 60970-0466

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT LOC OTHER:	X	X	0576288	12/31/2017	12/31/2018	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 200,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
A	AUTOMOBILE LIABILITY X ANY AUTO OWNED AUTOS ONLY / SCHEDULED AUTOS HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY	X	X	0576288	12/31/2017	12/31/2018	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $ $
A	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED X RETENTION $ 0	X	X	0576288	12/31/2017	12/31/2018	EACH OCCURRENCE AGGREGATE	$ 8,000,000 $ 8,000,000 $
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N N If yes, describe under DESCRIPTION OF OPERATIONS below	N/A	X	0576289	12/31/2017	12/31/2018	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 500,000 $ 500,000 $ 500,000
B	Pollution Liability	X	X	CSE211137206	12/31/2017	12/31/2018	Limit	2,000,000
A	Rented Equipment			0576288	12/31/2017	12/31/2018	Limit	1,401,700

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
RE: RELTD# 18-R0455.02 - 183rd Street Resurfacing - Harlem Ave to Oak Park Ave - Option 1 - Modified Urethane
Village of Tinley Park and Robinson Engineering Inc are named as additional insured on a primary non-contributory basis including completed operations under the General Liability (Form WB1482), on a primary non-contributory basis under the Automobile (CA2048Z), and on a primary basis under the Pollution (Form CSE4917); subject to written contract. Umbrella is following form but not primary non-contributory. Waivers of subrogation are awarded to Village of Tinley Park and Robinson Engineering Inc under the General Liability, Automobile, Pollution and Workers Compensation; subject to written contract. Umbrella is following form.

CERTIFICATE HOLDER

Village of Tinley Park
16250 S Oak Park Ave
Tinley Park, IL 60477

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

© 1988-2015 ACORD CORPORATION. All rights reserved.
The ACORD name and logo are registered marks of ACORD

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – CONTRACTOR'S BLANKET

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

A. WHO IS AN INSURED (Section II) is amended to include as an additional insured any person or organization whom you are required to add as an additional insured on this policy under a written contract or written agreement.

The written contract or written agreement must be:

1. Currently in effect or becoming effective during the term of this policy; and
2. Signed by all parties to the written contract or written agreement prior to the "bodily injury," "property damage," "personal injury and advertising injury."

B. The insurance provided to the additional insured is limited as follows:

1. That person or organization is only an additional insured with respect to liability for "bodily injury", "property damage' or "personal and advertising injury" caused in whole or in part, by:
   a. Your premises; or
   b. Your negligent acts or omissions in connection with "Your work" for that additional insured.

   However:
   a. The insurance afforded to such additional insured only applies to the extent permitted by law; and
   b. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the written contract or written agreement to provide such additional insured.
2. The Limits of Insurance applicable to the additional insured are those specified in the written contract or written agreement or in the Declarations for this policy, whichever is less. These Limits of Insurance are inclusive and not in addition to the Limits of Insurance shown in the Declarations.
3. Except when required by written contract or written agreement, the coverage provided to the additional insured by this endorsement does not apply to:
   a. "Bodily injury" or "property damage" occurring after:
      (1) All work on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured at the site of the covered operations has been completed; or
      (2) That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as part of the same project.
   b. "Bodily injury" or "property damage" arising out of acts or omissions of the additional insured other than in connection with the general supervision of "your work."
4. The insurance provided to the additional insured does not apply to "bodily injury," "property damage," "personal injury and advertising injury" arising out of an architect's, engineer's, or surveyor's rendering of or failure to render any professional services including;
   a. The preparing, approving, or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; and
   b. Supervisory, or inspection activities performed as part of any related architectural or engineering activities.

   This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of, or the failure to render, any professional architectural, engineering or surveying services.

C. As respects the coverage provided under this endorsement, Paragraph **4.b. SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS** is amended with the addition of the following:

4. Other insurance

b. Excess insurance

This insurance is excess over:

Any other valid and collectible insurance procured by or on behalf of the additional insured whether primary, excess, contingent or on any other basis unless a written contract specifically requires that this insurance be either primary or primary and noncontributing. Where required by written contract, we will consider any other insurance procured by the additional insured for injury or damage covered by this endorsement to be excess and noncontributing with this insurance.

If no written contract specifically requires primary or noncontributory coverage, then this insurance is excess and as a condition of coverage, the additional insured shall be obligated to tender the defense and indemnity of every claim or suit to all other insurers that may provide coverage to the additional insured, whether on a contingent, excess or primary basis.

When this insurance is excess, we will have no duty under Coverage **A.** and Coverage **B.** to defend the insured against any "suit" if any other insurer has a duty to defend the insured against that "suit". If no other insurer defends, we will undertake to do so, but we will be entitled to the insured's rights against all those other insurers.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

DESIGNATED INSURED

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM
GARAGE COVERAGE FORM
MOTOR CARRIER COVERAGE FORM
TRUCKERS COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by this endorsement.

This endorsement identifies person(s) or organization(s) who are "insureds" under the Who Is An Insured Provision of the Coverage Form. This endorsement does not alter coverage provided in the Coverage Form.

This endorsement changes the policy effective on the inception date of the policy unless another date is indicated below.

Endorsement Effective: 12-31-2017	Countersigned By:
Named Insured: Iroquois Paving Corp	(Authorized Representative)

SCHEDULE

Name of Person(s) or Organization(s): Any party for whom the insured is required to provide designated insured status.

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to the endorsement.)

Each person or organization shown in the Schedule is an "insured" for Liability Coverage, but only to the extent that person or organization qualifies as an "insured" under the Who Is An Insured Provision contained in **Section II** of the Coverage Form.

If a written contract between you and the designated insured specifically requires that this insurance be primary, then the insurance afforded by this endorsement is primary insurance and we will not seek contribution from any other insurance available to the designated insured named in this schedule unless the other insurance is provided by a contractor other than the named insured. Then we will pay only our share. Our share is the proportion that the Limit of Insurance of our Coverage Form bears to the total of the limits of all the Coverage Forms and policies covering on the same basis.

If no contract between you and the designated insured requires that this insurance be primary, then the coverage granted to the designated insured under this endorsement shall follow the provisions of the Coverage Form.

Contains material copyrighted by ISO, with its permission.
West Bend Mutual Insurance Company
West Bend, Wisconsin 53095

GREAT AMERICAN INSURANCE GROUP
Administrative Offices
301 E. 4th Street
Cincinnati, Ohio 45202
Tel: 1-513-369-5000

ENDORSEMENT # 7

This endorsement, effective 12:01 a.m., 12/31/2017, forms a part of Policy No. CSE 2111372 06 issued to IROQUOIS PAVING CORPORATION By GREAT AMERICAN E & S INSURANCE COMPANY

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

PRIMARY COVERAGE FOR THE INSURED'S CLIENT

This endorsement modifies insurance provided under the following:

CONTRACTING SERVICES ENVIRONMENTAL LIABILITY INSURANCE POLICY

The INSURED and the Company agree to the following Policy change(s):

Section II. DEFINITIONS, Item N. INSURED is deleted in its entirety and replaced with the following:

N. INSURED means:

1. the FIRST NAMED INSURED, any ADDITIONAL NAMED INSURED, and any present or former director, officer, partner, member, employee, leased or temporary worker thereof, while acting within the scope of his/her duties as such; and

2. any organization or entity in which the FIRST NAMED INSURED has an ownership interest of fifty percent (50%) or more, or otherwise has management control over, as of the inception date of this Policy; and

3. any joint ventures in which the INSURED is named as a co-venturer, but solely with regard to the INSURED's liability arising out of its CONTRACTING SERVICES provided under such joint venture; and

4. solely with regard to Coverage A under this Policy:

When required by written contract, INSURED also includes the client for whom the INSURED performs CONTRACTING SERVICES provided that such contract was signed by the INSURED and such client prior to the date the POLLUTION CONDITION first commenced. However, the client is included as an INSURED under this Policy solely to the extent that the client is found liable based upon CONTRACTING SERVICES negligently performed by an INSURED other than the client. Coverage for such client under this Policy shall not exceed the lesser of the following amounts:

i. the Limit of Liability required under such written contract; or

ii. the applicable Coverage A Limit of Liability of this Policy.

Notwithstanding Section IX. CONDITIONS, Item L. OTHER INSURANCE, and only when required by such written contract, the coverage afforded under this Policy for any entity who is an INSURED solely by reason of subparagraph 4. shall apply as primary as to any other valid and collectible insurance available to such INSURED.

All other terms and conditions remain the same.

DIVISION I

GENERAL REQUIREMENTS AND COVENANTS

SECTION 1. DEFINITION OF TERMS		***1***
1-1	***DESCRIPTION***	***1***
1-2	***ABBREVIATIONS***	***1***
1-3	***ADDENDA***	***2***
1-4	***AWARD***	***2***
1-5	***BASE COURSE***	***2***
1-6	***BITUMINOUS PAVEMENT***	***2***
1-7	***BIDDER***	***2***
1-8	***CONTRACT***	***2***
1-9	***CONTRACTOR***	***3***
1-10	***CONTRACT BOND***	***3***
1-11	***CORPORATION***	***3***
1-12	***CULVERT***	***3***
1-13	***ENGINEER***	***4***
1-14	***FORCE MAIN***	***4***
1-15	***ENGINEERING OBSERVER***	***4***
1-16	***LABORATORY***	***4***
1-17	***MANHOLE***	***4***
1-18	***NOTICE TO BIDDERS***	***4***
1-19	***OWNER***	***4***
1-20	***PAVEMENT STRUCTURE***	***4***
1-21	***PLANS***	***5***
1-22	***PLUMBING***	***5***
1-23	***PROPOSAL (BID)***	***5***
1-24	***PROPOSAL GUARANTY***	***5***
1-25	***RAILROAD***	***5***
1-26	***RIGHT-OF-WAY AND EASEMENTS***	***5***
1-27	***SEWER, COMBINED***	***5***
1-28	***SEWER, SANITARY***	***5***
1-29	***SEWER, SERVICE***	***6***
1-30	***SEWER, STORM***	***6***
1-31	***SPECIAL PROVISIONS***	***6***

1-32	SPECIFICATIONS	6
1-33	STATE SPECIFICATIONS	6
1-34	SUBCONTRACTOR	6
1-35	SUB-BASE	6
1-36	SUB-GRADE	7
1-37	SUPPLEMENTAL AGREEMENT	7
1-38	SUPPLIER	7
1-39	SURETY	7
1-40	SURFACE COURSE	7
1-41	WATER MAIN	7
1-42	WATER SERVICE LINE	7
1-43	THE WORK	7
SECTION 2. PROPOSAL REQUIREMENTS AND CONDITIONS		8
2-1	CONTENTS OF THE PROPOSAL FORM	8
2-2	INTERPRETATION OF ESTIMATE OF QUANTITIES	8
2-3	EXAMINATION OF PLANS, SPECIFICATIONS, SPECIAL PROVISIONS, AND SITE OF WORK	8
2-4	ENGINEER'S ESTIMATE	9
2-5	PREPARATION OF THE PROPOSAL	9
2-6	MULTIPLE BIDS	9
2-7	REJECTION OF PROPOSALS	9
2-8	PROPOSAL GUARANTY	10
2-9	DELIVERY OF PROPOSALS	10
2-10	WITHDRAWAL OF PROPOSALS	10
2-11	WITHDRAWAL OF PROPOSAL GUARANTY	10
2-12	PUBLIC OPENING OF PROPOSALS	10
2-13	DISQUALIFICATION OF BIDDERS	11
2-14	COMPETENCY OF BIDDERS	11
2-15	MATERIAL SUBSTITUTIONS	12
2-16	CONTRACTOR'S UNDERSTANDING	12
2-17	STATUS OF RIGHT-OF-WAY, EASEMENT AND CONSTRUCTION EASEMENT ACQUISITION	12

SECTION 3. AWARD AND EXECUTION OF CONTRACT		***13***
3-1	***CONSIDERATION OF PROPOSALS***	***13***
3-2	***AWARD OF CONTRACT***	***13***
3-3	***RETURN OF PROPOSAL GUARANTY***	***13***
3-4	***REQUIREMENT OF CONTRACT BOND***	***13***
3-5	***EXECUTION OF THE CONTRACT***	***14***
3-6	***FAILURE TO EXECUTE CONTRACT***	***14***
SECTION 4. SCOPE OF WORK		***15***
4-1	***INTENT OF THE PLANS AND SPECIFICATIONS***	***15***
4-2	***SPECIAL WORK***	***15***
4-3	***CHANGES***	***15***
4-4	***PERIODIC AND FINAL CLEANUP***	***16***
4-5	***LUMP SUM CONTRACTS***	***17***
4-6	***LOCAL ORDINANCES AND REGULATIONS***	***17***
4-7	***PREFERENCE TO VETERANS***	***17***
SECTION 5. CONTROL OF THE WORK		***18***
5-1	***PLANS AND WORKING DRAWINGS***	***18***
5-2	***CONFORMITY WITH PLANS AND SPECIFICATIONS***	***18***
5-3	***COORDINATION OF COMPONENT PARTS OF THE CONTRACT***	***18***
5-4	***COOPERATION BY CONTRACTOR***	***19***
5-5	***UTILITIES***	***19***
5-6	***COOPERATION BETWEEN CONTRACTORS***	***19***
5-7	***CONSTRUCTION STAKES***	***20***
5-8	***AUTHORITY AND DUTIES OF OBSERVERS***	***20***
5-9	***ENGINEER'S FIELD OFFICE AND/OR LABORATORY***	***20***
5-10	***CONSTRUCTION OBSERVATION***	***21***
5-11	***REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK***	***22***
5-12	***FINAL ACCEPTANCE***	***22***
5-13	***PUBLIC CONSTRUCTION BID ACT, 30 ILCS 557/1***	***23***

SECTION 6. CONTROL OF MATERIAL		***24***
6-1	***QUALITY OF MATERIALS***	***24***
6-2	***DEFECTIVE MATERIALS***	***24***
6-3	***TESTING MATERIALS***	***24***
6-4	***SAND, GRAVEL AND CRUSHED STONE***	***24***
6-5	***CONCRETE***	***24***
6-6	***MISCELLANEOUS MATERIALS***	***25***
6-7	***JOB SITE OBSERVATION***	***25***
6-8	***STORED MATERIALS***	***25***
6-9	***"OR EQUAL" CLAUSE***	***25***
SECTION 7. LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC		***26***
7-1	***LAWS TO BE OBSERVED***	***26***
7-2	***INSURANCE REQUIREMENTS***	***27***
7-3	***PERMITS AND LICENSES***	***33***
7-4	***PATENTS AND ROYALTIES***	***33***
7-5	***STATE AND FEDERAL PARTICIPATION***	***34***
7-6	***SANITARY PROVISIONS***	***34***
7-7	***PUBLIC CONVENIENCE AND SAFETY***	***34***
7-8	***BARRICADES AND WARNING SIGNS***	***34***
7-9	***DEBRIS ON TRAVELED SURFACE OR STRUCTURES***	***35***
7-10	***EQUIPMENT ON TRAVELED SURFACE AND STRUCTURES***	***35***
7-11	***USE OF EXPLOSIVES***	***35***
7-12	***USE OF FIRE HYDRANTS***	***35***
7-13	***PROTECTION AND RESTORATION OF PROPERTY***	***36***
7-14	***PROTECTION AND RESTORATION OF TRAFFIC SIGNS***	***37***
7-15	***CONTRACTOR'S RESPONSIBILITY FOR WORK***	***37***
7-16	***GUARANTEE PERIOD***	***38***
7-17	***PERSONAL LIABILITY OF OWNER'S AGENTS***	***38***
7-18	***NO WAIVER OF LEGAL RIGHTS***	***38***
7-19	***SAFETY***	***39***
7-20	***USE OF PRIVATE LAND***	***39***

7-21	*USE OF WATER*	*39*
7-22	*COST OF SERVICES*	*39*
7-23	*WORK IN BAD WEATHER*	*39*
7-24	*SUNDAY WORK*	*39*
7-25	*WATCHMEN*	*40*
7-26	*CONSTRUCTION DEBRIS*	*40*
7-27	*SAMPLE INSURANCE CERTIFICATE*	*41*
SECTION 8. PROSECUTION AND PROGRESS		*42*
8-1	*SUBLETTING OR ASSIGNMENT OF CONTRACT*	*42*
8-2	*PROGRESS SCHEDULE*	*42*
8-3	*PRE-CONSTRUCTION CONFERENCE*	*42*
8-4	*PROSECUTION OF THE WORK*	*42*
8-5	*COMPLETION DATE*	*42*
8-6	*LIMITATIONS OF OPERATIONS*	*43*
8-7	*SUSPENSION OF WORK*	*43*
8-8	*DETERMINATION AND EXTENSION OF CONTRACT TIME FOR COMPLETION*	*43*
8-9	*FAILURE TO COMPLETE THE WORK ON TIME*	*44*
8-10	*DEFAULT ON CONTRACT*	*44*
8-11	*TERMINATION OF THE CONTRACTOR'S RESPONSIBILITY*	*45*
SECTION 9. MEASUREMENT AND PAYMENT		*46*
9-1	*MEASUREMENT OF QUANTITIES*	*46*
9-2	*SCOPE OF PAYMENT*	*46*
9-3	*INCREASED OR DECREASED QUANTITIES*	*46*
9-4	*PAYMENT FOR EXTRA WORK*	*47*
9-5	*PAYMENT FOR SUBCONTRACTING, EXTRA WORK*	*48*
9-6	*PARTIAL PAYMENTS*	*48*
9-7	*ACCEPTANCE AND FINAL PAYMENT*	*49*
9-8	*OWNER'S RIGHT TO WITHHOLD CERTAIN AMOUNTS*	*49*
9-9	*RELEASE OF CLAIMS AND LIENS*	*50*

SECTION 1. DEFINITION OF TERMS

1-1 DESCRIPTION

When a standard specification number is used in the Specifications it shall be taken to mean the latest revision of that Standard Specification at the time of the Bid.

Whenever in the specifications and Contract the following terms, or pronouns in place of them, are used, the intent and meaning shall be interpreted as follows:

1-2 ABBREVIATIONS

The following organizations are referred to in this specification by abbreviations of the titles. Additional information noted but not detailed can be obtained from these organizations by writing to them.

ASTM	American Society for Testing and Materials 1916 Race Street Philadelphia, Pennsylvania 19103
ASSHTO	The American Association of State Highway and Transportation Officials 917 National Press Building Washington, D.C. 20004
AWWA	American Water Works Association 6666 West Quincy Avenue Denver, Colorado 80235
NSF	National Sanitation Test Laboratory Foundation Box 1478 Ann Arbor, Michigan
ANSI	American National Standards Institute 1430 Broadway New York, New York 10018
IDOT	Illinois Department of Transportation 2300 South Dirksen Parkway Springfield, Illinois 62764
FHWA	Federal Highway Administration DOT Building, 400 Seventh St., S.W. Washington, D.C. 20590
OSHA	Occupational Safety and Health Act
MWRDGC	The Metropolitan Water Reclamation District of Greater Chicago 100 East Erie Street Chicago, Illinois 60611

REL	Robinson Engineering, Ltd
ISO	Insurance Services Office

1-3 ADDENDA

Written or graphic instruments issued prior to the execution of the Agreement, which modify or interpret the Contract Documents, Drawings, and Specifications by additions, deletions, clarifications or corrections.

1-4 AWARD

The decision of the Owner to accept the proposal of the lowest responsive, responsible bidder for the work, subject to the execution of and approval of a satisfactory Contract therefore, and bond to secure the performance thereof, and to such other conditions as may be specified or otherwise required by law.

1-5 BASE COURSE

The layer or layers of specified or selected material of designed thickness placed on a sub-base or a subgrade to support the surface course.

1-6 BITUMINOUS PAVEMENT

A pavement structure which maintains intimate contact and distributes loads to the subgrade and depends upon aggregate interlock particle friction and cohesion for stability, and a pavement structure which includes a bituminous concrete surface course over a bituminous concrete base course or a portland cement concrete base course.

1-7 BIDDER

Any individual, firm, partnership or corporation submitting a proposal for the Work contemplated, acting directly or through a duly authorized representative.

1-8 CONTRACT

The written agreement between the Owner and the Contractor setting forth the obligations of the parties thereunder, including, but not limited to, the performance of the Work (the furnishing of labor and materials, and the basis of payment).

The Contract includes such of the following document parts as may be utilized. These document parts so utilized will be as fully part of the Contract as if therein set out verbatim, or, if not attached, as if attached thereto. The controlling order of priority for these documents on the project is as follows (e.g., A is controlling over B-N, etc.):

A. Supplemental Agreements (Change Order)
B. Addenda
C. Special Conditions of Contract
D. General Conditions of Contract
E. Special Provisions to the Specifications
F. Detailed Specifications
G. Complete Project Plans or Drawings
H. General Specifications
I. Contract
J. Contractor's Contract Bond
K. Contractor's Proposal
L. Notice to Proceed
M. Notice of Award
N. Notice to Bidders

1-9 CONTRACTOR

The Bidder awarded the Contract for the Work.

1-10 CONTRACT BOND

The approved form of security furnished by the Contractor and his surety as a guaranty that he will execute the Work in accordance with the terms of the Contract.

1-11 CORPORATION

With respect to the execution and performance of the Contract, a corporate body authorized or licensed to do business in the State of Illinois for projects in Illinois and in the State of Indiana for projects in Indiana.

1-12 CULVERT

A drainage structure extending across and beneath a traveled way and having a tubular or box-type cross-section open on both ends.

1-13 ENGINEER

ROBINSON ENGINEERING, LTD. or an engineer of a municipality, including such assistants as are authorized to represent them, who represents the Owner during the construction phase activities of the Work.

1-14 FORCE MAIN

A pipe constructed or used to carry sewage under pressure.

1-15 ENGINEERING OBSERVER

The authorized representative of the Owner or of the Engineer assigned to observe the progress of the Work to determine only if the Work is proceeding in accordance with the technical plans and specifications.

1-16 LABORATORY

An established testing laboratory approved by the Engineer.

1-17 MANHOLE

A vertical enclosed structure providing access to a pipe line or other structure.

1-18 NOTICE TO BIDDERS

The official notice, included in the proposal form, inviting bids for the proposed improvement, including a brief description of the Work.

1-19 OWNER

The Village, City, Town, Sanitary District, or other governmental body, corporation, partnership or individual initiating the project, acting through its legally constituted officials, officers or employees. The Department as referenced in the State Specifications.

1-20 PAVEMENT STRUCTURE

The combination of sub-base, base course and surface course placed on a sub-grade to support the traffic load and distribute it to the roadbed.

1-21 PLANS

All official drawings or reproductions of drawings pertaining to the Work provided for in the contract.

1-22 PLUMBING

Plumbing shall be as defined in the latest adopted Illinois State Plumbing Code, copies of which are available from the Illinois Department of Public Health, Division of Engineering and Sanitation, 535 West Jefferson Street, Springfield, Illinois 62706.

1-23 PROPOSAL (BID)

The written offer of the Bidder to perform the proposed Work.

1-24 PROPOSAL GUARANTY

The security designated in the proposal to be furnished by the Bidder as a guaranty that said Bidder will enter into a Contract with the Owner for the acceptable performance of the Work and will furnish the required Contract Bond, if the Work is awarded to him.

1-25 RAILROAD

The Railroad or Railway Company whose property is involved in the Work.

1-26 RIGHT-OF-WAY AND EASEMENTS

The areas owned, or acquired by permanent easement; also, the areas acquired by temporary easement during the time the easement is in effect.

1-27 SEWER, COMBINED

Any sewer constructed or used for the purpose of carrying both storm water and waterborne wastes to a treatment facility.

1-28 SEWER, SANITARY

Any sewer constructed or used for the purpose of carrying waterborne wastes to a treatment facility.

1-29 SEWER, SERVICE

A branch sanitary sewer line constructed from the main sanitary sewer line to a point described in the Special Provisions or Plans or to a point established by the Engineer.

1-30 SEWER, STORM

A sewer constructed or used for carrying storm water or sub-surface water to a storm water outlet.

1-31 SPECIAL PROVISIONS

Specific directions, provisions, requirements and revisions of the Specifications peculiar to the Work under consideration which are not satisfactorily provided for in the Specifications. The Special Provisions set forth the final contractual intent as to the matter involved. The Special Provisions included in the Contract shall not operate to annul those portions of the Specifications with which they are not in conflict.

1-32 SPECIFICATIONS

The body of directions, provisions and requirements contained herein, or in any supplement to this document referred to in the Special Provisions, together with written agreements and all documents of any description made or to be made pertaining to the method or manner of performing the Work, the quantities or the quality of materials to be furnished under the contract.

1-33 STATE SPECIFICATIONS

IDOT, Standard Specifications for Road and Bridge Construction, latest edition at the time of Bid. This book outlines the general requirements and covenants to all improvements, as well as provisions relating to materials, equipment and construction requirements for individual items of work.

1-34 SUBCONTRACTOR

The individual, firm, partnership or corporation to whom the Contractor, with the written consent of the Engineer, sublets, assigns, or otherwise disposes of any part of the Work covered by the contract.

1-35 SUB-BASE

The layer or layers of specified or selected material of designed thickness placed on a sub-grade to support a base course.

1-36 SUB-GRADE

The top of surface of a roadbed upon which the pavement structure and shoulders are constructed.

1-37 SUPPLEMENTAL AGREEMENT

The written agreement executed by the Owner and the Contractor, with the assent of the Contractor's surety, covering modifications or alterations of the terms of the original Contract.

1-38 SUPPLIER

Any person or organization who supplies materials or equipment for the Work including that fabricated to a special design.

1-39 SURETY

The corporate body, individual or individuals which engage to be responsible for the Bidder's acts in the execution of the Contract in the event of its being awarded to him; or, which are bound with and for the Contractor to insure his acceptable performance of the Contract, his payment of all obligations pertaining to the Work, and his fulfillment of such other conditions as may be specified or otherwise required by law.

1-40 SURFACE COURSE

One or more layers of a pavement structure designed to accommodate the traffic load, the top layer of which resists skidding, traffic abrasion, and the disintegrating effects of climate. The top layer is sometimes called "wearing course".

1-41 WATER MAIN

A pipe constructed or used to carry potable water under pressure.

1-42 WATER SERVICE LINE

That line connected to the water main, which delivers potable water to the user's facilities.

1-43 THE WORK

The improvement advertised for bids, described in the Proposal form, indicated on the Plans and covered in the Specifications, Special Provisions, Contract, authorized alterations, extensions and deductions, and supplementary agreements, or any part or parts thereof.

SECTION 2. PROPOSAL REQUIREMENTS AND CONDITIONS

2-1 CONTENTS OF THE PROPOSAL FORM

Bidders will be furnished with forms stating the location and description of the Work contemplated, the approximate quantities of Work to be performed, the amount of the Proposal Guarantee, requirements pertaining to labor, and the date, time and place of filing and opening Proposals. All documents bound with or attached to the proposal shall be considered a part thereof, and shall not be detached or altered.

2-2 INTERPRETATION OF ESTIMATE OF QUANTITIES

An estimate of quantities of Work to be done and materials to be furnished under the Specifications is given in the Proposal. It is given as a basis for comparison of Proposals and the award of the Contract. The Owner and Engineer do not expressly or by implication agree that the actual quantities involved will correspond therewith; nor shall the Bidder plead misunderstanding or deception because of such estimate of quantities pertaining to the Work.

Payment will be based on the actual quantities of Work performed in accordance with Contract, at the Contract unit prices specified. No allowance will be made for any change in anticipated profits due to an increase or decrease in the original estimate of quantities. The Owner reserves the right to omit any item entirely, or to increase or decrease any or all items as provided in Section 4-3.

2-3 EXAMINATION OF PLANS, SPECIFICATIONS, SPECIAL PROVISIONS, AND SITE OF WORK

The bidder shall, before submitting his bid, carefully examine the Proposal, Plans, Specifications, Special Provisions, and form of Contract and bond. He shall inspect in detail the site of the proposed Work and familiarize himself with all the local conditions affecting the Contract and the detailed requirements of construction. If his Bid is accepted, he will be responsible for all errors in his Proposal resulting from his failure or neglect to comply with these instructions. The Owner or Engineer will, in no case, be responsible for any change in anticipated profits resulting from such failure or neglect.

When the Plans or Special Provisions include information pertaining to sub-surface exploration, borings, test pits, and other preliminary investigations, such information is included only for the convenience of the Bidder. The Owner or Engineer assumes no responsibility whatever in respect to the sufficiency of the information, and there is no guaranty, either expressed or implied, that the conditions indicated are representative of those existing throughout the Work, or that unanticipated developments may not occur.

When the Plans or Special Provisions include information pertaining to the location of underground utility facilities, such information is only included for the convenience of the Bidder. The Owner or Engineer assumes no responsibility whatever in respect to the sufficiency or accuracy of the information, or lack of information, shown on the Plans relative to the location of underground utility

facilities. It shall be the Contractor's responsibility to obtain from the respective utility companies detailed information relative to the location of their facilities and the work schedules of the utility companies for removing or adjusting them.

2-4 ENGINEER'S ESTIMATE

The Engineer's "Estimate of Cost" as prepared for the Owner for the work to be completed under this contract may or may not be available to the Bidders at the discretion of the Owner or the Engineer. If the "Estimate of Cost" is available, it shall be given to all prospective bidders upon request.

2-5 PREPARATION OF THE PROPOSAL

The Bidder shall submit his Proposal on the form furnished by the Owner. The Proposal shall be executed properly, and Bids shall be made for all items indicated in the proposal form, except that when alternate bids are asked, a Bid on more than one alternate for each item is not required, unless the Special Provisions provide otherwise. The Bidder shall indicate, in figures, a unit price or lump sum for each of the separate items called for in the Proposal; he shall show the products of respective quantities and unit prices in the column provided for that purpose, and the gross sum shown in the place indicated in the Proposal shall be the summation of said products. All writing shall be with ink or typewriter, except the signature of the bidder, which shall be written with ink.

If the Proposal is made by an individual, his name and post office address shall be shown. If made by a firm, joint venture, or partnership, the name and post office address of each member of the firm, joint venture, or partnership shall be shown. If made by a corporation, the Proposal shall show the names, titles, and business addresses of the president, secretary, and treasurer, certified to by the secretary.

2-6 MULTIPLE BIDS

If multiple Bids are to be received, bidding shall be in accordance with the instructions in the Special Provisions.

2-7 REJECTION OF PROPOSALS

Proposals that contain omissions, erasures, alterations, additions not called for, conditional or alternate bids unless called for, irregularities of any kind, or proposals otherwise regular which are not accompanied by the proper proposal guaranty shall be rejected as informal or insufficient. However, the Owners reserve the right to reject any or all Proposals and to waive such technical error as may be deemed best for the interest of the Owner.

2-8 PROPOSAL GUARANTY

Each proposal shall be accompanied by a bid bond, bank draft, bank cashier's check, or properly certified check for not less than ten per cent (10%) of the amount Bid unless otherwise specified in the Special Provisions.

If a multiple Bid is submitted, the bid bond, bank draft, bank cashier's check, or certified checks, which accompany the individual Proposals making up the combination, will be considered as also covering the multiple Bid.

See Paragraph 3-3 regarding return of Proposal Guaranty.

The bid bond, bank draft, cashier's checks, or certified checks accompanying Proposals shall be made payable to the Owner.

2-9 DELIVERY OF PROPOSALS

Proposals shall be delivered prior to the time and at the place indicated in the notice to bidders. Each Proposal shall be placed in an envelope sealed and plainly marked to indicate its contents. Only sealed Proposals will be accepted.

Proposals will not be opened unless received at the place of letting and prior to the time stated in the Notice to Bidders.

2-10 WITHDRAWAL OF PROPOSALS

Permission will be given a Bidder to withdraw a Proposal if he makes his request in writing before the time for opening Proposals. If a Proposal is withdrawn, the Bidder will not be permitted to submit another Proposal for the same Work at the same letting.

2-11 WITHDRAWAL OF PROPOSAL GUARANTY

See Paragraphs 3-2 and 3-3 on award of Contract and return of Proposal Guaranty.

2-12 PUBLIC OPENING OF PROPOSALS

Unless otherwise specified, Proposals will be opened and read publicly at the time and placed specified in the Notice to Bidders. Bidders, their authorized agents, and other interested parties are invited to be present.

2-13 DISQUALIFICATION OF BIDDERS

Any one or more of the following causes may be considered as sufficient for the disqualification of a Bidder and rejection of his Proposal.

A. More than one Proposal for the same Work from an individual, firm, partnership, or corporation under the same or different names.

B. Evidence of collusion among bidders.

C. Unbalanced Proposals in which the prices for some items are substantially out of proportion to the prices for other items.

D. Failure to submit a unit price for each item of Work listed in the Proposal.

E. If the Proposal form is other than that furnished by the Engineer or if the form is altered or any part thereof is detached.

F. If there are omissions, erasures, alterations, unauthorized additions, conditional or alternate bids, or irregularities of any kind which may tend to make the Proposal incomplete, indefinite or ambiguous as to its meaning.

G. If the bidder adds any provisions reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.

H. If the Proposal is not accompanied by the proper proposal guaranty.

I. If the Proposal is prepared with other than ink or typewriter.

J. Lack of competency as revealed by financial statement or experience questionnaire.

K. Unsatisfactory performance record as shown by past work judged from the standpoint of workmanship and progress.

L. Uncompleted work, which, in the judgment of the Owner, might hinder or prevent the prompt completion of additional work.

M. False information provided on a Bidder's "Contractor's Statement."

N. Failure to comply with any prequalification regulations of the Owner.

O. Default under previous contracts.

2-14 COMPETENCY OF BIDDERS

The Bidder, if a corporation, shall show the name of the State in which the corporation is chartered. Each Bidder shall furnish the Owner within two (2) weeks after request, with satisfactory evidence of his competency to perform the Work contemplated. When requested, he shall submit to the Owner a

financial statement prepared by a Certified Public Accountant showing his financial condition at the end of his past fiscal year. The accountant who prepares the statement shall certify that he holds a valid and unrevoked certificate as a Certified Public Accountant, issued in accordance with the laws of the State in which he is licensed. The Bidder, if requested, shall also answer and submit questionnaires relating to his experience and available equipment for performing construction work similar to that for which he is offering a proposal, and shall do so within the same two weeks from the time of request.

Before an award is made, the Bidder may, at the option of the Owner be required to furnish a statement showing the value of all uncompleted work for which he has entered into contracts.

2-15 MATERIAL SUBSTITUTIONS

If restrictions of any governmental authority prohibit the use of certain items that are required by the Plans and Specifications, substitution for such items will be determined by the Owner.

Each Bidder shall base his bid on the furnishing of all items exactly as shown on the Plans and as described in the Specifications. The successful Bidder will not be authorized to make any substitutions on his own volition, but in each and every case must obtain a properly authorized change order from the Owner on his Contract before installing any work in variance with the Contract requirements.

2-16 CONTRACTOR'S UNDERSTANDING

It is understood and agreed that the Contractor has, by careful examination, satisfied himself as to the nature and location of the work, the conformation of the ground, the character, quality and quantity of the materials to be encountered, the character of equipment and facilities needed preliminary to and during the prosecution of the Work, the general and local conditions, and all other matters which can in any way affect the Work under this Contract. No verbal agreement or conversation with any officer, agent, or employee of the Owner and Engineer, either before or after the execution of this Contract, shall affect or modify any of the terms or obligations herein contained.

2-17 STATUS OF RIGHT-OF-WAY, EASEMENT AND CONSTRUCTION EASEMENT ACQUISITION

Each bidder is instructed to fully acquaint himself with the status of the right-of-way, easement and construction easement acquisition at the time of submission of his proposal and the possibility of the acquisition of the parcels remaining to be acquired, if any, in time so as not to interfere with the progress of his work under this contract, and the owner shall not be liable to any damage that may occur to him for any and all delay through delay of the owner in securing the necessary right-of-way, easement and construction easement.

The owner agrees that it will make every effort to acquire any right-of-way, easement and construction easement with all speed and diligence possible.

SECTION 3. AWARD AND EXECUTION OF CONTRACT

3-1 CONSIDERATION OF PROPOSALS

The proposals received will be compared on the basis of the summation of the products of the items of Work listed and the unit prices offered. In case of discrepancy between the gross sum shown in the Proposal prices, the unit prices shall govern, and any errors found in said products shall be corrected. In awarding Contracts, the Owner will, in addition to considering the amounts stated in the Proposals, take into consideration the responsibility of the various Bidders as determined from a study of the data required under the previous article and from other investigations, which the Owner may elect to make.

3-2 AWARD OF CONTRACT

Except in cases where the Owner exercises the right reserved to reject any or all Proposals, the Contract will be awarded by the Owner, as soon as practicable after the opening of Proposals.

Unless otherwise specified, if a Contract is not awarded within forty- five (45) days after the opening of Proposals, a Bidder may file a written request with the Owner for the withdrawal of his bid or award date may be extended by mutual consent of the Owner and Bidder. The Owner will have a maximum of ten (10) days after the receipt of such request to award the Contract or release the Bidder from further obligation by return of the Bidder's Proposal Guaranty.

3-3 RETURN OF PROPOSAL GUARANTY

The Proposal Guaranties of all except the two lowest Bidders will be returned promptly after the Proposals have been checked. Proposal Guaranties of the two lowest Bidders will be returned as soon as the Contract and Bond of the successful bidder have been properly executed and approved.

If Contracts cannot be awarded promptly, the Owner shall permit the two (2) lowest Bidders to substitute for the bank cashier's checks, or certified checks which they may have submitted with their Proposals as Proposal Guaranties, a bid bond executed by a corporate surety company satisfactory to the Owner, but such substitutions shall not be made until a period of three (3) days has elapsed after the date of opening Proposals.

3-4 REQUIREMENT OF CONTRACT BOND

The successful Bidder, at the time of the execution of the Contract, shall deposit with the Owner a surety bond for the full amount of the Contract. The form of bond shall be that furnished by the Owner, and the surety shall be acceptable to the Owner.

3-5 EXECUTION OF THE CONTRACT

The contract shall be executed by the successful Bidder. The bond, when required, shall be executed by the principal and the sureties, and executed Contract and Contract Bond shall be presented to the Owner within fifteen (15) days after the date of notice of the award of the Contract.

Each Contract must be executed in three (3) original counterparts, and there shall be executed original counterparts of the Contract Bond in equal number to the executed original counterparts of the Contract. One (I) copy each of such executed documents will be retained by the Owner and the Engineer, the third will be delivered to the Contractor.

3-6 FAILURE TO EXECUTE CONTRACT

Failure on the part of the successful Bidder to execute a Contract and an acceptable Contract Bond and acceptable insurance certificates as provided herein, within fifteen (15) days from the date of receipt of Contract documents from the Owner will be considered as just cause for the annulment of the award and the forfeiture of the proposal guaranty to the Owner, not as a penalty but in payment of liquidated damages sustained as a result of such failure.

SECTION 4. SCOPE OF WORK

4-1 INTENT OF THE PLANS AND SPECIFICATIONS

The intent of the contract is to prescribe a complete outline of work which the Contractor undertakes to do in full compliance with the contract, plans and specifications. The Contractor shall furnish all required materials, equipment, tools, labor, and incidentals, unless otherwise provided in the contract, and shall include the cost of these items in the unit prices bid for the several units of work. Contractor shall be solely responsible for all safety procedures and safety violations. The quantities appearing in the bid schedule of prices are estimates prepared for the establishment of pay item prices and the comparison of bids. Payment to the Contractor will be made for the actual measured quantities performed and accepted or material furnished and accepted according to the contract, and the scheduled quantities may be increased, decreased, or omitted as herein provided.

Under no circumstances shall the Contractor exceed any established pay item quantity without notification to the Engineer and receipt of written authorization as provided herein.

The latest edition of the State Specifications and Standard Specifications for Water and Sewer Construction in Illinois shall be the basis and govern this contract unless otherwise provided by special provision or exception.

4-2 SPECIAL WORK

Should any construction or requirement not covered by the Specifications be anticipated on any proposed Work, Special Provisions for the same will be prepared and included in the Proposal form, which Special Provisions shall be considered as a part of the Specifications the same as though contained fully herein.

4-3 CHANGES

The Owner reserves the right to make, in writing, at any time during work, changes in quantities, alterations in work, and the performance of extra work to satisfactorily complete the project. Such changes in quantities, alterations, and extra work shall not invalidate the contract nor release the surety, and the Contractor agrees to perform the work as altered.

If the alterations or changes in quantities significantly change the character of the work under the contract, whether or not changed by any such different quantities or alterations, an adjustment, excluding loss of anticipated profits, will be made to the contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made either for or against the Contractor in such amount as the Owner may determine to be fair and equitable.

If alterations or changes in quantities do not significantly change the character of the work to be performed under contract, the altered work will be paid for as provided elsewhere in the contract.

The term "significant change" shall be construed to apply only when the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction or when a major item, defined as an item whose total original contract costs exceeds ten percent of the total original contract amount, is increased in excess of 125 percent or decreased below 75 percent of the original contract quantity.

All alterations, cancellations, extensions, and deductions shall be authorized in writing by the Owner before work is started. Such authorizations shall set up the items of work involved and the method of payment for each item.

The Contractor shall accept payment for alterations which result in an increase or decrease in the quantities of work to be performed according to the following:

A. All increases in work of the type which appear in the contract as pay items accompanied by unit prices will, except as provided under paragraph (C) herein, be paid for at the contract unit prices. Decreases in quantities included in the contract will be deducted from the contract at the unit bid prices. No allowance will be made for delays or anticipated profits.

B. Major items of work for which the quantities are increased by not more than 125 percent or reduced to not less than 75 percent of the original contract quantities will be paid for as specified in paragraph (a) above. Any adjustments for increased quantities for major items of work increased more than 125 percent shall only apply to that portion in excess of 125 percent of original contract quantities. Any adjustments made for major items of work which are decreased to less than 75 percent of the original contract quantities shall apply to the actual amount of work performed.

C. Extra work which is not included in the contract as pay items at unit prices and is not included in other items of the contract will be paid for according to Section 9-4.

4-4 PERIODIC AND FINAL CLEANUP

From time to time or as may be ordered by the Owner and immediately after completion of the Work, the Contractor shall at his own expense clean up and remove all refuse and unused materials of any kind resulting from the Work. Upon failure to do so within five (5) working days after receipt of written request from the Owner, the Work may be done by the Owner and the cost thereof be charged to the Contractor and be deducted from his Contract price. Upon completion of the Work, the Contractor shall remove all his equipment and put the area of the Work in a neat and clean condition and do all other cleaning required to complete the Work in a workmanlike manner, ready for use and satisfactory to the Owner.

All Cleanup shall be performed as specified in the various sections of these Specifications or in the Special Provisions.

4-5 LUMP SUM CONTRACTS

On lump sum Contract, when specified in Special Provisions, or Contracts containing lump sum items, the lump sum contract price shall include the furnishing and installation of all Work described in the Specifications and/or shown on the Plans.

4-6 LOCAL ORDINANCES AND REGULATIONS

The Contractor shall keep himself fully informed of all existing laws, ordinances, and regulations of the municipality affecting the work and/or material of this Contract. If any inconsistency is discovered between the Plans, Specifications and those covered by local municipal laws, ordinances, or regulations, it shall be reported to the Owner and Engineer.

4-7 PREFERENCE TO VETERANS

Attention is called to assure compliance with Illinois Revised State Chapter 126 Section 23. Preference to veterans upon public works: "In the employment and appointment to fill positions in the construction, addition to, or alteration of all public works undertaken or contracted for by the state, or by any political subdivision thereof, preference shall be given to persons who were engaged in the military or naval service of the United States in time of war".

SECTION 5. CONTROL OF THE WORK

5-1 PLANS AND WORKING DRAWINGS

The Contractor shall submit to the Engineer such shop, working, or layout drawings pertaining to the construction of the Work, as may be required. These drawings shall be reviewed by Engineer for general conformance with the design concept only. This review by the Engineer does not relieve the Contractor and/or fabricator/vendor of responsibility for conformance with the Contract documents (see 1-8) and applicable codes, all of which have priority over these shop, working and layout drawings. Corrections or comments made on the shop drawings by the Engineer during this review process do not relieve the Contractor from compliance with the requirements of the Contract documents (1-8) and applicable codes.

When the Contract includes Work adjacent to a railroad and false work, cofferdams, or sheeting is required, the Contractor shall submit to the Engineer for his approval and the Railroad Engineer's approval, plans for the false work, cofferdams, or sheeting by a Registered Structural Engineer. It shall be the responsibility of the Contractor to contact the railroad to determine how to meet their requirements. The cost of meeting those requirements shall be borne by the Contractor. The plans shall be submitted sufficiently in advance of the time the Contractor intends to start work to permit checking. No such work shall be started prior to receipt by the Contractor of approval of the Plans for the false work, cofferdams, or sheeting.

The cost of furnishing such Drawings shall be incidental to the contract and no additional compensation will be allowed the Contractor for any delays resulting therefrom.

5-2 CONFORMITY WITH PLANS AND SPECIFICATIONS

It is the intent of the Specifications that all Work performed and all materials furnished shall be in conformity with the lines, grades, cross section, dimensions and material requirements shown on the Plans or indicated in the Specifications.

In the event the Engineer finds the materials or the finished product in which the materials are used or the Work performed are not in conformity with the Engineering Plans and technical Specifications including tolerances and have resulted in an inferior or unsatisfactory product, the Work or material shall be removed and replaced or otherwise corrected by and at the expense of the Contractor.

5-3 COORDINATION OF COMPONENT PARTS OF THE CONTRACT

The Specifications, the accompanying Plans, the Proposal, the Special Provisions, and all other contract documents are intended to describe a complete Work and are essential parts of the Contract. A requirement occurring in any of them is binding. In case of discrepancy, figured dimensions shall govern over scaled dimensions, Plans shall govern over Specifications, Special Provisions shall govern over both Specifications and Plans, and quantities shown on the plans shall govern over those shown in the

Proposal. Neither the Owner, Engineer, nor the Contractor shall take advantage of any apparent error or omission in the Plans or Specifications, and the Owner shall be permitted to make such minor changes or alterations as may be deemed necessary for the fulfillment of the intent of the Plans and Specifications. Any corrections or alterations so made shall be subject to the provisions of Section 4-3.

5-4 COOPERATION BY CONTRACTOR

The Contractor will be furnished necessary copies of the Plans and Special Provisions, and he shall have one copy of each available on the work at all times during its prosecution. He shall give the work his constant attention to facilitate the progress thereof, and shall cooperate with the Owner and Engineer in every way possible. He shall have on the Work site at all times a competent, English-speaking representative authorized to receive orders and act for him and shall not replace him without prior written notification to the Owner.

5-5 UTILITIES

Not all of the gas, power, telephone or cable television lines, whether above or below ground, have been shown on the drawings. The location of existing underground utilities, such as water mains, sewers gas mains, etc., as shown on the drawings, have been determined form the best available information and are given for the convenience of the Contractor. The Contractor must assume responsibility for location and protection of all utilities, whether shown or not, and must realize that the actual locations of the utilities shown on the drawings may be different from the location indicated.

It is the responsibility of the Contractor to phone the Joint Utility Locating Information for Excavators (J.U.L.I.E.) at least 48 hours before excavation starts (except Saturday, Sunday and Holidays) phone toll free 1-800-892-0123. The Contractor shall also be responsible for having the "Dig Number" assigned as a result of the phone request available at the construction site and at his office.

It is understood and agreed that the Contractor has considered in his Proposal all of the permanent and temporary utility appurtenances shown or otherwise indicated on the Plans in their present positions and that no additional compensation will be allowed for any delays, inconvenience, or damage sustained by him due to any interference from the said utility appurtenances of the operation of moving them either by the utilities company or by the Contractor; or on account of any special construction methods required in prosecuting his work due to the existence of said appurtenances.

5-6 COOPERATION BETWEEN CONTRACTORS

If separate contracts are let for Work comprising an entire improvement, each Contractor shall conduct his Work so as not to interfere with or hinder the progress or completion of the Work being performed by other Contractors.

The Contractor shall as far as possible arrange his Work, and place and dispose of the materials being used so as not to interfere with the operations of the other contractors within the limits of the same improvement. He shall join his work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others. In case of dispute, the latest approved progress schedule shall govern.

5-7 CONSTRUCTION STAKES

Construction stakes and/or paint will be furnished and set by the Engineer to mark the general location, alignment, elevation and grade of the Work. The Contractor shall exercise proper care in the preservation of stakes set for his use or the use of the Engineer. The Contractor shall pay for the cost of replacing stakes damaged by his operation or those stolen by others.

5-8 AUTHORITY AND DUTIES OF OBSERVERS

Observers employed by the Owner or by the Engineer shall be authorized to observe the progress of the Work to determine if the Work is proceeding in accordance with the technical Plans and Specifications, and to perform such other duties as may be designated by the Engineer. However, the Engineer shall not be responsible for the construction means, methods, techniques, sequences or safety procedures and precautions in connection with the work by the contractors.

5-9 ENGINEER'S FIELD OFFICE AND/OR LABORATORY

When required by the Special Provisions, the Contractor shall furnish a field office and laboratory. The field office and/or laboratory shall be a weatherproof building for the exclusive use of the Engineer. It shall be independent of any building used by the Contractor. All keys to the building shall be turned over to the Engineer. The Engineer shall designate the location of the building and it shall remain on the site until released by the Engineer.

The building shall conform to the following requirements:

Floor space, not less than ..... 120 square feet

Height of ceiling, not less than..... 8 feet

Windows, not less than 3

Door, with lock approved by the Engineer 1

Instrument locker, 2 feet x 3 feet x 4 feet, with adjustable shelves
Hinged wall table ..... 3 feet x 6 feet

The Contractor shall provide lights, heat, and when electric power is available, summer air conditioning for the building. The conditions shall be acceptable to the Engineer.

When shown on the plans or specified in the Special Provisions, the Contractor shall furnish two (2) buildings conforming to the above requirements, one to be used as a field laboratory, and each to be located where designated by the Engineer.

With the approval of the Engineer, a mobile building or buildings of approximately the same dimensions and having similar facilities may be substituted for the above described building or buildings.

The cost of furnishing the building or buildings, light, heat, and air conditioning shall be paid for at the contract lump sum price for "FIELD OFFICE AND/OR LABORATORY". The office and/or laboratory shall remain the property of the Contractor when the Work is completed.

5-10 CONSTRUCTION OBSERVATION

All materials and each part or detail of the Work may be subject at all times to observation by the Engineer and the Owner, or their authorized representatives, and the Contractor will be held strictly to the true intent of the Contract documents in regard to quality of materials, workmanship and the diligent execution of the Contract. Observations may be made at the site or at the source of material supply whether mill, plant or shop. The Engineer, or his representatives, shall be allowed access to all parts of the Work and shall be furnished with such information and assistance by the Contractor as is required to make his observations and construction review. The duty of the Engineer to conduct observations and construction review of the Contractor's performance shall not include review of the adequacy of the Contractor's safety measures in, on, or near the construction site.

Engineer shall not at any time supervise, direct, or have control over any contractors' work, nor shall Engineer have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected or used by any contractor, nor for safety precautions and programs in connection with the contractors' work, nor for any failure of any Contractor to comply with laws and regulations applicable to contractors' work. Engineer neither guarantees the performance of any contractor nor assumes responsibility for any contractor's failure to furnish and perform its work. Engineer shall have no authority to stop the work of any contractor on the Project. The Engineer's efforts will be directed toward providing assurance for the Owner that the completed project will conform to the Plans and Specifications as prepared by the Engineer, to safeguard the Owner against variances and deviations from the Plans and Specifications, and to assist in a correct interpretation of the Plans and Specifications.

The Engineer shall not have control of the construction and does not have a right, duty or responsibility to stop work for any reason including any contractor's failure to follow proper safety precautions or any acts or omissions. The Engineer shall not be responsible for the acts, errors or omissions of any contractor or any of their agents or employees or any other person performing any of the Work under the Contract.

The Contractor shall, upon written notice from the Owner, remove or uncover such portions of the finished Work as he may direct, before the final acceptance of the same. After examination, the Contractor shall restore said portion of the Work to the standard required by the Contract documents. If the Work thus exposed or examined proves acceptable, the expenses of uncovering or removing and the replacing of the parts removed shall be paid for as Extra work, unless otherwise provided in the Contract documents, but if the Work so exposed or examined is unacceptable, the expense of uncovering or removing and the replacing of the same in accordance with the Contract documents shall be borne by the Contractor.

The Contractor shall supervise and direct the Work. He will be solely responsible for the means, ethods, techniques, sequences and procedures of construction.

Any reference to "supervision" by the Engineer in the Illinois Department of Transportation, Standard Specifications for Road and Bridge Construction or any other referenced documents shall be changed to "observation."

When the State and/or Federal Government is to pay a portion of the cost of the Work covered by the Contract, the Work shall be subject to the observation of the representatives of those Governments, but such observation shall in no sense make those Governments a part of the Contract.

5-11 REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK

Work done without lines and grades being given, or beyond the lines shown on the Plans or as given, except as herein provided, or any extra work done without authority will be considered as unauthorized and at the expense of the Contractor, and will not be measured or paid for. Work so done may be ordered by the Owner to be removed or replaced at the Contractor's expense.

All work, which has been rejected, shall be remedied or removed and replaced so as to comply with the Plans and Specifications by the Contractor at his own expense. Upon failure on the part of the Contractor to comply promptly with any order of the Owner made under the provisions of this article, the Owner shall, after giving written notice to the Contractor, have the authority to cause defective work to be remedied, or removed and replaced, or to cause unauthorized work to be removed, and to deduct the cost thereof from the contract price due or become due to the Contractor.

5-12 FINAL ACCEPTANCE

The Engineer shall make final acceptance of all Work included in the Contract, as soon as practicable after notification by the Contractor that the Work is completed. If the Work is not acceptable to the Engineer, he shall inform the Contractor in writing as to the particular defects to be remedied before final acceptance can be made.

The Contractor shall be relieved of normal maintenance responsibilities for any sections of the work, which are completed and accepted by the Owner prior to project completion. For the remainder of the Work, the guarantee period shall be as stated in Section 7-16.

When the Contract includes work for which the County, State and/or Federal Government is to pay a portion of the cost thereof, such work shall also be subject to the inspection and approval of the representatives of those governments.

5-13 PUBLIC CONSTRUCTION BID ACT, 30 ILCS 557/1

It is agreed that the Public Construction Bid Act, 30 ILCS 557/1, shall not be applicable to this contract pursuant to the home rule powers of the community.

SECTION 6. CONTROL OF MATERIAL

6-1 QUALITY OF MATERIALS

It is the intent of the Specifications that first-class materials shall be used throughout the Work, and that they shall be incorporated as to produce completed construction, which is workmanlike and acceptable in every detail. The cost or collecting and furnishing of samples of all test material shall be borne by the Contractor. The cost of all testing shall be borne by the Owner. Only materials, which conform to the requirements of these Specifications, shall be incorporated in the Work.

6-2 DEFECTIVE MATERIALS

All materials not conforming to the requirements of the Specifications shall be considered as defective and shall be removed from the Work; if in place, they shall be removed by the Contractor at his expense and replaced with acceptable materials. No defective materials, the defects of which have been subsequently corrected, shall be used until approval has been given. Upon failure of the Contractor to comply forthwith with any written order of the Owner pursuant to the provisions of this article, the Owner shall have authority to remove and replace defective materials and to deduct the cost of removal and replacement from any monies due to become due the Contractor.

6-3 TESTING MATERIALS

All materials should be tested and approved by the Engineer before incorporation in the Work. The Contractor shall give sufficient advance notice of placing orders to permit tests to be completed before the materials are incorporated in the Work and the Contractor shall afford such facilities as the Engineer may require for collecting and forwarding samples and making observations.

6-4 SAND, GRAVEL AND CRUSHED STONE

The source of sand, gravel and crushed stone construction shall be approved by the Engineer prior to usage. The approval shall be based upon testing of samples furnished by the Contractor and tested by the Engineer for conformance with Specifications. Approval shall be contingent upon the Contractor using materials on the job, which conform with the samples satisfactorily tested.

6-5 CONCRETE

Samples of concrete used in construction shall be taken by the Contractor and made into test cylinders in conformance with ASTM C31. The Owner shall provide the services of an independent testing laboratory to collect and test the cylinders in conformance with ASTM C39, and furnish a copy of test results to the Engineer. Any concrete, which tests indicate failed to conform to the Specifications, shall be removed and replaced at Contractor's expense. At the option of the Owner, the concrete may be accepted and agreed upon adjustment in payment.

6-6 MISCELLANEOUS MATERIALS

Fittings, valves, castings, hydrants, house service pipes, masonry blocks, bricks, manhole sections or other miscellaneous manufactured materials used in water and sewer construction shall be furnished with the implied guarantee that such materials conform with the requirements of the Specifications. The Engineer reserves the right to require a certified statement from the manufacturer of such materials that the specific materials have been inspected and tested and conform with the Specifications.

6-7 JOB SITE OBSERVATION

Regardless of any tests of materials made at the source, the Contractor shall carefully inspect all materials before installation and reject any materials, which have been damaged or have visible flaws. The Engineer also reserves the right to make such observation, but failure to detect irregularities does not relieve the Contractor of responsibility to remove and replace materials, which are found to be defective after installation.

6-8 STORED MATERIALS

If it is necessary to store materials, they shall be protected in such a manner as to insure the preservation of their quality and fitness for the Work. All stored materials shall be inspected at the time of use in the Work, even though they may have been inspected and approved before being placed in storage. The Contractor may use the right-of-way for storage of materials. If stockpiling is done outside the right-of-way, the additional space required shall be provided by the Contractor at his expense.

6-9 "OR EQUAL" CLAUSE

Whenever, in any of the Contract Documents, an article, material or equipment is defined by describing a proprietary product, or by using the name of a manufacturer, or vendor, the term "or equal", if not inserted shall be implied except where the Proposal provides for alternate bids. The specific article, materials, or equipment mentioned shall be understood as indication of the type function, minimum standard or design, efficiency and quality desired and shall not be construed in such a manner as to exclude manufacturer's products of comparable quality, design and efficiency. The Contractor shall comply with the requirements of the Contract Documents relative to an Owner's approval of materials and equipment before they are incorporated in the project.

SECTION 7. LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC

7-1 LAWS TO BE OBSERVED

The Contractor shall at all times observe and comply with all Federal laws, State laws, County laws, local laws, ordinances, and regulations which in any manner affect the conduct of the Work, and all such orders or decrees as exist at the time Bids are advertised, of legislative bodies or tribunals having legal jurisdiction or authority over the work and no plea of misunderstanding or ignorance thereof will be considered. The Engineer shall not be responsible for determining whether the Contractor is in compliance with these laws, ordinances and regulations.

The Contractor shall indemnify and save harmless the Owner, the Engineer, and all of their officers, agents, employees and servants against any claim or liability, including legal fees, arising from or based on the violation of such law, ordinance, regulation, order or decree, whether by themselves or their employees.

7-1.01 INDEMNIFICATION

To the fullest extent permitted by law, the Contractor shall defend, indemnify and hold harmless Owner and REL and their respective officers, agents and employees, from and against all claims, damages, losses, costs, expenses, judgments and liabilities, including but not limited to attorney's fees, costs and expenses, arising out of or in connection with Contractor's performance of or failure to perform this Agreement, provided that any such claim, damage, loss, costs, expenses, judgments or liabilities are attributable to bodily injury, sickness, disease or death, or to injury or destruction of tangible personal property, including the loss of use resulting therefrom, that is caused in whole or in part by any act or omission of the Contractor, any subcontractor, anyone directly or indirectly employed by them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by any party indemnified hereunder.

Contractor shall defend, indemnify and hold harmless Owner, REL, and their respective officers, agents and employees from and against all claims, damages, losses, costs and expenses arising out of, relating to, or incurred in connection with the use by Contractor, its officers, agents, subcontractors and employees of any equipment, materials, tools, construction equipment, machinery, and/or motor vehicles owned or leased by Owner. The indemnification provided by this Section shall apply regardless of whether Owner consents to the use of equipment by Contractor.

In the event such indemnity as described above is prohibited by law, then said indemnity shall only be to the extent caused by the negligent acts or omissions of the Contractor, subcontractors, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, or to the extent allowed by applicable law.

The indemnification obligation under this paragraph shall not be limited in any way by any limitations on the amount or type of damages, compensation or benefits payable by or for the benefit of Contractor or any indemnities under any Worker's Compensation Act, Occupational Disease Act, Disability Benefits Act, or any other employee benefits act. The Contractor further agrees to waive any and all liability limitations based upon the Worker's Compensation Act court interpretations or otherwise.

Contractor agrees that a similar waiver of liability limitation will be incorporated in its agreements with subcontractors or anyone directly or indirectly employed by them. Contractor agrees that in the event it fails to incorporate such a waiver of liability limitation in its agreements with said subcontractors and others, then it will be responsible for any additional liability arising out of said failure. The defense and indemnification obligations set forth in this provision shall survive the termination or expiration of this Agreement.

Contractor further agrees that all future contracts in furtherance of this contract between Contractor and any of its subcontractors will designate Owner and REL as intended third party beneficiaries of that contract. Contractor hereby agrees to specifically label Owner and REL as an "intended third party beneficiaries" in all contracts entered in furtherance of this contract.

7-2 INSURANCE REQUIREMENTS

7-2.01 GENERAL

The Contractor and any Subcontractors shall obtain and thereafter keep in force for the term of the contract the insurance coverage specified in 7-2.02 MINIMUM INSURANCE REQUIREMENTS.

The Contractor shall not commence work under the Contract until all the insurance required by this section or any Special Provisions has been obtained. The insurance companies must be authorized to do business in the State of Illinois for Work in Illinois and the State of Indiana for Work in Indiana.

The insurance companies providing coverage shall be rated in the Best's Key Rating Guide with a rating not lower than A- and shall have a financial size category of not less than VII.

The Contractor shall be solely responsible for enforcing compliance with these insurance requirements by all Subcontractors of any tier.

A. PRIMARY INSURANCE

All insurance required of the Contractor shall be specifically endorsed so that it is Primary Insurance as to all additional insureds with respect to all claims arising out of operations by or on their behalf. If additional insureds have other applicable insurance coverage, those coverages shall be deemed to be on an excess or contingent basis.

B. NO WAIVER OF INSURANCE REQUIREMENT BY OWNER

Under no circumstances shall the Owner be deemed to have waived any of the insurance requirements of this Contract by any act or omission, including, but not limited to:

1. Allowing work by Contractor or any Subcontractor of any tier to start before receipt of certificates of insurance, endorsements, and other required insurance documents; or

2. Failure to examine, or to demand correction of any deficiency of, any certificate of insurance received.

The Contractor agrees that the obligation to provide insurance is solely the Contractor's responsibility and cannot be waived by any act or omission of the Owner.

C. INSURANCE DOES NOT LIMIT LIABILITY

The purchase of insurance by the Contractor under this Contract shall not be deemed to limit the liability of the Contractor in any way for damages suffered by Owner (e.g., in excess of policy limits, because of deductibles, or not covered by the policies purchased).

D. NOTIFICATION OF PERSONAL INJURY/PROPERTY DAMAGE

The Contractor shall notify the Owner, in writing, of any possible or potential claim for personal injury or property damage arising out of the work of this Contract promptly whenever the occurrence giving rise to such a potential claim becomes known to the Contractor.

7-2.02 MINIMUM INSURANCE REQUIREMENTS

The insurance coverage required of the Contractor and any Subcontractors shall be written for not less than the following, or greater if required by law:

A. Workers' Compensation and Occupational Disease Insurance in accordance with applicable state and federal laws, and Employer's Liability Insurance with a bodily injury per accident limit of liability of at least $ 500,000, bodily injury by disease limit each employee of $500,000 and bodily injury by disease policy limit of $500,000 or such greater sum as may be reasonably required by Owner.

B. ***Commercial General Liability Insurance*** provided by ISO form CG 0001 with a combined Bodily Injury and Property Damage limit of at least $1,000,000 per occurrence, $2,000,000 products and completed operations aggregate and $2,000,000 general aggregate, or such greater sum as may be reasonably required by Owner.

1. Completed Operations and Products liability insurance shall be maintained for a period of 2-years after completion and acceptance of the Project by Owner, or such longer period as may be reasonably required by the Owner.

2. The above policy shall include an endorsement identifying Owner, Robinson Engineering, Ltd, and any other parties as may be reasonably required by Owner or REL as Additional Insured. ISO endorsements CG 2010 and CG 2037 any edition, or equivalent forms, must be used to provide this coverage. Copies of the endorsements must be included with the certificate of insurance as required in paragraph L.

3. Claims-Made coverage triggers are not acceptable to Owner.

4. ISO form CG2503, Designated Construction Project(s) General Aggregate Limit or an equivalent form must be endorsed to the policy and identified on the certificate of insurance. An Owners and Contractors Protective Liability policy can be utilized in lieu of aggregate limits per project, (see 7-2.02O for OCP requirements)

5. The policy shall not contain a sunset provision, commutation clause or any other provision which would prohibit the reporting of a claim and the subsequent defense and indemnity that would normally be provided by the policy.

6. The policy shall not contain any provision, definition or endorsement which would serve to eliminate third party action over claims.

7. Residential Work exclusions or limitations, in any form, are not acceptable to Contractor.

C. ***Comprehensive Automobile Liability Insurance*** covering use of all owned, non-owned and hired vehicles with Bodily Injury and Property Damage limit of at least $1,000,000 Combined Single Limit, or such greater sum as may be reasonably required by the Owner. This policy shall include coverage for Owner, REL, and any other parties as may be reasonably required by Owner, for liability arising out of the actions of Contractor, whether by endorsement or otherwise.

D. ***Excess or Umbrella Liability Insurance*** limits of no less than $5,000,000 per occurrence for Employer's Liability, Commercial General Liability and Comprehensive Automobile Liability, in excess of the minimum policy limits stated below:

Employer's Liability	$500,000 / $500,000 / $500,000
Commercial General Liability	$1,000,000 per occurrence
Commercial General Liability	$2,000,000 general aggregate
Commercial General Liability	$2,000,000 completed operations aggregate
Comprehensive Auto Liability	$1,000,000 combined single limit

Excess/Umbrella coverage shall be provided as no less than Follow Form and shall name Owner, REL, and any other parties as may be reasonably required by Owner, as Additional Insured on a Primary and Non-Contributory basis.

E. ***Pollution Liability*** in the amount of $1,000,000 per occurrence and in the aggregate or such sum as may be reasonably required by the Owner. This requirement covers the Contractor's use of, transportation, removal and/or disposal of hazardous materials and/or pollutants. Additionally, this requirement must apply to any disposal site receiving hazardous materials and/or pollutants. Pollution means the actual or alleged discharge, dispersal, release, seepage, migration, growth, or escape of smoke, soot, fumes, acids, alkalis, toxic chemicals, mold, mildew, spores, fungi, microbes, bacterial matter, legionella pneumophila, asbestos, lead, silica, liquids or gases, waste materials, contaminants, or other irritants, into or upon land, the atmosphere, any structure on land, the atmosphere contained within that structure, or any watercourse or body of water, including groundwater. Radioactive matter shall also be considered a pollutant, except as otherwise covered or protected by insurance or protections provided pursuant to 42 U.S.C. § 2014(w), as amended, or Section 170 of the Atomic Energy Act of 1954, as amended.

F. ***Professional Liability*** in the amount of $2,000,000 per occurrence and in the aggregate or such sum as may be reasonably required by the Owner. This requirement covers the Contractor's duties that involve professional architectural, engineering, design or consultation work. Any applicable deductibles and/or retention's must be noted on the Certificate of Insurance. Policy exclusions are not allowed for pollution, including mold, fungi or bacteria including the vapor produced or arising therefrom. Please see the project *Special Provisions* for the project specific needs of this policy.

G. ***Property and Equipment*** Contractor shall purchase and maintain at its own discretion and expense, Builder's Risk/Installation Floater Insurance in an amount equal to the insurable value of the Contractor's property, whether off site or in transit, to cover any equipment, tools or tangible personal property. Contractor assumes all liability and risks, and agrees to waive all claims against Owner and REL for damage to or loss of equipment, machinery, tools, supplies and other tangible personal property owned or supplied by Contractor and utilized or intended to be utilized during the course of Contractor's Work. Any insurance carried by Contractor covering such damage or loss shall be endorsed with a waiver of subrogation in favor of Owner and REL. Any and all subcontractors agree to assume the same liabilities and risks as Contractor.

H. ***Each of Contractor's*** General Liability, Auto Liability, Pollution Liability, Professional Liability and Excess/Umbrella Liability policies must be endorsed as Primary and Non-Contributory as to any insurance maintained by the Additional Insured(s) and shown on the certificate of insurance.

I. ***An endorsement*** in favor of the Additional Insured(s) waiving the Contractor's and its insurer's rights of subrogation shall be issued with respect to the Commercial General Liability, Comprehensive Auto Liability, Pollution Liability, Professional Liability and Workers' Compensation and Employers Liability policies. Evidence of this endorsement must be noted on the certificate of insurance.

J. ***Self-funded*** or other non-risk transfer insurance mechanisms or deductibles/self-insured retentions greater than $25,000 per occurrence are not acceptable to Owner on any insurance coverage required in this agreement. If the Contractor has such a program, full disclosure must be made to Owner and REL prior to any consideration being given.

K. ***Any subcontractor*** employed by Contractor shall have equivalent coverage.

L. ***A Certificate of Insurance***, including copies of the Additional Insured endorsements, shall be sent to REL prior to the commencement of any Work (please see the sample attached at the end of Section 7). All Certificates of Insurance and Endorsements verifying the existence of the above required insurance shall be in form and content satisfactory and acceptable to Owner and REL and shall be submitted to REL in a timely manner so as to confirm Contractor's full compliance with these insurance requirements stated herein, throughout the entire term of this Agreement.

Certificates must be sent to: RELcertificates@thehortongroup.com

M. ***Contractor shall provide*** written notice via email to RELcertificates@thehortongroup.com of any cancellation notice received by Contractor from any insurer providing insurance as required in this Agreement within two (2) business days of Contractor's receipt of such notice.

N. ***Permitting Contractor*** to commence Work prior to RELs receipt of the required certificate shall not be a waiver of the Contractor's obligation to provide all of the above insurance. Acceptance by Owner or REL of insurance submitted by Contractor shall not relieve or decrease in any manner the liability of the Contractor for its performance under this Agreement.

In the event Contractor fails to obtain or maintain any of the foregoing required coverage, the Owner may purchase such coverage and charge the expense thereof to the Contractor, or may terminate this Agreement.

These Insurance provisions are intended to be a separate and distinct obligation on the part of Contractor. Therefore, these provisions shall be enforceable and Contractor shall be bound thereby regardless of whether or not the Indemnity provisions of this Agreement are determined at any time to be enforceable in the jurisdiction in which the Work covered by this Agreement is performed. The obligation of the Contractor to provide the insurance herein specified shall not limit in any way the liability or obligations assumed by the Contractor elsewhere in this Agreement.

In the event Contractor or its insurance carrier(s) defaults on any obligations under this Insurance provision, Contractor agrees that it will be liable for all reasonable expenses and attorneys' fees incurred by Owner in the enforcement of the terms of this provision.

O. ***Owner's And Contractor's Protective Liability Insurance***

If the Contractor is unable or unwilling to provide the required General Liability Additional Insured forms, an Owner's and Contractor's Protective Policy can be purchased as an acceptable alternate; Required limits of insurance;

1. Bodily Injury and Property Damage Combined

   $5,000,000 Each Occurrence

   $10,000,000 Annual Aggregate

2. The Contractor will furnish and maintain during the entire period of construction an Owner's and Contractor's Protective Liability policy written in the name of the Owner and REL with not less than the limits indicated. The named insureds shall be:

a. Owner
b. Robinson Engineering, Ltd.

3. Proof of insurance for the coverages required to be purchased by the Contractor, including the Owner's and Contractor's Protective Policy shall be submitted to REL for transmittal to the Owner for his approval prior to the start of construction. Proof of the Owner's Protective Policy shall consist of providing an entire copy of that policy to REL. With respect to all other coverages required to be purchased by the Contractor, proof of insurance shall consist of a Certificate of Insurance issued by the Contractor's insurance agency.

4. It is further understood that any insurance maintained or carried by Owner and Robinson Engineering, Ltd. shall be in excess of any coverage provided by any Contractor or Subcontractor.

P. ***Railroad Protective Insurance*** will be required by Special Provisions if needed.

Q. ***Builder's Risk Insurance*** is not provided by the Owner. The Contractor is responsible for any loss that would be insured by such coverage. On Contracts for construction of buildings, bridges, or other structures, all Builder's Risk coverage may be required by Special Provisions. Such coverage shall name the Owner, Contractor, subcontractors, and suppliers, as their interests may appear as named insureds.

7-3 PERMITS AND LICENSES

The Contractor, prior to commencing work, shall at his own expense procure all permits, licenses, and bonds necessary for the prosecution of the work, required by Municipal, County, State and Federal regulations, unless specifically provided otherwise in the Special Conditions of the Contract.

The Contractor shall also give all notice, pay all fees, and comply with all Federal, State, County and Municipal laws, ordinances, rules and regulations and building and construction codes bearing on the conduct of the Work.

7-4 PATENTS AND ROYALTIES

If any design, device, material or process covered by letters patent or copyright is used by the Contractor, he shall provide for such use by legal agreement with the owner of the patent or a duly authorized licensee of such owner, and shall save harmless the Owner and the Engineer from any and all loss or expense on account thereof, including its use by the Owner.

7-5 STATE AND FEDERAL PARTICIPATION

When the County, State, and/or the Federal Government pays all or any portion of the cost of the Work, the Work shall be subject to the inspection of the appropriate agency.

7-6 SANITARY PROVISIONS

The Contractor shall comply with all rules and regulations of the Federal, State, County, and local health departments, and shall take precautions to avoid creating unsanitary conditions. The Engineer shall not be responsible for determining whether the Contractor is in compliance with these rules and regulations.

7-7 PUBLIC CONVENIENCE AND SAFETY

The Contractor shall notify the Owner at least five (5) days in advance of the starting of Work, which might in any way inconvenience or endanger traffic, so that arrangements may be made, if necessary, for closing the road and providing suitable detours. The Contractor shall at all times conduct the Work as to insure the least obstruction to vehicular and pedestrian traffic. The convenience of the general public and of residents along the roadway shall be provided for in an adequate and satisfactory manner. (See also 7-9, 7-14 and 8-6.)

If a temporary road is required for the convenience of the general public and/or residents along the roadway, temporary road requirements will not be paid for separately, but will be incidental to the Contract and no extra compensation will be allowed.

7-8 BARRICADES AND WARNING SIGNS

When any section of road is closed to traffic, the Contractor shall provide, erect, and maintain barricades, red flags, signs and lights at each end of the closed section and at all intersecting roads in accordance with the Illinois Manual of Uniform Traffic Control Devices.

If during the progress of the work, it is necessary to provide access to private property along the road, the Contractor shall provide, erect, and maintain within the closed portion of the road, such barricades, signs, flags and lights as may be necessary to protect the Work and to safeguard local traffic.

When traffic is to be permitted to use the road during construction, the Contractor shall protect the work and provide for safe and convenient public travel by providing, erecting, and maintaining such barricades, red flags, and lights as are necessary.

The Contractor's responsibility for the work, as provided in Section 7-15, shall apply, even though barricades, signs, red flags, and lights are installed as required above.

The cost of furnishing and maintaining barricades, warning signs, red flags, and lights as required herein shall be incidental to the Contract and no extra compensation will be allowed. The Engineer shall not be responsible for determining whether the Contractor is in compliance with these rules and regulations.

7-9 DEBRIS ON TRAVELED SURFACE OR STRUCTURES

Where the Contractor's equipment is operated on any portion of the traveled surface or structures used by traffic on or adjacent to the section under construction, the Contractor shall clean the traveled surface of all dirt and debris at the end of each day's operation.

The cost of this work shall be included in the unit prices bid and no additional compensation will be allowed. The Engineer shall not be responsible for determining whether the Contractor is in compliance with these rules and regulations.

7-10 EQUIPMENT ON TRAVELED SURFACE AND STRUCTURES

The traveled surface and structures on or adjacent to the work shall be protected, from damage by lugs or cleats on treads or wheels of equipment.

All equipment used in the prosecution of the work shall comply with the legal loading limits established by the statutes of the State of Illinois or local regulations when moved over or operated on any traveled surface or structure unless permission in writing has been issued by the Owner. Before using any equipment, which may exceed the legal loading, the Contractor shall secure a permit, allowing ample time for making an analysis of stresses to determine whether or not the proposed loading would be within safe limits. The Owner will not be responsible for any delay in construction operations or for any costs incurred by the Contractor as a result of compliance with the above requirements. The Engineer shall not be responsible for determining whether the Contractor is in compliance with these rules and regulations.

7-11 USE OF EXPLOSIVES

When the use of explosives is necessary for the prosecution of the Work, the Contractor shall be governed by the rules and regulations of the Department of Mines and Minerals of the State of Illinois and any local regulations, which govern the use of explosives. The Engineer shall not be responsible for determining whether the Contractor is in compliance with these rules and regulations.

7-12 USE OF FIRE HYDRANTS

If the Contractor desires to use water from hydrants, he shall make application to the proper authorities, and shall conform to the municipal ordinances, rules or regulations concerning their use. Water from

hydrants or other sources shall be at the Contractor's expense unless otherwise provided in the Special Provisions.

Fire hydrants shall be accessible at all times to the Fire Department. No material or other obstructions shall be placed closer to a fire hydrant than permitted by municipal ordinances, rules or regulations, or within ten feet (10') of a fire hydrant, in the absence of such ordinances, rules or regulations.

7-13 PROTECTION AND RESTORATION OF PROPERTY

If corporate or private property interferes with the Work, the Contractor shall notify, in writing, the owners of such property, advising them of the nature or disposition of such property. The Contractor shall furnish the Owner with copies of such notifications and with copies of any agreements between him and the property owners concerning such protection or disposition.

The Contractor shall take all necessary precautions for the protection of corporate or private property, such as walls and foundations of buildings, vaults, underground structures of public utilities, underground drainage facilities, overhead structures of public utilities, trees, shrubbery, crops and fences contiguous to the Work, of which the Contract does not provide for removal. The Contractor shall protect and carefully preserve all official survey monuments, property marks, section markers, and Geological Survey monuments, or other similar monuments, until the Owner or an authorized surveyor or agent has witnessed or otherwise referenced their location or relocation. The Contractor shall take reasonable precautions to avoid disturbing any archeological and other historic remains encountered during construction. The Contractor shall notify the Owner of the presence of an such survey or property monuments or archeological and other historic remains as soon as they are discovered.

The Contractor shall be responsible for the damage or destruction of property of any character resulting from error, neglect, misconduct or omission in his manner or method of execution or non-execution of the Work, or caused by defective Work or the use of unsatisfactory materials, and such responsibility shall not be released until the Work shall have been completed and accepted and the requirements of the Specifications complied with.

Whenever public or private property is so damaged or destroyed, the Contractor shall at his own expense, restore such property to a condition equal to that existing before such damage or injury was done by repairing, rebuilding, or replacing it as may be directed, or he shall otherwise make good such damage or destruction in an acceptable manner. If he fails to do so, the Owner may, after the expiration of a period of forty-eight (48) hours after giving him notice in writing, proceed to repair, rebuild, or otherwise restore such property as may be deemed necessary, and the cost thereof shall be deducted from any compensation due, or which may become due the Contractor under his contract.

The Contractor shall remove all mailboxes within the limits of construction, which interfere with construction operations and shall erect them at temporary locations. As soon as construction

operations permit, he shall set the mailboxes at their permanent locations. The Contractor shall replace at his own expense any mailbox or post which has been damaged by his operations.

The cost of all materials required and all labor necessary to comply with the above provisions will not be paid for separately, but shall be considered as incidental to the Contract, unless otherwise specified in the Special Provisions.

7-14 PROTECTION AND RESTORATION OF TRAFFIC SIGNS

Any traffic sign within the limits of construction, which interferes with construction operations, may be removed by the Contractor when authorized by the traffic sign owner. Any traffic sign, which has been removed, shall be re-erected immediately by the Contractor at the temporary location designated by the traffic sign owner, and as soon as construction operations permit, the sign shall be set at its permanent location. The cost of all materials required and all labor necessary to comply with this provision will not be paid for separately, but shall be considered as incidental to the contract.

The Contractor shall replace at his own expense any traffic sign or post which has been damaged due to his operations.

Any traffic sign designated as critical by the traffic sign owner shall not be disturbed and no additional compensation will be allowed the Contractor for any delays, inconvenience, or damage sustained by him due to any special construction methods required in prosecuting his work due to the existence of such traffic signs.

7-15 CONTRACTOR'S RESPONSIBILITY FOR WORK

The Work shall be under the control and care of the Contractor until final acceptance or use or occupancy by the Owner. The Contractor shall assume all responsibility for injury or damage to the Work by action of the elements or from any other cause whatsoever, and shall rebuild, repair, restore, and make good, at his expense, all injuries or damages to the Work, except that when the Work is opened to usage by written order of the Owner, the provisions of this article shall not apply to damage caused by such use and not due to the Contractor's fault or negligence.

When materials are furnished to the Contractor by the Owner for inclusion in the work, the Contractor's responsibility for handling and installation of all such materials shall be the same as for materials furnished by him.

In case of suspension of Work by the Contractor, the Contractor shall be responsible for the Work and shall take such precautions as may be necessary to prevent damage to the Work, provide for normal drainage and shall erect any necessary temporary structures, signs, or other facilities at his expense.

7-16 GUARANTEE PERIOD

The Contractor shall warrant all Work performed for a period of one (1) year from the date of final acceptance in writing by the Engineer. In case of acceptance of a part of the work for use or occupancy prior to final acceptance of the entire Work, the guarantee for the part so accepted shall be for a period of one year from the date of such partial acceptance, in writing, by the Engineer.

In placing orders for equipment, the Contractor shall purchase same only under a written guarantee from the respective manufacturers that the equipment supplied will function satisfactorily as an integral part of the completed Work in accordance with the Plans and Specifications, and that the manufacturer will repair or otherwise make good any defects in workmanship or materials which may develop within a period of one (1) year from the date of final acceptance. Furthermore, the Contractor shall require that the manufacturer agree in writing at the time the order for equipment is placed that he will be responsible for the proper functioning of the equipment in cooperation with the Contractor, and that whenever necessary during the installation period or tuning up period following construction period, the manufacturer will supply without additional cost to the Owner, such superintendence and mechanical labor and any adjustments and additional parts and labor needed to make the equipment function satisfactorily, even if same was not shown on the approved shop drawings.

7-17 PERSONAL LIABILITY OF OWNER'S AGENTS

In carrying out the provisions of this contract, or in exercising any power or authority granted to the Owner, there shall be no personal liability upon any officer or authorized agent of the Owner provided the Owner is a governmental body, it being understood that all such persons act as agents and representatives of the Owner.

7-18 NO WAIVER OF LEGAL RIGHTS

The Owner and the Engineer shall not be precluded by any measurement, estimate, or certificate made either before or after the completion and acceptance of the Work and payment therefor, from showing the true amount and character of the Work performed and materials furnished by the Contractor, or from showing that any such measurement, estimate, or certificate is untrue or incorrectly made, or that the Work or materials do not conform in fact to the Contract. The Owner shall not be precluded, notwithstanding any such measurement, estimate, or certificate and payment in accordance therewith, from recovering from the Contractor and his sureties such damages as if it may sustain by reason of his failure to comply with the terms of the Contract. Neither the acceptance by the Owner, nor any representative of the Owner, nor any payment for or acceptance of the whole or any part of the work, nor any extension of time, nor any possession taken by the Owner, shall operate as a waiver of any portion of the Contract, or of any power herein reserved, or any right to damages herein provided. A waiver of any breach of the Contract shall not be held to be a waiver of any other or subsequent breach.

7-19 SAFETY

Contractor shall comply with State and Federal Safety regulations as outlined in latest revision of Federal Construction Safety Standards (Series 1926) and with applicable provisions and regulation of Occupation Safety and Health Administration (OSHA) Standards of the Williams-Steiger Occupational Health and Safety Act of 1970 (rev.). The Engineer shall not be responsible for determining the Contractor's compliance with these regulations.

The Contractor is solely responsible for the safety procedures, programs and methods of its employees, subcontractors of every tier, and agents. Contractor shall hold the Owner and the Engineer harmless for any and all damages resulting from violations thereof.

7-20 USE OF PRIVATE LAND

The Contractor shall not use any vacant lot or private land as a plant site, depository for materials, or as a spoil site without the written authorization of the owner of the land (or his agent), a copy of which authorization shall be filed with the Owner.

7-21 USE OF WATER

Contractors desiring to use water furnished by the Owner will be required to make application for extension to the proper authorities and conform to the rules and regulations provided in such cases by the municipal ordinances and pay the usual water rates.

7-22 COST OF SERVICES

The Contractor will be required to pay the established water rates for water obtained from the Owner. Large quantities of water for flushing trenches, filling mains, testing or other operations shall be drawn only at night or at times specifically authorized by the Owner.

The cost of all power, lighting and heating required during construction shall be paid by the Contractor and its costs merged in the contract price.

7-23 WORK IN BAD WEATHER

No construction work shall be done during stormy, freezing or inclement weather, except such as can be done satisfactorily, and to secure first-class construction throughout, and then only subject to permission of the Owner.

7-24 SUNDAY WORK

No work shall be performed under these specifications at night or on Sunday and legal holidays without the approval of the Owner. If it is found necessary to continue the work at night or on Sunday or on a legal holiday, the Contractor will be charged for the Engineering and observation at such times at the rate of Seven Hundred Fifty Dollars ($750.00) per day of eight (8) working hours for each person doing such work on the job, and the amount will be deducted from money due to the Contractor at the time of settlement.

7-25 WATCHMEN

Watchmen are to be provided by the Contractor at the site of the project to prevent loss, damage to property, or accidents.

7-26 CONSTRUCTION DEBRIS

The Contractor shall not conduct any generation, transportation, or recycling of construction or demolition debris, clean or general or uncontaminated soil generated during construction, remodeling, repair, and demolition of utilities, structures, and roads that is not commingled with any waste, without the maintenance of documentation identifying the hauler, generator, place of origin of the debris or soil, the weight or volume of the debris or soil, and the location, owner, and operator of the facility where the debris or soil was transferred, disposed, recycled or treated. This documentation must be maintained by the Contractor for 3 years.

7-27 SAMPLE INSURANCE CERTIFICATE

EMAIL ALL CERTIFICATES TO RELCERTIFICATES@THEHORTONGROUP.COM

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:
YOUR INSURANCE AGENT	PHONE (A/C, No, Ext): FAX (A/C, No):
	E-MAIL ADDRESS:
	INSURER(S) AFFORDING COVERAGE — NAIC #
INSURED YOUR NAME AND ADDRESS	INSURER A : CARRIERS MUST BE RATED
	INSURER B : A- VII OR BETTER
	INSURER C :
	INSURER D :
	INSURER E :
	INSURER F :

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	GENERAL LIABILITY X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER POLICY X PRO-JECT LOC	Y	Y	POLICY NUMBER	EFF DATE	EXP DATE	EACH OCCURRENCE	$ 1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	$ ANY LIMIT
							MED EXP (Any one person)	$ ANY LIMIT
							PERSONAL & ADV INJURY	$ 1,000,000
							GENERAL AGGREGATE	$ 2,000,000
							PRODUCTS - COMP/OP AGG	$ 2,000,000
								$
	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS X HIRED AUTOS SCHEDULED AUTOS X NON-OWNED AUTOS	Y	Y	POLICY NUMBER	EFF DATE	EXP DATE	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
							BODILY INJURY (Per person)	$
							BODILY INJURY (Per accident)	$
							PROPERTY DAMAGE (Per accident)	$
								$
	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED RETENTION $	Y	Y	POLICY NUMBER	EFF DATE	EFF DATE	EACH OCCURRENCE	$ 5,000,000
							AGGREGATE	$ 5,000,000
								$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N N If yes, describe under DESCRIPTION OF OPERATIONS below	N/A	Y	POLICY NUMBER	EFF DTE	EFF DATE	X WC STATU-TORY LIMITS OTH-ER	
							E.L. EACH ACCIDENT	$ 500,000
							E.L. DISEASE - EA EMPLOYEE	$ 500,000
							E.L. DISEASE - POLICY LIMIT	$ 500,000
	POLLUTION PROFESSIONAL			POLICY NUMBER	EFF DATE	EFF DATE	$1,000,000/1,000,000 AGG $1,000,000/2,000,000 AGG	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

REL JOB NUMBER AND PROJECT NAME AND ADDRESS:

Additional Insured with respect to General Liability, Auto Liability and Umbrella/Excess Liability on a primary and noncontributory basis when required by written contract (Owner and Robinson Engineering ltd)) Owner is Certificate Holder. Waiver of Subrogation in favor of listed additional insureds with respect to General Liability, Auto Liability, Umbrella/Excess Liability and Workers' Compensation policies. Additional Insured with respect to General Liability coverage per ISO forms CG2010 and CG2037 or equivalent forms. Umbrella/Excess is on a follow form basis and is primary and non-contributory.

CERTIFICATE HOLDER	CANCELLATION
OWNER	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE

© 1988-2010 ACORD CORPORATION. All rights reserved.

ACORD 25 (2010/05) The ACORD name and logo are registered marks of ACORD

SECTION 8. PROSECUTION AND PROGRESS

8-1 SUBLETTING OR ASSIGNMENT OF CONTRACT

The Contractor shall not sublet, sell, transfer, assign, or otherwise dispose of the Contract or Contracts or any portion thereof, or of his right, title, or interest therein, without written consent of the Owner. In case such consent is given, the Contractor will be permitted to sublet a portion thereof, but shall perform with his own organization, Work amounting to not less than 50 per cent of the total Contract, except that any items designated in the Contract as "specialty items" may be performed by subcontract and may be deducted from the total Contract price before computing the amount of work required to be performed by the Contractor with his own organization. No subcontracts, or transfer of Contract, shall in any case release the Contractor of his liability under the Contract. All transactions of the Owner shall be with the Contractor; subcontractors shall be recognized only in the capacity of employees or workmen and shall be subject to the same requirements as to character and competence.

8-2 PROGRESS SCHEDULE

Promptly after the award of the contract, if requested, the Contractor shall submit to the Owner a satisfactory progress schedule, which shall show the proposed sequence of work, and how the Contractor proposes to complete the various items of work within the number of days set up on the contract. The progress schedule shall be reviewed and revised periodically as working conditions warrant. The Contractor shall confer with the Owner in regard to the prosecution of the Work in accordance with this schedule. This schedule shall be used as a basis for establishing major construction operations, and for checking progress of the Work.

8-3 PRE-CONSTRUCTION CONFERENCE

Unless the need for a preconstruction conference is waived by the Engineer, the Contractor shall make himself and his representatives available to meet with the Engineer and other representatives of the Owner, prior to the start of construction to discuss scheduling, handling of materials, payments, etc.

8-4 PROSECUTION OF THE WORK

The Contractor shall begin the Work to be performed under the contract not later than ten (10) days after the execution and acceptance of the Contract, unless otherwise provided, but not prior to the execution of the Contract.

8-5 COMPLETION DATE

The Contractor shall complete all Work on or before the stipulated completion date, or on or before a later date determined as specified herein; otherwise, the Owner may proceed to collect liquidated damages described hereinafter.

When a delay occurs due to unforeseen causes beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of the public enemy, governmental acts, fires, floods, epidemics, strikes, extraordinary delays in delivery of materials caused by strikes, lockouts, wrecks, freight embargoes, governmental acts, or acts of God, the time of completion shall be extended in whatever amount is determined by the Owner.

An "Act of God" means an earthquake, flood, cloudburst, cyclone, or other cataclysmic phenomena of nature beyond the power of the Contractor to foresee or make preparation in defense against. A rain, windstorm or other natural phenomenon of normal intensity, based on U.S. Weather Bureau reports, for the particular locality and for the particular season of the year in which the work is being prosecuted, shall not be construed as an "Act of God", and no extension of time will be granted for the delays resulting therefrom.

8-6 LIMITATIONS OF OPERATIONS

The Contractor shall conduct his work so as to create a minimum amount of inconvenience to vehicular and pedestrian traffic. At any time when, in the judgment of the Owner, the Contractor has obstructed or closed the road or is carrying on operations on a greater portion of a street than is necessary for the proper prosecution of the Work, the Owner may require the Contractor to finish the section on which Work is in progress before the Work is started on any additional section. (See also Section 7-7).

8-7 SUSPENSION OF WORK

The Owner shall have authority to suspend the Work wholly or in part, for such period of time as he may deem necessary, due to conditions unfavorable for the satisfactory prosecution of the Work, or to conditions which in his opinion warrant such action; or for such time as is necessary by reason of failure on the part of the Contractor to carry out orders given, or to perform any or all provisions of the Contract. No additional compensation will be paid the Contractor because of any costs caused by such suspension, except when the suspension is ordered for reasons not resulting from any act or omission on the part of the Contractor. If it becomes necessary to stop Work for an indefinite period of time, the Contractor shall store all material in such manner that they will not obstruct or impede the traveling public unnecessarily or become damaged in any way, take every precaution to prevent damage or deterioration of the Work performed, provided suitable drainage of the roadway, and erect temporary structures where necessary. The Contractor shall not suspend Work without written authority from the Owner. (See also Section 7-15).

8-8 DETERMINATION AND EXTENSION OF CONTRACT TIME FOR COMPLETION

When the time for completion of the Work contemplated is specified in the Contract, it is understood that the completion of the Work within the time specified is an essential part of the Contract. If the Contractor finds it impossible to complete the Work within the time specified in the Contract, he may, at

any time prior to the last thirty (30) days of the Contract time specified, make written request to the Owner for an extension of Contract time. He shall set forth in full in his request the reasons, which he believes justify the granting of his request. If the Owner finds that the Work is delayed because of conditions beyond the control of the Contractor, or that the quantities of work done, or to be done, are in excess, he shall promptly grant an extension of time for completion, which appears reasonable and proper. The extended time for completion shall then be considered as in effect the same as if it were the original Contract time for completion.

8-9 FAILURE TO COMPLETE THE WORK ON TIME

Should the Contractor fail to complete the Work within the Contract time the Contractor shall be liable to the Owner in the amount shown in the following schedule of deductions, as liquidated damages, and not as a penalty, for each day of overrun in the Contract time or such extended time as may have been allowed.

SCHEDULE OF DEDUCTIONS FOR EACH DAY OF OVERRUN IN CONTRACT TIME

Original Contract Amount		Daily Charge	
From more than	To and Including	Calendar Day	Work Day
$ 0	100,000	$ 475	$ 675
100,000	500,000	750	1,050
500,000	1,000,000	1,025	1,425
1,000,000	3,000,000	1,275	1,725
3,000,000	6,000,000	1,425	2,000
6,000,000	12,000,000	2,300	3,450
12,000,000	And over	5,800	8,125

8-10 DEFAULT ON CONTRACT

If the Contractor fails to begin the Work under Contract within the time specified, or fails to perform the Work with sufficient workmen and equipment or with sufficient materials to insure the completion of said Work within the Contract time, or shall perform the Work unsuitable, or shall neglect or refuse to remove materials or perform anew such Work as shall be rejected as defective and unsuitable, or shall discontinue the prosecution of the Work, or if the Contractor shall become insolvent or be declared bankrupt, or shall commit any act of bankruptcy or insolvency, or shall make an assignment for the benefit of creditors, the Owner shall give notice in writing to the Contractor and his surety of such delinquency, said notice to specify the corrective measures required.

If the Contractor, within a period of ten (10) days after said notice, shall not proceed in accordance therewith, the Owner shall have full power and authority to forfeit the rights of the Contractor and at its

option to call upon the surety to complete the Work in accordance with the terms of the contract, or it may take over the Work, including any or all materials and equipment on the ground as may be suitable and acceptable, and may complete the Work with his own forces, or may enter into a new agreement for the completion of said Contract according to the terms and provisions thereof, or use such other methods as, in its opinion, shall be required for the completion of said Contract in an acceptable manner.

All costs and charges incurred by the Owner, together with the cost of completing the work under Contract, shall be deducted from the Contract amount. In case the expense so incurred by the Owner shall be less than the sum which would have been payable under the Contract if it had been completed by the Contractor, the Contractor shall be entitled to receive the difference subject to any claims for liens thereon in case such expense shall exceed the sum which would have been payable under the Contract, the Contractor and the surety shall be liable and shall pay to the Owner the amount of such excess.

8-11 TERMINATION OF THE CONTRACTOR'S RESPONSIBILITY

Whenever the Work called for by the Contract shall have been completely performed on the part of the Contractor and all parts of the Work have been approved and deemed to be in compliance with the Technical Plans and Specifications by the Engineer, according to the Contract, and the final estimate paid, the Contractor's obligations shall be considered fulfilled, except as set forth in his Bond, in Section 7-18 and his one-year guarantee, in Section 7-16.

SECTION 9. MEASUREMENT AND PAYMENT

9-1 MEASUREMENT OF QUANTITIES

All Work completed under the Contract will be measured by the Engineer according to United States Standard Measures. The method of measurement shall be described in the Specifications or the Special Provisions.

9-2 SCOPE OF PAYMENT

The Contractor shall receive and accept the compensation as herein provided, in full payment for furnishing all materials, labor, tools and equipment; for performing all Work contemplated and embraced under the Contract; for all loss or damage arising out of the nature of the Work or from action of the elements; for any unforeseen difficulties or obstructions which may arise or be encountered during the prosecution of the Work until its final acceptance by the Owner; for all risks of every description connected with the prosecution of the Work; also, for all such expenses incurred by or in consequence of suspension or discontinuance of such prosecution of the work as herein specified, or for any infringement of patents, trademarks, or copyrights, and for completing the Work in an acceptable manner according to the Contract Documents.

Contractor will be paid in cash and/or negotiable warrants at intervals, and in accord with the terms of the Contract. Except for subdivision contracts, the Owner will retain ten percent (10%) of each periodic payment until final completion and acceptance by the Owner of all Work included in the Contract.

The payment of any current estimate prior to final acceptance of the Work by the Owner shall in no way constitute an acknowledgment of the acceptance of the Work, nor in any way prejudice or affect the obligation of the Contractor, at his expense, to repair, correct, renew, or replace any defects or imperfections in the construction or in the strength or quality of the materials used in or about the construction of the Work under Contract and its appurtenances, nor any damage due or attributable to such defects, which defects, imperfections, or damage shall have been discovered on or before the final inspection and acceptance of the Work. Defects, imperfections, or damage, shall be determined by the Engineer observing the work for compliance with the Plans and Specifications, and the Contractor shall be liable to the Owner for failure to correct the same as provided herein.

9-3 INCREASED OR DECREASED QUANTITIES

Whenever the quantity of any item of Work as given in the Proposal shall be increased or decreased, payment shall be made on the basis of the actual quantity completed at the unit price for such item named in the Proposal, except as otherwise provided in Sections 4-3 or in the detailed specifications for each class of Work.

9-4 PAYMENT FOR EXTRA WORK

Extra Work which results from any of the changes as specified in Section 4-3 shall not be started, except in case of an emergency, until receipt of a written authorization or Work order from the Owner, which authorization shall state the items of work to be performed and the method of payment for each item. Work performed without such order will not be paid for.

Extra work will be paid for:

A. Either at a lump sum price or at unit prices agreed upon by the Contractor and the Owner. (In case a Supplemental Agreement is signed between the Contractor and the Owner, the agreed prices pertaining thereto shall prevail).

B. If acceptable to the Engineer, on the following force account basis:

1. Labor. The Contractor will be paid the actual amount of wages for all labor and foreman in direct charge of the specific Work for each hour that said labor and foreman are actually engaged in such Work, to which cost shall be added twenty percent (20%) of the sum thereof.

2. Bond, Insurance, Tax, Welfare Fund and other Payments. The Contractor will receive the actual cost of Contractor's bond, public liability and property damage insurance, workmen's compensation insurance, social security tax, welfare fund and other payments, if any, in accordance with agreements applicable to the Contract, required for force account work, to which no percentage shall be added. The Contractor shall furnish satisfactory evidence of the rate or rates paid for such bond, insurance tax, welfare fund and other payments.

3. Materials. The Contractor will receive the actual cost for all materials which are an integral part of the finished Work, including freight charges as shown by the original receipted bills, to which shall be added fifteen percent (15%) of the sum thereof.

   The Contractor will be reimbursed for any materials used in the construction of the Work, such as sheeting, false work, form lumber, curing materials, etc., which are not an integral part of the finished Work. The amount of reimbursement shall be agreed upon in writing before such Work is begun, and no percent shall be added. The salvage value of such materials shall be taken into consideration in the reimbursement agreed upon.

4. Equipment. Machinery and equipment, which the Contractor has on the job for use on contract items, shall be used on extra Work as deemed necessary or desirable. The Contractor will be paid for all machinery and equipment used on extra work in accordance with the latest revision of "SCHEDULE OF AVERAGE ANNUAL EQUIPMENT OWNERSHIP EXPENSE WITH OPERATING COST" as issued by the Department of Transportation, State of Illinois, for the period that said machinery and equipment are in use on such Work, to which no percent shall be added. In the event that equipment is used which is not included in aforesaid publication, the latest edition of the "Compilation of Nationally Averaged Rental Rates for Construction Equipment" complied by Equipment Distributors, 615 West 22nd Street, Oak Brook, Illinois 60521, shall be used to determine equipment rental rates and no percent shall be added to the rates indicated in such publication.

9-5 PAYMENT FOR SUBCONTRACTING, EXTRA WORK

Where an authorized subcontractor performs some or all of the Work qualifying as an Extra Work item and compensation is to be based on the terms of paragraph 9-4 (2), the cost of labor, bonds, material and equipment shall be the cost to the subcontractor on these items and an additional allowance to the prime Contractor of five percent (5%) of all costs as determined in paragraph 9-4 (2) shall be made in such instances.

9-6 PARTIAL PAYMENTS

Once each month, the Contractor will make an approximate estimate, in writing, of the materials in place complete, the amount of Work performed, and the value thereof, at the contract unit prices. From the amount so determined of completed work there shall be deducted ten percent (10%) to be retained until after the completion of the entire Work to the satisfaction of the Owner, and the balance certified to the Owner for payment.

In addition, an estimate may, at the discretion of the Owner and upon presentation of receipted bills and freight bills, be made for payment of the value of acceptable non-perishable materials delivered at the Work site or in acceptable storage places and not used at the time of such estimate. The care and storage of such material shall be the Contractor's responsibility. In the absence of receipted bills, an estimate may, at the request of the Contractor and at the discretion of the Owner, be made for payment of the value of materials in acceptable storage places and not used at the time of the estimate, but in such an event payment shall be made of such amounts by a check requiring the endorsement of both the Contractor and materials supplier. Endorsement of such a check by the material supplier shall be construed a waiver of lien for the cost of materials covered by the check. Such materials, when so paid for by the Owner, shall become the property of the Owner, and in the event of default on the part of the Contractor, the Owner may use or cause to be used such materials in the construction of the Work

provided for in the Contract. The amount thus paid by the Owner shall be deducted from estimates due the Contractor as the material is used in the Work.

9-7 ACCEPTANCE AND FINAL PAYMENT

Whenever the Work provided for by the Contract shall have been completely performed on the part of the Contractor, and all parts of the Work have been deemed to be in substantial compliance with the Plans and Specifications by the Engineer and accepted by the Owner, a final estimate showing the value of the Work will be prepared by the Engineer as soon as the necessary measurements and computations can be made, all prior estimates upon which payments have been made being approximate only and subject to correction in the final payment. The amount of this estimate, less any sums that have been deducted or retained under the provisions of the Contract, will be paid to the Contractor as soon as practicable after the final acceptance, provided the Contractor has furnished to the Owner satisfactory evidence that all sums of money due for any labor, materials, apparatus, fixtures, or machinery furnished for the purpose of such Work have been paid or that the person or persons to whom the same may be due have consented to such final payment.

Neither the final payment on this contract by the Owner nor any provisions in the contract documents shall relieve the Contractor of the responsibility for negligence in the furnishing and installation of faulty materials or for faulty workmanship which shows up within the extent and period provided by law or within the guarantee period of one (1) year from final acceptance of the work performed under this Contract, whichever is greater, nor of the responsibility of remedying such faulty workmanship and materials.

The acceptance by the Contractor of the final payment shall constitute a release and waiver of all claims by the Contractor except those previously made and still unsettled.

9-8 OWNER'S RIGHT TO WITHHOLD CERTAIN AMOUNTS

The Owner may withhold, in addition to retained percentages, from payment to the Contractor, such an amount or amounts as may be necessary to cover:

A. Payments that may be earned or due for just claims for labor and materials furnished in and about the Work.
B. For defective Work not remedied.
C. For failure of the Contractor to make proper payments to his subcontractors.
D. For reasonable doubt that the contract can be completed for the balance then unpaid.

The Owner will disburse and shall have the right to act as agent for the Contractor in disbursing such funds as have been withheld pursuant to this paragraph to the party or parties who are entitled to payment therefrom. The Owner will render to the Contractor a proper accounting of all such funds disbursed in behalf of the Contractor.

The Owner also reserves the right, even after full completion and acceptance of the Work, to refuse payment of the final ten percent (10%) due the Contractor, until it is satisfied that all subcontractors, material suppliers, and employees of the Contractor have been paid in full.

9-9 RELEASE OF CLAIMS AND LIENS

Neither the final payment nor any part of the retained percentage shall become due until the Contractor shall deliver to the Owner a complete release of all claims or liens arising out of this contract, or receipts in full in lieu thereof and, if required in either case, an affidavit that so far as he has knowledge or information the release and receipts include all the labor and materials for which a lien or claim could be filed; but the Contractor may, if a subcontractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to the Owner to indemnify the Owner against any claim or lien (in cases where such payment is not already guaranteed by surety bond). If any claim or lien remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all monies that the latter may be compelled to pay in discharging such a lien, including all costs and a reasonable attorney's fee.

DIVISION II

Technical Specifications

EXCAVATION AND CLEANUP

SECTION 1.	***EXCAVATION AND BACKFILL FOR UNDERGROUND CONDUITS***	***1***
1-1	***DESCRIPTION***	***1***
1-2	***CONSTRUCTION DETAILS***	***1***
SECTION 2.	***RESTORATION OF SURFACES***	***13***
2-1	***GENERAL***	***13***
2-2	***CONSTRUCTION DETAILS***	***13***
SECTION 3.	***FINISHING AND CLEAN UP FOR UNDERGROUND CONDUITS***	***16***
3-1	***CLEAN UP***	***16***

SECTION 1. EXCAVATION AND BACKFILL FOR UNDERGROUND CONDUITS

1-1 DESCRIPTION

For the purpose of this section, underground conduits shall be considered sewer pipe, water main or any other pipe conduit indicated on the Plans. Wherever the term "pipe" or "pipe line" is used, it shall mean underground conduit.

Excavation and backfill shall include all excavation, backfilling, compacting, disposal of surplus material, restoration of all disturbed surface, and all other work incidental to the construction of trenches, including any additional excavation which may be required for manholes or other structures forming a part of the pipe line.

1-2 CONSTRUCTION DETAILS

1-2.01 SURFACE REMOVAL AND TOPSOIL PRESERVATION

Along the proposed pipe lines as indicated on the Plans, the Contractor shall remove the surface materials only to such widths as will permit a trench to be excavated which will afford sufficient room for proper efficiency and proper construction. Where sidewalks, driveways, pavements and curb and gutter are encountered, care shall be taken to protect such against fracture or disturbance beyond reasonable working limits. In areas specified on the Plans, topsoil suitable for final grading and landscaping shall be piled separately in locations approved by the Owner and preserved so that it may be restored after the remainder of the backfill is replaced.

1-2.02 WIDTH OF EXCAVATION

A. The bottom width of the trench at and below the top of the pipe and inside the sheeting and bracing, if used, shall be in accordance with Section 550.04 of the Standard Specifications, unless otherwise noted.

   Note: The strength or class of pipe shall be as indicated on the Plans.

B. Trench sheeting and bracing or a trench shield shall be used as required by the rules and regulations of O.S.H.A. The Engineer shall not be responsible for determining whether the contractor is in compliance with this provision. The bottom of the trench excavation shall conform to the details shown on the Plan.

C. If these trench widths are exceeded without the written permission of the Engineer, the pipe shall be installed with a concrete cradle or with concrete encasement or a stronger pipe than originally specified shall be used as approved by the Engineer.

1-2.03 EXCAVATION BELOW GRADE

In cases where the excavation is carried beyond or below the lines and grades given by the Engineer, the Contractor shall, at his own expense, refill all such excavated space with suitable granular material.

1-2.04 ROCK EXCAVATION

A. GENERAL

Wherever "rock" is used as the name of an excavated material, it shall mean boulders or pieces of rock, concrete, or masonry measuring one-half (1/2) cubic yard or more, hard shale or solid ledge rock and masonry which requires for its removal the continuous use of pneumatic tools or drilling and blasting.

Before payment is allowed for "Rock Excavation", the Contractor shall be required to demonstrate the material cannot be removed "by hand pick" or by power operated excavator or shovel. No payment will be made for Rock Excavation unless air tools or explosives were used by the Contractor. No payment will be made for "Rock Excavation" unless the Engineer approves such payment in writing in advance upon being satisfied that the material meets the above criteria.

B. MEASUREMENT FOR PAYMENT

Where "Rock Excavation" is to be measured for payment, quantities will be determined by the Engineer. Rock required to be removed shall be computed by the cubic yard. Width for pay purposes shall be the measured width of rock removed, but shall not exceed the width specified in Section 550.04 of the Standard Specifications, plus any sheeting and bracing if required. Depth for pay purposes shall be the difference in elevation between the top and bottom of the rock as determined by the Engineer. Where rock is encountered in the bottom of the trench, the maximum depth for payment purposes will be six inches (6") below the bottom of the pipe. Where the proposal does not contain a pay item for "Rock Excavation", the additional cost of rock removal as defined by the specifications shall be paid on extra work basis. (Division I, Section 9-4).

C. PAYMENT

Payment shall be made at the Contract unit price per cubic yard of "Rock Excavation". These prices shall be full compensation for furnishing all materials; for all preparation, excavation and disposal of rock; and for all labor, equipment, tools and incidentals necessary to complete the item.

1-2.05 SUBSURFACE EXPLORATION

All information available to the Owner, if any, on subsurface exploration will be made available for examination by prospective Bidders. However, it is understood and agreed that the Owner shall in no way be held responsible for interpretation of this information, its accuracy or its thoroughness. Prospective Bidders shall make such subsurface explorations as they believe necessary to verify and supplement information received from the Owner.

1-2.06 EXPLORATORY EXCAVATION

A. GENERAL

Whenever, in the opinion of the Engineer, it is necessary to explore an excavate in advance of the Work to determine the best line and grade for the construction of the proposed pipe line, the Contractor shall make explorations and excavations for such purposes.

B. PAYMENT

The cost of such excavation will be paid at the contract unit price per foot for "Exploration Trench", or if no Bid Item is included, on an extra work basis.

1-2.07 BRACED AND SHEETED TRENCHES

A. GENERAL

Open-cut trenches shall be sheeted and braced or otherwise protected as required by any governing Federal or State laws and municipal ordinances, and as may be necessary to protect life, property, or the Work. In any event, the minimum protection shall conform to the recommendations in the Occupational Safety and Health Act Standards for Construction (OSHA). A sand box or trench shield may be used in lieu of sheeting as permitted by OSHA. When close-sheeting is used, it shall be so driven as to prevent adjacent soil from entering the trench either below or through such sheeting. Tight sheeting shall be used in that portion of the excavation in or along state and county highways below the intersection of a 1 to 1 slope line from the nearest face of the excavation to the edge of the pavement.

Where sheeting and bracing are used, the trench width shall be increased accordingly. The sheeting will be driven to the full depth of work, or to a depth where the soil has the stability necessary to meet the OSHA standards, whichever is lower. The shallower depth of required sheeting may be established by soil boring and analysis, to be performed at the Contractor's sole cost. The owner shall have the right of consent in the selection of the soils engineer for the sampling and analysis. This provision shall not relieve the contractor, in any degree, from his responsibilities under the contract.

Sheeting and bracing, which are required to be left in place shall be cut off at the specified elevation. Trench bracing, except that specified to be left in place, may be removed when the backfilling reaches the said bracing's level. All sheeting except that required to be left in place may be removed as the excavation is refilled, in such a manner as to avoid bank cave-in(s) or disturbance to the adjacent area(s) or structure(s). The voids left by the withdrawal of the sheeting shall be carefully filled by jetting, vibrating, ramming or other satisfactory means.

B. PAYMENT

Payment for sheeting and bracing, and all other Work incidental to sheeting and bracing, shall not be made separately but shall be included in the Contract price for the pipe size, except when ordered left in place.

Payment for timber sheeting left in place when shown on the plans or directed by the Engineer shall be made at the Contract unit price per 1,000 board feet of "Timber Sheeting Left in Place."

Payment for steel sheet piling when specified shall be made at the Contract unit price per square foot for "Steel Sheet Piling."

Payment for steel sheet piling left in place when shown on the plans or directed by the Engineer shall be made at the Contract unit price per square foot for "Steel Sheet Piling Left in Place."

1-2.08 TRENCHES WITH SLOPING SIDES, LIMITED

The Contractor may, at his option, where working conditions and right-of-way permit, excavate pipe line trenches with sloping sides, but with the following limitations:

A. In general, only braced and vertical trenches will be permitted in traveled streets, alleys or narrow easements.

B. Where trenches with sloping sides are permitted, the slopes shall not extend below the top of the pipe, and trench excavations below this point shall be made with vertical sides with widths not exceeding those specified hereinbefore for the various sizes of pipe.

1-2.09 SHORT TUNNELS

In some instances, trees, fire hydrants, sidewalks and other obstructions may be encountered, the proximity of which may be a hindrance to open-cut excavation. In such cases, the Contractor shall excavate by means of short tunnels in order to protect such obstructions against damage. Where such obstructions are shown on the Plans, short tunnel work shall be considered incidental to the construction of the pipe line and shall not be grounds for extra payment or payment for tunnel work. Where such obstructions are not shown on the Plans, payment will be at the Contract unit price or as extra work in accordance with Division I, Section 9-4.

1-2.10 PILING EXCAVATION MATERIAL

All excavated material shall be stockpiled to avoid obstructing streets, sidewalks and driveways. Excavated material suitable for backfilling shall be stockpiled separately on the site. No material shall be placed closer than 2'0" to the edge of an excavation. Fire hydrants under pressure, valve pit covers, valve boxes, curb top boxes, or other utility controls shall be left unobstructed and accessible until the Work is completed. Gutters shall be kept clear or other satisfactory provisions made for street drainage. Natural watercourses shall not be obstructed or polluted. Surplus material and excavated material unsuitable for backfilling shall be transported and disposed of off the site in disposal areas obtained by the Contractor.

1-2.11 REMOVAL OF WATER

The Contractor shall at all times during construction provide and maintain ample means and devices with which to promptly remove and properly dispose of all water entering the excavations or other parts of the Work until all Work to be performed therein has been completed. No sanitary sewer shall be used for disposal of trench water, unless specifically approved by the Engineer and then only if the trench water does not ultimately arrive at existing pumping or sewage treatment facilities. No water containing settle able solids shall be discharged into storm sewers.

1-2.12 BLASTING

Blasting for excavation will be permitted only after securing the approval of the Owner and only when proper precautions are taken for the protections of persons and property. The hours of blasting will be reviewed by the Owner. Any damage caused by blasting shall be repaired by the Contractor at his expense. The Contractor's methods of procedure in blasting shall conform to Federal and State laws and municipal ordinances and O.S.H.A. rules and regulations. The Engineer shall not be responsible for determining whether the contractor is in compliance with these rules and regulations.

1-2.13 SAFETY

A. BARRICADES, GUARDS AND SAFETY PROVISIONS

To protect persons from injury and to avoid property damage, adequate barricades, construction signs, lights and guards as required shall be placed and maintained by the Contractor at his expense during the progress of the construction Work and until it is safe for traffic to use the roads and streets. All material piles, equipment and pipe which may serve as obstructions to traffic shall be enclosed by fences or barricades and shall be protected by proper lights when the visibility is poor. The rules and regulations of O.S.H.A. and appropriate authorities respecting safety provisions shall be observed. The Engineer shall not be responsible for determining whether the contractor is in compliance with these rules and regulations.

B. STRUCTURE PROTECTION

Temporary support, adequate protection and maintenance of all underground and surface structures, drains, sewers and other obstructions encountered in the progress of the Work shall be furnished to the Contractor at his expense. Any structures which may have been disturbed shall be restored upon completion of the Work.

C. PROTECTION OF PROPERTY AND SURFACE STRUCTURES

Trees, shrubbery, fences, poles and all other property and surface structures shall be protected during construction operations unless their removal for purposes of construction is authorized by the Engineer. Any fences, poles, or other man-made surface improvements which are moved or disturbed by the Contractor shall be restored to the original conditions, after construction is completed, at the Contractor's expense. Any trees, shrubbery or other vegetation which are approved for removal or ordered for removal by the Engineer in order to facilitate construction operations shall be removed completely, including stumps and roots, by the Contractor. Responsibility for any damage or claims for damage caused by construction operations to shrubbery or other landscape improvements which were not authorized for removal by the Engineer shall be assumed by the Contractor.

1-2.14 DEVIATIONS OCCASIONED BY STRUCTURES OR UTILITIES

Wherever obstructions are encountered during the progress of the Work and interfere to such an extent that an alteration in the plan is required, the Engineer shall have the authority to change the Plans and order a deviation from the line and grade or arrange with the owners of the structures for the removal, relocation or reconstruction of the obstructions. Where gas, water, telephone, electrical, hot water, steam, or other existing utilities are an impediment to the vertical or horizontal alignment of the proposed pipe line, the Engineer shall order a change in grade or alignment or shall direct the Contractor to arrange with the owners of the utilities for their removal.

1-2.15 INTERRUPTION TO UTILITIES

The Contractor shall proceed with caution in the excavation and preparation of the trench so that the exact location of underground structures may be determined. Prior to proceeding with trench excavation, the Contractor shall contact all utility companies in the area to aid in locating their underground services.

The Contractor shall take all reasonable precautions against damage to existing utilities. However, in the event of a break in an existing water main, gas main, sewer or underground cable, he shall immediately notify the responsible official of the organization operating the utility interrupted. The Contractor shall lend all possible assistance in restoring services and shall assume all cost, charges, or claims connected with the interruption and repair of such services if the location of said utility was marked by the owner thereof prior to excavation.

1-2.16 MAINTENANCE OF TRAFFIC AND CLOSING OF STREETS

The Contractor shall carry on the Work in a manner which will cause a minimum of interruption to traffic, and may close to through travel not more than two consecutive blocks, including the cross street intersected. Where traffic must cross open trenches, the Contractor shall provide suitable bridges at street intersections and driveways. The Contractor shall post suitable signs indicating that a street is closed and necessary detour signs for the proper maintenance of traffic. Prior to closing of any streets, the Contractor shall notify responsible municipal authorities at least five (5) days in advance of the starting of the Work, unless otherwise approved by the municipality.

1-2.17 CONSTRUCTION IN EASEMENTS

In easements across private property, the Contractor shall confine all operations in the easement area and shall be responsible and liable for all damage outside of the easement area. Trees, fences, shrubbery or other type of surface improvements located in the easements will require protection during construction. The provisions of Section 1-2.14C above shall apply to all easement areas as well as to public right-of-way. Precautions shall be taken by adequate sheeting or other approved method to prevent any cave-in or subsidence beyond the easement limits or damage to improvements within the easement. In general, the easement area is intended to provide reasonable access and working area for efficient operation by the Contractor. Where easement space for efficient operation is not provided, the Contractor shall be responsible for organizing his operations to perform within the restrictions shown on the Plans. The Owner shall make available to the Contractor a copy of the construction easements.

1-2.18 UNDERGROUND CONDUIT CONSTRUCTED IN TUNNEL

A. GENERAL

Where shown on the plans or where specifically authorized by the Engineer, pipe lines shall be constructed in tunnel. This work will be made in accordance with requirements of any permits obtained by the Owner from railroads or state or county highway departments for tunnel work or in accordance with the following paragraph.

B. MATERIALS

Pipe materials shall be as shown on the Plans or as described in the Special Provisions.

C. EXCAVATION AND LAYING

Requirements for excavation and laying and for joints shall be those applicable for the type of pipe line involved, unless otherwise specified.

Before starting excavations for tunnel shafts or jacking or augering pits, the Contractor shall submit drawings of proposed sheeting and bracing arrangements which have been prepared, signed and sealed by a structural Engineer registered in the State of Illinois for Work in Illinois and by a structural Engineer registered in the State of Indiana for Work in Indiana.

An adequate ventilation system shall be provided to properly ventilate all parts of the tunnel.

D. METHODS OF CONSTRUCTION

1. The tunnel shall be only of sufficient width and height to provide free working space. The sides and roof of the tunnel shall be braced sufficiently to support the external loads and to prevent caving, bulging, and settlement of the earth.

2. The Contractor shall backfill all tunnels with well compacted sand, fine gravel or stone screenings as rapidly as the conditions permit.

3. The backfill material shall be deposited in the tunnel in such a manner as not to injure or disturb the pipe. The filling of the tunnel shall be carried on simultaneously on both sides of the pipe in such a manner that injurious side pressures do not occur. Special care shall be taken to compact the backfill under the haunches of the pipe. The remainder of the tunnel, or such portion of the remainder as may be possible, shall then be backfilled by one of the following methods, at the option of the Contractor.

    a. The material shall be deposited in uniform layers not to exceed twelve inches (12") thick (loose measure) and such layer either inundated or deposited in water.

b. The tunnel shall be backfilled with loose material or only partly backfilled at a time, if necessary, and settlement secured in either case by introducing water through holes jetted into the material to a point approximately two feet (2') above the top of the pipe.

4. If neither of the above methods is practicable or can be used for only a portion of the backfill, the remainder of the tunnel shall be completely backfilled with material carefully deposited in uniform layers and each layer compacted by ramming or tamping with appropriate tools.

5. When sheeting and bracing have been used, sufficient bracing shall be left across the trench as the backfilling progresses to hold the sides and top firmly in place without caving or settlement before the backfilling has been placed. This bracing may be removed as soon as practicable.

6. Any depressions which may develop within the area involved in the construction operations due to settlement of the backfilling material shall be filled.

E. USE OF CASING PIPE

The Contractor may use metal casing pipe as a tunnel liner in place of timber shoring for tunnel sections. The design data for such pipe, including, but not necessarily limited to, the diameter, gauge, type of pipe, method of placing and installation will be submitted for the owner's review. The void space between tunnel liners or casing pipe and the carrier pipe shall be filled with compacted sand or other approved material.

F. JACKING OR BORING OF PIPE

The Contractor may, subject to the approval of the Owner, use special cast iron or specially designed reinforced concrete jacking pipe jacked and/or bored into position with or without tunnel liners, for tunneled sections pipe.

G. MEASUREMENT AND PAYMENT

Underground conduit constructed in tunnel will be paid for at the unit prices Bid for "Underground Conduit Constructed in Tunnel" for the various type and sizes for the actual length of tunnel Work. Payment shall include all labor, materials and equipment necessary to construct the conduit and tunnel, complete in place, including excavation and backfill, shoring and bracing, furnishing and laying casing pipe where required and carrier pipe, and all other Work necessary for a complete installation.

1-2-19 SANITARY SEWERS

A. GENERAL

The methods of excavating and backfilling sanitary sewer pipe shall be in compliance with the latest edition of the Illinois Department of Transportation, "Standard Specifications for Road and Bridge Construction", and the Metropolitan Water Reclamation District of Greater Chicago, "Manual of Procedure", latest revision. Where there is a conflict of these specifications, the MWRDGC, "Manual of Procedure" shall be used.

B. MATERIAL

Pipe material shall be as shown on the Plans or as described in the Special Provisions. No substitution of material shall be made without written approval from the Owner.

C. EXCAVATION AND BEDDING

The trench shall be excavated to an elevation to allow for the following bedding.

Bedding, other than concrete embedment, shall consist of gravel, crushed gravel, crushed stone or crushed slag, 1/4" to 1" in size. As a minimum, the material shall conform to the requirements of Article 1004.01 of the State Specifications or ASTM Designation C-33. The gradation shall conform to Section 1004, gradation CA 11 or CA 13 or to ASTM Gradation No. 67. The pipe shall be laid so that it will be uniformly supported and the entire length of the pipe barrel will have full bearing. No blocking of any kind shall be used to adjust the pipe to grade except when used with embedment concrete. Bedding shall be required for all sewer construction, except ductile iron pipe, and shall be of a thickness equal to 1/4 of the outside diameter of the sewer pipe with a maximum thickness of eight inches (8") but shall not be less than four inches (4").

Where unsuitable material is encountered at the grade established, all such unsuitable soil shall be removed under the pipe and for the width of the trench, and shall be replaced with well compacted bedding material, to the satisfaction of the Engineer.

Where rock is encountered, it shall be removed below grade and replaced with a cushion of well compacted bedding material having a thickness under the pipe of not less than eight inches (8").

The cost of furnishing, placing and compacting bedding material will be considered as incidental work and no additional compensation will be allowed.

D. BACKFILLING

The backfilling of the sanitary sewer pipe trench shall be the same as for storm sewer pipe described in Section 550.07 of the Standard Specifications.

E. ***METHOD OF MEASUREMENT***

The method of measurement shall be the same as for storm sewer pipe described in Section 550.09 of the Standard Specifications except measurements will be made to the center of manholes.

F. ***BASIS OF PAYMENT***

This work will be paid for at the Contract unit price per foot for "Sanitary Sewer" of the type and diameter specified and measured as specified.

"Trench Backfill", when specified, will be measured and paid for at the Contract unit price per foot unless otherwise stated in the Special Provisions or contract documents.

1-2.20 WATER MAINS

A. ***GENERAL***

The method of excavating and backfilling water mains shall be in compliance with the latest edition of the Illinois Department of Transportation, "Standard Specifications for Road and Bridge Construction," and those below.

B. ***MATERIAL***

Pipe material shall be as shown on the Plans or as described in the Special Provisions. No substitution of material shall be made without written approval of the Owner.

C. ***EXCAVATION AND BEDDING***

The trench shall be excavated to an elevation to allow the minimum cover over the pipe as called for on the plans. Provision must be made by the Contractor to allow for any future cuts to be made to the ground over the pipe to assure that the minimum cover is maintained.

Bedding as described in Section 1-2.21C for sanitary sewers shall be required for all water mains, except ductile iron pipe that requires no bedding. The method of bedding for unsuitable material and where rock is encountered shall also comply with the conditions of that Section.

The cost of furnishing, placing and compacting bedding material will be considered as incidental work and no additional compensation will be allowed.

D. ***BACKFILLING***

The backfilling of the water main pipe shall be the same as for storm sewer pipe as described in Section 550.07 of the Standard Specifications except that the moist fine aggregate backfill to the elevation of the center of the pipe will not be required for ductile iron pipe. For PVC or any other type of pipe, the moist fine aggregate shall be

brought to a level 12" above the top of the pipe and it shall be compacted as described in that Section.

E. ***METHOD OF MEASUREMENT***

"Water main" pipe of the different types and diameters will be measured by the lineal foot in place.

Unless they are listed as separate Bid items, the water main item shall include all fittings required and all other material, except trench backfill within the specified trench.

F. ***BASIS OF PAYMENT***

This work will be paid for at the Contract unit price per lineal foot for "Water main" of the type and diameter specified and measured as specified.

"Trench Backfill", when specified, will be measured and paid for at the Contract unit price per foot, unless otherwise specified in the special provisions or contract documents.

SECTION 2. RESTORATION OF SURFACES

2-1 GENERAL

Restoration of surfaces shall include the removal of the existing surface, the disposal of surplus material, and the construction of new surfaces as indicated on the plans or Special Provisions. The type of surface restoration required shall be shown on the Plans or described in the Special Provisions.

2-2 CONSTRUCTION DETAILS

2-2.01 TEMPORARY SURFACE OVER TRENCH

Wherever conduits are constructed under traveled roadways, driveways, sidewalks, or other traveled surfaces, a temporary surface shall be placed over the top of the trench as soon as possible after compaction, as specified above, has been satisfactorily completed. The temporary surface shall consist of a minimum of six inches (6") of coarse aggregate conforming to the current specifications of the State Specifications for Grade No. CA-9 or CA-10. The top of the temporary surface shall be smooth and meet the grade of the adjacent undisturbed surface. The temporary surface shall be maintained at the Contractor's expense until final restoration of the street surface is completed, unless specific items for temporary aggregate is specified. No permanent restoration of street surface shall be initiated until authorized by the Engineer.

2-2.02 REMOVAL OF PAVEMENT, SIDEWALK, DRIVEWAY AND CURB

Wherever the pipe is located along or across an improved surface, the width of the trench shall be held as nearly as possible to the maximum width specified in Section 1-2.02. Where brick or concrete pavement, sidewalk, driveway or curbing is cut, the width of the cut shall exceed the actual width of the top of the trench by twelve inches (12") on each side or a total of two feet (2'). Exposed surfaces of portland cement or asphaltic concrete shall be cut with a pavement saw before breaking. Care shall be taken in cutting to insure that a straight joint is sawed.

2-2.03 REPLACEMENT OF PERMANENT TYPE PAVEMENT, SIDEWALKS, DRIVEWAYS, CURBS, GUTTERS AND STRUCTURES.

The Contractor shall restore (unless otherwise specified or ordered by the Engineer) all permanent type pavements, sidewalks, driveways, curbs, gutters, shrubbery, fences, poles and other property and surface structures removed or disturbed during or as a result of construction operations to a condition which is equal in appearance and quality to the condition that existed before the Work began. The surface of all improvements shall be constructed of the same material and match in appearance the surface of the improvement which was removed. Where trench backfill is used, the restoration shall be made as soon as possible after jetting of the backfill has been completed.

2-2.04 REPLACING EXISTING TEMPORARY STREET AND ALLEY SURFACES

A. GENERAL

For the purpose of this specification, all existing street and alley surfaces shall be considered temporary except:

(1) concrete or brick pavements; (2) an asphaltic concrete or a bituminous treated surface over a soil cement, concrete, crushed stone or selected gravel base. Specifically included as temporary street surfaces, shall be compacted earth, cinders, shale, mixtures of gravel and earth or crushed stone and earth, whether or not these respective materials are further stabilized by road oil or bituminous surface treatment. This work should not be confused with Temporary Surface Over Trench as specified in Section 2-2.01.

Where conduits are constructed under temporary street or alley surfaces, or where such surfaces are used for the placement of backfill material or are disturbed by construction operations, the Contractor shall reconstruct, by grading and shaping, the entire width of roadway, and any drainage facilities which may have existed, to the original condition at the Contractor's expense, including that portion within the specified trench width where removal and restoration is paid for under a separate payment item.

Where, in the opinion of the Engineer, the conduit is located in the traveled portion of the temporary street or alley traveled surface, a new temporary surface shall be constructed over the trench, as specified in Section 2-2.01 of this Division. After this surface has been placed, it shall be maintained by the Contractor until final restoration is authorized. Just prior to final restoration, the entire width of the street to be restored shall be scarified. For final surface restoration, the Contractor shall apply a bituminous treatment to the entire width of the traveled surface, as ordered by the Engineer. The bituminous treatment shall consist of the application of a bituminous prime coat and a bituminous surface treatment corresponding to the materials and construction methods described in the State Specifications for bituminous surface treatment, Class A-1, A-2, or A-3 as specified, or shown in the bid items.

The Engineer reserves the right to order the omission of Bituminous Surface Treatment in any locations where such omission may be, in his opinion, in the public interest.

B. MEASUREMENT

Measurement for purposes of payment shall be computed by using the actual length and width of surface to which treatment is applied, in accordance with these Specifications.

C. PAYMENT

The cost of final restoration of the surface shall be paid for at the contract unit price per foot, unless so stated in the Special Provisions or for all State of Illinois projects, for "Bituminous Surface Treatment", of the type specified. Such price shall include the cost of all labor and materials necessary to provide the bituminous treatment as specified.

2-2.05 DISPOSAL OF SURPLUS EXCAVATED MATERIAL

Surplus excavated material not needed for backfill shall be promptly removed from the site to locations provided by the Contractor. The cost of removal and disposal of surplus excavated materials will be included in the respective unit prices for pipeline or conduit construction and no additional payment will be allowed therefor.

2-2.06 CLEANING UP

All surplus materials and all tools and temporary structures shall be removed from the site by the Contractor. All dirt, rubbish and excess earth from the excavation shall be hauled to a dump provided by the Contractor and the construction site left clean and acceptable to the Owner at the earliest possible date.

SECTION 3. FINISHING AND CLEAN UP FOR UNDERGROUND CONDUITS

3-1 CLEAN UP

Before acceptance of underground conduits construction, all pipes, manholes, catch basins, fire hydrants and other appurtenances shall be cleaned of all debris and foreign material.

After all backfill has been completed, the ground surface shall be shaped to conform to the contour of adjacent surfaces. General clean up of the entire construction area shall otherwise conform to applicable requirements specified.

SPECIAL PROVISIONS

VILLAGE OF TINLEY PARK
183RD STREET RESURFACING- HARLEM AVENUE TO OAK PARK AVENUE
SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction", adopted April 1, 2016; the latest editions of the "Supplemental Specifications and Interim Special Provisions" and the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways"; the "Manual of Test Procedures for Materials" in effect on the date of the invitation for bids; the Division I General Requirements and Covenants; and the Division II Technical Specifications which apply to and govern the proposed improvement in Cook County, and in case of conflict with any part, or parts, of said specifications, the said Special Provisions shall take precedence and shall govern.

However, in all cases, the Division I General Requirements and Covenants of the specifications shall take precedence over the Division 100 General Requirements and Covenants of the Standard Specifications for Road and Bridge Construction and shall govem.

SCOPE OF WORK

This project consists of hot-mix asphalt grinding and resurfacing, curb and gutter removal and replacement, driveway removal and replacement, drainage structure adjustments/reconstructions, detector loop replacement aggregate shoulders, patching and pavement striping on the 183rd Street from Harlem Avenue to Oak Park Avenue.

The Contractor shall perform curb and gutter, sidewalk, and driveway removal/replacement repairs and patching at those locations directed by the Engineer. All drainage structures shall be adjusted and patching completed prior to the resurfacing, but after milling, as directed by the Engineer.

COMPLETION DATE

The contractor is advised that all paving work shall be completed on or before October 1, 2018, all striping work shall be completed by October 15, 2018, all restoration work shall be completed by November 1, 2018, all punch list work (non- landscaping related) by November 1, 2018, all punch list work (landscaping related) by November 15, 2018. Should the contractor fail to comply with the listed dates, the provisions of Section 108.09 shall be applied.

FUNDING LIMITS

The quantities called for in this contract indicate the approximate amount of work to be expected. The actual amounts for the various items may vary depending upon actual field conditions. The Village reserves the right to reduce or increase the scope of project quantities and to delete entire line items. It shall be understood and agreed upon that the unit prices for these items shall prevail throughout the period of the contract and that no additional compensation per unit price or otherwise will be allowed for any increase or decrease in the quantities including, but not limited to, decreases due to the deletion of an entire location/section of the improvement. No increase in unit price will be allowed if method of construction changes due to decreased quantity.

BASIS OF AWARD

The Village will award either Option 1 or Option 2 at their sole discretion. All contractors are required to submit costs for both options with their bid. If a bid contains pricing for only one Option it will be considered non-compliant and may be grounds for bid rejection.

PREQUALIFICATION

The Contractor shall be IDOT prequalified for roadway. A copy of the current IDOT Prequalification shall be presented at the time of bid document pick up. If this information is not supplied or on file, the bid documents shall be withheld.

PREFERENCE TO VETERANS

Attention is called to assure compliance with Illinois Compiled Statutes Veteran's Preference Act 330 ILCS 55/. "In the employment and appointment to fill positions in the construction, addition to, or alteration of all public works undertaken or contracted for by the state, or by any political subdivision thereof, preference shall be given to persons who have been members of the armed forces or allies of armed forces of allies of the United States in time of hostilities with a foreign country..."

WAGE RATES

This contract calls for the construction of a "public work," within the meaning of the Illinois Prevailing Wage Act, 820 ILCS 130/.01 *et seq.* ("the Act"). The Act requires contractors and subcontractors to pay laborers, workers and mechanics performing services on public works projects no less than the "prevailing rate of wages" (hourly cash wages plus fringe benefits) in the county where the work is performed. For information regarding current prevailing wage rates, please refer to the Illinois Department of Labor's website at: http://www.state.il.us/agency/idol/rates/rates.HTM. All contractors and subcontractors rendering services under this contract must comply with all requirements of the Act, *including but not limited to*, all wage, notice and record keeping duties.

MATERIAL INSPECTION – REPORTS

All materials incorporated in this contract are to be inspected according to the Project Procedures Guidelines (PPG) and the process and frequency of testing under the QC/QA specifications.

The Contractor shall be responsible for QC testing of these materials with the Engineer being notified at least forty-eight (48) hours in advance of the placement of any of these materials. The Local Agency shall be responsible for the QA testing of these materials on the job and at the plant per article 1030 of the Standard Specifications. Please note that the Contractor is required to submit a QC plan to the Engineer for approval per the referenced specifications.

All concrete materials incorporated in this contract are to be inspected according to the Recurring Special Provision, "Quality Control/Quality Assurance of Concrete Mixtures". Please note that the Contractor is required to submit a QC plan to the Engineer for approval per the referenced specifications.

The contractor shall coordinate his work operations with the engineer to assure that the testing agencies can provide proper and sufficient notice to schedule their work. Also, all QC documentation is to be submitted to the Engineer, immediately following completion of this project. Five percent (5%) of the final contract amount

due the Contractor will be withheld pending receipt of all documentation and approval of the Engineer's Final Payment Estimate by the Village.

PUBLIC CONSTRUCTION ACT, 30 ILCS 557/1

Pursuant to the home rule powers of the Village, Public Construction Act 30 ILCS 557/1 shall not be applicable to this contract.

INSURANCE COVERAGE

The Insurance Requirements can be found in Section 7 of the General Requirements "Legal Relations and Responsibility to the Public". The Contractor and any Subcontractors shall obtain and thereafter keep in force for the term of the contract the insurance coverage specified in this section. The Contractor shall not commence work under the Contract until all the insurance required by this section or any Special Provision has been obtained.

Section 7-2.02F Professional Liability WILL NOT be required as part of this project.
Section 7-2.02E Pollution Liability WILL be required as part of this project.

PERMITS

This improvement requires an IDOT permit bond and insurance requirements that are the responsibility of the Contractor to secure. This work will not be paid for but shall be considered incidental to the Contract.

NOTIFICATION COORDINATION

If the Contractor is required to impede access to any driveway/property for any reason during the course of this project, the Contractor shall provide 24 hour advance written notice to the affected properties. The notification shall be of a form and method as approved by the Village of Tinley Park.

GUARANTEE

All materials and equipment shall be guaranteed for a period of one (1) year from the date of written acceptance by the Owner. Upon receipt of notice from the Owner of failure of any part of the improvements during the guarantee period, replacement of the improvements shall be furnished and installed by the Contractor at no additional cost to the Village of Tinley Park.

VIDEO OF CONSTRUCTION ROUTE

Prior to the start of any construction or excavation, the contractor shall video record the existing conditions in the area of the construction route. The video shall be done on standard color DVD. The contractor shall supply the Village or Authorized Representative with two copies of the video prior to starting construction. The video shall include the following:

1. Full right-of-way
2. Parkway condition
3. Pavement condition
4. Curb condition
5. Driveway condition
6. Existing manholes
7. Fire hydrants
8. Fences
9. Trees and landscaped areas

The video recordings shall also supply a continuous audio record of the location (preferably with address), all anticipated problem areas, items, and features for the complete area to be affected by the construction. The video recording shall be made on a DVD or other approved equal, and shall conform to Japan Electronics and Information Technology Industries Association (JEITA) standards. The format of recording and type of media

used shall remain the same throughout the project. When the recorded video information is replayed and reviewed, it shall be free of electrical interference.

The audio portion of the composite signal shall be sufficiently free of electrical interference, background noise, and heavy foreign or regional accents to provide an oral report that is clear and complete and easily discernible. The audio portion of the video report shall be recorded by the operating technician on the video as they are being produced and shall include references to the street address and type of construction to be performed at the site as specified in the plans. Audio comments pertaining to special circumstances, which may arise during the excavation, shall also be included. Dubbing the audio information onto the video tract after the video is completed will not be permitted.

Video recordings shall be enclosed in vinyl plastic containers, which shall clearly indicate the date the video was taken, the designated section(s) of construction contained on the tape, and the label "VILLAGE OF TINLEY PARK 183RD STREET RESURFACING- HARLEM AVENUE TO OAK PARK AVENUE (Project #18-R0455)." One (1) copy of the finished video shall be delivered to the Village or Authorized Representative prior to commencing excavation.

The surface condition of excavated areas after final restoration shall be the same or better than the pre-construction site conditions as shown in the video. The cost of video and log preparation shall not be compensated for separately but shall be considered incidental to the contract.

The surface condition of excavated areas after final restoration shall be the same or better than the pre-construction site conditions as shown in the videotape. The cost of videotaping and log preparation shall not be compensated for separately but shall be considered incidental to the contract.

MAINTENANCE OF ROADWAYS, ALLEYS, AND DRIVEWAYS

Beginning on the date that the Contractor begins work on this project, he shall assume responsibility for the normal maintenance of all existing roadways, alleys, and driveways within the limits of the improvement. This normal maintenance shall include all repair work deemed necessary by the Engineer but shall not include snow removal operations. Traffic control and protection for this work shall be provided by the Contractor.

Access to driveways and alleys shall be maintained at all times by means of placing temporary aggregate. All driveways and curb and gutter removed shall be replaced within five (5) days of removal. Temporary aggregate will be required to allow residents access for all driveways and alleys that are determined to be removed and replaced. The temporary aggregate used to maintain alleys, and driveways shall not be paid separately nut shall be incidental to the various removal items.

COORDINATION/SCHEDULING OF WORK

The Contractor shall be advised that the work of all subcontractors will be coordinated by the General Contractor and not by the Village or their authorized representative.

All equipment parking and work in general must be coordinated with the Village event schedule.

All equipment must be removed off the Village streets during all holiday weekends at the request of the Village.

Work hours will be 7AM to 7PM Monday through Friday. Weekend/Holiday work hours as approved by the Village. No work including the start up of machinery can occur outside of these hours.

Priming/tacking of the streets must be done on the day of paving.

Prior to HMA surface removal, all curb removal and replacement and curb slot restoration must be completed.

Milling operations cannot be more than ten days ahead of any paving operation unless granted special permission by the Village and their authorized representative.

Street sweeping will be required after grinding operations, within 24 hours before paving.

Any irrigation systems, brick pavers, decorative rock, special corner landscaping, mailboxes, etc., within the ROW disturbed during construction will be the Contractors responsibility to repair and shall be included in the unit price for the various removal items.

Contractor is expected to inspect all locations before beginning work and have all material on hand to complete the project. No compensation will be had for inadequate inventory, shipping, trucking or re-stocking of materials.

Stockpiling of material and end of day clean up- Stockpiles shall not impede traffic, parking or access at any time. Any areas disturbed by stockpiles shall be restored to existing conditions and shall be considered incidental to the contract.

At the end of each working day, the contractor shall provide a steel plate, barricades, warning tape and any other safety measures deemed necessary by the Village/Engineer over the excavated area so that traffic, parking or access is not impeded during non-working hours. Access to the property shall be maintained at all times. Placement of temporary aggregate in the roadway and in driveway areas disturbed by the construction shall be used until final conditions are met. Street clean up and sweeping is also required at the end of each working day. The cost for materials and traffic control items necessary to meet these requirements shall be considered incidental to the contract.

All water use shall be coordinated with the Village and be in compliance with their rules and regulations.

PUBLIC UTILITIES

There are existing underground and above ground public and private, municipal and non-municipal utilities at the site, such as, but not necessarily limited to electrical and telephone cables including fiber-optic facilities, natural gas pipes, sewers, and water main, etc. All due notifications, vertical/horizontal separations, and other safety precautions required by the owners/operators of the facilities being crossed shall be observed by the contractor and/or all sub-contractors at all times. Any damage caused by the construction to any of the existing facilities on-site shall be promptly repaired to the satisfaction of the owners/operators of the facility involved, at no additional compensation.

It shall be the contractor's responsibility to very carefully inspect the site, identify and locate both horizontally and vertically all existing facilities, contact their owner/operators for their notification, separation, and safety requirements, and follow such requirements very carefully. It shall be the Contractor's responsibility to notify J.U.L.I.E. at least 48 hours prior to excavation to verify locations of all utilities.

The contractor shall protect and save harmless the Village of Tinley Park and Robinson Engineering, Ltd from any claim(s) of damage resulting from his/her activities at the site or from failing to undertake due and proper safety measures to avoid such damage to any utilities during the construction.

The contractor shall repair any damage to any of the utilities, caused by his/her work, to the satisfaction of the involved utility and the Village of Tinley Park at no additional compensation. The cost of compliance with this provision shall be considered incidental to the contract and will not be compensated for separately.

TRAFFIC CONTROL PLAN
Effective: September 30, 1985
Revised : January 1, 2007

Traffic Control shall be in accordance with the applicable sections of the Standard Specifications, the Supplemental Specifications, and the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways", any special details and Highway Standards contained in the plans and the Special Provisions contained herein.

Special attention is called to Article 107.09 of the Standard Specifications and the following Highway Standards, Details, Quality Standard for Work Zone Traffic Control Devices, Recurring Special Provisions and Special Provisions contained herein, relating to traffic control.

The Contractor shall contact the Resident Engineering Representative at least 72 hours in advance of beginning work.

STANDARDS: 701427-05, 701606-10, 701611-01, 701701-10, 701901-07

DISTRICT ONE DETAILS: TC-10, TC-16, TC-22

SPECIAL PROVISIONS: Traffic Control Plan, Maintenance of Roadways, Alleys and Driveways

The Contractor shall not remove any traffic control or safety devices until the entire job is complete. The Contractor shall obtain, erect, maintain and remove all signs, barricades, flagmen and other traffic control devices as may be necessary for the purpose of regulating, warning or guiding traffic. Placement and maintenance of all traffic control devices shall be in accordance with the applicable parts of Article 107.14 of the Standard Specifications and the Illinois Manual on Uniform Traffic Control Devices for Streets and Highways and the attached special provisions. The Contractor is solely responsible for ensuring all traffic control devices are installed and maintained in accordance with applicable state standards.

Work Zone Traffic Control will not be paid for separately but will be considered incidental to the contract.

The Contractor is hereby advised that notification to all affected residents is his responsibility including the placement of No Parking signs at least 48 hours prior to paving operations. In addition, signage indicating road conditions such as "Bump, "Rough Surface", "Fresh Oil", Dip", etc., as requested by the Village will also be required at no additional expense.

SAW CUT JOINTS
The removal and/or replacement of any driveways, pavement, curb, sidewalk, etc. shall be accomplished by means of a saw cut joint, at the direction of the Engineer. This work will not be paid for separately but shall be included in the unit price bid for the various removal items.

QUANTITIES FOR PAVEMENT PATCHING

The quantities called for in this contract indicate the approximate amount of patching work to be expected. The actual amounts for the various patching items shall be as marked out by the engineer in the field. It shall be understood and agreed upon that the unit price for these items shall prevail throughout the period of the contract and that no additional compensation per unit price will be allowed for any increase or decrease in the patching quantity.

PATCHING LIMITATIONS

It is hereby understood and agreed that no pavement patching will be permitted after Friday at 3:00 PM of each and every week and no holes will be allowed to remain open overnight or over the weekend.

CLASS B PATCHES, TYPE IV, 10 INCH

This work shall be in accordance with Section 442 of the Standard Specifications and the Class A and B Patches (BDE) except as modified herein. All required tie bars, dowel bars, deformed bars and expansion joints shall be included in the cost of this item. This work shall be paid for at the contract unit price per SQ YD for CLASS B PATCHES, TYPE IV, 10 INCH.

AGGREGATE SHOULDERS, TYPE B

This work shall consist of removal and replacement of the existing aggregate shoulder section in accordance with the applicable sections of Article 481 of the Standard Specifications at locations as directed by the Engineer in the field. The aggregate shoulder shall be placed three inches (3") in depth and two feet (2') in width. Any removal of material or earth excavation necessary to place the three inch (3") aggregate shoulder shall be included in the cost of this item. This work shall be paid for at the contract unit price per TON for AGGREGATE SHOULDERS, TYPE B.

COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24

This item shall consist of the replacement of combination concrete curb and gutter, in accordance with Sections 606 and 440 of the Standard Specifications at locations as designated by the Engineer.

If sod cannot be placed behind the curbs once the curb is poured and cured because it is outside the planting limitations approved by IDOT, topsoil must be placed in these gaps within 14 days of the curb being poured. If this topsoil is not placed the Contractor will be charged $500 per day after day 14 in liquidated damages. In addition, if the Village has to undertake this work, the Contractor will be responsible for the cost to the Village to procure the work and this amount will be withheld from any amount due the Contractor by the Village. Topsoil will be paid for at the contract price for TOPSOIL, FURNISH AND PLACE, 4" (SPECIAL).

The abutting street in front of the curb and all driveways, carriage walks and sidewalks behind the curb shall be restored to their original condition with like material. The surfaces shall be removed by full depth sawed joints and one-half inch (1/2") preformed joint filler shall be used between new concrete and existing concrete; where concrete driveways, walks, etc. meet curbs; and between the curb and all steel castings. Where curb and gutter is removed at driveway location, access to the property shall be maintained with temporary aggregate. When replacing curb near an inlet, all curbs must be drilled and dowelled using number 6 smooth rods and expansion material.

All existing pavement removed due to the removal and replacement of combination concrete curb and gutter or concrete curb shall be replaced in two layers with a patch consisting of Hot-Mix Binder Surface Course, Mix D, N70 not less than ten-inches (10") below the existing surface elevation at a minimum width of one foot wide. Saw cutting shall be required as directed by the Engineer to secure a straight joint and shall be paid for in the curb removal item. Concrete will not be allowed to fill in the gap between the new curb and existing pavement. The replacement of the pavement shall be paid for in the respective Class D patch items. The material, any temporary aggregate, rods, required expansion material and any labor and incidentals for a complete job shall be paid for at the contract unit price bid per FOOT of COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24.

RUBBER ADJUSTING RINGS

This work shall consist of the adjustment and/or reconstruction of drainage and utility structures at those locations as directed by the engineer in the field using rubber fibrepolyurethane prepolymer composite adjusting rings as approved by the Engineer. This pay item reflects the cost of the material only. Installation shall be included in the pay item for the DRAINAGE AND UTILITY STRUCTURES TO BE ADJUSTED. Tapered adjusting rings shall be used where necessary to match the profile of the pavement. In order to minimize the number of rings used, thicker rings shall be used where practical (i.e. one 3-inch ring rather than 3 one-inch rings). The Contractor shall examine all adjustments in the field prior to ordering materials.

This work will be paid for at the contract unit price EACH for RUBBER ADJUSTING RINGS.

TOPSOIL FURNISH AND PLACE, 4" (SPECIAL)

This work shall consist of the furnishing and placing of four inches (4") of pulverized topsoil at all areas disturbed by the construction. All work shall be done in accordance with Sections 211 of the Standard Specifications with the exception the timeframe. All topsoil must be placed within 14 days of the curb replacement regardless of the schedule for the sod replacement. If this topsoil is not placed the Contractor will be charged $500 per day after day 14 in liquidated damages. In addition, if the Village has to undertake this work, the Contractor will be responsible for the cost to the Village to procure the work and this amount will be withheld from any amount due the Contractor by the Village.

If, in the opinion of the Engineer, more surface area than necessary has been damaged, it shall be replaced by the Contractor as specified herein without additional compensation. The maximum width for restoration will be three feet (3').

This work, including the topsoil, pulverizing, etc. shall be paid for at the contract unit price per SQUARE YARD for TOPSOIL FURNISH AND PLACE, 4" (SPECIAL).

SODDING, SPECIAL

This work shall consist of preparing the ground surface, fertilizing the areas to be sodded and furnishing and placing the salt tolerant sod. All work shall be in accordance with the applicable portions of Section 252 of the Standard Specifications. **The maximum pay width shall be three (3') feet unless specifically directed otherwise by the engineer.**

180 pounds of fertilizer nutrients per acre shall be applied at a 1:1:1 ratio as follows:

1. Nitrogen Fertilizer Nutrient	60 lb/acre
2. Phosphorus Fertilizer Nutrient	60 lb/acre
3. Potassium Fertilizer Nutrient	60 lb/acre

Watering shall be done as directed by the Engineer, in accordance with Article 252.08 of the Standard Specifications.

This work shall be measured in place and the area calculated in square yards and shall be paid for at the contract unit price per SQUARE YARD for SODDING, SPECIAL, which price shall be full compensation for all labor, equipment, and material needed to complete the work as specified in these Special Provisions.

HOT-MIX ASPHALT DRIVEWAY PAVEMENT, 6"

Where existing asphalt driveways or parkways are to be removed, they shall be removed to a straight sawed joint and restored with an application on the aggregate base of Bituminous Materials (Prime Coat) at a rate of 0.25 pounds per square foot, four inches (4") of Hot-Mix Asphalt Binder Course, IL 19.0, N50, then an application of Bituminous Materials (Tack Coat) at a rate of 0.025 pounds per square foot and a two inches (2") of Hot-Mix Asphalt Surface Course, Mix "D", N50. The replacement width shall be a maximum of three feet (3') unless otherwise directed by the Engineer and done in accordance with Section 440 of the Standard

Specifications. Any material needed below the HMA material due to the depth of the curb removal, shall be brought to the proper depth with Aggregate Base Course, Type B (CA-6) as specified in Section 1004.01 and shall be considered incidental to this pay item.

The cost for Hot-Mix Asphalt Binder and Surface Courses, prime coat, tack coat, and aggregate will be paid for at the contract unit price bid per SQUARE YARD of HOT-MIX ASPHALT DRIVEWAY PAVEMENT, 6". The cost for saw cutting, any additional excavation, and removal of the existing driveway pavement (regardless of the depth needed to obtain the required thickness) will be paid for at the contract unit price bid per SQUARE YARD of DRIVEWAY PAVEMENT REMOVAL.

Access to all properties shall be maintained throughout the duration of construction by means of temporary aggregate accordance with Articles 107.09 and 402.10 and shall be incidental to the various removal items.

All grassed areas disturbed by the removal and replacement of this item shall be restored in accordance with the TOPSOIL FURNISH AND PLACE, 4" (SPECIAL) and SODDING, SPECIAL specified elsewhere in these special provisions and paid for through those items.

DRAINAGE & UTILITY STRUCTURES TO BE ADJUSTED OR RECONSTRUCTED

This work shall consist of the adjustment and/or reconstruction of drainage and utility structures at those locations as indicated in the plans or as directed by the engineer in the field.

This work shall also include the adjustment of drainage and utility structures in HMA pavement at locations where the existing surface of the pavement is to be lowered to an elevation resulting in the existing structure being too high. Under this item the Contractor shall remove the existing frames and rings as required, plate the structure and backfill with HMA binder course to a level even with the existing pavement. After all HMA surface has been removed, the existing pavement shall be removed at the structure and frame adjusted prior to placing the surface course.

The General Contractor shall be responsible for coordinating this work with the subcontractor, not the Village or their authorized representative. This work shall be completed in accordance with the applicable portions of Section 602 of the Standard Specifications. ***All adjustments shall be made with rubber adjustment rings unless otherwise directed by the Engineer. The cost for the rubber adjustment rings will be paid for separately and shall not be included in the cost of the structure adjustment. It is anticipated that one (1) structure will require steel adjusting rings as noted on the plans per Article 603 of the Standard Specifications. Any steel adjusting rings shall not be paid for separately but shall be considered included in the cost of DRAINAGE & UTILITY STRUCTURES TO BE ADJUSTED.***

Concrete will not be allowed to fill the gap between the structure and the existing pavement. A full depth patch will be required for adjustments not within the curb and will be paid for at the Class D patch unit price. This work will be paid for at the contract unit price EACH for DRAINAGE & UTILITY STRUCTURES TO BE ADJUSTED and for DRAINAGE & UTILITY STRUCTURES TO BE RECONSTRUCTED.

CLEAN CONSTRUCTION OR DEMOLITION DEBRIS (CCDD) REQUIREMENTS PER 35 IAC 1100

If the Contractor is planning on disposing of uncontaminated soils at an Illinois Environmental Protection Agency (IEPA) permitted CCDD facility, the work shall be conducted in accordance with the criteria set forth in 35 Illinois Administrative Code (IAC) 1100 as amended on August 27, 2012. The following protocol must be followed:

1. The Contractor must identify in writing the name / location of the Contractor's intended CCDD facility to the Owner (or Engineer) prior to the commencement of any construction activities.

2. The Owner (or Engineer) will contact the Contractor's CCDD facility to identify the laboratory testing or certifications required for disposal acceptance.

3. The Contractor will assist the Owner (or Engineer) in obtaining the sample(s) through the use of the Contractor's equipment at locations determined by the Owner (or Engineer). The Contractor shall expose soils at one or more distinct locations as directed by the Owner (or Engineer). The Contractor may need to remove pavement, sidewalk or other surface improvements to expose the soil. The Owner (or Engineer) will determine the number, location and depth of the samples that will need to be collected for characterization of the excess soil that will be generated during the construction project.

4. The Owner (or Engineer) will be responsible for the sampling / testing of the soil and preparation of the required certification form.

5. The samples will be run with standard 5 to 7 working day turnaround time unless a rush is required by the Contractor. If so, the Contractor will be responsible for additional fees associates with fast-tracking the samples.

6. Once the appropriate certifications have been prepared, the Contractor will be responsible for all hauling/disposal of material at the CCDD facility.

The work contained within this special provision shall be considered incidental to the contract.

The owner will test for the following: VOC's, SVOC's, Pesticides, RCRA 8 total metals and pH. If the Contractor elects to utilize a CCDD facility that requires the full MAC list, the Contractor will be responsible for paying all sampling costs above $1,000.00.

If any contaminated soil is encountered that requires landfill disposal as a non-special waste, special waste or hazardous waste, it will be paid for per Article 109.04 of the Standard Specifications.

VILLAGE OF TINLEY PARK LOCAL VENDOR PURCHASING POLICY

The Village of Tinley Park believes it is important to provide local vendors with opportunities to provide goods and services to the Village of Tinley Park. This belief is based upon the fact that the active uses of commercial properties in Tinley Park benefits the community through stabilization of property tax, the creation of local sales tax and the provision of employment opportunities for citizens of the community and surrounding region. In an effort to promote the aforementioned benefits, the Village of Tinley Park wishes to provide local vendors with preferential treatment when competing for contracts with the Village. A local vendor is defined as a business that has an actual business location within the Village of Tinley Park and is licensed by the Village. The Village will not award a contract to a local vendor when the difference between the local vendors bid and the otherwise lowest responsive and responsible bid exceeds the applicable percentage indicated as follows. As such, when considering contracts, the Village of Tinley Park reserves the right to forego the lowest responsive and responsible bid exceeds the applicable percentage indicated as follows. As such, when considering contracts, the Village of Tinley Park reserves the right to forego the lowest responsive and responsible bid in favor of a local vendor under the following circumstances:

Contract Value	Range (up to a maximum of)
$0 to $250,000	5%
$250,000 to $500,000	4%
$500,000 to $750,000	3%
$750,000 to $1,000,000	2%
$1,000,000 to $2,000,000	1%

Under no circumstances will any contract be awarded to a local vendor when the local vendor's bid exceeds the lowest responsive and responsible bid by $25,000 or more.

This policy shall ONLY apply if formal notice of the aforementioned criteria is provided as part of the bid specifications. In addition, it should be noted that the Village of Tinley Park shall not be obligated to forego the low bidder in favor of the local vendor under any circumstances. However, this policy simply provides the Village with the option of doing so when applicable. Furthermore, this policy shall not apply in any situation where any portion of the contract amount is being paid with funds other than Village monies. Specifically, this policy shall not apply in any situation where the Village has received a grant or otherwise received a source of funds other than its own funds.

RESPONSIBLE BIDDER

For any construction project undertaken by the Village to which the Illinois Prevailing Wage Act, 820 ILCS 130/0.01 et seq. is applicable, in order to be considered a "responsible bidder" on Village Public Works Projects, a bidder must comply with the following criteria, and submit acceptable evidence of such compliance, in addition to any other requirements as determined from time to time by the Village for the specific type of work to be performed:

(a) Compliance with all applicable laws and Village Codes and Ordinances prerequisite to doing business in Illinois and in the Village;

(b) Compliance with:

a. Submittal of Federal Employer Tax Identification Number or Social Security Number (for individual), and

b. Provisions of Section 2000e of Chapter 21, Title 42 of the United States Code and Federal Executive Order No. 11246 as amended by Federal Executive Order No. 11375 (known as the Equal Employment Opportunity Provisions);

(c) Furnishing certificates of insurance indicating at least the following coverages at minimum limits established by the Village: general liability, workers' compensation, completed operations, automobile, hazardous occupation, product liability, and professional liability;

(d) Compliance with all provisions of the Illinois Prevailing Wage Act, including wages, medical and hospitalization insurance and retirement for those trades covered by the Act;

(e) Participation in apprenticeship and training programs approved by and registered with the United States Department of Labor's Bureau of Apprenticeship and Training;

(f) Compliance with the applicable provisions of the Illinois Human Rights Act and the rules of the Illinois Human Rights Commission, including the adoption of a written sexual harassment policy;

(g) Furnishing of required performance and payment bonds;

(h) Furnishing certification of no delinquency in the payment of any tax administered by the Illinois Department of Revenue;

(i) Furnishing certification that the bidder is not barred from bidding or contracting as a result of a violation of either Section 33E or 33E-4 of Chapter 720, Article 5 of the Illinois Compiled Statutes; and

(j) Furnishing evidence that the bidder has not only the financial responsibility but also the ability to respond to the needs of the Village by the discharge of the contractor's obligations in accordance with what is expected or demanded under the terms of the contract.

DRAINAGE AND INLET PROTECTION UNDER TRAFFIC (DISTRICT 1)

Effective: April 1, 2011
Revised: April 2, 2011

Add the following to Article 603.02 of the Standard Specifications:

"(i) Temporary Hot-Mix Asphalt (HMA) Ramp (Note 1) 1030
(j) Temporary Rubber Ramps (Note 2)

Note 1. The HMA shall have maximum aggregate size of 3/8 in. (95 mm).

Note 2. The rubber material shall be according to the following.

Property	Test Method	Requirement
Durometer Hardness, Shore A	ASTM D 2240	75 ±15
Tensile Strength, psi (kPa)	ASTM D 412	300 (2000) min
Elongation, percent	ASTM D 412	90 min
Specific Gravity	ASTM D 792	1.0 - 1.3
Brittleness, °F (°C)	ASTM D 746	-40 (-40)"

Revise Article 603.07 of the Standard Specifications to read:

"**603.07 Protection Under Traffic.** After the casting has been adjusted and the Class PP concrete has been placed, the work shall be protected by a barricade and two lights according to Article 701.17(e)(3)b.

When castings are under traffic before the final surfacing operation has been started, properly sized temporary ramps shall be placed around the drainage and/or utility castings according to the following methods.

(a) Temporary Asphalt Ramps. Temporary hot-mix asphalt ramps shall be placed around the casting, flush with its surface and decreasing to a featheredge in a distance of 2 ft (600 mm) around the entire surface of the casting.

(b) Temporary Rubber Ramps. Temporary rubber ramps shall only be used on roadways with permanent posted speeds of 40 mph or less and when the height of the casting to be protected meets the proper sizing requirements for the rubber ramps as shown below.

Dimension	Requirement
Inside Opening	Outside dimensions of casting + 1 in. (25 mm)

Thickness at inside edge	Height of casting ± 1/4 in. (6 mm)
Thickness at outside edge	1/4 in. (6 mm) max.
Width, measured from inside opening to outside edge	8 1/2 in. (215 mm) min

Placement shall be according to the manufacturer's specifications.

Temporary ramps for castings shall remain in place until surfacing operations are undertaken within the immediate area of the structure. Prior to placing the surface course, the temporary ramp shall be removed. Excess material shall be disposed of according to Article 202.03."

RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (D-1)

Effective: November 1, 2012
Revise: January 1, 2018

Revise Section 1031 of the Standard Specifications to read:

"SECTION 1031. RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES

1031.01 Description. Reclaimed asphalt pavement and reclaimed asphalt shingles shall be according to the following.

(a) Reclaimed Asphalt Pavement (RAP). RAP is the material resulting from cold milling or crushing an existing hot-mix asphalt (HMA) pavement. RAP will be considered processed FRAP after completion of both crushing and screening to size. The Contractor shall supply written documentation that the RAP originated from routes or airfields under federal, state, or local agency jurisdiction.

(b) Reclaimed Asphalt Shingles (RAS). Reclaimed asphalt shingles (RAS). RAS is from the processing and grinding of preconsumer or post-consumer shingles. RAS shall be a clean and uniform material with a maximum of 0.5 percent unacceptable material, as defined in Central Bureau of Materials Policy Memorandum, "Reclaimed Asphalt Shingle (RAS) Sources", by weight of RAS. All RAS used shall come from a Central Bureau of Materials approved processing facility where it shall be ground and processed to 100 percent passing the 3/8 in. (9.5 mm) sieve and 90 percent passing the #4 (4.75 mm) sieve. RAS shall meet the testing requirements specified herein. In addition, RAS shall meet the following Type 1 or Type 2 requirements.

(1) Type 1. Type 1 RAS shall be processed, preconsumer asphalt shingles salvaged from the manufacture of residential asphalt roofing shingles.

(2) Type 2. Type 2 RAS shall be processed post-consumer shingles only, salvaged from residential, or four unit or less dwellings not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP).

1031.02 Stockpiles. RAP and RAS stockpiles shall be according to the following.

(a) RAP Stockpiles. The Contractor shall construct individual, sealed RAP stockpiles meeting one of the following definitions. Additional processed RAP (FRAP) shall be stockpiled in a separate working pile, as designated in the QC Plan, and only added to the sealed stockpile when test results for the working pile are complete and are found to meet tolerances specified herein for the original sealed FRAP stockpile. Stockpiles shall be sufficiently separated to prevent intermingling at the base. All stockpiles (including unprocessed RAP and FRAP) shall be identified by signs indicating the type as listed below (i.e. "Non- Quality, FRAP -#4 or Type 2 RAS", etc...).

(1) Fractionated RAP (FRAP). FRAP shall consist of RAP from Class I, HMA (High and Low ESAL) or equivalent mixtures. The coarse aggregate in FRAP shall be crushed aggregate and may represent more than one aggregate type and/or quality, but shall be at least C quality. All FRAP shall be processed prior to testing and sized into fractions with the separation occurring on or between the #4 (4.75 mm) and 1/2 in. (12.5 mm) sieves. Agglomerations shall be minimized such that 100 percent of the RAP in the coarse fraction shall pass the maximum sieve size specified for the mix the FRAP will be used in.

(2) Restricted FRAP (B quality) stockpiles shall consist of RAP from Class I, HMA (High ESAL), or HMA (High ESAL). If approved by the Engineer, the aggregate from a maximum 3.0 in. (75 mm) single combined pass of surface/binder milling will be classified as B quality. All millings from this application will be processed into FRAP as described previously.

(3) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I, HMA (High and Low ESAL) or equivalent mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality, but shall be at least C quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate RAP shall be processed (FRAP) prior to testing. Conglomerate RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.

(4) Conglomerate "D" Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP from HMA shoulders, bituminous stabilized subbases or HMA (Low ESAL)/HMA (Low ESAL) IL-19.0L binder mixture. The coarse aggregate in this RAP may be crushed or round but shall be at least D quality. This RAP may have an inconsistent gradation and/or asphalt binder content. Conglomerate DQ RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.

(5) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as "Non-Quality".

RAP or FRAP containing contaminants, such as earth, brick, sand, concrete, sheet asphalt, bituminous surface treatment (i.e. chip seal), pavement fabric, joint sealants, plant cleanout etc., will be unacceptable unless the contaminants are removed to the satisfaction of the Engineer. Sheet asphalt shall be stockpiled separately.

(b) RAS Stockpiles. Type 1 and Type 2 RAS shall be stockpiled separately and shall be sufficiently separated to prevent intermingling at the base. Each stockpile shall be signed indicating what type of RAS is present.

However, a RAS source may submit a written request to the Department for approval to blend mechanically a specified ratio of Type 1 RAS with Type 2 RAS. The source will not be permitted to change the ratio of the blend without the Department prior written

approval. The Engineer's written approval will be required, to mechanically blend RAS with any fine aggregate produced under the AGCS, up to an equal weight of RAS, to improve workability. The fine aggregate shall be "B Quality" or better from an approved Aggregate Gradation Control System source. The fine aggregate shall be one that is approved for use in the HMA mixture and accounted for in the mix design and during HMA production.

Records identifying the shingle processing facility supplying the RAS, RAS type, and lot number shall be maintained by project contract number and kept for a minimum of three years.

1031.03 Testing. FRAP and RAS testing shall be according to the following.

(a) FRAP Testing. When used in HMA, the FRAP shall be sampled and tested either during processing or after stockpiling. It shall also be sampled during HMA production.

(1) During Stockpiling. For testing during stockpiling, washed extraction samples shall be run at the minimum frequency of one sample per 500 tons (450 metric tons) for the first 2000 tons (1800 metric tons) and one sample per 2000 tons (1800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4000 tons (3600 metric tons).

(2) Incoming Material. For testing as incoming material, washed extraction samples shall be run at a minimum frequency of one sample per 2000 tons (1800 metric tons) or once per week, whichever comes first.

(3) After Stockpiling. For testing after stockpiling, the Contractor shall submit a plan for approval to the District proposing a satisfactory method of sampling and testing the RAP/FRAP pile either in-situ or by restockpiling. The sampling plan shall meet the minimum frequency required above and detail the procedure used to obtain representative samples throughout the pile for testing.

Before extraction, each field sample of FRAP, shall be split to obtain two samples of test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall extract the other test sample according to Department procedure. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

(b) RAS Testing. RAS shall be sampled and tested during stockpiling according to Central Bureau of Materials Policy Memorandum, "Reclaimed Asphalt Shingle (RAS) Sources". The Contractor shall also sample as incoming material at the HMA plant.

(1) During Stockpiling. Washed extraction and testing for unacceptable materials shall be run at the minimum frequency of one sample per 200 tons (180 metric tons) for the first 1000 tons (900 metric tons) and one sample per 1000 tons (900 metric tons) thereafter. A minimum of five samples are required for stockpiles less than

1000 tons (900 metric tons). Once a ≤ 1000 ton (900 metric ton), five-sample/test stockpile has been established it shall be sealed. Additional incoming RAS shall be in a separate working pile as designated in the Quality Control plan and only added to the sealed stockpile when the test results of the working pile are complete and are found to meet the tolerances specified herein for the original sealed RAS stockpile.

(2) Incoming Material. For testing as incoming material at the HMA plant, washed extraction shall be run at the minimum frequency of one sample per 250 tons (227 metric tons). A minimum of five samples are required for stockpiles less than 1000 tons (900 metric tons). The incoming material test results shall meet the tolerances specified herein.

The Contractor shall obtain and make available all test results from start of the initial stockpile sampled and tested at the shingle processing facility in accordance with the facility's QC Plan.

Before extraction, each field sample shall be split to obtain two samples of test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall extract the other test sample according to Department procedures. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

1031.04 Evaluation of Tests. Evaluation of test results shall be according to the following.

(a) Evaluation of FRAP Test Results. All test results shall be compiled to include asphalt binder content, gradation and, when applicable (for slag), G_{mm}. A five test average of results from the original pile will be used in the mix designs. Individual extraction test results run thereafter, shall be compared to the average used for the mix design, and will be accepted if within the tolerances listed below.

Parameter	FRAP
No. 4 (4.75 mm)	± 6 %
No. 8 (2.36 mm)	± 5 %
No. 30 (600 μm)	± 5 %
No. 200 (75 μm)	± 2.0 %
Asphalt Binder	± 0.3 %
G_{mm}	± 0.03 1/

1/ For stockpile with slag or steel slag present as determined in the current Manual of Test Procedures Appendix B 21, "Determination of Reclaimed Asphalt Pavement Aggregate Bulk Specific Gravity".

If any individual sieve and/or asphalt binder content tests are out of the above tolerances when compared to the average used for the mix design, the FRAP stockpile shall not be

used in Hot-Mix Asphalt unless the FRAP representing those tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

The Contractor shall maintain a representative moving average of five tests to be used for Hot-Mix Asphalt production.

With the approval of the Engineer, the ignition oven may be substituted for extractions according to the ITP, "Calibration of the Ignition Oven for the Purpose of Characterizing Reclaimed Asphalt Pavement (RAP)" or Illinois Modified AASHTO T-164-11, Test Method A.

(b) Evaluation of RAS Test Results. All of the test results, with the exception of percent unacceptable materials, shall be compiled and averaged for asphalt binder content and gradation. A five test average of results from the original pile will be used in the mix designs. Individual test results run thereafter, when compared to the average used for the mix design, will be accepted if within the tolerances listed below.

Parameter	RAS
No. 8 (2.36 mm)	± 5 %
No. 16 (1.18 mm)	± 5 %
No. 30 (600 µm)	± 4 %
No. 200 (75 µm)	± 2.5 %
Asphalt Binder Content	± 2.0 %

If any individual sieve and/or asphalt binder content tests are out of the above tolerances when compared to the average used for the mix design, the RAS shall not be used in Hot-Mix Asphalt unless the RAS representing those tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

(c) Quality Assurance by the Engineer. The Engineer may witness the sampling and splitting conduct assurance tests on split samples taken by the Contractor for quality control testing a minimum of once a month.

The overall testing frequency will be performed over the entire range of Contractor samples for asphalt binder content and gradation. The Engineer may select any or all split samples for assurance testing. The test results will be made available to the Contractor as soon as they become available.

The Engineer will notify the Contractor of observed deficiencies.

Differences between the Contractor's and the Engineer's split sample test results will be considered acceptable if within the following limits.

Test Parameter	Acceptable Limits of Precision

% Passing:[1/]	FRAP	RAS
1/2 in.	5.0%	
No. 4	5.0%	
No. 8	3.0%	4.0%
No. 30	2.0%	4.0%
No. 200	2.2%	4.0%
Asphalt Binder Content	0.3%	3.0%
G_{mm}	0.030	

1/ Based on washed extraction.

In the event comparisons are outside the above acceptable limits of precision, the Engineer will immediately investigate.

(d) Acceptance by the Engineer. Acceptable of the material will be based on the validation of the Contractor's quality control by the assurance process.

1031.05 Quality Designation of Aggregate in RAP and FRAP.

(a) RAP. The aggregate quality of the RAP for homogeneous, conglomerate, and conglomerate "D" quality stockpiles shall be set by the lowest quality of coarse aggregate in the RAP stockpile and are designated as follows.

(1) RAP from Class I, HMA (High ESAL), or (Low ESAL) IL-9.5L surface mixtures are designated as containing Class B quality coarse aggregate.

(2) RAP from HMA (Low ESAL) IL-19.0L binder mixture is designated as Class D quality coarse aggregate.

(3) RAP from Class I, HMA (High ESAL) binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate.

(4) RAP from bituminous stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate.

(b) FRAP. If the Engineer has documentation of the quality of the FRAP aggregate, the Contractor shall use the assigned quality provided by the Engineer.

If the quality is not known, the quality shall be determined as follows. Fractionated RAP stockpiles containing plus #4 (4.75 mm) sieve coarse aggregate shall have a maximum tonnage of 5,000 tons (4,500 metric tons). The Contractor shall obtain a representative sample witnessed by the Engineer. The sample shall be a minimum of 50 lb (25 kg). The sample shall be extracted according to Illinois Modified AASHTO T 164 by a consultant laboratory prequalified by the Department for the specified testing. The consultant laboratory shall submit the test results along with the recovered aggregate to

the District Office. The cost for this testing shall be paid by the Contractor. The District will forward the sample to the Central Bureau of Materials Aggregate Lab for MicroDeval Testing, according to ITP 327. A maximum loss of 15.0 percent will be applied for all HMA applications. The fine aggregate portion of the fractionated RAP shall not be used in any HMA mixtures that require a minimum of "B" quality aggregate or better, until the coarse aggregate fraction has been determined to be acceptable thru a MicroDeval Testing.

1031.06 Use of FRAP and/or RAS in HMA. The use of FRAP and/or RAS shall be the Contractor's option when constructing HMA in all contracts.

(a) FRAP. The use of FRAP in HMA shall be as follows.

(1) Coarse Aggregate Size (after extraction). The coarse aggregate in all FRAP shall be equal to or less than the nominal maximum size requirement for the HMA mixture to be produced.

(2) Steel Slag Stockpiles. FRAP stockpiles containing steel slag or other expansive material, as determined by the Department, shall be homogeneous and will be approved for use in HMA (High ESAL and Low ESAL) mixtures regardless of lift or mix type.

(3) Use in HMA Surface Mixtures (High and Low ESAL). FRAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall have coarse aggregate that is Class B quality or better. FRAP shall be considered equivalent to limestone for frictional considerations unless produced/screened to minus 3/8 inch.

(4) Use in HMA Binder Mixtures (High and Low ESAL), HMA Base Course, and HMA Base Course Widening. FRAP stockpiles for use in HMA binder mixtures (High and Low ESAL), HMA base course, and HMA base course widening shall be FRAP in which the coarse aggregate is Class C quality or better.

(5) Use in Shoulders and Subbase. FRAP stockpiles for use in HMA shoulders and stabilized subbase (HMA) shall be FRAP, Restricted FRAP, conglomerate, or conglomerate DQ.

(b) RAS. RAS meeting Type 1 or Type 2 requirements will be permitted in all HMA applications as specified herein.

(c) FRAP and/or RAS Usage Limits. Type 1 or Type 2 RAS may be used alone or in conjunction with FRAP in HMA mixtures up to a maximum of 5.0 percent by weight of the total mix.

When FRAP is used alone or FRAP is used in conjunction with RAS, the percent of virgin asphalt binder replacement (ABR) shall not exceed the amounts indicated in the table below for a given N Design.

Max Asphalt Binder Replacement for FRAP with RAS Combination

HMA Mixtures 1/ 2/ 4/	Maximum % ABR		
Ndesign	Binder/Leveling Binder	Surface	Polymer Modified 3/
30L	50	40	30
50	40	35	30
70	40	30	30
90	40	30	30
4.75 mm N-50			40
SMA N-80			30

1/ For Low ESAL HMA shoulder and stabilized subbase, the percent asphalt binder replacement shall not exceed 50 % of the total asphalt binder in the mixture.

2/ When the binder replacement exceeds 15 % for all mixes, except for SMA and IL-4.75, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 % binder replacement using a virgin asphalt binder grade of PG64-22 will be reduced to a PG58-28). When constructing full depth HMA and the ABR is less than 15 %, the required virgin asphalt binder grade shall be PG64-28.

3/ When the ABR for SMA or IL-4.75 is 15 % or less, the required virgin asphalt binder shall be SBS PG76-22 and the elastic recovery shall be a minimum of 80. When the ABR for SMA or IL-4.75 exceeds 15%, the virgin asphalt binder grade shall be SBS PG70-28 and the elastic recovery shall be a minimum of 80.

4/ When FRAP or RAS is used alone, the maximum percent asphalt binder replacement designated on the table shall be reduced by 10 %.

1031.07 HMA Mix Designs. At the Contractor's option, HMA mixtures may be constructed utilizing RAP/FRAP and/or RAS material meeting the detailed requirements specified herein.

(a) FRAP and/or RAS. FRAP and /or RAS mix designs shall be submitted for verification. If additional FRAP or RAS stockpiles are tested and found to be within tolerance, as defined under "Evaluation of Tests" herein, and meet all requirements herein, the additional FRAP or RAS stockpiles may be used in the original design at the percent previously verified.

(b) RAS. Type 1 and Type 2 RAS are not interchangeable in a mix design.

The RAP, FRAP and RAS stone specific gravities (G_{sb}) shall be according to the "Determination of Aggregate Bulk (Dry) Specific Gravity (G_{sb}) or Reclaimed Asphalt Pavement (RAP) and

Reclaimed Asphalt Shingles (RAS)" procedure in the Department's Manual of Test Procedures for Materials.

1031.08 HMA Production. HMA production utilizing FRAP and/or RAS shall be as follows.

To remove or reduce agglomerated material, a scalping screen, gator, crushing unit, or comparable sizing device approved by the Engineer shall be used in the RAS and FRAP feed system to remove or reduce oversized material. .

If during mix production, corrective actions fail to maintain FRAP, RAS or QC/QA test results within control tolerances or the requirements listed herein the Contractor shall cease production of the mixture containing FRAP or RAS and conduct an investigation that may require a new mix design.

(a) RAS. RAS shall be incorporated into the HMA mixture either by a separate weight depletion system or by using the RAP weigh belt. Either feed system shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes. The portion of RAS shall be controlled accurately to within ± 0.5 percent of the amount of RAS utilized. When using the weight depletion system, flow indicators or sensing devices shall be provided and interlocked with the plant controls such that the mixture production is halted when RAS flow is interrupted.

(b) HMA Plant Requirements. HMA plants utilizing FRAP and/or RAS shall be capable of automatically recording and printing the following information.

(1) Dryer Drum Plants.

a. Date, month, year, and time to the nearest minute for each print.

b. HMA mix number assigned by the Department.

c. Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).

d. Accumulated dry weight of RAS and FRAP in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).

e. Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.

f. Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.

g. Residual asphalt binder in the RAS and FRAP material as a percent of the total mix to the nearest 0.1 percent.

h. Aggregate RAS and FRAP moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAS and FRAP are printed in wet condition.)

i. When producing mixtures with FRAP and/or RAS, a positive dust control system shall be utilized.

j. Accumulated mixture tonnage.

k. Dust Removed (accumulated to the nearest 0.1 ton (0.1 metric ton))

(2) Batch Plants.

a. Date, month, year, and time to the nearest minute for each print.

b. HMA mix number assigned by the Department.

c. Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).

d. Mineral filler weight to the nearest pound (kilogram).

f. RAS and FRAP weight to the nearest pound (kilogram).

g. Virgin asphalt binder weight to the nearest pound (kilogram).

h. Residual asphalt binder in the RAS and FRAP material as a percent of the total mix to the nearest 0.1 percent.

The printouts shall be maintained in a file at the plant for a minimum of one year or as directed by the Engineer and shall be made available upon request. The printing system will be inspected by the Engineer prior to production and verified at the beginning of each construction season thereafter.

1031.09 RAP in Aggregate Surface Course and Aggregate Wedge Shoulders, Type B. The use of RAP or FRAP in aggregate surface course and aggregate shoulders shall be as follows.

(a) Stockpiles and Testing. RAP stockpiles may be any of those listed in Article 1031.02, except "Non-Quality" and "FRAP". The testing requirements of Article 1031.03 shall not apply. RAP used shall be according to the current Central Bureau of Materials Policy Memorandum, "Reclaimed Asphalt Pavement (RAP) for Aggregate Applications".

(b) Gradation. The RAP material shall meet the gradation requirements for CA 6 according to Article 1004.01(c), except the requirements for the minus No. 200 (75 µm) sieve shall not apply. The sample for the RAP material shall be air dried to constant weight prior to being tested for gradation."

FRICTION AGGREGATE (D-1)

Effective: January 1, 2011
Revised: April 29, 2016

Revise Article 1004.03(a) of the Standard Specifications to read:

"**1004.03 Coarse Aggregate for Hot-Mix Asphalt (HMA).** The aggregate shall be according to Article 1004.01 and the following.

(a) Description. The coarse aggregate for HMA shall be according to the following table.

Use	Mixture	Aggregates Allowed
Class A	Seal or Cover	Allowed Alone or in Combination [5/]: Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag Crushed Concrete
HMA Low ESAL	Stabilized Subbase or Shoulders	Allowed Alone or in Combination [5/]: Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag[1/] Crushed Concrete
HMA High ESAL Low ESAL	Binder IL-19.0 or IL-19.0L SMA Binder	Allowed Alone or in Combination [5/ 6/]: Crushed Gravel Carbonate Crushed Stone[2/] Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Concrete[3/]

Use	Mixture	Aggregates Allowed	
HMA High ESAL Low ESAL	C Surface and Leveling Binder IL-9.5 or IL-9.5L SMA Ndesign 50 Surface	Allowed Alone or in Combination [5/]: Crushed Gravel Carbonate Crushed Stone[2/] Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag[4/] Crushed Concrete[3/]	
HMA High ESAL	D Surface and Leveling Binder IL-9.5 SMA Ndesign 50 Surface	Allowed Alone or in Combination [5/]: Crushed Gravel Carbonate Crushed Stone (other than Limestone)[2/] Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag[4/] Crushed Concrete[3/]	
		Other Combinations Allowed:	
		Up to...	*With...*
		25% Limestone	Dolomite
		50% Limestone	Any Mixture D aggregate other than Dolomite
		75% Limestone	Crushed Slag (ACBF) or Crushed Sandstone
HMA High ESAL	E Surface IL-9.5 SMA Ndesign 80 Surface	Allowed Alone or in Combination [5/ 6/]: Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag No Limestone.	
		Other Combinations Allowed:	
		Up to...	*With...*

Use	Mixture	Aggregates Allowed	
		50% Dolomite[2/]	Any Mixture E aggregate
		75% Dolomite[2/]	Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone
		75% Crushed Gravel[2/] or Crushed Concrete[3/]	Crushed Sandstone, Crystalline Crushed Stone, Crushed Slag (ACBF), or Crushed Steel Slag
HMA High ESAL	F Surface IL-9.5 SMA Ndesign 80 Surface	<u>Allowed Alone or in Combination</u> [5/ 6/]: Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag No Limestone.	
		<u>Other Combinations Allowed</u>:	
		Up to...	*With...*
		50% Crushed Gravel[2/], Crushed Concrete[3/], or Dolomite[2/]	Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone

1/ Crushed steel slag allowed in shoulder surface only.
2/ Carbonate crushed stone (limestone) and/or crushed gravel shall not be used in SMA Ndesign 80. In SMA Ndesign 50, carbonate crushed stone shall not be blended with any of the other aggregates allowed alone in Ndesign 50 SMA binder or Ndesign 50 SMA surface.
3/ Crushed concrete will not be permitted in SMA mixes.
4/ Crushed steel slag shall not be used as leveling binder.
5/ When combinations of aggregates are used, the blend percent measurements shall be by volume."
6/ Combining different types of aggregate will not be permitted in SMA Ndesign 80."

HMA MIXTURE DESIGN REQUIREMENTS (D-1)

Effective: January 1, 2013
Revised: January 1, 2018

1) Design Composition and Volumetric Requirements

Revise the table in Article 406.06(d) of the Standard Specifications to read:

"MINIMUM COMPACTED LIFT THICKNESS	
Mixture Composition	Thickness, in. (mm)
IL-4.75	3/4 (19)
SMA-9.5, IL-9.5, IL-9.5L	1 1/2 (38)
SMA-12.5	2 (50)
IL-19.0, IL-19.0L	2 1/4 (57)"

Revise the table in Article 1004.03(c) of the Standard Specifications to read:

"Use	Size/Application	Gradation No.
Class A-1, 2, & 3	3/8 in. (10 mm) Seal	CA 16
Class A-1	1/2 in. (13 mm) Seal	CA 15
Class A-2 & 3	Cover	CA 14
HMA High ESAL	IL-19.0 IL-9.5	CA 11 1/ CA 16, CA 13 3/
HMA Low ESAL	IL-19.0L IL-9.5L Stabilized Subbase or Shoulders	CA 11 1/ CA 16
SMA 2/	1/2 in. (12.5mm) Binder & Surface IL 9.5 Surface	CA13 3/, CA14 or CA16 CA16, CA 13 3/

1/ CA 16 or CA 13 may be blended with the gradations listed.
2/ The coarse aggregates used shall be capable of being combined with stone sand, slag sand, or steel slag sand meeting the FA/FM 20 gradation and mineral filler to meet the approved mix design and the mix requirements noted herein.
3/ CA 13 shall be 100 percent passing the 1/2 in. (12.5mm) sieve.

Revise Article 1004.03(e) of the Supplemental Specifications to read:

"(e) Absorption. For SMA the coarse aggregate shall also have water absorption ≤ 2.0 percent."

Revise the last paragraph of Article 1102.01 (a) (5) of the Standard Specifications to read:

"IL-4.75 and Stone Matrix Asphalt (SMA) mixtures which contain aggregate having absorptions greater than or equal to 2.0 percent, or which contain steal slag sand, shall have minimum surge bin storage plus haul time of 1.5 hours."

Revise the nomenclature table in Article 1030.01 of the Standard Specifications to read:

"High ESAL	IL-19.0 binder; IL-9.5 surface; IL-4.75; SMA-12.5, SMA-9.5
Low ESAL	IL-19.0L binder; IL-9.5L surface; Stabilized Subbase (HMA)[1/]; HMA Shoulders[2/]

1/ Uses 19.0L binder mix.

2/ Uses 19.0L for lower lifts and 9.5L for surface lift."

Revise Article 1030.02 of the Standard Specifications and Supplemental Specifications to read:

"**1030.02 Materials.** Materials shall be according to the following.

Item	Article/Section
(a) Coarse Aggregate	1004.03
(b) Fine Aggregate	1003.03
(c) RAP Material	1031
(d) Mineral Filler	1011
(e) Hydrated Lime	1012.01
(f) Slaked Quicklime (Note 1)	
(g) Performance Graded Asphalt Binder (Note 2)	1032
(h) Fibers (Note 3)	
(i) Warm Mix Asphalt (WMA) Technologies (Note 4)	

Note 1. Slaked quicklime shall be according to ASTM C 5.

Note 2. The asphalt binder shall be an SBS PG 76-28 when the SMA is used on a full-depth asphalt pavement and SBS PG 76-22 when used as an overlay, except where modified herein. The asphalt binder shall be an Elvaloy or SBS PG 76-22 for IL-4.75, except where modified herein. The elastic recovery shall be a minimum of 80.

Note 3. A stabilizing additive such as cellulose or mineral fiber shall be added to the SMA mixture according to Illinois Modified AASHTO M 325. The stabilizing additive shall meet the Fiber Quality Requirements listed in Illinois Modified AASHTO M 325. Prior to approval and use of fibers, the Contractor shall submit a notarized certification by the producer of these materials stating they meet these requirements. Reclaimed Asphalt Shingles (RAS) may be used in Stone Matrix Asphalt (SMA) mixtures designed with an SBA polymer modifier as a fiber additive if the mix design with RAS included meets AASHTO T305 requirements. The RAS shall be from a certified source that

produces either Type I or Type 2. Material shall meet requirements noted herein and the actual dosage rate will be determined by the Engineer.

Note 4. Warm mix additives or foaming processes shall be selected from the current Bureau of Materials and Physical Research Approved List, "Warm Mix Asphalt Technologies"."

Revise Article 1030.04(a)(1) of the Standard Specifications and the Supplemental Specifications to read:

"(1) High ESAL Mixtures. The Job Mix Formula (JMF) shall fall within the following limits.

High ESAL, MIXTURE COMPOSITION (% PASSING) 1/										
Sieve Size	IL-19.0 mm		SMA 4/ IL-12.5 mm		SMA 4/ IL-9.5 mm		IL-9.5 mm		IL-4.75 mm	
	min	max	min	max	min	max	min	max	min	max
1 1/2 in (37.5 mm)										
1 in. (25 mm)		100								
3/4 in. (19 mm)	90	100		100						
1/2 in. (12.5 mm)	75	89	80	100		100		100		100
3/8 in. (9.5 mm)				65	90	100	90	100		100
#4 (4.75 mm)	40	60	20	30	36	50	34	69	90	100
#8 (2.36 mm)	20	42	16	24 5/	16	32 5/	34 6/	52 2/	70	90
#16 (1.18 mm)	15	30					10	32	50	65
#30 (600 µm)			12	16	12	18				
#50 (300 µm)	6	15					4	15	15	30
#100 (150 µm)	4	9					3	10	10	18
#200 (75 µm)	3	6	7.0	9.0 3/	7.5	9.5 3/	4	6	7	9 3/
Ratio Dust/Asphalt Binder		1.0		1.5		1.5		1.0		1.0

1/ Based on percent of total aggregate weight.

2/ The mixture composition shall not exceed 44 percent passing the #8 (2.36 mm) sieve for surface courses with Ndesign = 90.

3/ Additional minus No. 200 (0.075 mm) material required by the mix design shall be mineral filler, unless otherwise approved by the Engineer.

4/ The maximum percent passing the #635 (20 µm) sieve shall be ≤ 3 percent.

5/ When establishing the Adjusted Job Mix Formula (AJMF) the percent passing the #8 (2.36 mm) sieve shall not be adjusted above the percentage stated on the table.

6/ When establishing the Adjusted Job Mix Formula (AJMF) the percent passing the #8 (2.36 mm) sieve shall not be adjusted below 34 percent.

Revise Article 1030.04(b)(1) of the Standard Specifications to read:

"(1) High ESAL Mixtures. The target value for the air voids of the HMA shall be 4.0 percent and for IL-4.75 it shall be 3.5 percent at the design number of gyrations. The VMA and VFA of the HMA design shall be based on the nominal maximum size of the aggregate in the mix, and shall conform to the following requirements.

VOLUMETRIC REQUIREMENTS High ESAL				
	Voids in the Mineral Aggregate (VMA), % minimum			Voids Filled with Asphalt Binder (VFA), %
Ndesign	IL-19.0	IL-9.5	IL-4.75 1/	
50	13.5	15.0	18.5	65 – 78 2/
70				65 - 75
90				

1/ Maximum Draindown for IL-4.75 shall be 0.3 percent

2/ VFA for IL-4.75 shall be 72-85 percent"

Replace Article 1030.04(b)(3) of the Standard Specifications with the following:

"(3) SMA Mixtures.

Volumetric Requirements SMA 1/			
Ndesign	Design Air Voids Target %	Voids in the Mineral Aggregate (VMA), % min.	Voids Filled with Asphalt (VFA), %
80 4/	3.5	17.0 2/	75 - 83
		16.0 3/	

1/ Maximum draindown shall be 0.3 percent. The draindown shall be determined at the JMF asphalt binder content at the mixing temperature plus 30 °F.

2/ Applies when specific gravity of coarse aggregate is ≥ 2.760.

3/ Applies when specific gravity of coarse aggregate is < 2.760.

4/ Blending of different types of aggregate will not be permitted.
For surface course, the coarse aggregate can be crushed steel slag, crystalline crushed stone or crushed sandstone. For binder course, coarse aggregate shall be crushed stone (dolomite), crushed gravel, crystalline crushed stone, or crushed sandstone.

Add to the end of Article 1030.05 (d) (2) a. of the Standard Specifications:

"During production, the Contractor shall test SMA mixtures for draindown according to AASHTO T305 at a frequency of 1 per day of production."

Delete last sentence of the second paragraph of Article 1102.01(a) (4) b. 2.

Add to the end of Article 1102.01 (a) (4) b. 2.:

"As an option, collected dust (baghouse) may be used in lieu of manufactured mineral filler according to the following:

(a.) Sufficient collected dust (baghouse) is available for production of the SMA mix for the entire project.

(b.) A mix design was prepared based on collected dust (baghouse).

2) Design Verification and Production

Revise Article 1030.04 (d) of the Standard Specifications to read:

"(d) Verification Testing. High ESAL, IL-4.75, and SMA mix designs submitted for verification will be tested to ensure that the resulting mix designs will pass the required criteria for the Hamburg Wheel Test (IL mod AASHTO T-324) and the Tensile Strength Test (IL mod AASHTO T-283). The Department will perform a verification test on gyratory specimens compacted by the Contractor. If the mix fails the Department's verification test, the Contractor shall make the necessary changes to the mix and resubmit compacted specimens to the Department for verification. If the mix fails again, the mix design will be rejected.

All new and renewal mix designs will be required to be tested, prior to submittal for Department verification and shall meet the following requirements:

(1)Hamburg Wheel Test criteria. The maximum allowable rut depth shall be 0.5 in. (12.5 mm). The minimum number of wheel passes at the 0.5 in. (12.5 mm) rut depth criteria shall be based on the high temperature binder grade of the mix as specified in the mix requirements table of the plans.

Illinois Modified AASHTO T 324 Requirements [1/]

Asphalt Binder Grade	# Repetitions	Max Rut Depth (mm)
PG 70 -XX (or higher)	20,000	12.5
PG 64 -XX (or lower)	10,000	12.5

1/ When produced at temperatures of 275 ± 5 °F (135 ± 3 °C) or less, loose Warm Mix Asphalt shall be oven aged at 270 ± 5 °F (132 ± 3 °C) for two hours prior to gyratory compaction of Hamburg Wheel specimens.

Note: For SMA Designs (N-80) the maximum rut depth is 6.0 mm at 20,000 repetitions.
For IL 4.75mm Designs (N-50) the maximum rut depth is 9.0mm at 15,000 repetitions.

(2) Tensile Strength Criteria. The minimum allowable conditioned tensile strength shall be 60 psi (415 kPa) for non-polymer modified performance graded (PG) asphalt binder and 80 psi (550 kPa) for polymer modified PG asphalt binder. The maximum allowable unconditioned tensile strength shall be 200 psi (1380 kPa)."

Production Testing. Revise first paragraph of Article 1030.06(a) of the Standard Specifications to read:

"(a) High ESAL, IL-4.75, WMA, and SMA Mixtures. For each contract, a 300 ton (275 metric tons) test strip, except for SMA mixtures it will be 400 ton (363 metric ton), will be required at the beginning of HMA production for each mixture at the beginning of each construction year according to the Manual of Test Procedures for Materials "Hot Mix Asphalt Test Strip Procedures". At the request of the Producer, the Engineer may waive the test strip if previous construction during the current construction year has demonstrated the constructability of the mix using Department test results."

Add the following after the sixth paragraph in Article 1030.06 (a) of the Standard Specifications:

"The Hamburg Wheel test shall also be conducted on all HMA mixtures from a sample taken within the first 500 tons (450 metric tons) on the first day of production or during start up with a split reserved for the Department. The mix sample shall be tested according to the Illinois Modified AASHTO T 324 and shall meet the requirements specified herein. Mix production shall not exceed 1500 tons (1350 metric tons) or one day's production, whichever comes first, until the testing is completed and the mixture is found to be in conformance. The requirement to cease mix production may be waived if the plant produced mixture demonstrates conformance prior to start of mix production for a contract.
If the mixture fails to meet the Hamburg Wheel criteria, no further mixture will be accepted until the Contractor takes such action as is necessary to furnish a mixture meeting the criteria"

Method of Measurement:

Add the following after the fourth paragraph of Article 406.13 (b):

"The plan quantities of SMA mixtures shall be adjusted using the actual approved binder and surface Mix Design's G_{mb}."

Basis of Payment.

Replace the fourth paragraph of Article 406.14 of the Standard Specifications with the following:

> "Stone matrix asphalt will be paid for at the contract unit price per ton (metric ton) for POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, of the mixture composition and Ndesign specified; and POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, STONE MATRIX ASPHALT, of the mixture composition and Ndesign specified."

GROUND TIRE RUBBER (GTR) MODIFIED ASPHALT BINDER (D-1)
Effective: June 26, 2006
Revised: April 1, 2016

Add the following to the end of article 1032.05 of the Standard Specifications:

"(c) Ground Tire Rubber (GTR) Modified Asphalt Binder. A quantity of 10.0 to 14.0 percent GTR (Note 1) shall be blended by dry unit weight with a PG 64-28 to make a GTR 70-28 or a PG 58-28 to make a GTR 64-28. The base PG 64-28 and PG 58-28 asphalt binders shall meet the requirements of Article 1032.05(a). Compatible polymers may be added during production. The GTR modified asphalt binder shall meet the requirements of the following table.

Test	Asphalt Grade GTR 70-28	Asphalt Grade GTR 64-28
Flash Point (C.O.C.), AASHTO T 48, °F (°C), min.	450 (232)	450 (232)
Rotational Viscosity, AASHTO T 316 @ 275 °F (135 °C), Poises, Pa·s, max.	30 (3)	30 (3)
Softening Point, AASHTO T 53, °F (°C), min.	135 (57)	130 (54)
Elastic Recovery, ASTM D 6084, Procedure A (sieve waived) @ 77 °F, (25 °C), aged, ss, 100 mm elongation, 5 cm/min., cut immediately, %, min.	65	65

Note 1. GTR shall be produced from processing automobile and/or light truck tires by the ambient grinding method. GTR shall not exceed 1/16 in. (2 mm) in any dimension and shall contain no free metal particles or other materials. A mineral powder (such as talc) meeting the requirements of AASHTO M 17 may be added, up to a maximum of four percent by weight of GTR to reduce sticking and caking of the GTR particles. When tested in accordance with Illinois modified AASHTO T 27, *a* 50 g sample of the GTR shall conform to the following gradation requirements:

Sieve Size	Percent Passing
No. 16 (1.18 mm)	100
No. 30 (600 μm)	95 ± 5
No. 50 (300 μm)	> 20

Add the following to the end of Note 1. of article 1030.03 of the Standard Specifications:

"A dedicated storage tank for the Ground Tire Rubber (GTR) modified asphalt binder shall be provided. This tank must be capable of providing continuous mechanical mixing throughout by continuous agitation and recirculation of the asphalt binder to provide a uniform mixture. The tank shall be heated and capable of maintaining the temperature

of the asphalt binder at 300 °F to 350 °F (149 °C to 177 °C). The asphalt binder metering systems of dryer drum plants shall be calibrated with the actual GTR modified asphalt binder material with an accuracy of ± 0.40 percent."

Revise 1030.02(c) of the Standard Specifications to read:

"(c) RAP Materials (Note 5) .....1031"

Add the following note to 1030.02 of the Standard Specifications:

Note 5. When using reclaimed asphalt pavement and/or reclaimed asphalt shingles, the maximum asphalt binder replacement percentage shall be according to the most recent special provision for recycled materials.

DETECTOR LOOP REPLACEMENT AND/OR INSTALLATION (ROADWAY GRINDING, RESURFACING, & PATCHING OPERATIONS)
Effective: January 1, 1985
Revised: January 5, 2016
886.02TS

The following Traffic Signal Special Provisions and the "District 1 Standard Traffic Signal Design Details" supplement the requirements of the State of Illinois "Standard Specifications for Road and Bridge Construction" Sections 810, 886, 1079 and 1088.

The intent of this Special Provision is to prescribe the materials and construction methods commonly used to replace traffic signal detector loops and replace magnetic signal detectors with detector loops during roadway resurfacing, grinding and patching operations. Loop detector replacement will not require the transfer of traffic signal maintenance from the District Electrical Maintenance Contractor to this contract's electrical contractor. Replacement of magnetic detector will require wiring revisions inside the control cabinet and therefore the transfer of maintenance will be required. All material furnished shall be new. The locations and the details of all installations shall be as indicated on the Plans or as directed by the Engineer.

The work to be provided under this contract consists of furnishing and installing all traffic signal work as specified on the Plans and as specified herein in a manner acceptable and approved by the Engineer.

Notification of Intent to Work.
Contracts such as pavement grinding or patching which result in the destruction of traffic signal detection require a notification of intent to work and an inspection. A minimum of seven (7) working days prior to the detection removal, the Contractor shall notify the:

- Traffic Signal Maintenance and Operations Engineer at (847)705-4424
- IDOT Electrical Maintenance Contractor at (773) 287-7600

at which time arrangements will be made to adjust the traffic controller timing to compensate for the absence of detection.

Failure to provide proper notification may require the District's Electrical Maintenance Contractor to be called to investigate complaints of inadequate traffic signal timing. All costs associated with these expenses will be paid for by the Contractor at no additional expense to the Department according to Section 109 of the "Standard Specifications."

Acceptance of Material.
The Contractor shall provide:

1. All material approval requests shall be submitted a minimum of seven (7) days prior to the delivery of equipment to the job site, or within 30 consecutive calendar days after the contract is awarded, or within 15 consecutive calendar days after the preconstruction meeting, whichever is first.
2. Four (4) copies of a letter listing the vendor's name and model numbers of the proposed equipment shall be supplied. The letter will be reviewed by the Traffic Design Engineer to determine whether the equipment to be used is approved. The

letters will be stamped as approved or not approved accordingly and returned to the Contractor.

3. One (1) copy of material catalog cuts.
4. The contract number, permit number or intersection location must be on each sheet of the letter and material catalog cuts as required in items 2 and 3.

Inspection of Construction.
When the road is open to traffic, except as otherwise provided in Section 801 and 850 of the Standard Specifications, the Contractor must request a turn-on and inspection of the completed detector loop installation at each separate location. This request must be made to the Traffic Signal Maintenance and Operations Engineer at (847)705-4424 a minimum of seven (7) working days prior to the time of the requested inspection.

Acceptance of the traffic signal equipment by the Department shall be based upon inspection results at the traffic signal "turn on." If approved, traffic signal acceptance shall be verbal at the "turn on" inspection followed by written correspondence from the Engineer. If this work is not completed in time, the Department reserves the right to have the work completed by others at the Contractor's expense.

All cost of work and materials required to comply with the above requirements shall be included in the pay item bid price, under which the subject materials and signal equipment are paid, and no additional compensation will be allowed. Materials and signal equipment not complying with the above requirements will be subject to removal and disposal at the Contractor's expense.

Restoration of Work Area.
Restoration of the traffic signal work area due to the detector loop installation and/or replacement shall be included in the cost of this item. All roadway surfaces such as shoulders, medians, sidewalks, pavement shall be replaced as shown in the plans or in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded.

Removal, Disposal and Salvage of Existing Traffic Signal Equipment.
The removal, disposal, and salvage of existing traffic signal equipment shall be included in the cost of this item. All material and equipment removed shall become the property of the Contractor and disposed of by the Contractor outside the State's right-of-way. No additional compensation shall be provided to the Contractor for removal, disposal or salvage expense for the work in this contract.

DETECTOR LOOP REPLACEMENT.
This work shall consist of replacing existing detector loops which are destroyed during grinding, resurfacing, or patching operations.

If damage to the detector loop is unavoidable, replacement of the existing detection system will be necessary. This work shall be completed by an approved Electrical Contractor as directed by the Engineer.

Replacement of the loops shall be accomplished in the following manner: The Engineer shall mark the location of the replacement loops. The Traffic Signal Maintenance and Operations Engineer shall be called to approve loop locations prior to the cutting of the pavement. The Contractor may reuse the existing coilable non-metallic conduit (CNC) located between the

existing handhole and the pavement if it hasn't been damaged. CNC meeting the requirements of NEC Article 353 shall be used for detector loop raceways to the handholes. All burrs shall be removed from the edges of the existing conduit which could cause damage to the new detector loop during installation. If the existing conduit is damaged beyond repair, if it cannot be located, or if additional conduits are required for each proposed loop; the Contractor shall be required to drill through the existing pavement into the appropriate handhole, and install 1" (25 mm) CNC. This work and the required materials shall not be paid for separately but shall be included in the pay item Detector Loop Replacement. Once suitable CNC raceways is established, the loop may be cut, installed, sealed and spliced to the twisted-shielded lead-in cable in the handhole.
All loops installed in new asphalt pavement shall be installed in the binder course and not in the surface course. The edge of pavement or the curb shall be cut with a 1/4" (6.3 mm) deep x 4" (100 mm) saw-cut to mark location of each loop lead-in.

A minimum of seven (7) working days prior to the Contractor cutting loops, the Contractor shall have the proposed loop locations marked and contact the Traffic Signal Maintenance and Operations Engineer (847)705-4424 to inspect and approve the layout.

Loop detectors shall be installed according to the requirements of the "District 1 Standard Traffic Signal Design Details." Saw-cuts from the loop to the edge of pavement shall be made perpendicular to the edge of pavement when possible in order to minimize the length of the saw-cut unless directed otherwise by the Engineer or as shown on the plan.

The detector loop cable insulation shall be labeled with the cable specifications.

Each loop detector lead-in wire shall be labeled in the handhole using a water proof tag, from an approved vendor, secured to each wire with nylon ties. The lead-in wire, including all necessary connections for proper operation, from the edge of pavement to the handhole, shall be included in the detector loop pay item.

Loop sealant shall be a two-component thixotropic chemically cured polyurethane. The sealant shall be installed 1/8" (3 mm) below the pavement surface. If installed above the surface the excess shall be removed immediately.

Round loop(s) 6 ft (1.8 m) diameter may be substituted for 6 ft (1.8 m) by 6 ft (1.8 m) square loop(s) and shall be paid for as 24 feet (7.2 m) of detector loop.

Resistance to ground shall be a minimum of 100 mega-ohms under any conditions of weather or moisture. Inductance shall be more than 50 and less than 700 microhenries. Quality readings shall be more than 5.

Heat shrink splices shall be used according to the "District 1 Standard Traffic Signal Design Details."

Detector loop replacement shall be measured along the sawed slot in the pavement containing the loop cable up to the edge of pavement, rather than the actual length of the wire in the slot. Drilling handholes, sawing the pavement, furnishing and installing CNC to the appropriate handhole, cable splicing to provide a fully operable detector loop, testing and all trench and backfill shall be included in this item.

Basis of Payment.
Detector Loop Replacement shall be paid for at the contract unit price per foot (meter) of DETECTOR LOOP REPLACEMENT.

MAGNETIC DETECTOR REMOVAL AND DETECTOR LOOP INSTALLATION.
This work shall consist of the removal of existing magnetic detectors, magnetic detector lead-in cable and magnetic detection amplifiers and related control equipment wiring, installation of detector lead-in cable, detector loops, detector amplifiers and related equipment wiring. The detector loop, cable, and amplifier shall be installed according to the applicable portions of the "Standard Specifications" and the applicable portions of the Special Provision for "Detector Loop Replacement." All drilling of handholes, furnishing and installing CNC, cable splicing, trench and backfill, removal of equipment, and removing cable from conduit shall be included in this item.

Basis of Payment.
Magnetic Detector Removal and Detector Loop Installation shall be paid for at the contract unit price per foot (meter) for DETECTOR LOOP, TYPE I, per each for INDUCTIVE LOOP DETECTOR, and foot (meter) for ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR.

TEMPORARY INFORMATION SIGNING
Effective: November 13, 1996
Revised: January 2, 2007

Description.
This work shall consist of furnishing, installing, maintaining, relocating for various states of construction and eventually removing temporary informational signs. Included in this item may be ground mount signs, skid mount signs, truss mount signs, bridge mount signs, and overlay sign panels which cover portions of existing signs.

Materials.
Materials shall be according to the following Articles of Section 1000 - Materials:

	Item	Article/Section
a.)	Sign Base (Notes 1 & 2)	1090
b.)	Sign Face (Note 3)	1091
c.)	Sign Legends	1092
d.)	Sign Supports	1093
e.)	Overlay Panels (Note 4)	1090.02

Note 1. The Contractor may use 5/8 inch (16 mm) instead of 3/4 inch (19 mm) thick plywood.
Note 2. Type A sheeting can be used on the plywood base.
Note 3. All sign faces shall be Type A except all orange signs shall meet the requirements of Article 1106.01.
Note 4. The overlay panels shall be 0.08 inch (2 mm) thick.

GENERAL CONSTRUCTION REQUIRMENTS

Installation.
The sign sizes and legend sizes shall be verified by the Contractor prior to fabrication.

Signs which are placed along the roadway and/or within the construction zone shall be installed according to the requirements of Article 701.14 and Article 720.04. The signs shall be 7 ft (2.1 m) above the near edge of the pavement and shall be a minimum of 2 ft (600 mm) beyond the edge of the paved shoulder. A minimum of two (2) posts shall be used.

The attachment of temporary signs to existing sign structures or sign panels shall be approved by the Engineer. Any damage to the existing signs due to the Contractor's operations shall be repaired or signs replaced, as determined by the Engineer, at the Contractor's expense.

Signs which are placed on overhead bridge structures shall be fastened to the handrail with stainless steel bands. These signs shall rest on the concrete parapet where possible. The Contractor shall furnish mounting details for approval by the Engineer.

Method of Measurement.

This work shall be measured for payment in square feet (square meters) edge to edge (horizontally and vertically).

All hardware, posts or skids, supports, bases for ground mounted signs, connections, which are required for mounting these signs will be included as part of this pay item.

Basis Of Payment.
This work shall be paid for at the contract unit price per square foot (square meter) for TEMPORARY INFORMATION SIGNING.

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2018

This index contains a listing of SUPPLEMENTAL SPECIFICATIONS, frequently used RECURRING SPECIAL PROVISIONS, and LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS.

ERRATA Standard Specifications for Road and Bridge Construction (Adopted 4-1-16) (Revised 1-1-18)

SUPPLEMENTAL SPECIFICATIONS

Std. Spec. Sec.		Page No.
106	Control of Materials	1
403	Bituminous Surface Treatment (Class A-1, A-2, A-3)	2
404	Micro-Surfacing and Slurry Sealing	3
405	Cape Seal	14
420	Portland Cement Concrete Pavement	24
442	Pavement Patching	26
502	Excavation for Structures	27
503	Concrete Structures	29
504	Precast Concrete Structures	32
542	Pipe Culverts	33
586	Sand Backfill for Vaulted Abutments	34
630	Steel Plate Beam Guardrail	36
631	Traffic Barrier Terminals	39
670	Engineer's Field Office and Laboratory	40
701	Work Zone Traffic Control and Protection	41
704	Temporary Concrete Barrier	42
781	Raised Reflective Pavement Markers	44
888	Pedestrian Push-Button	45
1003	Fine Aggregates	46
1004	Coarse Aggregates	47
1006	Metals	50
1020	Portland Cement Concrete	51
1050	Poured Joint Sealers	53
1069	Pole and Tower	55
1077	Post and Foundation	56
1096	Pavement Markers	57
1101	General Equipment	58
1102	Hot-Mix Asphalt Equipment	59
1103	Portland Cement Concrete Equipment	61
1106	Work Zone Traffic Control Devices	63

Illinois Department of Transportation

Check Sheet For Recurring Special Provisions

The Following Recurring Special Provisions Indicated By An "X" Are Applicable To This Contract And Are Included By Reference:

Recurring Special Provisions

Check Sheet #			Page No.
1	☐	Additional State Requirements for Federal-Aid Construction Contracts	64
2	☐	Subletting of Contracts (Federal-Aid Contracts)	67
3	☐	EEO	68
4	☐	Specific EEO Responsibilities Non Federal-Aid Contracts	78
5	☐	Required Provisions - State Contracts	83
6	☐	Asbestos Bearing Pad Removal	89
7	☐	Asbestos Waterproofing Membrane and Asbestos Hot-Mix Asphalt Surface Removal	90
8	☐	Temporary Stream Crossings and In-Stream Work Pads	91
9	☐	Construction Layout Stakes Except for Bridges	92
10	☐	Construction Layout Stakes	95
11	☐	Use of Geotextile Fabric for Railroad Crossing	98
12	☐	Subsealing of Concrete Pavements	100
13	☐	Hot-Mix Asphalt Surface Correction	104
14	☐	Pavement and Shoulder Resurfacing	106
15	☐	Patching with Hot-Mix Asphalt Overlay Removal	107
16	☐	Polymer Concrete	109
17	☐	PVC Pipeliner	111
18	☐	Bicycle Racks	112
19	☐	Temporary Portable Bridge Traffic Signals	114
20	☐	Work Zone Public Information Signs	116
21	☐	Nighttime Inspection of Roadway Lighting	117
22	☐	English Substitution of Metric Bolts	118
23	☐	Calcium Chloride Accelerator for Portland Cement Concrete	119
24	☐	Quality Control of Concrete Mixtures at the Plant	120
25	☒	Quality Control/Quality Assurance of Concrete Mixtures	128
26	☐	Digital Terrain Modeling for Earthwork Calculations	144
27	☐	Reserved	146
28	☐	Preventive Maintenance - Bituminous Surface Treatment	147
29	☐	Reserved	153
30	☐	Reserved	154
31	☐	Reserved	155
32	☐	Temporary Raised Pavement Markers	156
33	☐	Restoring Bridge Approach Pavements Using High-Density Foam	157
34	☐	Portland Cement Concrete Inlay or Overlay	160
35	☐	Portland Cement Concrete Partial Depth Hot-Mix Asphalt Patching	164

The Following Local Roads And Streets Recurring Special Provisions Indicated By An "X" Are Applicable To This Contract And Are Included By Reference:

Local Roads And Streets Recurring Special Provisions

Check Sheet #			Page No.
LRS 1		**Reserved**	168
LRS 2	☐	Furnished Excavation	169
LRS 3	☒	Work Zone Traffic Control Surveillance	170
LRS 4	☒	Flaggers in Work Zones	171
LRS 5	☐	Contract Claims	172
LRS 6	☐	Bidding Requirements and Conditions for Contract Proposals	173
LRS 7	☐	Bidding Requirements and Conditions for Material Proposals	179
LRS 8		**Reserved**	185
LRS 9	☐	Bituminous Surface Treatments	186
LRS 10		**Reserved**	187
LRS 11	☐	Employment Practices	188
LRS 12	☐	Wages of Employees on Public Works	190
LRS 13	☐	Selection of Labor	192
LRS 14	☐	Paving Brick and Concrete Paver Pavements and Sidewalks	193
LRS 15	☐	Partial Payments	196
LRS 16	☐	Protests on Local Lettings	197
LRS 17	☐	Substance Abuse Prevention Program	198
LRS 18	☐	Multigrade Cold Mix Asphalt	199

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
QUALITY CONTROL/QUALITY ASSURANCE OF CONCRETE MIXTURES

Effective: April 1, 1992
Revised: January 1, 2015

Add the following to Section 1020 of the Standard Specifications:

"**1020.16 Quality Control/Quality Assurance of Concrete Mixtures.** This Article specifies the quality control responsibilities of the Contractor for concrete mixtures (except Class PC and PS concrete), cement aggregate mixture II, and controlled low-strength material incorporated in the project, and defines the quality assurance and acceptance responsibilities of the Engineer.

A list of quality control/quality assurance (QC/QA) documents is provided in Article 1020.16(g), Schedule D.

A Level I Portland Cement Concrete (PCC) Technician shall be defined as an individual who has successfully completed the Department's training for concrete testing.

A Level II Portland Cement Concrete (PCC) Technician shall be defined as an individual who has successfully completed the Department's training for concrete proportioning.

A Level III Portland Cement Concrete (PCC) Technician shall be defined as an individual who has successfully completed the Department's training for concrete mix design.

A Concrete Tester shall be defined as an individual who has successfully completed the Department's training to assist with concrete testing and is monitored on a daily basis.

Aggregate Technician shall be defined as an individual who has successfully completed the Department's training for gradation testing involving aggregate production and mixtures.

Mixture Aggregate Technician shall be defined as an individual who has successfully completed the Department's training for gradation testing involving mixtures.

Gradation Technician shall be defined as an individual who has successfully completed the Department's training to assist with gradation testing and is monitored on a daily basis.

(a) Equipment/Laboratory. The Contractor shall provide a laboratory and test equipment to perform their quality control testing.

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

The laboratory shall be of sufficient size and be furnished with the necessary equipment, supplies, and current published test methods for adequately and safely performing all required tests. The laboratory will be approved by the Engineer according to the current Bureau of Materials and Physical Research Policy Memorandum "Minimum Private Laboratory Requirements for Construction Materials Testing or Mix Design". Production of a mixture shall not begin until the Engineer provides written approval of the laboratory. The Contractor shall refer to the Department's "Required Sampling and Testing Equipment for Concrete" for equipment requirements.

Test equipment shall be maintained and calibrated as required by the appropriate test method, and when required by the Engineer. This information shall be documented on the Department's "Calibration of Concrete Testing Equipment" forms BMPR PCCQ01 through BMPR PCCQ09.

Test equipment used to determine compressive or flexural strength shall be calibrated each 12 month period by an independent agency, using calibration equipment traceable to the National Institute of Standards and Technology (NIST). The Contractor shall have the calibration documentation available at the test equipment location.

The Engineer will have unrestricted access to the plant and laboratory at any time to inspect measuring and testing equipment, and will notify the Contractor of any deficiencies. Defective equipment shall be immediately repaired or replaced by the Contractor.

(b) Quality Control Plan. The Contractor shall submit, in writing, a proposed Quality Control (QC) Plan to the Engineer. The QC Plan shall be submitted a minimum of 45 calendar days prior to the production of a mixture. The QC Plan shall address the quality control of the concrete, cement aggregate mixture II, and controlled low-strength material incorporated in the project. The Contractor shall refer to the Department's "Model Quality Control Plan for Concrete Production" to prepare a QC Plan. The Engineer will respond in writing to the Contractor's proposed QC Plan within 15 calendar days of receipt.

Production of a mixture shall not begin until the Engineer provides written approval of the QC Plan. The approved QC Plan shall become a part of the contract between the Department and the Contractor, but shall not be construed as acceptance of any mixture produced.

The QC Plan may be amended during the progress of the work, by either party, subject to mutual agreement. The Engineer will respond in writing to a Contractor's proposed QC Plan amendment within 15 calendar days of receipt. The response will indicate the approval or denial of the Contractor's proposed QC Plan amendment.

(c) Quality Control by Contractor. The Contractor shall perform quality control inspection, sampling, testing, and documentation to meet contract requirements. Quality control includes the recognition of obvious defects

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

and their immediate correction. Quality control also includes appropriate action when passing test results are near specification limits, or to resolve test result differences with the Engineer. Quality control may require increased testing, communication of test results to the plant or the jobsite, modification of operations, suspension of mixture production, rejection of material, or other actions as appropriate. The Engineer shall be immediately notified of any failing tests and subsequent remedial action. Passing tests shall be reported no later than the start of the next work day.

When a mixture does not comply with specifications, the Contractor shall reject the material, unless the Engineer accepts the material for incorporation in the work, according to Article 105.03.

(1) Personnel Requirements. The Contractor shall provide a Quality Control (QC) Manager who will have overall responsibility and authority for quality control. The jobsite and plant personnel shall be able to contact the QC Manager by cellular phone, two-way radio, or other methods approved by the Engineer.

The QC Manager shall visit the jobsite a minimum of once a week. A visit shall be performed the day of a bridge deck pour, the day a non-routine mixture is placed as determined by the Engineer, or the day a plant is anticipated to produce more than 1000 cu yd (765 cu m). Any of the three required visits may be used to meet the once per week minimum requirement.

The Contractor shall provide personnel to perform the required inspections, sampling, testing, and documentation in a timely manner. The Contractor shall refer to the Department's "Qualifications and Duties of Concrete Quality Control Personnel" document.

A Level I PCC Technician shall be provided at the jobsite during mixture production and placement, and may supervise concurrent pours on the project. For concurrent pours, a minimum of one Concrete Tester shall be required at each pour location. If the Level I PCC Technician is at one of the pour locations, a Concrete Tester is still required at the same location. Each Concrete Tester shall be able to contact the Level I PCC Technician by cellular phone, two-way radio, or other methods approved by the Engineer. A single Level I PCC Technician shall not supervise concurrent pours for multiple contracts.

A Level II PCC Technician shall be provided at the plant, or shall be available, during mixture production and placement. A Level II PCC Technician may supervise a maximum of three plants. Whenever the Level II PCC Technician is not at the plant during mixture production and placement, a Concrete Tester or Level I PCC Technician shall be present at the plant to perform any necessary concrete tests. The Concrete Tester, Level I PCC Technician, or other individual shall also be trained to perform any necessary aggregate moisture tests, if the Level II PCC Technician is not at the plant during mixture production and placement. The Concrete Tester, Level I PCC Technician, plant personnel, and jobsite personnel shall have the ability to contact the

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

Level II PCC Technician by cellular phone, two-way radio, or other methods approved by the Engineer.

For a mixture which is produced and placed with a mobile portland cement concrete plant as defined in Article 1103.04, a Level II PCC Technician shall be provided. The Level II PCC Technician shall be present at all times during mixture production and placement. However, the Level II PCC Technician may request to be available if operations are satisfactory. Approval shall be obtained from the Engineer, and jobsite personnel shall have the ability to contact the Level II PCC Technician by cellular phone, two-way radio, or other methods approved by the Engineer.

A Concrete Tester, Mixture Aggregate Technician, and Aggregate Technician may provide assistance with sampling and testing. A Gradation Technician may provide assistance with testing. A Concrete Tester shall be supervised by a Level I or Level II PCC Technician. A Gradation Technician shall be supervised by a Level II PCC Technician, Mixture Aggregate Technician, or Aggregate Technician.

(2) Required Plant Tests. Sampling and testing shall be performed at the plant, or at a location approved by the Engineer, to control the production of a mixture. The required minimum Contractor plant sampling and testing is indicated in Article 1020.16(g) Schedule A.

(3) Required Field Tests. Sampling and testing shall be performed at the jobsite to control the production of a mixture, and to comply with specifications for placement. For standard curing, after initial curing, and for strength testing, the location shall be approved by the Engineer. The required minimum Contractor jobsite sampling and testing is indicated in Article 1020.16(g), Schedule B.

(d) Quality Assurance by Engineer. The Engineer will perform quality assurance tests on independent samples and split samples. An independent sample is a field sample obtained and tested by only one party. A split sample is one of two equal portions of a field sample, where two parties each receive one portion for testing. The Engineer may request the Contractor to obtain a split sample. Aggregate split samples and any failing strength specimen shall be retained until permission is given by the Engineer for disposal. The results of all quality assurance tests by the Engineer will be made available to the Contractor. However, Contractor split sample test results shall be provided to the Engineer before Department test results are revealed. The Engineer's quality assurance independent sample and split sample testing are indicated in Article 1020.16(g), Schedule C.

(1) Strength Testing. For strength testing, Article 1020.09 shall apply, except the Contractor and Engineer strength specimens may be placed in the same field curing box for initial curing and may be cured in the same water storage tank for final curing.

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

(2) Comparing Test Results. Differences between the Engineer's and the Contractor's split sample test results will be considered reasonable if within the following limits:

Test Parameter	Acceptable Limits of Precision
Slump	0.75 in. (20 mm)
Air Content	0.9%
Compressive Strength	900 psi (6200 kPa)
Flexural Strength	90 psi (620 kPa)
Slump Flow (Self-Consolidating Concrete (SCC))	1.5 in. (40 mm)
Visual Stability Index (SCC)	Not Applicable
J-Ring (SCC)	1.5 in. (40 mm)
L-Box (SCC)	10 %
Hardened Visual Stability Index (SCC)	Not Applicable
Dynamic Segregation Index (SCC)	1.0 %
Flow (Controlled Low-Strength Material (CLSM))	1.5 in. (40 mm)
Strength (CLSM)	40 psi (275 kPa)
Aggregate Gradation	See "Guideline for Sample Comparison" in Appendix "A" of the Manual of Test Procedures for Materials.

When acceptable limits of precision have been met, but only one party is within specification limits, the failing test shall be resolved before the material may be considered for acceptance.

(3) Test Results and Specification Limits.

a. Split Sample Testing. If either the Engineer's or the Contractor's split sample test result is not within specification limits and the other party is within specification limits, immediate retests on a split sample shall be performed for slump, air content, slump flow, visual stability index, J-Ring, L-Box, dynamic segregation index, flow (CLSM), or aggregate gradation. A passing retest result by each party will require no further action. If either the Engineer's or Contractor's slump, air content, slump flow, visual stability index, J-Ring, L-Box, dynamic segregation index, flow (CLSM), or aggregate gradation split sample retest result is a failure; or if either the Engineer's or Contractor's strength or hardened visual stability index test result is a failure and the other party is within specification limits; the following actions shall be initiated to investigate the test failure:

1. The Engineer and the Contractor shall investigate the sampling method, test procedure, equipment condition, equipment calibration, and other factors.

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

2. The Engineer or the Contractor shall replace test equipment, as determined by the Engineer.

3. The Engineer and the Contractor shall perform additional testing on split samples, as determined by the Engineer.

For aggregate gradation, jobsite slump, jobsite air content, jobsite slump flow, jobsite visual stability index, jobsite J-Ring, jobsite L-Box, jobsite dynamic segregation index, and jobsite flow (CLSM), if the failing split sample test result is not resolved according to 1., 2., or 3., and the mixture has not been placed, the Contractor shall reject the material; unless the Engineer accepts the material for incorporation in the work, according to Article 105.03. If the mixture has already been placed, or if a failing strength or hardened visual stability index test result is not resolved according to 1., 2., or 3., the material will be considered unacceptable.

If a continued trend of difference exists between the Engineer's and the Contractor's split sample test results, or if split sample test results exceed the acceptable limits of precision, the Engineer and the Contractor shall investigate according to items 1., 2., and 3.

b. Independent Sample Testing. For aggregate gradation, jobsite slump, jobsite air content, jobsite slump flow, jobsite visual stability index, jobsite J-Ring, jobsite L-Box, jobsite dynamic segregation index, jobsite flow (CLSM), if the result of a quality assurance test on a sample independently obtained by the Engineer is not within specification limits, and the mixture has not been placed, the Contractor shall reject the material; unless the Engineer accepts the material for incorporation in the work, according to Article 105.03. If the mixture has already been placed or the Engineer obtains a failing strength or hardened visual stability index test result, the material will be considered unacceptable.

(e) Acceptance by the Engineer. Final acceptance will be based on the Standard Specifications and the following:

(1) The Contractor's compliance with all contract documents for quality control.

(2) Validation of Contractor quality control test results by comparison with the Engineer's quality assurance test results using split samples. Any quality control or quality assurance test determined to be flawed may be declared invalid only when reviewed and approved by the Engineer. The Engineer will declare a test result invalid only if it is proven that improper sampling or testing occurred. The test result is to be recorded and the reason for declaring the test invalid will be provided by the Engineer.

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

(3) Comparison of the Engineer's quality assurance test results with specification limits using samples independently obtained by the Engineer.

The Engineer may suspend mixture production, reject materials, or take other appropriate action if the Contractor does not control the quality of concrete, cement aggregate mixture II, or controlled low-strength material for acceptance. The decision will be determined according to (1), (2), or (3).

(f) Documentation.

(1) Records. The Contractor shall be responsible for documenting all observations, inspections, adjustments to the mix design, test results, retest results, and corrective actions in a bound hardback field book, bound hardback diary, or appropriate Department form, which shall become the property of the Department. The documentation shall include a method to compare the Engineer's test results with the Contractor's results. The Contractor shall be responsible for the maintenance of all permanent records whether obtained by the Contractor, the consultants, the subcontractors, or the producer of the mixture. The Contractor shall provide the Engineer full access to all documentation throughout the progress of the work.

The Department's form BMPR MI504, form BMPR MI654, and form BMPR MI655 shall be completed by the Contractor, and shall be submitted to the Engineer weekly or as required by the Engineer. A correctly completed form BMPR MI504, form BMPR MI654, and form BMPR MI655 are required to authorize payment by the Engineer for applicable pay items.

(2) Delivery Truck Ticket. The following information shall be recorded on each delivery ticket or in a bound hardback field book: initial revolution counter reading (final reading optional) at the jobsite, if the mixture is truck-mixed; time discharged at the jobsite; total amount of each admixture added at the jobsite; and total amount of water added at the jobsite.

(g) Basis of Payment and Schedules. Quality Control/Quality Assurance of portland cement concrete mixtures will not be paid for separately, but shall be considered as included in the cost of the various concrete contract items.

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

CHECK SHEET #25

SCHEDULE A

CONTRACTOR PLANT SAMPLING AND TESTING			
Item	Test	Frequency	IL Modified AASHTO, IL Modified ASTM, or Illinois Test Procedure [1/]
Aggregates (Arriving at Plant)	Gradation [2/]	As needed to check source for each gradation number	ITP 2, ITP 11, ITP 27, and ITP 248
Aggregates (Stored at Plant in Stockpiles or Bins)	Gradation [2/]	2500 cu yd (1900 cu m) for each gradation number [3/]	ITP 2, ITP 11, ITP 27, and ITP 248
Aggregates (Stored at Plant in Stockpiles or Bins)	Moisture [4/]: Fine Aggregate	Once per week for moisture sensor, otherwise daily for each gradation number	Flask, Dunagan, Pychnometer Jar, or ITP 255
	Moisture [4/]: Coarse Aggregate	As needed to control production for each gradation number	Dunagan, Pychnometer Jar, or ITP 255
Mixture [5/]	Slump Air Content Unit Weight / Yield Slump Flow (SCC) Visual Stability Index (SCC) J-Ring (SCC) [6/] L-Box (SCC) [6/] Temperature	As needed to control production	R 60 and T 119 R 60 and T 152 or T 196 R 60 and T 121 ITP SCC-1 and ITP SCC-2 ITP SCC-1 and ITP SCC-2 ITP SCC-1 and ITP SCC-3 ITP SCC-1 and ITP SCC-4 R 60 and ASTM C 1064
Mixture (CLSM) [7/]	Flow Air Content Temperature	As needed to control production	ITP 307

1/ Refer to the Department's "Manual of Test Procedures for Materials".

2/ All gradation tests shall be washed. Testing shall be completed no later than 24 hours after the aggregate has been sampled.

3/ One per week (Sunday through Saturday) minimum, unless the stockpile has not received additional aggregate material since the previous test.

One per day minimum for a bridge deck pour, unless the stockpile has not received additional aggregate material since the previous test. The sample shall be taken and testing completed prior to the pour. The bridge deck aggregate sample may be taken the day before the pour or as approved by the Engineer.

4/ If the moisture test and moisture sensor disagree by more than 0.5 percent, retest. If the difference remains, adjust the moisture sensor to an average of two or more moisture tests. The Department's "Water/Cement Ratio Worksheet" form (BMPR PCCW01) shall be completed, when applicable.

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

5/ The Contractor may also perform strength testing according to Illinois Modified AASHTO R 60, T 23, and T 22 or T 177; or water content testing according to Illinois Modified AASHTO T 318.

The Contractor may also perform other available self-consolidating concrete (SCC) tests at the plant to control mixture production.

6/ The Contractor shall select the J-Ring or L-Box test for plant sampling and testing.

7/ The Contractor may also perform strength testing according to ITP 307.

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

CHECK SHEET #25

SCHEDULE B

CONTRACTOR JOBSITE SAMPLING & TESTING [1/]			
Item	Measured Property	Random Sample Testing Frequency per Mix Design and per Plant [2/]	IL Modified AASHTO, IL Modified ASTM, or Illinois Test Procedure
Pavement, Shoulder, Base Course, Base Course Widening, Driveway Pavement, Railroad Crossing, Cement Aggregate Mixture II	Slump [3/ 4/]	1 per 500 cu yd (400 cu m) or minimum 1/day	R 60 and T 119
	Air Content [3/ 5/ 6/]	1 per 100 cu yd (80 cu m) or minimum 1/day	R 60 and T 152 or T 196
	Compressive Strength [7/ 8/] or Flexural Strength [7/ 8/]	1 per 1250 cu yd (1000 cu m) or minimum 1/day	R 60, T 22 and T 23 or R 60, T 177 and T 23
Bridge Approach Slab [9/], Bridge Deck [9/], Bridge Deck Overlay [9/], Superstructure [9/], Substructure, Culvert, Miscellaneous Drainage Structures, Retaining Wall, Building Wall, Drilled Shaft Pile & Encasement Footing, Foundation, Pavement Patching, Structural Repairs	Slump [3/ 4/]	1 per 50 cu yd (40 cu m) or minimum 1/day	R 60 and T 119
	Air Content [3/ 5/ 6/]	1 per 50 cu yd (40 cu m) or minimum 1/day	R 60 and T 152 or T 196
	Compressive Strength [7/ 8/] or Flexural Strength [7/ 8/]	1 per 250 cu yd (200 cu m) or minimum 1/day	R 60, T 22 and T 23 or R 60, T 177 and T 23
Seal Coat	Slump [3/]	1 per 250 cu yd (200 cu m) or minimum 1/day	R 60 and T 119
	Air Content [3/ 5/ 6/]	1 per 250 cu yd (200 cu m) or minimum 1/day when air is entrained	R 60 and T 152 or T 196
	Compressive Strength [7/ 8/] or Flexural Strength [7/ 8/]	1 per 250 cu yd (200 cu m) or minimum 1/day	R 60, T 22 and T 23 or R 60, T 177 and T 23

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

CONTRACTOR JOBSITE SAMPLING & TESTING [1/]			
Curb, Gutter, Median, Barrier, Sidewalk, Slope Wall, Paved Ditch, Fabric Formed Concrete Revetment Mat [10/], Miscellaneous Items, Incidental Items	Slump [3/ 4/]	1 per 100 cu yd (80 cu m) or minimum 1/day	R 60 and T 119
	Air Content [3/ 5/ 6/]	1 per 50 cu yd (40 cu m) or minimum 1/day	R 60 and T 152 or T 196
	Compressive Strength [7/ 8/] or Flexural Strength [7/ 8/]	1 per 400 cu yd (300 cu m) or minimum 1/day	R 60, T 22 and T 23 or R 60, T 177 and T 23
Items Using Self-Consolidating Concrete	Slump Flow [3/] VSI [3/] J-Ring [3/ 11/] L-Box [3/ 11/]	Perform at same frequency that is specified for the Item's slump	ITP SCC-1 & ITP SCC-2 ITP SCC-1 & ITP SCC-2 ITP SCC-1 & ITP SCC-3 ITP SCC-1 & ITP SCC-4
	HVSI [12/]	Minimum 1/day at start of production for that day	ITP SCC-1 and ITP SCC-6
	Dynamic Segregation Index (DSI)	Minimum 1/week at start of production for that week	ITP SCC-1 and ITP SCC-8 (Option C)
	Air Content [3/ 5/ 6/]	Perform at same frequency that is specified for the Item's air content	ITP SCC-1 and T 152 or T 196
	Compressive Strength [7/ 8/] or Flexural Strength [7/ 8/]	Perform at same frequency that is specified for the Item's strength	ITP SCC-1, T 22 and T 23 or ITP SCC-1, T 177 and T 23
All	Temperature [3/]	As needed to control production	R 60 and ASTM C 1064
Controlled Low-Strength Material (CLSM)	Flow, Air Content, Compressive Strength (28-day) [13/], and Temperature	First truck load delivered and as needed to control production thereafter	ITP 307

1/ Sampling and testing of small quantities of curb, gutter, median, barrier, sidewalk, slope wall, paved ditch, miscellaneous items, and incidental items may be waived by the Engineer, if requested by the Contractor. However, quality control personnel are still required according to Article 1020.16(c)(1). The Contractor shall also provide recent evidence that similar material has been found to be satisfactory under normal sampling and testing

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

procedures. The total quantity that may be waived for testing shall not exceed 100 cu yd (76 cu m) per contract.

If the Contractor's or Engineer's test result for any jobsite mixture test is not within the specification limits, all subsequent truck loads delivered shall be tested by the Contractor until the problem is corrected.

2/ If one mix design is being used for several construction items during a day's production, one testing frequency may be selected to include all items. The construction items shall have the same slump, air content, and water/cement ratio specifications. For self-consolidating concrete, the construction items shall have the same slump flow, visual stability index, J-Ring, L-Box, air content, and water/cement ratio specifications. The frequency selected shall equal or exceed the testing required for the construction item.

One sufficiently sized sample shall be taken to perform the required test(s). Random numbers shall be determined according to the Department's "Method for Obtaining Random Samples for Concrete". The Engineer will provide random sample locations.

3/ The temperature, slump, and air content tests shall be performed on the first truck load delivered, for each pour. For self-consolidating concrete, the temperature, slump flow, visual stability index, J-Ring or L-Box, and air content tests shall be performed on the first truck load delivered, for each pour. Unless a random sample is required for the first truck load, testing the first truck load does not satisfy random sampling requirements.

4/ The slump random sample testing frequency shall be a minimum 1/day for a construction item which is slipformed.

5/ If a pump or conveyor is used for placement, a correction factor shall be established to allow for a loss of air content during transport. The first three truck loads delivered shall be tested, before and after transport by the pump or conveyor, to establish the correction factor. Once the correction is determined, it shall be re-checked after an additional 50 cu yd (38 cu m) is pumped, or an additional 100 cu yd (76 cu m) is transported by conveyor. This shall continue throughout the pour. If the re-check indicates the correction factor has changed, a minimum of two truckloads is required to re-establish the correction factor. The correction factor shall also be re-established when significant changes in temperature, distance, pump or conveyor arrangement, and other factors have occurred. If the correction factor is greater than 3.0 percent, the Contractor shall take corrective action to reduce the loss of air content during transport by the pump or conveyor. The Contractor shall record all air content test results, correction factors, and corrected air contents. The corrected air content shall be reported on form BMPR MI654.

6/ If the Contractor's or Engineer's air content test result is within the specification limits, and 0.2 percent or closer to either limit, the next truck load delivered shall be tested by the Contractor. For example, if the specified air content range is 5.0 to 8.0 percent and the test result is 5.0, 5.1, 5.2, 7.8, 7.9, or 8.0 percent, the next truck shall be tested by the Contractor.

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

7/ The test of record for strength shall be the day indicated in Article 1020.04. For cement aggregate mixture II, a strength requirement is not specified and testing is not required. Additional strength testing to determine early falsework and form removal, early pavement or bridge opening to traffic, or to monitor strengths is at the discretion of the Contractor. Strength shall be defined as the average of two 6 x 12 in. (150 x 300 mm) cylinder breaks, three 4 x 8 in. (100 x 200 mm) cylinder breaks, or two beam breaks for field tests. Per Illinois Modified AASHTO T 23, cylinders shall be 6 x 12 in. (150 x 300 mm) when the nominal maximum size of the coarse aggregate exceeds 1 in. (25 mm). Nominal maximum size is defined as the largest sieve which retains any of the aggregate sample particles.

8/ In addition to the strength test, a slump test, air content test, and temperature test shall be performed on the same sample. For self-consolidating concrete, a slump flow test, visual stability index test, J-Ring or L-Box test, air content test, and temperature test shall be performed on the same sample as the strength test. For mixtures pumped or conveyored, the Contractor shall sample according to Illinois Modified AASHTO R 60.

9/ The air content test will be required for each delivered truck load.

10/ For fabric formed concrete revetment mat, the slump test is not required and the flexural strength test is not applicable.

11/ The Contractor shall select the J-Ring or L-Box test for jobsite sampling and testing.

12/ In addition to the hardened visual stability index (HVSI) test, a slump flow test, visual stability index (VSI) test, J-Ring or L-Box test, air content test, and temperature test shall be performed on the same sample. The Contractor shall retain all hardened visual stability index cut cylinder specimens until the Engineer notifies the Contractor that the specimens may be discarded.

13/ The test of record for strength shall be the day indicated in Article 1019.04. In addition to the strength test, a flow test, air content test, and temperature test shall be performed on the same sample. The strength test may be waived by the Engineer if future removal of the material is not a concern.

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

SCHEDULE C

ENGINEER QUALITY ASSURANCE INDEPENDENT SAMPLE TESTING		
Location	Measured Property	Testing Frequency [1/]
Plant	Gradation of aggregates stored in stockpiles or bins, Slump and Air Content	As determined by the Engineer.
Jobsite	Slump, Air Content, Slump Flow, Visual Stability Index, J-Ring, L-Box, Hardened Visual Stability Index, Dynamic Segregation Index, and Strength	As determined by the Engineer.
	Flow, Air Content, Strength (28-day), and Dynamic Cone Penetration for Controlled Low-Strength Material (CLSM)	As determined by the Engineer

ENGINEER QUALITY ASSURANCE SPLIT SAMPLE TESTING [2/]		
Location	Measured Property	Testing Frequency [1/]
Plant	Gradation of aggregates stored in stockpiles or bins	At the beginning of the project, the first test performed by the Contractor. Thereafter, a minimum of 10% of total tests required of the Contractor will be performed per aggregate gradation number and per plant.
	Slump, Air Content, Slump Flow (SCC), Visual Stability Index (SCC), J-Ring (SCC), and L-Box (SCC)	As determined by the Engineer.
Jobsite	Slump, Air Content [3/], Slump Flow, Visual Stability Index, J-Ring and L-Box	At the beginning of the project, the first three tests performed by the Contractor. Thereafter, a minimum of 20% of total tests required of the Contractor will be performed per plant, which will include a minimum of one test per mix design.
	Hardened Visual Stability Index	As determined by the Engineer.
	Dynamic Segregation Index	As determined by the Engineer.
	Strength	At the beginning of the project, the first test performed by the Contractor. Thereafter, a minimum of 20% of total tests required of the Contractor will be performed per plant, which will include a minimum of one test per mix design.
	Flow, Air Content, and Strength (28-day) for Controlled Low-Strength Material (CLSM)	As determined by the Engineer.

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

1/ The Engineer will perform the testing throughout the period of quality control testing by the Contractor.

2/ The Engineer will witness and take immediate possession of or otherwise secure the Department's split sample obtained by the Contractor.

3/ Before transport by pump or conveyor, a minimum of 20 percent of total tests required of the Contractor will be performed per mix design and per plant. After transport by pump or conveyor, a minimum of 20 percent of total tests required of the Contractor will be performed per mix design and per plant.

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

CHECK SHEET #25

SCHEDULE D

CONCRETE QUALITY CONTROL AND QUALITY ASSURANCE DOCUMENTS

(a) Model Quality Control Plan for Concrete Production (*)

(b) Qualifications and Duties of Concrete Quality Control Personnel (*)

(c) Development of Gradation Bands on Incoming Aggregate at Mix Plants (*)

(d) Required Sampling and Testing Equipment for Concrete (*)

(e) Method for Obtaining Random Samples for Concrete (*)

(f) Calibration of Concrete Testing Equipment (BMPR PCCQ01 through BMPR PCCQ09) (*)

(g) Water/Cement Ratio Worksheet (BMPR PCCW01) (*)

(h) Field/Lab Gradations (BMPR MI504) (*)

(i) Concrete Air, Slump and Quantity (BMPR MI654) (*)

(j) P.C. Concrete Strengths (BMPR MI655) (*)

(k) Aggregate Technician Course or Mixture Aggregate Technician Course (*)

(l) Portland Cement Concrete Tester Course (*)

(m) Portland Cement Concrete Level I Technician Course - Manual of Instructions for Concrete Testing (*)

(n) Portland Cement Concrete Level II Technician Course - Manual of Instructions for Concrete Proportioning (*)

(o) Portland Cement Concrete Level III Technician Course - Manual of Instructions for Design of Concrete Mixtures (*)

(p) Manual of Test Procedures for Materials

* Refer to Appendix C of the Department's "Manual of Test Procedures for Materials" for more information.

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

BDE SPECIAL PROVISIONS
For the August 3 and September 21, 2018 Lettings

The following special provisions indicated by an "x" are applicable to this contract and will be included by the Project Development and Implementation Section of the BD&E. An * indicates a new or revised special provision for the letting.

	File Name	#		Special Provision Title	Effective	Revised
	80099	1		Accessible Pedestrian Signals (APS)	April 1, 2003	Jan. 1, 2014
	80382	2		Adjusting Frames and Grates	April 1, 2017	
	80274	3		Aggregate Subgrade Improvement	April 1, 2012	April 1, 2016
	80192	4		Automated Flagger Assistance Device	Jan. 1, 2008	
	80173	5		Bituminous Materials Cost Adjustments	Nov. 2, 2006	Aug. 1, 2017
	80241	6		Bridge Demolition Debris	July 1, 2009	
	5026I	7		Building Removal-Case I (Non-Friable and Friable Asbestos)	Sept. 1, 1990	April 1, 2010
	5048I	8		Building Removal-Case II (Non-Friable Asbestos)	Sept. 1, 1990	April 1, 2010
	5049I	9		Building Removal-Case III (Friable Asbestos)	Sept. 1, 1990	April 1, 2010
	5053I	10		Building Removal-Case IV (No Asbestos)	Sept. 1, 1990	April 1, 2010
	80366	11	✓	Butt Joints	July 1, 2016	
	80386	12		Calcium Aluminate Cement for Class PP-5 Concrete Patching	Nov. 1, 2017	
	80396	13	✓	Class A and B Patching	Jan. 1, 2018	
	80384	14		Compensable Delay Costs	June 2, 2017	
	80198	15		Completion Date (via calendar days)	April 1, 2008	
	80199	16		Completion Date (via calendar days) Plus Working Days	April 1, 2008	
	80293	17		Concrete Box Culverts with Skews > 30 Degrees and Design Fills ≤ 5 Feet	April 1, 2012	July 1, 2016
	80311	18		Concrete End Sections for Pipe Culverts	Jan. 1, 2013	April 1, 2016
	80277	19		Concrete Mix Design – Department Provided	Jan. 1, 2012	April 1, 2016
	80261	20	✓	Construction Air Quality – Diesel Retrofit	June 1, 2010	Nov. 1, 2014
	80387	21		Contrast Preformed Plastic Pavement Marking	Nov. 1, 2017	
*	80029	22		Disadvantaged Business Enterprise Participation	Sept. 1, 2000	April 2, 2018
	80378	23		Dowel Bar Inserter	Jan. 1, 2017	Jan. 1, 2018
	80388	24		Equipment Parking and Storage	Nov. 1, 2017	
	80229	25		Fuel Cost Adjustment	April 1, 2009	Aug. 1, 2017
	80304	26	✓	Grooving for Recessed Pavement Markings	Nov. 1, 2012	Nov. 1, 2017
*	80246	27	✓	Hot-Mix Asphalt – Density Testing of Longitudinal Joints	Jan. 1, 2010	Aug. 1, 2018
*	80398	28		Hot-Mix Asphalt – Longitudinal Joint Sealant	Aug. 1, 2018	
*	80399	29		Hot-Mix Asphalt – Oscillatory Roller	Aug. 1, 2018	
*	80347	30		Hot-Mix Asphalt – Pay for Performance Using Percent Within Limits – Jobsite Sampling	Nov. 1, 2014	Aug. 1, 2018
	80383	31		Hot-Mix Asphalt – Quality Control for Performance	April 1, 2017	Nov. 1, 2017
	80376	32	✓	Hot-Mix Asphalt – Tack Coat	Nov. 1, 2016	
	80392	33		Lights on Barricades	Jan. 1, 2018	
	80336	34		Longitudinal Joint and Crack Patching	April 1, 2014	April 1, 2016
*	80393	35		Manholes, Valve Vaults, and Flat Slab Tops	Jan. 1, 2018	March 2, 2018
*	80400	36		Mast Arm Assembly and Pole	Aug. 1, 2018	
	80045	37		Material Transfer Device	June 15, 1999	Aug. 1, 2014
	80394	38		Metal Flared End Section for Pipe Culverts	Jan. 1, 2018	April 1, 2018
	80165	39		Moisture Cured Urethane Paint System	Nov. 1, 2006	Jan. 1, 2010
	80349	40		Pavement Marking Blackout Tape	Nov. 1, 2014	April 1, 2016
	80371	41		Pavement Marking Removal	July 1, 2016	
	80390	42		Payments to Subcontractors	Nov. 2, 2017	
	80377	43		Portable Changeable Message Signs	Nov. 1, 2016	April 1, 2017
	80389	44	✓	Portland Cement Concrete	Nov. 1, 2017	
	80359	45		Portland Cement Concrete Bridge Deck Curing	April 1, 2015	Nov. 1, 2017
*	80401	46		Portland Cement Concrete Pavement Connector for Bridge Approach	Aug. 1, 2018	

File Name	#		Special Provision Title	Effective	Revised
			Slab		
80385	47		Portland Cement Concrete Sidewalk	Aug. 1, 2017	
80300	48		Preformed Plastic Pavement Marking Type D - Inlaid	April 1, 2012	April 1, 2016
80328	49		Progress Payments	Nov. 2, 2013	
3426I	50		Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
80157	51		Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	
80306	52		Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS)	Nov. 1, 2012	Jan. 1, 2018
80395	53		Sloped Metal End Section for Pipe Culverts	Jan. 1, 2018	
80340	54		Speed Display Trailer	April 2, 2014	Jan. 1, 2017
80127	55		Steel Cost Adjustment	April 2, 2004	Aug. 1, 2017
* **80397**	**56**		**Subcontractor and DBE Payment Reporting**	**April 2, 2018**	
80391	57		Subcontractor Mobilization Payments	Nov. 2, 2017	
80317	58		Surface Testing of Hot-Mix Asphalt Overlays	Jan. 1, 2013	April 1, 2016
80298	59	✓	Temporary Pavement Marking (NOTE: This special provision was previously named *"Pavement Marking Tape Type IV"*.)	April 1, 2012	April 1, 2017
20338	60		Training Special Provisions	Oct. 15, 1975	
80318	61		Traversable Pipe Grate for Concrete End Sections (NOTE: This special provision was previously named "*Traversable Pipe Grate*".)	Jan. 1, 2013	Jan. 1, 2018
80288	62		Warm Mix Asphalt	Jan. 1, 2012	April 1, 2016
80302	63		Weekly DBE Trucking Reports	June 2, 2012	April 2, 2015
80071	64		Working Days	Jan. 1, 2002	

The following special provisions are in the 2018 Supplemental Specifications and Recurring Special Provisions.

File Name	Special Provision Title	New Location	Effective	Revised
80368	Light Tower	Article 1069.08	July 1, 2016	
80369	Mast Arm Assembly and Pole	Article 1077.03(a)(1)	July 1, 2016	
80338	Portland Cement Concrete Partial Depth Hot-Mix Asphalt Patching	Recurring CS #35	April 1, 2014	April 1, 2016
80379	Steel Plate Beam Guardrail	Articles 630.02, 630.05, 630.06, and 630.08	Jan. 1, 2017	
80381	Traffic Barrier Terminal, Type 1 Special	Article 631.04	Jan. 1, 2017	
80380	Tubular Markers	Articles 701.03, 701.15, 701.18, and 1106.02	Jan. 1, 2017	

The following special provisions require additional information from the designer. The additional information needs to be submitted as a separate document. The Project Development and Implementation section will then include the information in the applicable special provision. The Special Provisions are:

- Bridge Demolition Debris
- Building Removal - Case I
- Building Removal – Case II
- Building Removal - Case III
- Building Removal-Case IV
- Completion Date
- Completion Date Plus Working Days
- DBE Participation
- Material Transfer Device
- Railroad Protective Liability Insurance
- Training Special Provisions
- Working Days

BUTT JOINTS (BDE)

Effective: July 1, 2016

Add the following to Article 406.08 of the Standard Specifications.

"(c) Temporary Plastic Ramps. Temporary plastic ramps shall be made of high density polyethylene meeting the properties listed below. Temporary plastic ramps shall only be used on roadways with permanent posted speeds of 55 mph or less. The ramps shall have a minimum taper rate of 1:30 (V:H). The leading edge of the plastic ramp shall have a maximum thickness of 1/4 in. (6 mm) and the trailing edge shall match the height of the adjacent pavement ± 1/4 in. (± 6 mm).

The ramp will be accepted by certification. The Contractor shall furnish a certification from the manufacturer stating the temporary plastic ramp meets the following requirements.

Physical Property	Test Method	Requirement
Melt Index	ASTM D 1238	8.2 g/10 minutes
Density	ASTM D 1505	0.965 g/cc
Tensile Strength @ Break	ASTM D 638	2223 psi (15 MPa)
Tensile Strength @ Yield	ASTM D 638	4110 psi (28 MPa)
Elongation @ Yield [1/], percent	ASTM D 638	7.3 min.
Durometer Hardness, Shore D	ASTM D 2240	65
Heat Deflection Temperature, 66 psi	ASTM D 648	176 °F (80 °C)
Low Temperature Brittleness, F_{50}	ASTM D 746	<-105 °F (<-76 °C)

1/ Crosshead speed -2 in./minute

The temporary plastic ramps shall be installed according to the manufacturer's specifications and fastened with anchors meeting the manufacturer's recommendations. Temporary plastic ramps that fail to stay in place or create a traffic hazard shall be replaced immediately with temporary HMA ramps at the Contractor's expense."

80366

CLASS A AND B PATCHING (BDE)

Effective: January 1, 2018

Revise the second sentence of the first paragraph of Article 442.06(a)(1) of the Standard Specifications to read:

> "Patches more than 20 ft (6 m) in length, including half-lane patches, shall be tied to the adjacent pavement, portland cement concrete shoulders, and curb and gutter with No. 6 (No. 19) transverse tie bars, 24 in. (600 mm) long, embedded 8 in. (200 mm) at 36 in. (600 mm) centers according to Article 420.05(b)."

Revise the sixth paragraph of Article 442.06(a)(2) of the Standard Specifications to read:

> "Patches more than 20 ft (6 m) in length shall be tied to the adjacent lane of pavement, portland cement concrete shoulders, and curb and gutter with No. 6 (No. 19) transverse tie bars, 24 in. (600 mm) long, embedded 8 in. (200 mm) at 36 in. (600 mm) centers according to Article 420.05(b)."

80396

CONSTRUCTION AIR QUALITY – DIESEL RETROFIT (BDE)

Effective: June 1, 2010
Revised: November 1, 2014

The reduction of emissions of particulate matter (PM) for off-road equipment shall be accomplished by installing retrofit emission control devices. The term "equipment" refers to diesel fuel powered devices rated at 50 hp and above, to be used on the jobsite in excess of seven calendar days over the course of the construction period on the jobsite (including rental equipment).

Contractor and subcontractor diesel powered off-road equipment assigned to the contract shall be retrofitted using the phased in approach shown below. Equipment that is of a model year older than the year given for that equipment's respective horsepower range shall be retrofitted:

Effective Dates	Horsepower Range	Model Year
June 1, 2010 1/	600-749	2002
	750 and up	2006
June 1, 2011 2/	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006
June 1, 2012 2/	50-99	2004
	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006

1/ Effective dates apply to Contractor diesel powered off-road equipment assigned to the contract.

2/ Effective dates apply to Contractor and subcontractor diesel powered off-road equipment assigned to the contract.

The retrofit emission control devices shall achieve a minimum PM emission reduction of 50 percent and shall be:

a) Included on the U.S. Environmental Protection Agency (USEPA) *Verified Retrofit Technology List* (http://www.epa.gov/cleandiesel/verification/verif-list.htm), or verified by the California Air Resources Board (CARB) (http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm); or

b) Retrofitted with a non-verified diesel retrofit emission control device if verified retrofit emission control devices are not available for equipment proposed to be used on the project, and if the Contractor has obtained a performance certification from the retrofit

device manufacturer that the emission control device provides a minimum PM emission reduction of 50 percent.

Note: Large cranes (Crawler mounted cranes) which are responsible for critical lift operations are exempt from installing retrofit emission control devices if such devices adversely affect equipment operation.

Diesel powered off-road equipment with engine ratings of 50 hp and above, which are unable to be retrofitted with verified emission control devices or if performance certifications are not available which will achieve a minimum 50 percent PM reduction, may be granted a waiver by the Department if documentation is provided showing good faith efforts were made by the Contractor to retrofit the equipment.

Construction shall not proceed until the Contractor submits a certified list of the diesel powered off-road equipment that will be used, and as necessary, retrofitted with emission control devices. The list(s) shall include (1) the equipment number, type, make, Contractor/rental company name; and (2) the emission control devices make, model, USEPA or CARB verification number, or performance certification from the retrofit device manufacturer. Equipment reported as fitted with emissions control devices shall be made available to the Engineer for visual inspection of the device installation, prior to being used on the jobsite.

The Contractor shall submit an updated list of retrofitted off-road construction equipment as retrofitted equipment changes or comes on to the jobsite. The addition or deletion of any diesel powered equipment shall be included on the updated list.

If any diesel powered off-road equipment is found to be in non-compliance with any portion of this special provision, the Engineer will issue the Contractor a diesel retrofit deficiency deduction.

Any costs associated with retrofitting any diesel powered off-road equipment with emission control devices shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed. The Contractor's compliance with this notice and any associated regulations shall not be grounds for a claim.

Diesel Retrofit Deficiency Deduction

When the Engineer determines that a diesel retrofit deficiency exists, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency continues to exist. The calendar day(s) will begin when the time period for correction is exceeded and end with the Engineer's written acceptance of the correction. The daily monetary deduction will be $1,000.00 for each deficiency identified.

The deficiency will be based on lack of diesel retrofit emissions control.

If a Contractor accumulates three diesel retrofit deficiency deductions for the same piece of equipment in a contract period, the Contractor will be shutdown until the deficiency is corrected.

Such a shutdown will not be grounds for any extension of the contract time, waiver of penalties, or be grounds for any claim.

80261

Illinois Department of Transportation

Memorandum

To:	Regional Engineers
From:	Maureen M. Addis
Subject:	Special Provision for Grooving for Recessed Pavement Markings
Date:	August 4, 2017

This special provision was developed by the Bureau of Operations to create a statewide specification for installing a pavement groove for recessed pavement markings that provides for improved durability of pavement marking materials. It has been revised to reduce the offset of the groove from longitudinal joints and to reduce the waiting time for new HMA pavements from 14 to ten days.

This special provision should be inserted into contracts where the grooving of pavement marking materials has been specified.

The districts should include the BDE Check Sheet marked with the applicable special provisions for the November 17, 2017 and subsequent lettings. The Project Development and Implementation Section will include a copy in the contract.

This special provision will be available on the transfer directory August 4, 2017.

80304m

GROOVING FOR RECESSED PAVEMENT MARKINGS (BDE)

Effective: November 1, 2012
Revised: November 1, 2017

Description. This work shall consist of grooving the pavement surface in preparation for the application of recessed pavement markings.

Equipment. Equipment shall be according to the following.

(a) Preformed Plastic Pavement Marking Installations. The grooving equipment shall have a free-floating saw blade cutting head equipped with gang-stacked diamond saw blades. The diamond saw blades shall be of uniform wear and shall produce a smooth textured surface. Any ridges in the groove shall have a maximum height of 15 mils (0.38 mm).

(b) Liquid and Thermoplastic Pavement Marking Installations. The grooving equipment shall be equipped with either a free-floating saw blade cutting head or a free-floating grinder cutting head configuration with diamond or carbide tipped cutters and shall produce an irregular textured surface.

CONSTRUCTION REQUIREMENTS

General. The Contractor shall supply the Engineer with a copy of the pavement marking material manufacturer's recommendations for constructing a groove.

Pavement Grooving Methods. The grooves for recessed pavement markings shall be constructed using the following methods.

(a) Wet Cutting Head Operation. When water is required or used to cool the cutting head, the groove shall be flushed with high pressure water immediately following the cut to avoid build up and hardening of slurry in the groove. The pavement surface shall be allowed to dry for a minimum of 24 hours prior to the final cleaning of the groove and application of the pavement marking material.

(b) Dry Cutting Head Operation. When used on HMA pavements, the groove shall be vacuumed or cleaned by blasting with high-pressure air to remove loose aggregate, debris, and dust generated during the cutting operation. When used on PCC pavements, the groove shall be flushed with high pressure water or shot blasted to remove any PCC particles that may have become destabilized during the grooving process. If high pressure water is used, the pavement surface shall be allowed to dry for a minimum of 24 hours prior to the final cleaning of the groove and application of the pavement marking material.

Pavement Grooving. Grooving shall not cause ravels, aggregate fractures, spalling or disturbance of the joints to the underlying surface of the pavement. Grooves shall be cut into

the pavement prior to the application of the pavement marking material. Grooves shall be cut such that the width is 1 in. (25 mm) greater than the width of the pavement marking line as specified on the plans. Grooves for letters and symbols shall be cut in a square or rectangular shape so that the entire marking will fit within the limits of the grooved area. The position of the edge of the grooves shall be a minimum of 2 in. (50 mm) from the edge of all longitudinal joints. The depth of the groove shall not be less than the manufacturer's recommendations for the pavement marking material specified, but shall be installed to a minimum depth of 110 mils (2.79 mm) and a maximum depth of 200 mils (5.08 mm) for pavement marking tapes thermoplastic markings and a minimum depth of 40 mils (1.02 mm) and a maximum depth of 80 mils (2.03 mm) for liquid markings. The cutting head shall be operated at the appropriate speed in order to prevent undulation of the cutting head and grooving at an inconsistent depth.

At the start of grooving operations, a 50 ft (16.7 m) test section shall be installed and depth measurements shall be made at 10 ft (3.3 m) intervals within the test section. The individual depth measurements shall be within the allowable ranges according to this Article. If it is determined the test section has not been grooved at the appropriate depth or texture, adjustments shall be made to the cutting head and another 50 ft (16.7 m) test section shall be installed and checked. This process shall continue until the test section meets the requirements of this Article.

For new HMA pavements, grooves shall not be installed within 10 days of the placement of the final course of pavement.

Final Cleaning. Immediately prior to the application of the pavement marking material or primer sealer, the groove shall be cleaned with high-pressure air blast.

Method of Measurement. This work will be measured for payment in place, in feet (meter) for the groove width specified.

Grooving for letter, numbers and symbols will be measured in square feet (square meters).

Basis of Payment. This work will be paid for at the contract unit price per foot (meter) for GROOVING FOR RECESSED PAVEMENT MARKING of the groove width specified, and per square foot (square meter) for GROOVING FOR RECESSED PAVEMENT MARKING, LETTERS AND SYMBOLS.

The following shall only apply when preformed plastic pavement markings are to be recessed:

Add the following paragraph after the first paragraph of Article 780.07 of the Standard Specifications.

"The markings shall be capable of being applied in a grooved slot on new and existing portland cement concrete and HMA surfaces, by means of a pressure-sensitive, precoated adhesive, or liquid contact cement which shall be applied at the time of installation. A primer sealer shall be applied with a roller and shall cover and seal the entire bottom of the groove.

The primer sealer shall be recommended by the manufacturer of the pavement marking material and shall be compatible with the material being used. The Contractor shall install the markings in the groove as soon as possible after the primer sealer cures according to the manufacturer's recommendations. The markings placed in the groove shall be rolled and tamped into the groove with a roller or tamper cart cut to fit the groove and loaded with or weighing at least 200 lb (90kg). Vehicle tires shall not be used for tamping. The Contractor shall roll and tamp the material with a minimum of 6 passes to prevent easy removal or peeling."

80304

HOT-MIX ASPHALT - DENSITY TESTING OF LONGITUDINAL JOINTS (BDE)

Effective: January 1, 2010
Revised: August 1, 2018

Description. This work shall consist of testing the density of longitudinal joints as part of the quality control/quality assurance (QC/QA) of hot-mix asphalt (HMA). Work shall be according to Section 1030 of the Standard Specifications except as follows.

Quality Control/Quality Assurance (QC/QA). Delete the second and third sentence of the third paragraph of Article 1030.05(d)(3) of the Standard Specifications.

Add the following paragraphs to the end of Article 1030.05(d)(3) of the Standard Specifications:

"Longitudinal joint density testing shall be performed at each random density test location. Longitudinal joint testing shall be located at a distance equal to the lift thickness or a minimum of 4 in. (100 mm), from each pavement edge. (i.e. for a 5 in. (125 mm) lift the near edge of the density gauge or core barrel shall be within 5 in. (125 mm) from the edge of pavement.) Longitudinal joint density testing shall be performed using either a correlated nuclear gauge or cores.

a. Confined Edge. Each confined edge density shall be represented by a one-minute nuclear density reading or a core density and shall be included in the average of density readings or core densities taken across the mat which represents the Individual Test.

b. Unconfined Edge. Each unconfined edge joint density shall be represented by an average of three one-minute density readings or a single core density at the given density test location and shall meet the density requirements specified herein. The three one-minute readings shall be spaced 10 ft (3 m) apart longitudinally along the unconfined pavement edge and centered at the random density test location.

When a longitudinal joint sealant (LJS) is applied, longitudinal joint density testing will not be required on the joint(s) sealed."

Revise the Density Control Limits table in Article 1030.05(d)(4) of the Standard Specifications to read:

"Mixture Composition	Parameter	Individual Test (includes confined edges)	Unconfined Edge Joint Density Minimum
IL-4.75	Ndesign = 50	93.0 – 97.4% 1/	91.0%
IL-9.5	Ndesign = 90	92.0 – 96.0%	90.0%
IL-9.5,IL-9.5L	Ndesign < 90	92.5 – 97.4%	90.0%
IL-19.0	Ndesign = 90	93.0 – 96.0%	90.0%
IL-19.0, IL-19.0L	Ndesign < 90	93.0 2/– 97.4%	90.0%

SMA	Ndesign = 50 & 80	93.5 – 97.4%	91.0%”

80246

HOT-MIX ASPHALT – TACK COAT (BDE)

Effective: November 1, 2016

Revise Article 1032.06(a) of the Standard Specifications to read:

"(a) Anionic Emulsified Asphalt. Anionic emulsified asphalts shall be according to AASHTO M 140. SS-1h emulsions used as a tack coat shall have the cement mixing test waived."

80376

PORTLAND CEMENT CONCRETE (BDE)

Effective: November 1, 2017

Revise the Air Content % of Class PP Concrete in Table 1 Classes of Concrete and Mix Design Criteria in Article 1020.04 of the Standard Specifications to read:

"TABLE 1. CLASSES OF CONCRETE AND MIX DESIGN CRITERIA		
Class of Conc.	Use	Air Content %
PP	Pavement Patching Bridge Deck Patching (10)	
	PP-1	4.0 - 8.0"
	PP-2	
	PP-3	
	PP-4	
	PP-5	

Revise Note (4) at the end of Table 1 Classes of Concrete and Mix Design Criteria in Article 1020.04 of the Standard Specifications to read:

"(4) For all classes of concrete, the maximum slump may be increased to 7 in (175 mm) when a high range water-reducing admixture is used. For Class SC, the maximum slump may be increased to 8 in. (200 mm). For Class PS, the maximum slump may be increased to 8 1/2 in. (215 mm) if the high range water-reducing admixture is the polycarboxylate type."

80389

TEMPORARY PAVEMENT MARKING (BDE)

Effective: April 1, 2012
Revised: April 1, 2017

Revise Article 703.02 of the Standard Specifications to read:

"**703.02 Materials.** Materials shall be according to the following.

(a) Pavement Marking Tape, Type I and Type III 1095.06
(b) Paint Pavement Markings 1095.02
(c) Pavement Marking Tape, Type IV ..... 1095.11"

Revise the second paragraph of Article 703.05 of the Standard Specifications to read:

"Type I marking tape or paint shall be used at the option of the Contractor, except paint shall not be applied to the final wearing surface unless authorized by the Engineer for late season applications where tape adhesion would be a problem. Type III or Type IV marking tape shall be used on the final wearing surface when the temporary pavement marking will conflict with the permanent pavement marking such as on tapers, crossovers and lane shifts."

Revise Article 703.07 of the Standard Specifications to read:

"**703.07 Basis of Payment.** This work will be paid for as follows.

a) Short Term Pavement Marking. Short term pavement marking will be paid for at the contract unit price per foot (meter) for SHORT TERM PAVEMENT MARKING. Removal of short term pavement markings will be paid for at the contract unit price per square foot (square meter) for SHORT TERM PAVEMENT MARKING REMOVAL.

b) Temporary Pavement Marking. Where the Contractor has the option of material type, temporary pavement marking will be paid for at the contract unit price per foot (meter) for TEMPORARY PAVEMENT MARKING of the line width specified, and at the contract unit price per square foot (square meter) for TEMPORARY PAVEMENT MARKING LETTERS AND SYMBOLS.

Where the Department specifies the use of pavement marking tape, the Type III or Type IV temporary pavement marking will be paid for at the contract unit price per foot (meter) for PAVEMENT MARKING TAPE, TYPE III or PAVEMENT MARKING TAPE, TYPE IV of the line width specified and at the contract unit price per square feet (square meter) for PAVEMENT MARKING TAPE, TYPE III - LETTERS AND SYMBOLS or PAVEMENT MARKING TAPE, TYPE IV – LETTERS AND SYMBOLS.

Removal of temporary pavement markings will be paid for at the contract unit price per square foot (square meter) for TEMPORARY PAVEMENT MARKING REMOVAL.

When temporary pavement marking is shown on the Standard, the cost of the temporary pavement marking and its removal will be included in the cost of the Standard."

Add the following to Section 1095 of the Standard Specifications:

"**1095.11 Pavement Marking Tape, Type IV.** The temporary, preformed, patterned markings shall consist of a white or yellow tape with wet retroreflective media incorporated to provide immediate and continuing retroreflection during both wet and dry conditions. The tape shall be manufactured without the use of heavy metals including lead chromate pigments or other similar, lead-containing chemicals.

The white and yellow Type IV marking tape shall meet the Type III requirements of Article 1095.06 and the following.

(a) Composition. The retroreflective pliant polymer pavement markings shall consist of a mixture of high-quality polymeric materials, pigments and glass beads distributed throughout its base cross-sectional area, with a layer of wet retroreflective media bonded to a durable polyurethane topcoat surface. The patterned surface shall have approximately 40% ± 10% of the surface area raised and presenting a near vertical face to traffic from any direction. The channels between the raised areas shall be substantially free of exposed beads or particles.

(b) Retroreflectance. The white and yellow markings shall meet the following for initial dry and wet retroreflectance.

(1) Dry Retroreflectance. Dry retroreflectance shall be measured under dry conditions according to ASTM D 4061 and meet the values described in Article 1095.06 for Type III tape.

(2) Wet Retroreflectance. Wet retroreflectance shall be measured under wet conditions according to ASTM E 2177 and meet the values shown in the following table.

Wet Retroreflectance, Initial R_L

Color	R_L 1.05/88.76
White	300
Yellow	200

(c) Color. The material shall meet the following requirements for daylight reflectance and color, when tested, using a color spectrophotometer with 45 degrees circumferential/zero degree geometry, illuminant D65, and a two degree observer angle. The color instrument shall measure the visible spectrum from 380 to 720 nm with a wavelength measurement interval and spectral bandpass of 10 nm.

Color	Daylight Reflectance %Y
White	65 minimum
*Yellow	36-59

*Shall match Federal 595 Color No. 33538 and the chromaticity limits as follows.

x	0.490	0.475	0.485	0.530
y	0.470	0.438	0.425	0.456

(d) Skid Resistance. The surface of the markings shall provide an average minimum skid resistance of 50 BPN when tested according to ASTM E 303.

(e) Sampling, Testing, Acceptance, and Certification. Prior to approval and use of the wet reflective, temporary, removable pavement marking tape, the manufacturer shall submit a notarized certification from an independent laboratory, together with the results of all tests, stating that the material meets the requirements as set forth herein. The certification test report shall state the lot tested, manufacturer's name, and date of manufacture.

After approval by the Department, samples and certification by the manufacturer shall be submitted for each batch used. The manufacturer shall submit a certification stating that the material meets the requirements as set forth herein and is essentially identical to the material sent for qualification. The certification shall state the lot tested, manufacturer's name, and date of manufacture.

All costs of testing (other than tests conducted by the Department) shall be borne by the manufacturer."

80298

PREVAILING WAGES

Prevailing Wage rates for Cook County effective Sept. 1, 2017

Trade Title	Region	Type	Class	Base Wage	Fore-man Wage	M-F OT	OSA	OSH	H/W	Pension	Vacation	Training
ASBESTOS ABT-GEN	ALL	ALL		41.20	42.20	1.5	1.5	2	14.65	12.32	0.00	0.50
ASBESTOS ABT-MEC	ALL	BLD		37.46	39.96	1.5	1.5	2	11.62	11.06	0.00	0.72
BOILERMAKER	ALL	BLD		48.49	52.86	2	2	2	6.97	19.61	0.00	0.90
BRICK MASON	ALL	BLD		45.38	49.92	1.5	1.5	2	10.45	16.68	0.00	0.90
CARPENTER	ALL	ALL		46.35	48.35	1.5	1.5	2	11.79	18.87	0.00	0.63
CEMENT MASON	ALL	ALL		44.25	46.25	2	1.5	2	14.00	17.16	0.00	0.92
CERAMIC TILE FNSHER	ALL	BLD		38.56	38.56	1.5	1.5	2	10.65	11.18	0.00	0.68
COMM. ELECT.	ALL	BLD		43.10	45.90	1.5	1.5	2	8.88	13.22	1.00	0.85
ELECTRIC PWR EQMT OP	ALL	ALL		50.50	55.50	1.5	1.5	2	11.69	16.69	0.00	3.12
ELECTRIC PWR GRNDMAN	ALL	ALL		39.39	55.50	1.5	1.5	2	9.12	13.02	0.00	2.43
ELECTRIC PWR LINEMAN	ALL	ALL		50.50	55.50	1.5	1.5	2	11.69	16.69	0.00	3.12
ELECTRICIAN	ALL	ALL		47.40	50.40	1.5	1.5	2	14.33	16.10	1.00	1.18
ELEVATOR CONSTRUCTOR	ALL	BLD		51.94	58.43	2	2	2	14.43	14.96	4.16	0.90
FENCE ERECTOR	ALL	ALL		39.58	41.58	1.5	1.5	2	13.40	13.90	0.00	0.40
GLAZIER	ALL	BLD		42.45	43.95	1.5	1.5	2	14.04	20.14	0.00	0.94
HT/FROST INSULATOR	ALL	BLD		50.50	53.00	1.5	1.5	2	12.12	12.96	0.00	0.72
IRON WORKER	ALL	ALL		47.33	49.33	2	2	2	14.15	22.39	0.00	0.35
LABORER	ALL	ALL		41.20	41.95	1.5	1.5	2	14.65	12.32	0.00	0.50
LATHER	ALL	ALL		46.35	48.35	1.5	1.5	2	11.79	18.87	0.00	0.63
MACHINIST	ALL	BLD		47.56	50.06	1.5	1.5	2	7.05	8.95	1.85	1.47
MARBLE FINISHERS	ALL	ALL		33.95	33.95	1.5	1.5	2	10.45	15.52	0.00	0.47
MARBLE MASON	ALL	BLD		44.63	49.09	1.5	1.5	2	10.45	16.28	0.00	0.59
MATERIAL TESTER I	ALL	ALL		31.20	31.20	1.5	1.5	2	14.65	12.32	0.00	0.50
MATERIALS TESTER II	ALL	ALL		36.20	36.20	1.5	1.5	2	14.65	12.32	0.00	0.50
MILLWRIGHT	ALL	ALL		46.35	48.35	1.5	1.5	2	11.79	18.87	0.00	0.63

OPERATING ENGINEER	ALL	BLD	1	50.10	54.10	2	2	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	BLD	2	48.80	54.10	2	2	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	BLD	3	46.25	54.10	2	2	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	BLD	4	44.50	54.10	2	2	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	BLD	5	53.85	54.10	2	2	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	BLD	6	51.10	54.10	2	2	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	BLD	7	53.10	54.10	2	2	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	FLT	1	55.90	55.90	1.5	1.5	2	18.05	13.60	1.90	1.30
OPERATING ENGINEER	ALL	FLT	2	54.40	55.90	1.5	1.5	2	18.05	13.60	1.90	1.30
OPERATING ENGINEER	ALL	FLT	3	48.40	55.90	1.5	1.5	2	18.05	13.60	1.90	1.30
OPERATING ENGINEER	ALL	FLT	4	40.25	55.90	1.5	1.5	2	18.05	13.60	1.90	1.30
OPERATING ENGINEER	ALL	FLT	5	57.40	55.90	1.5	1.5	2	18.05	13.60	1.90	1.30
OPERATING ENGINEER	ALL	FLT	6	38.00	55.90	1.5	1.5	2	18.05	13.60	1.90	1.30
OPERATING ENGINEER	ALL	HWY	1	48.30	52.30	1.5	1.5	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	HWY	2	47.75	52.30	1.5	1.5	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	HWY	3	45.70	52.30	1.5	1.5	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	HWY	4	44.30	52.30	1.5	1.5	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	HWY	5	43.10	52.30	1.5	1.5	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	HWY	6	51.30	52.30	1.5	1.5	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	HWY	7	49.30	52.30	1.5	1.5	2	18.80	14.35	2.00	1.30
ORNAMNTL IRON WORKER	ALL	ALL		46.75	49.25	2	2	2	13.90	19.79	0.00	0.75
PAINTER	ALL	ALL		45.55	51.24	1.5	1.5	1.5	11.56	11.44	0.00	1.87
PAINTER SIGNS	ALL	BLD		37.45	42.05	1.5	1.5	2	2.60	3.18	0.00	0.00
PILEDRIVER	ALL	ALL		46.35	48.35	1.5	1.5	2	11.79	18.87	0.00	0.63
PIPEFITTER	ALL	BLD		47.50	50.50	1.5	1.5	2	10.05	17.85	0.00	2.12
PLASTERER	ALL	BLD		42.75	45.31	1.5	1.5	2	14.00	15.71	0.00	0.89
PLUMBER	ALL	BLD		49.25	52.20	1.5	1.5	2	14.34	13.35	0.00	1.28
ROOFER	ALL	BLD		42.30	45.30	1.5	1.5	2	9.08	12.14	0.00	0.58
SHEETMETAL WORKER	ALL	BLD		43.50	46.98	1.5	1.5	2	11.03	23.43	0.00	0.78
SIGN HANGER	ALL	BLD		31.31	33.81	1.5	1.5	2	4.85	3.28	0.00	0.00

SPRINKLER FITTER	ALL	BLD		47.20	49.20	1.5	1.5	2	12.25	11.55	0.00	0.55
STEEL ERECTOR	ALL	ALL		42.07	44.07	2	2	2	13.45	19.59	0.00	0.35
STONE MASON	ALL	BLD		45.38	49.92	1.5	1.5	2	10.45	16.68	0.00	0.90
TERRAZZO FINISHER	ALL	BLD		40.54	40.54	1.5	1.5	2	10.65	12.76	0.00	0.73
TERRAZZO MASON	ALL	BLD		44.38	47.88	1.5	1.5	2	10.65	14.15	0.00	0.82
TILE MASON	ALL	BLD		45.49	49.49	1.5	1.5	2	10.65	13.88	0.00	0.86
TRAFFIC SAFETY WRKR	ALL	HWY		33.50	35.85	1.5	1.5	2	6.00	7.25	0.00	0.50
TRUCK DRIVER	E	ALL	1	35.60	36.25	1.5	1.5	2	8.56	11.50	0.00	0.15
TRUCK DRIVER	E	ALL	2	35.85	36.25	1.5	1.5	2	8.56	11.50	0.00	0.15
TRUCK DRIVER	E	ALL	3	36.05	36.25	1.5	1.5	2	8.56	11.50	0.00	0.15
TRUCK DRIVER	E	ALL	4	36.25	36.25	1.5	1.5	2	8.56	11.50	0.00	0.15
TRUCK DRIVER	W	ALL	1	35.98	36.53	1.5	1.5	2	8.25	10.14	0.00	0.15
TRUCK DRIVER	W	ALL	2	36.13	36.53	1.5	1.5	2	8.25	10.14	0.00	0.15
TRUCK DRIVER	W	ALL	3	36.33	36.53	1.5	1.5	2	8.25	10.14	0.00	0.15
TRUCK DRIVER	W	ALL	4	36.53	36.53	1.5	1.5	2	8.25	10.14	0.00	0.15
TUCKPOINTER	ALL	BLD		45.42	46.42	1.5	1.5	2	8.32	15.42	0.00	0.80

Legend

M-F OT Unless otherwise noted, OT pay is required for any hour greater than 8 worked each day, Mon through Fri. The number listed is the multiple of the base wage.

OSA Overtime pay required for every hour worked on Saturdays

OSH Overtime pay required for every hour worked on Sundays and Holidays

H/W Health/Welfare benefit

Explanations COOK COUNTY

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day and Veterans Day in some classifications/counties. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration. If in doubt, please check with IDOL.

TRUCK DRIVERS (WEST) - That part of the county West of Barrington Road.

EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date. ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

CERAMIC TILE FINISHER

The grouting, cleaning, and polishing of all classes of tile, whether for interior or exterior purposes, all burned, glazed or unglazed products; all composition materials, granite tiles, warning detectable tiles, cement tiles, epoxy composite materials, pavers, glass, mosaics, fiberglass, and all substitute materials, for tile made in tile-like units; all mixtures in tile like form of cement, metals, and other materials that are for and intended for use as a finished floor surface, stair treads, promenade roofs, walks, walls, ceilings, swimming pools, and all other places where tile is to form a finished interior or exterior. The mixing of all setting mortars including but not limited to thin-set mortars, epoxies, wall mud, and any other sand and cement mixtures or adhesives when used in the preparation, installation, repair, or maintenance of tile and/or similar materials. The handling and unloading of all sand, cement, lime, tile, fixtures, equipment, adhesives, or any other materials to be used in the preparation, installation, repair, or maintenance of tile and/or similar materials. Ceramic Tile Finishers shall fill all joints and voids regardless of method on all tile work, particularly and especially after installation of said tile work. Application of any and all protective coverings to all types of tile installations including, but not be limited to, all soap compounds, paper products, tapes, and all polyethylene coverings, plywood, masonite, cardboard, and any new type of products that may be used to protect tile installations, Blastrac equipment, and all floor scarifying equipment used in preparing floors to receive tile. The clean up and removal of all waste and materials. All demolition of existing tile floors and walls to be re-tiled.

COMMUNICATIONS ELECTRICIAN

Installation, operation, inspection, maintenance, repair and service of radio, television, recording, voice sound vision production and reproduction, telephone and telephone interconnect, facsimile, data apparatus, coaxial, fibre optic and wireless equipment, appliances and systems used for the transmission and reception of signals of any nature, business, domestic, commercial, education, entertainment, and residential purposes, including but not limited to, communication and telephone, electronic and sound equipment, fibre optic and data communication systems, and the performance of any task directly related to such installation or service whether at new or existing sites, such tasks to include the placing of wire and cable and electrical power conduit or other raceway work within the equipment room and pulling wire and/or cable through conduit and the installation of any incidental conduit, such that the employees covered hereby can complete any job in full.

MARBLE FINISHER

Loading and unloading trucks, distribution of all materials (all stone, sand, etc.), stocking of floors with material, performing all rigging for heavy work, the handling of all material that may be needed for the installation of such materials, building of scaffolding, polishing if needed, patching, waxing of material if damaged, pointing up, caulking, grouting and cleaning of marble, holding water on diamond or Carborundum blade or saw for setters cutting, use of tub saw or any other saw needed for preparation of material, drilling of holes for wires that anchor material set by setters, mixing up of molding plaster for installation of material, mixing up thin set for the installation of material, mixing up of sand to cement for the installation of material and such other work as may be required in helping a Marble Setter in the handling of all material in the erection or installation of interior marble, slate, travertine, art marble, serpentine, alberene stone, blue stone, granite and other stones (meaning as to stone any foreign or domestic materials as are specified and used in building interiors and exteriors and customarily known as stone in the trade), carrara, sanionyx, vitrolite and similar opaque glass and the laying of all marble tile, terrazzo tile, slate tile and precast tile, steps, risers treads, base, or any other materials that may be used as substitutes for any of the aforementioned materials and which are used on interior and exterior which are installed in a similar manner.

MATERIAL TESTER I: Hand coring and drilling for testing of materials; field inspection of uncured concrete and asphalt.

MATERIAL TESTER II: Field inspection of welds, structural steel, fireproofing, masonry, soil, facade, reinforcing steel, formwork, cured concrete, and concrete and asphalt batch plants; adjusting proportions of bituminous mixtures.

OPERATING ENGINEER - BUILDING

Class 1. Asphalt Plant; Asphalt Spreader; Autograde; Backhoes with Caisson Attachment; Batch Plant; Benoto (requires Two Engineers); Boiler and Throttle Valve; Caisson Rigs; Central Redi-Mix Plant; Combination Back Hoe Front End-loader Machine; Compressor and Throttle Valve; Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Conveyor (Truck Mounted); Concrete Paver Over 27E cu. ft; Concrete Paver 27E cu. ft. and Under: Concrete Placer; Concrete Placing Boom; Concrete Pump (Truck Mounted); Concrete Tower; Cranes, All; Cranes, Hammerhead; Cranes, (GCI and similar Type); Creter Crane; Spider Crane; Crusher, Stone, etc.; Derricks, All; Derricks, Traveling; Formless Curb and Gutter Machine; Grader, Elevating; Grouting Machines; Heavy Duty Self-Propelled Transporter or Prime Mover; Highlift Shovels or Front Endloader 2-1/4 yd. and over; Hoists, Elevators, outside type rack and pinion and similar machines; Hoists, One, Two and Three Drum; Hoists, Two Tugger One Floor; Hydraulic Backhoes; Hydraulic Boom Trucks; Hydro Vac (and similar equipment); Locomotives, All; Motor Patrol; Lubrication Technician; Manipulators; Pile Drivers and Skid Rig; Post Hole Digger; Pre-Stress Machine; Pump Cretes Dual Ram; Pump Cretes: Squeeze Cretes-Screw Type Pumps; Gypsum Bulker and Pump; Raised and Blind Hole Drill; Roto Mill Grinder; Scoops - Tractor Drawn; Slip-Form Paver; Straddle Buggies; Operation of Tie Back Machine; Tournapull; Tractor with Boom and Side Boom; Trenching Machines.

Class 2. Boilers; Broom, All Power Propelled; Bulldozers; Concrete Mixer (Two Bag and Over); Conveyor, Portable; Forklift Trucks; Highlift Shovels or Front Endloaders under 2-1/4 yd.; Hoists, Automatic; Hoists, Inside Elevators; Hoists, Sewer Dragging Machine; Hoists, Tugger Single Drum;

STANDARD DRAWINGS

ABV	ABOVE
A/C	ACCESS CONTROL
AC	ACRE
ADJ	ADJUST
AS	AERIAL SURVEYS
AGG	AGGREGATE
AH	AHEAD
APT	APARTMENT
ASPH	ASPHALT
AUX	AUXILIARY
AGS	AUXILIARY GAS VALVE (SERVICE)
AVE	AVENUE
AX	AXIS OF ROTATION
BK	BACK
B-B	BACK TO BACK
BKPL	BACKPLATE
B	BARN
BARR	BARRICADE
BGN	BEGIN
BM	BENCHMARK
BIND	BINDER
BIT	BITUMINOUS
BTM	BOTTOM
BLVD	BOULEVARD
BRK	BRICK
BBOX	BUFFALO BOX
BLDG	BUILDING
CIP	CAST IRON PIPE
CB	CATCH BASIN
C-C	CENTER TO CENTER
CL	CENTERLINE OR CLEARANCE
CL-E	CENTERLINE TO EDGE
CL-F	CENTERLINE TO FACE
CTS	CENTERS
CERT	CERTIFIED
CHSLD	CHISELED
CS	CITY STREET
CP	CLAY PIPE
CLSD	CLOSED
CLID	CLOSED LID
CT	COAT OR COURT
COMB	COMBINATION
C	COMMERCIAL BUILDING
CE	COMMERCIAL ENTRANCE
CONC	CONCRETE
CONST	CONSTRUCT
CONTD	CONTINUED
CONT	CONTINUOUS
COR	CORNER
CORR	CORRUGATED
CMP	CORRUGATED METAL PIPE
CNTY	COUNTY
CH	COUNTY HIGHWAY
CSE	COURSE
XSECT	CROSS SECTION
m^3	CUBIC METER
mm^3	CUBIC MILLIMETER
CU YD	CUBIC YARD
CULV	CULVERT
C&G	CURB & GUTTER
D	DEGREE OF CURVE
DC	DEPRESSED CURVE
DET	DETECTOR
DIA	DIAMETER
DIST	DISTRICT
DOM	DOMESTIC
DBL	DOUBLE
DSEL	DOWNSTREAM ELEVATION
DSFL	DOWNSTREAM FLOWLINE
DR	DRAINAGE OR DRIVE
DI	DRAINAGE INLET OR DROP INLET
DRV	DRIVEWAY
DCT	DUCT
EA	EACH
EB	EASTBOUND
EOP	EDGE OF PAVEMENT
E-CL	EDGE TO CENTERLINE
E-E	EDGE TO EDGE
EL	ELEVATION
ENTR	ENTRANCE
EXC	EXCAVATION
EX	EXISTING
EXPWAY	EXPRESSWAY
E	EXTERNAL DISTANCE OF HORIZONTAL CURVE
E	OFFSET DISTANCE TO VERTICAL CURVE
F-F	FACE TO FACE
FA	FEDERAL AID
FAI	FEDERAL AID INTERSTATE
FAP	FEDERAL AID PRIMARY
FAS	FEDERAL AID SECONDARY
FAUS	FEDERAL AID URBAN SECONDARY
FP	FENCE POST
FE	FIELD ENTRANCE
FH	FIRE HYDRANT
FL	FLOW LINE
FB	FOOT BRIDGE
FDN	FOUNDATION
FR	FRAME
F&G	FRAME & GRATE
FRWAY	FREEWAY
GAL	GALLON
GALV	GALVANIZED
G	GARAGE
GM	GAS METER
GV	GAS VALVE
GRAN	GRANULAR
GR	GRATE
GRVL	GRAVEL
GND	GROUND
GUT	GUTTER
GP	GUY POLE
GW	GUY WIRE
HH	HANDHOLE
HATCH	HATCHING
HD	HEAD
HDW	HEADWALL
HDUTY	HEAVY DUTY
ha	HECTARE
HMA	HOT MIX ASPHALT
HWY	HIGHWAY
HORIZ	HORIZONTAL
HSE	HOUSE
IL	ILLINOIS
IMP	IMPROVEMENT
IN DIA	INCH DIAMETER
INL	INLET
INST	INSTALLATION
IDS	INTERSECTION DESIGN STUDY
INV	INVERT
IP	IRON PIPE
IR	IRON ROD
JT	JOINT
kg	KILOGRAM
km	KILOMETER
LS	LANDSCAPING
LN	LANE
LT	LEFT
LP	LIGHT POLE
LGT	LIGHTING
LF	LINEAL FEET OR LINEAR FEET
L	LITER OR CURVE LENGTH
LC	LONG CHORD
LNG	LONGITUDINAL
L SUM	LUMP SUM
MACH	MACHINE
MB	MAIL BOX
MH	MANHOLE
MATL	MATERIAL
MED	MEDIAN
m	METER
METH	METHOD
M	MID-ORDINATE
mm	MILLIMETER
mm DIA	MILLIMETER DIAMETER
MIX	MIXTURE
MBH	MOBILE HOME
MOD	MODIFIED
MFT	MOTOR FUEL TAX
N & BC	NAIL & BOTTLE CAP
N & C	NAIL & CAP
N & W	NAIL & WASHER
NOAA	NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION
NC	NORMAL CROWN
NB	NORTHBOUND
NE	NORTHEAST
NW	NORTHWEST
OLID	OPEN LID
PAT	PATTERN
PVD	PAVED
PVMT	PAVEMENT
PM	PAVEMENT MARKING
PED	PEDESTAL
PNT	POINT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION OF HORIZONTAL CURVE
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENCY
POT	POINT ON TANGENT
POLYETH	POLYETHYLENE
PCC	PORTLAND CEMENT CONCRETE
PP	POWER POLE OR PRINCIPAL POINT
PRM	PRIME
PE	PRIVATE ENTRANCE
PROF	PROFILE
PGL	PROFILE GRADELINE
PROJ	PROJECT
P.C.	PROPERTY CORNER
PL	PROPERTY LINE
PR	PROPOSED
R	RADIUS
RR	RAILROAD
RRS	RAILROAD SPIKE
RPS	REFERENCE POINT STAKE
REF	REFLECTIVE
RCCP	REINFORCED CONCRETE CULVERT PIPE
REINF	REINFORCEMENT
REM	REMOVAL
RC	REMOVE CROWN
REP	REPLACEMENT
REST	RESTAURANT
RESURF	RESURFACING
RET	RETAINING
RT	RIGHT
ROW	RIGHT-OF-WAY
RD	ROAD
RDWY	ROADWAY
RTE	ROUTE
SAN	SANITARY
SANS	SANITARY SEWER
SEC	SECTION
SEED	SEEDING
SHAP	SHAPING
S	SHED
SH	SHEET
SHLD	SHOULDER
SW	SIDEWALK OR SOUTHWEST
SIG	SIGNAL
SOD	SODDING
SM	SOLID MEDIAN
SB	SOUTHBOUND
SE	SOUTHEAST
SPL	SPECIAL
SD	SPECIAL DITCH
SQ FT	SQUARE FEET
m^2	SQUARE METER
mm^2	SQUARE MILLIMETER
SQ YD	SQUARE YARD
STB	STABILIZED
STD	STANDARD
SBI	STATE BOND ISSUE
SR	STATE ROUTE
STA	STATION
SPBGR	STEEL PLATE BEAM GUARDRAIL
SS	STORM SEWER
STY	STORY
ST	STREET
STR	STRUCTURE
e	SUPERELEVATION RATE
S.E. RUN.	SUPERELEVATION RUNOFF LENGTH
SURF	SURFACE
SMK	SURVEY MARKER
T	TANGENT DISTANCE
T.R.	TANGENT RUNOUT DISTANCE
TEL	TELEPHONE
TB	TELEPHONE BOX
TP	TELEPHONE POLE
TEMP	TEMPORARY
TBM	TEMPORARY BENCH MARK
TD	TILE DRAIN
TBE	TO BE EXTENDED
TBR	TO BE REMOVED
TBS	TO BE SAVED
TWP	TOWNSHIP
TR	TOWNSHIP ROAD
TS	TRAFFIC SIGNAL
TSCB	TRAFFIC SIGNAL CONTROL BOX
TSC	TRAFFIC SYSTEMS CENTER
TRVS	TRANSVERSE
TRVL	TRAVEL
TRN	TURN
TY	TYPE
T-A	TYPE A
TYP	TYPICAL
UNDGND	UNDERGROUND
USGS	U.S. GEOLOGICAL SURVEY
USEL	UPSTREAM ELEVATION
USFL	UPSTREAM FLOWLINE
UTIL	UTILITY
VBOX	VALVE BOX
VV	VALVE VAULT
VLT	VAULT
VEH	VEHICLE
VP	VENT PIPE
VERT	VERTICAL
VC	VERTICAL CURVE
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
WM	WATER METER
WV	WATER VALVE
WMAIN	WATER MAIN
WB	WESTBOUND
WILDFL	WILDFLOWERS
W	WITH
WO	WITHOUT

Illinois Department of Transportation

PASSED January 1, 2011
Michael Brand
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2011
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

DATE	REVISIONS
1-1-11	Updated abbreviations
	and symbols.
1-1-08	Updated abbreviations
	and symbols.

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

(Sheet 1 of 8)

STANDARD 000001-06

ADJUSTMENT ITEMS

	EX	PR
Structure To Be Adjusted		ADJ
Structure To Be Cleaned		C
Main Structure To Be Filled		FM
Structure To Be Filled		F
Structure To Be Filled Special		FSP
Structure To Be Removed		R
Structure To Be Reconstructed		REC
Structure To Be Reconstructed Special		RSP
Frame and Grate To Be Adjusted		A
Frame and Lid To Be Adjusted		A
Domestic Service Box To Be Adjusted		A
Valve Vault To Be Adjusted		A
Special Adjustment		SP
Item To Be Abandoned		AB
Item To Be Moved		M
Item To Be Relocated		REL
Pavement Removal and Replacement		

ALIGNMENT ITEMS

	EX	PR
Baseline		
Centerline		
Centerline Break Circle		
Baseline Symbol		
Centerline Symbol		
PI Indicator		
Point Indicator		
Horizontal Curve Data (Half Size)	CURVE P.I. STA= Δ= D= R= T= L= E= e= T.R.= S.E. RUN= P.C. STA= P.T. STA=	CURVE P.I. STA= Δ= D= R= T= L= E= e= T.R.= S.E. RUN= P.C. STA= P.T. STA=

BOUNDARIES ITEMS

	EX	PR
Dashed Property Line		
Solid Property/Lot Line		
Section/Grant Line		
Quarter Section Line		
Quarter/Quarter Section Line		
County/Township Line		
State Line		
Iron Pipe Found		
Iron Pipe Set		
Survey Marker		
Property Line Symbol		
Same Ownership Symbol (Half Size)		
Northwest Quarter Corner (Half Size)		
Section Corner (Half Size)		
Southeast Quarter Corner (Half Size)		

CONTOUR ITEMS

	EX	PR
Approx. Index Line		
Approx. Intermediate Line		
Index Contour		
Intermediate Contour		

DRAINAGE ITEMS

	EX	PR
Channel or Stream Line		
Culvert Line		
Grading & Shaping Ditches		
Drainage Boundary Line		
Paved Ditch		
Aggregate Ditch		
Pipe Underdrain		
Storm Sewer		
Flowline		
Ditch Check		
Headwall		
Inlet		
Manhole		
Summit		
Roadway Ditch Flow		
Swale		
Catch Basin		
Culvert End Section		
Water Surface Indicator		
Riprap		

Illinois Department of Transportation

PASSED January 1, 2011

Michael Brand

ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2011

ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

(Sheet 2 of 8)

STANDARD 000001-06

EROSION & SEDIMENT CONTROL ITEMS

	EX	PR
Cleaning & Grading Limits		
Dike		
Erosion Control Fence		
Perimeter Erosion Barrier		
Temporary Fence		
Ditch Check Temporary		
Ditch Check Permanent		
Inlet & Pipe Protection		
Sediment Basin		
Erosion Control Blanket		
Fabric Formed Concrete Revetment Mat		
Turf Reinforcement Mat		
Mulch Temporary		
Mulch Method 1		
Mulch Method 2 Stabilized		
Mulch Method 3 Hydraulic		

NON-HIGHWAY IMPROVEMENT ITEMS

	EX	PR
Noise Attn./Levee		
Field Line		
Fence		
Base of Levee		
Mailbox		
Multiple Mailboxes		
Pay Telephone		
Advertising Sign		

LANDSCAPING ITEMS

	EX	PR
Contour Mounding Line		
Fence		
Fence Post		
Shrubs		
Mowline		
Perennial Plants		
Seeding Class 2		
Seeding Class 2A		
Seeding Class 4		
Seeding Class 4 & 5 Combined		

EXISTING LANDSCAPING ITEMS (contd.)

	EX	PR
Seeding Class 5		
Seeding Class 7		
Seedlings Type 1		
Seedlings Type 2		
Sodding		
Mowstake w/Sign		
Tree Trunk Protection		
Evergreen Tree	E	
Shade Tree	E	+

LIGHTING

	EX	PR
Duct		
Conduit		
Electrical Aerial Cable	A	A
Electrical Buried Cable	L	L
Controller		
Underpass Luminaire		
Power Pole		

Illinois Department of Transportation

PASSED January 1, 2011
Michael Brand
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2011
Scott E. Sotzky
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

(Sheet 3 of 8)

STANDARD 000001-06

LIGHTING (contd.)

	EX	PR
Pull Point		
Handhole		
Heavy Duty Handhole		
Junction Box		
Light Unit Comb.		
Electrical Ground		
Traffic Flow Arrow		
High Mast Pole (Half Size)		
Light Unit-1		

PAVEMENT (MISC.)

	EX	PR
Keyed Long. Joint		
Keyed Long. Joint w/Tie Bars		
Sawed Long. Joint w/Tie Bars		
Bituminous Shoulder		
Bituminous Taper		
Stabilized Driveway		
Widening		

PAVEMENT MARKINGS

	EX	PR
Bike Lane Symbol		
Bike Lane Text		
Handicap Symbol		
RR Crossing		
Raised Marker Amber 1 Way		
Raised Marker Amber 2 Way		
Raised Marker Crystal 1 Way		
Two Way Turn Left		
Shoulder Diag. Pattern		
Skip-Dash White		
Skip-Dash Yellow		
Stop Line		
Solid Line		
Double Centerline		
Dotted Lines		
CL 2Ln 2Way RRPM 12.2 m (40') o.c.		
CL 2Ln 2Way RRPM 80' (24.4 m) o.c.		
CL Multilane Div. RRPM 40' (12.2 m) o.c.		
CL Multilane Div. RRPM 80' (24.4 m) o.c.		
CL Multilane Div. Dbl. RRPM 80' (24.4 m) o.c.		
CL Multilane Undiv.		
Two Way Turn Left Line		

Illinois Department of Transportation

PASSED January 1, 2011
Michael Brand
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2011
Scott E. Sobaski
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

(Sheet 4 of 8)

STANDARD 000001-06

PAVEMENT MARKINGS (contd.)

	EX	PR
Urban Combination Left		
Urban Combination Right		
Urban Left Turn Arrow		
Urban Right Turn Arrow		
Urban Left Turn Only		ONLY
Urban Right Turn Only		ONLY
Urban Thru Only		ONLY
Urban U-Turn		
Urban Combined U-Turn		
Rural Combination Left		
Rural Combination Right		
Rural Left Turn Arrow		
Rural Right Turn Arrow		
Rural Left Turn Only		ONLY
Rural Right Turn Only		ONLY
Rural Thru Only		ONLY

RAILROAD ITEMS

	EX	PR
Abandoned Railroad		
Railroad		
Railroad Point		
Control Box		
Crossing Gate		
Flashing Signal		
Railroad Cant. Mast Arm		
Crossbuck		

REMOVAL ITEMS

	EX	PR
Removal Tic		
Bituminous Removal		
Hatch Pattern		
Tree Removal Single		

RIGHT OF WAY ITEMS

	EX	PR
Future ROW Corner Monument		
ROW Marker		
ROW Line		
Easement		
Temporary Easement		

Illinois Department of Transportation

PASSED January 1, 2011
Michael Brand
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2011
Scott E. Smith
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

(Sheet 5 of 8)

STANDARD 000001-06

RIGHT OF WAY ITEMS (contd.)

	EX	PR
Access Control Line		AC
Access Control Line & ROW	AC	AC
Access Control Line & ROW with Fence	AC	AC
Excess ROW Line		XS

ROADWAY PLAN ITEMS

	EX	PR
Cable Barrier		
Concrete Barrier		
Edge of Pavement		
Bit Shoulders, Medians and C&G Line		
Aggregate Shoulder		
Sidewalks, Driveways		
Guardrail		
Guardrail Post		
Traffic Sign		
Corrugated Median		
Impact Attenuator		
North Arrow with District Office (Half Size)	N	
Match Line		STA. 45+00
Slope Limit Line		
Typical Cross-Section Line		

ROADWAY PROFILES

	EX	PR
P.I. Indicator		
Point Indicator		
Earthworks Balance Point		
Begin Point		
Vert. Curve Data	VPI = ELEV= L = E =	VPI = ELEV= L = E =
Ditch Profile Left Side		
Ditch Profile Right Side		
Roadway Profile Line		
Storm Sewer Profile Left Side		
Storm Sewer Profile Right Side		

SIGNING ITEMS

	EX	PR
Cone, Drum or Barricade		
Barricade Type II		
Barricade Type III		
Barricade With Edge Line		
Flashing Light Sign		
Panels I		
Panels II		
Direction of Traffic		
Sign Flag (Half Size)		

SIGNING ITEMS (contd.)

	EX	PR
Reverse Left W1-4L (Half Size)		
Reverse Right W1-4R (Half Size)		
Two Way Traffic Sign W6-3 (Half Size)		
Detour Ahead W20-2(O) (Half Size)		DETOUR AHEAD
Left Lane Closed Ahead W20-5L(O) (Half Size)		LEFT LANE CLOSED AHEAD
Right Lane Closed Ahead W20-5R(O) (Half Size)		RIGHT LANE CLOSED AHEAD
Road Closed Ahead W20-3(O) (Half Size)		ROAD CLOSED AHEAD
Road Construction Ahead W20-1-(O) (Half Size)		ROAD CONSTRUCTION AHEAD
Single Lane Ahead (Half Size)		SINGLE LANE AHEAD
Transition Left W4-2L (Half Size)		
Transition Right W4-2R (Half Size)		

Illinois Department of Transportation

PASSED January 1, 2011
Michael Brand
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2011
Scott E. Sobek
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

(Sheet 6 of 8)

STANDARD 000001-06

SIGNING ITEMS (contd.)

	EX	PR
One Way Arrow Lrg. W1-6-(O) (Half Size)		
Two Way Arrow Large W1-7-(O) (Half Size)		
Detour M4-10L-(O) (Half Size)		DETOUR
Detour M4-10R-(O) (Half Size)		DETOUR
One Way Left R6-1L (Half Size)		ONE WAY
One Way Right R6-1R (Half Size)		ONE WAY
Left Turn Lane R3-I100L (Half Size)		LEFT TURN LANE
Keep Left R4-7AL (Half Size)		KEEP LEFT
Keep Left R4-7BL (Half Size)		KEEP LEFT
Keep Right R4-7AR (Half Size)		KEEP RIGHT
Keep Right R4-7BR (Half Size)		KEEP RIGHT
Stop Here On Red R10-6-AL (Half Size)		STOP HERE ON RED
Stop Here On Red R10-6-AR (Half Size)		STOP HERE ON RED
No Left Turn R3-2 (Half Size)		
No Right Turn R3-1 (Half Size)		
Road Closed R11-2 (Half Size)		ROAD CLOSED
Road Closed Thru Traffic R11-2 (Half Size)		ROAD CLOSED TO THRU TRAFFIC

STRUCTURES ITEMS

	EX	PR
Box Culvert Barrel		
Box Culvert Headwall		
Bridge Pier		
Bridge		
Retaining Wall		
Temporary Sheet Piling		

TRAFFIC SHEET ITEMS

	EX	PR
Cable Number		
Left Turn Green	G	G
Left Turn Yellow	Y	Y
Signal Backplate		
Signal Section 8" (200 mm)		
Signal Section 12" (300 mm)		
Walk/Don't Walk Letters	DW W	DW W
Walk/Don't Walk Symbols		

TRAFFIC SIGNAL ITEMS

	EX	PR
Galv. Steel Conduit		
Underground Cable		
Detector Loop Line		
Detector Loop Large		
Detector Loop Small		
Detector Loop Quadrapole		

Illinois Department of Transportation

PASSED January 1, 2011
Michael Brand
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2011
Scott E. Stokes
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

(Sheet 7 of 8)

STANDARD 000001-06

TRAFFIC SIGNAL ITEMS (contd.)

	EX	PR
Detector Raceway	"E"	
Aluminum Mast Arm		
Steel Mast Arm		
Veh. Detector Magnetic		
Conduit Splice		
Controller		
Gulfbox Junction		
Wood Pole		
Temp. Signal Head		
Handhole		
Double Handhole		
Heavy Duty Handhole	H	H
Junction Box		
Ped. Pushbutton Detector		
Ped. Signal Head		
Power Pole Service		
Priority Veh. Detector		
Signal Head		
Signal Head w/Backplate		
Signal Post		
Closed Circuit TV	C	C
Video Detector System	V	V

Illinois Department of Transportation

PASSED January 1, 2011

Michael Brand

ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2011

ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

UNDERGROUND UTILITY ITEMS

	EX	PR	ABANDONED
Cable TV	CTV	CTV	CTV
Electric Cable	E	E	E
Fiber Optic	FO	FO	FO
Gas Pipe	G	G	G
Oil Pipe	O	O	O
Sanitary Sewer			
Telephone Cable	T	T	T
Water Pipe	W	W	W

UTILITIES ITEMS

	EX	PR
Controller		
Double Handhole		
Fire Hydrant		
GuyWire or Deadman Anchor		
Handhole		
Heavy Duty Handhole		
Junction Box		
Light Pole		
Manhole		
Pipeline Warning Sign		
Power Pole		
Power Pole with Light		
Sanitary Sewer Cleanout		
Splice Box Above Ground		
Telephone Splice Box Above Ground		
Telephone Pole		

UTILITY ITEMS (contd.)

	EX	PR
Traffic Signal		
Traffic Signal Control Box		
Water Meter		
Water Meter Valve Box		
Profile Line		
Aerial Power Line	A A	A A

VEGETATION ITEMS

	EX	PR
Deciduous Tree		
Bush or Shrub		
Evergreen Tree		
Stump		
Orchard/Nursery Line		
Vegetation Line		
Woods & Bush Line		

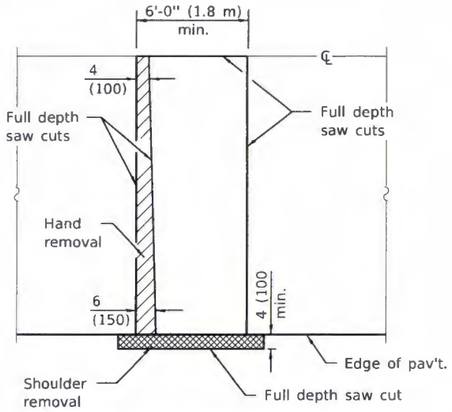
WATER FEATURE ITEMS

	EX	PR
Stream or Drainage Ditch		
Waters Edge		
Water Surface Indicator		
Water Point		
Disappearing Ditch		
Marsh		
Marsh/Swamp Boundary		

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

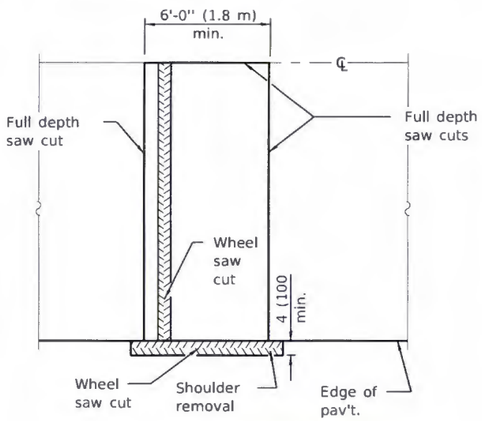
(Sheet 8 of 8)

STANDARD 000001-06



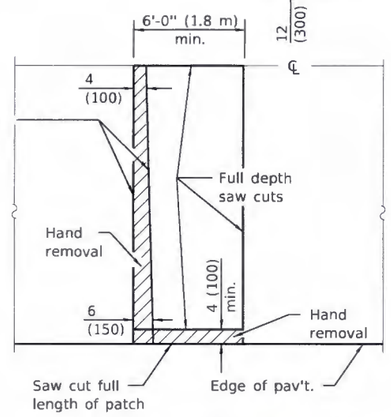
PAVEMENT SAWING DETAIL

(HMA SHOULDER)



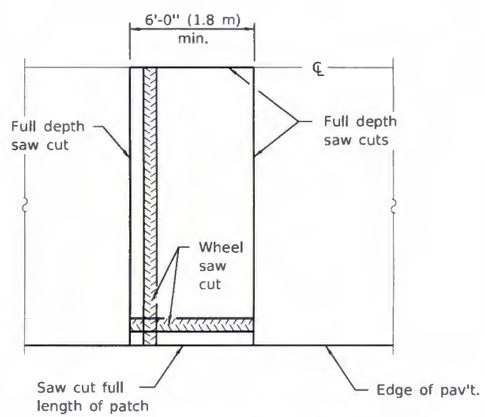
ALTERNATE SAWING DETAIL

(HMA SHOULDER)



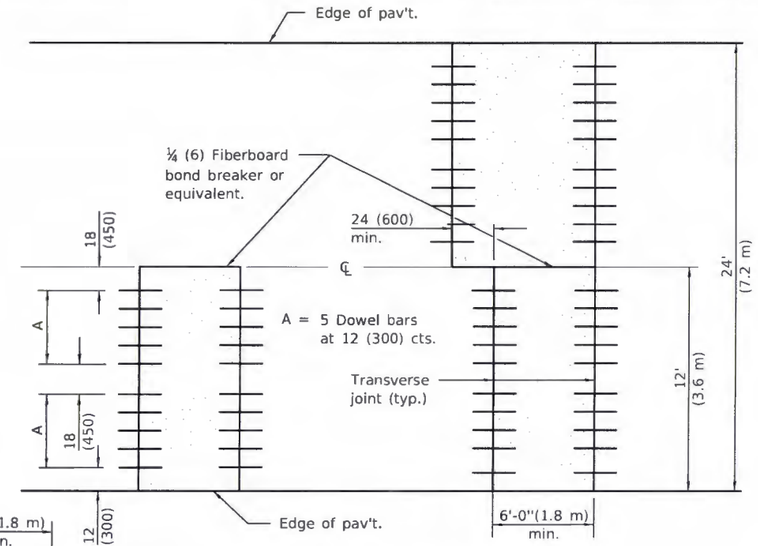
PAVEMENT SAWING DETAIL

(PCC SHOULDER)

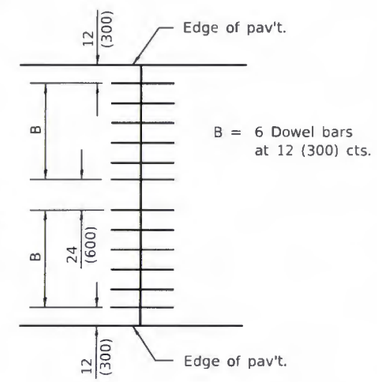


ALTERNATE SAWING DETAIL

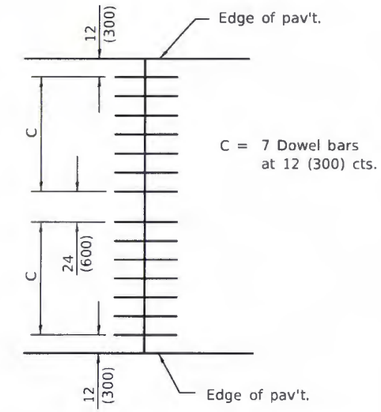
(PCC SHOULDER)



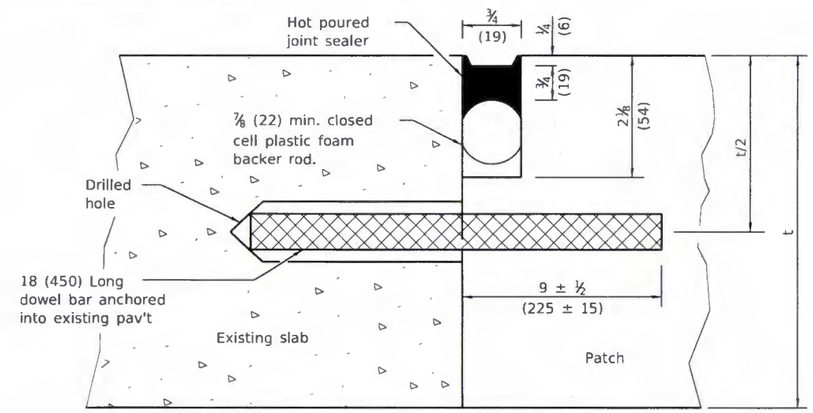
12' (3.6 m) WIDE LANES



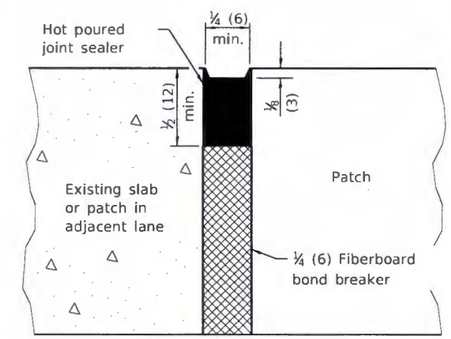
14' (4.2 m) WIDE RAMP



16' (4.8 m) WIDE RAMP



TRANSVERSE JOINT



CENTERLINE JOINT

DOWEL BAR TABLE		
PAVEMENT THICKNESS	DOWEL BAR DIAMETER	HOLE DIAMETER
10 (250) or greater	1½ (38)	1⅝ (41)
8 (200) thru 9.99 (249)	1¼ (32)	1⅜ (35)
Less than 8 (200)	1 (25)	1⅛ (29)

GENERAL NOTES

The transverse joints for Class B patches shall align with joints or cracks in the adjacent lane whenever possible.

See Standard 420701 for details of pavement fabric.

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

Illinois Department of Transportation

PASSED January 1, 2018
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2018
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

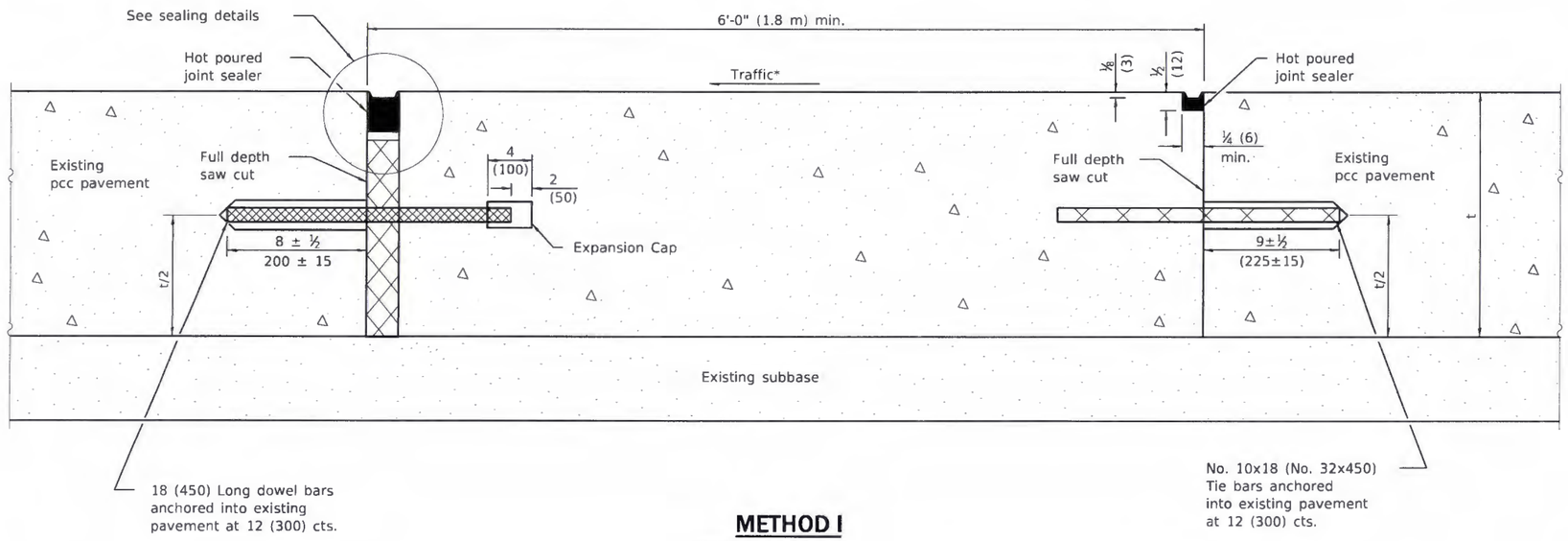
DATE	REVISIONS
1-1-18	Revised DOWEL BAR TABLE.
1-1-08	Switched units to
	English (metric).

CLASS B PATCHES

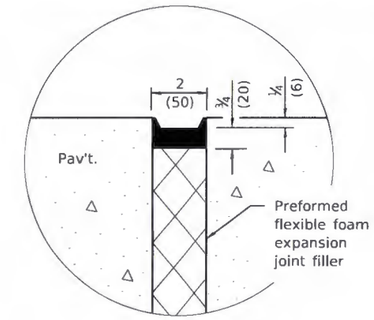
(Sheet 1 of 2)

STANDARD 442101-08

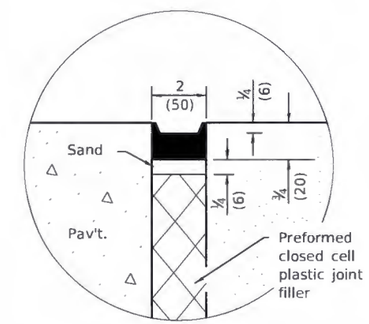
TRANSVERSE EXPANSION JOINTS



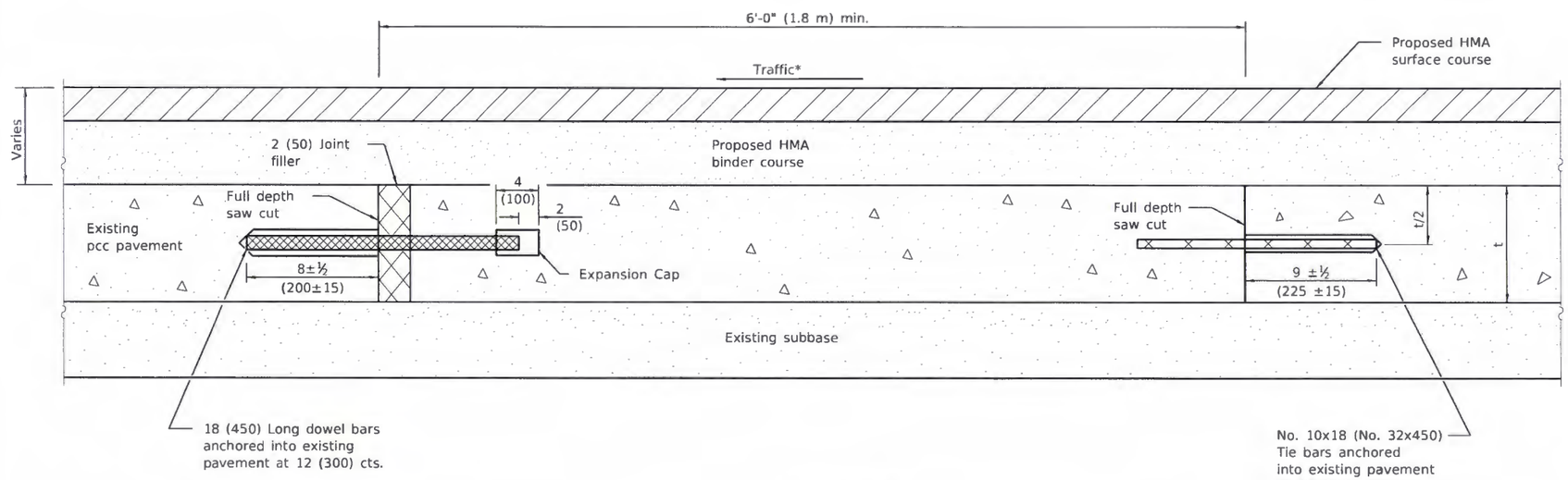
METHOD I
(Without Resurfacing)



SEALING DETAIL



SEALING DETAIL



METHOD II
(With Resurfacing)

NOTE

* When re-establishing a transverse expansion joint on a two-lane, two-way road, reverse the orientation of the dowel bars with respect to traffic for one of the patches such that the joint will be continuous across both lanes.

Illinois Department of Transportation

PASSED January 1, 2018
Michael Brand
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2018
Maureen M. Addis
ENGINEER OF DESIGN AND ENVIRONMENT

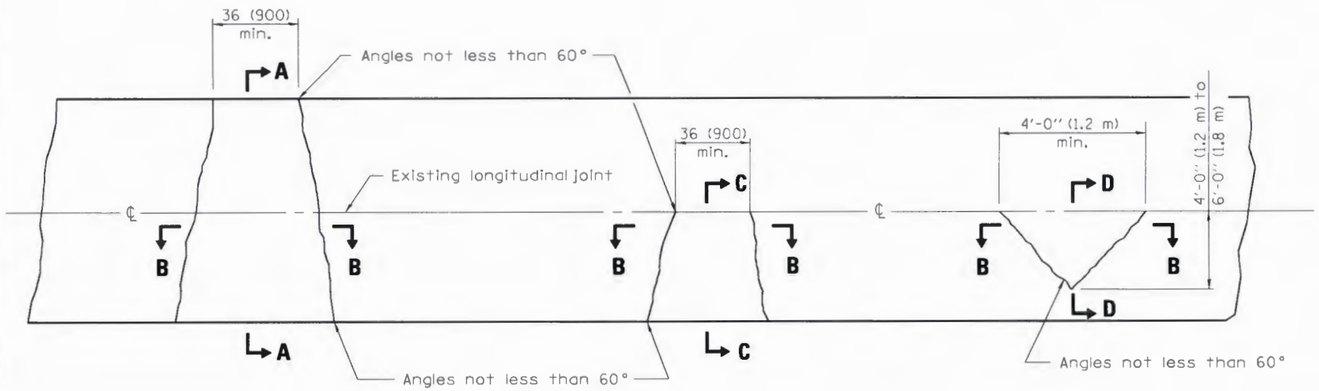
ISSUED 1-1-97

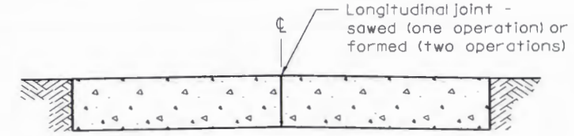
CLASS B PATCHES

(Sheet 2 of 2)

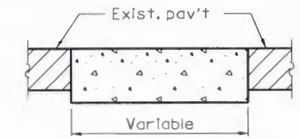
STANDARD 442101-08

CLASS C

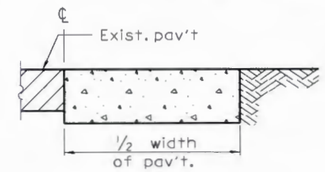




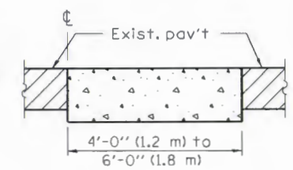
SECTION A–A



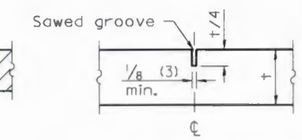
SECTION B–B



SECTION C–C



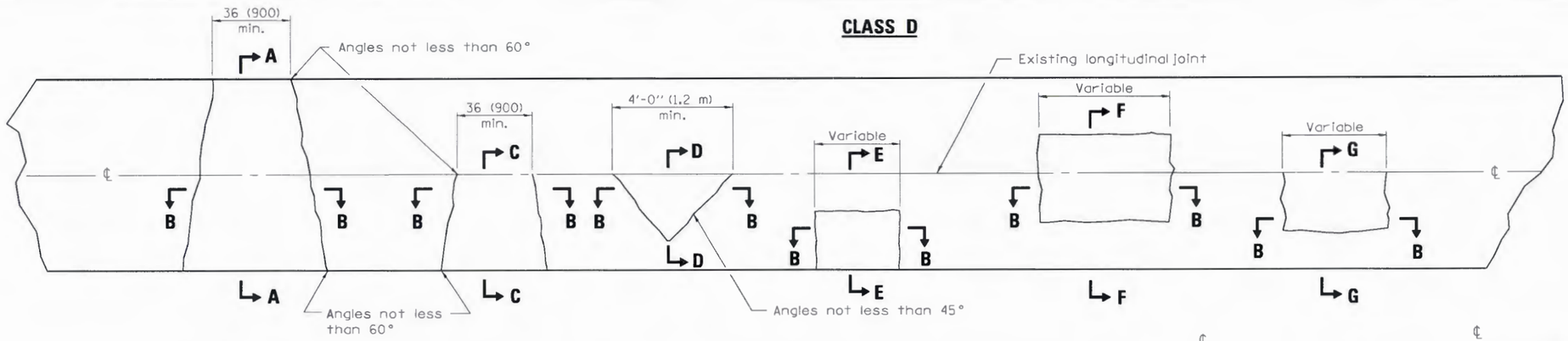
SECTION D–D

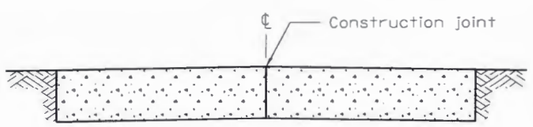


DETAIL OF SAWED CONTRACTION JOINT

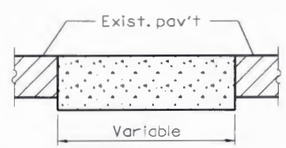
Note:
Longitudinal joints shall be as detailed on Standard 420001, except tie bars are not required for patches 20'-0" (6.0 m) or less in length.

CLASS D

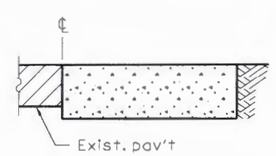




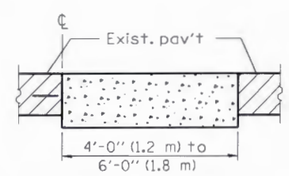
SECTION A–A
(Built in two operations)



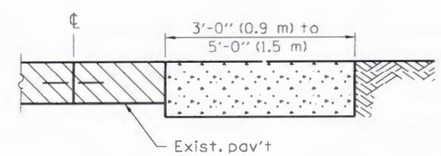
SECTION B–B



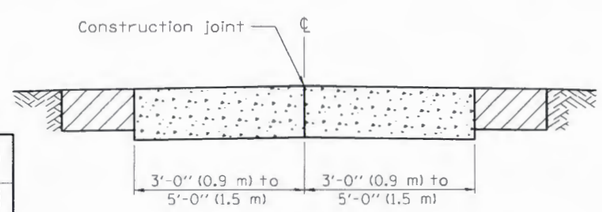
SECTION C–C



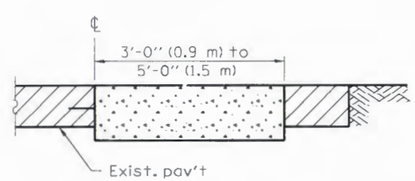
SECTION D–D



SECTION E–E



SECTION F–F
(Built in two operations)



SECTION G–G

GENERAL NOTES

Existing tie bars shall be either cut or removed. Marginal bars shall be cut.

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

Illinois Department of Transportation

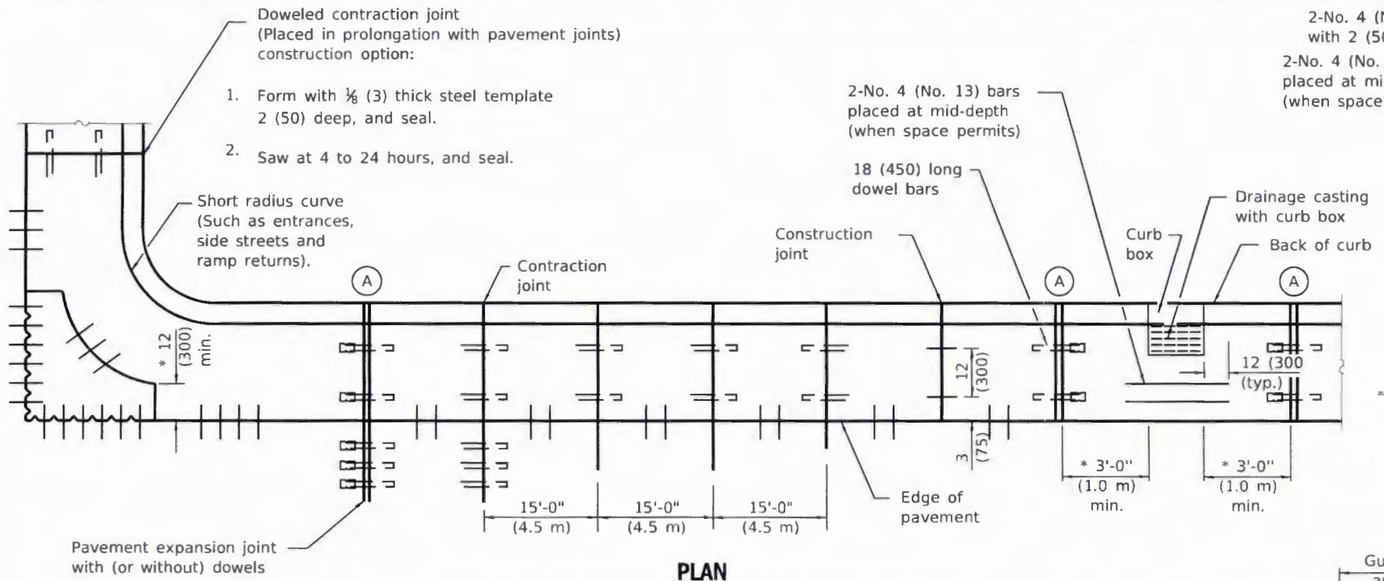
PASSED January 1, 2008
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2008
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

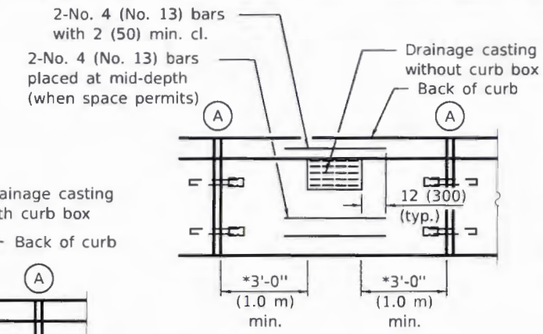
DATE	REVISIONS
1-1-08	Switched units to
	English (metric).
1-1-07	Revised Note for
	Class C patches.

CLASS C and D PATCHES

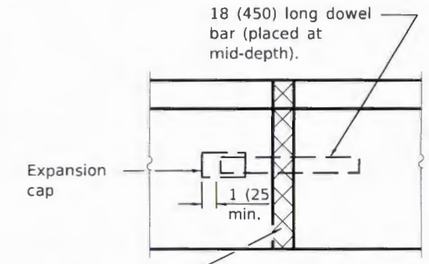
STANDARD 442201–03



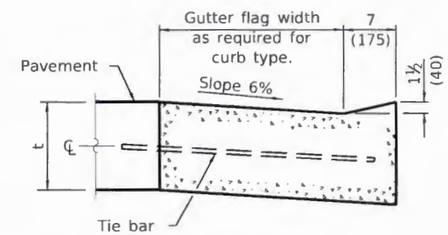
PLAN
ADJACENT TO PCC PAVEMENT OR PCC BASE COURSE



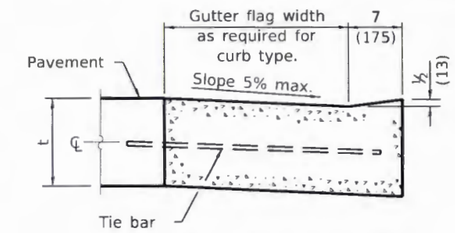
* This dimension shall be adjusted to align with joint on the adjacent pavement



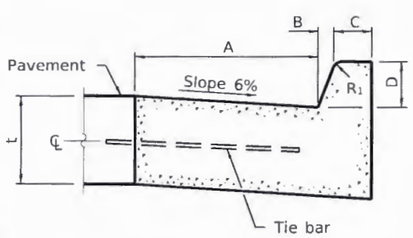
DETAIL (A)
EXPANSION JOINT



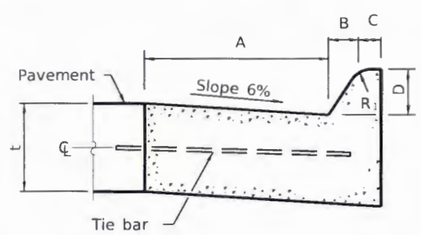
DEPRESSED CURB (TYPICAL)



DEPRESSED CURB ADJACENT TO CURB RAMP ACCESSIBLE TO THE DISABLED



BARRIER CURB

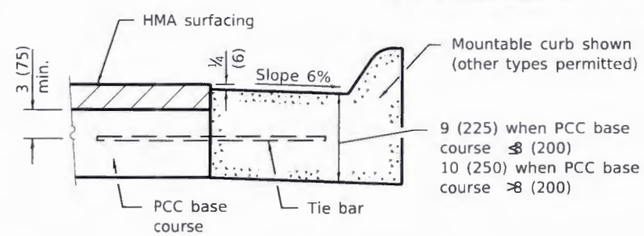


MOUNTABLE CURB

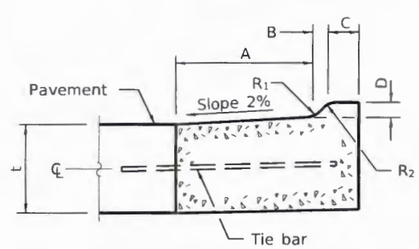
TABLE OF DIMENSIONS BARRIER CURB					
TYPE	A	B	C	D	R_1
B-6.06 * (B-15.15)	6 (150)	1 (25)	6 (150)	6 (150)	1 (25)
B-6.12 (B-15.3)	12 (300)	1 (25)	6 (150)	6 (150)	1 (25)
B-6.18 (B-15.45)	18 (450)	1 (25)	6 (150)	6 (150)	1 (25)
B-6.24 (B-15.60)	24 (600)	1 (25)	6 (150)	6 (150)	1 (25)
B-9.12 (B-22.30)	12 (300)	2 (50)	5 (125)	9 (225)	1 (25)
B-9.18 (B-22.45)	18 (450)	2 (50)	5 (125)	9 (225)	1 (25)
B-9.24 (B-22.60)	24 (600)	2 (50)	5 (125)	9 (225)	1 (25)

* For corner islands only.

TABLE OF DIMENSIONS MOUNTABLE CURB						
TYPE	A	B	C	D	R_1	R_2
M-2.06 (M-5.15)	6 (150)	2 (50)	4 (100)	2 (50)	3 (75)	2 (50)
M-2.12 (M-5.30)	12 (300)	2 (50)	4 (100)	2 (50)	3 (75)	2 (50)
M-4.06 (M-10.15)	6 (150)	4 (100)	3 (75)	4 (100)	3 (75)	NA
M-4.12 (M-10.30)	12 (300)	4 (100)	3 (75)	4 (100)	3 (75)	NA
M-4.18 (M-10.45)	18 (450)	4 (100)	3 (75)	4 (100)	3 (75)	NA
M-4.24 (M-10.60)	24 (600)	4 (100)	3 (75)	4 (100)	3 (75)	NA
M-6.06 (M-15.15)	6 (150)	6 (150)	2 (50)	6 (150)	2 (50)	NA
M-6.12 (M-15.30)	12 (300)	6 (150)	2 (50)	6 (150)	2 (50)	NA
M-6.18 (M-15.45)	18 (450)	6 (150)	2 (50)	6 (150)	2 (50)	NA
M-6.24 (M-15.60)	24 (600)	6 (150)	2 (50)	6 (150)	2 (50)	NA



ADJACENT TO PCC BASE COURSE WITH HMA SURFACING



M-2.06 (M-5.15) and M-2.12 (M-5.30)

GENERAL NOTES

The bottom slope of combination curb and gutter constructed adjacent to pcc pavement shall be the same slope as the subbase or 6% when subbase is omitted.

t = Thickness of pavement.

Longitudinal joint tie bars shall be No. 6 (No. 19) at 36 (900) centers in accordance with details for longitudinal construction joint shown on Standard 420001.

A minimum clearance of 2 (50) between the end of the tie bar and the back of the curb shall be maintained.

The dowel bars shown in contraction joints will only be required for monolithic construction.

See Standard 606301 for details of corner islands.

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

Illinois Department of Transportation

PASSED January 1, 2018
Michael Beard
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2018
Maureen M. Addis
ENGINEER OF DESIGN AND ENVIRONMENT

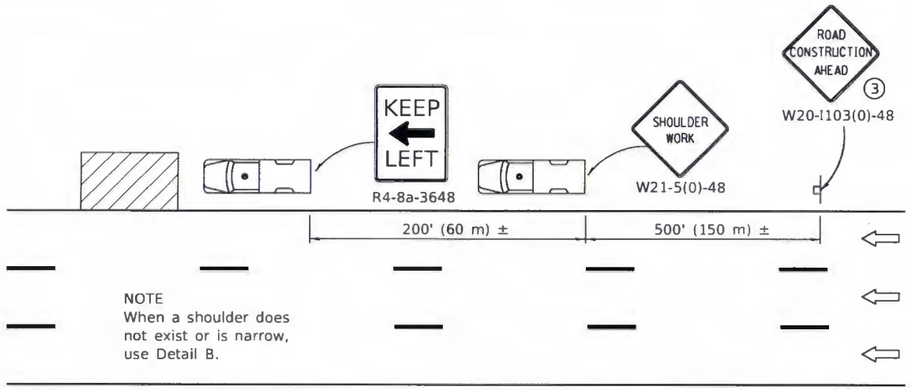
ISSUED 1-1-97

DATE	REVISIONS
1-1-18	Revised General Note for tie
	bar spacing to 36 (900) cts.
1-1-15	Added B-6.06 (B-15.15) barrier
	curb and gutter to table
	(corner islands only).

CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER

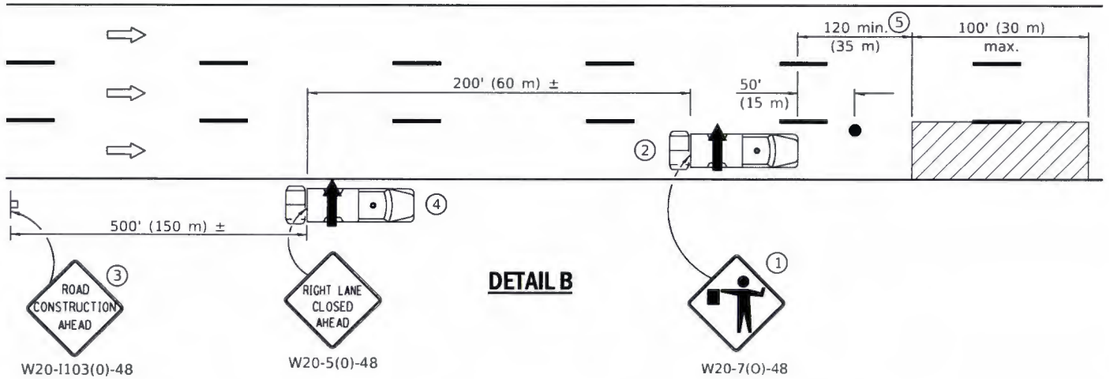
(Sheet 1 of 2)

STANDARD 606001-07

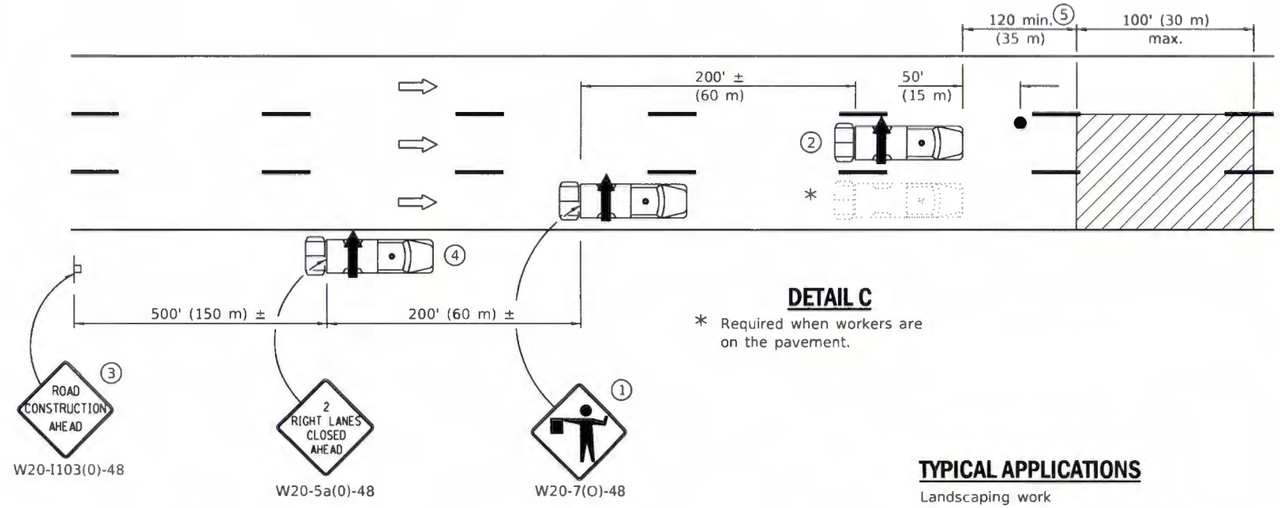


NOTE
When a shoulder does not exist or is narrow, use Detail B.

DETAIL A



DETAIL B



DETAIL C

* Required when workers are on the pavement.

TYPICAL APPLICATIONS

Landscaping work
Utility work
Pavement marking
Weed spraying
Roadometer measurements
Debris cleanup
Crack pouring

① Flaggers are required when workers are on the pavement.

② For striping operations only. See sign arrow detail on this standard.

③ For stationary operations which are on the roadway or shoulder, greater than 15 minutes and up to 1 hour.

④ Omit truck, attenuator and arrow board when no shoulder exists due to curb and gutter.

⑤ The distance between the work and the lead truck may vary according to terrain or paint/crack sealing time.

G20-I101-2430
(appropriate arrow)
②(when striping only)

GENERAL NOTES

This Standard is used where any vehicle, equipment, workers or their activities will require: 1) stationary operations up to 1 hour, or 2) a continuous or intermittent moving operation where the average speed of movement is greater than 1 mph (2 km/h).

This Standard is also applicable when work is being performed in the left lane(s) or on the median shoulder. Under these conditions, KEEP RIGHT signs shall be substituted for KEEP LEFT signs and arrow board indications shall be directed to the right.

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

SYMBOLS

- Arrow board
- Work area
- Truck with flashing amber light
- Truck/Trailer mounted attenuator
- Flagger with traffic control sign
- Sign

Illinois Department of Transportation

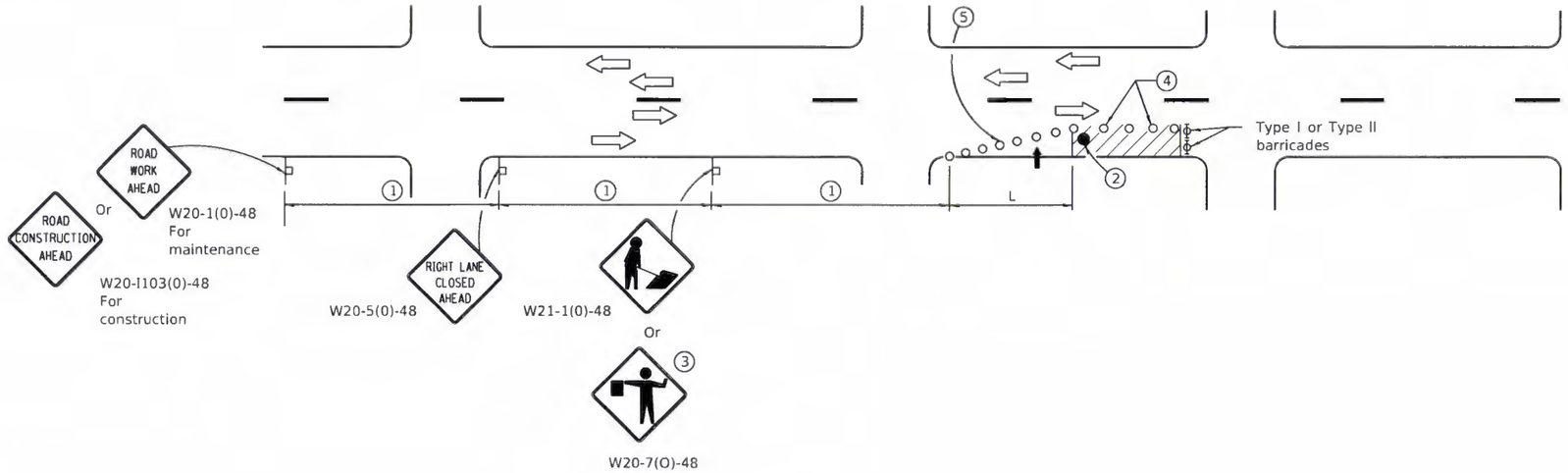
PASSED January 1, 2017
ENGINEER OF SAFETY PROG. AND ENGINEERING
APPROVED January 1, 2017
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-11

DATE	REVISIONS
1-1-17	Revised 'NOTE' on DETAIL A
	to use DETAIL B in lieu of
	DETAIL C.
4-1-16	Rev. gen. notes. Added
	note ⑤. Rev. dist. between
	work and lead truck.

LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS ≤ 40 MPH

STANDARD 701427-05



SIGN SPACING	
Posted Speed	Sign Spacing
55	500' (150 m)
50-45	350' (100 m)
<45	200' (60 m)

SYMBOLS

- Arrow board
- Cone, drum or barricade
- Sign on portable or permanent support
- Work area
- Barricade or drum with flashing light
- Flagger with traffic control sign.

1. Refer to SIGN SPACING TABLE for distances.
2. Required for speeds > 40 mph.
3. Use flagger sign only when flagger is present.
4. Cones at 25' (8 m) centers for 250' (75 m). Additional cones may be placed at 50' (15 m) centers. When drums or Type I or Type II barricades are used, the interval between devices may be doubled.
5. Cones, drums or barricades at 20' (6 m) centers in taper.

GENERAL NOTES

This Standard is used where at any time, day or night, any vehicle, equipment, workers or their activities encroach on the pavement requiring the closure of one traffic lane in an Urban area.

Calculate L as follows:

SPEED LIMIT	FORMULAS English	FORMULAS (Metric)
40 mph (70 km/h) or less:	$L=\frac{WS^2}{60}$	$L=\frac{WS^2}{150}$
45 mph (80 km/h) or greater:	L=(W)(S)	L=0.65(W)(S)

W = Width of offset in feet (meters).

S = Normal posted speed mph (km/h).

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

Illinois Department of Transportation

PASSED January 1, 2015
ENGINEER OF SAFETY ENGINEERING

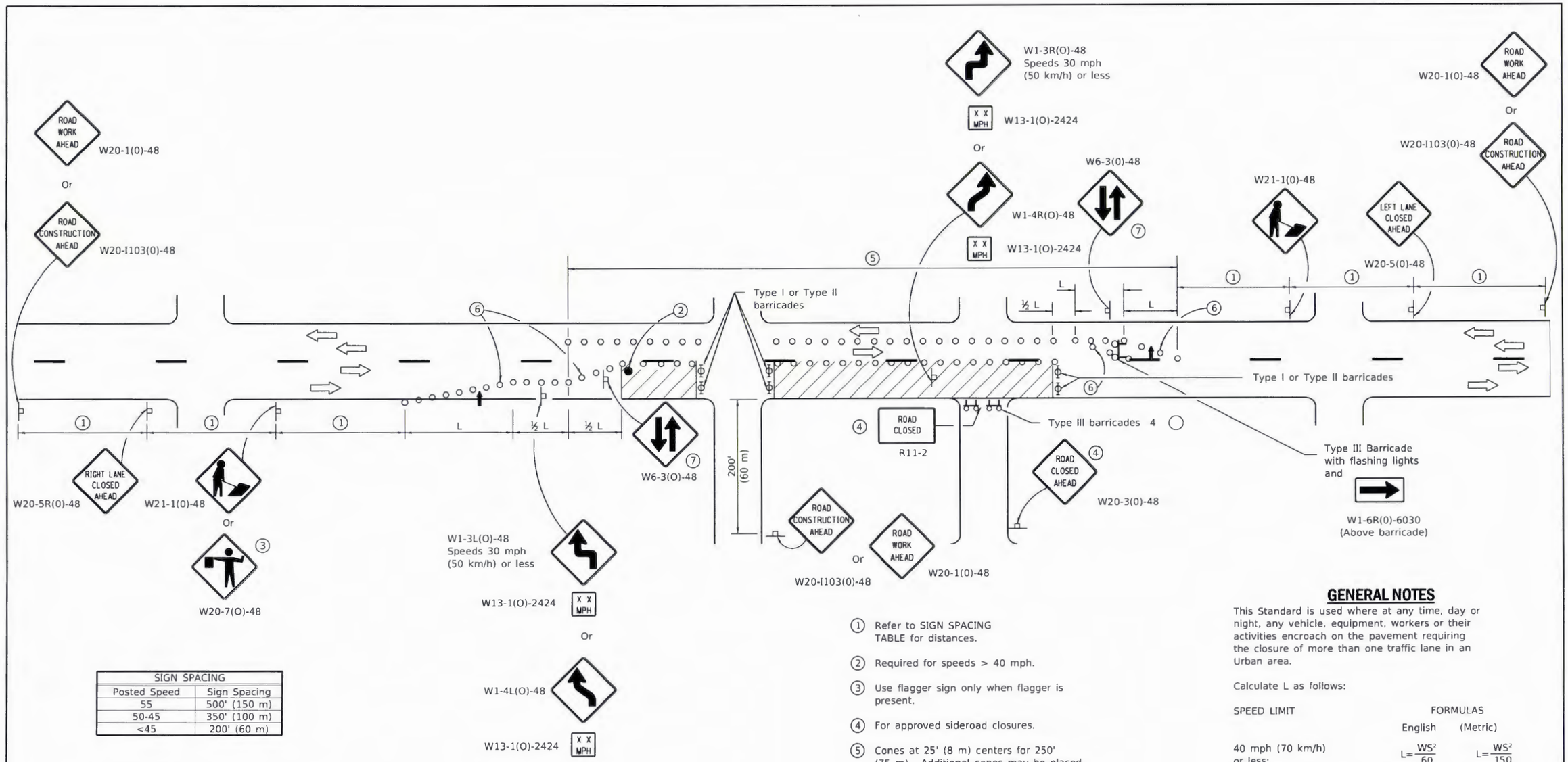
APPROVED January 1, 2015
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

DATE	REVISIONS
1-1-15	Renamed standard. Moved
	case on Sheet 2 to new
	Highway Standard.
1-1-14	Revised workers sign
	number to agree with
	current MUTCD.

URBAN SINGLE LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN

STANDARD 701606-10



SIGN SPACING	
Posted Speed	Sign Spacing
55	500' (150 m)
50-45	350' (100 m)
<45	200' (60 m)

SYMBOLS

- Arrow board
- Cone, drum or barricade
- Sign on portable or permanent support
- Work area
- Barricade or drum with flashing light
- Type III barricade with flashing lights
- Flagger with traffic control sign.

1. Refer to SIGN SPACING TABLE for distances.
2. Required for speeds > 40 mph.
3. Use flagger sign only when flagger is present.
4. For approved sideroad closures.
5. Cones at 25' (8 m) centers for 250' (75 m). Additional cones may be placed at 50' (15 m) centers. When drums or Type I or Type II barricades are used, the interval between devices may be doubled.
6. Cones, drums or barricades at 20' (6 m) centers in taper.
7. Repeat every 1 mile (1.6 km).

GENERAL NOTES

This Standard is used where at any time, day or night, any vehicle, equipment, workers or their activities encroach on the pavement requiring the closure of more than one traffic lane in an Urban area.

Calculate L as follows:

SPEED LIMIT	FORMULAS English	FORMULAS (Metric)
40 mph (70 km/h) or less:	$L=\frac{WS^2}{60}$	$L=\frac{WS^2}{150}$
45 mph (80 km/h) or greater:	L=(W)(S)	L=0.65(W)(S)

W = Width of offset in feet (meters).

S = Normal posted speed mph (km/h).

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

Illinois Department of Transportation

PASSED April 1, 2016
ENGINEER OF SAFETY ENGINEERING

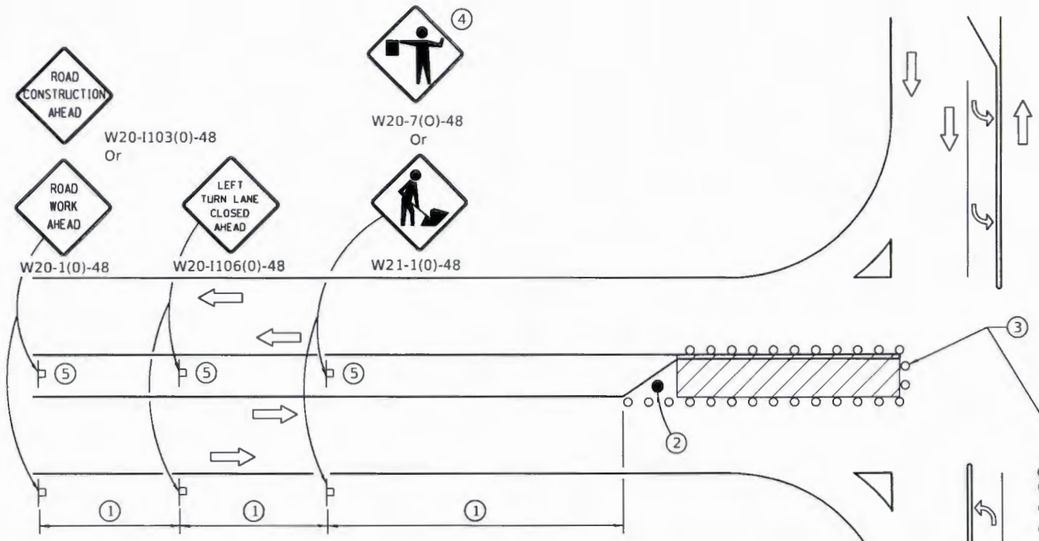
APPROVED April 1, 2016
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-15

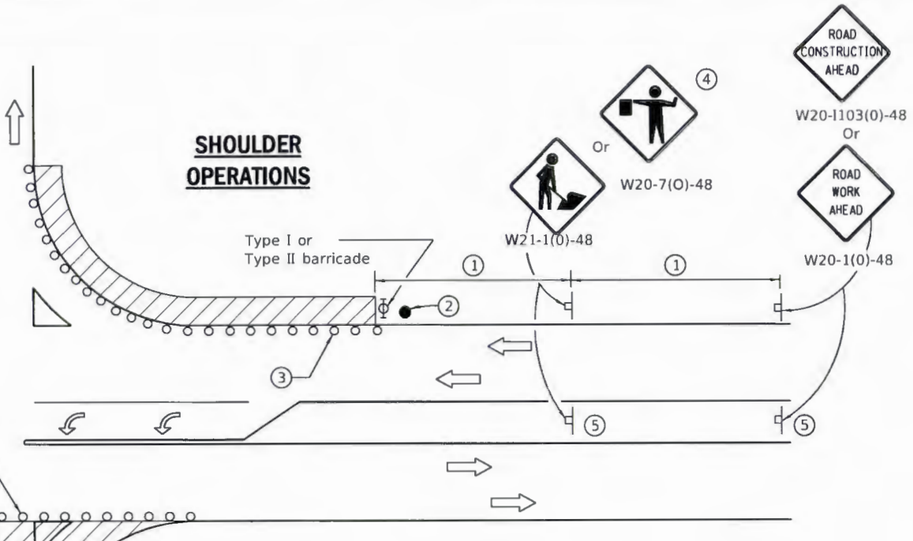
DATE	REVISIONS
4-1-16	Moved first reverse
	curve/turn sign to
	middle of tangent.
1-1-15	New Standard.

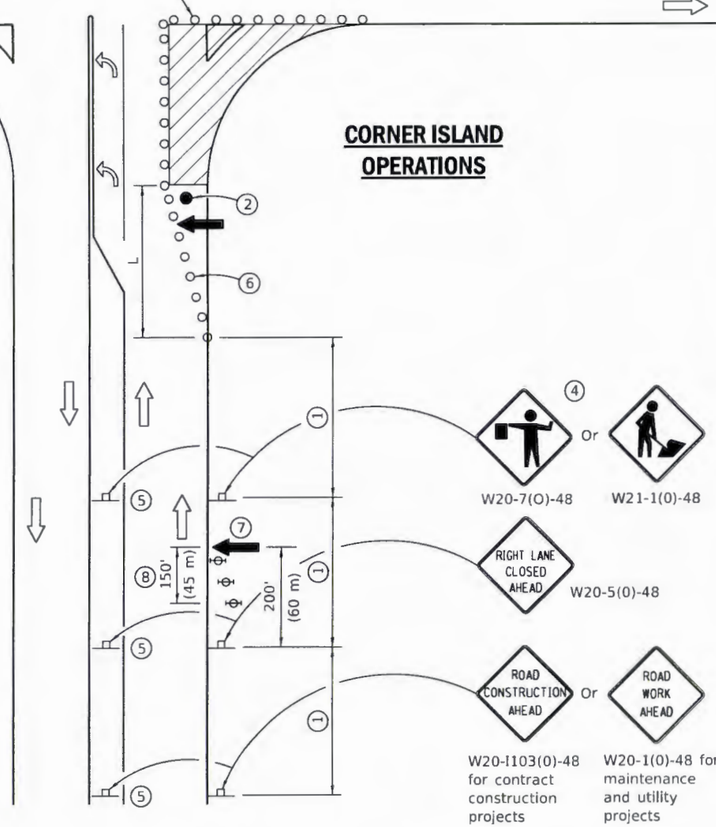
URBAN HALF ROAD CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN

STANDARD 701611-01



LEFT TURN LANE OR CENTER MEDIAN OPERATIONS





1. Refer to SIGN SPACING TABLE for distance.
2. Required for speed > 40 mph.
3. Cones at 25' (8 m) centers for 250' (75 m). Additional cones may be placed at 50' (15 m) centers. When drums or Type I or Type II barricades are used, the interval between devices may be doubled.
4. Use flagger sign only when flagger is present.
5. Omit this sign when median is less than 10' (3 m) or for bi-directional turn lanes.
6. Cones, drums or barricades at 20' (6 m) centers in taper.
7. Advanced arrow board required for speeds > 45 mph.
8. Three Type II barricades, drums or vertical barricades at 50' (15 m) centers.

SIGN SPACING	
Posted Speed	Sign Spacing
55	500' (150 m)
50-45	350' (100 m)
<45	200' (60 m)

SYMBOLS

- Work area
- Cone, drum or barricade
- Sign on portable or permanent support
- Arrow board
- Barricade or drum with flashing light
- Flagger with traffic control sign

GENERAL NOTES

This Standard is used where at any time, day or night, any vehicle, equipment, workers or their activities encroach on the pavement during shoulder operations or where construction requires lane closures in an urban area.

Calculate L as follows:

SPEED LIMIT	FORMULAS English	FORMULAS (Metric)
40 mph (70 km/h) or less:	$L=\frac{WS^2}{60}$	$L=\frac{WS^2}{150}$
45 mph (80 km/h) or greater:	L=(W)(S)	L=0.65(W)(S)

W = Width of offset in feet (meters).

S = Normal posted speed mph (km/h).

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

Illinois Department of Transportation

PASSED April 1, 2016
ENGINEER OF SAFETY ENGINEERING

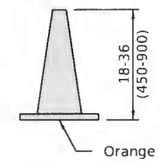
APPROVED April 1, 2016
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

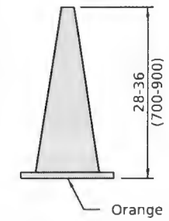
DATE	REVISIONS
4-1-16	Corrected sign number for
	LEFT TURN LANE CLOSED
	AHEAD.
1-1-14	Added devices at arrow
	board upstream from taper.
	Rev. workers sign number.

URBAN LANE CLOSURE, MULTILANE INTERSECTION

STANDARD 701701-10

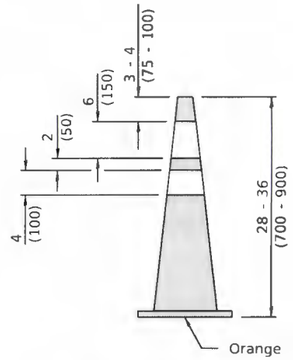


Posted speed < 45 mph

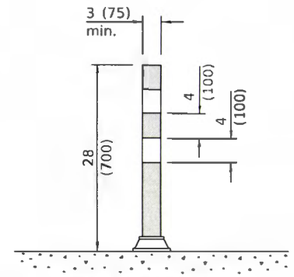


Posted speed ≥ 45 mph

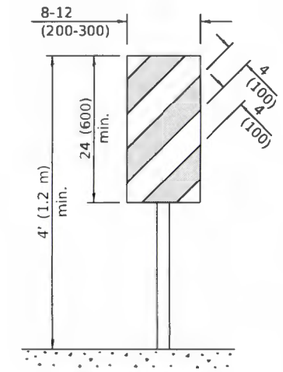
CONE FOR DAYTIME



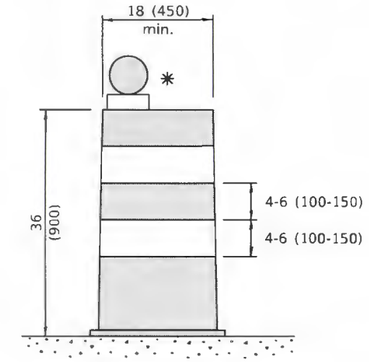
REFLECTORIZED CONE FOR NIGHTTIME



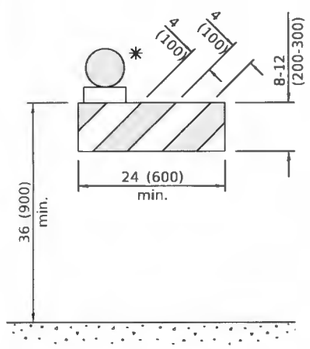
TUBULAR MARKER



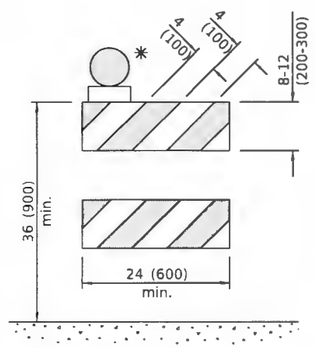
VERTICAL PANEL
POST MOUNTED



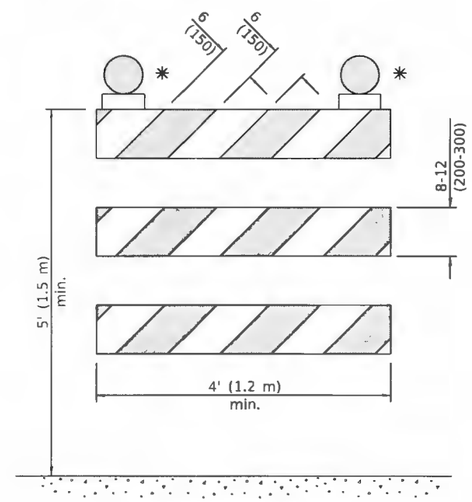
DRUM



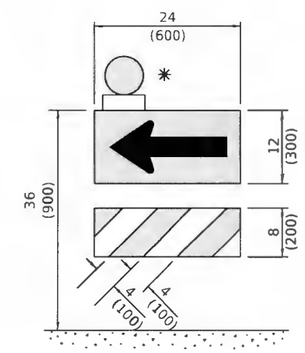
TYPE I BARRICADE



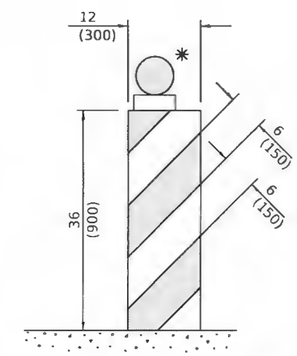
TYPE II BARRICADE



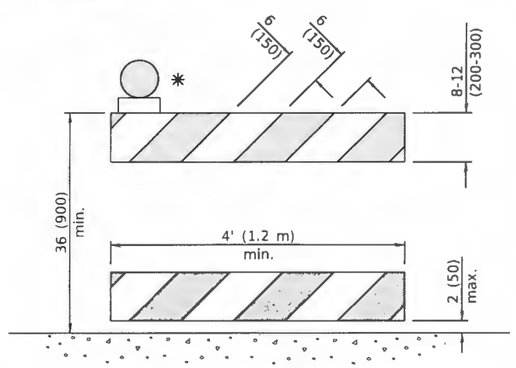
TYPE III BARRICADE



DIRECTION INDICATOR BARRICADE



VERTICAL BARRICADE



DETECTABLE PEDESTRIAN CHANNELIZING BARRICADE

✱ Warning lights (if required)

GENERAL NOTES

All heights shown shall be measured above the pavement surface.

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

Illinois Department of Transportation

PASSED January 1, 2018
ENGINEER OF OPERATIONS

APPROVED January 1, 2018
ENGINEER OF DESIGN AND ENVIRONMENT

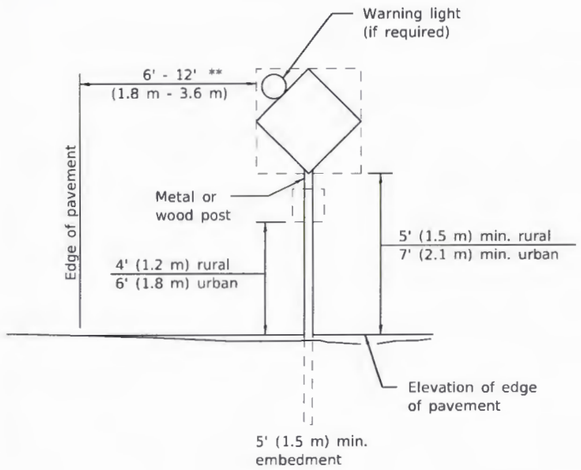
ISSUED 1-1-97

DATE	REVISIONS
1-1-18	Revised END WORK ZONE
	SPEED LIMIT sign from
	orange to white background.
1-1-17	Changed FLEXIBLE DELINEATOR
	to TUBULAR MARKER.

TRAFFIC CONTROL DEVICES

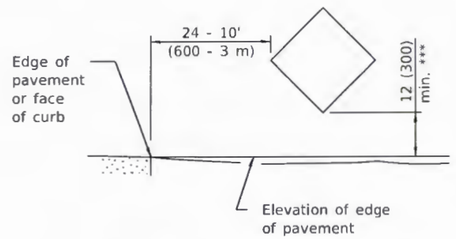
(Sheet 1 of 3)

STANDARD 701901-07



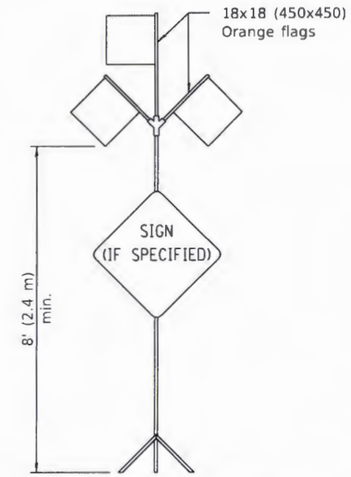
POST MOUNTED SIGNS

** When curb or paved shoulder are present this dimension shall be 24 (600) to the face of curb or 6' (1.8 m) to the outside edge of the paved shoulder.



SIGNS ON TEMPORARY SUPPORTS

*** When work operations exceed four days, this dimension shall be 5' (1.5 m) min. If located behind other devices, the height shall be sufficient to be seen completely above the devices.

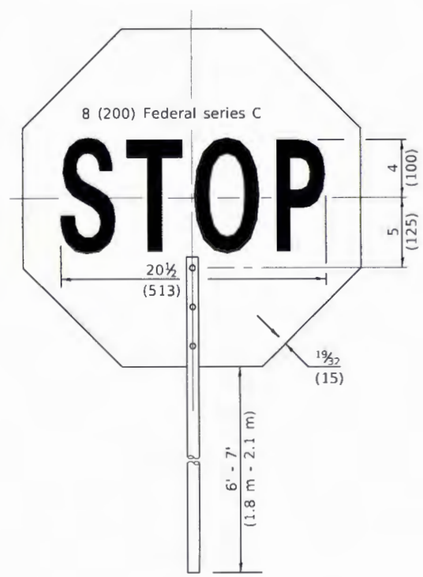


HIGH LEVEL WARNING DEVICE

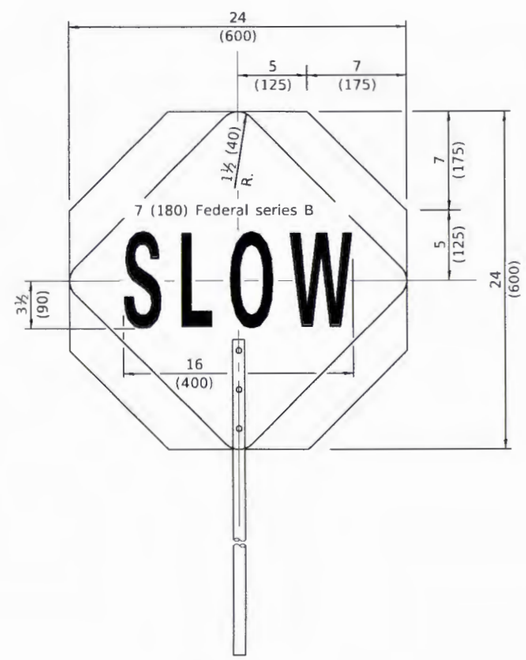
W12-I103-4848

WIDTH RESTRICTION SIGN

XX'-XX" width and X miles are variable.



FRONT SIDE



REVERSE SIDE

FLAGGER TRAFFIC CONTROL SIGN

ROAD CONSTRUCTION NEXT X MILES	G20-I104(0)-6036
END CONSTRUCTION	G20-I105(0)-6024

This signing is required for all projects 2 miles (3200 m) or more in length.

ROAD CONSTRUCTION NEXT X MILES sign shall be placed 500' (150 m) in advance of project limits.

END CONSTRUCTION sign shall be erected at the end of the job unless another job is within 2 miles (3200 m).

Dual sign displays shall be utilized on multi-lane highways.

WORK LIMIT SIGNING

WORK ZONE	W21-III5(0)-3618
SPEED LIMIT XX	R2-1-3648
PHOTO ENFORCED	R10-I108p-3618 ****
$XXX FINE MINIMUM	R2-I106p-3618

Sign assembly as shown on Standards or as allowed by District Operations.

END WORK ZONE SPEED LIMIT	G20-I103-6036

This sign shall be used when the above sign assembly is used.

HIGHWAY CONSTRUCTION SPEED ZONE SIGNS

**** R10-I108p shall only be used along roadways under the juristiction of the State.

Illinois Department of Transportation

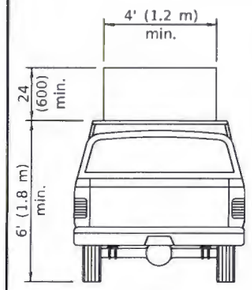
PASSED January 1, 2018
ENGINEER OF OPERATIONS
APPROVED January 1, 2018
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

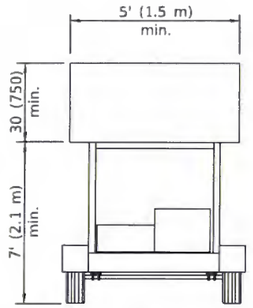
TRAFFIC CONTROL DEVICES

(Sheet 2 of 3)

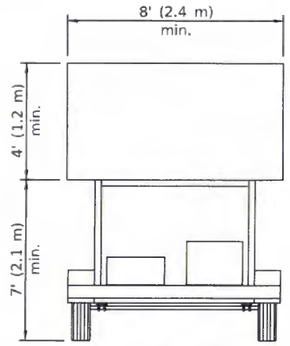
STANDARD 701901-07



TYPE A ROOF MOUNTED

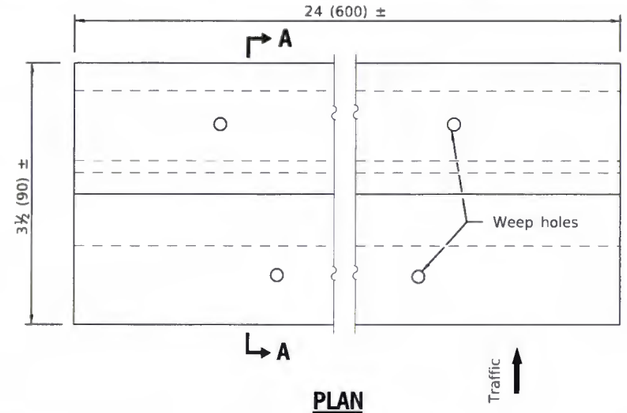


TYPE B ROOF OR TRAILER MOUNTED

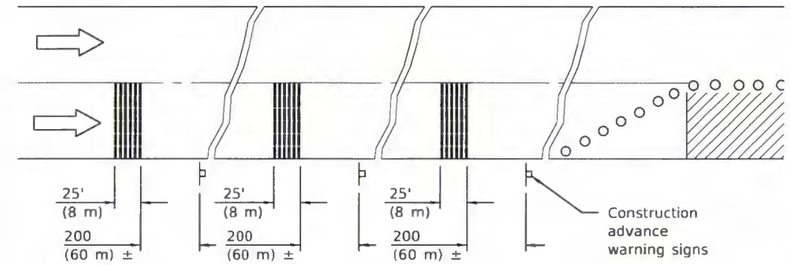


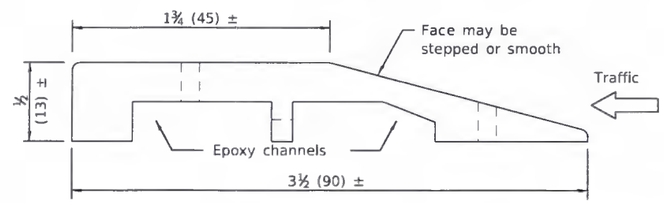
TYPE C TRAILER MOUNTED

ARROW BOARDS

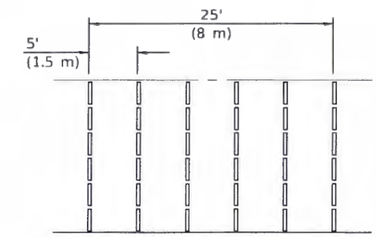


PLAN



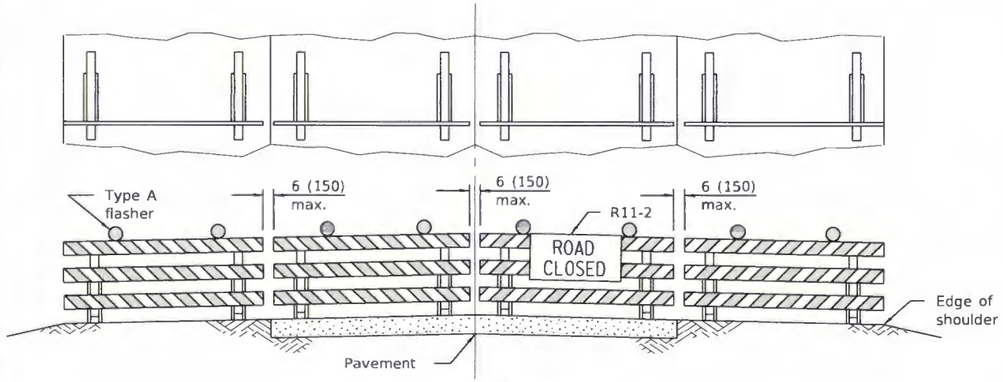


SECTION A-A



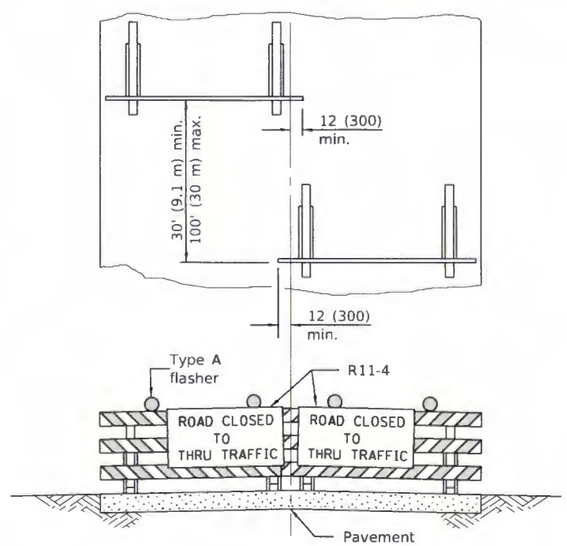
TYPICAL INSTALLATION

TEMPORARY RUMBLE STRIPS



ROAD CLOSED TO ALL TRAFFIC

Reflectorized striping may be omitted on the back side of the barricades. If a Type III barricade with an attached sign panel which meets NCHRP 350 is not available, the sign may be mounted on an NCHRP 350 temporary sign support directly in front of the barricade.



ROAD CLOSED TO THRU TRAFFIC

Reflectorized striping shall appear on both sides of the barricades. If a Type III barricade with an attached sign panel which meets NCHRP 350 is not available, the signs may be mounted on NCHRP 350 temporary sign supports directly in front of the barricade.

TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD

Illinois Department of Transportation

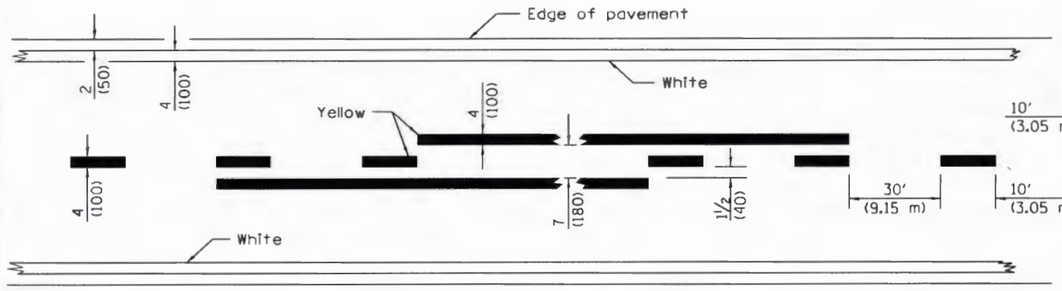
PASSED January 1, 2018
ENGINEER OF OPERATIONS
APPRDVED January 1, 2018
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

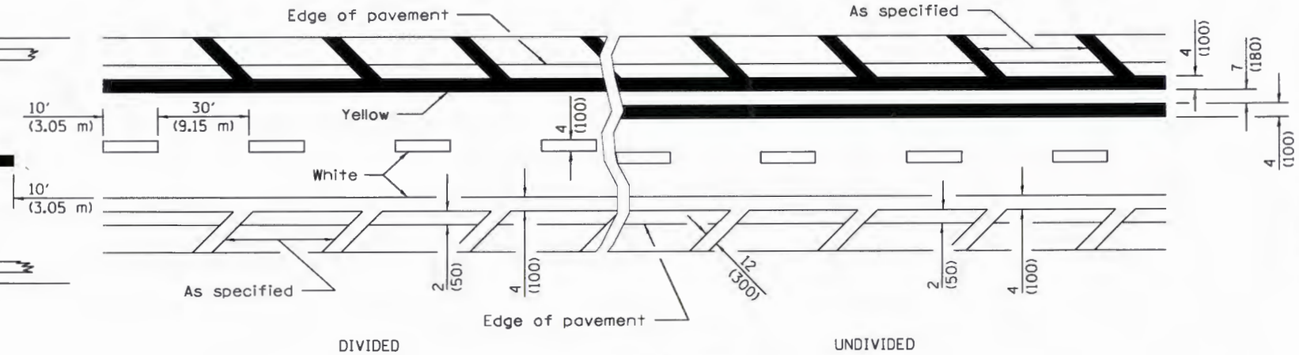
TRAFFIC CONTROL DEVICES

(Sheet 3 of 3)

STANDARD 701901-07

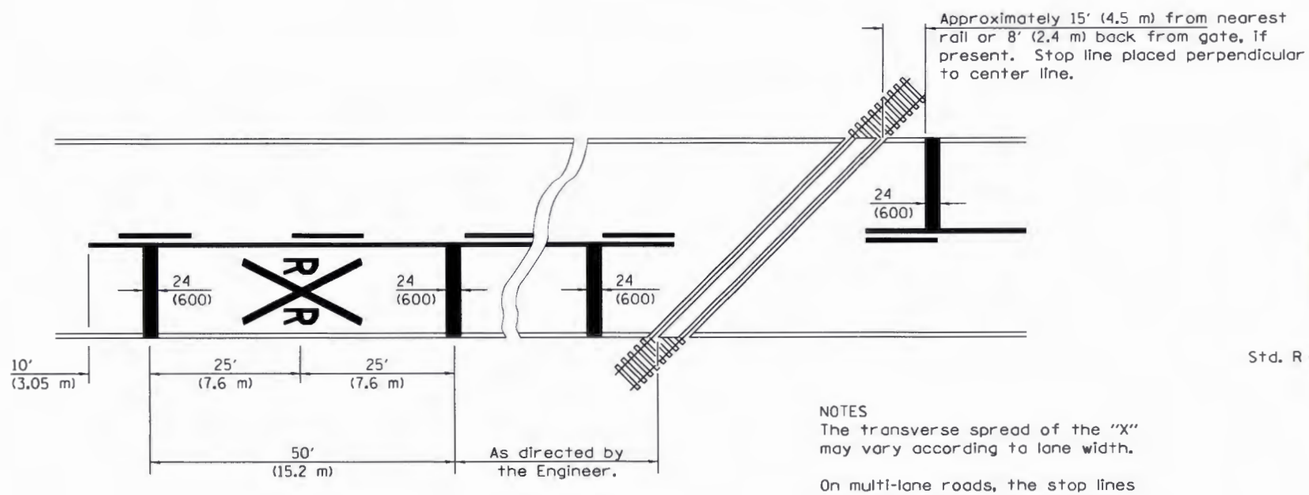


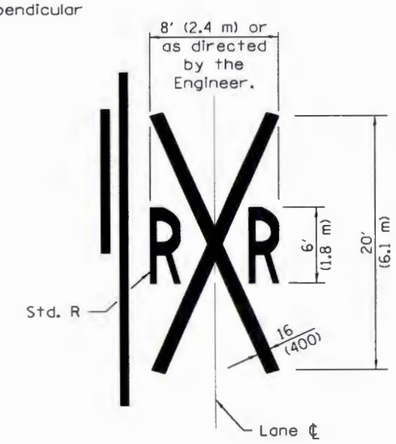
2 LANE



MULTI LANE

LANE AND EDGE LINES





NOTES
The transverse spread of the "X" may vary according to lane width.

On multi-lane roads, the stop lines shall extend across all approach lanes and separate RXR symbols shall be placed adjacent to each other in each lane.

When the pavement marking symbol is used, a portion of the symbol should be located directly adjacent to the Advance Warning Sign (W10-1) as placed by Table 2C-4, Condition B of the MUTCD.

PAVEMENT MARKINGS AT RAILROAD–HIGHWAY GRADE CROSSING

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

Illinois Department of Transportation

APPROVED January 1, 2015
ENGINEER OF OPERATIONS
APPROVED January 1, 2015
ENGINEER OF DESIGN AND ENVIRONMENT

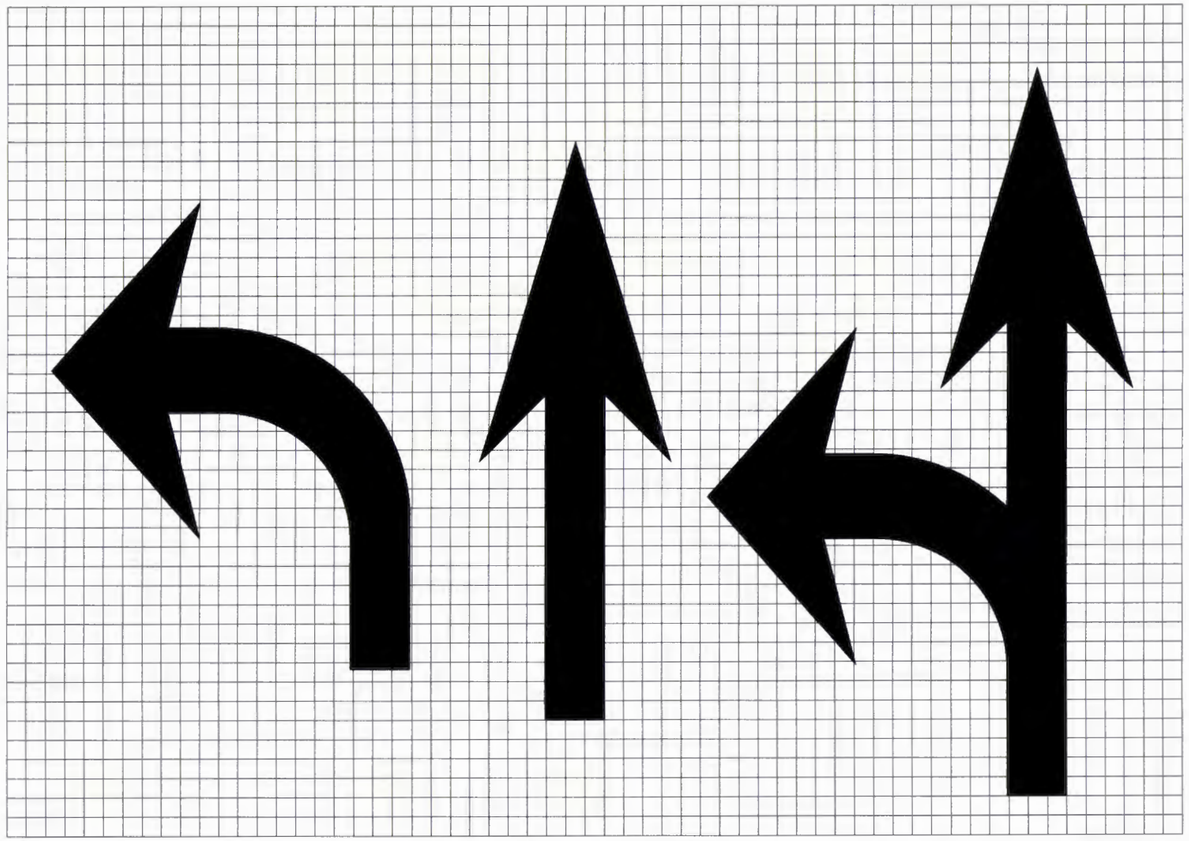
ISSUED 1-1-97

DATE	REVISIONS
1-1-15	Added symbols. Revised
	bike symbol. Revised note
	for stop line at RR crossing.
1-1-14	Added bike symbol. Renamed
	'LANE DROP ARROW' detail to
	'LANE-REDUCTION ARROW'.

TYPICAL PAVEMENT MARKINGS

(Sheet 1 of 3)

STANDARD 780001–05



Legend Height	Arrow Size	a
6′ (1.8 m)	Small	2.9 (74)
8′ (2.4 m)	Large	3.8 (96)

The space between adjacent letters or numerals should be approximately 3 (75) for 6′ (1.8 m) legend and 4 (100) for 8′ (2.4 m) legend.

LETTER AND ARROW GRID SCALE

Illinois Department of Transportation

APPROVED January 1, 2015
ENGINEER OF OPERATIONS

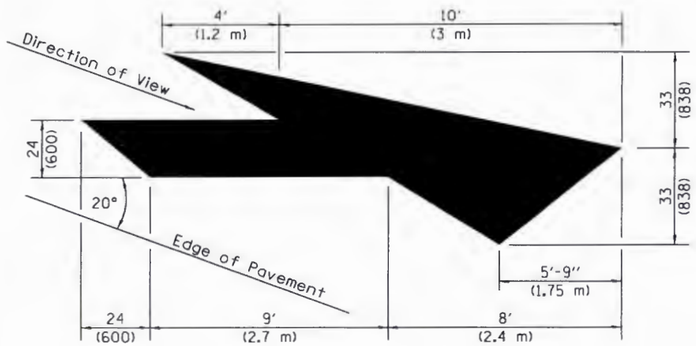
APPROVED January 1, 2015
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

TYPICAL PAVEMENT MARKINGS

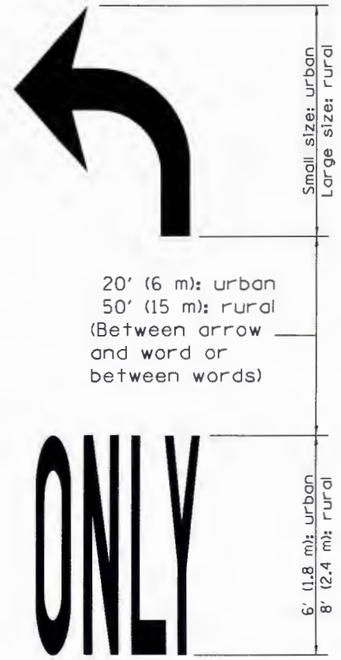
(Sheet 2 of 3)

STANDARD 780001-05

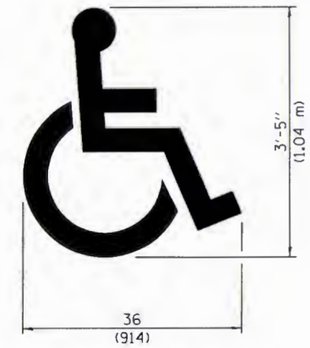


LANE-REDUCTION ARROW

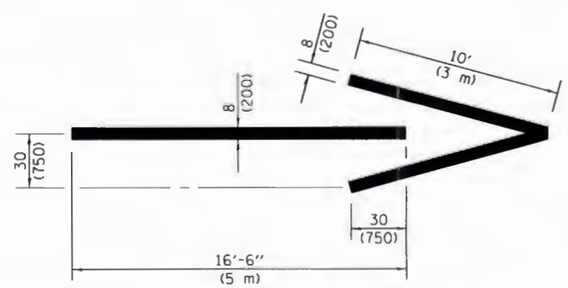
Right lane-reduction arrow shown.
Use mirror image for left lane.



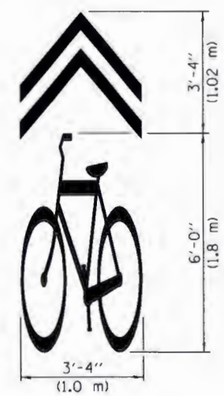
WORD AND ARROW LAYOUT



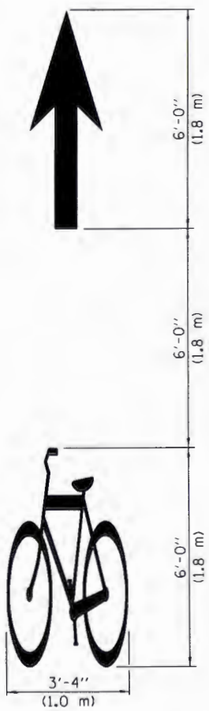
INTERNATIONAL SYMBOL OF ACCESSILITY



WRONG WAY ARROW



SHARED LANE SYMBOL



BIKE SYMBOL

(Arrow is optional.)

Illinois Department of Transportation

APPROVED January 1, 2015
ENGINEER OF OPERATIONS

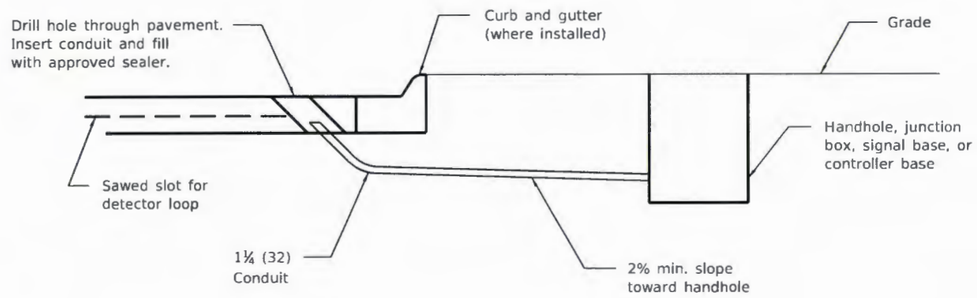
APPROVED January 1, 2015
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

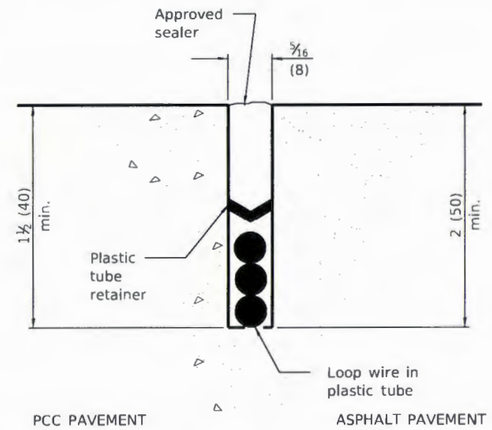
TYPICAL PAVEMENT MARKINGS

(Sheet 3 of 3)

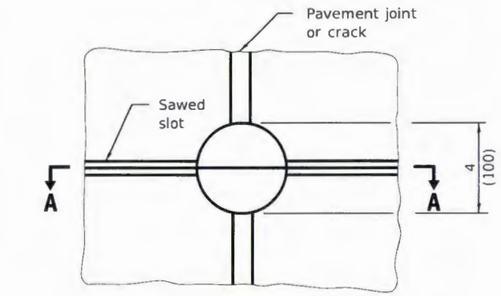
STANDARD 780001-05



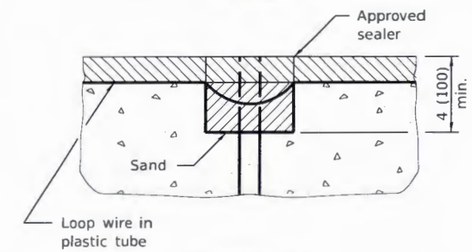
DETECTOR LOOP LEAD-IN



DETECTOR LOOP INSTALLATION



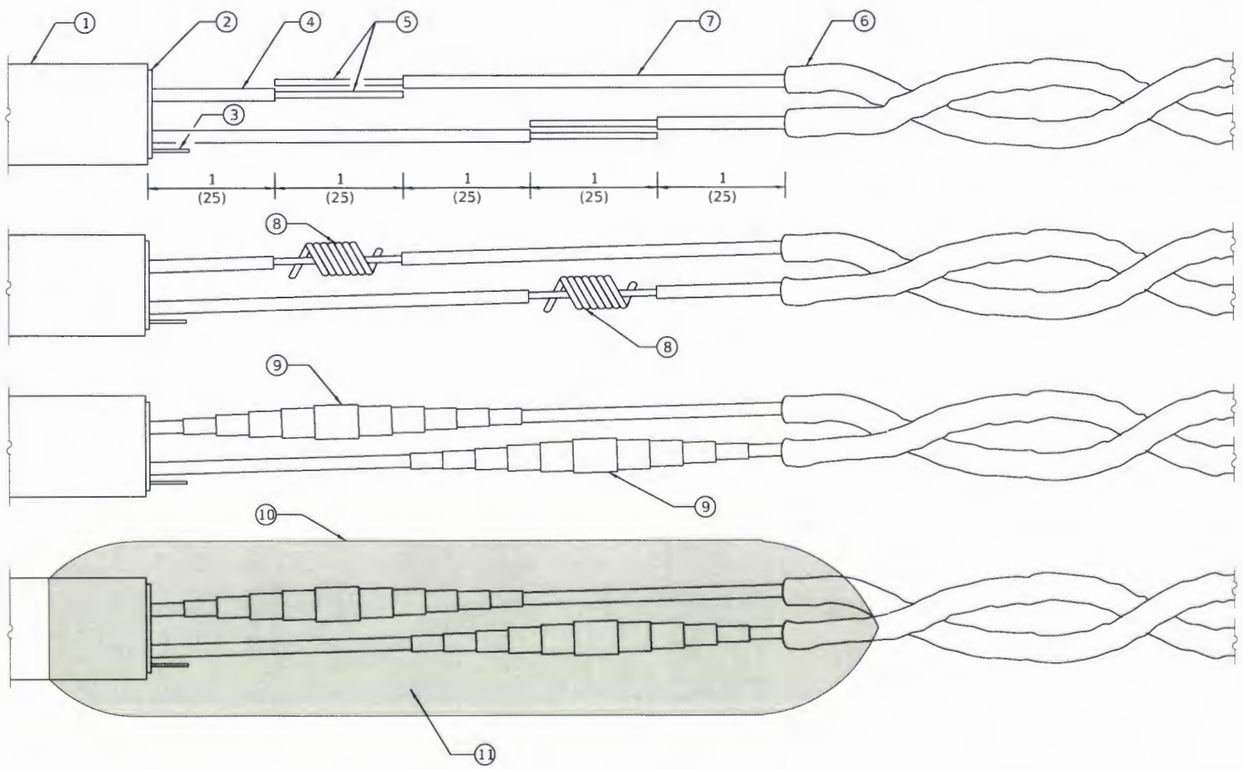
PLAN



SECTION A-A

NOTE
Loop wire shall follow saw cut to bottom, forming slack section at joint.

DETECTOR LOOP AT PAVEMENT JOINT OR PAVEMENT CRACK



LOOP WIRE AND LEAD-IN CABLE SPLICE

① = Lead-in cable (single pair or multipair)
② = Lead-in cable shield
③ = Lead-in cable shield drain-wire
④ = Lead-in cable insulated conductor
⑤ = Bare conductor
⑥ = Loop wire in tube
⑦ = Loop wire insulated conductor
⑧ = Twisted and resin soldered conductor
⑨ = Electrical tape insulated spice
⑩ = Rigid mold
⑪ = Waterproof and dielectric resin

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

Illinois Department of Transportation

PASSED January 1, 2009
ENGINEER OF OPERATIONS
APPROVED January 1, 2009
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-02

DATE	REVISIONS
1-1-09	Switched units to English (metric)
1-1-02	Renum. Standard 846001.

DETECTOR LOOP INSTALLATIONS

STANDARD 886001-01

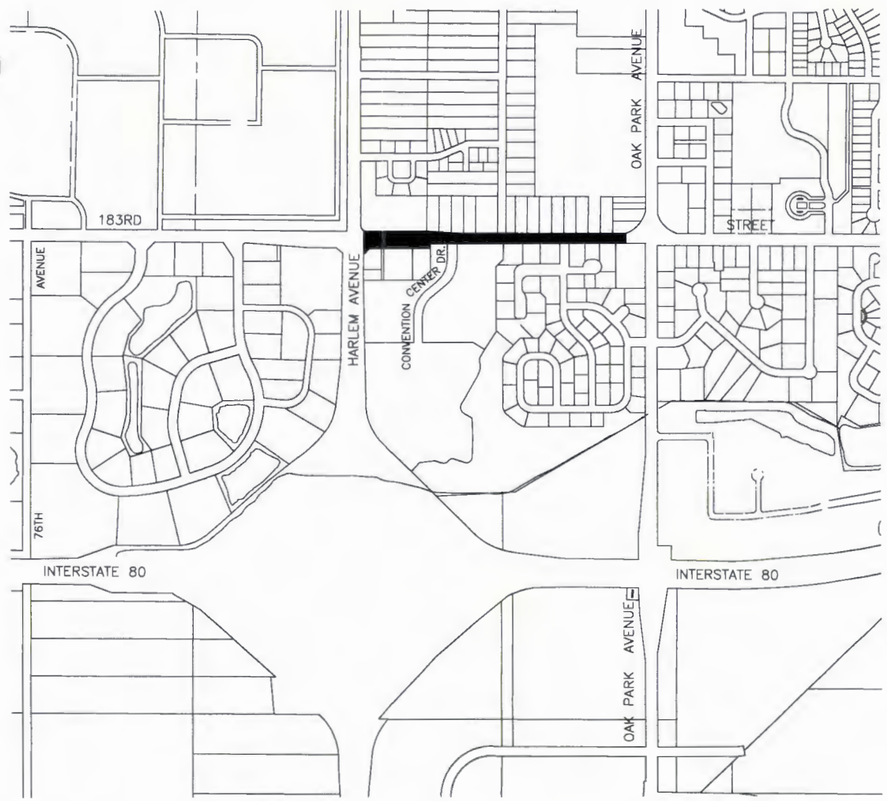
PLAN SHEETS

VILLAGE *of* TINLEY PARK ILLINOIS

183RD STREET RESURFACING
HARLEM AVENUE TO OAK PARK AVENUE

HIGHWAY STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
442101-08	CLASS B PATCHES
442201-03	CLASS C AND D PATCHES
606001-07	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
701427-05	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS ≤ 40MPH
701606-10	URBAN SINGLE LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701611-01	URBAN HALF ROAD CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701901-07	TRAFFIC CONTROL DEVICES
780001-05	TYPICAL PAVEMENT MARKINGS
886001-01	DETECTOR LOOP INSTALLATIONS



LOCATION MAP

- INDICATES PROPOSED IMPROVEMENT

GROSS LENGTH = 2304.18 FEET = 0.436 MILES
NET LENGTH = 2304.18 FEET = 0.436 MILES

INDEX OF SHEETS

1.	COVER SHEET
2.	SUMMARY OF QUANTITIES AND GENERAL NOTES
3.-4.	TYPICAL CROSS SECTIONS
5.-6.	PAVEMENT PLAN
7.-9.	TRAFFIC SIGNAL MODERNIZATION (FOR REFERENCE ONLY)
10.	DETECTOR LOOP LOCATIONS
11.	PAVEMENT MARKING PLAN
12.-21.	IDOT DISTRICT 1 STANDARD DETAILS

PREPARED BY OR UNDER THE DIRECT SUPERVISION OF:

6-21-18

WILLIAM P. DOLAN
62-57490
REGISTERED PROFESSIONAL ENGINEER
STATE OF ILLINOIS
LICENSE EXPIRES: 11/30/19

Call Before You Dig
JULIE ILLINOIS ONE-CALL SYSTEM
JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS
48 hours before you dig (EXCLUDING SAT., SUN. & HOL.)
811
Call: 811 OR 1-800-892-0123

PREPARED BY:

Robinson ENGINEERING

© COPYRIGHT 2018
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128

PROJECT NO. 18-R0455

SHEET NO. 01 OF 21

18R0455-COVR-02 - COVR01

OPTION #1

NO.	ITEM DESCRIPTION	UNIT	TOTAL
1	EARTH EXCAVATION	CU YD	25
2	PREPARATION OF BASE	SQ YD	75
3	AGGREGATE BASE REPAIR	TON	75
4	BITUMINOUS MATERIALS (TACK COAT)	POUND	12,000
5	LEVELING BINDER (MACHINE METHOD), N70	TON	1,250
6	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	175
7	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	2,000
8	HOT-MIX ASPHALT SURFACE REMOVAL, 3"	SQ YD	17,700
9	DRIVEWAY PAVEMENT REMOVAL	SQ YD	15
10	COMBINATION CURB AND GUTTER REMOVAL	FOOT	275
11	CLASS B PATCHES, TYPE IV, 10 INCH	SQ YD	90
12	CLASS D PATCHES, TYPE IV, 10 INCH	SQ YD	220
13	AGGREGATE SHOULDERS, TYPE B	TON	60
14	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	275
15	SHORT TERM PAVEMENT MARKING	FOOT	2,100
16	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	700
17	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	6,500
18	MODIFIED URETHANE PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	600
19	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	8,000
20	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"	FOOT	2,400
21	MODIFIED URETHANE PAVEMENT MARKING - LINE 12"	FOOT	700
22	MODIFIED URETHANE PAVEMENT MARKING - LINE 24"	FOOT	200
28	RAISED REFLECTIVE PAVEMENT MARKER	EACH	230
29	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	170
30	DETECTOR LOOP REPLACEMENT	FOOT	1,200
31	RUBBER ADJUSTING RINGS	EACH	24
32	TOPSOIL FURNISH AND PLACE, 4" (SPECIAL)	SQ YD	300
33	SODDING, SPECIAL	SQ YD	300
23	GROOVING FOR RECESSED PAVEMENT MARKING, LETTERS AND SYMBOLS	SQ FT	600
24	GROOVING FOR RECESSED PAVEMENT MARKING 5"	FOOT	8,000
25	GROOVING FOR RECESSED PAVEMENT MARKING 7"	FOOT	2,400
26	GROOVING FOR RECESSED PAVEMENT MARKING 13"	FOOT	700
27	GROOVING FOR RECESSED PAVEMENT MARKING 25"	FOOT	200
34	HOT-MIX ASPHALT DRIVEWAY PAVEMENT, 6"	SQ YD	15
35	DRAINAGE & UTILITY STRUCTURES TO BE ADJUSTED	EACH	8
36	DRAINAGE & UTILITY STRUCTURES TO BE RECONSTRUCTED	EACH	1
37	TEMPORARY INFORMATION SIGNING	SQ FT	51

OPTION #2

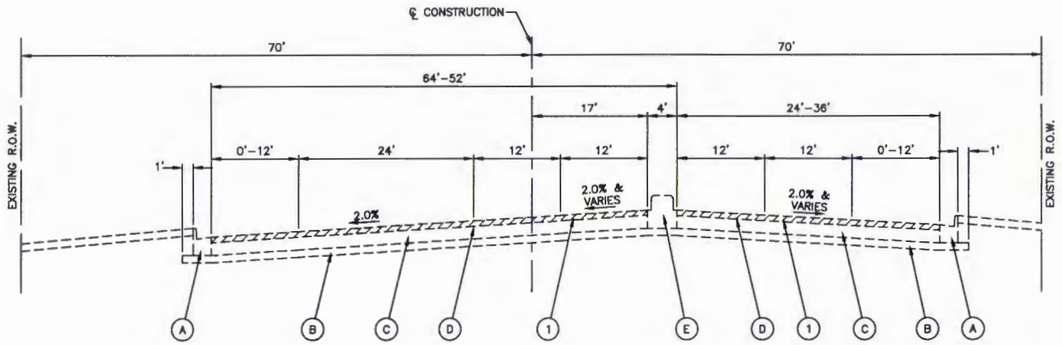
NO.	ITEM DESCRIPTION	UNIT	TOTAL
1	EARTH EXCAVATION	CU YD	25
2	PREPARATION OF BASE	SQ YD	75
3	AGGREGATE BASE REPAIR	TON	75
4	BITUMINOUS MATERIALS (TACK COAT)	POUND	12,000
5	LEVELING BINDER (MACHINE METHOD), N70	TON	1,250
6	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	175
7	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	2,000
8	HOT-MIX ASPHALT SURFACE REMOVAL, 3"	SQ YD	17,700
9	DRIVEWAY PAVEMENT REMOVAL	SQ YD	15
10	COMBINATION CURB AND GUTTER REMOVAL	FOOT	275
11	CLASS B PATCHES, TYPE IV, 10 INCH	SQ YD	90
12	CLASS D PATCHES, TYPE IV, 10 INCH	SQ YD	220
13	AGGREGATE SHOULDERS, TYPE B	TON	60
14	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	275
15	SHORT TERM PAVEMENT MARKING	FOOT	2,100
16	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	700
17	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	6,500
18	POLYUREA PAVEMENT MARKING TYPE I - LETTERS AND SYMBOLS	SQ FT	600
19	POLYUREA PAVEMENT MARKING TYPE I - LINE 4"	FOOT	8,000
20	POLYUREA PAVEMENT MARKING TYPE I - LINE 6"	FOOT	2,400
21	POLYUREA PAVEMENT MARKING TYPE I - LINE 12"	FOOT	700
22	POLYUREA PAVEMENT MARKING TYPE I - LINE 24"	FOOT	200
28	RAISED REFLECTIVE PAVEMENT MARKER	EACH	230
29	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	170
30	DETECTOR LOOP REPLACEMENT	FOOT	1,200
31	RUBBER ADJUSTING RINGS	EACH	24
32	TOPSOIL FURNISH AND PLACE, 4" (SPECIAL)	SQ YD	300
33	SODDING, SPECIAL	SQ YD	300
23	GROOVING FOR RECESSED PAVEMENT MARKING, LETTERS AND SYMBOLS	SQ FT	600
24	GROOVING FOR RECESSED PAVEMENT MARKING 5"	FOOT	8,000
25	GROOVING FOR RECESSED PAVEMENT MARKING 7"	FOOT	2,400
26	GROOVING FOR RECESSED PAVEMENT MARKING 13"	FOOT	700
27	GROOVING FOR RECESSED PAVEMENT MARKING 25"	FOOT	200
34	HOT-MIX ASPHALT DRIVEWAY PAVEMENT, 6"	SQ YD	15
35	DRAINAGE & UTILITY STRUCTURES TO BE ADJUSTED	EACH	8
36	DRAINAGE & UTILITY STRUCTURES TO BE RECONSTRUCTED	EACH	1
37	TEMPORARY INFORMATION SIGNING	SQ FT	51

GENERAL NOTES

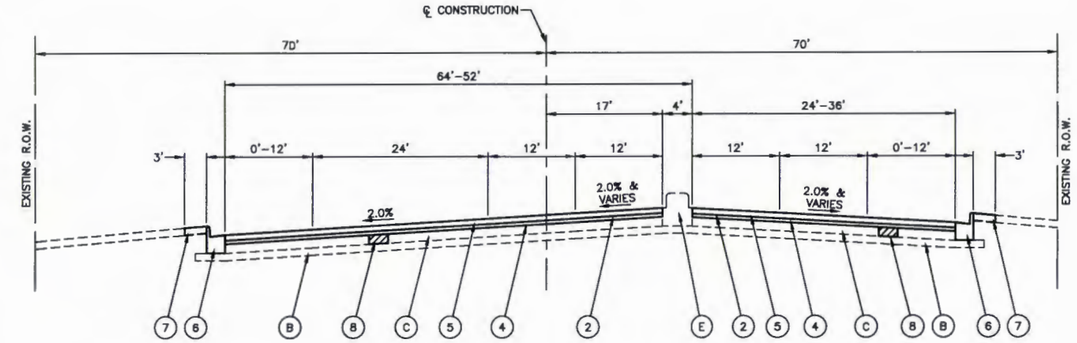
1. THE ROBINSON ENGINEERING, LTD. FIELD OFFICE (708-331-6700), AND VILLAGE ENGINEER (708-444-5516), AT THE VILLAGE OF TINLEY PARK, SHALL BE NOTIFIED TWO (2) WORKING DAYS BEFORE CONSTRUCTION BEGINS.
2. BEFORE STARTING ANY EXCAVATION THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT (800) 892-0123 OR 811 AND (312) 744-7000 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS UTILITIES. (48 HOUR NOTIFICATION REQUIRED)
3. UTILITIES INDICATED ON THE PLANS ARE PROVIDED FOR THE CONTRACTOR'S USE AND ARE BASED UPON INFORMATION AVAILABLE AT THE TIME OF THE ADVERTISEMENT FOR BIDS. THE OWNER AND ENGINEER DO NOT GUARANTEE THE ACCURACY OF UTILITY INFORMATION.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
5. THE THICKNESS OF HMA MIXTURE STATED IN THE SPECIFICATIONS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HMA SURFACE IS PLACED.
6. ANY LOOSE MATERIAL DEPOSITED IN THE FLOW LINE OF DITCHES, GUTTERS OR OTHER DRAINAGE STRUCTURES SHALL BE REMOVED BY THE END OF EACH DAY BY THE CONTRACTOR AT THEIR EXPENSE.
7. CLASS B & D PATCHING QUANTITIES FOR THIS CONTRACT SHALL BE PERFORMED AT THE DIRECTION OF THE ENGINEER AFTER PAVEMENT MILLING.
8. EXISTING TREES ARE NOT AFFECTED BY THE LIMITS OF CONSTRUCTION. CONTRACTOR SHALL BE CAUTIOUS ON TREE PROTECTION DURING THE CONSTRUCTION. IF ANY DAMAGE OCCURS, CONTRACTOR SHALL REPLACE ANY TREES AT THEIR OWN EXPENSE.
9. CARE IS TO BE TAKEN AS NOT TO DAMAGE ANY OF THE EXISTING TRAFFIC SIGNAL CONDUITS, FIBER CABLES AND EQUIPMENT. IF ANY OF THE TRAFFIC SIGNAL CONDUITS, CABLES AND/OR EQUIPMENT IS DAMAGED, THE CONTRACTOR SHALL REPAIR AND/OR REPLACE THE CONDUITS, CABLES AND/OR EQUIPMENT AT NO COST TO THE VILLAGE.

COMMITMENTS

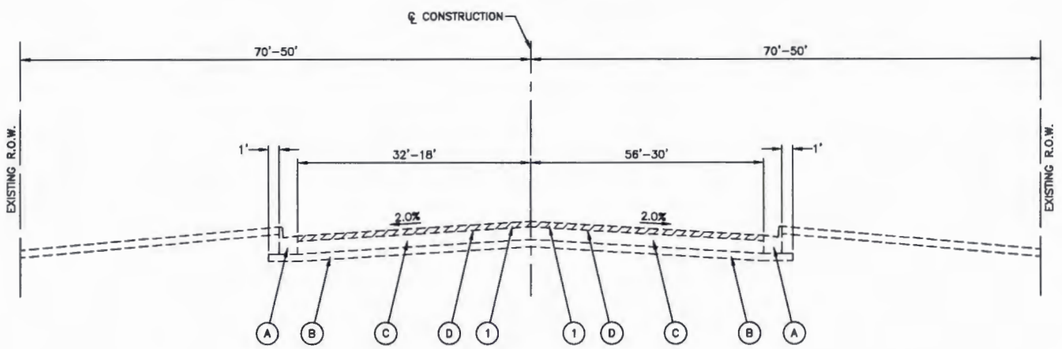
1. NO PAVEMENT PATCHING SHALL BE PERMITTED AFTER FRIDAY AT 3:00PM OF EACH AND EVERY WEEK AND NO HOLES WILL BE ALLOWED TO REMAIN OPEN OVERNIGHT OR OVER THE WEEKEND.
2. ALL EQUIPMENT SHALL BE REMOVED OFF THE VILLAGE STREETS DURING ALL HOLIDAY WEEKENDS AS COORDINATED WITH THE VILLAGE.



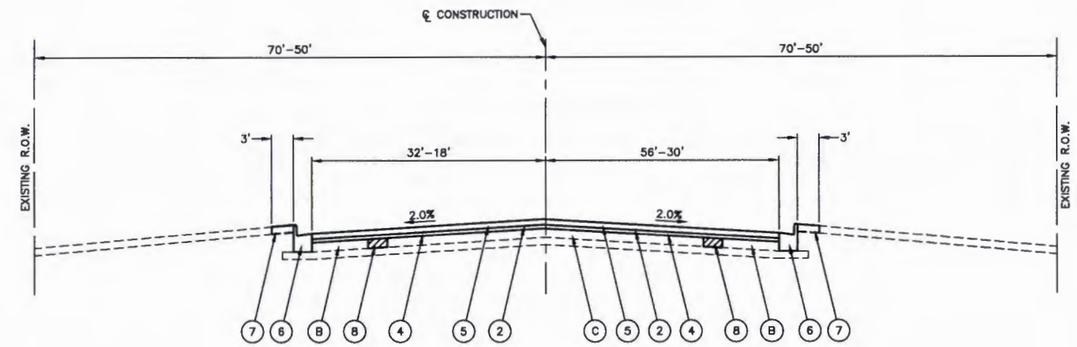
EXISTING TYPICAL CROSS SECTION
183RD ST - STA 10+00.00 TO STA 13+70.00



PROPOSED TYPICAL CROSS SECTION
183RD ST - STA 10+00.00 TO STA 13+70.00



EXISTING TYPICAL CROSS SECTION
183RD ST - STA 13+70.00 TO STA 20+70.00



PROPOSED TYPICAL CROSS SECTION
183RD ST - STA 10+00.00 TO STA 13+70.00

LEGEND

- (A) EXISTING B-6.24 CURB AND GUTTER
- (B) EXISTING AGGREGATE BASE COURSE
- (C) EXISTING PCC BASE COURSE
- (D) EXISTING HMA SURFACE COURSE
- (E) EXISTING PCC MEDIAN
- (F) EXISTING HMA BASE COURSE
- ITEM TO BE REMOVED

- (1) HOT-MIX ASPHALT SURFACE REMOVAL, 3"
- (2) BITUMINOUS MATERIALS (TACK COAT)
- (3) CLASS "D" PATCH, 10", AT LOCATIONS SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.
- (4) LEVELING BINDER (MACHINE METHOD), N70, 1-1/4"
- (5) HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 2"
- (6) PROPOSED CURB AND GUTTER, TYPE B-6.24 TO BE DETERMINED AT LOCATIONS SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.
- (7) TOPSOIL FURNISH AND PLACE, 4" (SPECIAL) AND SODDING, SPECIAL INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- (8) CLASS "B" PATCH, 10", AT LOCATIONS SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

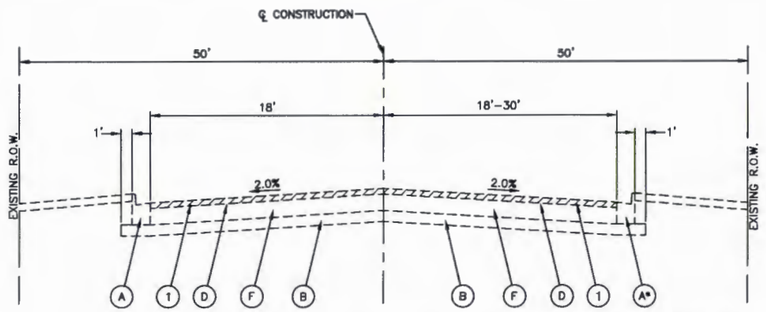
MIXTURE TYPE	AIR VOIDS
RESURFACING - ROADWAYS	
HOT MIX ASPHALT SURFACE COURSE, MIX "D", N70; 2"	4% @ 70 Gyr.
LEVELING BINDER (MACHINE METHOD), N70, 1-1/4"	4% @ 70 Gyr.
HOT-MIX ASPHALT DRIVEWAYS	
HOT MIX ASPHALT SURFACE COURSE, MIX "D", N50 (IL-9.5mm); 2"	4% @ 50 Gyr.
HOT MIX ASPHALT BINDER COURSE, IL-19.0, N50; 4"	4% @ 50 Gyr.
FULL DEPTH PAVEMENT PATCHING	
CLASS D PATCHES (HMA BINDER IL-19.0mm), 10" (IN 3 LIFTS)	4% @ 70 Gyr.

NOTES:
1. THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURE QUANTITIES IS 112 LBS/SY/IN.
2. THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76-22" AND FOR NON-POLYMERIZED HMA THE "AC" TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS. FOR "PERCENT OF RAP" SEE SPECIAL PROVISIONS.
3. THE EXISTING PAVEMENT SHALL BE MILLED PRIOR TO PATCHING OPERATIONS.

DATE = 6-21-18	DESIGNED — WD	REVISED —	Robinson ENGINEERING
SCALE = 1"=XX	CHECKED — JP	REVISED —	
PROJECT NO = 18-R0455	DRAWN — CAD	REVISED —	
FILE NAME = 18R0455-TYPX-02	CHECKED — AG	REVISED —	

183RD STREET RESURFACING
HARLEM AVENUE TO OAK PARK AVENUE
TYPICAL CROSS SECTIONS

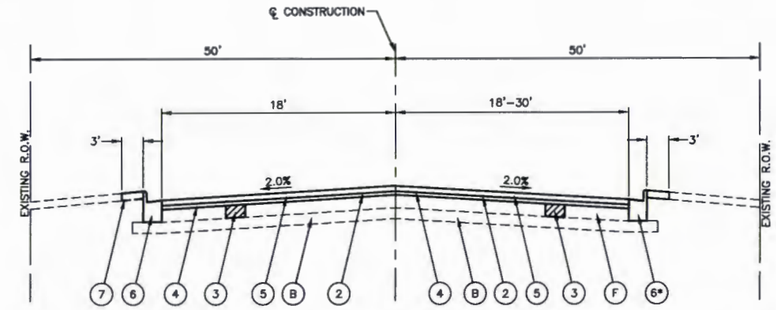
VILLAGE of TINLEY PARK



EXISTING TYPICAL CROSS SECTION

183RD ST - STA 20+70.00 TO STA 33+04.18

*AGGREGATE SHOULDER STARTS AT STA. 26+85.53 AND ENDS AT STA. 33+04.18



PROPOSED TYPICAL CROSS SECTION

183RD ST - STA 20+70.00 TO STA 33+04.18

*AGGREGATE SHOULDER STARTS AT STA. 26+85.53 AND ENDS AT STA. 33+04.18

LEGEND

- (A) EXISTING B-6.24 CURB AND GUTTER
- (B) EXISTING AGGREGATE BASE COURSE
- (C) EXISTING PCC BASE COURSE
- (D) EXISTING HMA SURFACE COURSE
- (E) EXISTING PCC MEDIAN
- (F) EXISTING HMA BASE COURSE
- ITEM TO BE REMOVED

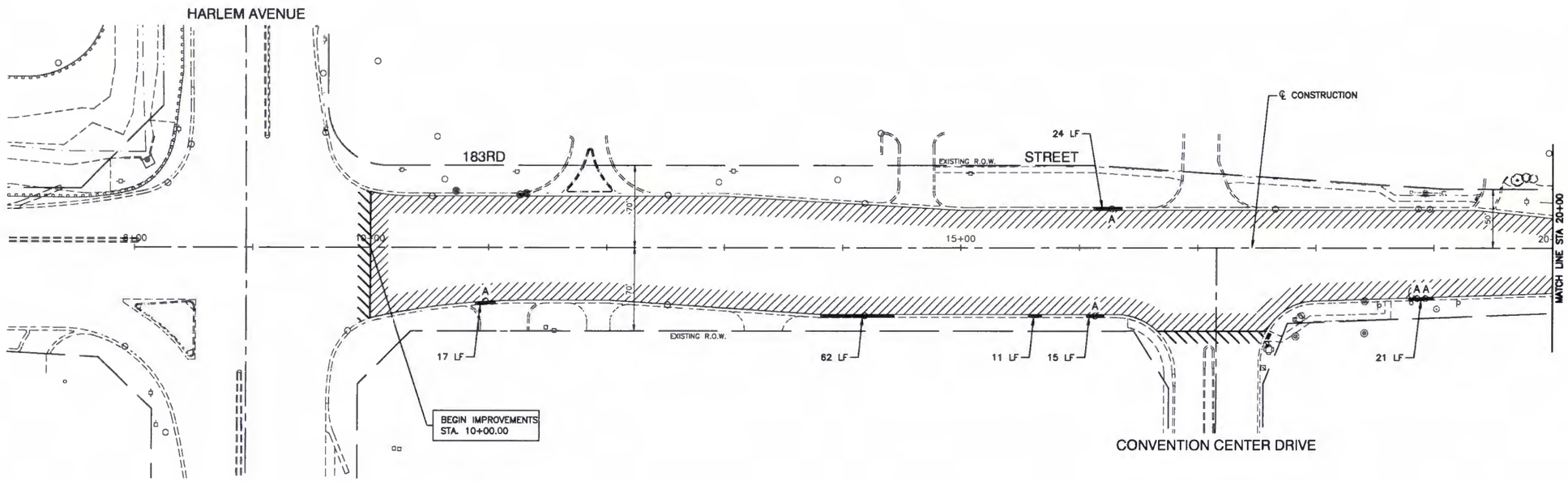
- (1) HOT-MIX ASPHALT SURFACE REMOVAL, 3"
- (2) BITUMINOUS MATERIALS (TACK COAT)
- (3) CLASS "D" PATCH, 10", AT LOCATIONS SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.
- (4) LEVELING BINDER (MACHINE METHOD), N70, 1-1/4"
- (5) HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 2"
- (6) PROPOSED CURB AND GUTTER, TYPE B-6.24 TO BE DETERMINED AT LOCATIONS SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.
- (7) TOPSOIL FURNISH AND PLACE, 4" (SPECIAL) AND SODDING, SPECIAL INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- (8) CLASS "B" PATCH, 10", AT LOCATIONS SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.

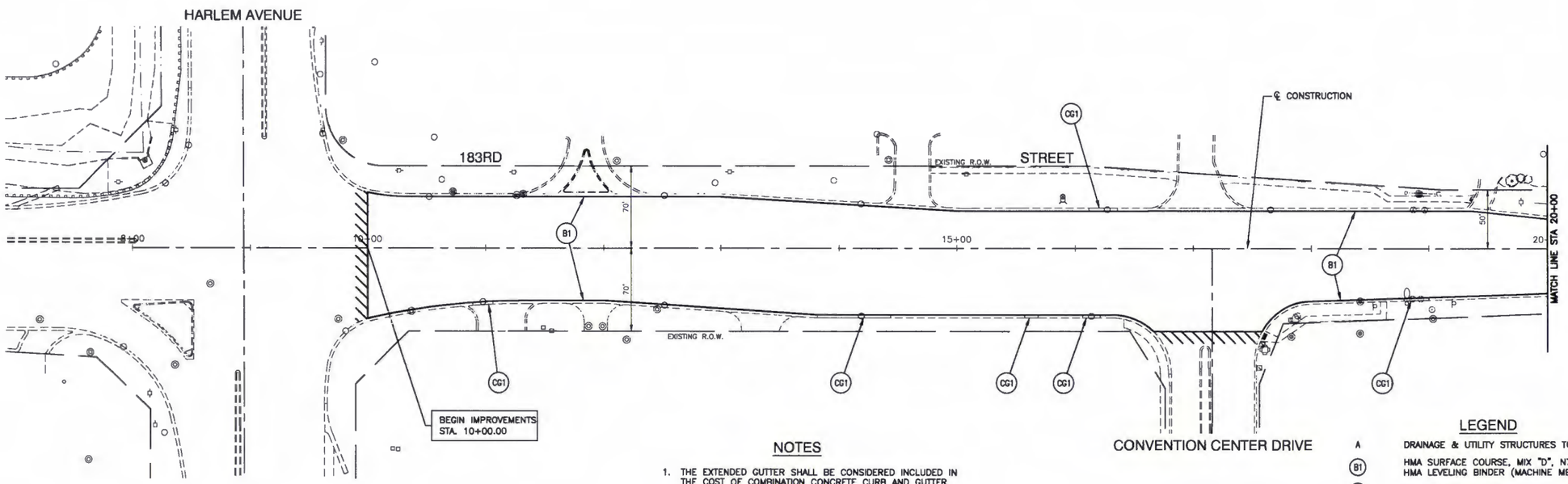
DATE = 8-21-18	DESIGNED — WD	REVISED —	
SCALE = 1"=XX	CHECKED — JP	REVISED —	
PROJECT NO = 18-R0455	DRAWN — CAD	REVISED —	
FILE NAME = 18R0455-TYPX-02	CHECKED — AG	REVISED —	

Robinson ENGINEERING

183RD STREET RESURFACING
HARLEM AVENUE TO OAK PARK AVENUE
TYPICAL CROSS SECTIONS

VILLAGE of TINLEY PARK





NOTES

1. THE EXTENDED GUTTER SHALL BE CONSIDERED INCLUDED IN THE COST OF COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24.
2. THIS STRUCTURE SHALL BE ADJUSTED WITH A STEEL RING ACCORDING TO ARTICLE 603 OF THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
3. ALL SURROUNDING SPACE FOR STRUCTURE ADJUSTMENTS SHALL BE FILLED WITH HMA PER THE SPECIAL PROVISIONS.

LEGEND

A	DRAINAGE & UTILITY STRUCTURES TO BE ADJUSTED
B1	HMA SURFACE COURSE, MIX "D", N70, 2" HMA LEVELING BINDER (MACHINE METHOD), N70, 1-1/4"
CG1	C & G TYPE B-6.24
SH	AGGREGATE SHOULDERS, TYPE B, 6"
	COMBINATION CURB AND GUTTER REMOVAL
	BUTT JOINT
	HMA SURFACE REMOVAL, 3"

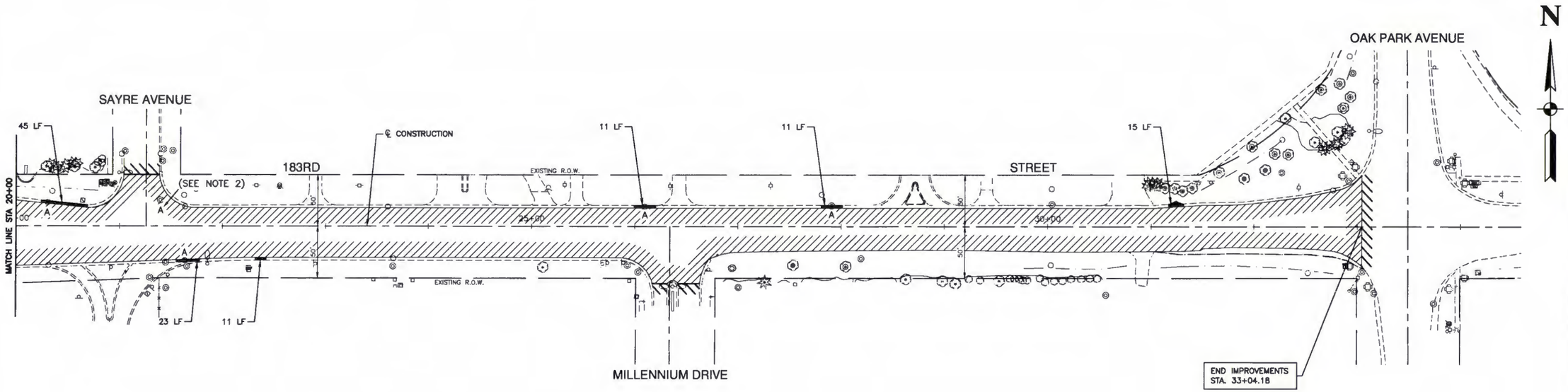
DATE = 6-21-18	DESIGNED — WD	REVISED —	
SCALE = 1"=50'	CHECKED — JP	REVISED —	
PROJECT NO = 18-R0455	DRAWN — CAD	REVISED —	
FILE NAME = 18R0455-PLAN-02	CHECKED — AG	REVISED —	

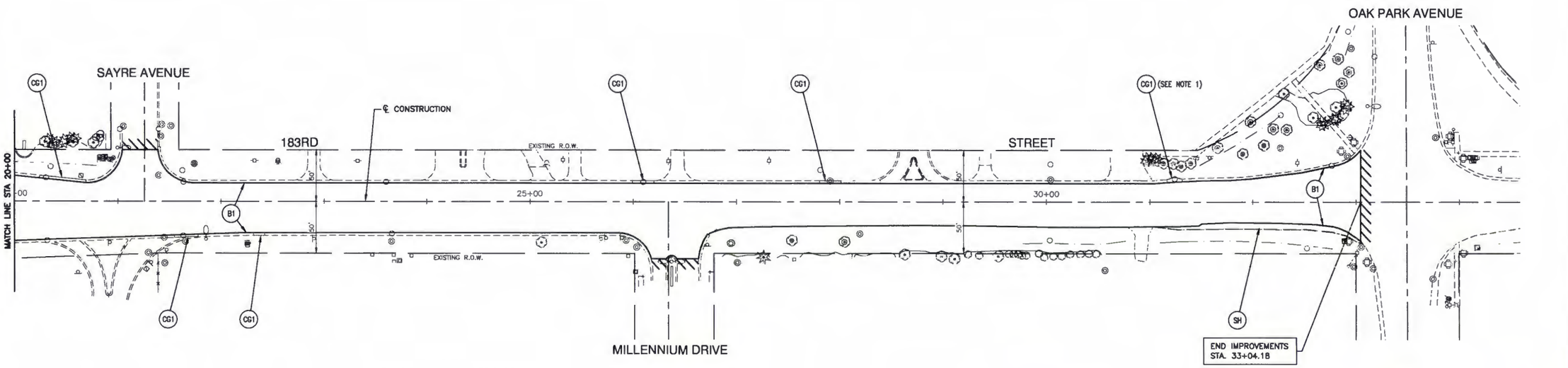
Robinson ENGINEERING

183RD STREET RESURFACING
HARLEM AVENUE TO OAK PARK AVENUE
PAVEMENT PLAN

VILLAGE of TINLEY PARK

SHEET NO. 05 of 21





NOTES

1. THE EXTENDED GUTTER SHALL BE CONSIDERED INCLUDED IN THE COST OF COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24.
2. THIS STRUCTURE SHALL BE ADJUSTED WITH A STEEL RING ACCORDING TO ARTICLE 603 OF THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
3. ALL SURROUNDING SPACE FOR STRUCTURE ADJUSTMENTS SHALL BE FILLED WITH HMA PER THE SPECIAL PROVISIONS.

LEGEND

A	DRAINAGE & UTILITY STRUCTURES TO BE ADJUSTED
B1	HMA SURFACE COURSE, MIX "D", N70, 2" HMA LEVELING BINDER (MACHINE METHOD), N70, 1-1/4"
CG1	C & G TYPE B-6.24
SH	AGGREGATE SHOULDERS, TYPE B, 6"
	COMBINATION CURB AND GUTTER REMOVAL
	BUTT JOINT
	HMA SURFACE REMOVAL, 3"

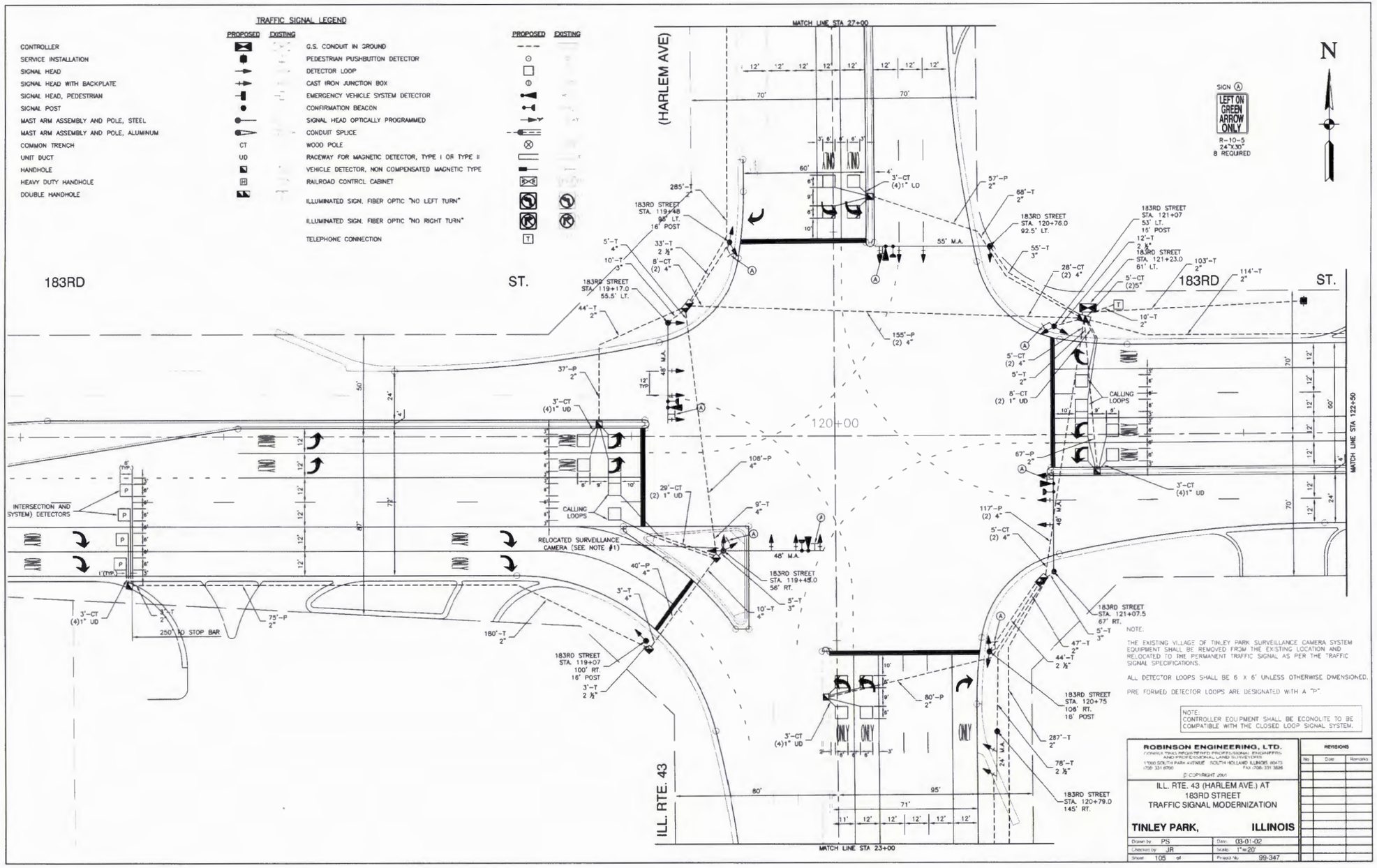
DATE = 6-21-18	DESIGNED — WD	REVISED —	
SCALE = 1"=50'	CHECKED — JP	REVISED —	
PROJECT NO = 18-R0455	DRAWN — CAD	REVISED —	
FILE NAME = 18R0455-PLAN-02	CHECKED — AG	REVISED —	

Robinson ENGINEERING

183RD STREET RESURFACING
HARLEM AVENUE TO OAK PARK AVENUE
PAVEMENT PLAN

VILLAGE of TINLEY PARK

SHEET NO. 06 of 21



FOR REFERENCE ONLY

DATE = 6-21-18	DESIGNED — WD	REVISED —	
SCALE = 1"=XX	CHECKED — JP	REVISED —	
PROJECT NO = 18-R0455	DRAWN — CAD	REVISED —	
FILE NAME = 18R0455-SGNL-02	CHECKED — AG	REVISED —	

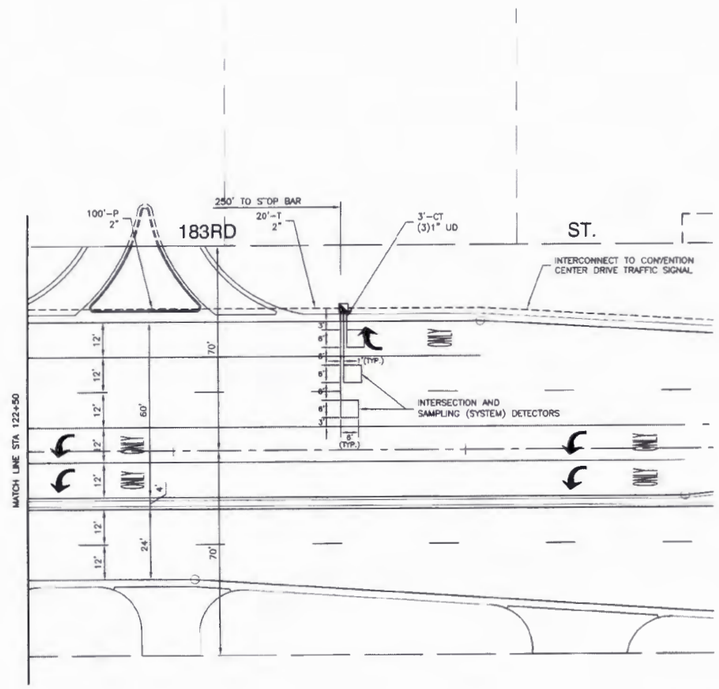
Robinson ENGINEERING

183RD STREET RESURFACING
HARLEM AVENUE TO OAK PARK AVENUE
TRAFFIC SIGNAL MODERNIZATION

VILLAGE of TINLEY PARK

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMMON TRENCH	CT	
UNIT DUCT	UD	
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED		
CONDUIT SPLICE		
WOOD POLE		
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		
TELEPHONE CONNECTION	T	



N

NOTE:

ALL DETECTOR LOOPS SHALL BE 6 X 6' UNLESS OTHERWISE DIMENSIONED.

PRE FORMED DETECTOR LOOPS ARE DESIGNATED WITH A "P".

NOTE:
CONTROLLER EQUIPMENT SHALL BE ECONOLITE TO BE COMPATIBLE WITH THE CLOSED LOOP SIGNAL SYSTEM.

ROBINSON ENGINEERING, LTD.
CONSULTING ENGINEERS, PROFESSIONAL ENGINEERS AND PROFESSIONAL LAND SURVEYORS
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331 6700 FAX (708) 331 3626

© COPYRIGHT 2001

ILL. RTE. 43 (HARLEM AVE.) AT
183RD STREET
TRAFFIC SIGNAL MODERNIZATION

TINLEY PARK, ILLINOIS

Drawn by	PS	Date	03-01-02
Checked by	JR	Scale	1"=20'
Sheet	108 of	Project No.	99-347

REVISIONS		
No.	Date	Remarks

99347_SGNL_01

FOR REFERENCE ONLY

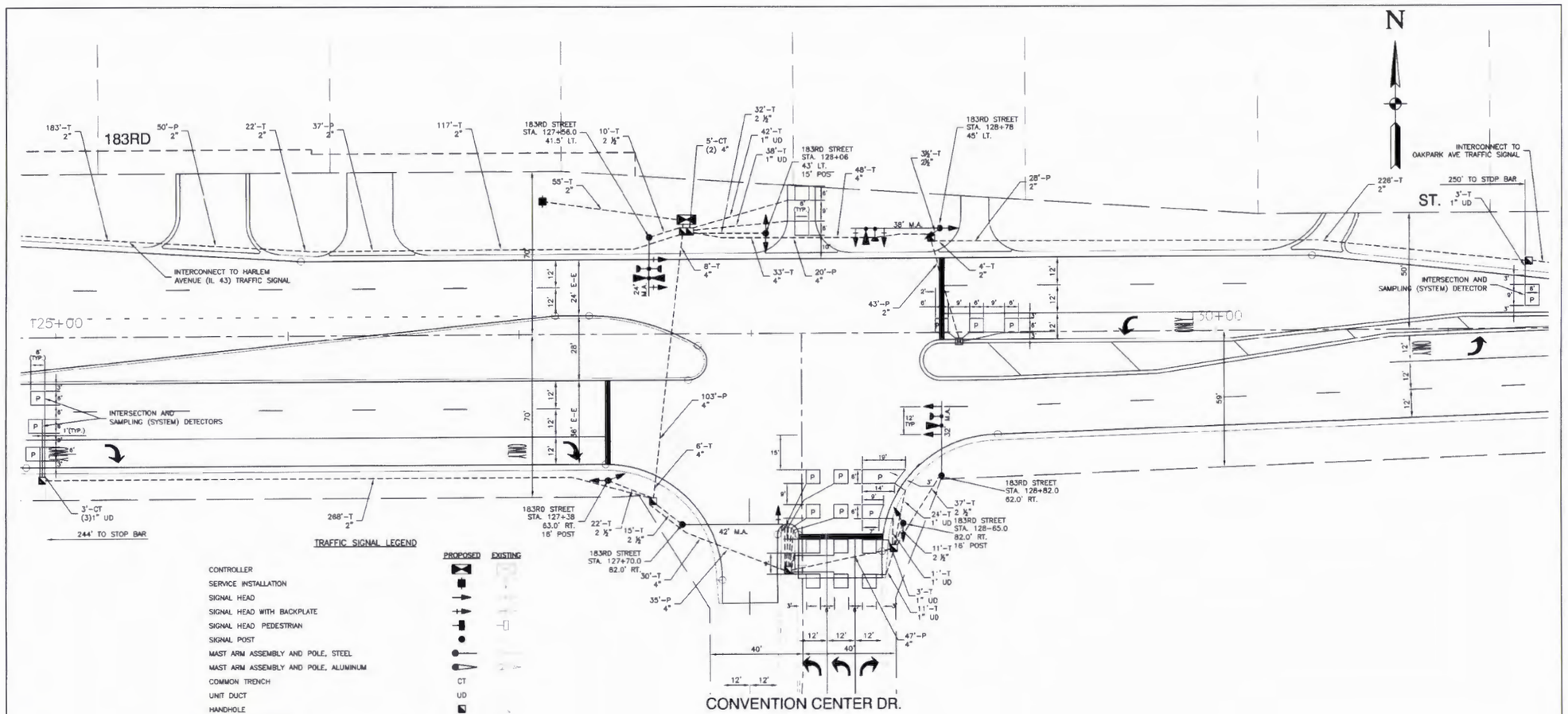
DATE = 6-21-18	DESIGNED — WD	REVISED —	
SCALE = 1"=XX	CHECKED — JP	REVISED —	
PROJECT NO = 18-R0455	DRAWN — CAD	REVISED —	
FILE NAME = 18R0455-SGNL-02	CHECKED — AG	REVISED —	

Robinson ENGINEERING

183RD STREET RESURFACING
HARLEM AVENUE TO OAK PARK AVENUE
TRAFFIC SIGNAL MODERNIZATION

VILLAGE of TINLEY PARK

SHEET NO. 08 of 21



TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMMON TRENCH	CT	
UNIT DUCT	UD	
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED		
CONDUIT SPLICE		
WOOD POLE		
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		
TELEPHONE CONNECTION	T	

NOTE:

ALL DETECTOR LOOPS SHALL BE 6' X 6' UNLESS OTHERWISE DIMENSIONED.

PRE FORMED DETECTOR LOOPS ARE DESIGNATED WITH A "P"

NOTE:
CONTROLLER EQUIPMENT SHALL BE ECONOLITE TO BE COMPATIBLE WITH THE CLOSED LOOP SIGNAL SYSTEM.

ROBINSON ENGINEERING, LTD.
CONSULTING ENGINEERS, PROFESSIONAL ENGINEERS AND PROFESSIONAL LAND SURVEYORS
17000 SOUTH PARK AVENUE SOUTH HOLLAND ILLINOIS 60473
(708) 331-5700 FAX (708) 331-3828
© COPYRIGHT 2001

183RD STREET AND
CONVENTION CENTER DRIVE
PROPOSED TRAFFIC SIGNAL PLAN

TINLEY PARK, ILLINOIS

Drawn by	PS	Date	03-01-02
Checked by	JR	Scale	1"=20'
Sheet	109 of	Project No	99-347

REVISIONS		
No.	Date	Remarks

99347_SGNL_01

FOR REFERENCE ONLY

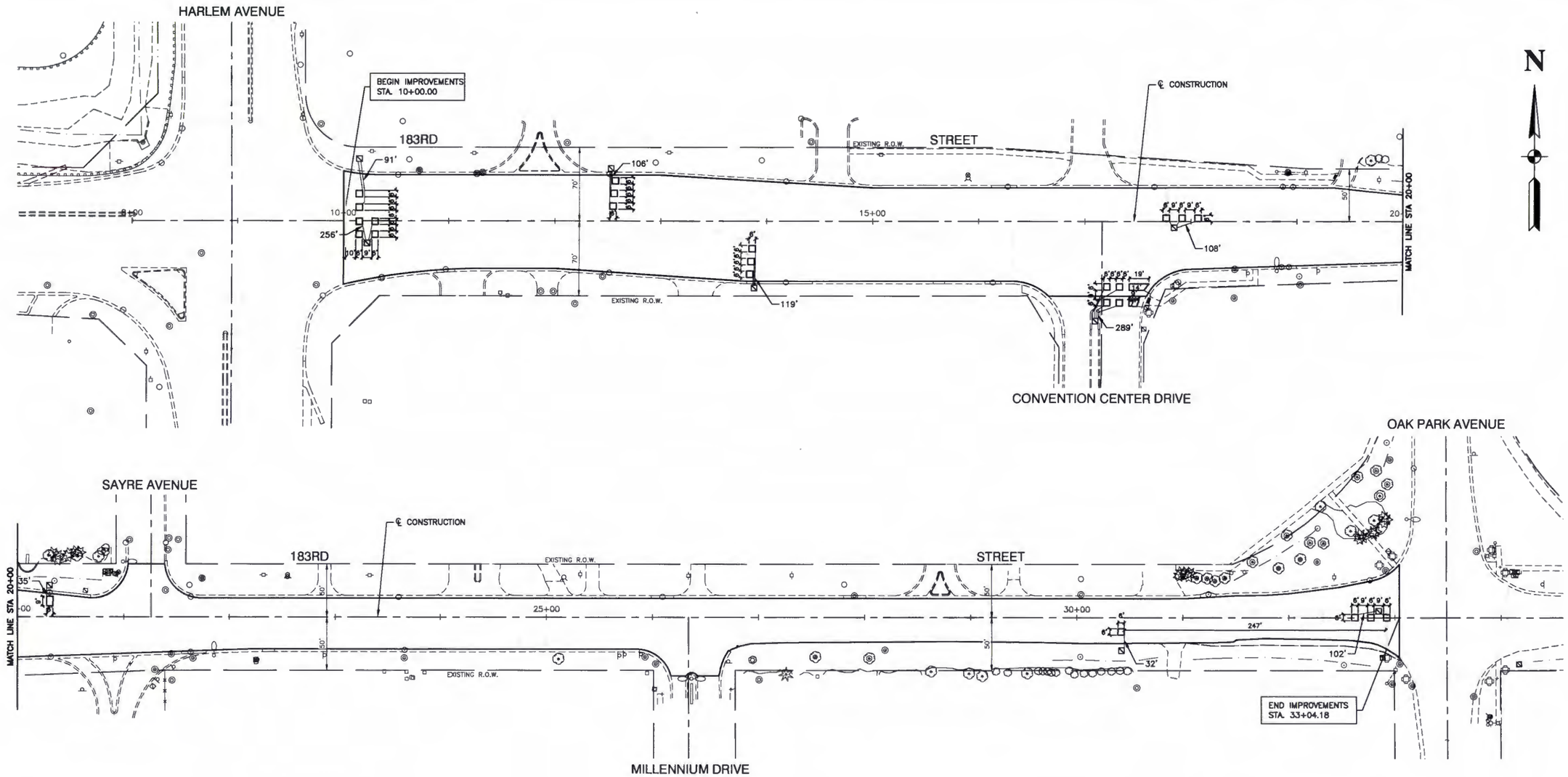
DATE = 6-21-18	DESIGNED — WD	REVISED —	
SCALE = 1"=XX	CHECKED — JP	REVISED —	
PROJECT NO = 18-R0455	DRAWN — CAD	REVISED —	
FILE NAME = 18R0455-SGNL-02	CHECKED — AG	REVISED —	

Robinson ENGINEERING

183RD STREET RESURFACING
HARLEM AVENUE TO OAK PARK AVENUE
TRAFFIC SIGNAL MODERNIZATION

VILLAGE of **TINLEY PARK**

SHEET NO. 09 of 21



LEGEND

☐ DETECTOR LOOP REPLACEMENT

NOTES

1. SEE TRAFFIC SIGNAL MODERNIZATION PLANS FOR DETECTOR LOOP LAYOUTS UNLESS OTHERWISE INDICATED.

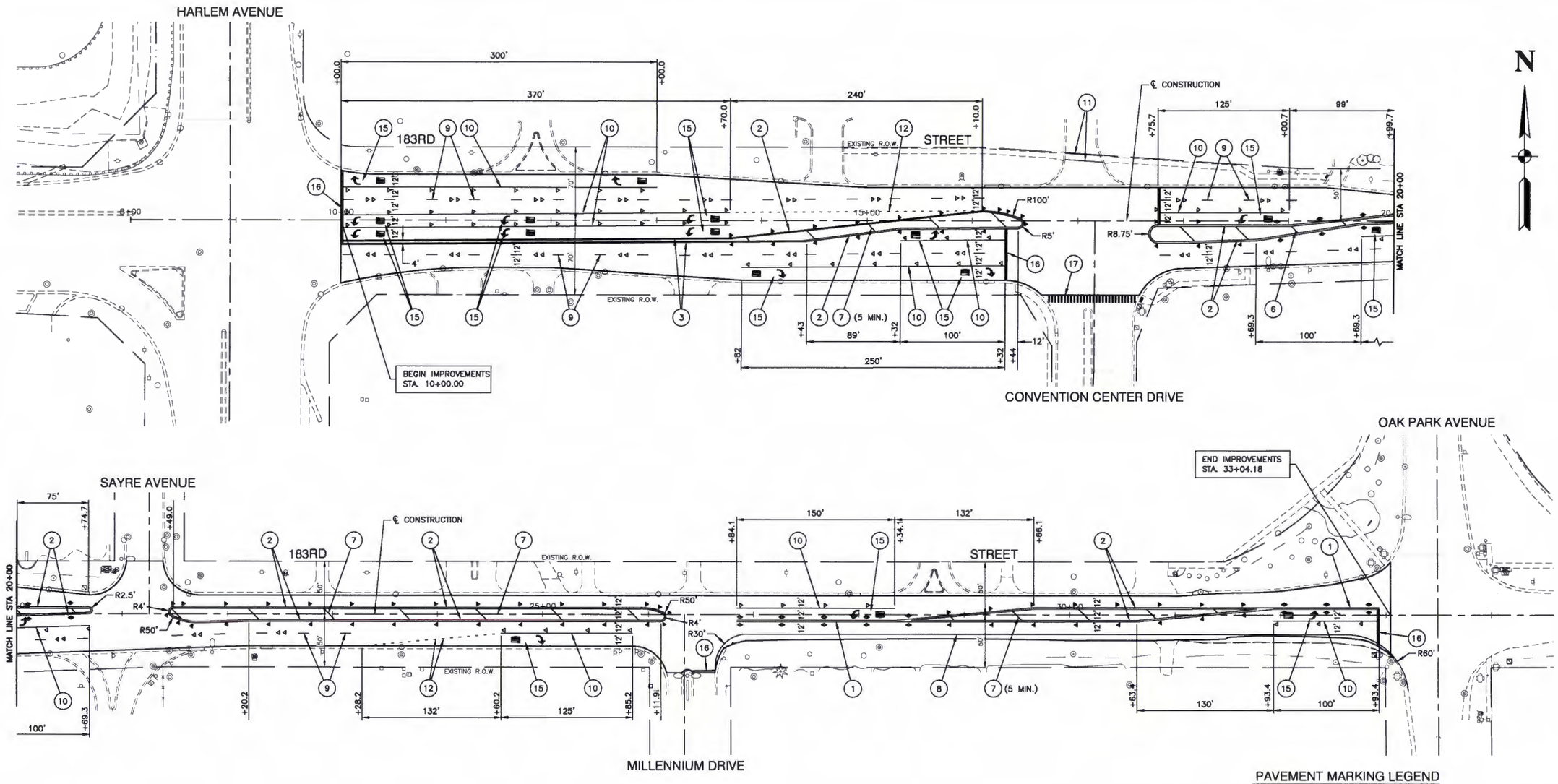
DATE = 6-21-18	DESIGNED — WD	REVISED —	
SCALE = 1"=50'	CHECKED — JP	REVISED —	
PROJECT NO = 18-R0455	DRAWN — CAD	REVISED —	
FILE NAME = 18R0455-PLAN-02	CHECKED — AG	REVISED —	

Robinson ENGINEERING

183RD STREET RESURFACING
HARLEM AVENUE TO OAK PARK AVENUE
DETECTOR LOOP LOCATIONS

VILLAGE of **TINLEY PARK**

SHEET NO. 10 of 21



PAVEMENT MARKING LEGEND

1. 4" DOUBLE YELLOW CENTERLINE (11" C/C)
2. 4" DOUBLE YELLOW MEDIAN OUTLINE (11" C/C)
3. 4" YELLOW MEDIAN OUTLINE
4. 4" YELLOW LANE LINE
5. 4" YELLOW LINES 5-1/2" C-C WITH SKIP DASH LINE(10' LINE, 30' SPACING)
6. 12" YELLOW DIAGONAL (20' C/C)
7. 12" YELLOW DIAGONAL (75' C/C)
8. 4" WHITE EDGE LINE
9. 4" WHITE SKIP DASH (10' LINE, 30' SPACE)
10. 8" WHITE LANE LINE
11. 8" WHITE LINE (8' C/C)
12. 6" WHITE SKIP DASH (2' LINE, 6' SPACE)
13. 8" WHITE LINE
14. 12" WHITE DIAGONALS (10' C/C)
15. WHITE LETTERS & SYMBOLS - LARGE
16. 24" WHITE STOP BAR
17. 12" WHITE LINE (3' C/C)

◂ ONE-WAY CRYSTAL MARKER 40' C/C UNLESS OTHERWISE NOTED.

◂◂ DOUBLE ONE-WAY CRYSTAL MARKERS 80' C/C UNLESS OTHERWISE NOTED.

◂ ONE-WAY AMBER MARKERS 40' C/C UNLESS OTHERWISE NOTED.

◆ TWO-WAY AMBER MARKERS 40' C/C UNLESS OTHERWISE NOTED.

NOTE:

1. ALL PAVEMENT MARKINGS SHALL CONFORM TO DISTRICT 1 STANDARDS (SEE TC-13).
2. ALL RAISED REFLECTIVE PAVEMENT MARKINGS SHALL BE ACCORDING TO TC-11.

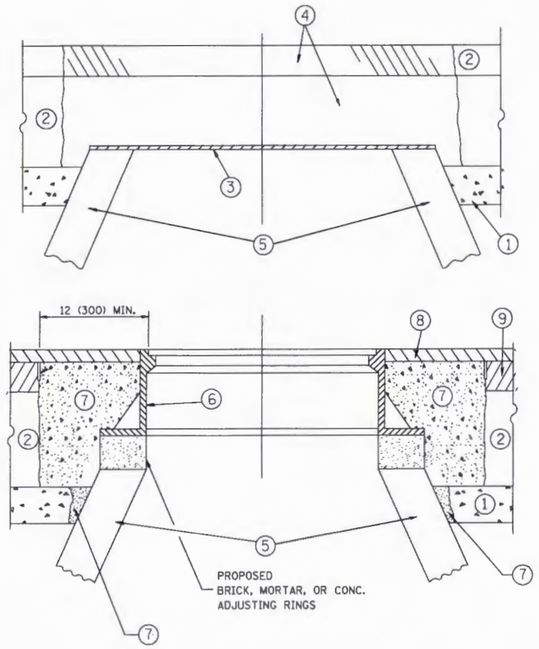
DATE = 6-21-18	DESIGNED — WD	REVISED —	
SCALE = 1"=50'	CHECKED — JP	REVISED —	
PROJECT NO = 18-R0455	DRAWN — CAD	REVISED —	
FILE NAME = 18R0455-PLAN-02	CHECKED — AG	REVISED —	

Robinson ENGINEERING

183RD STREET RESURFACING
HARLEM AVENUE TO OAK PARK AVENUE
PAVEMENT MARKING & SIGNING

VILLAGE of TINLEY PARK

SHEET NO. 11 of 21



CONSTRUCTION PROCEDURES

STAGE 1 (BEFORE PAVEMENT MILLING)

A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.
B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.
D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 1½ (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

STAGE 2 (AFTER PAVEMENT MILLING)

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

*UNLESS OTHERWISE SPECIFIED IN THE PLANS.

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

LEGEND

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

NOTES:

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

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

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

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

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

LOCATION OF STRUCTURES:

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

BASIS OF PAYMENT:

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

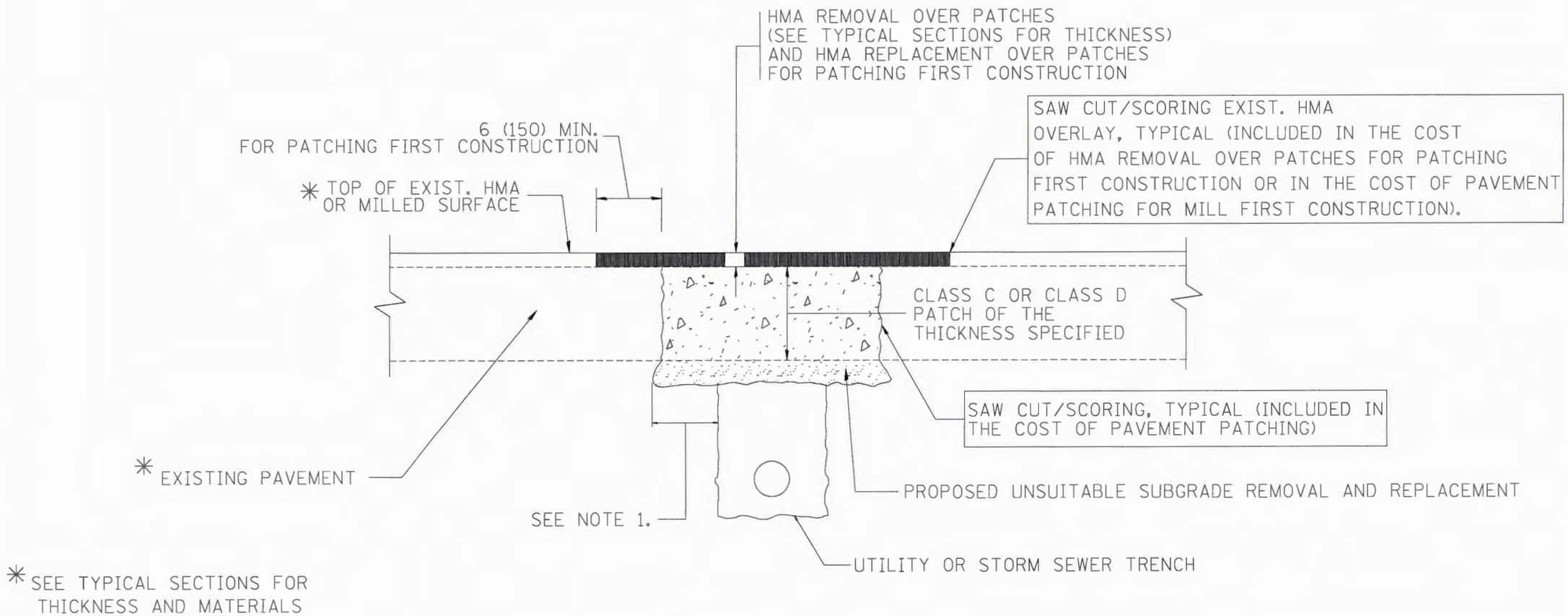
THIS WORK WILL NOT BE PAID FOR WHEN DRAINAGE AND UTILITY STRUCTURES ARE SPECIFIED FOR PAYMENT AS STRUCTURE RECONSTRUCTION.

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

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME = 18R0455-DTLS-02 - BD08	USER NAME = bauerdl	DESIGNED — R. SHAH	REVISED — R. WIEDEMAN 05-14-04	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING	F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED —	REVISED — R. BORO 01-01-07					COOK	21	12
	PLOT SCALE = 1968.5000 ' / m	DRAWN —	REVISED — R. BORO 03-09-11				BD600-03 (BD-8)	CONTRACT NO.		
	PLOT DATE = 12/6/2011	CHECKED — 10-25-94	REVISED — R. BORO 12-06-11		SCALE: NONE / SHEET NO. 12 OF 21 SHEETS / STA. / TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT —		



* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

NOTES:

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

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

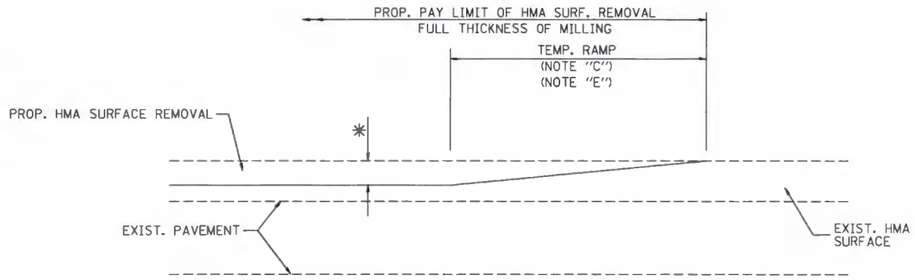
1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

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

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

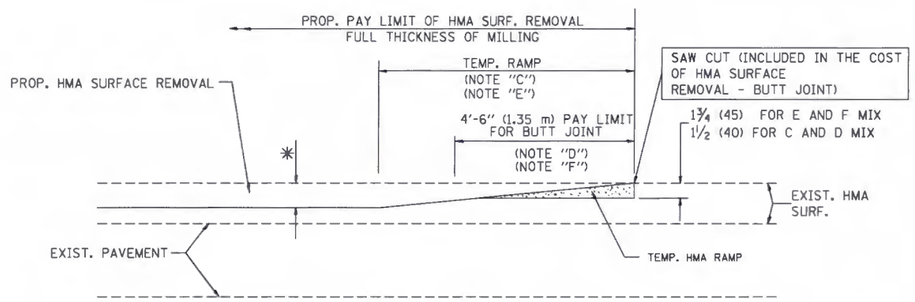
FILE NAME = 18R0455-DTLS-02 - BD22	USER NAME = bauerdl	DESIGNED — R. SHAH	REVISED — A. ABBAS 04-27-98	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT	F.A.# RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED —	REVISED — R. BORO 01-01-07					COOK	21	13
	PLOT SCALE = 50.000 ' / IN.	DRAWN —	REVISED — R. BORO 09-04-07				BD400-04 (BD-22)	CONTRACT NO.		
	PLOT DATE = 10/27/2008	CHECKED — 10-25-94	REVISED — K. ENG 10-27-08		SCALE: NONE / SHEET NO. 13 OF 21 SHEETS / STA. / TO STA.	FED. ROAD DIST. NO. #	ILLINOIS	FED. AID PROJECT		



MILLED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 1

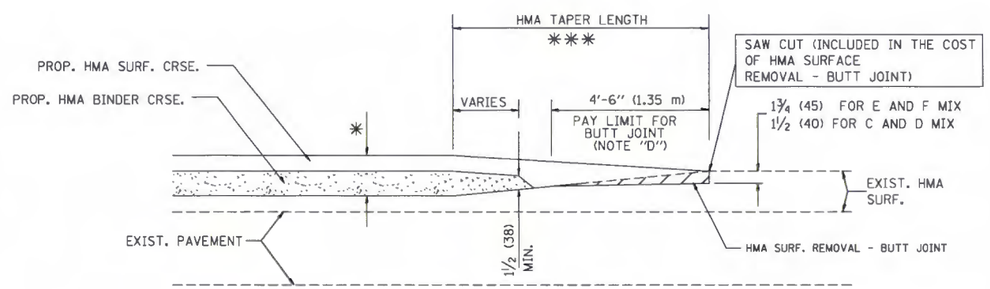


HMA CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

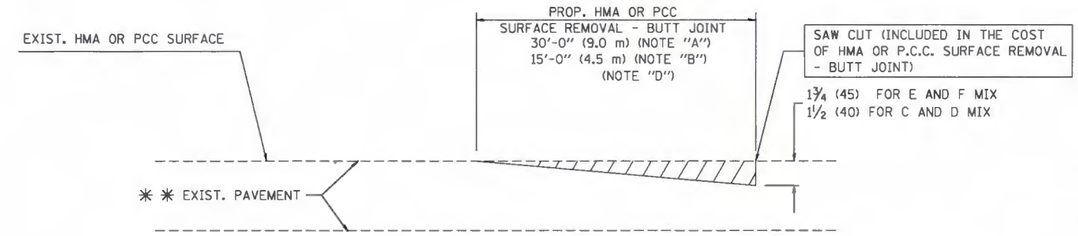
OPTION 2

TYPICAL TEMPORARY RAMP

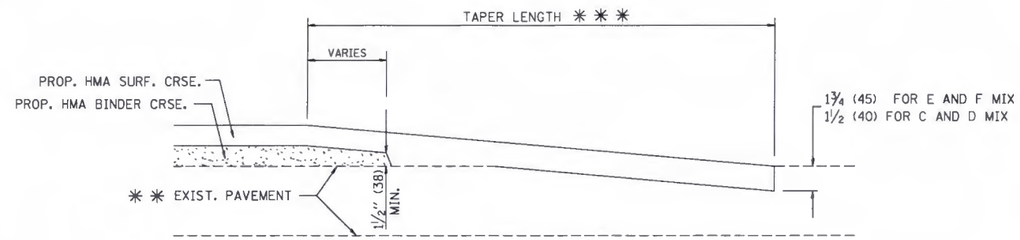


BUTT JOINT AND HMA TAPER

TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

✳✳ PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.

B: MINOR SIDE ROADS.

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

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

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

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

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

✳ SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

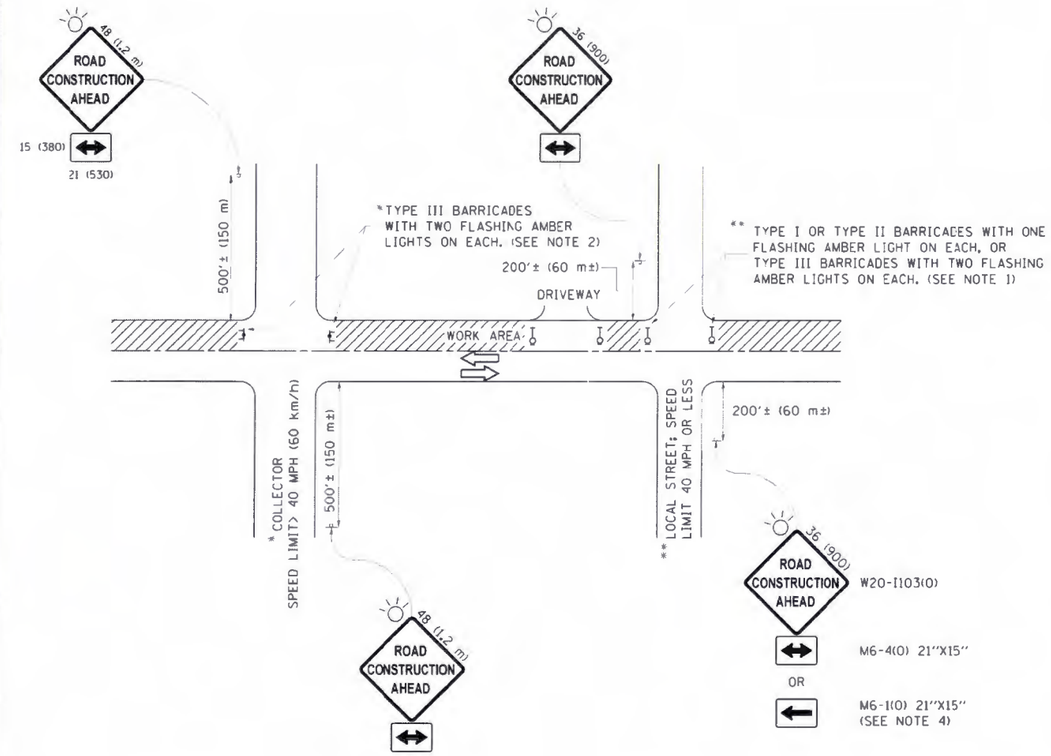
✳✳✳ 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

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

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

FILE NAME = 18R0455-DTLS-02 - BD32	USER NAME = gagliarobt	DESIGNED — M. DE YONG	REVISED — R. SHAH 10-25-94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BUTT JOINT AND HMA TAPER DETAILS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS / SHEET NO.
		CHECKED —	REVISED — A. ABBAS 03-21-97							COOK	21 / 14
	PLOT SCALE = 50.0000 ' / IN.	DRAWN —	REVISED — M. GOMEZ 04-06-01						BD400-05 BD32	CONTRACT NO.	
	PLOT DATE = 1/4/2008	CHECKED — 06-13-90	REVISED — R. BORO 01-01-07		SCALE: NONE	SHEET NO. 14 OF 21 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. #	ILLINOIS	FED. AID PROJECT	



NOTES:

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

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

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

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

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

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

3. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.

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

5. WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARD(S). THE DIRECTIONAL ARROW (M6-1 OR M6-4) SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET-UP.

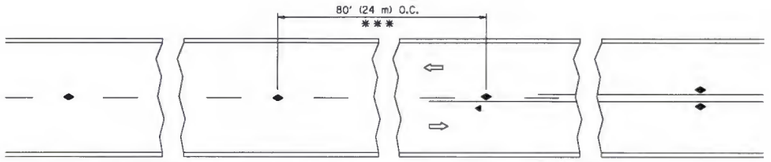
6. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.

7. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

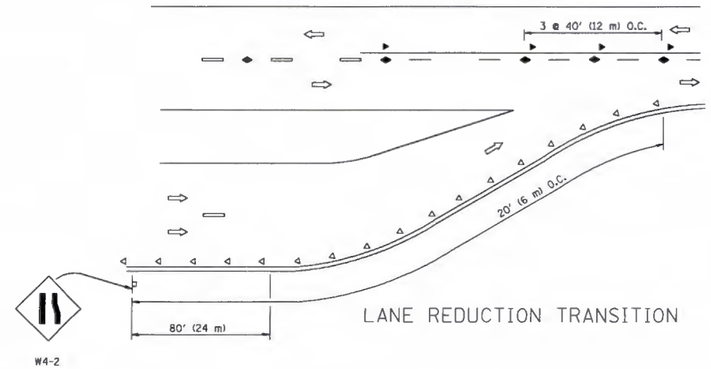
FILE NAME = 18R0455-DTLS-02 - TC10	USER NAME = fgutser	DESIGNED — L.H.A.	REVISED — A. HOUSEH 10-15-96	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
	fices\District 1\Projects\ts\	CHECKED — \CADsheets\tc10.dgn	REVISED —. RAMMACHER 01-06-00		
	PLOT SCALE = 50.000 in.	DRAWN —	REVISED — A. SCHUETZE 07-01-13		
	PLOT DATE = 9/15/2016	CHECKED — 06-89	REVISED — A. SCHUETZE 09-15-16		SCALE: NONE / SHEET NO. 15 OF 21 SHEETS / STA. / TO STA.

F.A.# RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	21	15
	TC-10	CONTRACT NO.		
FED. ROAD DIST. NO. #	ILLINOIS	FED. AID PROJECT		

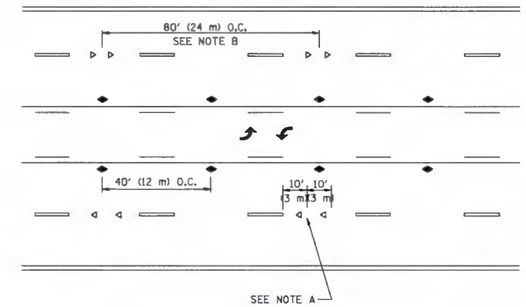


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

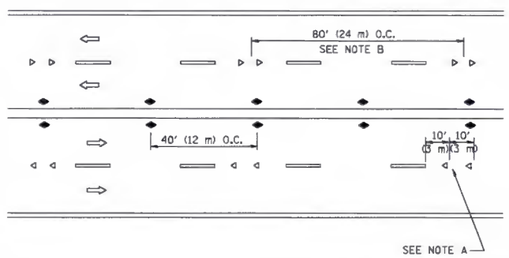
TWO-LANE/TWO-WAY



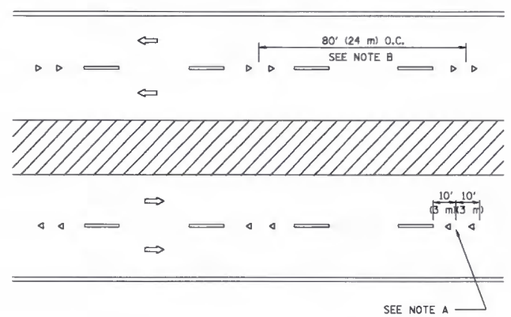
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

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

SYMBOLS

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

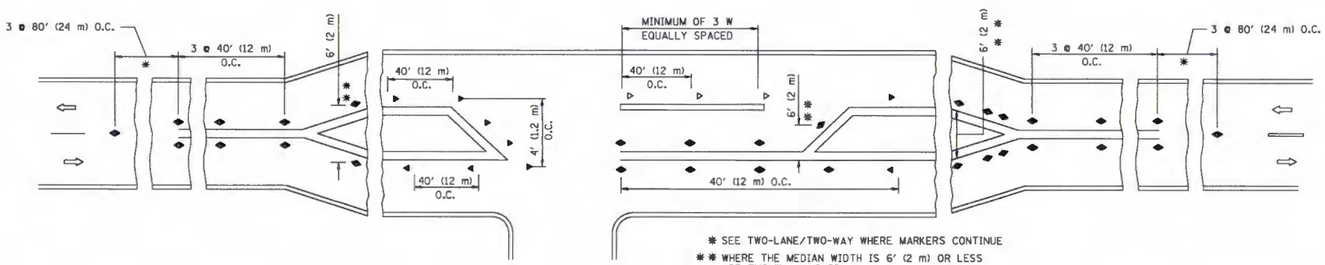
LANE MARKER NOTES

A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

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

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 SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



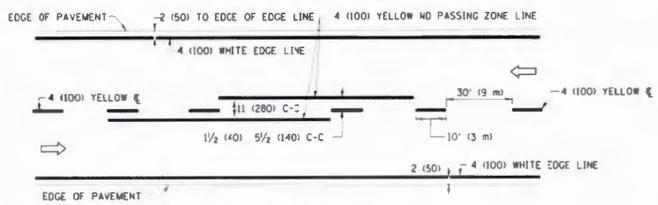
* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE

** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

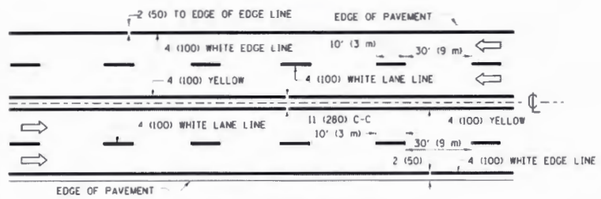
LEFT TURN

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

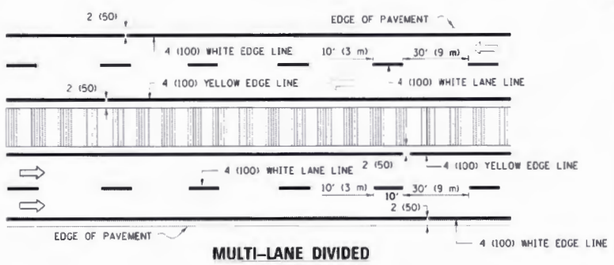
FILE NAME = 18R0455-DTLS-02 - TC11	USER NAME = leyso	DESIGNED —	REVISED — RAMMACHER 09-19-94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)	F.A.# RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED —	REVISED — RAMMACHER 03-12-99					COOK	21	16
	PLOT SCALE = 50.000 ' / IN.	DRAWN —	REVISED — RAMMACHER 01-06-00				TC-11	CONTRACT NO.		
	PLOT DATE = 3/2/2011	CHECKED —	REVISED — . JUCIUS 09-09-01		SCALE: NONE / SHEET NO. 16 OF 21 SHEETS / STA. TO STA.	FED. ROAD DIST. NO. #	ILLINOIS	FED. AID PROJECT		



2-LANE ROADWAY

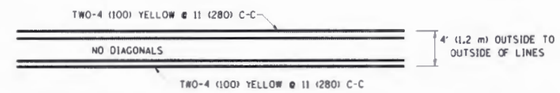


MULTI-LANE UNDIVIDED

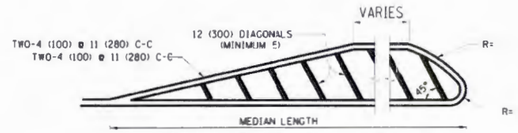


MULTI-LANE DIVIDED
WITH MEDIAN

TYPICAL LANE AND EDGE LINE MARKING



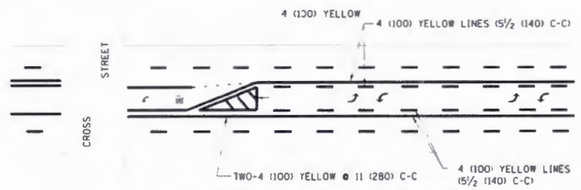
4' (1.2 m) WIDE MEDIANS ONLY



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

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

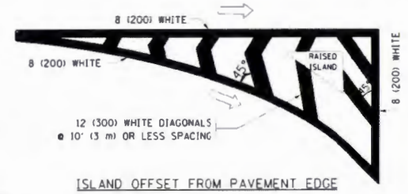
MEDIANS OVER 4' (1.2 m) WIDE



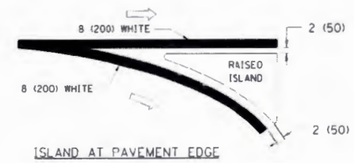
A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.

MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

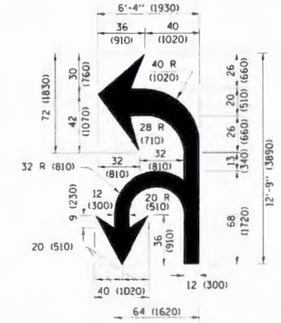


ISLAND OFFSET FROM PAVEMENT EDGE

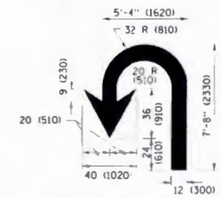


ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING



COMBINATION LEFT AND U-TURN

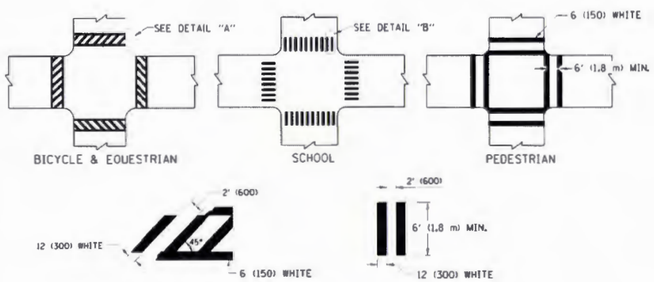


U-TURN

D(FT)	SPEED LIMIT
345	30
425	35
500	40
580	45
665	50
750	55

LANE REDUCTION TRANSITION

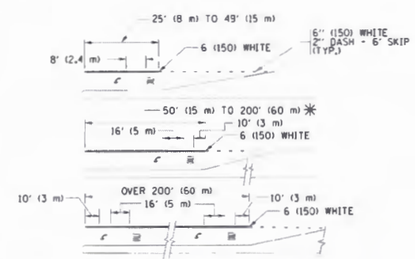
✳ LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR GREATER OR WHEN SPECIFIED IN PLANS.



DETAIL "A" DETAIL "B"

TYPICAL CROSSWALK MARKING

✳ MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES



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

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	5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MEDIANS IN YELLOW
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m²) EACH "X"=54.0 SQ. FT. (5.0 m²)
SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS ≥ 8')	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))
U TURN ARROW	SEE DETAIL	SOLID	WHITE	16.3 SF
2 ARROW COMBINATION LEFT AND U TURN	SEE DETAIL	SOLID	WHITE	30.4 SF

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

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

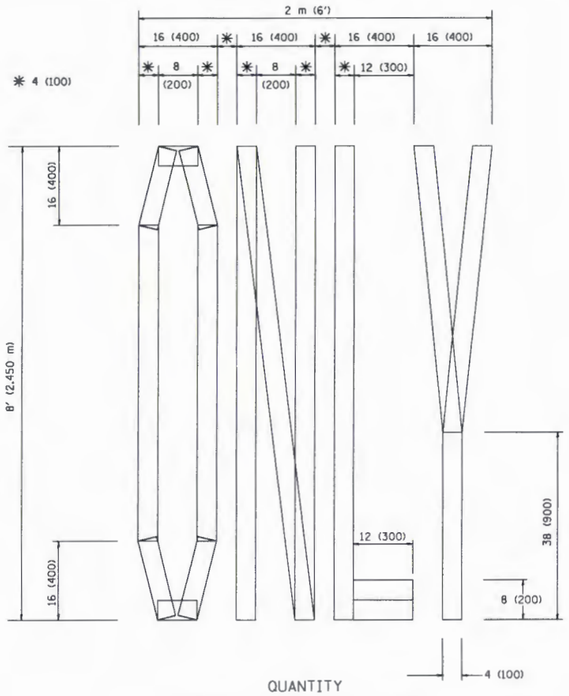
FILE NAME = 18R0455-DTLS-02 - TC13	USER NAME = (Jultgen)	DESIGNED — EVERS	REVISED — C. JUCIUS 09-09-09
	fices\District 1\Projects\1	CHECKED — CADsheets	REVISED — C. JUCIUS 07-01-13
	PLOT SCALE = 50.000 in.	DRAWN —	REVISED — C. JUCIUS 12-21-15
	PLOT DATE = 4/13/2016	CHECKED — 03-19-90	REVISED — C. JUCIUS 04-12-16

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

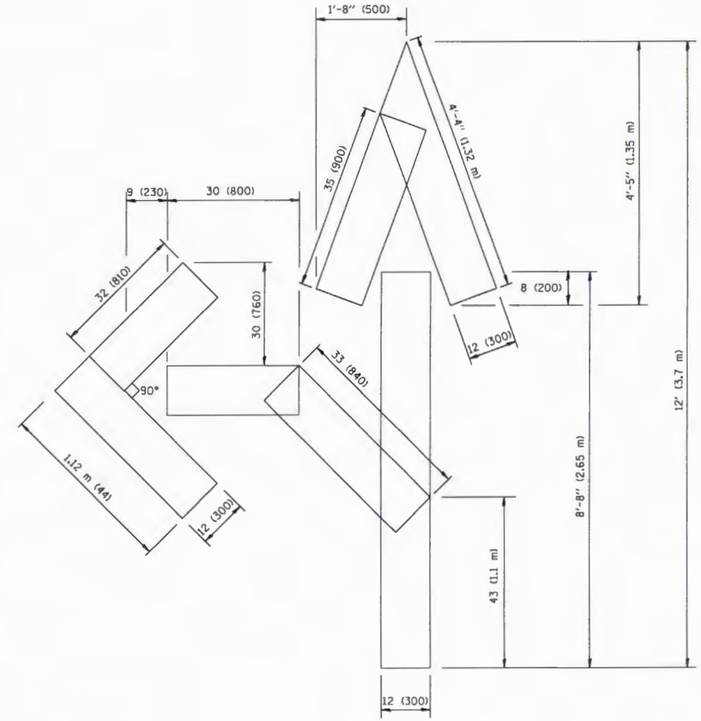
DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

SCALE: NONE | SHEET NO. 17 OF 21 SHEETS | STA. | TO STA.

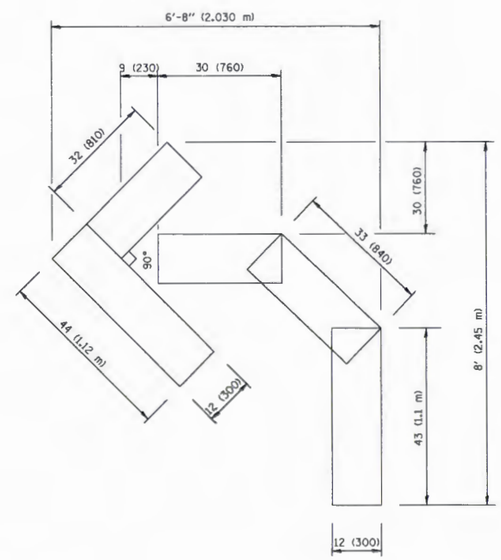
F.A.# RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	21	17
	TC-13	CONTRACT NO.		
FED. ROAD DIST. NO. #	ILLINOIS	FED. AID PROJECT		



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



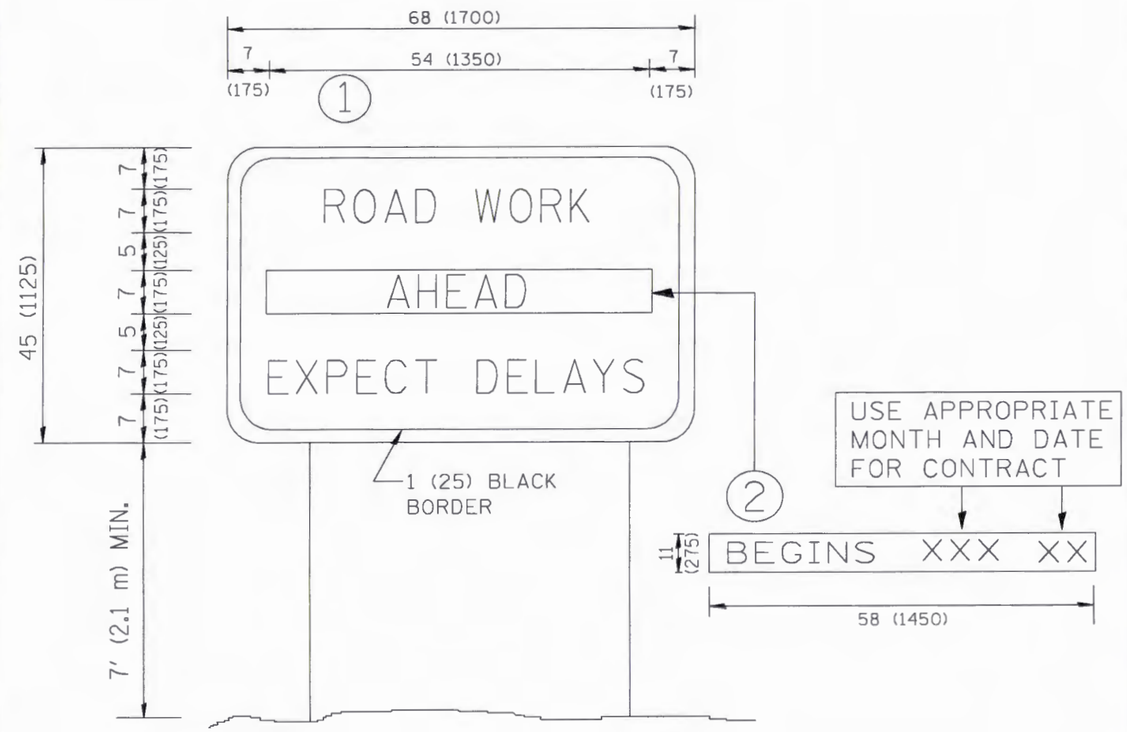
QUANTITY
4 (100) LINE = 82.5 ft. (25.3 m)
27.5 sq. ft. (2.53 sq. m)



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

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

FILE NAME = 18R0455-DTLS-02 - TC16	USER NAME = geglianobt	DESIGNED —	REVISED -T. RAMMACHER 06-05-96	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING			F.A.# RTE.	SECTION	COUNTY	TOTAL SHEETS / SHEET NO.
		CHECKED —	REVISED -T. RAMMACHER 11-04-97							COOK	21 / 18
	PLOT SCALE = 50.0000 ' / IN.	DRAWN —	REVISED -T. RAMMACHER 03-02-98						TC-16	CONTRACT NO.	
	PLOT DATE = 1/4/2008	CHECKED — 09-18-94	REVISED -E. GOMEZ 08-28-00		SCALE: NONE	SHEET NO. 18 OF 21 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. #	ILLINOIS	FED. AID PROJECT	



NOTES:

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

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

FILE NAME = 18R0455-DTLS-02-TC22	USER NAME = gaglianobt	DESIGNED —	REVISED — R. MIRS 09-15-97	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ARTERIAL ROAD INFORMATION SIGN			F.A.# RTE.	SECTION	COUNTY	TOTAL SHEETS / SHEET NO.
		CHECKED —	REVISED — R. MIRS 12-11-97							COOK	21 / 19
	PLOT SCALE = 50.000 ' / IN.	DRAWN —	REVISED — T. RAMMACHER 02-02-99						TC-22	CONTRACT NO.	
	PLOT DATE = 1/4/2008	CHECKED —	REVISED — C. JUCIUS 01-31-07		SCALE: NONE	SHEET NO. 19 OF 21 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. #	ILLINOIS	FED. AID PROJECT	

LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.

2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.

3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.

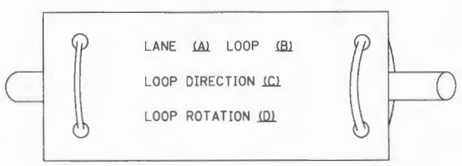
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.

6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.

7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

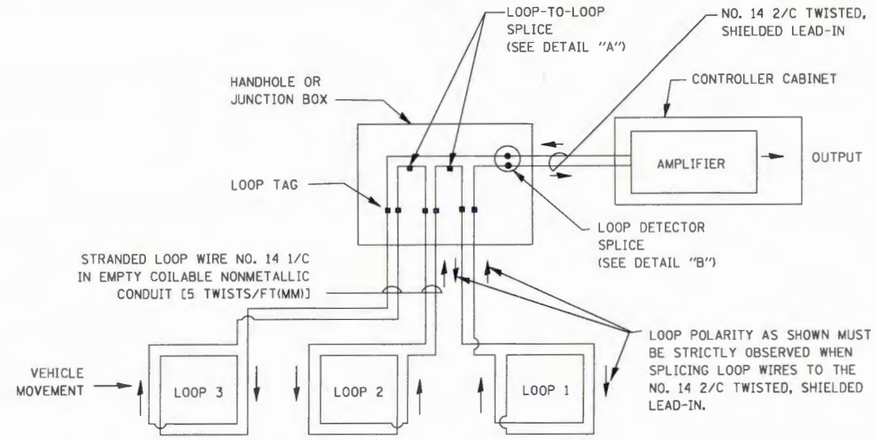


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.

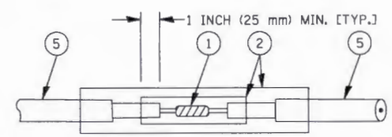
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

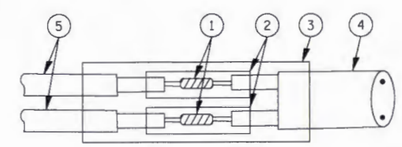


DETECTOR LOOP WIRING SCHEMATIC

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.

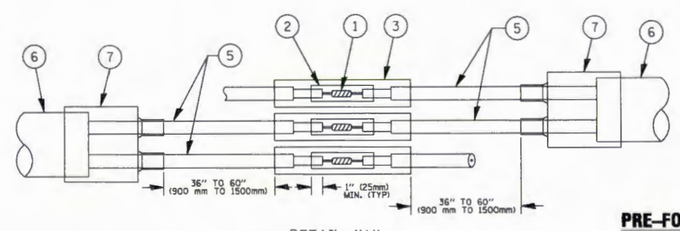


DETAIL "A"
LOOP-TO-LOOP SPLICE



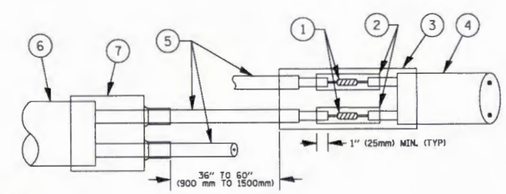
DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE

PRE-FORMED LOOP

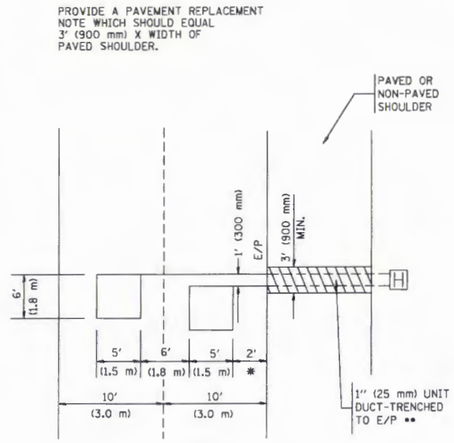


DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

1. WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH. THE WESTERN UNION SPLICES SHALL BE STAGGERED.
2. WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
3. WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGHT 6" (150 mm), UNDERWATER GRADE.
4. NO. 14 2/C TWISTED, SHIELDED CABLE.
5. LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
6. PRE-FORMED LOOP
7. XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

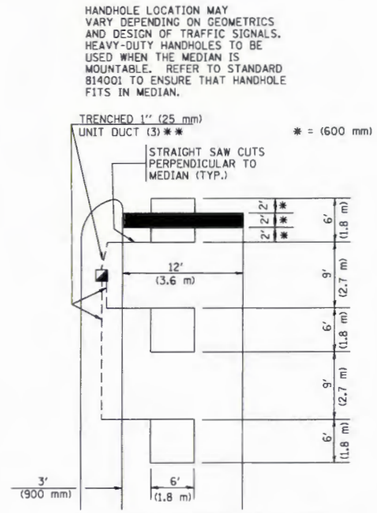
LOOPS NEXT TO SHOULDERS



* = (600 mm)

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

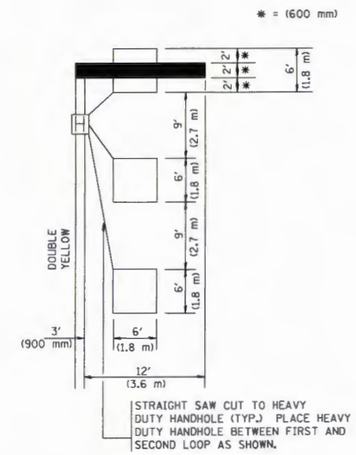
LEFT TURN LANES WITH MEDIANS
VOLUME DENSITY ("FAR OUT" DETECTION) ON SAME APPROACH
(PROTECTED / PERMITTED LEFT TURN PHASING)



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

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

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



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

NOTES:

VEHICLES LOOP DETECTORS

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

PLACEMENT OF DETECTORS

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

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

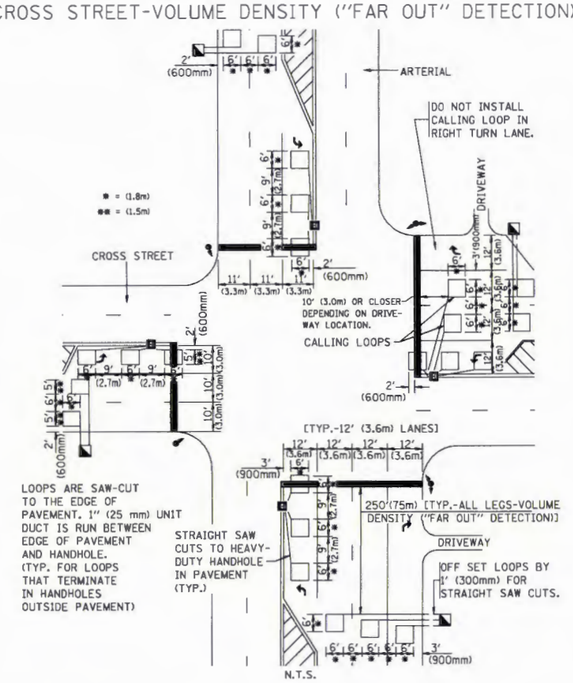
"FAR OUT" DETECTION REFERS TO LOCKING, PRESENCE TYPE DETECTION LOCATED IN THRU LANES, RIGHT TURN LANES, AND RIGHT TURN LANE TAPER AREAS (IF APPLICABLE), USUALLY 250' (75 m) IN ADVANCE OF STOP BARS. "UPTIGHT" DETECTION REFERS TO NON-LOCKING PRESENCE TYPE DETECTION LOCATED IN ALL LANES AND 10'-15' (3.0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

NOTE:

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

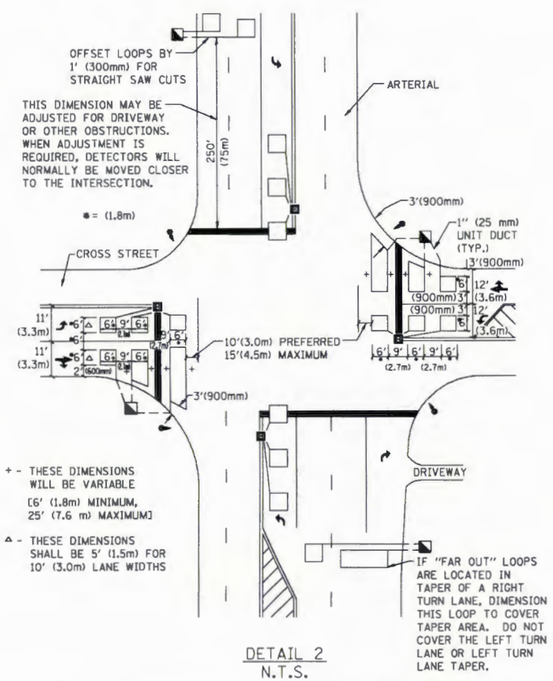
THIS DRAWING HAS BEEN PREPARED TO ASSIST THE RESIDENT ENGINEER FOR ALL ROADWAY RESURFACING OR S.M.A.R.T. PROJECTS WHERE THE DIMENSIONS ARE NOT SHOWN ON THE PLANS AND THE FINAL LOCATIONS FOR CROSSWALKS OR STOP BARS ARE NOT DETERMINED.

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



DETAIL 1
N.T.S.

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



DETAIL 2
N.T.S.

FILE NAME = 18R0455-DTLS-02 - TS07	USER NAME = geglionobt	DESIGNED —	REVISED —	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT 1 – DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY RESURFACING	F.A.U RTE.	SECTION	COUNTY / TOTAL SHEETS / SHEET NO.
		CHECKED —	REVISED —					COOK / 21 / 21
	PLOT SCALE = 50.0000 ' / IN.	DRAWN —	REVISED —				TS-07	CONTRACT NO.
	PLOT DATE = 1/4/2008	CHECKED —	REVISED —		SCALE: NONE / SHEET NO. 21 OF 21 SHEETS / STA. / TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT