Illinois Department of Transportation

Local Public Agency Formal Contract

PROPOSAL SUBMITTED BY		
ILLINOIS CIVIL CONTRACTORS INC		
Contractor's Name		
420 PINECREST DR		
Street		P.O. Box
EAST PEORIA	IL	61611
City	State	Zip Code

STATE OF ILLINOIS

COUNTY Peoria

CITY OF PEORIA, ILLINOIS

(Name of City, Village, Town or Road District)

FOR THE IMPROVEMENT OF

STREET NAME OR ROUTE University Street (FAU 6593)

SECTION NO. 12-00361-03-SW

TYPES OF FUNDS MFT

☒ SPECIFICATIONS (required) ☒ PLANS (required) ☒ CONTRACT BOND (when required)

For Municipal Projects

Submitted/Approved/Passed

☐ Mayor ☐ President of Board of Trustees ☒ Municipal Official

Date 6/14/16

Department of Transportation

☒ Concurrence in approval of award

Regional Engineer

Agreement of Understanding

Date

For County and Road District Projects

Submitted/Approved

Highway Commissioner

Date

Submitted/Approved

County Engineer/Superintendent of Highways

Date

County Peoria
Local Public Agency City of Peoria
Section Number 12-00361-03-SW
Route FAU 6593 University

1. THIS AGREEMENT, made and concluded the 14TH day of June, 2016 (Month and Year), between the City of Peoria, an IL Municipal Corp of Peoria, Illinois acting by and through its City Manager known as the party of the first part, and ILLINOIS CIVIL CONTRACTORS, INC. his/their executors, administrators, successors or assigns, known as the party of the second part.

2. Witnesseth: That for and in consideration of the payments 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 terms of this agreement and the requirements of the Engineer under it.

3. And it is also understood and agreed that the LPA Formal Contract Proposal, Special Provisions, Affidavit of Illinois Business Office, Apprenticeship or Training Program Certification, and Contract Bond hereto attached, and the Plans for Section 12-00361-03-SW, in Peoria, Illinois, approved by the Illinois Department of Transportation on _____ (Date), are essential documents of this contract and are a part hereof.

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

Attest: Beth Ball City Clerk

(Seal)

REVIEWED AND APPROVED:
By: Donald P. Tarst
Corporation Counsel

The City of Peoria
By _____
City Manager — Party of the First Part

(If a Corporation)

Corporate Name ILLINOIS CIVIL CONTRACTORS, INC.
By _____
President — Party of the Second Part

Attest: _____
Secretary

(If a Co-Partnership)

_____

_____

Partners doing Business under the firm name of

_____
Party of the Second Part

(If an individual)

_____
Party of the Second Part

Illinois Department of Transportation

Contract Bond
Bond Number 2324406

Route 6593 University
County Peoria
Local Agency City of Peoria
Section 12-00361-03-SW

We, Illinois Civil Contractors, Inc.

a/an) ☐ Individual ☐ Co-partnership ☒ Corporation organized under the laws of the State of Illinois,

as PRINCIPAL, and West Bend Mutual Insurance Company

as SURETY,

are held and firmly bound unto the above Local Agency (hereafter referred to as "LA") in the penal sum of TWO MILLION FIVE HUNDRED EIGHTY THOUSAND EIGHTY FIVE AND 66/100

Dollars ($2,580,085.66), lawful money of the United States, well and truly to be paid unto said LA, for the payment of which we bind ourselves, our heirs, executors, administrators, successors, jointly to pay to the LA this sum under the conditions of this instrument.

WHEREAS THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH that, the said Principal has entered into a written contract with the LA acting through its awarding authority for the construction of work on the above section, which contract is hereby referred to and made a part hereof, as if written herein at 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 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 during the time of the performance thereof and until the said work shall have been accepted, and shall hold the LA and its awarding authority 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 TESTIMONY WHEREOF, the said PRINCIPAL and the said SURETY have caused this instrument to be signed by their respective officers this 14th day of June A.D. 2016

PRINCIPAL

Illinois Civil Contractors, Inc.
(Company Name)

By: [signature] President
(Signature & Title)

Attest: [signature] Vice President
(Signature & Title)

Illinois Civil Contractors, Inc.
(Company Name)

By: _____
(Signature & Title)

Attest: _____
(Signature & Title)

(If PRINCIPAL is a joint venture of two or more contractors, the company names and authorized signature of each contractor must be affixed.)

STATE OF ILLINOIS,

COUNTY OF Macon

I, Glenda Hoffman, a Notary Public in and for said county, do hereby certify that Michael Fehr

(Insert names of individuals signing on behalf or PRINCIPAL)

who are each personally known to me to be the same persons whose names are subscribed to the foregoing instrument on behalf of PRINCIPAL, appeared before me this day in person and acknowledged respectively, that they signed and delivered said instrument as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this 14th day of June A.D. 2016

My commission expires 7-16-17

[signature] Notary Public (SEAL)

"OFFICIAL SEAL"
GLENDA HOFFMAN
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 07-16-2017

SURETY

West Bend Mutual Insurance Company
(Name of Surety)

By: [signature]
(Signature of Attorney-in-Fact)

Ronald A Koopman (SEAL)

STATE OF ILLINOIS.

COUNTY OF Macon

I, Glenda Hoffman, a Notary Public in and for said county, do hereby certify that Ronald A Koopman

(Insert names of individuals signing on behalf or SURETY)

who are each personally known to me to be the same persons whose names are subscribed to the foregoing instrument on behalf of SURETY, appeared before me this day in person and acknowledged respectively, that they signed and delivered said instrument as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this 14th day of June A.D. 2016

My commission expires 7-16-17

[signature] Notary Public (SEAL)

"OFFICIAL SEAL"
GLENDA HOFFMAN
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 07-16-2017

Approved this _____ day of June, A.D. 2016

Attest:

[signature] City Clerk

CITY OF PEORIA
(Awarding Authority)

[signature]
City Manager (Chairman/Mayor/President)

REVIEWED AND APPROVED:
[signature]
Corporation Counsel

IL 494-0372

BLR 12321 (Rev. 7/05)

WEST BEND
A MUTUAL INSURANCE COMPANY

2324406

Power of Attorney

Know all men by these Presents, That West Bend Mutual Insurance Company, a corporation having its principal office in the City of West Bend, Wisconsin does make, constitute and appoint:

RONALD A KOOPMAN

lawful Attorney(s)-in-fact, to make, execute, seal and deliver for and on its behalf as surety and as its act and deed any and all bonds, undertakings and contracts of suretyship, provided that no bond or undertaking or contract of suretyship executed under this authority shall exceed in amount the sum of: Seven Million Five Hundred Thousand Dollars ($7,500,000)

This Power of Attorney is granted and is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of West Bend Mutual Insurance Company at a meeting duly called and held on the 21st day of December, 1999.

Appointment of Attorney-In-Fact. The president or any vice president, or any other officer of West Bend Mutual Insurance Company may appoint by written certificate Attorneys-in-Fact to act on behalf of the company in the execution of and attesting of bonds and undertakings and other written obligatory instruments of like nature. The signature of any officer authorized hereby and the corporate seal may be affixed by facsimile to any such power of attorney or to any certificate relating therefore and any such power of attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the company, and any such power so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the company in the future with respect to any bond or undertaking or other writing obligatory in nature to which it is attached. Any such appointment may be revoked, for cause, or without cause, by any said officer at any time.

In witness whereof, the West Bend Mutual Insurance Company has caused these presents to be signed by its president undersigned and its corporate seal to be hereto duly attested by its secretary this 1st day of March, 2009.

Attest James J. Pauly

James J. Pauly
Secretary

WEST BEND MUTUAL INSURANCE COMPANY CORPORATE SEAL WASHINGTON CO. WIS

Kevin A. Steiner

Kevin A. Steiner
Chief Executive Officer / President

State of Wisconsin
County of Washington

On the 1st day of March, 2009 before me personally came Kevin A. Steiner, to me known being by duly sworn, did depose and say that he resides in the County of Washington, State of Wisconsin; that he is the President of West Bend Mutual Insurance Company, the corporation described in and which executed the above instrument; that he knows the seal of the said corporation; that the seal affixed to said instrument is such corporate seal; that is was so affixed by order of the board of directors of said corporation and that he signed his name thereto by like order.

JOHN F. DUWELL NOTARY PUBLIC STATE OF WISCONSIN

John F. Duwell

John F. Duwell
Executive Vice President - Chief Legal Officer
Notary Public, Washington Co. WI
My Commission is Permanent

The undersigned, duly elected to the office stated below, now the incumbent in West Bend Mutual Insurance Company, a Wisconsin corporation authorized to make this certificate, Do Hereby Certify that the foregoing attached Power of Attorney remains in full force effect and has not been revoked and that the Resolution of the Board of Directors, set forth in the Power of Attorney is now in force.

Signed and sealed at West Bend, Wisconsin this 14 day of June, 2016

WEST BEND MUTUAL INSURANCE COMPANY CORPORATE SEAL WASHINGTON CO. WIS

Dale J. Kent

Dale J. Kent
Executive Vice President -
Chief Financial Officer

NOTICE: Any questions concerning this Power of Attorney may be directed to the Bond Manager at NSI, a division of West Bend Mutual Insurance Company

8401 Greenway Blvd. Suite 1100 | P.O. Box 620976 | Middleton, WI 53562 | ph (608) 410-3410 | www.thesilverlining.com

RETURN WITH BID

Illinois Department of Transportation

Local Public Agency Formal Contract Proposal

PROPOSAL SUBMITTED BY		
Illinois Civil Contractors, Inc		
Contractor's Name		
420 Pinecrest Drive		
Street		P.O. Box
East Peoria	IL	61611
City	State	Zip Code

STATE OF ILLINOIS

COUNTY OF Peoria

City of Peoria

(Name of City, Village, Town or Road District)

FOR THE IMPROVEMENT OF

STREET NAME OR ROUTE NO. University Street (FAU 6593)

SECTION NO. 12-00361-03-SW

TYPES OF FUNDS MFT

☒ SPECIFICATIONS (required) ☒ PLANS (required)

For Municipal Projects

Submitted/Approved/Passed

☐ Mayor ☐ President of Board of Trustees ☒ Municipal Official

Date 5/17/16

Department of Transportation

☐ Released for bid based on limited review

AGREEMENT OF UNDERSTANDING

Date

For County and Road District Projects

Submitted/Approved

Highway Commissioner

Date

Submitted/Approved

County Engineer/Superintendent of Highways

Date

Note: All proposal documents, including Proposal Guaranty Checks or Proposal Bid Bonds, should be stapled together to prevent loss when bids are processed.

RETURN WITH BID

NOTICE TO BIDDERS

County Peoria
Local Public Agency City of Peoria
Section Number 12-00361-03-SW
Route 6593

Sealed proposals for the improvement described below will be received at the office of City of Peoria,
3505 N. Dries Lane, Peoria, IL 61604 (Address) until 11:00 AM (Time) on June 2, 2016 (Date)

Sealed proposals will be opened and read publicly at the office of City of Peoria
3505 N. Dries Lane, Peoria, IL 61604 (Address) at 11:05 AM (Time) on June 2, 2016 (Date)

DESCRIPTION OF WORK

Name University Street Length: 2525.00 feet (0.48 miles)
Location Forrest Hill Avenue to War Memorial Drive
Proposed Improvement New sidewalks, new curb & gutter, storm drainage improvements, street lighting, water main replacement, and some modifications to existing traffic signal systems

1. Plans and proposal forms will be available in the office of City of Peoria Public Works
   3505 N. Dries Lane, Peoria, IL 61604 (Address)
2. ☒ Prequalification
   If checked, the 2 low bidders must file within 24 hours after the letting an "Affidavit of Availability" (Form BC 57), in duplicate, showing all uncompleted contracts awarded to them and all low bids pending award for Federal, State, County, Municipal and private work. One original shall be filed with the Awarding Authority and one original with the IDOT District Office.
3. The Awarding Authority reserves the right to waive technicalities and to reject any or all proposals as provided in BLRS Special Provision for Bidding Requirements and Conditions for Contract Proposals.
4. The following BLR Forms shall be returned by the bidder to the Awarding Authority:
   a. BLR 12200: Local Public Agency Formal Contract Proposal
   b. BLR 12200a Schedule of Prices
   c. BLR 12230: Proposal Bid Bond (if applicable)
   d. BLR 12325: Apprenticeship or Training Program Certification (**do not use for federally funded projects**)
   e. BLR 12326: Affidavit of Illinois Business Office
5. The quantities appearing in the bid schedule are approximate and are prepared for the comparison of bids. Payment to the Contractor will be made only for the actual quantities of work performed and accepted or materials furnished according to the contract. The scheduled quantities of work to be done and materials to be furnished may be increased, decreased or omitted as hereinafter provided.
6. Submission of a bid shall be conclusive assurance and warranty the bidder has examined the plans and understands all requirements for the performance of work. The bidder will be responsible for all errors in the proposal resulting from failure or neglect to conduct an in depth examination. The Awarding Authority will, in no case be responsible for any costs, expenses, losses or changes in anticipated profits resulting from such failure or neglect of the bidder.
7. The bidder shall take no advantage of any error or omission in the proposal and advertised contract.
8. If a special envelope is supplied by the Awarding Authority, each proposal should be submitted in that envelope furnished by the Awarding Agency and the blank spaces on the envelope shall be filled in correctly to clearly indicate its contents. When an envelope other than the special one furnished by the Awarding Authority is used, it shall be marked to clearly indicate its contents. When sent by mail, the sealed proposal shall be addressed to the Awarding Authority at the address and in care of the official in whose office the bids are to be received. All proposals shall be filed prior to the time and at the place specified in the Notice to Bidders. Proposals received after the time specified will be returned to the bidder unopened.
9. Permission will be given to a bidder to withdraw a proposal if the bidder makes the request in writing or in person before the time for opening proposals.

RETURN WITH BID

PROPOSAL

* See Attached

County Peoria
Local Public Agency City of Peoria
Section Number 12-00361-03-SW
Route 6593

1. Proposal of _____

for the improvement of the above section by the construction of _____

a total distance of 2525.00 feet, of which a distance of 2525.00 feet, (0.480 miles) are to be improved.

2. The plans for the proposed work are those prepared by Crawford, Murphy & Tilly, Inc.
and approved by the Department of Transportation on _____
3. The specifications referred to herein are those prepared by the Department of Transportation and designated as "Standard Specifications for Road and Bridge Construction" and the "Supplemental Specifications and Recurring Special Provisions" thereto, adopted and in effect on the date of invitation for bids.
4. The undersigned agrees to accept, as part of the contract, the applicable Special Provisions indicated on the "Check Sheet for Recurring Special Provisions" contained in this proposal.
5. The undersigned agrees to complete the work within _____ working days or by October 31, 2016 unless additional time is granted in accordance with the specifications.
6. A proposal guaranty in the proper amount, as specified in BLRS Special Provision for Bidding Requirements and Conditions for Contract Proposals, will be required. Bid Bonds will be allowed as a proposal guaranty. Accompanying this proposal is either a bid bond if allowed, on Department form BLR 12230 or a proposal guaranty check, complying with the specifications, made payable to:

Patrick Nichting Treasurer of _____

The amount of the check is _____ (_____).

7. In the event that one proposal guaranty check is intended to cover two or more proposals, the amount must be equal to the sum of the proposal guaranties, which would be required for each individual proposal. If the proposal guaranty check is placed in another proposal, it will be found in the proposal for: Section Number _____.
8. The successful bidder at the time of execution of the contract will be required to deposit a contract bond for the full amount of the award. When a contract bond is not required, the proposal guaranty check will be held in lieu thereof. If this proposal is accepted and the undersigned fails to execute a contract and contract bond as required, it is hereby agreed that the Bid Bond or check shall be forfeited to the Awarding Authority.
9. Each pay item should have a unit price and a total price. If no total price is shown or if there is a discrepancy between the product of the unit price multiplied by the quantity, the unit price shall govern. If a unit price is omitted, the total price will be divided by the quantity in order to establish a unit price.
10. A bid will be declared unacceptable if neither a unit price nor a total price is shown.
11. The undersigned submits herewith the schedule of prices on BLR 12200a covering the work to be performed under this contract.
12. The undersigned further agrees that if awarded the contract for the sections contained in the combinations on BLR 12200a, the work shall be in accordance with the requirements of each individual proposal for the multiple bid specified in the Schedule for Multiple Bids below.

Illinois Department of Transportation

Local Agency Proposal Bid Bond

Route 6593
County Peoria
Local Agency City of Peoria
Section 12-00361-03-SW

RETURN WITH BID

PAPER BID BOND

WE Illinois Civil Contractors Inc. as PRINCIPAL,

and West Bend Mutual Insurance Company as SURETY,

are held jointly, severally and firmly bound unto the above Local Agency (hereafter referred to as "LA") in the penal sum of 5% of the total bid price, or for the amount specified in the proposal documents in effect on the date of invitation for bids whichever is the lesser sum. We bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly pay to the LA this sum under the conditions of this instrument.

WHEREAS THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH that, the said PRINCIPAL is submitting a written proposal to the LA acting through its awarding authority for the construction of the work designated as the above section.

THEREFORE if the proposal is accepted and a contract awarded to the PRINCIPAL by the LA for the above designated section and the PRINCIPAL shall within fifteen (15) days after award enter into a formal contract, furnish surety guaranteeing the faithful performance of the work, and furnish evidence of the required insurance coverage, all as provided in the "Standard Specifications for Road and Bridge Construction" and applicable Supplemental Specifications, then this obligation shall become void; otherwise it shall remain in full force and effect.

IN THE EVENT the LA determines the PRINCIPAL has failed to enter into a formal contract in compliance with any requirements set forth in the preceding paragraph, then the LA acting through its awarding authority shall immediately be entitled to recover the full penal sum set out above, together with all court costs, all attorney fees, and any other expense of recovery.

IN TESTIMONY WHEREOF, the said PRINCIPAL and the said SURETY have caused this instrument to be signed by their respective officers this 2nd day of June, 2016

Principal

Illinois Civil Contractors Inc.
(Company Name)

By: [signature] President
(Signature and Title)

(Company Name)

By:
(Signature and Title)

(If PRINCIPLE is a joint venture of two or more contractors, the company names, and authorized signatures of each contractor must be affixed.)

Surety

West Bend Mutual Insurance Company
(Name of Surety)

By: [signature]
(Signature of Attorney-in-Fact)

STATE OF ILLINOIS,
COUNTY OF Macon
I, Amanda Rhoades, a Notary Public in and for said county,
do hereby certify that Ronald A Koopman
(Insert names of individuals signing on behalf of PRINCIPAL & SURETY)
who are each personally known to me to be the same persons whose names are subscribed to the foregoing instrument on behalf of PRINCIPAL and SURETY, appeared before me this day in person and acknowledged respectively, that they signed and delivered said instruments as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this 2nd day of June, 2016

My commission expires July 21, 2018

[signature] (Notary Public)

"OFFICIAL SEAL"
AMANDA RHOADES
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 07-21-2018

ELECTRONIC BID BOND

☐ **Electronic bid bond is allowed (box must be checked by LA if electronic bid bond is allowed)**

The Principal may submit an electronic bid bond, in lieu of completing the above section of the Proposal Bid Bond Form. By providing an electronic bid bond ID code and signing below, the Principal is ensuring the identified electronic bid bond has been executed and the Principal and Surety are firmly bound unto the LA under the conditions of the bid bond as shown above. (If PRINCIPAL is a joint venture of two or more contractors, an electronic bid bond ID code, company/Bidder name title and date must be affixed for each contractor in the venture.)

Electronic Bid Bond ID Code

(Company/Bidder Name)

(Signature and Title)

Date

BLR 12230 (Rev. 7/05

WEST BEND
A MUTUAL INSURANCE COMPANY*

2324406

Power of Attorney

Know all men by these Presents, That West Bend Mutual Insurance Company, a corporation having its principal office in the City of West Bend, Wisconsin does make, constitute and appoint:

RONALD A KOOPMAN

lawful Attorney(s)-in-fact, to make, execute, seal and deliver for and on its behalf as surety and as its act and deed any and all bonds, undertakings and contracts of suretyship, provided that no bond or undertaking or contract of suretyship executed under this authority shall exceed in amount the sum of: Seven Million Five Hundred Thousand Dollars ($7,500,000)

This Power of Attorney is granted and is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of West Bend Mutual Insurance Company at a meeting duly called and held on the 21st day of December, 1999.

Appointment of Attorney-In-Fact. The president or any vice president, or any other officer of West Bend Mutual Insurance Company may appoint by written certificate Attorneys-in-Fact to act on behalf of the company in the execution of and attesting of bonds and undertakings and other written obligatory instruments of like nature. The signature of any officer authorized hereby and the corporate seal may be affixed by facsimile to any such power of attorney or to any certificate relating therefore and any such power of attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the company, and any such power so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the company in the future with respect to any bond or undertaking or other writing obligatory in nature to which it is attached. Any such appointment may be revoked, for cause, or without cause, by any said officer at any time.

In witness whereof, the West Bend Mutual Insurance Company has caused these presents to be signed by its president undersigned and its corporate seal to be hereto duly attested by its secretary this 1st day of March, 2009.

Attest James J. Pauly

James J. Pauly
Secretary

WEST BEND MUTUAL INSURANCE COMPANY CORPORATE SEAL WASHINGTON CO. WIS.

Kevin A. Steiner
Chief Executive Officer / President

State of Wisconsin
County of Washington

On the 1st day of March, 2009 before me personally came Kevin A. Steiner, to me known being by duly sworn, did depose and say that he resides in the County of Washington, State of Wisconsin; that he is the President of West Bend Mutual Insurance Company, the corporation described in and which executed the above instrument; that he knows the seal of the said corporation; that the seal affixed to said instrument is such corporate seal; that is was so affixed by order of the board of directors of said corporation and that he signed his name thereto by like order.

JOHN F. DUWELL NOTARY PUBLIC STATE OF WISCONSIN

John F. Duwell

John F. Duwell
Executive Vice President - Chief Legal Officer
Notary Public, Washington Co. WI
My Commission is Permanent

The undersigned, duly elected to the office stated below, now the incumbent in West Bend Mutual Insurance Company, a Wisconsin corporation authorized to make this certificate, Do Hereby Certify that the foregoing attached Power of Attorney remains in full force effect and has not been revoked and that the Resolution of the Board of Directors, set forth in the Power of Attorney is now in force.

Signed and sealed at West Bend, Wisconsin this 2 day of June, 2016

WEST BEND MUTUAL INSURANCE COMPANY CORPORATE SEAL WASHINGTON CO. WIS.

Dale J. Kent
Executive Vice President -
Chief Financial Officer

NOTICE: Any questions concerning this Power of Attorney may be directed to the Bond Manager at NSI, a division of West Bend Mutual Insurance Company

8401 Greenway Blvd. Suite 1100 | P.O. Box 620976 | Middleton, WI 53562 | ph (608) 410-3410 | www.thesilverlining.com

CITY OF
PEORIA

ADDENDUM NO. 1
CITY OF PEORIA
Arterial Overlay – University Street (Forrest Hill Ave to War Memorial Dr)
12-00361-03-SW
Date of Addendum: May 27, 2016
Letting: June 2, 2016 at 11:00 AM

RE: **Addendum No. 1** for Bid Package, University Street (FAU 6593), Section 12-00361-03-SW, Peoria, IL

The following shall be considered part of the Contract Documents for the subject project and shall apply to all construction there under:

REVISED BID DOCUMENT (Issued with this Addendum):

1) Page I-3 through I-5, Schedule of Prices: REFORMAT to Fit 3 Updated Sheets.
2) Page I-4, Schedule of Prices:
   a. ADD new Item #***86200200, Uninterruptable Power Supply, Standard, Unit: EACH, Quantity: 1***.
   b. REMOVE Item #***K0012992, Perennial Plants, Ornamental Type, 2-Gallon Pot, Unit: UNIT, Quantity: 15.***
   c. ADD new Item #***X0012992, Perennial Plants, Ornamental Grasses, 1-Gallon Pot (Special), Unit: EACH, Quantity: 15.***
3) Page I-5, Schedule of Quantities: ADD Row at bottom "***ENGINEER'S ESTIMATE: $2,547,389.75***".
4) SHEETS 4&5, Summary of Quantities: REMOVE Pay Item # K0012992, Perennial Plants and REPLACE with New Pay Item #***X0012992, Perennial Plants, Ornamental Grasses, 1-Gallon Pot, Unit: EACH, Quantity: 15.***
5) SHEET 5, Summary of Quantities: ADD new Item ***#86200200, Uninterruptable Power Supply, Unit: EACH, Quantity: 1***
6) SHEET 45: ADD **UNINTERRUPTABLE POWER SUPPLY** note, pointing to the Signal Cabinet at University Street & Florence Avenue.

Bidders shall acknowledge receipt of this addendum by inserting its number on Bid Form. Failure to do so may subject Bidder to Disqualification.

This Addendum consists of two (2) cover pages, three (3) Proposal and Specification book pages, and three (3) Plan Sheets.

Sincerely,

Stephen Letsky, P.E.

SCHEDULE OF PRICES

ADDENDUM #1

County Peoria
Local Public Agency City of Peoria
Section 12-00361-03-SW
Route FAU 6593

PAY ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
	Bidder's Proposal for making Entire Improvements				
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	10		
20200100	EARTH EXCAVATION	CU YD	691		
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	2,439		
25200100	SODDING	SQ YD	2,439		
28000500	INLET AND PIPE PROTECTION	EACH	45		
31101000	SUBBASE GRANULAR MATERIAL, TYPE B	TON	2,114		
35401100	PORTLAND CEMENT CONCRETE BASE COURSE WIDENING (VARIABLE DEPTH)	SQ YD	222		
40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	537		
40600050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	280		
42000900	HIGH-EARLY-STRENGTH PORTLAND CEMENT CONCRETE PAVEMENT 8"	SQ YD	425		
42300400	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH	SQ YD	1,306		
42400100	PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH	SQ FT	20,340		
42400800	DETECTABLE WARNINGS	SQ FT	271		
44000100	PAVEMENT REMOVAL	SQ YD	1,320		
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	2,042		
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	3,015		
44000600	SIDEWALK REMOVAL	SQ FT	13,387		
44003100	MEDIAN REMOVAL	SQ FT	3,532		
44200168	PAVEMENT PATCHING, TYPE II, 14 INCH	SQ YD	125		
44200172	PAVEMENT PATCHING, TYPE III, 14 INCH	SQ YD	54		
44200174	PAVEMENT PATCHING, TYPE IV, 14 INCH	SQ YD	262		
550B0050	STORM SEWERS, CLASS B, TYPE 1 12"	FOOT	571		
550B0070	STORM SEWERS, CLASS B, TYPE 1 15"	FOOT	135		
550B0090	STORM SEWERS, CLASS B, TYPE 1 18"	FOOT	48		
550B0340	STORM SEWERS, CLASS B, TYPE 2 12"	FOOT	31		
55100300	STORM SEWER REMOVAL 8"	FOOT	25		
55100500	STORM SEWER REMOVAL 12"	FOOT	452		
55100700	STORM SEWER REMOVAL 15"	FOOT	403		
55100900	STORM SEWER REMOVAL 18"	FOOT	223		
60100080	FRENCH DRAINS	CU YD	378		
60100085	GEOTECHNICAL FABRIC FOR FRENCH DRAINS	SQ YD	2,071		
60108000	PIPE UNDERDRAINS 12"	FOOT	1,144		
60108010	PIPE UNDERDRAINS 15"	FOOT	491		
60218400	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	2		
60218500	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 3 FRAME AND GRATE	EACH	2		
60221000	MANHOLES, TYPE A, 5'-DIAMETER, TYPE 1 FRAME, OPEN LID	EACH	1		
60223700	MANHOLES, TYPE A, 6'-DIAMETER, TYPE 1 FRAME, OPEN LID	EACH	1		
60235700	INLETS, TYPE A, TYPE 3 FRAME AND GRATE	EACH	6		
60236200	INLETS, TYPE A, TYPE 8 GRATE	EACH	3		
60237000	INLETS, TYPE A, TYPE 15 FRAME AND LID	EACH	2		
60237460	INLETS, TYPE A, TYPE 23 FRAME AND GRATE	EACH	1		
60240220	INLETS, TYPE B, TYPE 3 FRAME AND GRATE	EACH	11		
60255500	MANHOLES TO BE ADJUSTED	EACH	4		
60262700	INLETS TO BE RECONSTRUCTED	EACH	1		
60265700	VALVE VAULTS TO BE ADJUSTED	EACH	1		
60500040	REMOVING MANHOLES	EACH	3		
60500050	REMOVING CATCH BASINS	EACH	2		
60500060	REMOVING INLETS	EACH	21		
60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	1,620		

SCHEDULE OF PRICES

ADDENDUM #1

County Peoria
Local Public Agency City of Peoria
Section 12-00361-03-SW
Route FAU 6593

PAY ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
60604100	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 (MODIFIED)	FOOT	205		
60604400	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.18	FOOT	3,883		
60604700	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.18 (MODIFIED)	FOOT	827		
60622305	CONCRETE MEDIAN, TYPE SM - 4.12	SQ FT	2,722		
66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	840		
66900450	SPECIAL WASTE PLANS AND REPORTS	LSUM	1		
66900530	SOIL DISPOSAL ANALYSIS	EACH	7		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	5		
80400100	ELECTRIC SERVICE INSTALLATION	EACH	1		
81028340	UNDERGROUND CONDUIT, PVC, 1 1/2" DIA.	FOOT	4,686		
81028350	UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	3,060		
81028360	UNDERGROUND CONDUIT, PVC, 2 1/2" DIA.	FOOT	19		
81028370	UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	284		
81028380	UNDERGROUND CONDUIT, PVC, 3 1/2" DIA.	FOOT	10		
81028390	UNDERGROUND CONDUIT, PVC, 4" DIA.	FOOT	704		
81400700	HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	7		
81702130	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	24,060		
81702450	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 10	FOOT	247		
83600200	LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	126		
84200500	REMOVAL OF LIGHTING UNIT, SALVAGE	EACH	3		
84200804	REMOVAL OF POLE FOUNDATION	EACH	3		
86200200	UNINTERRUPTABLE POWER SUPPLY, STANDARD	EACH	1		
86400100	TRANSCEIVER - FIBER OPTIC	EACH	2		
87100140	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, 12F	FOOT	3,164		
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	794		
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	651		
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	814		
87301732	ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 20 3C	FOOT	239		
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	530		
87502490	TRAFFIC SIGNAL POST, GALVANIZED STEEL 15 FT.	EACH	2		
87601100	PEDESTRIAN PUSH-BUTTON POST, GALVANIZED STEEL, TYPE I	EACH	3		
87702960	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 46 FT.	EACH	1		
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	6		
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	13		
87900200	DRILL EXISTING HANDHOLE	EACH	15		
88040110	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	2		
88800100	PEDESTRIAN PUSH-BUTTON	EACH	3		
89500100	RELOCATE EXISTING SIGNAL HEAD	EACH	2		
89500200	RELOCATE EXISTING PEDESTRIAN SIGNAL HEAD	EACH	3		
89500400	RELOCATE EXISTING PEDESTRIAN PUSH-BUTTON	EACH	3		
89501420	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, COMPLETE	EACH	1		
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	5,800		
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	2		
89502376	REBUILD EXISTING HANDHOLE	EACH	6		
89502380	REMOVE EXISTING HANDHOLE	EACH	1		
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	4		
A2018726	TREE, ULMUS CARPINIFOLIA NEW HORIZON (NEW HORIZON SMOOTHLEAF ELM), 2" CALIPER, BALLED AND BURLAPPED	EACH	5		
~~K0012982~~	~~PERENNIAL PLANTS, ORNAMENTAL TYPE, 2 GALLON POT~~	~~UNIT~~	~~15~~		
X0012992	PERENNIAL PLANTS ORNAMENTAL GRASSES, 1-GALLON POT	EACH	15		
K1003680	MULCH	SQ YD	23		

SCHEDULE OF PRICES

ADDENDUM #1

County Peoria
Local Public Agency City of Peoria
Section 12-00361-03-SW
Route FAU 6593

PAY ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
X0300558	SANITARY SEWER REMOVAL AND REPLACEMENT 8"	FOOT	8		
X0326812	CAT 5 ETHERNET CABLE	FOOT	268		
X0326905	CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	2		
X1200050	BOX CULVERT REMOVAL	FOOT	57		
X4404000	PARKING LOT PAVEMENT REMOVAL	SQ YD	714		
X6022858	MANHOLES, TYPE A, SANITARY, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1		
X6060505	CONCRETE CURB (SPECIAL)	FOOT	27		
X6061305	CONCRETE MEDIAN SURFACE, SPECIAL	SQ FT	2,010		
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	LSUM	1		
X8440102	RELOCATE EXISTING LUMINAIRE	EACH	1		
X8710050	FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	2		
XXX00001	CATCH BASINS (SPECIAL), 3'-DIAMETER, TYPE 23 FRAME AND GRATE	EACH	10		
XXX00002	CATCH BASINS (SPECIAL), 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	2		
XXX00003	CATCH BASINS (SPECIAL), 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1		
XXX00004	CATCH BASINS (SPECIAL), 4'-DIAMETER, TYPE 23 FRAME AND GRATE	EACH	1		
XXX00005	STORM SEWERS, TYPE 2, WATER MAIN QUALITY PIPE, 27"	FOOT	70		
XXX00006	STORM SEWERS, CLASS B, TYPE 1 8"	FOOT	48		
XXX00007	METER PEDESTAL AND LIGHTING CONTROLLER COMBINATION UNIT, SPECIAL	EACH	1		
XXX00008	LED STREET LIGHT POLE AND LUMINAIRE (COMPLETE)	EACH	21		
XXX00009	SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, 4-SECTION, BRACKET MOUNTED	EACH	1		
XXX00010	IRRIGATION HEAD REPAIR	EACH	25		
XXXXXXX4	RELOCATE EXISTING PEDESTRIAN PUSH-BUTTON AND POST	EACH	1		
Z0013798	CONSTRUCTION LAYOUT	LSUM	1		
Z0033070	VIDEO VEHICLE DETECTION, 4 CAMERAS	EACH	3		
Z0056648	STORM SEWERS, TYPE 1, WATER MAIN QUALITY PIPE, 12"	FOOT	46		
Z0056650	STORM SEWERS, TYPE 1, WATER MAIN QUALITY PIPE, 15"	FOOT	118		
1	WATERMAIN, 8" DIAMETER, DUCTILE IRON, OPEN CUT	L.F.	1,187		
2	WATERMAIN, 6" DIAMETER, DUCTILE IRON, OPEN CUT	L.F.	408		
3	WATERMAIN, 4" DIAMETER, DUCTILE IRON, OPEN CUT	L.F.	30		
4	16 INCH PVC SDR 21 CASING FOR WATER/SEWER CROSSING	L.F.	22		
5	GATE VALVE AND BOX, 8" DIAMETER	EACH	10		
6	GATE VALVE AND BOX, 6" DIAMETER	EACH	6		
7	GATE VALVE AND BOX, 4" DIAMETER	EACH	1		
8	DUCTILE IRON FITTINGS	LBS.	1,682		
9	FIRE HYDRANT (3-WAY)	EACH	3		
10	FLOWABLE BACKFILL CLSM	C.Y.	341		
11	PAVEMENT REMOVAL	SY	1,074		
12	CONCRETE PAVEMENT PLACEMENT	SY	1,074		
13	FIRE SERVICE TRANSFER	EACH	5		
14	WATERMAIN TESTING AND DISINFECTION	L.S.	1		

ENGINEER'S ESTIMATE	$2,547,389.75

SUMMARY OF QUANTITIES

PAY ITEM	DESCRIPTION	UNIT	BID QUANTITY	RECORD QUANTITY
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	10	
20200100	EARTH EXCAVATION	CU YD	691	
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	2439	
25200100	SODDING	SQ YD	2439	
28000500	INLET AND PIPE PROTECTION	EACH	45	
31101600	SUBBASE GRANULAR MATERIAL, TYPE B	TON	2114	
35401100	PORTLAND CEMENT CONCRETE BASE COURSE WIDENING (VARIABLE DEPTH)	SQ YD	222	
40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	537	
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	280	
42000900	HIGH-EARLY-STRENGTH PORTLAND CEMENT CONCRETE PAVEMENT 8"	SQ YD	425	
42300400	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH	SQ YD	1306	
42400100	PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH	SQ FT	20340	
42400800	DETECTABLE WARNINGS	SQ FT	271	
44000100	PAVEMENT REMOVAL	SQ YD	1320	
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	2042	
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	3015	
44000600	SIDEWALK REMOVAL	SQ FT	13387	
44003100	MEDIAN REMOVAL	SQ FT	3532	
44200168	PAVEMENT PATCHING, TYPE I, 14 INCH	SQ YD	125	
44200172	PAVEMENT PATCHING, TYPE III, 14 INCH	SQ YD	54	
44200174	PAVEMENT PATCHING, TYPE IV, 14 INCH	SQ YD	262	
550B0050	STORM SEWERS, CLASS B, TYPE 1 12"	FOOT	571	
550B0070	STORM SEWERS, CLASS B, TYPE 1 15"	FOOT	135	
550B0090	STORM SEWERS, CLASS B, TYPE 1 18"	FOOT	48	
550B0340	STORM SEWERS, CLASS B, TYPE 2 12"	FOOT	31	
55100300	STORM SEWER REMOVAL 8"	FOOT	25	
55100500	STORM SEWER REMOVAL 12"	FOOT	452	
55100700	STORM SEWER REMOVAL 15"	FOOT	403	
55100900	STORM SEWER REMOVAL 18"	FOOT	223	
60100080	FRENCH DRAINS	CU YD	378	
60100085	GEOTECHNICAL FABRIC FOR FRENCH DRAINS	SQ YD	2071	
60108000	PIPE UNDERDRAINS 12"	FOOT	1144	
60108010	PIPE UNDERDRAINS 15"	FOOT	491	
60218400	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	2	
60218500	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 3 FRAME AND GRATE	EACH	2	
60221000	MANHOLES, TYPE A, 5'-DIAMETER, TYPE 1 FRAME, OPEN LID	EACH	1	
60223700	MANHOLES, TYPE A, 6'-DIAMETER, TYPE 1 FRAME, OPEN LID	EACH	1	
60235700	INLETS, TYPE A, TYPE 3 FRAME AND GRATE	EACH	6	
60236200	INLETS, TYPE A, TYPE 8 GRATE	EACH	3	
60237000	INLETS, TYPE A, TYPE 15 FRAME AND LID	EACH	2	
60237460	INLETS, TYPE A, TYPE 23 FRAME AND GRATE	EACH	1	
60240220	INLETS, TYPE B, TYPE 3 FRAME AND GRATE	EACH	11	
60255500	MANHOLES TO BE ADJUSTED	EACH	4	
60262700	INLETS TO BE RECONSTRUCTED	EACH	1	
60265700	VALVE VAULTS TO BE ADJUSTED	EACH	1	
60500040	REMOVING MANHOLES	EACH	3	
60500050	REMOVING CATCH BASINS	EACH	2	
60500060	REMOVING INLETS	EACH	21	
60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	1620	
60604100	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 (MODIFIED)	FOOT	205	
60604400	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.18	FOOT	3883	
60604700	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.18 (MODIFIED)	FOOT	827	
60622305	CONCRETE MEDIAN, TYPE SM - 4.12	SQ FT	2722	
66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	840	
66900450	SPECIAL WASTE PLANS AND REPORTS	LSUM	1	
66900530	SOIL DISPOSAL ANALYSIS	EACH	7	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	5	
80400100	ELECTRIC SERVICE INSTALLATION	EACH	1	
81028340	UNDERGROUND CONDUIT, PVC, 1 1/2" DIA.	FOOT	4686	
81028350	UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	2927	
81028360	UNDERGROUND CONDUIT, PVC, 2 1/2" DIA.	FOOT	19	
81028370	UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	284	

PAY ITEM	DESCRIPTION	UNIT	BID QUANTITY	RECORD QUANTITY
81028380	UNDERGROUND CONDUIT, PVC, 3 1/2" DIA.	FOOT	10	
81028390	UNDERGROUND CONDUIT, PVC, 4" DIA.	FOOT	704	
81400700	HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	7	
81702130	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	24060	
81702450	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 10	FOOT	247	
83600200	LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	126	
84200500	REMOVAL OF LIGHTING UNIT, SALVAGE	EACH	3	
84200804	REMOVAL OF POLE FOUNDATION	EACH	3	
86400100	TRANSCEIVER - FIBER OPTIC	EACH	2	
87100140	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, 12F	FOOT	3164	
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	794	
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	651	
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	814	
87301732	ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 20 3C	FOOT	239	
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	530	
87502490	TRAFFIC SIGNAL POST, GALVANIZED STEEL 15 FT.	EACH	2	
87601100	PEDESTRIAN PUSH-BUTTON POST, GALVANIZED STEEL, TYPE 1	EACH	3	
87702960	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 46 FT.	EACH	1	
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	6	
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	13	
87900200	DRILL EXISTING HANDHOLE	EACH	15	
88040110	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	2	
88800100	PEDESTRIAN PUSH-BUTTON	EACH	3	
89500100	RELOCATE EXISTING SIGNAL HEAD	EACH	2	
89500200	RELOCATE EXISTING PEDESTRIAN SIGNAL HEAD	EACH	3	
89500400	RELOCATE EXISTING PEDESTRIAN PUSH-BUTTON	EACH	3	
89501420	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, COMPLETE	EACH	1	
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	5800	
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	2	
89502376	REBUILD EXISTING HANDHOLE	EACH	6	
89502380	REMOVE EXISTING HANDHOLE	EACH	1	
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	4	
A2018726	TREE, ULMUS CARPINIFOLIA NEW HORIZON (NEW HORIZON SMOOTHLEAF ELM), 2" CALIPER, BALLED AND BURLAPPED	EACH	5	
K0012992	PERENNIAL PLANTS, ORNAMENTAL TYPE, 2 GALLON POT	UNIT	15	
K1003680	MULCH	SQ YD	23	
X0300558	SANITARY SEWER REMOVAL AND REPLACEMENT 8"	FOOT	8	
X0326812	CAT 5 ETHERNET CABLE	FOOT	268	
X0326905	CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	2	
X1200050	BOX CULVERT REMOVAL	FOOT	57	
X4404000	PARKING LOT PAVEMENT REMOVAL	SQ YD	714	
X6022858	MANHOLES, TYPE A, SANITARY, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	
X6060505	CONCRETE CURB (SPECIAL)	FOOT	27	
X6061305	CONCRETE MEDIAN SURFACE, SPECIAL	SQ FT	2010	
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	LSUM	1	
X8440102	RELOCATE EXISTING LUMINAIRE	EACH	1	
X8710050	FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	2	
XXX00001	CATCH BASINS (SPECIAL), 3'-DIAMETER, TYPE 23 FRAME AND GRATE	EACH	10	
XXX00002	CATCH BASINS (SPECIAL), 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	2	
XXX00003	CATCH BASINS (SPECIAL), 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	
XXX00004	CATCH BASINS (SPECIAL), 4'-DIAMETER, TYPE 23 FRAME AND GRATE	EACH	1	
XXX00005	STORM SEWERS, TYPE 2, WATER MAIN QUALITY PIPE, 27"	FOOT	70	
XXX00006	STORM SEWERS, CLASS B, TYPE 1 8"	FOOT	48	
XXX00007	METER PEDESTAL AND LIGHTING CONTROLLER COMBINATION UNIT, SPECIAL	EACH	1	
XXX00008	LED STREET LIGHT POLE AND LUMINAIRE (COMPLETE)	EACH	21	
XXX00009	SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, 4-SECTION, BRACKET MOUNTED	EACH	1	
XXX00010	IRRIGATION HEAD REPAIR	EACH	25	
XXXXXXX4	RELOCATE EXISTING PEDESTRIAN PUSH-BUTTON AND POST	EACH	1	
Z0013798	CONSTRUCTION LAYOUT	LSUM	1	
Z0033070	VIDEO VEHICLE DETECTION, 4 CAMERAS	EACH	3	
Z0056648	STORM SEWERS, TYPE 1, WATER MAIN QUALITY PIPE, 12"	FOOT	46	
Z0056650	STORM SEWERS, TYPE 1, WATER MAIN QUALITY PIPE, 15"	FOOT	118	

REMOVED

DIRECTORY
USER NAME

CMT

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PLOT DATE = 5/11/2016 12:47:46 PM

DESIGNED - EMM
DRAWN - AWH
CHECKED - EJH
DATE - APRIL 2016

REVISED -
REVISED -
REVISED -

CITY OF PEORIA
DEPARTMENT OF PUBLIC WORKS

SUMMARY OF QUANTITIES

SCALE: | SHEET 1 OF 2 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6593	12-00361-03-SW	PEORIA	85	4
		CONTRACT NO.		
PHASE 02	ILLINOIS STATE MFT PROJECT, 39			

SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	BID QUANTITY	RECORD QUANTITY
1	WATERMAIN, 8" DIAMETER, DUCTILE IRON, OPEN CUT	L.F.	1,187	
2	WATERMAIN, 6" DIAMETER, DUCTILE IRON, OPEN CUT	L.F.	408	
3	WATERMAIN, 4" DIAMETER, DUCTILE IRON, OPEN CUT	L.F.	30	
4	16 INCH PVC SDR 21 CASING FOR WATER/SEWER CROSSING	L.F.	22	
5	GATE VALVE AND BOX, 8" DIAMETER	EACH	10	
6	GATE VALVE AND BOX, 6" DIAMETER	EACH	6	
7	GATE VALVE AND BOX, 4" DIAMETER	EACH	1	
8	DUCTILE IRON FITTINGS	LBS.	1,682	
9	FIRE HYDRANT (3-WAY)	EACH	3	
10	FLOWABLE BACKFILL CLSM	C.Y.	341	
11	PAVEMENT REMOVAL	SY	1,074	
12	CONCRETE PAVEMENT PLACEMENT	SY	1,074	
13	FIRE SERVICE TRANSFER	EACH	5	
14	WATERMAIN TESTING AND DISINFECTION	L.S.	1	

ITEMS ADDED WITH ADDENDUM #1, 05-27-16

86200200	UNINTERRUPTABLE POWER SUPPLY, STANDARD	EACH	1
X0012992	PERENNIAL PLANTS, ORNAMENTAL GRASSES, 1-GALLON POT	EACH	15

QUANTITY SCHEDULES

TREE SCHEDULE

STATION	O/S	A2018726 PROPOSED EACH	20100110 REMOVAL UNITS
106+42	8.4' RT	1	
106+67	9.0' RT	1	
107+51	50.0' RT		10.0
107+84	11.5', RT	1	
108+14	11.5', RT	1	
108+44	11.5', RT	1	
TOTAL		5	10

PCC BASE CSE WIDENING (VARIABLE DEPTH)

STATION		STATION		STREET	AREA (SY)
			PAY ITEM	35401100	
87+61.18	RT	89+66.43	RT	UNIVERSITY	41.2
105+47.27	RT	106+28.78	RT	UNIVERSITY	22.7
106+42.28	RT	107+75.24	LT	UNIVERSITY	36.2
107+40.88	RT	10862.12	RT	UNIVERSITY	13.8
108+44.10	LT	108+63.12	LT	UNIVERSITY	7.3
10+41.35		10+74.43		MEADOWBRK	39.9
10+68.21	RT	10+92.44	RT	MEADOWBRK	24.5
110+08.38	RT	111+00.64	LT	UNIVERSITY	36.3
				TOTAL	222.0

SITE	NON-SPECIAL WASTE DISPOSAL 66900200 CU. YD.	SOIL DISPOSAL ANALYSIS 66900530 EACH
STATE R.O.W.	330	2
53	31	1
54	87	1
63	166	1
64	60	1
72	166	1
TOTAL	840	7

LIGHTING SCHEDULE

ID	STATION	OFFSET	83600200 FOOT	XXX00008 EACH
L1	86+70.00	58.0' LT	6.0	1
L2	87+88.00	55.5' LT	6.0	1
L3	89+22.50	31.0' RT	6.0	1
L4	90+43.00	31.0' LT	6.0	1
L5	91+82.50	31.0' RT	6.0	1
L6	93+16.00	31.0' LT	6.0	1
L7	94+37.00	31.0' RT	6.0	1
L8	95+56.00	31.0' LT	6.0	1
L9	96+71.50	31.0' RT	6.0	1
L10	97+89.00	31.0' LT	6.0	1
L11	99+14.50	31.0' RT	6.0	1
L12	101+00.00	31.0' LT	6.0	1
L13	102+16.50	31.0' RT	6.0	1
L14	103+45.00	31.0' LT	6.0	1
L15	104+66.50	35.5' RT	6.0	1
L16	106+50.00	36.5' LT	6.0	1
L17	107+66.50	47.5' RT	6.0	1
L18	108+37.97	54.9' LT	6.0	1
L19	109+22.50	42.5' RT	6.0	1
L20	110+10.00	36.5' LT	6.0	1
L21	110+73.00	54.0' RT	6.0	1
		TOTAL	126	21

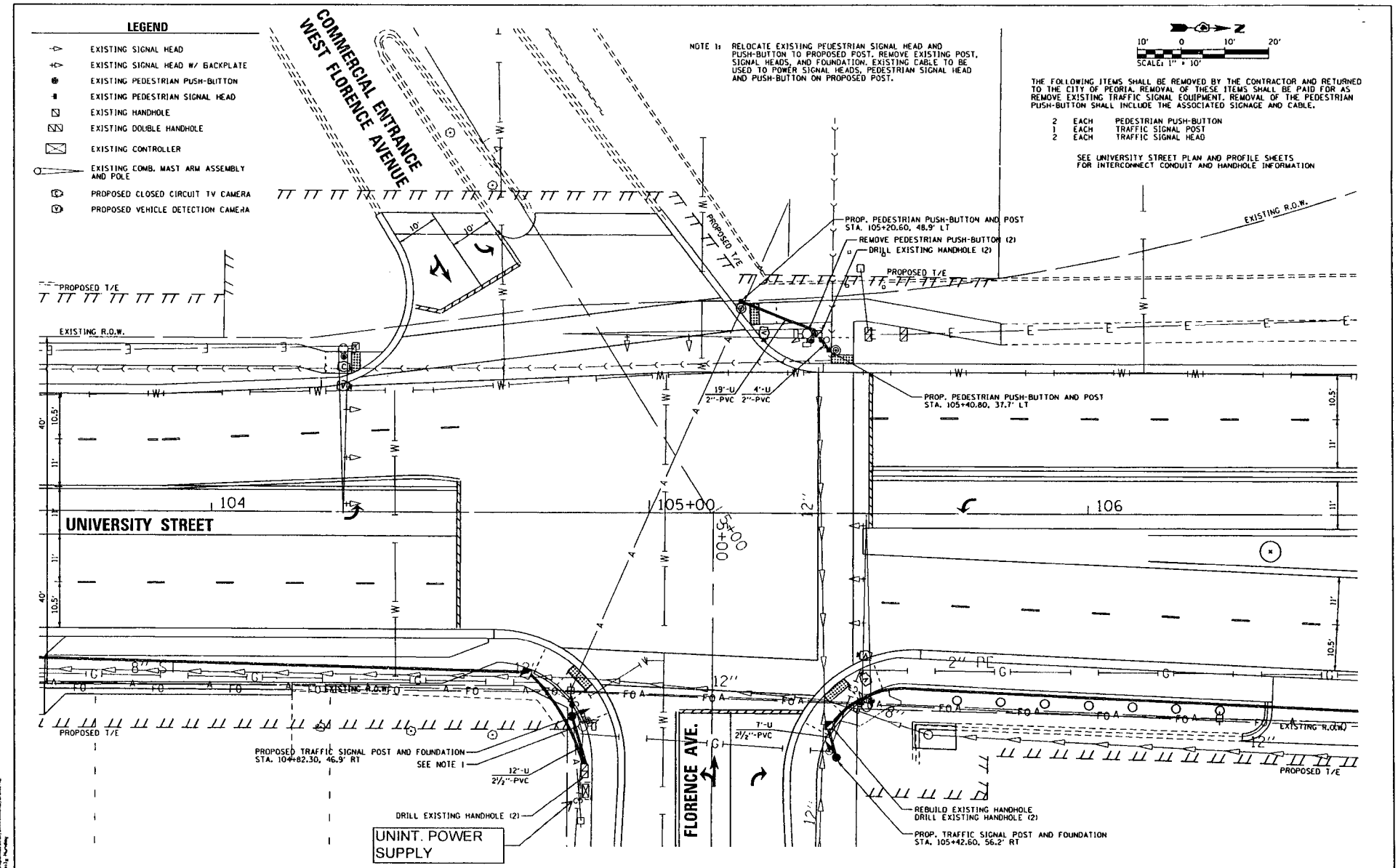
CENTERLINE STA.	O/S	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH 42300400 SQ YD	HIGH-EARLY-STRENGTH PCC PAVEMENT, 8" 42000900 * SQ YD
87+90.62	RT	27.5	
88+27.09	RT	15.0	
89+03.55	RT	27.5	
90+06.14	LT	28.1	
90+93.52	RT	33.6	
91+43.53	RT	30.2	
91+89.05 to 92+14.37, RT		3.9	
92+26.37	RT	45.0	
92+27.02	LT	31.7	
92+38.37 to 93+26.81, RT		12.7	
92+95.79	LT	31.7	
93+38.81	RT	37.8	
93+90.30	LT	31.7	
94+18.54	RT	23.3	
94+60.62	RT	27.5	
94+65.94	LT	27.5	
95+96.97	LT		27.6
96+44.19	LT		30.2
96+46.04	RT		44.9
97+58.04	RT	42.9	
ALDI ENTRANCE	RT	104.9	
ACCESS ROAD	LT	247.9	
100+61.18	LT	36.4	
103+47.59	RT	31.7	
W. FLORENCE	LT		261.9
106+54.85	RT	45.9	
107+91.05	RT	51.5	
108+83.08	RT	123.6	
109+80.10	RT	75.1	
109+80.68	LT	45.8	
111+16.85	LT	35.2	
12+47.47 MEADOW	RT	25.3	
11+17.78 MEADOW	RT	21.2	
TOTAL		1,322	365

* ADDITIONAL HIGH-EARLY-STRENGTH PCC PAVEMENT, 8" INCLUDED IN PROJECT FOR USE AS DIRECTED BY THE ENGINEER.

UTILITY CONDUIT SCHEDULE

STATION	81028350 UNDERGROUND CONDUIT, PVC 2" DIA. NO.	LENGTH (FT)	81028370 UNDERGROUND CONDUIT, PVC 3" DIA. NO.	LENGTH (FT)	81028390 UNDERGROUND CONDUIT, PVC 4" DIA. NO.	LENGTH (FT)
90+29	1	78	1	78		
94+32	1	150			1	130
96+14	1	76			1	76
97+80	1	78			1	156
101+51			1	98	1	98
103+11	2	150				
105+00	1	105	1	105		
109+14	2	222				
111+58	1	133			1	133
TOTAL		992		281		593

* CONTRACTOR SHALL COORDINATE EXACT LOCATIONS AND VERIFY CONDUIT SIZES WITH ENGINEER AND AERIAL UTILITY COMPANIES PRIOR TO PERFORMING THIS WORK.



CMT

MODEL NAME = Default	DESIGNED - EMM	REVISED -	
FILE NAME = Signal-Layout-Florence.dgn	DRAWN - AWH	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED - EJH	REVISED -	
PLOT DATE = 4/8/2016 9:44:47 AM	DATE - APRIL 2016	REVISED -	

CITY OF PEORIA
DEPARTMENT OF PUBLIC WORKS

TRAFFIC SIGNAL PLAN
UNIVERSITY STREET & FLORENCE AVENUE

SCALE: 1" = 10' | SHEET 6 OF 8 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6593	12-00361-03-SW	PEORIA	85	45
		CONTRACT NO.		
PHASE 02	ILLINOIS STATE 1ST PROJECT, 3R			

CONTRACTOR CERTIFICATIONS

County Peoria
Local Public Agency City of Peoria
Section Number 12-00361-03-SW
Route 6593

The certifications hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder.

1. **Debt Deliquency.** The bidder or contractor or subcontractor, respectively, certifies that it is not delinquent in the payment of any tax administered by the Department of Revenue unless the individual or other entity is contesting, in accordance with the procedures established by the appropriate revenue Act, its liability for the tax or the amount of tax. Making a false statement voids the contract and allows the Department to recover all amounts paid to the individual or entity under the contract in a civil action.

2. **Bid-Rigging or Bid Rotating.** The bidder or contractor or subcontractor, respectively, certifies that it is not barred from contracting with the Department by reason of a violation of either 720 ILCS 5/33E-3 or 720 ILCS 5/33E-4.

   A violation of Section 33E-3 would be represented by a conviction of the crime of bid-rigging which, in addition to Class 3 felony sentencing, provides that any person convicted of this offense or any similar offense of any state or the United States which contains the same elements as this offense shall be barred for 5 years from the date of conviction from contracting with any unit of State or local government. No corporation shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of such corporation if the employee so convicted is no longer employed by the corporation and: (1) it has been finally adjudicated not guilty or (2) if it demonstrates to the governmental entity with which it seeks to contract and that entity finds that the commission of the offense was neither authorized, requested, commanded, nor performed by a director, officer or a high managerial agent in behalf of the corporation.

   A violation of Section 33E-4 would be represented by a conviction of the crime of bid-rotating which, in addition to Class 2 felony sentencing, provides that any person convicted of this offense or any similar offense of any state or the United States which contains the same elements as this offense shall be permanently barred from contracting with any unit of State or local government. No corporation shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of such corporation if the employee so convicted is no longer employed by the corporation and: (1) it has been finally adjudicated not guilty or (2) if it demonstrates to the governmental entity with which it seeks to contract and that entity finds that the commission of the offense was neither authorized, requested, commanded, nor performed by a director, officer or a high managerial agent in behalf of the corporation.

3. **Bribery.** The bidder or contractor or subcontractor, respectively, certifies that it has not been convicted of bribery or attempting to bribe an officer or employee of the State of Illinois or any unit of local government, nor has the firm made an admission of guilt of such conduct which is a matter of record, nor has an official, agent, or employee of the firm committed bribery or attempted bribery on behalf of the firm and pursuant to the direction or authorization of a responsible official of the firm.

4. **Interim Suspension or Suspension.** The bidder or contractor or subcontractor, respectively, certifies that it is not currently under a suspension as defined in Subpart I of Title 44 Subtitle A Chapter III Part 6 of the Illinois Administrative Code. Furthermore, if suspended prior to completion of this work, the contract or contracts executed for the completion of this work may be cancelled.

County Peoria
Local Public Agency City of Peoria
Section Number 12-00361-03-SW
Route 6593

SIGNATURES

(If an individual)

Signature of Bidder _____

Business Address _____

(If a partnership)

Firm Name _____

Signed By _____

Business Address _____

Inset Names and Addressed of All Partners _____

(If a corporation)

Corporate Name Illinois Civil Contractors Inc

Signed By _____ President

Business Address 420 Pinecrest Drive
East Peoria, IL 61611

Insert Names of Officers
President Michael L. Fehr
Secretary Jeff Fuerst
Treasurer _____

Attest: _____ Secretary

Illinois Department of Transportation

Apprenticeship or Training Program Certification

Return with Bid

Route	6593
County	Peoria
Local Agency	City of Peoria
Section	12-00361-03-SW

All contractors are required to complete the following certification:

☐ For this contract proposal or for all groups in this deliver and install proposal.

☐ For the following deliver and install groups in this material proposal:

Illinois Department of Transportation policy, adopted in accordance with the provisions of the Illinois Highway Code, requires this contract to be awarded to the lowest responsive and responsible bidder. The award decision is subject to approval by the Department. In addition to all other responsibility factors, this contract or deliver and install proposal requires all bidders and all bidders' subcontractors to disclose participation in apprenticeship or training programs that are (1) approved by and registered with the United States Department of Labor's Bureau of Apprenticeship and Training, and (2) applicable to the work of the above indicated proposals or groups. Therefore, all bidders are required to complete the following certification:

I. Except as provided in paragraph IV below, the undersigned bidder certifies that it is a participant, either as an individual or as part of a group program, in an approved apprenticeship or training program applicable to each type of work or craft that the bidder will perform with its own employees.

II. The undersigned bidder further certifies for work to be performed by subcontract that each of its subcontractors submitted for approval either (A) is, at the time of such bid, participating in an approved, applicable apprenticeship or training program; or (B) will, prior to commencement of performance of work pursuant to this contract, establish participation in an approved apprenticeship or training program applicable to the work of the subcontract.

III. The undersigned bidder, by inclusion in the list in the space below, certifies the official name of each program sponsor holding the Certificate of Registration for all of the types of work or crafts in which the bidder is a participant and that will be performed with the bidder's employees. Types of work or craft that will be subcontracted shall be included and listed as subcontract work. The list shall also indicate any type of work or craft job category for which there is no applicable apprenticeship or training program available.

LABORER
FINISHERS
OPERATORS
CARPENTERS

IV. Except for any work identified above, any bidder or subcontractor that shall perform all or part of the work of the contract or deliver and install proposal solely by individual owners, partners or members and not by employees to whom the payment of prevailing rates of wages would be required, check the following box, and identify the owner/operator workforce and positions of ownership. ☐

The requirements of this certification and disclosure are a material part of the contract, and the contractor shall require this certification provision to be included in all approved subcontracts. The bidder is responsible for making a complete report and shall make certain that each type of work or craft job category that will be utilized on the project is accounted for and listed. The Department at any time before or after award may require the production of a copy of each applicable Certificate of Registration issued by the United States Department of Labor evidencing such participation by the contractor and any or all of its subcontractors. In order to fulfill the participation requirement, it shall not be necessary that any applicable program sponsor be currently taking or that it will take applications for apprenticeship, training or employment during the performance of the work of this contract or deliver and install proposal.

Bidder: Illinois Civil Contractors, Inc. By: _____ (Signature)

Address: 420 Pinecrest Drive Title: President

East Peoria, IL 61611

Bid Proposal

Illinois Civil Contractors, Inc.

420 Pinecrest Drive
East Peoria, IL 61611
Contact: Michael Fehr (mfehr@ilcivil.com)
Phone: (o) 309-694-4224 (m) 309-208-7281
Fax: 309-694-5676

Quote To: City of Peoria
Phone:
Fax:

Job Name: University St. Forrest Hill to War Dr.

Bid Date: 6/2/2016
Addendum(s): 1

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	10.00	UNIT	53.79	537.90
20200100	EARTH EXCAVATION	691.00	CU Y	55.71	38,495.61
21101615	TOPSOIL FURNISH AND PLACE, 4"	2,439.00	SQ Y	7.80	19,024.20
25200100	SODDING	2,439.00	SQ Y	8.87	21,633.93
28000500	INLET AND PIPE PROTECTION	45.00	EACH	223.18	10,043.10
31101000	SUBBASE GRANULAR MATERIAL, TYPE B	2,114.00	TON	33.89	71,643.46
35401100	PORTLAND CEMENT CONCRETE BASE COURSE WIDENING (VAR	222.00	SQ Y	38.05	8,447.10
40201000	AGGREGATE FOR TEMPORARY ACCESS	537.00	TON	50.31	27,016.47
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	280.00	TON	222.31	62,246.80
42000900	HIGH-EARLY-STRENGTH PORTLAND CEMENT CONCRETE PAVEM	425.00	SQ Y	74.75	31,768.75
42300400	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INC	1,306.00	SQ Y	74.26	96,983.56
42400100	PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH	20,340.00	SQ F	5.91	120,209.40
42400800	DETECTABLE WARNINGS	271.00	SQ F	21.78	5,902.38
44000100	PAVEMENT REMOVAL	1,320.00	SQ Y	14.16	18,691.20
44000200	DRIVEWAY PAVEMENT REMOVAL	2,042.00	SQ Y	13.86	28,302.12
44000500	COMBINATION CURB AND GUTTER REMOVAL	3,015.00	FOOT	9.32	28,099.80
44000600	SIDEWALK REMOVAL	13,387.00	SQ F	1.63	21,820.81
44003100	MEDIAN REMOVAL	3,532.00	SQ F	4.49	15,858.68
44200168	PAVEMENT PATCHING, TYPE II, 14 INCH	125.00	SQ Y	104.23	13,028.75
44200172	PAVEMENT PATCHING, TYPE III, 14 INCH	54.00	SQ Y	102.44	5,531.76
44200174	PAVEMENT PATCHING, TYPE IV, 14 INCH	262.00	SQ Y	102.52	26,860.24
550B0050	STORM SEWERS, CLASS B, TYPE 1 12"	571.00	FOOT	76.58	43,727.18
550B0070	STORM SEWERS, CLASS B, TYPE 1 15"	135.00	FOOT	90.07	12,159.45
550B0090	STORM SEWERS, CLASS B, TYPE 1 18"	48.00	FOOT	87.43	4,196.64
550B0340	STORM SEWERS, CLASS B, TYPE 2 12"	31.00	FOOT	113.70	3,524.70
55100300	STORM SEWER REMOVAL 8"	25.00	FOOT	25.45	636.25
55100500	STORM SEWER REMOVAL 12"	452.00	FOOT	28.15	12,723.80

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
55100700	STORM SEWER REMOVAL 15"	403.00	FOOT	28.42	11,453.26
55100900	STORM SEWER REMOVAL 18"	223.00	FOOT	28.53	6,362.19
60100080	FRENCH DRAINS	378.00	CU Y	61.65	23,303.70
60100085	GEOTECHNICAL FABRIC FOR FRENCH DRAINS	2,071.00	SQ Y	1.74	3,603.54
60108000	PIPE UNDERDRAINS 12"	1,144.00	FOOT	45.99	52,612.56
60108010	PIPE UNDERDRAINS 15"	491.00	FOOT	50.09	24,594.19
60218400	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, CLOSE	2.00	EACH	2,392.53	4,785.06
60218500	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 3 FRAME AND GR	2.00	EACH	2,520.90	5,041.80
60221000	MANHOLES, TYPE A, 5'-DIAMETER, TYPE 1 FRAME, OPEN	1.00	EACH	3,091.95	3,091.95
60223700	MANHOLES, TYPE A, 6'-DIAMETER, TYPE 1 FRAME, OPEN	1.00	EACH	4,908.35	4,908.35
60235700	INLETS, TYPE A, TYPE 3 FRAME AND GRATE	6.00	EACH	1,625.12	9,750.72
60236200	INLETS, TYPE A, TYPE 8 GRATE	3.00	EACH	1,394.57	4,183.71
60237000	INLETS, TYPE A, TYPE 15 FRAME AND LID	2.00	EACH	1,519.18	3,038.36
60237460	INLETS, TYPE A, TYPE 23 FRAME AND GRATE	1.00	EACH	2,091.68	2,091.68
60240220	INLETS, TYPE B, TYPE 3 FRAME AND GRATE	11.00	EACH	1,727.98	19,007.78
60255500	MANHOLES TO BE ADJUSTED	4.00	EACH	508.44	2,033.76
60262700	INLETS TO BE RECONSTRUCTED	1.00	EACH	1,367.17	1,367.17
60265700	VALVE VAULTS TO BE ADJUSTED	1.00	EACH	160.88	160.88
60500040	REMOVING MANHOLES	3.00	EACH	680.44	2,041.32
60500050	REMOVING CATCH BASINS	2.00	EACH	680.44	1,360.88
60500060	REMOVING INLETS	21.00	EACH	680.44	14,289.24
60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	1,620.00	FOOT	34.74	56,278.80
60604100	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	205.00	FOOT	39.18	8,031.90
60604400	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.18	3,883.00	FOOT	31.82	123,557.06
60604700	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.18	827.00	FOOT	37.49	31,004.23
60622305	CONCRETE MEDIAN, TYPE SM - 4.12	2,722.00	SQ F	14.36	39,087.92
66900200	NON-SPECIAL WASTE DISPOSAL	840.00	CU Y	101.35	85,134.00
66900450	SPECIAL WASTE PLANS AND REPORTS	1.00	LSUM	7,099.61	7,099.61
66900530	SOIL DISPOSAL ANALYSIS	7.00	EACH	1,419.92	9,939.44
67000400	ENGINEER'S FIELD OFFICE, TYPE A	5.00	CAL	1,575.98	7,879.90
80400100	ELECTRIC SERVICE INSTALLATION	1.00	EACH	1,699.72	1,699.72
81028340	UNDERGROUND CONDUIT, PVC, 1 1/2" DIA.	4,686.00	FOOT	8.81	41,283.66
81028350	UNDERGROUND CONDUIT, PVC, 2" DIA.	3,060.00	FOOT	15.14	46,328.40
81028360	UNDERGROUND CONDUIT, PVC, 2 1/2" DIA.	19.00	FOOT	8.14	154.66
81028370	UNDERGROUND CONDUIT, PVC, 3" DIA.	284.00	FOOT	57.79	16,412.36
81028380	UNDERGROUND CONDUIT, PVC, 3 1/2" DIA.	10.00	FOOT	17.87	178.70
81028390	UNDERGROUND CONDUIT, PVC, 4" DIA.	704.00	FOOT	50.10	35,270.40
81400700	HANDHOLE, PORTLAND CEMENT CONCRETE	7.00	EACH	1,493.56	10,454.92

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
81702130	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C	24,060.00	FOOT	1.29	31,037.40
81702450	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1	247.00	FOOT	2.31	570.57
83600200	LIGHT POLE FOUNDATION, 24" DIAMETER	126.00	FOOT	142.54	17,960.04
84200500	REMOVAL OF LIGHTING UNIT, SALVAGE	3.00	EACH	289.93	869.79
84200804	REMOVAL OF POLE FOUNDATION	3.00	EACH	247.88	743.64
86200200	UNINTERUPTANLE POWER SUPPLY STANDARD	1.00	EACH	6,584.21	6,584.21
86400100	TRANSCEIVER - FIBER OPTIC	2.00	EACH	3,081.85	6,163.70
87100140	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, 12F	3,164.00	FOOT	5.10	16,136.40
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	794.00	FOOT	1.03	817.82
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	651.00	FOOT	1.16	755.16
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	814.00	FOOT	1.52	1,237.28
87301732	ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 20	239.00	FOOT	2.27	542.53
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CON	530.00	FOOT	1.87	991.10
87502490	TRAFFIC SIGNAL POST, GALVANIZED STEEL 15 FT.	2.00	EACH	1,085.23	2,170.46
87601100	PEDESTRIAN PUSH-BUTTON POST, GALVANIZED STEEL, TYP	3.00	EACH	1,040.19	3,120.57
87702960	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 46 FT	1.00	EACH	11,049.29	11,049.29
87800100	CONCRETE FOUNDATION, TYPE A	6.00	FOOT	172.24	1,033.44
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	13.00	FOOT	220.93	2,872.09
87900200	DRILL EXISTING HANDHOLE	15.00	EACH	203.28	3,049.20
88040110	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION	2.00	EACH	916.59	1,833.18
88800100	PEDESTRIAN PUSH-BUTTON	3.00	EACH	500.89	1,502.67
89500100	RELOCATE EXISTING SIGNAL HEAD	2.00	EACH	492.44	984.88
89500200	RELOCATE EXISTING PEDESTRIAN SIGNAL HEAD	3.00	EACH	406.67	1,220.01
89500400	RELOCATE EXISTING PEDESTRIAN PUSH-BUTTON	3.00	EACH	120.21	360.63
89501420	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTE	1.00	EACH	442.52	442.52
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	5,800.00	FOOT	0.61	3,538.00
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	2.00	EACH	993.28	1,986.56
89502376	REBUILD EXISTING HANDHOLE	6.00	EACH	1,357.01	8,142.06
89502380	REMOVE EXISTING HANDHOLE	1.00	EACH	649.15	649.15
89502385	REMOVE EXISTING CONCRETE FOUNDATION	4.00	EACH	1,092.09	4,368.36
A2018726	TREE, ULMUS CARPINIFOLIA NEW HORIZON (NEW HORIZON	5.00	EACH	467.93	2,339.65

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
K0012992	PERENNIAL PLANTS, ORNAMENTAL GRASSES 1-GALLON POT	15.00	EACH	27.43	411.45
K1003680	MULCH	23.00	SQ Y	5.11	117.53
X0300558	SANITARY SEWER REMOVAL AND REPLACEMENT 8"	8.00	FOOT	607.77	4,862.16
X0326812	CAT 5 ETHERNET CABLE	268.00	FOOT	3.26	873.68
X0326905	CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED	2.00	EACH	4,220.53	8,441.06
X1200050	BOX CULVERT REMOVAL	57.00	FOOT	103.41	5,894.37
X4404000	PARKING LOT PAVEMENT REMOVAL	714.00	SQ Y	13.61	9,717.54
X6022858	MANHOLES, TYPE A, SANITARY, 4'-DIAMETER, TYPE 1 FR	1.00	EACH	4,517.94	4,517.94
X6060505	CONCRETE CURB (SPECIAL)	27.00	FOOT	53.58	1,446.66
X6061305	CONCRETE MEDIAN SURFACE, SPECIAL	2,010.00	SQ F	6.30	12,663.00
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	1.00	LSUM	37,163.73	37,163.73
X8440102	RELOCATE EXISTING LUMINAIRE	1.00	EACH	172.85	172.85
X8710050	FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	2.00	EACH	570.17	1,140.34
XXX00001	CATCH BASINS (SPECIAL), 3'-DIAMETER, TYPE 23 FRAME	10.00	EACH	1,864.30	18,643.00
XXX00002	CATCH BASINS (SPECIAL), 4'-DIAMETER, TYPE 1 FRAME,	2.00	EACH	2,179.15	4,358.30
XXX00003	CATCH BASINS (SPECIAL), 5'-DIAMETER, TYPE 1 FRAME,	1.00	EACH	2,889.87	2,889.87
XXX00004	CATCH BASINS (SPECIAL), 4'-DIAMETER, TYPE 23 FRAME	1.00	EACH	2,911.19	2,911.19
XXX00005	STORM SEWERS, TYPE 2, WATER MAIN QUALITY PIPE, 27	70.00	FOOT	120.28	8,419.60
XXX00006	STORM SEWERS, CLASS B, TYPE 1 8"	48.00	FOOT	67.04	3,217.92
XXX00007	METER PEDESTAL AND LIGHTING CONTROLLER COMBINATION	1.00	EACH	4,874.52	4,874.52
XXX00008	LED STREET LIGHT POLE AND LUMINAIRE (COMPLETE)	21.00	EACH	9,119.95	191,518.95
XXX00009	SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, 4-SECTION	1.00	EACH	1,831.96	1,831.96
XXX00010	IRRIGATION HEAD REPAIR	25.00	EACH	223.75	5,593.75
XXXXXXX4	RELOCATE EXISTING PEDESTRIAN PUSH-BUTTON AND POST	1.00	EACH	1,292.50	1,292.50
Z0013798	CONSTRUCTION LAYOUT	1.00	LSUM	18,727.92	18,727.92
Z0033070	VIDEO VEHICLE DETECTION, 4 CAMERAS	3.00	EACH	24,583.97	73,751.91
Z0056648	STORM SEWERS, TYPE 1, WATER MAIN QUALITY PIPE, 12	46.00	FOOT	64.13	2,949.98
Z0056650	STORM SEWERS, TYPE 1, WATER MAIN QUALITY PIPE, 15	118.00	FOOT	77.45	9,139.10
1	WATERMAIN, 8" DIAMETER, DUCTILE IRON, OPEN CUT	1,187.00	L.F.	69.65	82,674.55
2	WATERMAIN, 6" DIAMETER, DUCTILE IRON, OPEN CUT	408.00	L.F.	79.06	32,256.48

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
3	WATERMAIN, 4" DIAMETER, DUCTILE IRON, OPEN CUT	30.00	L.F.	83.90	2,517.00
4	16 INCH PVC SDR 21 CASING FOR WATER/SEWER CROSSING	22.00	L.F.	97.62	2,147.64
5	GATE VALVE AND BOX, 8" DIAMETER	10.00	EACH	1,613.55	16,135.50
6	GATE VALVE AND BOX, 6" DIAMETER	6.00	EACH	1,189.72	7,138.32
7	GATE VALVE AND BOX, 4" DIAMETER	1.00	EACH	989.64	989.64
8	DUCTILE IRON FITTINGS	1,682.00	LBS.	13.72	23,077.04
9	FIRE HYDRANT (3-WAY)	3.00	EACH	3,034.55	9,103.65
10	FLOWABLE BACKFILL CLSM	341.00	C.Y.	66.42	22,649.22
11	PAVEMENT REMOVAL	1,074.00	SY	22.42	24,079.08
12	CONCRETE PAVEMENT PLACEMENT	1,074.00	SY	65.99	70,873.26
13	FIRE SERVICE TRANSFER	5.00	EACH	1,882.47	9,412.35
14	WATERMAIN TESTING AND DISINFECTION	1.00	L.S.	1,871.72	1,871.72
GRAND TOTAL					**$2,345,532.41**

Illinois Department of Transportation

Bureau of Construction
2300 South Dirksen Parkway/Room 322
Springfield, Illinois 62764

Affidavit of Availability
For the Letting of _____

Instructions: Complete this form by either typing or using black ink. "Authorization to Bid" will not be issued unless both sides of this form are completed in detail. Use additional forms as needed to list all work.

Part I. Work Under Contract

List below all work you have under contract as either a prime contractor or a subcontractor. It is required to include all pending low bids not yet awarded or rejected. In a joint venture, list only that portion of the work which is the responsibility of your company. The uncompleted dollar value is to be based upon the most recent engineer's or owners estimate, and must include work subcontracted to others. If no work is contracted, show **NONE.**

	1	2	3	4	Awards Pending	
Contract Number						
Contract With						
Estimated Completion Date						
Total Contract Price						Accumulated Totals
Uncompleted Dollar Value if Firm is the Prime Contractor						
Uncompleted Dollar Value if Firm is the Subcontractor						
				Total Value of All Work		

Part II. Awards Pending and Uncompleted Work to be done with your own forces.

List below the uncompleted dollar value of work for each contract and awards pending to be completed with your own forces. All work subcontracted to others will be listed on the reverse of this form. In a joint venture, list only that portion of the work to be done by your company. If no work is contracted, show NONE.

						Accumulated Totals
Earthwork						
Portland Cement Concrete Paving						
HMA Plant Mix						
HMA Paving						
Clean & Seal Cracks/Joints						
Aggregate Bases & Surfaces						
Highway, R.R. and Waterway Structures						
Drainage						
Electrical						
Cover and Seal Coats						
Concrete Construction						
Landscaping						
Fencing						
Guardrail						
Painting						
Signing						
Cold Milling, Planning & Rotomilling						
Demolition						
Pavement Markings (Paint)						
Other Construction (List)						
						$ 0.00
Totals						

Disclosure of this information is **REQUIRED** to accomplish the statutory purpose as outlined in the "Illinois Procurement Code." Failure to comply will result in non-issuance of an "Authorization To Bid." This form has been approved by the State Forms Management Center.

Part III. Work Subcontracted to Others.

For each contract described in Part I, list all the work you have subcontracted to others.

	1	2	3	4	Awards Pending
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Total Uncompleted					

I, being duly sworn, do hereby declare that this affidavit is a true and correct statement relating to ALL uncompleted contracts of the undersigned for Federal, State, County, City and private work, including ALL subcontract work, ALL pending low bids not yet awarded or rejected and ALL estimated completion dates.

Subscribed and sworn to before me

this _____ day of _____ , _____ Type or Print Name _____

Officer or Director Title

_____ Signed _____

Notary Public

My commission expires _____

Company _____

(Notary Seal)

Address _____

_____

RETURN WITH BID

Illinois Department of Transportation

Affidavit of Illinois Business Office

County Peoria
Local Public Agency City of Peoria
Section Number 12-00361-03-SW
Route 6593

State of Illinois)
) ss.
County of Tazewell)

I, Michael L. Fehr (Name of Affiant) of East Peoria (City of Affiant), Illinois (State of Affiant),

being first duly sworn upon oath, states as follows:

1. That I am the President (officer or position) of Illinois Civil Contractors, Inc. (bidder),
2. That I have personal knowledge of the facts herein stated.
3. That, if selected under this proposal, Illinois Civil Contractors, Inc (bidder), will maintain a business office in the State of Illinois which will be located in Tazewell County, Illinois.
4. That this business office will serve as the primary place of employment for any persons employed in the construction contemplated by this proposal.
5. That this Affidavit is given as a requirement of state law as provided in Section 30-22(8) of the Illinois Procurement Code.

(Signature)
Michael L. Fehr
(Print Name of Affiant)

This instrument was acknowledged before me on 2nd day of June, 2016.

(SEAL)

MARY K LINDNER
OFFICIAL SEAL
Notary Public, State of Illinois
My Commission Expires
March 09, 2019

Mary K Lindner
(Signature of Notary Public)

STATE OF ILLINOIS
CITY OF PEORIA

PEORIA PROPOSAL CONDITIONS

1. The undersigned certifies that it is not delinquent in the payment of any indebtedness, tax, fee or fine owed to the City of Peoria, or in the payment of any tax administered by the Illinois Department of Revenue, and is in compliance with the terms and conditions of Sec. 10-109 of the Peoria City Code and 65 ILCS 5/11-42.1-1.

2. The undersigned firm certifies that it has not been convicted of bribery or attempting to bribe an officer or employee of the City of Peoria, nor has the firm made an admission of guilt of such conduct which is a matter of record, nor has an official, agent, or employee of the firm committed bribery or attempted bribery on behalf of the firm and pursuant to the direction or authorization of a responsible official of the firm. The undersigned firm further certifies that it has not been barred from bidding by the Federal, State or local governments and has not been suspended or debarred from receiving federal funding.

3. EMPLOYEE/EMPLOYMENT RESTRICTIONS – **THE CONTRACTOR**, (hereinafter referred to as "SERVICE PROVIDER") agrees, as a condition of accepting this contract with the City of Peoria, that, for a period of one (1) year following completion of this contract, it shall be prohibited from hiring, directly or indirectly, any City employee or official who was involved, directly or indirectly in: (1) the selection and/or recommendation to select the SERVICE PROVIDER for performance of this contract; (2) coordinating the efforts of the SERVICE PROVIDER in the consummation or completion of this contract; or (3) monitoring or determining the performance of the SERVICE PROVIDER. The SERVICE PROVIDER further acknowledges and agrees that, upon the City's determination that a violation of this provision has occurred, the penalty imposed, at the sole discretion of the City, may include one or more of the following: (1) cancellation of any other contract(s) between the City of Peoria and the SERVICE PROVIDER; (2) disqualification of the SERVICE PROVIDER from bidding or being awarded future contracts with the City of Peoria for a period of two [2] years; and/or (3) payment of liquidated damages to the City of Peoria in the amount of TWENTY FIVE THOUSAND DOLLARS ($25,000.00). ***This provision does not apply to any City employee involved in the 2011-12 reduction in force; nor does it apply to parties taking the Early Retirement Incentive offered by the city from November 1, 2011 through November 1, 2012.***

4. Each Bidder must be prequalified with the Illinois Department of Transportation to perform the type of construction work necessary for the project. Bidders shall include a copy of their Illinois Department of Transportation "Certificate of Eligibility" with their bid.

5. EEO CERTIFICATION* (Check one):

_____We are presently applying for the EEO Certification. Employer Report Form (Form CC-1) is completed and enclosed.

X Presently, we have the Employer Report Form (Form CC-1) on file with the City of Peoria, Office of Equal Opportunity and have a current Certificate of Compliance Number.

Certificate of Compliance Number: 02533-170331

Please note there is a $50.00 processing fee for new and renewal certification requests.

6. Accompanying this proposal is a bid bond, certified check, or cashier's check complying with the requirements of the Specifications, made payable to the City Treasurer of the City of Peoria, Illinois. If this proposal is accepted and the undersigned fails to execute a contract and contract bond as required, it is hereby agreed that the check shall be forfeited to the awarding authority.

The amount of the check or draft is $*Bid Bond.

If Bid Bond is not used, attach Cashier's Check or Certified Check Here

CITY OF PEORIA

CITY OF PEORIA
SUBCONTRACTOR UTILIZATION STATEMENT

Section I (*select all that apply*)
X MBE/WBE Subcontractor(s) will be utilized on this project
X Non MBE/WBE Subcontractor(s) will be utilized on this project

Section II

PRIME CONTRACTOR

Name: Illinois Civil Contractors Inc
Address: 420 Pinecrest Dr. East Peoria, IL 61611
Phone: 309-694-4224
Contact Person: Michael L. Fehr
Email: mfehr@ilcivil.com

PROJECT

Name: University - Forrest & War Memorial
Total Contract Value: 2,345,532.41

Section III

Subcontractor Name	MBE, WBE or Non M/WBE	Amount	% of Total Contract	Scope of Work
Electrical Resource MGT	DBE	138,347	6 %	Electric Mat'l Supply
CJL	WBE	40,471	2 %	LANDSCAPE
MCS	WBE	19,890	2 %	Traffic Control
LEO Brown Trucking	DBE	90,000	4 %	TRUCKING
O'Brien	Non	523,142	22 %	Electrical
TOTALS				

*If more than five firms are utilized, please copy the form and attach the additional information.

J & D Dillon — Non — 203,194 — 4.4 % — SAN-WATER
R A Fallin — Non — 57,868 — 2.5 % — ASPHALT

Section IV

The City of Peoria is committed to promoting equal opportunity and has established the following subcontractor utilization goals for city funded construction projects: 10% MBE and 5% WBE. Prime Contractors have an obligation to make a good faith effort to advance the city's commitment to increase diversity among the firms working on city construction projects.

This form must be completed and submitted with bid proposals. ALL subcontractors intended for use on this project shall be listed in the columns above; along with the total amount to be paid to the subcontractors; percentage of total contract; and scope of work. If for whatever reason the prime contractor has to utilize a subcontractor not listed above, they must submit a Notification of Change in Participation.

The undersigned certifies that the information included herein is true and correct; the subcontractors listed above have agreed to perform the scope of work described. The undersigned further certifies that it has no controlling, dominating or conflict of interest in any of the listed subcontractors.

Signature of Prime Contractor

June 2, 2016
Date

For Office Use Only
Reviewed by:_____

RETURN WITH BID

Illinois Department of Transportation

Local Public Agency Formal Contract Proposal

PROPOSAL SUBMITTED BY		
Contractor's Name		
Street		P.O. Box
City	State	Zip Code

STATE OF ILLINOIS

COUNTY OF Peoria

City of Peoria

(Name of City, Village, Town or Road District)

FOR THE IMPROVEMENT OF

STREET NAME OR ROUTE NO. University Street (FAU 6593)

SECTION NO. 12-00361-03-SW

TYPES OF FUNDS MFT

☒ SPECIFICATIONS (required) ☒ PLANS (required)

For Municipal Projects

Submitted/Approved/Passed

☐ Mayor ☐ President of Board of Trustees ☒ Municipal Official

Date 5/17/16

Department of Transportation

☐ Released for bid based on limited review

AGREEMENT OF UNDERSTANDING

Date

For County and Road District Projects

Submitted/Approved

Highway Commissioner

Date

Submitted/Approved

County Engineer/Superintendent of Highways

Date

Note: All proposal documents, including Proposal Guaranty Checks or Proposal Bid Bonds, should be stapled together to prevent loss when bids are processed.

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RETURN WITH BID

NOTICE TO BIDDERS

County Peoria
Local Public Agency City of Peoria
Section Number 12-00361-03-SW
Route 6593

Sealed proposals for the improvement described below will be received at the office of City of Peoria,
3505 N. Dries Lane, Peoria, IL 61604 (Address) until 11:00 AM (Time) on June 2, 2016 (Date)

Sealed proposals will be opened and read publicly at the office of City of Peoria
3505 N. Dries Lane, Peoria, IL 61604 (Address) at 11:05 AM (Time) on June 2, 2016 (Date)

DESCRIPTION OF WORK

Name University Street Length: 2525.00 feet (0.48 miles)
Location Forrest Hill Avenue to War Memorial Drive
Proposed Improvement New sidewalks, new curb & gutter, storm drainage improvements, street lighting, water main replacement, and some modifications to existing traffic signal systems

1. Plans and proposal forms will be available in the office of City of Peoria Public Works
   3505 N. Dries Lane, Peoria, IL 61604 (Address)
2. ☒ Prequalification
   If checked, the 2 low bidders must file within 24 hours after the letting an "Affidavit of Availability" (Form BC 57), in duplicate, showing all uncompleted contracts awarded to them and all low bids pending award for Federal, State, County, Municipal and private work. One original shall be filed with the Awarding Authority and one original with the IDOT District Office.
3. The Awarding Authority reserves the right to waive technicalities and to reject any or all proposals as provided in BLRS Special Provision for Bidding Requirements and Conditions for Contract Proposals.
4. The following BLR Forms shall be returned by the bidder to the Awarding Authority:
   a. BLR 12200: Local Public Agency Formal Contract Proposal
   b. BLR 12200a Schedule of Prices
   c. BLR 12230: Proposal Bid Bond (if applicable)
   d. BLR 12325: Apprenticeship or Training Program Certification (**do not use for federally funded projects**)
   e. BLR 12326: Affidavit of Illinois Business Office
5. The quantities appearing in the bid schedule are approximate and are prepared for the comparison of bids. Payment to the Contractor will be made only for the actual quantities of work performed and accepted or materials furnished according to the contract. The scheduled quantities of work to be done and materials to be furnished may be increased, decreased or omitted as hereinafter provided.
6. Submission of a bid shall be conclusive assurance and warranty the bidder has examined the plans and understands all requirements for the performance of work. The bidder will be responsible for all errors in the proposal resulting from failure or neglect to conduct an in depth examination. The Awarding Authority will, in no case be responsible for any costs, expenses, losses or changes in anticipated profits resulting from such failure or neglect of the bidder.
7. The bidder shall take no advantage of any error or omission in the proposal and advertised contract.
8. If a special envelope is supplied by the Awarding Authority, each proposal should be submitted in that envelope furnished by the Awarding Agency and the blank spaces on the envelope shall be filled in correctly to clearly indicate its contents. When an envelope other than the special one furnished by the Awarding Authority is used, it shall be marked to clearly indicate its contents. When sent by mail, the sealed proposal shall be addressed to the Awarding Authority at the address and in care of the official in whose office the bids are to be received. All proposals shall be filed prior to the time and at the place specified in the Notice to Bidders. Proposals received after the time specified will be returned to the bidder unopened.
9. Permission will be given to a bidder to withdraw a proposal if the bidder makes the request in writing or in person before the time for opening proposals.

RETURN WITH BID

PROPOSAL

County Peoria
Local Public Agency City of Peoria
Section Number 12-00361-03-SW
Route 6593

1. Proposal of _____

for the improvement of the above section by the construction of _____

a total distance of 2525.00 feet, of which a distance of 2525.00 feet, (0.480 miles) are to be improved.

2. The plans for the proposed work are those prepared by Crawford, Murphy & Tilly, Inc.
and approved by the Department of Transportation on _____
3. The specifications referred to herein are those prepared by the Department of Transportation and designated as "Standard Specifications for Road and Bridge Construction" and the "Supplemental Specifications and Recurring Special Provisions" thereto, adopted and in effect on the date of invitation for bids.
4. The undersigned agrees to accept, as part of the contract, the applicable Special Provisions indicated on the "Check Sheet for Recurring Special Provisions" contained in this proposal.
5. The undersigned agrees to complete the work within _____ working days or by October 31, 2016 unless additional time is granted in accordance with the specifications.
6. A proposal guaranty in the proper amount, as specified in BLRS Special Provision for Bidding Requirements and Conditions for Contract Proposals, will be required. Bid Bonds will be allowed as a proposal guaranty. Accompanying this proposal is either a bid bond if allowed, on Department form BLR 12230 or a proposal guaranty check, complying with the specifications, made payable to:

Patrick Nichting Treasurer of _____

The amount of the check is _____ (_____).

7. In the event that one proposal guaranty check is intended to cover two or more proposals, the amount must be equal to the sum of the proposal guaranties, which would be required for each individual proposal. If the proposal guaranty check is placed in another proposal, it will be found in the proposal for: Section Number _____.
8. The successful bidder at the time of execution of the contract will be required to deposit a contract bond for the full amount of the award. When a contract bond is not required, the proposal guaranty check will be held in lieu thereof. If this proposal is accepted and the undersigned fails to execute a contract and contract bond as required, it is hereby agreed that the Bid Bond or check shall be forfeited to the Awarding Authority.
9. Each pay item should have a unit price and a total price. If no total price is shown or if there is a discrepancy between the product of the unit price multiplied by the quantity, the unit price shall govern. If a unit price is omitted, the total price will be divided by the quantity in order to establish a unit price.
10. A bid will be declared unacceptable if neither a unit price nor a total price is shown.
11. The undersigned submits herewith the schedule of prices on BLR 12200a covering the work to be performed under this contract.
12. The undersigned further agrees that if awarded the contract for the sections contained in the combinations on BLR 12200a, the work shall be in accordance with the requirements of each individual proposal for the multiple bid specified in the Schedule for Multiple Bids below.

SCHEDULE OF PRICES

County Peoria
Local Public Agency City of Peoria
Section 12-00361-03-SW
Route FAU 6593

PAY ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
	Bidder's Proposal for making Entire Improvements				
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	10		
20200100	EARTH EXCAVATION	CU YD	691		
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	2,439		
25200100	SODDING	SQ YD	2,439		
28000500	INLET AND PIPE PROTECTION	EACH	45		
31101000	SUBBASE GRANULAR MATERIAL, TYPE B	TON	2,114		
35401100	PORTLAND CEMENT CONCRETE BASE COURSE WIDENING (VARIABLE DEPTH)	SQ YD	222		
40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	537		
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	280		
42000900	HIGH-EARLY-STRENGTH PORTLAND CEMENT CONCRETE PAVEMENT 8"	SQ YD	425		
42300400	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH	SQ YD	1,306		
42400100	PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH	SQ FT	20,340		
42400800	DETECTABLE WARNINGS	SQ FT	271		
44000100	PAVEMENT REMOVAL	SQ YD	1,320		
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	2,042		
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	3,015		
44000600	SIDEWALK REMOVAL	SQ FT	13,387		
44003100	MEDIAN REMOVAL	SQ FT	3,532		
44200168	PAVEMENT PATCHING, TYPE II, 14 INCH	SQ YD	125		
44200172	PAVEMENT PATCHING, TYPE III, 14 INCH	SQ YD	54		
44200174	PAVEMENT PATCHING, TYPE IV, 14 INCH	SQ YD	262		
550B0050	STORM SEWERS, CLASS B, TYPE 1 12"	FOOT	571		
550B0070	STORM SEWERS, CLASS B, TYPE 1 15"	FOOT	135		
550B0090	STORM SEWERS, CLASS B, TYPE 1 18"	FOOT	48		
550B0340	STORM SEWERS, CLASS B, TYPE 2 12"	FOOT	31		
55100300	STORM SEWER REMOVAL 8"	FOOT	25		
55100500	STORM SEWER REMOVAL 12"	FOOT	452		
55100700	STORM SEWER REMOVAL 15"	FOOT	403		
55100900	STORM SEWER REMOVAL 18"	FOOT	223		
60100080	FRENCH DRAINS	CU YD	378		
60100085	GEOTECHNICAL FABRIC FOR FRENCH DRAINS	SQ YD	2,071		
60108000	PIPE UNDERDRAINS 12"	FOOT	1,144		
60108010	PIPE UNDERDRAINS 15"	FOOT	491		
60218400	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	2		
60218500	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 3 FRAME AND GRATE	EACH	2		
60221000	MANHOLES, TYPE A, 5'-DIAMETER, TYPE 1 FRAME, OPEN LID	EACH	1		
60223700	MANHOLES, TYPE A, 6'-DIAMETER, TYPE 1 FRAME, OPEN LID	EACH	1		
60235700	INLETS, TYPE A, TYPE 3 FRAME AND GRATE	EACH	6		
60236200	INLETS, TYPE A, TYPE 8 GRATE	EACH	3		
60237000	INLETS, TYPE A, TYPE 15 FRAME AND LID	EACH	2		
60237460	INLETS, TYPE A, TYPE 23 FRAME AND GRATE	EACH	1		
60240220	INLETS, TYPE B, TYPE 3 FRAME AND GRATE	EACH	11		
60255500	MANHOLES TO BE ADJUSTED	EACH	4		
60262700	INLETS TO BE RECONSTRUCTED	EACH	1		
60265700	VALVE VAULTS TO BE ADJUSTED	EACH	1		
60500040	REMOVING MANHOLES	EACH	3		
60500050	REMOVING CATCH BASINS	EACH	2		
60500060	REMOVING INLETS	EACH	21		
60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	1,620		

SCHEDULE OF PRICES

County Peoria
Local Public Agency City of Peoria
Section 12-00361-03-SW
Route FAU 6593

PAY ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
60604100	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 (MODIFIED)	FOOT	205		
60604400	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.18	FOOT	3,883		
60604700	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.18 (MODIFIED)	FOOT	827		
60622305	CONCRETE MEDIAN, TYPE SM - 4.12	SQ FT	2,722		
66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	840		
66900450	SPECIAL WASTE PLANS AND REPORTS	LSUM	1		
66900530	SOIL DISPOSAL ANALYSIS	EACH	7		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	5		
80400100	ELECTRIC SERVICE INSTALLATION	EACH	1		
81028340	UNDERGROUND CONDUIT, PVC, 1 1/2" DIA.	FOOT	4,686		
81028350	UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	3,060		
81028360	UNDERGROUND CONDUIT, PVC, 2 1/2" DIA.	FOOT	19		
81028370	UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	284		
81028380	UNDERGROUND CONDUIT, PVC, 3 1/2" DIA.	FOOT	10		
81028390	UNDERGROUND CONDUIT, PVC, 4" DIA.	FOOT	704		
81400700	HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	7		
81702130	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	24,060		
81702450	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 10	FOOT	247		
83600200	LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	126		
84200500	REMOVAL OF LIGHTING UNIT, SALVAGE	EACH	3		
84200804	REMOVAL OF POLE FOUNDATION	EACH	3		
86200200	UNINTERRUPTABLE POWER SUPPLY, STANDARD	EACH	1		
86400100	TRANSCEIVER - FIBER OPTIC	EACH	2		
87100140	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, 12F	FOOT	3,164		
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	794		
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	651		
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	814		
87301732	ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 20 3C	FOOT	239		
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	530		
87502490	TRAFFIC SIGNAL POST, GALVANIZED STEEL 15 FT.	EACH	2		
87601100	PEDESTRIAN PUSH-BUTTON POST, GALVANIZED STEEL, TYPE I	EACH	3		
87702960	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 46 FT.	EACH	1		
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	6		
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	13		
87900200	DRILL EXISTING HANDHOLE	EACH	15		
88040110	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	2		
88800100	PEDESTRIAN PUSH-BUTTON	EACH	3		
89500100	RELOCATE EXISTING SIGNAL HEAD	EACH	2		
89500200	RELOCATE EXISTING PEDESTRIAN SIGNAL HEAD	EACH	3		
89500400	RELOCATE EXISTING PEDESTRIAN PUSH-BUTTON	EACH	3		
89501420	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, COMPLETE	EACH	1		
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	5,800		
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	2		
89502376	REBUILD EXISTING HANDHOLE	EACH	6		
89502380	REMOVE EXISTING HANDHOLE	EACH	1		
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	4		
A2018726	TREE, ULMUS CARPINIFOLIA NEW HORIZON (NEW HORIZON SMOOTHLEAF ELM), 2" CALIPER, BALLED AND BURLAPPED	EACH	5		
~~K0012992~~	~~PERENNIAL PLANTS, ORNAMENTAL TYPE, 2-GALLON POT~~	~~UNIT~~	~~15~~		
X0012992	PERENNIAL PLANTS, ORNAMENTAL GRASSES, 1-GALLON POT (SPECIAL)	EACH	15		
K1003680	MULCH	SQ YD	23		

SCHEDULE OF PRICES

County Peoria
Local Public Agency City of Peoria
Section 12-00361-03-SW
Route FAU 6593

PAY ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
X0300558	SANITARY SEWER REMOVAL AND REPLACEMENT 8"	FOOT	8		
X0326812	CAT 5 ETHERNET CABLE	FOOT	268		
X0326905	CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	2		
X1200050	BOX CULVERT REMOVAL	FOOT	57		
X4404000	PARKING LOT PAVEMENT REMOVAL	SQ YD	714		
X6022858	MANHOLES, TYPE A, SANITARY, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1		
X6060505	CONCRETE CURB (SPECIAL)	FOOT	27		
X6061305	CONCRETE MEDIAN SURFACE, SPECIAL	SQ FT	2,010		
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	LSUM	1		
X8440102	RELOCATE EXISTING LUMINAIRE	EACH	1		
X8710050	FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	2		
XXX00001	CATCH BASINS (SPECIAL), 3'-DIAMETER, TYPE 23 FRAME AND GRATE	EACH	10		
XXX00002	CATCH BASINS (SPECIAL), 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	2		
XXX00003	CATCH BASINS (SPECIAL), 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1		
XXX00004	CATCH BASINS (SPECIAL), 4'-DIAMETER, TYPE 23 FRAME AND GRATE	EACH	1		
XXX00005	STORM SEWERS, TYPE 2, WATER MAIN QUALITY PIPE, 27"	FOOT	70		
XXX00006	STORM SEWERS, CLASS B, TYPE 1 8"	FOOT	48		
XXX00007	METER PEDESTAL AND LIGHTING CONTROLLER COMBINATION UNIT, SPECIAL	EACH	1		
XXX00008	LED STREET LIGHT POLE AND LUMINAIRE (COMPLETE)	EACH	21		
XXX00009	SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, 4-SECTION, BRACKET MOUNTED	EACH	1		
XXX00010	IRRIGATION HEAD REPAIR	EACH	25		
XXXXXXX4	RELOCATE EXISTING PEDESTRIAN PUSH-BUTTON AND POST	EACH	1		
Z0013798	CONSTRUCTION LAYOUT	LSUM	1		
Z0033070	VIDEO VEHICLE DETECTION, 4 CAMERAS	EACH	3		
Z0056648	STORM SEWERS, TYPE 1, WATER MAIN QUALITY PIPE, 12"	FOOT	46		
Z0056650	STORM SEWERS, TYPE 1, WATER MAIN QUALITY PIPE, 15"	FOOT	118		
1	WATERMAIN, 8" DIAMETER, DUCTILE IRON, OPEN CUT	L.F.	1,187		
2	WATERMAIN, 6" DIAMETER, DUCTILE IRON, OPEN CUT	L.F.	408		
3	WATERMAIN, 4" DIAMETER, DUCTILE IRON, OPEN CUT	L.F.	30		
4	16 INCH PVC SDR 21 CASING FOR WATER/SEWER CROSSING	L.F.	22		
5	GATE VALVE AND BOX, 8" DIAMETER	EACH	10		
6	GATE VALVE AND BOX, 6" DIAMETER	EACH	6		
7	GATE VALVE AND BOX, 4" DIAMETER	EACH	1		
8	DUCTILE IRON FITTINGS	LBS.	1,682		
9	FIRE HYDRANT (3-WAY)	EACH	3		
10	FLOWABLE BACKFILL CLSM	C.Y.	341		
11	PAVEMENT REMOVAL	SY	1,074		
12	CONCRETE PAVEMENT PLACEMENT	SY	1,074		
13	FIRE SERVICE TRANSFER	EACH	5		
14	WATERMAIN TESTING AND DISINFECTION	L.S.	1		

ENGINEER'S ESTIMATE:	$2,547,389.75

CONTRACTOR CERTIFICATIONS

County Peoria
Local Public Agency City of Peoria
Section Number 12-00361-03-SW
Route 6593

The certifications hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder.

1. **Debt Deliquency.** The bidder or contractor or subcontractor, respectively, certifies that it is not delinquent in the payment of any tax administered by the Department of Revenue unless the individual or other entity is contesting, in accordance with the procedures established by the appropriate revenue Act, its liability for the tax or the amount of tax. Making a false statement voids the contract and allows the Department to recover all amounts paid to the individual or entity under the contract in a civil action.

2. **Bid-Rigging or Bid Rotating.** The bidder or contractor or subcontractor, respectively, certifies that it is not barred from contracting with the Department by reason of a violation of either 720 ILCS 5/33E-3 or 720 ILCS 5/33E-4.

   A violation of Section 33E-3 would be represented by a conviction of the crime of bid-rigging which, in addition to Class 3 felony sentencing, provides that any person convicted of this offense or any similar offense of any state or the United States which contains the same elements as this offense shall be barred for 5 years from the date of conviction from contracting with any unit of State or local government. No corporation shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of such corporation if the employee so convicted is no longer employed by the corporation and: (1) it has been finally adjudicated not guilty or (2) if it demonstrates to the governmental entity with which it seeks to contract and that entity finds that the commission of the offense was neither authorized, requested, commanded, nor performed by a director, officer or a high managerial agent in behalf of the corporation.

   A violation of Section 33E-4 would be represented by a conviction of the crime of bid-rotating which, in addition to Class 2 felony sentencing, provides that any person convicted of this offense or any similar offense of any state or the United States which contains the same elements as this offense shall be permanently barred from contracting with any unit of State or local government. No corporation shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of such corporation if the employee so convicted is no longer employed by the corporation and: (1) it has been finally adjudicated not guilty or (2) if it demonstrates to the governmental entity with which it seeks to contract and that entity finds that the commission of the offense was neither authorized, requested, commanded, nor performed by a director, officer or a high managerial agent in behalf of the corporation.

3. **Bribery.** The bidder or contractor or subcontractor, respectively, certifies that it has not been convicted of bribery or attempting to bribe an officer or employee of the State of Illinois or any unit of local government, nor has the firm made an admission of guilt of such conduct which is a matter of record, nor has an official, agent, or employee of the firm committed bribery or attempted bribery on behalf of the firm and pursuant to the direction or authorization of a responsible official of the firm.

4. **Interim Suspension or Suspension.** The bidder or contractor or subcontractor, respectively, certifies that it is not currently under a suspension as defined in Subpart I of Title 44 Subtitle A Chapter III Part 6 of the Illinois Administrative Code. Furthermore, if suspended prior to completion of this work, the contract or contracts executed for the completion of this work may be cancelled.

County Peoria
Local Public Agency City of Peoria
Section Number 12-00361-03-SW
Route 6593

SIGNATURES

(If an individual)

Signature of Bidder _____

Business Address _____

_____

(If a partnership)

Firm Name _____

Signed By _____

Business Address _____

_____

Inset Names and Addressed of All Partners _____

_____

_____

_____

(If a corporation)

Corporate Name _____

Signed By _____
President

Business Address _____

_____

Insert Names of Officers

President _____

Secretary _____

Treasurer _____

Attest: _____
Secretary

Illinois Department of Transportation

Local Agency Proposal Bid Bond

Route 6593
County Peoria
Local Agency City of Peoria
Section 12-00361-03-SW

RETURN WITH BID

PAPER BID BOND

WE _____ as PRINCIPAL,

and _____ as SURETY,

are held jointly, severally and firmly bound unto the above Local Agency (hereafter referred to as "LA") in the penal sum of 5% of the total bid price, or for the amount specified in the proposal documents in effect on the date of invitation for bids whichever is the lesser sum. We bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly pay to the LA this sum under the conditions of this instrument.

WHEREAS THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH that, the said PRINCIPAL is submitting a written proposal to the LA acting through its awarding authority for the construction of the work designated as the above section.

THEREFORE if the proposal is accepted and a contract awarded to the PRINCIPAL by the LA for the above designated section and the PRINCIPAL shall within fifteen (15) days after award enter into a formal contract, furnish surety guaranteeing the faithful performance of the work, and furnish evidence of the required insurance coverage, all as provided in the "Standard Specifications for Road and Bridge Construction" and applicable Supplemental Specifications, then this obligation shall become void; otherwise it shall remain in full force and effect.

IN THE EVENT the LA determines the PRINCIPAL has failed to enter into a formal contract in compliance with any requirements set forth in the preceding paragraph, then the LA acting through its awarding authority shall immediately be entitled to recover the full penal sum set out above, together with all court costs, all attorney fees, and any other expense of recovery.

IN TESTIMONY WHEREOF, the said PRINCIPAL and the said SURETY have caused this instrument to be signed by their respective officers this _____ day of _____

Principal

_____ (Company Name)

By: _____ (Signature and Title)

_____ (Company Name)

By: _____ (Signature and Title)

(If PRINCIPLE is a joint venture of two or more contractors, the company names, and authorized signatures of each contractor must be affixed.)

Surety

_____ (Name of Surety)

By: _____ (Signature of Attorney-in-Fact)

STATE OF ILLINOIS,
COUNTY OF _____
I, _____, a Notary Public in and for said county,
do hereby certify that _____
(Insert names of individuals signing on behalf of PRINCIPAL & SURETY)
who are each personally known to me to be the same persons whose names are subscribed to the foregoing instrument on behalf of PRINCIPAL and SURETY, appeared before me this day in person and acknowledged respectively, that they signed and delivered said instruments as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this _____ day of _____

My commission expires _____

_____ (Notary Public)

ELECTRONIC BID BOND

☐ **Electronic bid bond is allowed (box must be checked by LA if electronic bid bond is allowed)**
The Principal may submit an electronic bid bond, in lieu of completing the above section of the Proposal Bid Bond Form. By providing an electronic bid bond ID code and signing below, the Principal is ensuring the identified electronic bid bond has been executed and the Principal and Surety are firmly bound unto the LA under the conditions of the bid bond as shown above. (If PRINCIPAL is a joint venture of two or more contractors, an electronic bid bond ID code, company/Bidder name title and date must be affixed for each contractor in the venture.)

Electronic Bid Bond ID Code

_____ (Company/Bidder Name)

_____ (Signature and Title)

_____ Date

Illinois Department of Transportation

Apprenticeship or Training Program Certification

Return with Bid

Route	6593
County	Peoria
Local Agency	City of Peoria
Section	12-00361-03-SW

All contractors are required to complete the following certification:

☐ For this contract proposal or for all groups in this deliver and install proposal.

☐ For the following deliver and install groups in this material proposal:

Illinois Department of Transportation policy, adopted in accordance with the provisions of the Illinois Highway Code, requires this contract to be awarded to the lowest responsive and responsible bidder. The award decision is subject to approval by the Department. In addition to all other responsibility factors, this contract or deliver and install proposal requires all bidders and all bidders' subcontractors to disclose participation in apprenticeship or training programs that are (1) approved by and registered with the United States Department of Labor's Bureau of Apprenticeship and Training, and (2) applicable to the work of the above indicated proposals or groups. Therefore, all bidders are required to complete the following certification:

I. Except as provided in paragraph IV below, the undersigned bidder certifies that it is a participant, either as an individual or as part of a group program, in an approved apprenticeship or training program applicable to each type of work or craft that the bidder will perform with its own employees.

II. The undersigned bidder further certifies for work to be performed by subcontract that each of its subcontractors submitted for approval either (A) is, at the time of such bid, participating in an approved, applicable apprenticeship or training program; or (B) will, prior to commencement of performance of work pursuant to this contract, establish participation in an approved apprenticeship or training program applicable to the work of the subcontract.

III. The undersigned bidder, by inclusion in the list in the space below, certifies the official name of each program sponsor holding the Certificate of Registration for all of the types of work or crafts in which the bidder is a participant and that will be performed with the bidder's employees. Types of work or craft that will be subcontracted shall be included and listed as subcontract work. The list shall also indicate any type of work or craft job category for which there is no applicable apprenticeship or training program available.

IV. Except for any work identified above, any bidder or subcontractor that shall perform all or part of the work of the contract or deliver and install proposal solely by individual owners, partners or members and not by employees to whom the payment of prevailing rates of wages would be required, check the following box, and identify the owner/operator workforce and positions of ownership. ☐

_____

_____

_____

_____

_____

The requirements of this certification and disclosure are a material part of the contract, and the contractor shall require this certification provision to be included in all approved subcontracts. The bidder is responsible for making a complete report and shall make certain that each type of work or craft job category that will be utilized on the project is accounted for and listed. The Department at any time before or after award may require the production of a copy of each applicable Certificate of Registration issued by the United States Department of Labor evidencing such participation by the contractor and any or all of its subcontractors. In order to fulfill the participation requirement, it shall not be necessary that any applicable program sponsor be currently taking or that it will take applications for apprenticeship, training or employment during the performance of the work of this contract or deliver and install proposal.

Bidder: _____ By: _____
(Signature)

Address: _____ Title: _____

RETURN WITH BID

Illinois Department of Transportation

Affidavit of Illinois Business Office

County Peoria
Local Public Agency City of Peoria
Section Number 12-00361-03-SW
Route 6593

State of _____)
) ss.
County of _____)

I, _____ (Name of Affiant) of _____ (City of Affiant), _____ (State of Affiant),

being first duly sworn upon oath, states as follows:

1. That I am the _____ (officer or position) of _____ (bidder).
2. That I have personal knowledge of the facts herein stated.
3. That, if selected under this proposal, _____ (bidder), will maintain a business office in the State of Illinois which will be located in _____ County, Illinois.
4. That this business office will serve as the primary place of employment for any persons employed in the construction contemplated by this proposal.
5. That this Affidavit is given as a requirement of state law as provided in Section 30-22(8) of the Illinois Procurement Code.

_____
(Signature)

_____
(Print Name of Affiant)

This instrument was acknowledged before me on day of _____, _____.

(SEAL)

_____
(Signature of Notary Public)

Printed 2/6/2016

BLR 12326 (01/08/14)

STATE OF ILLINOIS
CITY OF PEORIA

PEORIA PROPOSAL CONDITIONS

1. The undersigned certifies that it is not delinquent in the payment of any indebtedness, tax, fee or fine owed to the City of Peoria, or in the payment of any tax administered by the Illinois Department of Revenue, and is in compliance with the terms and conditions of Sec. 10-109 of the Peoria City Code and 65 ILCS 5/11-42.1-1.

2. The undersigned firm certifies that it has not been convicted of bribery or attempting to bribe an officer or employee of the City of Peoria, nor has the firm made an admission of guilt of such conduct which is a matter of record, nor has an official, agent, or employee of the firm committed bribery or attempted bribery on behalf of the firm and pursuant to the direction or authorization of a responsible official of the firm. The undersigned firm further certifies that it has not been barred from bidding by the Federal, State or local governments and has not been suspended or debarred from receiving federal funding.

3. EMPLOYEE/EMPLOYMENT RESTRICTIONS – **THE CONTRACTOR**, (hereinafter referred to as "SERVICE PROVIDER") agrees, as a condition of accepting this contract with the City of Peoria, that, for a period of one (1) year following completion of this contract, it shall be prohibited from hiring, directly or indirectly, any City employee or official who was involved, directly or indirectly in: (1) the selection and/or recommendation to select the SERVICE PROVIDER for performance of this contract; (2) coordinating the efforts of the SERVICE PROVIDER in the consummation or completion of this contract; or (3) monitoring or determining the performance of the SERVICE PROVIDER. The SERVICE PROVIDER further acknowledges and agrees that, upon the City's determination that a violation of this provision has occurred, the penalty imposed, at the sole discretion of the City, may include one or more of the following: (1) cancellation of any other contract(s) between the City of Peoria and the SERVICE PROVIDER; (2) disqualification of the SERVICE PROVIDER from bidding or being awarded future contracts with the City of Peoria for a period of two [2] years; and/or (3) payment of liquidated damages to the City of Peoria in the amount of TWENTY FIVE THOUSAND DOLLARS ($25,000.00). ***This provision does not apply to any City employee involved in the 2011-12 reduction in force; nor does it apply to parties taking the Early Retirement Incentive offered by the city from November 1, 2011 through November 1, 2012.***

4. Each Bidder must be prequalified with the Illinois Department of Transportation to perform the type of construction work necessary for the project. Bidders shall include a copy of their Illinois Department of Transportation "Certificate of Eligibility" with their bid.

5. EEO CERTIFICATION* (Check one):

_____We are presently applying for the EEO Certification. Employer Report Form (Form CC-1) is completed and enclosed.

_____Presently, we have the Employer Report Form (Form CC-1) on file with the City of Peoria, Office of Equal Opportunity and have a current Certificate of Compliance Number.

Certificate of Compliance Number: _____

**Please note there is a $50.00 processing fee for new and renewal certification requests.*

6. Accompanying this proposal is a bid bond, certified check, or cashier's check complying with the requirements of the Specifications, made payable to the City Treasurer of the City of Peoria, Illinois. If this proposal is accepted and the undersigned fails to execute a contract and contract bond as required, it is hereby agreed that the check shall be forfeited to the awarding authority.

The amount of the check or draft is $_____.

If Bid Bond is not used, attach Cashier's Check or Certified Check Here

Illinois Department of Transportation

Bureau of Construction
2300 South Dirksen Parkway/Room 322
Springfield, Illinois 62764

Affidavit of Availability
For the Letting of _____

Instructions: Complete this form by either typing or using black ink. "Authorization to Bid" will not be issued unless both sides of this form are completed in detail. Use additional forms as needed to list all work.

Part I. Work Under Contract

List below all work you have under contract as either a prime contractor or a subcontractor. It is required to include all pending low bids not yet awarded or rejected. In a joint venture, list only that portion of the work which is the responsibility of your company. The uncompleted dollar value is to be based upon the most recent engineer's or owners estimate, and must include work subcontracted to others. If no work is contracted, show **NONE.**

	1	2	3	4	Awards Pending	
Contract Number						
Contract With						
Estimated Completion Date						
Total Contract Price						Accumulated Totals
Uncompleted Dollar Value if Firm is the Prime Contractor						
Uncompleted Dollar Value if Firm is the Subcontractor						
				Total Value of All Work		

Part II. Awards Pending and Uncompleted Work to be done with your own forces.

List below the uncompleted dollar value of work for each contract and awards pending to be completed with your own forces. All work subcontracted to others will be listed on the reverse of this form. In a joint venture, list only that portion of the work to be done by your company. If no work is contracted, show NONE.

						Accumulated Totals
Earthwork						
Portland Cement Concrete Paving						
HMA Plant Mix						
HMA Paving						
Clean & Seal Cracks/Joints						
Aggregate Bases & Surfaces						
Highway, R.R. and Waterway Structures						
Drainage						
Electrical						
Cover and Seal Coats						
Concrete Construction						
Landscaping						
Fencing						
Guardrail						
Painting						
Signing						
Cold Milling, Planning & Rotomilling						
Demolition						
Pavement Markings (Paint)						
Other Construction (List)						
						$
Totals						

Disclosure of this information is **REQUIRED** to accomplish the statutory purpose as outlined in the "Illinois Procurement Code." Failure to comply will result in non-issuance of an "Authorization To Bid." This form has been approved by the State Forms Management Center.

Part III. Work Subcontracted to Others.

For each contract described in Part I, list all the work you have subcontracted to others.

	1	2	3	4	Awards Pending
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Total Uncompleted					

I, being duly sworn, do hereby declare that this affidavit is a true and correct statement relating to ALL uncompleted contracts of the undersigned for Federal, State, County, City and private work, including ALL subcontract work, ALL pending low bids not yet awarded or rejected and ALL estimated completion dates.

Subscribed and sworn to before me

this _____ day of _____ , _____ Type or Print Name _____

Officer or Director Title

_____ Signed _____

Notary Public

My commission expires _____

Company _____

(Notary Seal)

Address _____

_____

CITY OF
PEORIA

CITY OF PEORIA
SUBCONTRACTOR UTILIZATION STATEMENT

Section I (*select all that apply*)
_____MBE/WBE Subcontractor(s) will be utilized on this project
_____Non MBE/WBE Subcontractor(s) will be utilized on this project

Section II
PRIME CONTRACTOR

Name: _____

Address: _____

Phone: _____

Contact Person: _____

Email: _____

PROJECT

Name: _____

Total Contract Value:_____

Section III

Subcontractor Name	MBE, WBE or Non M/WBE	Amount	% of Total Contract	Scope of Work
TOTALS				

**If more than five firms are utilized, please copy the form and attach the additional information.*

Section IV
The City of Peoria is committed to promoting equal opportunity and has established the following subcontractor utilization goals for city funded construction projects: 10% MBE and 5% WBE. Prime Contractors have an obligation to make a good faith effort to advance the city's commitment to increase diversity among the firms working on city construction projects.

This form must be completed and submitted with bid proposals. ALL subcontractors intended for use on this project shall be listed in the columns above; along with the total amount to be paid to the subcontractors; percentage of total contract; and scope of work. If for whatever reason the prime contractor has to utilize a subcontractor not listed above, they must submit a Notification of Change in Participation.

The undersigned certifies that the information included herein is true and correct; the subcontractors listed above have agreed to perform the scope of work described. The undersigned further certifies that it has no controlling, dominating or conflict of interest in any of the listed subcontractors.

_____ _____
Signature of Prime Contractor Date

For Office Use Only
Reviewed by:_____

CITY OF PEORIA

CITY OF PEORIA
M/WBE PARTICIPATION WAIVER REQUEST

PRIME CONTRACTOR

Name: _____

Address: _____

_____

Phone: _____

Contact Person: _____

PROJECT

Name: _____

We hereby request to waive all of the MBE and WBE participation goals on the above named project and self-perform all work for the following reason(s). The firm further affirms that the stated reasons and documents provided are true and correct and not misleading: **(CHECK ALL THAT APPLY. SPECIFIC SUPPORTING DOCUMENTATION MUST BE SUBMITTED WHERE INDICATED.)**

1. No MBEs/WBEs responded to our invitation to bid. _____
2. No subcontracting opportunities exist. (Attach explanation) _____
3. The award of subcontract(s) is impracticable. (Attach explanation) _____

SIGNED: _____ DATE: _____
(Company Official)

FOR OFFICE USE ONLY

☐ **APPROVED** ☐ **DISAPPROVED**

REVIEWED BY _____ **DATE** _____

Illinois Department of Transportation

Local Public Agency
Formal Contract

PROPOSAL SUBMITTED BY		
Contractor's Name		
Street		P.O. Box
City	State	Zip Code

STATE OF ILLINOIS

COUNTY OF Peoria

City of Peoria
(Name of City, Village, Town or Road District)

FOR THE IMPROVEMENT OF

STREET NAME OR ROUTE NO. FAU 6593

SECTION NO. 12-00361-03-SW

TYPES OF FUNDS MFT

☒ SPECIFICATIONS (required) ☒ PLANS (required) ☒ CONTRACT BOND (when required)

For Municipal Projects
Submitted/Approved/Passed

☐ Mayor ☐ President of Board of Trustees ☐ Municipal Official

Date

Department of Transportation
☐ Concurrence in approval of award

Regional Engineer

Date

For County and Road District Projects
Submitted/Approved

Highway Commissioner

Date

Submitted/Approved

County Engineer/Superintendent of Highways

Date

County Peoria
Local Public Agency City of Peoria
Section Number 12-00361-03-SW
Route 6593

1. THIS AGREEMENT, made and concluded the _____ day of _____ (Month and Year),
between the _____ of _____
acting by and through its _____ known as the party of the first part, and
_____ his/their executors, administrators, successors or assigns,
known as the party of the second part.

2. Witnesseth: That for and in consideration of the payments 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 terms of this agreement and the requirements of the Engineer under it.

3. And it is also understood and agreed that the LPA Formal Contract Proposal, Special Provisions, Affidavit of Illinois Business Office, Apprenticeship or Training Program Certification, and Contract Bond hereto attached, and the Plans for Section _____, in _____,
approved by the Illinois Department of Transportation on _____ (Date), are essential documents of this
contract and are a part hereof.

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

Attest:

_____ Clerk

(Seal)

The _____ of _____

By _____
Party of the First Part

(If a Corporation)

Corporate Name _____

By _____
President Party of the Second Part

(If a Co-Partnership)

Attest:

_____
Secretary

_____

Partners doing Business under the firm name of

_____
Party of the Second Part

(If an individual)

_____
Party of the Second Part

Illinois Department of Transportation

Contract Bond

Route 6593
County Peoria
Local Agency City of peoria
Section 12-00361-03-SW

We , _____

a/an) ☐ Individual ☐ Co-partnership ☐ Corporation organized under the laws of the State of _____ ,

as PRINCIPAL, and _____

_____ as SURETY,

are held and firmly bound unto the above Local Agency (hereafter referred to as "LA") in the penal sum of

_____ Dollars (_____), lawful money of the United States, well and truly to be paid unto said LA, for the payment of which we bind ourselves, our heirs, executors, administrators, successors, jointly to pay to the LA this sum under the conditions of this instrument.

WHEREAS THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH that, the said Principal has entered into a written contract with the LA acting through its awarding authority for the construction of work on the above section, which contract is hereby referred to and made a part hereof, as if written herein at 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 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 during the time of the performance thereof and until the said work shall have been accepted, and shall hold the LA and its awarding authority 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 TESTIMONY WHEREOF, the said PRINCIPAL and the said SURETY have caused this instrument to be signed by their respective officers this _____ day of _____ A.D. _____

PRINCIPAL

_____ (Company Name)

By: _____ (Signature & Title)

Attest: _____ (Signature & Title)

_____ (Company Name)

By: _____ (Signature & Title)

Attest: _____ (Signature & Title)

(If PRINCIPAL is a joint venture of two or more contractors, the company names and authorized signature of each contractor must be affixed.)

STATE OF ILLINOIS,

COUNTY OF _____

I, _____, a Notary Public in and for said county, do hereby certify that

_____

_____ (Insert names of individuals signing on behalf or PRINCIPAL)

who are each personally known to me to be the same persons whose names are subscribed to the foregoing instrument on behalf of PRINCIPAL, appeared before me this day in person and acknowledged respectively, that they signed and delivered said instrument as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this _____ day of _____ A.D. _____

My commission expires _____ _____ Notary Public **(SEAL)**

SURETY

_____ (Name of Surety)

By: _____ (Signature of Attorney-in-Fact)

STATE OF ILLINOIS. **(SEAL)**

COUNTY OF _____

I, _____, a Notary Public in and for said county, do hereby certify that

_____

_____ (Insert names of individuals signing on behalf or SURETY)

who are each personally known to me to be the same persons whose names are subscribed to the foregoing instrument on behalf of SURETY, appeared before me this day in person and acknowledged respectively, that they signed and delivered said instrument as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this _____ day of _____ A.D. _____

My commission expires _____ _____ Notary Public **(SEAL)**

Approved this _____ day of _____, A.D. _____

Attest:

_____ _____ (Awarding Authority)

_____ Clerk _____ (Chairman/Mayor/President)

SECTION II - GENERAL CONDITIONS

PROJECT DESCRIPTION

The proposed improvements will provide functional drainage facilities, watermain, sidewalks, driveways and street lighting to the existing street. The drainage facilities will include new curb and gutter along each edge of the street, inlets, manholes, catch basins and drain pipes. A unique aspect of this project's drainage system is the construction of an aggregate French Drain with underdrain pipe to be constructed under identified segments of the proposed curb and gutter. The French Drain will provide multiple benefits including: reduced total runoff volume because of infiltration into soils, reduced runoff rates resulting from detention and restricted release rates, and cleaner runoff resulting from filtration through the aggregate.

Watermain construction will replace an existing watermain and shall be accomplished in accordance with the requirements of Illinois American Water Company.

New sidewalks and driveways will also be constructed within the street right of way to provide safe routes for pedestrians and access to and from private property. Traffic and pedestrian signal improvements will be improved at existing signalized intersections.

New asphalt pavement construction for this section of street will be completed under a separate contract with the City of Peoria. The work to be accomplished in this contract requires coordination of this work with the work of other contractors and utility companies.

PUBLIC INFORMATION MEETING

A public information meeting will be held for this project prior to the start of construction. The Contractor shall schedule the meeting in cooperation with the City and advertise its date, time, and location in all local newspapers and media outlets in the City of Peoria. The Contractor and the City of Peoria representatives shall conduct the meeting jointly. The Contractor shall have a representative at the meeting to answer questions concerning scheduling, the nature of work to be performed, and any other issues that may arise. The Contractor shall secure the meeting facility and pay for any facility rental fees and provide appropriate liability insurance. In addition to conducting the public information meeting, the Contractor shall also notify all residents and property owners adjacent to the project limits of the meeting. A meeting notice and mailing list will be provided to the Contractor by the City of Peoria. The cost for conducting this meeting and contacting residents and property owners shall not be paid for separately, but shall be considered included with the various traffic control items contained herein.

CITY ENGINEER, RESIDENT ENGINEER, AND DESIGN ENGINEER

As defined in Article 101.16 of the Standard Specifications, the City Engineer of the City of Peoria is the Engineer referenced in the contract documents. The Resident Engineer/Resident Technician shall be identified by the Engineer at the initial project meeting. The City of Peoria may also retain a consulting engineer to provide services on behalf of the Engineer during construction of the improvements. These persons and their responsibilities will be identified at the initial project meeting. The City of Peoria hired a consulting engineer to evaluate the existing street conditions and design the proposed improvements. The plan drawings and specifications were prepared under the direction of the Professional Engineer whose seal is on the plan cover sheet. That person is the Design Engineer. Questions about the designer's intent shall be directed to the Design Engineer. The Design Engineer shall also be consulted regarding modifications to these plans that alter the designer's intent.

PROPERTY OWNER CONSIDERATIONS

Before construction begins, the Contractor shall contact all property owners to be affected by the project to determine if any special access considerations are required. The Contractor shall notify owners no less than 3 calendar days before removing any part of existing alleys or driveways. The contractor shall also allow for pick-up of garbage from and material deliveries to properties. Construction of curb and gutter and driveways shall be completed as soon as possible once driveway pavement is removed. Aggregate for Temporary Access shall be used as necessary to provide access to properties once driveway pavement has been removed in order to minimize the occupant's inconvenience.

Whenever excavation is made within a temporary or permanent construction easement, on private property for driveways, sidewalks, steps, retaining walls, utility connections, tree plantings or other construction, the topsoil disturbed by the excavation operations shall be restored as nearly as possible to its original position and the whole area involved in the construction operation shall be left in a neat and presentable condition.

The Contractor shall use reasonable care to avoid disturbing portions of private property not necessary to the construction operations. If, in the judgment of the Engineer, areas are disturbed unnecessarily, the Contractor shall restore these areas at his own expense. The Contractor shall not pile excavated material outside the limits of the R.O.W. upon adjacent private property without the written consent of the property owner and the Engineer.

STATUS OF UTILITIES

Utility companies were notified of the project improvements during the process of preparing construction drawings. The utility companies were requested to provide drawings and information about the size and location of their respective facilities for

inclusion on the construction plan drawings. Utility companies have also been provided the set of construction drawings distributed for bidding purposes and informed that they must determine if their respective facilities will be in conflict with the proposed improvements and if so, take steps to relocate the conflicting facilities.

The City of Peoria and consulting engineers retained by the City assume no responsibility for the presence, specific size or location of underground distribution systems of the several public utility corporations. No responsibility for the protection of said underground systems will be assumed by the City of Peoria. If such protection is found to be necessary to water mains, gas mains, steam mains, underground electrical distribution systems, underground telephone circuit systems or any other underground systems of non-municipal ownership, the cost of same, in whole or in part, is disclaimed by the City of Peoria.

The construction plans include a list of facilities known to the Engineer to be in conflict with the proposed improvements. The list was developed based on the limited information available to the Design Engineer when plans were prepared. The Contractor shall take all steps necessary to identify the presence and location of existing utilities, protect those utilities from damage, and coordinate the relocation and adjustment of utilities as required to construct the proposed improvements.

SIGNS WITHIN THE RIGHT OF WAY

The contractor shall relocate or remove and reinstall all street, traffic, parking, directional, regulatory and warning signs within the limits of the improvement. All signs which interfere with construction operations shall be removed, stored in a place away from work, and replaced by the contractor after the improvement has been completed if they are not required for traffic control. Signs which are required for traffic control shall be reinstalled at a temporary location acceptable to the Engineer, in a workmanlike manner, visible to traffic, and maintained straight and neat for the duration of the temporary setting. Signs shall not be moved until progress of the work demands the relocation. The cost of this item shall be included in the contract unit price bid for the item of work which necessitated the removal.

RESPONSIBILITY FOR DAMAGE CLAIMS

The Contractor shall indemnify and save harmless the CITY OF PEORIA, its officers, employees and consultants against all loss, damage or expense that it or they may sustain as a result of any suits, actions, or claims of any character brought on account of injury to or death of any person or persons, including all persons performing any work under this contract, which may arise in any way (except for a negligent act of the City of Peoria, its officers, employees or consultants) in connection with the work to be performed under this contract, including but not limited to, suits, actions or claims arising under "An Act providing for the protection and safety of persons in and about

the construction, repairing, alteration or removal of building, bridges, viaducts, and other structures, and to provide for the enforcement thereof," approved June 3, 1907, (740 ILCS 150/1), as amended: the Contractor shall also indemnify and save harmless the CITY OF PEORIA, its officers, employees and consultants from all suits, actions, or claims of any character brought because of any injuries or damages received or sustained by any person, persons, or property, on account of, or in consequence of, any neglect by Contractor or a Subcontractor in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect, or misconduct of said Contractor; or because of any claims or amounts recovered for any infringements of patent, trademark, or copyright, or from any claims or amounts arising or recovered under the "Workers Compensation Act," or any other law, ordinance, order, or decree, and so much of the money due the said Contractor under and by virtue of his contract as shall be considered necessary by the Department for such purposes, may be retained for the use of the ENGINEERING DIVISION; or, in case no money is due, his surety shall be held until such suits, actions, or claims have been settled and suitable evidence to that effect furnished to the Department.

PHASING OF PROJECT

The Contractor is completely responsible for scheduling and coordinating all work within the project limits. All utility relocations and adjustments must be coordinated by the Contractor in order to not cause undue delays in completing the work. Removal and replacement of driveways shall be completed in an expeditious manner in order to minimize inconvenience to property owners.

CONTRACTOR'S INSURANCE

The Contractor shall not commence work under this project until obtaining all insurance required under this paragraph and such insurance has been approved by the City of Peoria, nor shall the Contractor allow any Subcontractor to commence work on his subcontract until all similar insurance required of the Subcontractor has been so obtained and approved by the City of Peoria.

The Contractor shall require Subcontractors, if any, not protected under the Contractor's insurance policies as an additional insured to take out and maintain insurance of such nature in amounts not less than that required of the principal Contractor, excluding Umbrella Coverage and Owner's Protective Liability and Property Damage Insurance, and any and all insurance obtained by any Subcontractor or Subcontractors shall be approved by the City of Peoria.

All policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insured thereunder.

Worker's Compensation Insurance

The Contractor shall take out and maintain during the life of this project Worker's Compensation Insurance for all of his employees employed at the site of the project and, in case any work is sublet, the Contractor shall require the Subcontractor similarly to provide Worker's Compensation Insurance for all of the latter's employees unless such employees are covered by the protection afforded by the Contractor, and any such insurance obtained by any subcontractor or subcontractors shall be approved by the City of Peoria. In case any class of employees engaged in hazardous work at the site of the project is not protected under the Worker's Compensation statute, the Contractor shall provide, and shall cause each Subcontractor to provide adequate insurance coverage for the protection of his employees not otherwise protected, such as accident insurance, and any such insurance shall be approved by the City of Peoria.

Public Liability and Property Damage Insurance

The Contractor shall take out and maintain during the life of the project such General Liability, Public Liability and Property Damage Insurance as shall protect him and any Subcontractor performing work covered by this project, from claims for damages for personal injury, including accidental death, as well as from claims for property damages, which may arise from operations under this project, whether such operations be by himself or by any Subcontractors or by anyone directly or indirectly employed by either of them and the amounts of such insurance shall be as follows:

Commercial General Liability Insurance that provides Property Damage and/or Bodily Injury in an amount not less than $1,000,000 per occurrence and $2,000,000 aggregate.

Owner's Protective Liability and Property Damage Insurance

The Contractor shall obtain Owner's Protective Liability and Property Damage Insurance in an amount not less than $1,000,000 per occurrence and $2,000,000 aggregate. If endorsements to the above public liability and property damage insurance policies cannot be made, then separate policies providing such protection must be furnished by the Contractor.

Automobile Insurance

The Contractor shall take out and maintain during the life of the project such automobile insurance covering all owned and non-owned vehicles as shall project him an any Subcontractor performing work covered by this project, from claims for damages in an amount not less than $1,000,000 Combined Bodily Injury and Property Damage.

Umbrella Coverage

The Contractor shall take out and maintain during the life of the project such Umbrella or Excess Liability coverage as shall protect him and any Subcontractor performing

work covered by this project, from claims for damages in an amount not less than $2,000,000 per occurrence and $5,000,000 annual aggregate.

Additional Insured Endorsement

All Liability insurance policies shall name Illinois American Water Company and the City of Peoria its officers, directors, employees, agents, representatives, subsidiaries, successors, and assigns, as additional insured, shall be primary to any other insurance carried by the Additional Insured and shall provide coverage consistent with ISO CG 20 26, and shall maintain the required coverage, naming Illinois American and the City of Peoria as an additional insured, for a period of not less than three years from the date the City of Peoria and Contractor execute an Agreement to Final Quantities.

PROOF OF CARRIAGE OF INSURANCE

The Contractor and all Subcontractors shall furnish the City of Peoria with satisfactory proof of insurance coverage before the project begins. If coverage is cancelled or the carrier's rating falls below A.M. Best "A" rated, the City of Peoria shall be notified in writing.

Certificates of insurance are required. The Certificate must state the following "The City of Peoria, its officers, directors, employees, agents, and representatives, are named as Additional Insured on a primary basis for liability arising out of the contractor's operations."

The Contractor must provide copies of the policies and endorsements. Failure to provide the required certificates of insurance shall not operate to invalidate the insurance requirements under this Contract.

SUBSTANCE ABUSE PREVENTION PROGRAM

Before the contractor and any Subcontractor commences work, the Contractor and any Subcontractor shall have in place a written Substance Abuse Prevention Program for the prevention of substance abuse among its employees which meets or exceeds the requirements in P.A. 95-0635 or shall have a collective bargaining agreement in effect dealing with the subject matter of P.A. 95-0635.

The Contractor and any Subcontractor shall file with a public body: a copy of the substance abuse prevention program along with a cover letter certifying that their program meets the requirements of the Act, or a letter certifying that the Contractor or a Subcontractor has a collective bargaining agreement in effect dealing with the subject matter of this Act.

CERTIFIED PAYROLL REQUIREMENTS

Contractors and subcontractors on public works projects must submit certified payroll records on a monthly basis to the public body in charge of the construction project, along

with a statement affirming that such records are true and accurate, that the wages paid to each worker are not less than the required prevailing rate, and that the contractor is aware that filing records he or she knows to be false is a Class B Misdemeanor. The Certified Payroll Records must include, for every worker employed on the public works project, the name, address, telephone number, social security number, job classification, hourly wages paid in each pay period, number of hours worked each day, and starting and ending time of work each day.

PREVAILING WAGE PROVISION

This contract is for the performance of "public works" as that term is defined by 820 ILCS 130/2. Not less than the prevailing rate of wages as found by the Illinois Department of Labor or determined by a Court on review shall be paid to all laborers, workers and mechanics performing work under this contract. These prevailing rates of wages are included in this contract.

If the Department of Labor revises the prevailing rate of hourly wages to be paid by the public body, the revised rate as provided by the public body shall apply to this contract.

University Street (FAU 6593)
Section 12-00361-03-SW
Peoria County

Peoria County Prevailing Wage for July 2015

(See explanation of column headings at bottom of wages)

Trade Name	RG	TYP	C	Base	FRMAN	M-F>8	OSA	OSH	H/W	Pensn	Vac	Trng
ASBESTOS ABT-GEN		BLD		26.700	28.200	1.5	1.5	2.0	7.700	16.21	0.000	0.800
ASBESTOS ABT-GEN		HWY		29.910	31.410	1.5	1.5	2.0	7.700	17.47	0.000	0.800
ASBESTOS ABT-MEC		BLD		32.510	35.010	1.5	1.5	2.0	11.47	10.96	0.000	0.720
BOILERMAKER		BLD		38.000	41.000	2.0	2.0	2.0	7.070	15.99	0.000	0.400
BRICK MASON		BLD		32.380	33.880	1.5	1.5	2.0	8.600	9.870	0.000	0.590
CARPENTER		BLD		30.880	33.130	1.5	1.5	2.0	8.000	15.71	0.000	0.520
CARPENTER		HWY		32.700	34.950	1.5	1.5	2.0	8.000	15.81	0.000	0.520
CEMENT MASON		BLD		28.050	29.800	1.5	1.5	2.0	7.500	15.65	0.000	0.500
CEMENT MASON		HWY		29.280	30.780	1.5	1.5	2.0	7.500	16.02	0.000	0.500
CERAMIC TILE FNSHER		BLD		29.890	0.000	1.5	1.5	2.0	8.600	10.05	0.000	0.580
ELECTRIC PWR EQMT OP		ALL		38.300	45.290	1.5	1.5	2.0	6.150	10.73	0.000	0.380
ELECTRIC PWR GRNDMAN		ALL		26.280	45.290	1.5	1.5	2.0	5.790	7.360	0.000	0.260
ELECTRIC PWR LINEMAN		ALL		42.540	45.290	1.5	1.5	2.0	6.280	11.92	0.000	0.430
ELECTRIC PWR TRK DRV		ALL		27.560	45.290	1.5	1.5	2.0	5.830	7.720	0.000	0.280
ELECTRICIAN		ALL		34.820	37.320	1.5	1.5	2.0	6.500	11.68	0.000	0.800
ELECTRICIAN		BLD		34.820	37.320	1.5	1.5	2.0	6.100	11.43	0.000	0.400
ELECTRONIC SYS TECH		BLD		28.250	30.250	1.5	1.5	2.0	6.350	10.54	0.000	0.400
ELEVATOR CONSTRUCTOR		BLD		41.690	46.900	2.0	2.0	2.0	13.57	14.21	3.340	0.600
GLAZIER		BLD		31.870	33.870	1.5	1.5	1.5	10.25	7.700	0.000	1.250
HT/FROST INSULATOR		BLD		43.350	45.850	1.5	1.5	2.0	11.47	12.36	0.000	0.720
IRON WORKER		BLD		32.190	34.090	0.0	0.0	0.0	9.490	13.91	0.000	0.000
IRON WORKER		HWY		35.980	37.980	0.0	0.0	0.0	9.490	13.91	0.000	0.000
LABORER		BLD		25.700	27.200	1.5	1.5	2.0	7.700	16.21	0.000	0.800
LABORER		HWY		29.160	30.660	1.5	1.5	2.0	7.700	17.47	0.000	0.800
LABORER, SKILLED		BLD		26.100	27.600	1.5	1.5	2.0	7.700	16.21	0.000	0.800
LABORER, SKILLED		HWY		29.460	30.960	1.5	1.5	2.0	7.700	17.47	0.000	0.800
LATHER		BLD		30.880	33.130	1.5	1.5	2.0	8.000	15.71	0.000	0.520
MACHINERY MOVER		HWY		35.980	37.980	0.0	0.0	0.0	9.490	13.91	0.000	0.000
MACHINIST		BLD		45.350	47.850	1.5	1.5	2.0	7.260	8.950	1.850	0.000
MARBLE FINISHERS		BLD		29.890	0.000	1.5	1.5	2.0	8.600	10.05	0.000	0.580
MARBLE MASON		BLD		31.650	32.900	1.5	1.5	2.0	8.600	10.05	0.000	0.580
MILLWRIGHT		BLD		31.060	33.310	1.5	1.5	2.0	8.000	15.87	0.000	0.520
MILLWRIGHT		HWY		33.060	35.310	1.5	1.5	2.0	8.000	15.95	0.000	0.520
OPERATING ENGINEER		BLD	1	37.050	40.050	1.5	1.5	2.0	7.000	17.48	0.000	3.000
OPERATING ENGINEER		BLD	2	34.450	40.050	1.5	1.5	2.0	7.000	17.48	0.000	3.000
OPERATING ENGINEER		BLD	3	30.160	40.050	1.5	1.5	2.0	7.000	17.48	0.000	3.000
OPERATING ENGINEER		HWY	1	38.150	41.150	1.5	1.5	2.0	7.250	18.23	0.000	3.000
OPERATING ENGINEER		HWY	2	35.460	41.150	1.5	1.5	2.0	7.250	18.23	0.000	3.000
OPERATING ENGINEER		HWY	3	31.030	41.150	1.5	1.5	2.0	7.250	18.23	0.000	3.000
PAINTER		ALL		33.650	35.650	1.5	1.5	1.5	10.30	8.200	0.000	1.350
PAINTER SIGNS		BLD		33.920	38.090	1.5	1.5	1.5	2.600	2.710	0.000	0.000
PILEDRIVER		BLD		31.880	34.130	1.5	1.5	2.0	8.000	15.71	0.000	0.520
PILEDRIVER		HWY		33.700	35.950	1.5	1.5	2.0	8.000	15.81	0.000	0.520
PIPEFITTER		BLD		37.400	41.510	1.5	1.5	2.0	7.000	11.63	0.000	1.060
PLASTERER		BLD		28.140	29.770	1.5	1.5	2.0	7.500	15.00	0.000	0.870
PLUMBER		BLD		34.520	37.630	1.5	1.5	2.0	7.000	13.86	0.000	0.950
ROOFER		BLD		30.580	32.110	1.5	1.5	2.0	8.450	7.220	0.000	0.250
SHEETMETAL WORKER		BLD		32.430	34.050	1.5	1.5	2.0	9.120	15.55	0.000	0.780
SIGN HANGER		HWY		35.980	37.980	0.0	0.0	0.0	9.490	13.91	0.000	0.000
SPRINKLER FITTER		BLD		37.120	39.870	1.5	1.5	2.0	8.420	8.500	0.000	0.350
STEEL ERECTOR		HWY		35.980	37.980	0.0	0.0	0.0	9.490	13.91	0.000	0.000
STONE MASON		BLD		32.380	33.880	1.5	1.5	2.0	8.600	9.870	0.000	0.590
~~SURVEY WORKER~~	->NOT IN EFFECT			ALL	28.900	30.400	1.5	1.5	2.0	7.700	14.86	0.000	0.800
TERRAZZO FINISHER		BLD		29.890	0.000	1.5	1.5	2.0	8.600	10.05	0.000	0.580
TERRAZZO MASON		BLD		31.650	32.900	1.5	1.5	2.0	8.600	10.05	0.000	0.580
TILE MASON		BLD		31.650	32.900	1.5	1.5	2.0	8.600	10.05	0.000	0.580
TRUCK DRIVER		ALL	1	33.000	36.550	1.5	1.5	2.0	11.10	5.230	0.000	0.250
TRUCK DRIVER		ALL	2	33.480	36.550	1.5	1.5	2.0	11.10	5.230	0.000	0.250
TRUCK DRIVER		ALL	3	33.700	36.550	1.5	1.5	2.0	11.10	5.230	0.000	0.250
TRUCK DRIVER		ALL	4	34.010	36.550	1.5	1.5	2.0	11.10	5.230	0.000	0.250
TRUCK DRIVER		ALL	5	34.900	36.550	1.5	1.5	2.0	11.10	5.230	0.000	0.250
TRUCK DRIVER		O&C	1	27.280	30.220	1.5	1.5	2.0	11.40	5.440	0.000	0.250
TRUCK DRIVER		O&C	2	27.680	30.220	1.5	1.5	2.0	11.40	5.440	0.000	0.250
TRUCK DRIVER		O&C	3	27.860	30.220	1.5	1.5	2.0	11.40	5.440	0.000	0.250

TRUCK DRIVER	O&C	4	28.110	30.220	1.5	1.5	2.0	11.40	5.440	0.000	0.250
TRUCK DRIVER	O&C	5	28.850	30.220	1.5	1.5	2.0	11.40	5.440	0.000	0.250
TUCKPOINTER	BLD		32.380	33.880	1.5	1.5	2.0	8.600	9.870	0.000	0.590

Legend: RG (Region)
TYP (Trade Type - All,Highway,Building,Floating,Oil & Chip,Rivers)
C (Class)
Base (Base Wage Rate)
FRMAN (Foreman Rate)
M-F>8 (OT required for any hour greater than 8 worked each day, Mon through Fri.
OSA (Overtime (OT) is required for every hour worked on Saturday)
OSH (Overtime is required for every hour worked on Sunday and Holidays)
H/W (Health & Welfare Insurance)
Pensn (Pension)
Vac (Vacation)
Trng (Training)

Explanations

PEORIA 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.

Oil and chip resealing (O&C) means the application of road oils and liquid asphalt to coat an existing road surface, followed by application of aggregate chips or gravel to coated surface, and subsequent rolling of material to seal the surface.

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, MARBLE FINISHER, TERRAZZO FINISHER

Assisting, helping or supporting the tile, marble and terrazzo mechanic by performing their historic and traditional work assignments required to complete the proper installation of the work covered by said crafts. The term "Ceramic" is used for naming the classification only and is in no way a limitation of the product handled. Ceramic takes into consideration most hard tiles.

ELECTRONIC SYSTEMS TECHNICIAN

Installation, service and maintenance of low-voltage systems which utilizes the transmission and/or transference of voice, sound, vision, or digital for commercial, education, security and entertainment purposes for the following: TV monitoring and surveillance, background/foreground music, intercom and telephone interconnect, field programming, inventory control systems, microwave transmission, multi-media, multiplex, radio page, school, intercom and sound burglar alarms and low voltage master clock systems.

Excluded from this classification are energy management systems, life safety systems, supervisory controls and data acquisition systems not intrinsic with the above listed systems, fire alarm systems, nurse call systems and raceways exceeding fifteen feet in length.

LABORER, SKILLED - BUILDING

The skilled laborer building (BLD) classification shall encompass the following types of work, irrespective of the site of the work: cutting & acetylene torch, gunnite nozzlemen, gunnite pump men & pots, kettlemen & carriers of men handling hot stuff, sandblaster nozzle men, sandblasting pump men & pots, setting up and using concrete burning bars, wood block setters, underpinning & shoring of existing buildings, and the unload-ing and handling of all material coated with creosote.

LABORER, SKILLED - HIGHWAY

The skilled laborer heavy & highway (HWY) classification shall encompass the following types of work,irrespective of the site of the work: jackhammer & drill operator, gunite pump & pot man, puddlers, vibrator men, wire fabric placer, sandblast pump & pot man, strike off concrete, unloading, handling & carrying of all creosoted piles, ties or timber, concrete burning bars, power wheelbarrows or buggies, asphalt raker, brickset-ters, cutting torchman (electric & acetylene), men setting lines to level forms, form setters, gunite nozzle man & sandblasting nozzle man, power man, and rip-rapping by hand.

SURVEY WORKER - Operated survey equipment including data collectors, G.P.S. and robotic instruments, as well as conventional levels and transits.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION
Class 1. Drivers on 2 axle trucks hauling less than 9 ton. Air compressor and welding machines and brooms, including those pulled by separate units, truck driver helpers, warehouse employees, mechanic helpers, greasers and tiremen, pickup trucks when hauling materials, tools, or workers to and from and on-the-job site, and fork lifts up to 6,000 lb. capacity.

Class 2. Two or three axle trucks hauling more than 9 ton but hauling less than 16 ton. A-frame winch trucks, hydrolift trucks, vactor trucks or similar equipment when used for transportation purposes. Fork lifts over 6,000 lb. capacity, winch trucks, four axle combination units, and ticket writers.

Class 3. Two, three or four axle trucks hauling 16 ton or more. Drivers on water pulls, articulated dump trucks, mechanics and working forepersons, and dispatchers. Five axle or more combination units.

Class 4. Low Boy and Oil Distributors.

Class 5. Drivers who require special protective clothing while employed on hazardous waste work.

TRUCK DRIVER - OIL AND CHIP RESEALING ONLY.

This shall encompass laborers, workers and mechanics who drive contractor or subcontractor owned, leased, or hired pickup, dump, service, or oil distributor trucks. The work includes transporting materials and equipment (including but not limited to, oils, aggregate supplies, parts, machinery and tools) to or from the job site; distributing oil or liquid asphalt and aggregate; stock piling material when in connection with the actual oil and chip contract. The Truck Driver (Oil & Chip Resealing) wage classification does not include supplier delivered materials.

OPERATING ENGINEERS - BUILDING

Class 1. Cranes; Overhead Cranes; Gradall; All Cherry Pickers; Mechanics; Central Concrete Mixing Plant Operator; Road Pavers (27E - Dual Drum - Tri Batchers); Blacktop Plant Operators and Plant Engineers; 3 Drum Hoist; Derricks; Hydro Cranes; Shovels; Skimmer Scoops; Koehring Scooper; Drag Lines; Backhoe; Derrick Boats; Pile Drivers and Skid Rigs; Clamshells; Locomotive Cranes; Dredge (all types) Motor Patrol; Power Blades - Dumore - Elevating and similar types; Tower Cranes (Crawler-Mobile) and Stationary; Crane-type Backfiller; Drott Yumbo and similar types considered as Cranes; Caisson Rigs; Dozer; Tournadozer; Work Boats; Ross Carrier; Helicopter; Tournapulls - all and similar types; Scoops (all sizes); Pushcats; Endloaders (all types); Asphalt Surfacing Machine; Slip Form Paver; Rock Crusher; Heavy Equipment Greaser; CMI, CMI Belt Placer, Auto Grade & 3 Track and similar types; Side Booms; Multiple Unit Earth Movers; Creter Crane; Trench Machine; Pump-crete-Belt Crete-Squeeze Cretes-Screw-type Pumps and Gypsum; Bulker & Pump - Operator will clean; Formless Finishing Machine; Flaherty Spreader or similar types; Screed Man on Laydown Machine; Wheel Tractors (industrial or Farm-type w/Dozer-Hoe-Endloader or other attachments); F.W.D. & Similar Types; Vermeer Concrete Saw.

Class 2. Dinkeys; Power Launches; PH One-pass Soil Cement Machine (and similar types); Pugmill with Pump; Backfillers; Euclid Loader; Forklifts; Jeeps w/Ditching Machine or other attachments; Tuneluger; Automatic Cement and Gravel Batching Plants; Mobile Drills (Soil Testing) and similar types; Gurries and Similar Types; (1) and (2) Drum Hoists (Buck Hoist and Similar Types); Chicago Boom; Boring Machine & Pipe Jacking Machine; Hydro Boom; Dewatering System; Straw Blower; Hydro Seeder; Assistant Heavy Equipment Greaser on Spread; Tractors (Track type) without Power Unit pulling Rollers; Rollers on Asphalt -- Brick Macadem; Concrete Breakers; Concrete Spreaders; Mule Pulling Rollers; Center Stripper; Cement Finishing Machines & CMI Texture & Reel Curing Machines; Cement Finishing Machine; Barber

Green or similar loaders; Vibro Tamper (All similar types) Self-propelled; Winch or Boom Truck; Mechanical Bull Floats; Mixers over 3 Bag to 27E; Tractor pulling Power Blade or Elevating Grader; Porter Rex Rail; Clary Screed; Truck Type Hoptoe Oilers; Fireman; Spray Machine on Paving; Curb Machines; Truck Crane Oilers; Oil Distributor; Truck-Mounted Saws.

Class 3. Air Compressor; Power Subgrader; Straight Tractor; Trac Air without attachments; Herman Nelson Heater, Dravo, Warner, Silent Glo, and similar types; Roller: Five (5) Ton and under on Earth or Gravel; Form Grader; Crawler Crane & Skid Rig Oilers; Freight Elevators - permanently installed; Pump; Light Plant; Generator; Conveyor (1) or (2) - Operator will clean; Welding Machine; Mixer (3) Bag and Under (Standard Capacity with skip); Bulk Cement Plant; Oiler on Central Concrete Mixing Plant.

OPERATING ENGINEERS - HEAVY AND HIGHWAY CONSTRUCTION

CLASS 1. Cranes; Hydro Cranes; Shovels; Crane Type Backfiller; Tower, Mobile, Crawler, & Stationary Cranes; Derricks; Hoists (3 Drum); Draglines; Drott Yumbo & Similar Types considered as Cranes; 360 Degree Swing Excavator (Shears, Grapples, Movacs, etc.); Back Hoe; Derrick Boats; Pile Driver and Skid Rigs; Clam Shell; Locomotive - Cranes; Road Pavers - Single Drum - Dual Drum - Tri Batcher; Motor Patrols & Power Blades - Dumore - Elevating & Similar Types; Mechanics; Central Concrete Mixing Plant Operator; Asphalt Batch Plant Operators and Plant Engineers; Gradall; Caisson Rigs; Skimmer Scoop - Koering Scooper; Dredges (all types); Hoptoe; All Cherry Pickers; Work Boat; Ross Carrier; Helicopter; Dozer; Tournadozer; Tournapulls - all and similar types; Operation of Concrete and all Recycle Machines; Multiple Unit Earth Movers; Scoops (all sizes); Pushcats; Endloaders (all types); Asphalt Surfacing Machine; Slip Form Paver; Rock Crusher; Operation of Material Crusher, Screening Plants, and Tunnel Boring Machine; Heavy Equipment Greaser (top greaser on spread); CMI, Auto Grade, CMI Belt Placer & 3 Track and Similar Types; Side Booms; Asphalt Heater & Planer Combination (used to plane streets); Wheel Tractors (with Dozer, Hoe or Endloader Attachments); CAT Earthwork Compactors and Similar Types; Blaw Knox Spreader and Similar Types; Trench Machines; Pump Crete - Belt Crete - Squeeze Crete - Screw Type Pumps and Gypsum (operator will clean); Creter Crane; Operation of Concrete Pump Truck; Formless Finishing Machines; Flaherty Spreader or Similar Types; Screed Man on Laydown Machine; Vermeer Concrete Saw; Operation of Laser Screed; Span Saw; Dredge Leverman; Dredge Engineer; Lull or Similar Type; Hydro-Boom Truck; Operation of Guard Rail Machine; and Starting Engineer on Pipeline or Construction (11 or more pieces) including: Air Compressor (Trailer Mounted), All Forced Air Heaters (regardless of Size), Water Pumps (Greater than 4-1/2" or Total Discharge Over 4-1/2"), Light Plants, Generators (Trailer Mounted - Excluding Decontamination Trailer), Welding Machines (Any Size or Mode of Power), Conveyor, Mixer (any size), Stud Welder, Power Pac, etc, and Ground Heater (Trailer Mounted).

CLASS 2. Bulker & Pump; Power Launches; Boring Machine & Pipe Jacking Machine; Dinkeys; Operation of Carts, Powered Haul Unit for a Boring Machine; P & H One Pass Soil Cement Machines and Similar Types; Wheel Tractors (Industry or Farm Type - Other); Back Fillers; Euclid Loader; Fork Lifts; Jeep w/Ditching Machine or Other Attachments; Tunneluger; Automatic Cement & Gravel Batching Plants; Mobile Drills - Soil Testing and Similar Types; Pugmill with Pump; All (1) and (2) Drum Hoists; Dewatering System; Straw Blower; Hydro-Seeder; Bump Grinders (self-propelled); Assistant Heavy Equipment Greaser; Apsco Spreader; Tractors (Track-Type) without Power Units Pulling Rollers; Rollers on Asphalt - Brick or Macadam; Concrete Breakers; Concrete Spreaders; Cement Strippers; Cement Finishing Machines & CMI Texture & Reel Curing Machines; Vibro-Tampers (All Similar Types Self-Propelled); Mechanical Bull Floats; Self-Propelled Concrete Saws; Truck Mounted Power Saws; Operation of Curb Cutters; Mixers - Over Three (3) Bags; Winch and Boom Trucks; Tractor Pulling Power Blade or Elevating Grader; Porter Rex Rail; Clary Screed; Mule Pulling Rollers; Pugmill without Pump; Barber Greene or Similar Loaders; Track Type Tractor w/Power Unit attached (minimum); Fireman; Spray Machine on Paving; Curb Machines; Paved Ditch Machine; Power Broom; Self-Propelled Sweepers; Self-Propelled Conveyors; Power Subgrader; Oil Distributor; Straight Tractor; Truck Crane Oiler; Truck Type Oilers; Directional Boring Machine; Horizontal Directional Drill; Articulating End Dump Vehicles; Starting Engineer on Pipeline or Construction (6 -10 pieces) including: Air Compressor (Trailer Mounted), All Forced Air Heaters (regardless of Size), Water Pumps (Greater than 4-1/2" or Total Discharge Over 4-1/2"), Light Plants, Generators (Trailer Mounted - Excluding Decontamination Trailer), Welding Machines (Any Size or Mode of Power), Conveyor, Mixer (any size), Stud Welder, Power Pac, etc., and Ground Heater (Trailer Mounted).

CLASS 3. Straight Framed Truck Mounted Vac Unit (separately powered); Trac Air Machine (without attachments); Rollers - Five Ton and Under on Earth and Gravel; Form Graders; Bulk Cement Plant; Oilers; and

Starting Engineer on Pipeline or Construction (3 - 5 pieces) including: Air Compressor (Trailer Mounted), All Forced Air Heaters (regardless of Size), Water Pumps (Greater than 4-1/2" or Total Discharge Over 4-1/2"), Light Plants, Generators (Trailer Mounted - Excluding Decontamination Trailer), Welding Machines (Any Size or Mode of Power), Conveyor, Mixer (any size), Stud Welder, Power Pac, etc., and Ground Heater (Trailer Mounted).

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 217-782-1710 for wage rates or clarifications.

LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

This project shall be completed in compliance with the "National Pollutant Discharge Elimination System Permit" (NPDES) requirements. The project is covered by the implementing agency's MS4 permit number ILR40 0424. The Contractor will be required to comply with all terms of the permit. As a part of the requirements the Contractor will be required to complete the "Contractor Certification Statement", on the attached BDE 2342 form and submit it to the Engineer at the pre-construction conference.

Illinois Department of Transportation

Storm Water Pollution Prevention Plan

Route	Marked Route	Section
FAU 6593		12-00361-03-SW
Project Number	**County**	**Contract Number**
	Peoria	

This plan has been prepared to comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Permit No. ILR10 (Permit ILR10), issues by the Illinois Environmental Protection Agency (IEPA) for storm water discharges from construction site activities.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name	Title	Agency
Emily Munday	Senior Engineer	Crawford, Murphy, and Tilly

Signature: Emily Munday

Date: 04/04/2016

I. Site Description

A. Provide a description of the project location (include latitude and longitude):

University Street from Forrest Hill Avenue (Lat. 40.72582, Long. -89.61277) to War Memorial Drive (Lat. 40.73253, Long. -89.61626)

B. Provide a description of the construction activity which is subject of this plan:

Resurfacing of the existing pavement, new curb and gutter, new sidewalk, traffic signal upgrades, and storm drainage system improvements that include infiltration systems.

C. Provide the estimated duration of this project:

5 months

D. The total area of the construction site is estimated to be 6 acres.

The total area of the site estimated to be disturbed by excavation, grading or other activities is 3 acres.

E. The following is a weighted average of the runoff coefficient for this project after construction activities are completed:

0.90

F. List all soils found within project boundaries. Include map unit name, slope information and erosivity:

Rozetta silt loam, 2% to 5%, T=5 t/ac-yr

G. Provide an aerial extent of wetland acreage at the site:

Wetlands are not present

H. Provide a description of potentially erosive areas associated with this project:

The site is relatively level and completely developed as commercial sites. The site does not included streams or erosive banks.

I. The following is a description of soil disturbing activities by stages, their locations, and their erosive factors (e.g. steepness of slopes, length of scopes, etc.):

The construction site is an existing street right of way. Slopes are not more than 2%. Bare soils are subject to wind and water erosion forces.

J. See the erosion control plans and/or drainage plans for this contract for information regarding drainage patterns, approximate slopes anticipated before and after major grading activities, locations where vehicles enter or exit the site and controls to prevent off site sediment tracking (to be added after contractor identifies locations), areas of soil disturbance, the location of major structural and non-structural controls identified in the plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands) and locations where storm water is discharged to surface water including wetlands.

K. Identify who owns the drainage system (municipality or agency) this project will drain into:

City of Peoria owns the storm sewer system which outlets into Dry Run Creek.

L. The following is a list of General NPDES ILR40 permittees within whose reporting jurisdiction this project is located.

City of Peoria

M. The following is a list of receiving water(s) and the ultimate receiving water(s) for this site. The location of the receiving waters can be found on the erosion and sediment control plans:

Dry Run Creek

N. Describe areas of the site that are to be protected or remain undisturbed. These areas may include steep slopes, highly erodible soils, streams, stream buffers, specimen trees, natural vegetation, nature preserves, etc.

No sensitive areas exist withing the construction site.

O. The following sensitive environmental resources are associated with this project, and may have the potential to be impacted by the proposed development:

- ☐ Floodplain
- ☐ Wetland Riparian
- ☐ Threatened and Endangered Species
- ☐ Historic Preservation
- ☐ 303(d) Listed receiving waters for suspended solids, turbidity, or siltation
- ☐ Receiving waters with Total Maximum Daily Load (TMDL) for sediment, total suspended solids, turbidity, or siltation
- ☐ Applicable Federal, Tribal, State or Local Programs
- ☐ Other

1. 303(d) Listed receiving waters (fill out this section if checked above):

   a. The name(s) of the listed water body, and identification of all pollutants causing impairment:

   b. Provide a description of how erosion and sediment control practices will prevent a discharge of sediment resulting from a storm event equal to or greater than a twenty-five (25) year, twenty-four (24) hour rainfall event:

   c. Provide a description of the location(s) of direct discharge from the project site to the 303(d) water body:

   d. Provide a description of the location(s) of any dewatering discharges to the MS4 and/or water body:

2. TMDL (fill out this section if checked above)

   a. The name(s) of the listed water body:

b. Provide a description of the erosion and sediment control strategy that will be incorporated into the site design that is consistent with the assumptions and requirements of the TMDL:

c. If a specific numeric waste load allocation has been established that would apply to the project's discharges, provide a description of the necessary steps to meet the allocation:

P. The following pollutants of concern will be associated with this construction project:

☒ Soil Sediment	☒ Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids)
☒ Concrete	☐ Antifreeze / Coolants
☒ Concrete Truck waste	☒ Waste water from cleaning construction equipment
☒ Concrete Curing Compounds	☐ Other (specify) _____
☐ Solid waste Debris	☐ Other (specify) _____
☐ Paints	☐ Other (specify) _____
☐ Solvents	☐ Other (specify) _____
☐ Fertilizers / Pesticides	☐ Other (specify) _____

II. Controls

This section of the plan addresses the controls that will be implemented for each of the major construction activities described in I.C. above and for all use areas, borrow sites, and waste sites. For each measure discussed, the Contractor will be responsible for its implementation as indicated. The Contractor shall provide to the Resident Engineer a plan for the implementation of the measures indicated. The Contractor and subcontractors, will notify the Resident Engineer of any proposed changes, maintenance, or modifications to keep construction activities compliant with the Permit ILR10. Each such Contractor has signed the required certification on forms which are attached to, and are a part of, this plan:

A. **Erosion and Sediment Controls:** At a minimum, controls must be coordinated, installed, and maintained to:
1. Minimize the amount of soil exposed during construction activity;
2. Minimize the disturbance of steep slopes;
3. Maintain natural buffers around surface waters, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration, unless infeasible;
4. Minimize soil compaction and, unless infeasible, preserve topsoil.

B. **Stabilization Practices:** Provided below is a description of interim and permanent stabilization practices, including site- specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices may include but are not limited to: temporary seeding, permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided below in II(B)(1) and II(B)(2), stabilization measures shall be initiated **immediately** where construction activities have temporarily or permanently ceased, but in no case more than **one (1) day** after the construction activity in that portion of the site has temporarily or permanently ceases on all disturbed portions of the site where construction will not occur for a period of fourteen (14) or more calendar days.

1. Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable.
2. On areas where construction activity has temporarily ceased and will resume after fourteen (14) days, a temporary stabilization method can be used.

The following stabilization practices will be used for this project:

☒ Preservation of Mature Vegetation	☐ Erosion Control Blanket / Mulching
☐ Vegetated Buffer Strips	☒ Sodding
☒ Protection of Trees	☐ Geotextiles
☐ Temporary Erosion Control Seeding	☐ Other (specify) _____

- ☐ Temporary Turf (Seeding, Class 7) ☐ Other (specify) _____
- ☐ Temporary Mulching ☐ Other (specify) _____
- ☐ Permanent Seeding ☐ Other (specify) _____

Describe how the stabilization practices listed above will be utilized during construction:

Construction limits will be limited to only that area necessary to build the sidewalk and driveways. Trees and vegetation area to be protected and sod will be placed at the appropriate time to minimize the amount of time bare soil is exposed to erosion.

Describe how the stabilization practices listed above will be utilized after construction activities have been completed:

All disturbed areas will be stabilized with sod.

C. **Structural Practices:** Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include but are not limited to: perimeter erosion barrier, earth dikes, drainage swales, sediment traps, ditch checks, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. The installation of these devices may be subject to Section 404 of the Clean Water Act.

The following stabilization practices will be used for this project:

- ☐ Perimeter Erosion Barrier
- ☐ Temporary Ditch Check
- ☒ Storm Drain Inlet Protection
- ☐ Sediment Trap
- ☐ Temporary Pipe Slope Drain
- ☐ Temporary Sediment Basin
- ☐ Temporary Stream Crossing
- ☐ Stabilized Construction Exits
- ☐ Turf Reinforcement Mats
- ☐ Permanent Check Dams
- ☐ Permanent Sediment Basin
- ☐ Aggregate Ditch
- ☐ Paved Ditch
- ☐ Rock Outlet Protection
- ☐ Riprap
- ☐ Gabions
- ☐ Slope Mattress
- ☐ Retaining Walls
- ☐ Slope Walls
- ☐ Concrete Revetment Mats
- ☐ Level Spreaders
- ☒ Other (specify) French drain with underdrain
- ☐ Other (specify) _____
- ☐ Other (specify) _____
- ☐ Other (specify) _____
- ☐ Other (specify) _____

Describe how the structural practices listed above will be utilized during construction:

Runoff from the project site is only by inlets and storm sewers. Practices will be used that prevent eroded soils from entering storm sewers.

Describe how the structural practices listed above will be utilized after construction activities have been completed:

The catch basins, french drain and underdrain system will transfer runoff from the street into the aggregate trench. The aggregate trench will remove pollutants from the runoff and allow runoff to infiltrate into sub-soils.

D. **Treatment Chemicals**

Will polymer flocculents or treatment chemicals be utilized on this project: ☐ Yes ☒ No

If yes above, identify where and how polymer flocculents or treatment chemicals will be utilized on this project.

E. **Permanent Storm Water Management Controls:** Provided below is a description of measures that will be

installed during the construction process to control volume and pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water act.

1. Such practices may include but are not limited to: storm water detention structures (including wet ponds), storm water retention structures, flow attenuation by use of open vegetated swales and natural depressions, infiltration of runoff on site, and sequential systems (which combine several practices).

   The practices selected for implementation were determined on the basis of the technical guidance in Chapter 41 (Construction Site Storm Water Pollution Control) of the IDOT Bureau of Design & Environment Manual. If practices other than those discussed in Chapter 41 are selected for implementation or if practices are applied to situations different from those covered in Chapter 41, the technical basis for such decisions will be explained below.
2. Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g. maintenance of hydrologic conditions such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Description of permanent storm water management controls:

The catch basins, french drain and underdrain system will transfer runoff from the street into the aggregate trench. The aggregate trench will remove pollutants from the runoff and allow runoff to infiltrate into sub-soils. The total volume of runoff and runoff rate will be reduced and the runoff will be cleaner after the construction is completed.

F. **Approved State or Local Laws:** The management practices, controls, and provisions contained in this plan will be in accordance with IDOT specifications, which are at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Illinois Urban Manual. Procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials shall be described or incorporated by reference in the space provided below. Requirements specified in sediment and erosion site plans, site permits, storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI, to be authorized to discharge under the Permit ILR10 incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

Description of procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials:

G. **Contractor Required Submittals:** Prior to conducting any professional services at the site covered by this plan, the Contractor and each subcontractor responsible for compliance with the permit shall submit to the Resident Engineer a Contractor Certification Statement, BDE 2342a.
   1. The Contractor shall provide a construction schedule containing an adequate level of detail to show major activities with implementation of pollution prevention BMPs, including the following items:
      - Approximate duration of the project, including each stage of the project
      - Rainy season, dry season, and winter shutdown dates
      - Temporary stabilization measures to be employed by contract phases
      - Mobilization time frame
      - Mass clearing and grubbing/roadside clearing dates
      - Deployment of Erosion Control Practices
      - Deployment of Sediment Control Practices (including stabilized construction entrances/exits)
      - Deployment of Construction Site Management Practices (including concrete washout facilities, chemical storage, refueling locations, etc.)
      - Paving, saw-cutting, and any other pavement related operations
      - Major planned stockpiling operations
      - Time frame for other significant long-term operations or activities that may plan non-storm water discharges such as dewatering, grinding, etc.
      - Permanent stabilization activities for each area of the project
   2. The Contractor and each subcontractor shall provide, as an attachment to their signed Contractor Certification Statement, a discussion of how they will comply with the requirements of the permit in regard to the following items and provide a graphical representation showing location and type of BMPs to be used when applicable:

- Vehicle Entrances and Exits - Identify type and location of stabilized construction entrances and exits to be used and how they will be maintained.
- Material delivery, Storage, and Use - Discuss where and how materials including chemicals, concrete curing compounds, petroleum products, etc. will be stored for this project.
- Stockpile Management - Identify the location of both on-site and off-site stockpiles. Discuss what BMPs will be used to prevent pollution of storm water from stockpiles.
- Waste Disposal - Discuss methods of waste disposal that will be used for this project.
- Spill Prevention and Control - Discuss steps that will be taken in the event of a material spill (chemicals, concrete curing compounds, petroleum, etc.).
- Concrete Residuals and Washout Wastes - Discuss the location and type of concrete washout facilities to be used on this project and how they will be signed and maintained.
- Litter Management - Discuss how litter will be maintained for this project (education of employees, number of dumpsters, frequency of dumpster pick-up, etc.).
- Vehicle and Equipment Cleaning and Maintenance - Identify where equipment cleaning and maintenance locations for this project and what BMPs will be used to ensure containment and spill prevention.
- Dewatering Activities - Identify the controls which will be used during dewatering operations to ensure sediments will not leave the construction site.
- Polymer Flocculants and Treatment Chemicals - Identify the use and dosage of treatment chemicals and provide the Resident Engineer with Material Safety Data Sheets. Describe procedures on how the chemicals will be used and identify who will be responsible for the use and application of these chemicals. The selected individual must be trained on the established procedures.
- Additional measures indicated in the plan.

III. Maintenance

When requested by the Contractor, the Resident Engineer will provide general maintenance guides to the Contractor for the practices associated with this project. The following additional procedures will be used to maintain, in good and effective operating conditions, the vegetation, erosion and sediment control measures and other protective measures identified in this plan. It will be Contractor's responsibility to attain maintenance guidelines for any manufactured BMPs which are to be installed and maintained per manufacture's specifications.

IV. Inspections

Qualified personnel shall inspect disturbed areas of the construction site which have not yet been finally stabilized, structural control measures, and locations where vehicles and equipment enter and exit the site using IDOT Storm Water Pollution Prevention Plan Erosion Control Inspection Report (BC 2259). Such inspections shall be conducted at least once every seven (7) calendar days and within twenty-four (24) hours of the end of a storm or by the end of the following business or work day that is 0.5 inch or greater or equivalent snowfall.

Inspections may be reduced to once per month when construction activities have ceased due to frozen conditions. Weekly inspections will recommence when construction activities are conducted, or if there is 0.5" or greater rain event, or a discharge due to snowmelt occurs.

If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer shall notify the appropriate IEPA Field Operations Section office by e-mail at: epa.swnoncomp@illinois.gov, telephone or fax within twenty-four (24) hours of the incident. The Resident Engineer shall then complete and submit an "Incidence of Non-Compliance" (ION) report for the identified violation within five (5) days of the incident. The Resident Engineer shall use forms provided by IEPA and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of non-compliance shall be signed by a responsible authority in accordance with Part VI. G of the Permit ILR10.

The Incidence of Non-Compliance shall be mailed to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Compliance Assurance Section
1021 North Grand East
Post Office Box 19276
Springfield, Illinois 62794-9276

Additional Inspections Required:

The proposed french drain aggregate materials shall be protected from soil contamination. The aggregate shall not be left in an open trench exposed to eroded soils. The Engineer and Contractor shall take extra precautions to protect the french drain aggregate from contamination. The Engineer's on-site representative shall observe the construction of the french drain and maintain field reports of this work. Any french drain aggregates contaminated with soils shall be removed and replaced with clean aggregate.

V. Failure to Comply

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of a National Pollutant Discharge Elimination System/Erosion and Sediment Control Deficiency Deduction against the Contractor and/or penalties under the Permit ILR10 which could be passed on to the Contractor.

Illinois Department of Transportation

Contractor Certification Statement

Prior to conducting any professional services at the site covered by this contract, the Contractor and every subcontractor must complete and return to the Resident Engineer the following certification. A separate certification must be submitted by each firm. Attach to this certification all items required by Section II.G of the Storm Water Pollution Prevention Plan (SWPPP) which will be handled by the Contractors/subcontractor completing this form.

Route	Marked Route	Section
FAU 6593		12-00361-03-SW
Project Number	**County**	**Contract Number**
	Peoria	

This certification statement is a part of SWPPP for the project described above, in accordance with the General NPDES Permit No. ILR10 issued by the Illinois Environmental Protection Agency.

I certify under penalty of law that I understand the terms of the Permit No. ILR10 that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

In addition, I have read and understand all of the information and requirements stated in SWPPP for the above mentioned project; I have received copies of all appropriate maintenance procedures; and, I have provided all documentation required to be in compliance with the Permit ILR10 and SWPPP and will provide timely updates to these documents as necessary.

☐ Contractor

☐ Sub-Contractor

Print Name	Signature
Title	**Date**
Name of Firm	**Telephone**
Street Address	**City/State/Zip**

Items which the Contractor/subcontractor will be responsible for as required in Section II.G. of SWPPP:

SECTION III

EEO CONTRACT COMPLIANCE CLAUSE

It is hereby declared to be the public policy of the City of Peoria, that it will not execute a contract for goods and/or services with any individual, business enterprise, supplier/vendor; maintain a financial relationship with any financial institution; or use the services of any labor organization or member thereof found to be in violation of the provisions of the Municipal Code for the City of Peoria, Chapter 17, Article III, Division 4, Section 17-118.

This clause covers contractors, vendors, suppliers, borrowers and/or recipients of city resources, purchasers and/or developers of city owned property, and any other individuals or entities providing goods and/or services to the City of Peoria; and are hereinafter referred to as "Contractor."

If any Contractor conducting business with the City of Peoria fails to comply with the fair employment and affirmative action provisions of Chapter 17, Article III, Division 4 of the municipal code (hereinafter Chapter 17), the city, at its option, may do any or all of the following:

(1) Cancel, terminate, or suspend the contract in whole or in part;

(2) Declare the contractor ineligible for further contracts for one calendar year;

(3) The Fair Employment and Housing Commission (hereinafter FEHC), in accordance with its rules and regulations, shall have the power to impose a penalty upon any Contractor failing to comply with Chapter 17 in an amount not less than $50.00; nor more than as provided in Chapter 1, Section 1-5 of the municipal code, for each day that the Contractor fails to comply, upon a specific finding of such violation. The FEHC may order a Contractor found guilty of failure to comply with the provisions of Chapter 17 to pay all or a portion of the legal costs incurred by the city as a result of prosecution of such violations. Penalties assessed under the this clause may be recovered from the Contractor by setoff against unpaid portion of the contract price; and

(4) Such other sanctions as may be imposed by the FEHC pursuant to the provisions of Chapter 17 and other applicable ordinance provisions of the municipal code.

During the performance of this contract, the Contractor agrees:

(A) That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual harassment, ancestry, national origin, place of birth, age, or a physical and/or mental disability which would not interfere with the efficient performance of the job in question. The contractor/vendor will take affirmative action to comply with the provisions of Peoria City Code, Chapter 17 and will require any subcontractor to submit to the City of Peoria a written commitment to comply with this division. The Contractor will distribute copies of this commitment to all persons who participate in recruitment, screening, referral, and selection of job applicants, prospective job applicants, members, or prospective contractors.

The Contractor agrees that the provisions of Chapter 17, of the Municipal Code of the City of Peoria is hereby incorporated by reference, as if set out verbatim

(B) That it will examine each one of its workforce job classifications to determine if minorities and/or females are underutilized; and it will take appropriate affirmative action steps to rectify such identified underutilization.

(C) That if it hires additional employees in order to perform this contract or any portion thereof, it will determine the availability of minority and females in the area(s) from which it may reasonably recruit; and every good faith effort will be made in its selection process to minimize or eliminate identified areas of minority and/or female underutilization for each job classification for which there are employment opportunities.

(D) That during the performance of this contract, the Contractor will maintain its eligibility status to conduct business with the City of Peoria under the provisions of the EEO certification registration program.

(E) That in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, sex, religion, national origin, age, or physical and/or mental disability.

(F) That it will send to each labor organization or representative of workers with which it has or is bound by a collective bargaining agreement or understanding, a notice advising such labor organization or representative of the Contractor's obligations under Chapter 17. If any such labor organization or representative fails or refuses to cooperate with the Contractor in its efforts to comply with Chapter 17, the Contractor will promptly so notify the Equal Opportunity Office (hereinafter EOO) and/or the FEHC for the City of Peoria.

(G) That it will submit reports as required and furnish all relevant information as may from time to time be requested the EOO and/or the FEHC.

(H) That it will permit access to all relevant books, records, accounts and work sites by EOO staff members for purposes of investigation to ascertain compliance with Chapter 17.

(I) That it will include verbatim or by reference the provisions of Section 17-120 of Chapter 17 so that such provisions will be binding in the same manner as with other provisions of this contract. The Contractor will be liable for compliance with applicable provisions of this clause by all its subcontractors; and further, it will promptly notify the EOO and/or FEHC in the event any subcontractor fails or refuses to comply therewith. In addition, no Contractor will utilize any subcontractor declared by the EOO and/or FEHC to be non-responsive and therefore, ineligible for contracts or subcontracts with the City of Peoria.

(J) That during the performance of this contract, the Contractor agrees: that it will have written sexual harassment policies that shall include, at a minimum, the following information: (i) the illegality of sexual harassment; (ii) the definition of sexual harassment under state law; (iii) a description of sexual harassment utilizing examples;
(iv) the contractor's internal complaint process including penalties; (v) the legal recourse, investigative and complaint process available through the Illinois Department of Human Rights and the Human Rights Commission; (vi) directions on how to contact the Department of Human Rights and the Commission; and (vii) protection against retaliation as provided by Section 6-101 of this Act (Public Act 87-1257). A copy of the policies shall be provided to the Illinois Department of Human

Rights or the City of Peoria upon request.

(K) That during the performance of this contract, the Contractor agrees that they do not and will not maintain or provide for their employees, any segregated facilities at any of their establishments, or permit employees to perform their services at any location under their control where segregated facilities are maintained.

As used in this document, the term segregated facilities means any waiting rooms, work areas, rest rooms and wash rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, religion, color, national origin, because of habit, local custom, or otherwise.

(Revised 01/04)

CITY OF
PEORIA

MINORITY AND WOMEN'S BUSINESS ENTERPRISE (M/WBE) PARTICIPATION REQUIREMENTS FOR GOOD-FAITH EFFORTS

(Projects exceeding $50,000)

Description of Program

A. It is the policy of the City of Peoria to encourage participation of M/WBE's on all city-funded construction projects In complying with this clause bidders are required, when subcontracting opportunities are available, to make a good- faith effort to meet the goals established for M/WBE participation. The participation goals are cited in Section VI on the Subcontractor Utilization Statement.

B. Failure to submit the documentation requested in Sections II and III of this document may cause (1) the bid to be rejected and determined non-responsive; (2) subject the bidders to the sanctions described in Section VIII.

Pre-Bid Efforts when Awarding Subcontracts

A. Bidders are required to contact and solicit, in writing, bids from M/WBEs for available subcontracting. In seeking solicitations, bidders are to identify the portion(s) of work to be subcontracted and offer to break down any portion(s) of work into economically feasible units in order to facilitate M/WBE participation. Bidders also are to provide the name of a specific contact person in their notice to the M/WBEs. Contact shall be made prior to bid opening. The name of each company contacted, the date and method must be submitted with bid documents.

The low bidder shall provide to the City of Peoria, upon request, copies of faxes, letters, and e-mails sent to M/WBEs

B. Bidders who are a MBE or WBE are not exempt from soliciting bids for available subcontracting. The bidder is required to contact, in writing, firms that will help the bidder meet the participation goal for the targeted group opposite to which the bidder belongs. If the bidder is identified as both a MBE and WBE, the participation goals shall be deemed to have been met.

In seeking solicitations, bidders are to identify the portion(s) of work to be subcontracted and offer to break down any portion(s) of work into economically feasible units in order to facilitate M/WBE participation. Bidders also are to provide the name of a specific contact person in their notice to the M/WBEs. Contact shall be made prior to bid opening. A list containing the name of each company contacted, the date and method must be submitted with bid documents.

The low bidder shall provide to the City of Peoria, upon request, copies of faxes, letters, and e-mails sent to M/WBEs.

III. Good-Faith Efforts Documentation when Utilizing Subcontractors

A. All Bidders must provide proof of its compliance with the pre-bid requirements and good-faith efforts to the City. Both the pre-bid documentation and the support documentation requested below must be submitted with bid documents.

1. All Bidders must submit a properly completed **"Subcontractor Utilization Statement."** All Bidders must provide the scope of work to be performed, the dollar amount to be paid, and the percentage amount of the contract for each company listed.
2. All Bidders must submit a list of qualified M/WBE's who submitted proposals but will not be utilized. This list must include a justification for not accepting the proposed bid.

B. Disputes arising from the enforcement of these requirements will be resolved by the Equal Opportunity Office.

IV. Waiver Requirements When Self-Performing All Work

A. All bidders will make every effort to make subcontract opportunities available to M/WBEs. However, if such an opportunity cannot be made available, the Bidder must seek a waiver by submitting **"M/WBE Participation Waiver Request."** The waiver request must be submitted to the City of Peoria with bid documents.

B. For the M/WBE waiver request to receive consideration, the following supportive documentation that applies must accompany the form:

1. A narrative describing the Bidder's good faith efforts to secure M/WBE participation prior to bid opening.

2. A notarized affidavit attesting the Bidder did not receive inquiries or proposals from qualified M/WBEs in response to the required notification prior to bid opening.

3. A written explanation for why the Bidder believes no subcontracting opportunities exist. ***If the City of Peoria determines that the explanation is insufficient it reserves the right to halt the bid award process to request additional information from the Bidder. The Bidder will receive the request for information in writing.***

4. A written explanation for why the Bidder believes it is impracticable to award any subcontract(s) on the project in question. ***If the Equal Opportunity Office determines that the explanation is insufficient it reserves the right to halt the bid award process to request additional information from the Bidder. The Bidder will receive the request for information in writing.***

V. Change In Use of Subcontractors or Self-Performance Status

Before the General Contractor can deviate from utilizing any of the subcontractors listed on the Subcontractor Utilization Statement or its declared intent to self-perform, it must submit a completed **Notification of Change in Participation** form to the City of Peoria. Upon notification construction on the project may be delayed or halted until a review is conducted by the Equal Opportunity Office.

Regarding a self-performance change, if a subcontracting opportunity has been made available, the General Contractor must identify all good faith efforts made to meet the M/WBE participation goals, unless the change was due to an emergency.

VI. Procedures for Counting M/WBE Participation toward Goals (based upon Department of Transportation regulations)

i. When an M/WBE participates in a contract, count only the value of the work actually performed by the M/WBE toward M/WBE participation goals.

1. Count the entire amount of that portion of a construction contract (or other contract not covered by paragraph (i)(2) of this section) that is performed by the M/WBE's own forces. Include the cost of supplies and materials obtained by the M/WBE for the work of the contract including supplies purchased or equipment leased by the M/WBE (except supplies and equipment the M/WBE subcontractor purchases or leases from the prime contractor or its affiliate).

2. Count the entire amount of fees or commissions performed by an M/WBE firm towards M/WBE goals if that firm provides the Apparent Low Bidder a bona fide professional, technical, consultant, or managerial service or provides bonds or insurance specifically required in a City of Peoria contract.

3. If an M/WBE subcontracts a portion of its work to an M/WBE, 100% of the value of the subcontracted work may be counted toward the M/WBE goal, but any portion of the work the M/WBE subcontracts to a non-M/WBE does not count toward the M/WBE goal.

ii. When an M/WBE participates in a joint venture on a City contract, only count the dollar value of the portion of the work that the M/WBE performs with its own forces toward M/WBE goals.

iii. Count expenditures to an M/WBE contractor toward M/WBE goals if, and only if, the M/WBE is performing a commercially useful function on that contract.

1. An M/WBE performs a commercially useful function when it is responsible for performing, managing, and supervising its contracted work; moreover, with respect to materials and supplies used on the contract, it must also be responsible for negotiating its price, and purchasing and managing those supplies.

2. An M/WBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of M/WBE participation. It should be noted that an effort contrived to give the appearance of M/WBE participation is not considered a good faith effort and is considered an ethical violation that is subject to sanctions outlined in section V.

3. If an M/WBE does not perform or exercise responsibility for at least 30% of the total cost of its contract with its own work force, you must presume that it is not performing a commercially useful function and the dollar amount of that work will not count toward the M/WBE goals.

4. When an M/WBE is presumed the City of Peoria not to be performing a commercially useful function as provided in paragraph (iii)(3) of this section, the M/WBE may present evidence to rebut this presumption. Your rebuttal is subject to review by the City of Peoria.

iv. Use the following factors in determining if an M/WBE trucking company is performing a commercially useful function:

1. The M/WBE trucking company must manage and supervise the trucking work it is being paid to perform. A contrived arrangement for the purpose of giving the appearance of meeting M/WBE goals is not considered a good faith effort.

2. The M/WBE trucking company must own and operate at least one fully licensed, insured, and operational truck used on the contract.

3. The M/WBE trucking company receives credit for the total dollar value of the transportation services it provides on the contract using trucks it owns, insures, and operates.

4. The M/WBE trucking company may lease trucks from another M/WBE trucking firm, including an owner-operator who is certified as an M/WBE. The M/WBE who leases trucks from another M/WBE receives total credit for the dollar value of the transportation services the M/WBE trucking lessee provides on the contract.

5. The M/WBE trucking company may also lease trucks from a non-M/WBE trucking firm, including an owner-operator. The M/WBE who leases trucks from a non-M/WBE is only entitled to credit for the fee or commission it receives as a result of the lease arrangement. The M/WBE does not receive credit for the total dollar value of the transportation services provided by the lessee since these services are not provided by an M/WBE.

6. A lease agreement with an M/WBE trucking firm must indicate that the M/WBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the M/WBE, so long as the lease gives the M/WBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the M/WBE.

v. Count expenditures with M/WBEs for materials and supplies toward M/WBE goals in the following manner:

1. If the materials or supplies are obtained from an M/WBE manufacturer, count 100% of the cost of the materials or supplies toward M/WBE goals.

Note: For purposes of this paragraph (v)(1), a manufacturer is a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the

contract and of the general character described by the specifications.

2. If the materials or supplies are purchased from an M/WBE regular dealer, count 60% of the cost of the materials or supplies toward M/WBE goals.

   Note: For purposes of this section, a regular dealer is a firm that owns, operates or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the contract are brought, kept in stock, and regularly sold or leased to the public in the usual course of business.

   (A) To be a regular dealer, the firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question.

   (B) A person may be a regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone, or asphalt without owning, operating, or maintaining a place of business as provided in this paragraph (v)(2), if the person both owns and operates distribution equipment for the products. Any supplementing of regular dealers' own distribution equipment shall be by a long-term lease agreement and not on an ad hoc or contract-by-contract basis.

   (C) Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not regular dealers within the meaning of the paragraph (v)(2).

3. If materials or supplies are purchased from an M/WBE which is neither a manufacturer nor a regular dealer, count only 5% of the contract amount toward the M/WBE goals.

VII. Record Keeping and Reporting

A. The General Contractor and subcontractors agree to maintain records demonstrative of its good faith efforts to comply with the participation goals attached to the project. This would include, but not limited to, names of M/WBEs and non-minority firms awarded subcontracts, including dollar amount of the contract, payments to subcontractors, and weekly certified payroll reports. These records shall be made available to the City of Peoria.

B. All information will be provided through ePrismSoft, an electronic web based compliance tracking software. Access to ePrismSoft has been furnished by the City of Peoria. To activate access, the General Contractor and subcontractors must contact Human Capital Development at webnfo@eprismsoft.com or 309/692-6400.

VIII. Sanctions

A. The Equal Opportunity Office may recommend the rejection of the apparent low bid where the information submitted by the Apparent Low Bidder fails to objectively demonstrate compliance with the M/WBE Good-Faith Efforts requirements. The Apparent Low Bidder will be notified of this decision and the reasons in writing. The Apparent Low Bidder may request a hearing within five (5) business days of this notice. The request must be submitted to the Equal Opportunity Office. The hearing will be held no later than seven (7) business days after receipt of request. The City Manager or designee will conduct all hearings.

B. Upon a finding that any party has not complied with the provisions of this clause, any one or a combination of the following actions may be taken:

1. Declare the Apparent Low Bidder non-responsive and therefore ineligible for contract award.

2. Declare the Apparent Low Bidder ineligible for further contracts for a calendar year.

3. File a formal complaint against Apparent Low Bidder, and/or subcontractor with the Fair Employment and Housing Commission.

org. 05/08/08 rev.
04/17/12

HUMAN RIGHTS ACT

The contract will be subject to and governed by the rules and regulations of the Illinois Human Rights Act, including Public Act 87-1257 (effective July 1, 1993) which requires that every bidder shall have a written sexual harassment policy that includes, at a minimum, the following information:

a. The illegality of sexual harassment;

b. The definition of sexual harassment under State law;

c. A description of sexual harassment, utilizing examples;

d. The bidder's internal complaint process including penalties;

e. The legal recourse, investigative and complaint process available through the Illinois Department of Human Rights and the Illinois Human Rights Commission;

f. Directions on how to contact the Department and the Commission;

g. Protection against retaliation as provided in the Act.

Bidders are hereby placed on notice, a copy of its policy shall be provided to the Department upon request.

SAXI-93
effective 7-1-93
per Legal Dept

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted April 1, 2016

This index contains a listing of SUPPLEMENTAL SPECIFICATIONS, frequently used RECURRING SPECIAL PROVISIONS, and LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS.

No ERRATA this year.

SUPPLEMENTAL SPECIFICATIONS

Std. Spec. Sec. Page No.

No Supplemental Specifications this year.

CHECK SHEET
FOR
RECURRING SPECIAL PROVISIONS

Adopted April 1, 2016

The following RECURRING SPECIAL PROVISIONS indicated by an "X" are applicable to this contract and are included by reference:

RECURRING SPECIAL PROVISIONS

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CHECK SHEET
FOR
LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS

Adopted April 1, 2016

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

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The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction", Adopted April 1, 2016, the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways", and the "Manual of Test Procedures of Materials" in effect on the date of invitation of bids, and the Supplemental Specifications and Recurring Special Provisions indicated on the Check Sheet included here in which apply to and govern the construction of University Street (Sec 12-00361-03-SW), and in case of conflict with any part, or parts, of said Specifications, the said Special Provisions shall take precedence and shall govern.

SEQUENCE OF CONSTRUCTION

The Contractor shall submit a progress schedule to the Resident Engineer before any work begins. The schedule shall identify the proposed sequence of work, the controlling item of work for each stage, and a calendar day schedule based on typical working day conditions. The progress schedule shall be updated by the Contractor as the work proceeds. Payment under this contract may be withheld if the Contractor has not submitted a satisfactory progress schedule.

Proposed improvements shall be constructed in an orderly and continuous manner. The Contractor shall make daily progress and not interrupt construction activity unless weather or unexpected utility conflicts prevent progress. The Contractor shall be solely responsible for coordinating utility relocations and providing sufficient materials, labor and equipment to complete the project within the contract time. Once the Contractor begins to remove driveways or street pavement, the Contractor is expected to work expeditiously in completing the project. The Contractor shall inform the Resident Engineer on a weekly basis what work will be performed the next week. The Contractor shall also inform the Resident Engineer of any changes to the weekly work plan at the earliest opportunity.

The City of Peoria expects the project work to begin with construction of the watermain replacement and storm drainage system. This work shall be started at the earliest opportunity and shall be accomplished without overnight lane closures.

All HMA paving, surface removal, and pavement marking work is to be provided under a separate contract to be awarded by the City of Peoria. Upon completion of curb and gutter work, the City of Peoria shall coordinate the work of the two contracts.

COMPLETION DATE

The Contractor shall schedule his operations so as to complete all work and open all the roadway to traffic on or before October 31, 2016. All concrete curb and gutter work along the public streets shall be completed by September 14, 2016.

TRAFFIC CONTROL & PROTECTION

This work shall consist of all the furnishing of labor, materials, and equipment necessary to control and direct traffic traveling within the project limits for the purposes of protecting persons and property within the work zone from damage and injury. The Contractor's efforts shall be guided by the standard detail drawings produced by the Illinois Department of Transportation and accepted standard practice. Section 701 of the Standard Specifications provides material and

equipment requirements and operational practices to be employed by the Contractor. Section 701 is modified by this special provision to remove responsibility from the Engineer and City of Peoria for the administration, approval, and consent of the traffic control.

In general, protection of the public shall be in accordance with Chapter 26, Article V of the Code of the City of Peoria, Illinois entitled "Excavation Generally," except that Sections 26-139, 26-140, 26-141 and 26-142 shall not apply.

The construction drawings do not include project specific traffic control plans to be followed by the Contractor. The Contractor shall develop traffic control plans for the various elements of work in accordance with the standard details included by reference. The traffic control measures shall be tailored to the Sequence of Work that is employed by the Contractor. The Contractor is solely responsible for traffic control and protection within the project limits from the inception of the work until the final completion. The Resident Engineer is available to the Contractor for consultation about the minimum requirements of the Standard Details and Standard Specifications.

The Contractor is expected to maintain a minimum of one lane per direction open to traffic at all times for traffic. It is absolutely necessary that one lane of roadway can be used by fire, police, and other emergency vehicles at all times under all weather conditions. The contractor shall, at all times, maintain a means for sidewalk traffic to detour the work zone. The Contractor will be responsible for scheduling his operations to provide access to all businesses located along the improvement that have current access to the street.

Traffic control and protection measures shall also be placed along intersecting streets to notify drivers of the construction activity of the construction activity ahead.

The Contractor shall sweep and remove any soil tracked onto the street by the end of the workday or before four (4) hours has elapsed, whichever is sooner.

All labor, materials, and equipment required to plan and implement a traffic control plan throughout the contract duration will be paid for at the contract unit price per Lump Sum for Traffic Control and Protection, (Special).

CUTTING EXISTING PAVEMENTS, SIDEWALKS, AND CURB & GUTTER

At locations where new construction will abut existing asphalt or concrete pavements, driveways, sidewalk, or curb and gutter; a uniformly straight cut shall be obtained by the use of a diamond concrete saw. The use of pneumatic tools to make these cuts will not be allowed. This work shall be considered as included in the contract unit prices for the various pay items of the proposed construction involved and no additional compensation will be allowed.

PROTECTION OF EXISTING TREES

All necessary precautions shall be taken to prevent damage to existing trees. Roots of two inch (2") diameter or more shall not be severed. Precautions shall be taken to prevent damage to the bark of existing trees by machinery or other means. Any damage shall be corrected as directed by the Engineer at the expense of the Contractor.

ABANDONED EXISTING STORM SEWER PIPES

Where existing storm sewers are to be abandoned in place, the remaining pipe opening shall be sealed using concrete or brick masonry units and grout to prevent the infiltration of ground water into the abandoned pipe. This work will not be paid for separately but will be considered as included in the contract unit prices for the various storm sewer pay items and no additional compensation will be allowed.

SALVAGEABLE MATERIALS

All materials deemed salvageable by the Engineer shall remain the property of the City of Peoria and shall be delivered to the location designated by the Engineer. The Contractor shall dispose of any materials off site that the Engineer determines should not be salvaged. This work will not be paid for separately and is considered to be included in the cost of the various removal items.

BOX CULVERT REMOVAL

The existing concrete box culvert shall be completely removed in accordance with Section 501 of the Standard Specifications at the locations indicated in the plans. The structure shall be removed to allow for installation of a new storm sewer pipe in the same location. Removal methods shall minimize the area of excavation and pavement removal. Payment for all work and disposal of materials shall be at the contract unit price for foot of box culvert removed.

FRENCH DRAIN

This work and materials shall be in accordance with plan details and the Standard Specifications. The French Drain is to be constructed at specified locations under the curb and gutter. The various materials and work required to construct the French Drain are described as follows.

Earth Excavation – Excavation for the trench shall be paid per cubic yard of excavated materials. The plan quantity has been calculated from cross sections using the measured average end-area. The trench excavation limits shall be kept to a minimum. The contractor will not be paid for excavation wider or deeper than the specified dimensions of the trench.

Geotechnical Fabric for French Drain – Nonwoven fabric as specified in Article 1080.05 of the Standard Specifications shall be used. Fabric shall be placed along the length of the trench using pins to hold the fabric against the trench walls. After aggregate has been placed in the trench, the fabric shall be wrapped over the top of the trench and overlapped not less than 6 inches. When a second roll of fabric must be used to continue the trench, the fabric shall be overlapped not less than 2 two feet and secured with pins. The upstream fabric shall lay on top of the downstream fabric. Securing pins shall be included in the unit price for the fabric.

Pipe Underdrains – Pipe underdrains of the specified diameter shall be placed within the aggregate French Drain at the specified elevation. Perforated PVC pipe per Article 1040.03 shall be installed. Other pipe materials will not be allowed. The underdrain pipe shall be installed without the fabric envelope. The pipe underdrain shall be measured and paid at the contract unit price per foot.

Aggregate for French Drains – Aggregate materials shall be of gradation CA-11 or CM-11 per Section 1004. The aggregate shall be gravel and not crushed. Because the aggregate must allow water to flow freely through the French Drain, the aggregate shall be kept in a clean condition

and not contaminated with native soil material, vegetation, sand, or other debris. The aggregate shall not be stockpiled on the project site. The material shall be transferred directly from the delivery truck and into the trench. Contaminated aggregates shall be removed from the project at the Contractor's expense. Material will only be approved for payment that is within the fabric lined trench and complies with the plan details and these specifications.

CATCH BASIN (SPECIAL)
This work and materials shall be in accordance with plan details and Section 602 of the Standard Specifications. The contractor shall submit shop drawings of each structure for review by the Engineer before their manufacture. These drainage structures will capture runoff from the street and transfer the runoff into the French Drain. Payment for all work and materials shall be at the contract unit price per each structure of the specified diameter. The depth of each structure is unique and specified in the plan detail according to pipe size and pipe invert.

STORM SEWER, CLASS B
This work shall comply with Section 550 of the Standard Specifications with the exception that Trench Backfill will not be measured or paid for separately. Trench Backfill will be required for all storm sewer installations and the cost of furnishing and installing the aggregate material shall be included in the unit price for Storm Sewers, Type B.

COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.12 (MODIFIED)
COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.18 (MODIFIED)
This work shall consist of constructing curb and gutter in accordance with Highway Standard 606001 and as modified by the detail provided in the construction plans. Section 606 of the Standard Specifications shall govern the work and materials of curb and gutter. The PCC sidewalk support shall be constructed in conjunction with the plan detail and payment for all material work shall be included in the unit price for curb and gutter.

CONCRETE CURB (SPECIAL)
Concrete Curb (Special) shall be installed at locations specified and as shown in the plan detail. This item is required where the curb height above grade is to be taller than 6 inches. Reinforcement bars shall be provided and installed as shown in the plan detail. Section 606 of the Standard Specifications shall govern the materials and construction of this item.

Work will be paid for at the Contract Unit Price per Linear Foot of Concrete Curb (Special), which price shall be considered payment in full for all labor, equipment, backfill, and all material necessary to complete the work.

PORTLAND CEMENT CONCRETE BASE COURSE WIDENING (VARIABLE DEPTH)
This work shall comply with all requirements of Section 353 of the Standard Specifications. The material shall be placed at the locations indicated in the typical sections for the purpose of widening the existing pavement. The thickness of the PCC material shall be placed 4" below the proposed pavement surface and not be less than 6" thick. Below the minimum 6" thickness, the Contractor has the option of placing PCC or Sub-Base Granular Material to fill any void caused by the removal of existing pavement, medians, curb and gutter. The cost of using PCC material thicker than 6 inches will not warrant an adjustment in the unit price of this pay item. Existing pavement thickness information is provided at specified locations where cores where extracted.

That information is provided in table format in the Removal Plan sheets. This work will be paid for at the contract unit price per square yard for PORTLAND CEMENT CONCRETE BASE COURSE WIDENING (VARIABLE DEPTH).

PARKING LOT PAVEMENT REMOVAL

This work shall be completed in accordance with Section 440 of the Standard Specifications. The locations and limits are identified in the plans. The existing pavement material may be asphalt or Portland cement concrete of varying thickness. Removal of the existing pavement is necessary to allow for construction of the sidewalk and in some locations, curb and gutter. Work and disposal of materials shall be paid at the contract unit price per square yard.

CONCRETE MEDIAN SURFACE, SPECIAL

The material and work shall be in accordance with Section 606 of the Standard Specifications. The median pavement shall be 9 inches thick and finished flat without grooves. The surface shall have a broomed surface. The median pavement shall be placed at the location shown on the plan, typical section and cross sections. Sub-base granular material shall also be placed below the median pavement as shown in the plans. All work and materials shall be paid at the contract unit price per square foot.

VALVE VAULT TO BE ADJUSTED

The existing concrete vault on private property within the driveway on the left side at Sta 104+75 is a precast concrete structure containing water valves and related equipment. The Contractor shall remove the top slab of the vault without damaging the slab. The Contractor shall order precast concrete risers to place on the existing box walls once the top slab is removed. The risers shall be the correct height to allow the top slab to be placed at the correct elevation to match the profile grade of the proposed driveway pavement as detailed in the plans. The risers and top slab shall be secured in place thereby preventing movement of the elements. The Contractor must use lifting devices that will not damage the precast slab. Any damage to the existing vault shall be repaired or replaced to the satisfaction of the Engineer. All work and materials necessary to adjust the elevation of the valve vault shall be paid at the contract unit price per each location.

RESETTING OF SECTION CORNERS

The Contractor will be responsible for locating and making recovery ties for all of the section corners before and after construction. If section monuments have been disturbed, the Contractor's Land Surveyor will be responsible for replacing the section corner with the appropriate information and recording the new Monument Records with the appropriate County Recorder as required by law. This work will not be paid for separately. The Contractor is expected to preserve and protect monuments such that replacement is not necessary.

MULCH

This work shall consist of all the furnishing of labor, materials, and equipment necessary to place landscaping mulch around proposed plantings as directed by the Engineer. The landscaping mulch shall be shredded hardwood. All work and materials shall be paid at the contract unit price per square yard for MULCH.

VIDEO VEHICLE DETECTION SYSTEM, 4 CAMERA

The video detection cameras shall be an Iteris RZ4 Advanced WDR or approved equivalent (4 Camera System). The rack module shall be Iteris VRACK-TS2 System 2+2 or equivalent appropriately paired with cameras. Video feed cables shall be Beldin 8281. Camera power cables shall be IMSA 19-1, 3-Conductor cables.

The video vehicle detection system shall include all necessary electric cable, electrical junction boxes, electrical and coaxial surge suppression, network communication surge protection, hardware, software, programming, and any camera brackets that are required for installation and configuration. These items should be taken into consideration and shall be included in the bid price for the video detection system.

One 15" – 20" color LCD video monitor and 4-camera video selector (if required to switch camera videos) shall be included for each installation to allow for the setup and monitoring of the video detection system.

All vehicle video detection systems shall be equipped with the latest software or firmware revisions.

The video vehicle system shall be configured and installed to NEMA TS2 Standards (use of the SDLC port and BIU). Installation conforming to NEMA TS1 standards will not be allowed.

The minimum requirements for a video vehicle detection system are listed below:

1.0 General

This Specification sets forth the minimum requirements for a system that monitors vehicles on a roadway via processing of video images and provides detector outputs to a traffic controller or similar device.

1.1 System Hardware

The system shall consist of four video cameras and an automatic control unit (ACU). The ACU shall process all detected calls and shall be equipped with the latest firmware revisions.

1.2 System Software

The system shall be able to detect either approaching or receding vehicles in multiple traffic lanes. A minimum of 24 detection zones shall be user-definable per camera. The user shall be able to modify and delete previously defined detection zones. The software shall provide remote access operation and shall be the latest revision.

2.0 Functional Capabilities

2.1 Real-Time Detection

2.2 The ACU shall be capable of simultaneously processing information from up to four (4) video sources. The video shall be digitized and analyzed at a rate of 30 times per second.

2.3 The system shall be able to detect the presence of vehicles in a minimum of 96 detection zones within the combined field of view of the image sensors.

3.0 Vehicle Detection

3.1 Detection Zone Placement

The video detection system shall provide flexible detection zone placement anywhere and at any orientation within the combined field of view of the image sensors. In addition, detection zones shall have the capability of implementing logical functions including AND and OR.

3.2 Optimal Detection

The video detection system shall reliably detect vehicle presence when the image sensor is mounted 10m (30 ft.) or higher above the roadway, when the image sensor is adjacent to the desired coverage area, and when the length of the detection area or field of view (FOV) is not greater than ten (10) times the mounting height of the image sensor. The image sensor shall not be required to be mounted directly over the roadway. A single image sensor, placed at the proper mounting height with the proper lens, shall be able to monitor six (6) to eight (8) traffic lanes simultaneously.

3.3 Detection Performance

Overall performance of the video detection system shall be comparable to inductive loops. Using standard image sensor optics and in the absence of occlusion, the system shall be able to detect vehicle presence with 98% accuracy under normal conditions, (days & night) and 96% accuracy under adverse conditions (fog, rain, snow). The ACU shall output a constant call for each enabled detector output channel if a loss of video signal occurs in any camera.

The ACU shall be capable of processing a minimum of twenty detector zones placed anywhere in the field of view of the camera.

4.0 ACU Hardware

4.1 ACU Mounting

The ACU shall be shelf or rack mountable. Nominal outside dimensions excluding connectors shall not exceed 180mm (7.25") x 475mm (19") x 260mm (10.5") (H x W x D).

4.2 ACU Environmental

The ACU shall be designed to operate reliably in the adverse environment found in the typical roadside traffic cabinet. It shall meet the environmental requirements set forth by the NEMA (National Electrical Manufacturers Association) TS1 and TS2 standards as well as the environmental requirements for Type 170 and Type 179 controllers. The minimum operating temperature range shall be from -35 to +74 degrees C at 0% to 95% relative humidity, non-condensing.

5.0 ACU Electrical

5.1 The ACU shall be modular in design and provide processing capability equivalent to the Intel Pentium microprocessor. The bus connections used to interconnect the modules of the ACU shall be gold-plated DIN connectors.

5.2 The ACU shall be powered by 89 - 135 VAC, 60 Hz, single phase, and draw 0.25 amps, or by 190 - 270 VAC, 50 Hz, single phase and draw 0.12 amps. If a rack mountable ACU is supplied, it shall be capable of operating from 10 to 28 VDC. The power supply shall automatically adapt to the input power level. Surge ratings shall be as set forth in the NEMA TS1 and TS2 specifications.

5.3 Serial communications to a remote computer equipped with remote monitoring software shall be through an RS-232 serial port. A 9-pin "D" subminiature connector on the front of the ACU shall be used for serial communications.

5.4 The ACU shall be equipped with a NEMA TS2 RS-485 SDLC interface for communicating input and output information. Front panel LEDs shall provide status information when communications are open.

5.5 The ACU and/or camera hookup panel shall be equipped with four RS-170 (B&W)/NTSC (color) composite video inputs for coaxial camera connections or so that signals from four image sensors can be processed in real-time.

5.6 The ACU shall be equipped with a port to provide communications to a computer running the remote access software.

5.7 The ACU and/or camera hookup panels used for a rack mountable ACU shall be equipped with a video output port.

5.8 The ACU shall be equipped with viewable front panel detection LED indications.

5.9 A video switcher that is capable of displaying all four video images on the screen simultaneously shall be provided.

6.0 Camera

6.1 The video detection system shall use medium resolution, monochrome or color, image sensors as the video source for real-time vehicle detection. As a minimum, each image sensor shall provide the following capabilities:

a. Images shall be produced with a CCD sensing element with horizontal resolution of at least 500 lines and vertical resolution of at least 350 lines.

b. Usable video and resolvable features in the video image shall be produced when those features have luminance levels as low as 0.1 lux at night.

c. Usable video and resolvable features in the video image shall be produced when those features have luminance levels as high as 10,000 lux during the day.

d. Automatic gain, automatic iris, and absolute black reference controls shall be furnished.

e. An optical filter and appropriate electronic circuitry shall be included in the image sensor to suppress "blooming" effects at night.

6.2 The image sensor shall be equipped with an integrated zoom lens with zoom and focus capabilities that can be changed using either configuration computer software or hand-held controller. The machine vision processor (MVP) may be enclosed within the camera.

6.3 The image sensor and lens assembly shall be housed in an environmental enclosure that provides the following capabilities:

a. The enclosure shall be waterproof and dust-tight to NEMA-4 specifications.

b. The enclosure shall allow the image sensor to operate satisfactorily over an ambient temperature range from -34C to +74C while exposed to precipitation as well as direct sunlight.

c. The enclosure shall allow the image sensor horizon to be rotated in the field during installation.

d. The enclosure shall include a provision at the rear of the enclosure for connection of power and video signal cables fabricated at the factory. Input power to the environmental enclosure shall be either 115 VAC 60 Hertz or 24 VAC/DC 60 Hertz.

e. A heater shall be at the front of the enclosure to prevent the formation of ice and condensation in cold weather, as well as to assure proper operation of the lens' iris mechanism. The heater shall not interfere with the operation of the image sensor electronics, and it shall not cause interference with the video signal.

f. The enclosure shall be light-colored and shall include a sun shield to minimize solar heating. The front edge of the sunshield shall protrude beyond the front edge of the environmental enclosure and shall include provision to divert water flow to the sides of the sunshield. The amount of overhang of the sun shield shall be adjustable to prevent direct sunlight from entering the lens or hitting the faceplate.

g. The total weight of the image sensor in the environmental enclosure with sunshield shall be less than 2.7 kg (6 pounds).

h. When operating in the environmental enclosure with power and video signal cables connected, the image sensor shall meet FCC class B requirements for electromagnetic interference emissions.

6.3 The video output of the image sensor shall be isolated from earth ground. All video connections from the image sensor to the video interface panel shall also be isolated from earth ground.

6.4 The video output, communication, and power to the image sensor shall include transient protection to prevent damage to the sensor due to transient voltages occurring on the cable leading from the image sensor to other field locations.

6.5 A stainless steel junction box shall be available as an option with each image sensor for installation on the structure used for image sensor mounting. The junction box shall contain a terminal block for terminating power to the image sensor and connection points for cables from the image sensor and from the ACU.

6.6 A video interface panel shall be included for installation inside of the traffic cabinet. The panel shall provide coaxial cable / twisted pair connection points and an Edco CNX06-

BNCY or approved equal transient suppressor for each image sensor. The shield side of the coaxial cable connection at the transient suppressor shall be connected to earth ground via the transient suppressor.

If the cable used to connect the video signal from the image sensor to the ACU is to be routed through a conduit containing unbundled AC power cables, a video isolation amplifier shall be installed in addition to the video interface panel if interference is present. There will be no additional compensation for providing the video isolation amplifier if necessitated by the presence of video interference. The isolation amplifier shall buffer the video signal and provide transient suppression. The isolation amplifier shall have a minimum common mode rejection ratio at 60 Hz of 100 dB.

6.6 The image sensor shall be connected to the ACU such that the video signal originating from the image sensor is not attenuated more than 3 dB when measured at the ACU. When the connection between the image sensor and the ACU is coaxial cable, the coaxial cable used shall be a low loss 75 ohm precision video cable suited for outdoor installation, such as Belden 8281, West Penn P806, or approved equal.

7.0 Software

7.1 The system shall include the remote access software that is used to setup and configure the video detection system. The software shall be of the latest revision.

7.2 All necessary cable, adapters, and other equipment shall be included with the system.

8.0 Installation and Training

8.1 The supplier of the video detection system shall supervise the installation and testing of the video and video vehicle detection equipment. A factory certified representative from the supplier shall be on-site during installation.

9.0 Warranty, Maintenance, and Support

9.1 The video detection system shall be warranted by its supplier for a minimum of two (2) years from date of turn-on. This warranty shall cover all material defects and shall also provide all parts and labor as well as unlimited technical support.

9.2 Ongoing software support by the supplier shall include updates of the ACU and supervisor software. These updates shall be provided free of charge during the warranty period.

9.3 The supplier shall maintain a program for technical support and software updates following expiration of the warranty period. This program shall be made available to the contracting agency in the form of a separate agreement for continuing support.

Basis of Payment:

This work will not be paid for separately, but shall be included in the contract unit price each for VIDEO VEHICLE DETECTION. 4 CAMERAS which price shall be payment in full for all labor, equipment, and materials required to furnish, install, and test the video vehicle detection system described above, complete.

RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, COMPLETE

This work shall consist of the relocation of existing emergency vehicle priority system equipment at the intersection of University Street and the Access Road as shown on the plans. This work shall be completed as specified in Article 895 of the Standard Specifications. The installation shall be done according to the specifications for Confirmation Beacon and Light Detector.

This work will be paid for at the contract unit price per each for RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, COMPLETE.

REBUILD EXISTING HANDHOLE

Description: This work shall consist of adjusting an existing handhole to bring the frame to the proposed grade at the locations shown on the plans or as directed by the Engineer.

General: The work shall be performed according to Section 603 and Section 814 of the "Standard Specifications", and the following:

1. Excavate the area adjacent to each side of the handhole to allow forming.
2. Remove the handhole frame and cover. Remove the existing walls of the handhole to a depth of 8" below the proposed finished grade.
3. Drill eight, ¾" diameter holes, 6" in deep into the remaining concrete. Drill 2 holes on each of the four handhole walls.
4. Install a 12" long section of #5 reinforcement bar, epoxy coated, in each drilled hole. The bars shall be installed with an approved masonry epoxy from the Approved List of Chemicals Adhesives (IDOT Bureau of Materials and Physical Research).
5. Form and place the new portions of the handhole walls. Replace the steel hooks as required.
6. Reinstall the handhole frame and cover.

All concrete debris shall be disposed of outside the right-of-way according to the requirements of Article 202.03 of the "Standard Specifications".

Basis of Payment: This work will be paid for at the contract unit price per each for REBUILD EXISTING HANDHOLE. The unit price shall include all labor materials and equipment required to perform the work. No additional compensation will be allowed for multiple adjustments to the same structure.

REMOVE EXISTING HANDHOLE

This work shall consist of removing existing handholes at locations identified on the plans. This work shall be completed as specified in Article 895 of the Standard Specifications. This work will be paid for at the contract unit price per each for REMOVE EXISTING HANDHOLE.

REMOVE EXISTING CONCRETE FOUNDATION

This work shall consist of removing existing concrete foundations at locations identified on the plans. This work shall be completed as specified in Article 895 of the Standard Specifications. This work will be paid for at the contract unit price per each for REMOVE EXISTING CONCRETE FOUNDATION, which price

The Contractor shall install the CCTV dome camera assembly at the locations indicated in the Plans. The CCTV Dome Camera Assembly shall be mounted on a pole, wall, or other structure.

Testing

The Contractor shall test each installed CCTV Dome Camera Assembly. The test shall be conducted from the field cabinet using the standard communication protocol and a laptop computer. The Contractor shall verify that the camera can be fully exercised and moved through the entire limits of Pan, Tilt, Zoom, Focus and Iris adjustments, using both the manual control and presets. The Contractor shall maintain a log of all testing and the results. A representative of the Contractor and a representative of the Engineer shall sign the log as witnessing the results. Records of all tests shall be submitted to the Engineer prior to accepting the installation.

Method of Measurement. The closed circuit television dome camera bid item will be measured for payment by the actual number of CCTV dome camera assemblies furnished, installed, tested, and accepted.

Basis of Payment. Payment will be made at the contract unit price for each CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED including all equipment, material, testing, documentation, and labor detailed in the contract documents for this bid item.

CAT 5 ETHERNET CABLE

This work shall be in accordance with Sections 873, 1076, and 1088 of the Standard Specifications except as modified herein.

This work shall consist of furnishing and installing an outdoor rated CAT5E cable in conduits, handholes, and poles.

The cable shall be rated for outdoor use and conform to the following specifications:

- Outdoor CMX Rated Jacket (climate/oil resistant jacket)
- UV Resistant Outer Jacket Material (PVC-UV, UV Stabilized)
- Outer Jacket Ripcord
- Designed For Outdoor Above- Ground or Conduit Duct applications
- Cat5E rated to 350MHz (great for 10/100 or even 1000mbps Gigabit Ethernet)
- Meets TIA/EIA 568b.2 Standard
- Unshielded Twist Pair
- 4 Pairs, 8 Conductors
- 24AWG, Solid Core Copper
- UL 444 ANSI TIA/EIA-568.2 ISO/IEC 11801
- RoHS Compliant
- Flooded (Water Blocking Gel)
-

Basis of Payment: This work will be paid for at the contract unit price per foot for CAT 5 ETHERNET CABLE, which shall be payment in full for all labor, equipment, and materials required to provide and install the cable described above, complete.

FIBER OPTIC DROP AND REPEAT SWITCH

The Contractor shall furnish a fiber optic drop and repeat switch complete with the accessories specified below and deliver it to the Department.

The fiber optic drop and repeat switch shall meet or exceed the following minimum specifications:

Approved Models: Antaira Technologies Model LNX-602-M-T (6-Port (4-port 10/100TX + 2-port 100FX) Slim Industrial Ethernet Switch, Multi-Mode Fiber 2 Km, Wide Operating Temperature) or approved equal.

Features:	• RJ-45 Port Supports Auto MDI/MDI-X Function • Store-and-Forward Switching Architecture • Back-Plane (Switching Fabric): 1Gbps • Wide-Range Redundant Power Design • Power Polarity Reserve Protect • Overload Current Resettable Fuse Present • Provides Broadcast Storm Protection • Provides EFT Protection 3000 VDC for Power Line • Supports 4000 VDC Ethernet ESD Protection • IP30 Rugged Aluminum Case Design • DIN-Rail and Wall Mount Design
Standard:	• IEEE 802.3 10BaseT Ethernet • IEEE 802.3u 100BaseTX Fast Ethernet • IEEE 802.3x Flow Control and Back-Pressure
Protocol:	• CSMA/CD
Switch Architecture:	• Store and Forward
Transfer Rate:	• 14,880pps for Ethernet Port • 148,800pps for Fast Ethernet Port
MAC Address:	• 1K MAC Address Table
Memory Buffer:	• 512 Kbits
LED:	• Unit: Power 1, Power 2, Fault • Port: Link/Activity, Full-Duplex/Collision
Connector:	• LNX-602A: 4 x 10/100TX RJ-45 with Auto MDI/MDI-X Function • 2 x 100M Fiber ST Type Connector
Network Cable:	• 10BaseT: 2-pair UTP/STP Cat. 3, 4, 5 cable EIA/TIA-568 100-ohm (100m) • 100BaseTX: 2-pair UTP/STP Cat. 5 cable EIA/TIA-568 100-ohm (100m)
Optical Cable:	• (Multi-Mode): 50/125µm ~ 62.5/125µm • Available Distance: 2KM (Multi-Mode), • Wavelength: 1310nm (Multi-Mode)
Back-Plane:	• LNX-602A: 1.2 Gbps

Packet Throughput Ability:	• LNX-602A: 1.488Mpps @ 64bytes
Power Supply:	• DC 12 ~ 48V, Redundant Power with Polarity Reverse Protect Function and Removable Terminal Block
Power Consumption:	• LNX-602A: 6.41 Watts
Reverse Polarity Protection:	• Present
Overload Current Protection:	• Present
Mechanical:	• Casing: IP30 Metal Case • Dimension (W x H x D): 30 x 140 x 95 mm (1.18 x 5.51 x 3.74 in.) • Installation: DIN-Rail/Wall Mountable
Weight:	• Unit Weight: 1 lbs. • Shipping Weight: 1.41 lbs.
Operation Temperature:	• Wide Operating Temperature: -40° C to 80° C (-40° F to 176° F)
Operation Humidity:	• 5% to 95% (Non-condensing)
Storage Temperature:	• -40° C to 85° C
EMI:	• FCC Class A • CE EN6100-4-2/EN6100-4-3/EN6100-4-4/EN6100-4-5/EN6100-4-6 • /EN6100-4-8/EN6100-4-11/EN6100-4-12/EN6100-6-2/EN6100-6-4
Safety:	• UL, cUL, CE EN60950-1
Stability Testing:	• Shock: IEC60068-2-27 • Free Fall: IEC60068-2-32 • Vibration: IEC60068-2-6
Warranty:	• 5-Year Warranty
Included Accessories:	• Mounting Brackets • Barrel Connector Cable • CD Manual/Software

The following items shall also be included with each switch:

- Power Supply – Qty. 1 (Antaira Model DR-45, 45 Watt, 12 Volt DC, Industrial Din-Rail Power Supply or Approved Equal)
- Fiber Optic Patch Cables – Qty. 2 (multimode fiber, 1 meter length, duplex, ST to SC connectors)
- Fiber Optic Patch Cables – Qty. 1 (multimode fiber, 1 meter length, duplex, ST to ST connectors)

Basis of Payment: This work will be paid for at the contract unit price per each for FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH which price shall be payment in full for all labor, materials, and equipment required to provide the fiber optic Ethernet drop and repeat switch and associated equipment and deliver it to the Department.

RELOCATE EXISTING PEDESTRIAN PUSH-BUTTON AND POST

This work shall include the removal and installation of the existing pedestrian push-button and post as shown at University Street and the Access Road on a new concrete foundation, according to Article 878.03. The cost of the new foundation shall not be paid for separately.

This work will be paid for at the contract unit price per each for RELOCATE EXISTING PUSH-BUTTON AND POST.

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

This work shall consist of removal of existing traffic signal equipment listed at the intersection locations designated on the plans. This work shall be completed as specified in Article 895 of the Standard Specifications. All removed equipment shall be salvaged and taken to the City of Peoria's Public works Operations Building, 3505 N. Dries Lane, Peoria, IL 61604. The Contractor shall notify Sie Maroon at 309-645-5139 forty-eight (48) hours in advance of equipment delivery.

This work will be paid for at the contract unit price per each for REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT.

RELOCATE EXISTING LUMINAIRE

This work shall include the removal and installation of the luminaire at University Street and the Access Road onto the new Steel Combination Mast Arm Assembly and Pole, according to Article 821.

This work will be paid for at the contract unit price per each for RELOCATE EXISTING LUMINAIRE.

Irrigation Head Repair

This work shall consist of the removal of damaged or obstructing sprinkler heads and underground irrigation lines and the relocation or installation of new sprinkler system components as needed. All locations shall be identified in field and coordinated with the Engineer. All materials shall match the current system components installed or be compatible per the manufacturer's recommendations. Installation shall be in accordance with manufacturer's specifications for the existing system installed and to the Satisfaction of the Engineer.

Basis of Payment

Work will be paid for at the Contract Unit Price per EACH of IRRIGATION HEAD REPAIR for the sprinkler head repair/relocation including irrigation lines, which price shall be considered payment in full for all labor, equipment, and material necessary to complete the work as specified.

LED Street Light Pole and Luminaire (Complete)

Description

This work shall consist of furnishing and installing a luminaire and associated light pole in accordance with Section 821 of the Standard Specifications, the details in the plans, and the following additions or exceptions

Materials

Luminaire:

The full cut off luminaire housing and reflector be made out of heavy wall aluminum construction, with integrated clear tempered 3/16" glass lens, sealed LED optical module for IP67 rating, constant current led driver which operates on input voltages from 120-277vac, 60 hz factory wired driver independently sealed and U.L. listed for wet locations. The luminaire shall have a type IV IES distribution with 100 LEDS and 525mA driver and 4000K in color. Finish shall be black in color, U.S Architectural, Sun Valley Lighting Cat Cut number DSS1-VLED-IV-100LED-525mA-NW-XPD-RAL-9005-t.

Pole and Arm:

Pole shall be a decretive type, 27' in nominal height, 6'-0" 2 ½" schedule 40 aluminum arm with 16 sharp flute, round tapered steel shaft 9.0" butt tapering to 5.2" top (7 gauge) and handhole and cover at base of pole. Include a GFCI 20 AMP receptacle with weatherproof cover at a height approximately 12" above grade. The base cover shall consist of two piece wraparound, cast aluminum, with minimum .250" wall thickness, smooth tapered bottom section and decorative tapered fluted section with evenly paced raised vertical flutes, contoured, fluted flush handhole and cover with taper resistant hardware. Pole, arm and base cover shall be black in color.

Anchorage:

Anchorage bolt and pattern shall be as required by the manufacturer.

Basis of Payment

This work will be paid for at the contract unit price each for LED STREET LIGHT POLE AND LUMINAIRE (COMPLETE) which price shall include all labor, equipment, and material necessary to complete the work as specified.

Meter Pedestal and Lighting Controller Combination Unit, Special

This work shall consist of furnishing, transporting, and installing the Lighting Controller Combination Unit on concrete foundation and all electrical cable connections in the unit in accordance with Section 825 of the Standard Specifications, the plans, and as directed by the Engineer.

The Controller Combination Unit shall be manufactured and assembled by Milbank (Catalog #CP3B51C19, 120/240 VAC, 1-phase, 3 wire; output 100 Amp, 100 Amp main circuit breaker, 2A Pole Loadcenter, Photocell, Rainproof – Type3R, Steel Enclosure, painted Ebony 334 Black) or approved equivalent. Ameren approval of meter components must be satisfied.

Unit exterior will be free of defects and have no sharp edges.

Basis of Payment

Work will be paid for at the Contract Unit Price per EACH of METER PEDESTAL AND LIGHTING CONTROLLER COMBINATION UNIT, SPECIAL for the combination unit specified in the plans, which price shall be considered payment in full for all labor, equipment, and material necessary to complete the work as specified.

Sanitary Sewer Removal and Replacement 8"

Description
This work shall consist of excavating and removing designated sections of existing gravity sanitary sewer pipe and replacing said sections with new PVC pipe to the required line and grade. Work shall include the installation and removal of temporary bulkheads at nearby manholes and/or by-pass pumping as may be required in order to complete the removal and replacement of the pipe, as well as the disconnection and reconnection of any service connections within the specified repair. All materials and work shall be in accordance with the Greater Peoria Sanitary District's (GPSD) General Specifications for Sanitary Sewers and Appurtenances, the details in the plans, and the following additions or exceptions.

Materials
PVC Pipe & Fittings:
All polyvinyl chloride (PVC) pipe and fittings shall conform to ASTM designation D-3034, Type PSM, and shall be standard dimension ratio (SDR) 26 for excavation depths up to twenty (20) feet. Pipe shall be legibly marked at intervals of 5 feet or less with: pipe size, manufacturer's name or trademark, and SDR-26 PVC sewer pipe, ASTM D-3034.

Joints for PVC Gravity Sanitary Sewer Pipe:
All joints for PVC gravity sanitary sewers shall conform to ASTM standard D-3212 and have flexible elastomeric seals.

Joining Pipes of Dissimilar Materials
Connections between pipes of dissimilar materials, or of unequal outside diameters, shall be made using fernco flexible-type couplings. The coupling shall be fit over the plain ends of both pipes (any bell sections shall be removed) and then tightened to make a water tight seal.

Pipe Bedding:
A minimum of four (4) inches of approved granular bedding shall be placed in the bottom of the trench, with an additional amount of approved granular bedding tamped and cradled around and over the pipe to a level of one (1) foot above the top of the pipe. Pipe shall be supported over its entire length. Approved bedding material for the pipe cradle and envelope shall be constructed with granular materials from approved local sources meeting the IDOT Course Aggregate Standards for CA-7 and CA-11. Material shall be a crushed gravel or a crushed stone as per IDOT's Coarse Aggregate Standards with a minimum of 75% fractured material.

Backfill:
Excavation within streets shall be in conformance with the City of Peoria Excavation Ordinance and shall be backfilled with flowable backfill material in accordance with Part 40.0, Section 021 of the GPSD General Specifications.

Basis of Payment
This work will be paid for at the contract unit price per lineal foot for SANITARY SEWER REMOVAL AND REPLACEMENT 8" which price shall include all labor, equipment, and material necessary to complete the work as specified.

Manhole, Type A, Sanitary 4' Dia. With Type 1 Frame, Closed Lid

Description
This work shall consist of the installation of new sanitary sewer manholes, including excavation and backfilling of said manholes. Work shall include the installation and removal of temporary bulkheads at nearby manholes and/or by-pass pumping as may be required in order to complete the removal and replacement of the structure. All materials and work shall be in accordance with the Greater Peoria Sanitary District's (GPSD) General Specifications for Sanitary Sewers and Appurtenances, the details in the plans, and the following additions or exceptions.

Materials:
Manhole Bottoms:
Bottom shall be pre-cast units equal to the "Moorbase Bottom", with pre-formed inverts.

Manhole Sections:
Manhole sections shall be pre-cast and meet the requirements of ASTM standard C478, as amended, and shall be constructed with a rubber gasket seal or a butyl rubber sealant. The exterior side of the manhole joints shall be sealed with an additional coating of a waterproof asphalt-based sealer. Joints to seal the connection between pipe and the manhole shall be either the "A-Lock" type, or a press seal boot.

Manhole Steps:
Plastic steps with steel cores shall be positioned over the outlet pipe in manholes with 8" or 12" lines. Steps shall conform to ASTM 2146-69, Type 2.

Flat Slab Top:
Reinforced concrete, pre-cast, flat slab tops shall be provided for pipes up to 42" in diameter and depths up to 20 feet.

Adjusting Rings:
Reinforced concrete manhole rings in accordance with ASTM C76-60T, class II, Wall B, for total adjustment heights less than eight (8) inches.

Manhole Frame and Casting:
Manhole frames and covers shall be equal to Neenah R-1530 Type B lid or East Jordan Iron Works No. 1920. All castings shall be bolted to manhole flat slab tops and all covers shall bear the "PSD" logo in accordance with GPSD General Specifications and Standard Details.

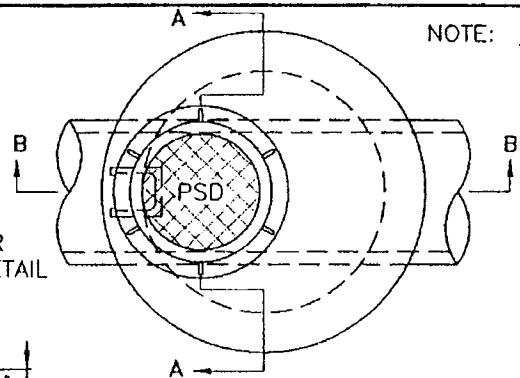
Backfill:
Excavation within streets shall be in conformance with the City of Peoria Excavation Ordinance and shall be backfilled with flowable backfill material in accordance with Part 40.0, Section 021 of the GPSD General Specifications.

Basis of Payment
This work will be paid for at the contract unit price per each for MANHOLE, TYPE A, SANITARY 4' DIAMETER, TYPE 1 FRAME, CLOSED LID, which price shall include all labor, equipment, and material necessary to complete the work as specified.

Manhole, Type A, Sanitary 4' Dia. with Type 1 Frame, Closed Lid

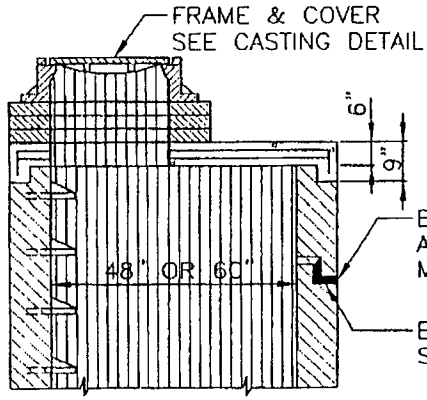
NOTE: FLAT TOP MANHOLES ARE DESIGNED TO ACCEPT PIPES UP TO 42" IN DIAMETER AT DEPTHS TO 20 FEET. FLAT TOP MANHOLES USED WITH PIPES GREATER THAN 42" IN DIAMETER AND/OR AT DEPTHS GREATER THAN 20 FEET SHALL BE DESIGNED BY A STRUCTURAL ENGINEER.

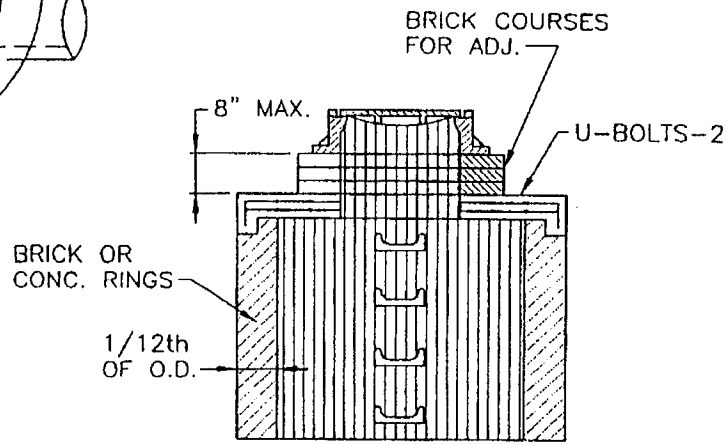
NOTE: CONCRETE MANHOLES
REINFORCED CONC. M.H. RINGS MAY BE USED IN ACCORDANCE WITH A.S.T.M. C76-60T CLASS II, WALL B, ALSO SLABS & RINGS CONFORM TO A.S.T.M. NO. C478-64T.

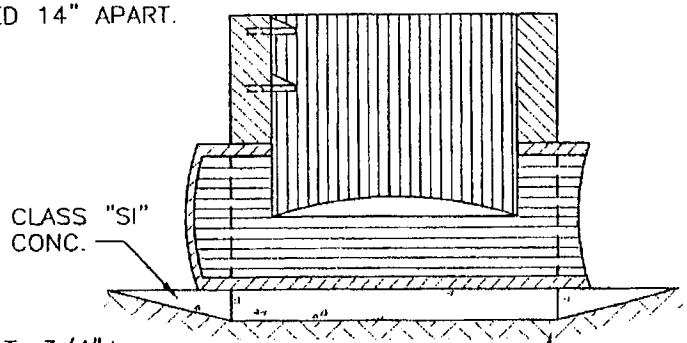


TOP VIEW

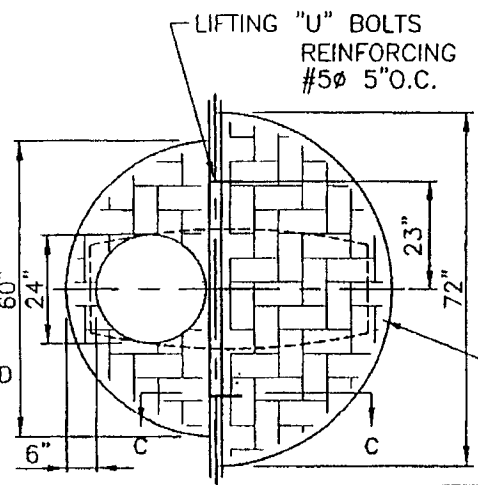
PLASTIC STEPS WITH STEEL CORE SHALL BE POSITIONED OVER THE OUTLET PIPE IN MANHOLES WITH 8" OR 12" LINES. IN MANHOLES WITH LINES LARGER THAN 12" THE STEPS SHALL BE PLACED AT 90° TO THE OUTLET PIPE. STEPS SHALL BE PLACED 14" APART.



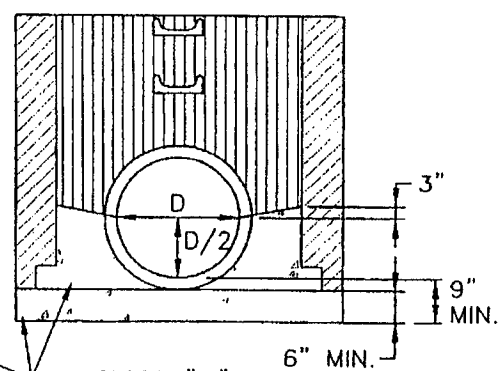




SECTION B-B

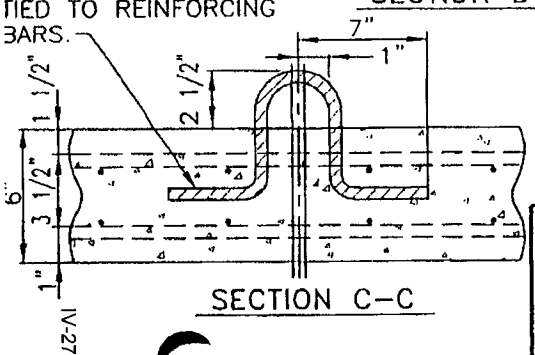


CONCRETE LID REINFORCEMENT



SECTION A-A

J BOLT: 3/4"ø TIED TO REINFORCING BARS.



SECTION C-C

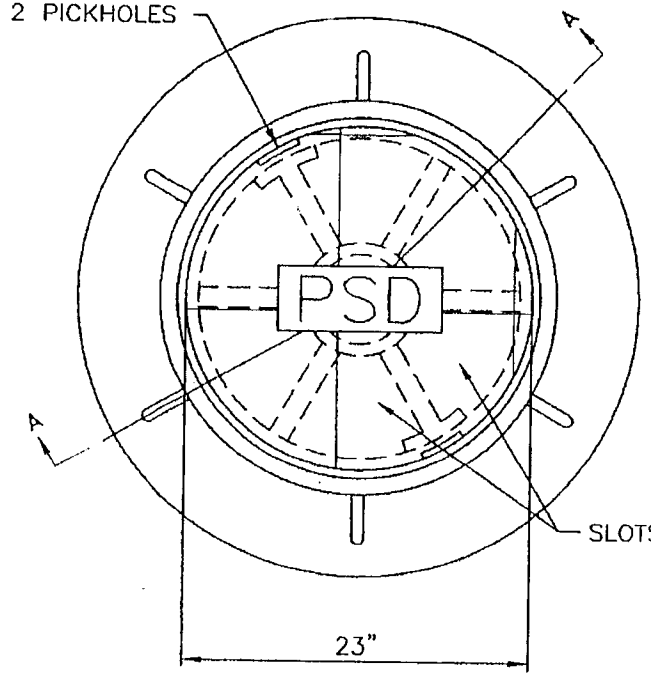
IV-27

GREATER PEORIA SANITARY DIST.
2322 South Darst Street
Peoria, Illinois 61607-2093
Phone 637-3511 Fax 63[illegible]14

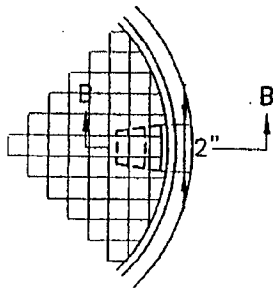
FLAT TOP MANHOLE		
SURVEYED: . DESIGNED: . DRAWN: CWB CHECKED: . APPROVED: .	DATE: AUG. 68 REV: SEP 2003	VERT. NTS HORIZ. NTS PAGE 095-1

University Street (FAU 6593)
Section 12-00361-03-SW
Peoria County

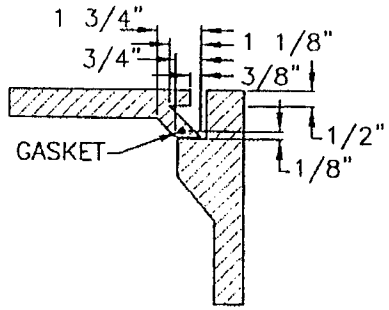
Manhole, Type A, Sanitary 4' Dia. with Type 1 Frame, Closed Lid



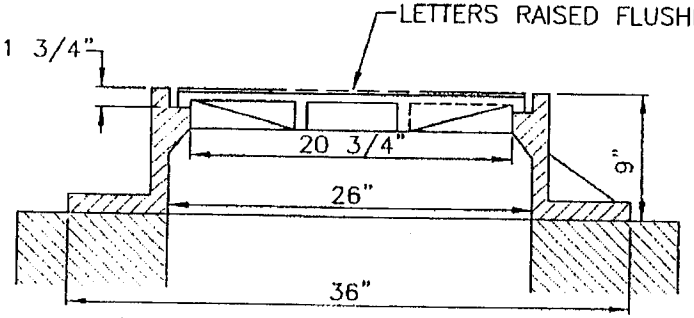
PLAN



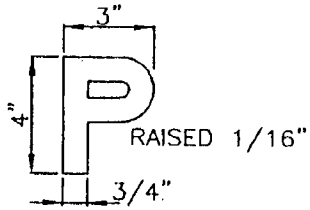
PICKHOLE DETAIL PLAN



SECTION B-B



SECTION A-A



LETTER DETAIL

MANHOLE FRAME & COVER

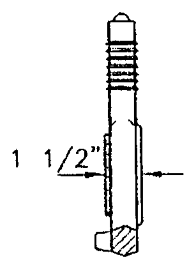
EQUAL TO NEENAH R-1530 TYPE "B" LID
OR EAST JORDAN NO. 1920
W.T. 455 LBS.

NOTE: ALL CASTINGS SHALL BE BOLTED TO CONCRETE MANHOLE SECTIONS

GREATER PEORIA SANITARY DIST. 2322 South Darst Street Peoria, Illinois 61607 Phone 637-3511 Fax 3614	CASTINGS		
	SURVEYED: . DESIGNED: . DRAWN: CWB CHECKED: . APPROVED: .	DATE: AUG. 68 REV: SEP 2003	VERT. NTS HORIZ. NTS PAGE 095-

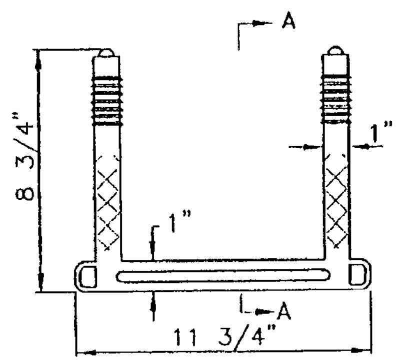
DETAILS\095-4.DWG 1=1

University Street (FAU 6593)
Section 12-00361-03-SW
Peoria County



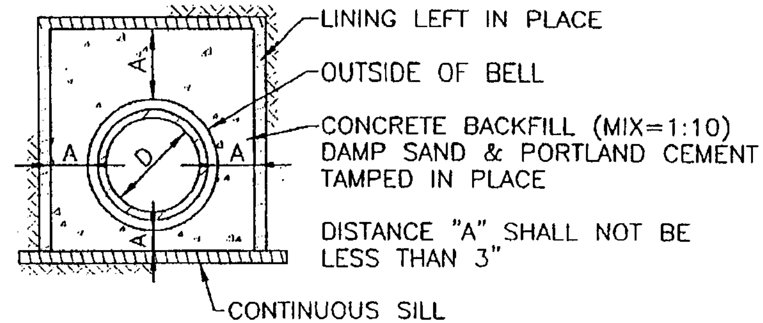
SECTION A-A

ASTM 2146-69
TYPE 2



PLAN

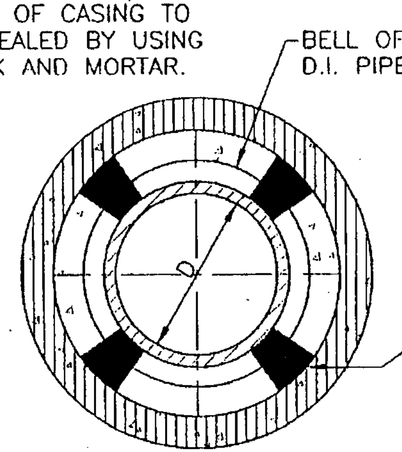
PLASTIC MANHOLE STEP



DISTANCE "A" SHALL NOT BE LESS THAN 3"

TUNNEL SECTION

ENDS OF CASING TO BE SEALED BY USING BRICK AND MORTAR.



JACKING SECTION

SEWER PIPE & CASING DIM.	
SEWER PIPE DIA.	CASING PIPE DIA.
54 IN.	64 IN.
42-48 IN.	58 IN.
30-36 IN.	44 IN.
20-24 IN.	36 IN.
16-18 IN.	26 IN.
12-14 IN.	24 IN.
8-10 IN.	24 IN.
4-6 IN.	24 IN.

CASING SPACERS SHALL BE EITHER PSI-BRAND MODEL S STAINLESS-STEEL CASING ISOLATORS OR APS-BRAND MODEL SSI STAINLESS-STEEL BAND CASING SPACERS OR AN APPROVED EQUAL, SPACED IN ACCORDANCE WITH THE SPECIFICATIONS.

IV-29

MANHOLE STEPS		
VERT. NTS	DATE: AUG. 90	SURVEYED: .
HORIZ. NTS	REV: .	DESIGNED: .
		DRAWN: DMF
		CHECKED: .
PAGE 095		APPROVED: .

GREATER PEORIA SANITARY DIST.
2322 South Darst Street
Peoria, Illinois 61[illegible]-2093
Phone 637-3511 [illegible]37-6614

ENCASEMENTS		
SURVEYED: .	DATE: AUG. 68	VERT. NTS
DESIGNED: .	REV: SEP 2003	HORIZ. NTS
DRAWN: CWB		
CHECKED: .		
APPROVED: .		PAGE 09

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Manhole, Type A, Sanitary 4' Dia. with Type 1 Frame, Closed Lid

University Street (FAU 6593)
Section 12-00361-03-SW
Peoria County

MATERIAL TRANSFER DEVICE

Description. This work shall consist of placing HMA binder and surface course mixtures for mainline paving operations according to Section 406 of the Standard Specifications, except that these materials shall be placed using a material transfer device (MTD).

Materials and Equipment. The MTD shall have a minimum surge capacity of 15 tons (13.5 metric tons), shall be self-propelled and capable of moving independent of the paver, and shall be equipped with the following:

(a) Front-Dump Hopper and Conveyor. The conveyor shall provide a positive restraint along the sides of the conveyor to prevent material spillage. MTDs having paver style hoppers shall have a horizontal bar restraint placed across the foldable wings which prevents the wings from being folded.

(b) Paver Hopper Insert. The paver hopper insert shall have a minimum capacity of 14 tons (12.7 metric tons).

(c) Mixer/Agitator Mechanism. This re-mixing mechanism shall consist of a segmented, anti-segregation, re-mixing auger or two full-length longitudinal paddle mixers designed for the purpose of re-mixing the hot-mix asphalt (HMA). The longitudinal paddle mixers shall be located in the paver hopper insert.

CONSTRUCTION REQUIREMENTS

General. The MTD shall be used for the placement of all HMA binder and surface course mixtures placed on the mainline roadway. The MTD speed shall be adjusted to the speed of the paver to maintain a continuous, non-stop paving operation. **Use of a MTD with a roadway contact pressure, when fully loaded, exceeding 25 psi (138 kPa) will not be allowed.**

Method of Measurement. This work will be measured for payment in tons (metric tons) of HMA binder and surface course materials placed on the mainline roadway with a MTD.

Basis of Payment. This work will be paid for at the contract unit price per ton (metric ton) for MATERIAL TRANSFER DEVICE.

The various HMA mixtures placed with the MTD will be paid for as specified in their respective specifications. The Contractor may choose to use the MTD for other applications on this project; however, no additional compensation will be allowed.

The maximum tonnage eligible for payment when placed with the material transfer device will be limited to the final pay quantity of the pay items placed.

POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT AND TACK COAT) (NON-TRACKING)

Description. This work shall consist of placing non-tracking, polymerized bituminous materials prime coat or tack coat per Section 406 of the Standard Specifications , expect for the following.

Revise the table in Note 1 of Article 406.02 of the Standard Specifications to include:

"QST-H1" for Type of Construction - Tack Coat on Brick, Concrete, or HMA Bases & Prime Coat on Aggregate Bases

Revise the table in article 406.05(b) of the Standard Specifications to read:

Type of Surface to be Primed	Residual Asphalt Rate (lb/sq ft)
Milled HMA, Aged Non-Milled HMA, Milled Concrete, Non-Milled Concrete & Tined Concrete	0.06
Fog Coat between HMA lifts, IL-4.75 & Brick	0.03

Add the following to Article 1032.06 of the Standard Specifications:

"(h) Non-Tracking Emulsified Asphalt QST-H1

Requirements for QST-H1	
Test	Requirement
Saybolt Viscosity at 77 °F (25 °C), (AASHTO T 59), SFS	15 - 100
Storage Stability Test, 24 hr, (AASHTO T 59), %	NA
Residue by Evaporation, 325 ± 5 °F (163 ± 3 °C), (AASHTO T 59), %	57 min.
Sieve Test, No. 20 (850 μm), (AASHTO T 59), %	0.10 max
Tests on Residue from Evaporation	
Penetration at 77 °F (25 °C), 100 g, 5 sec, (AASHTO T 49), dmm	40 - 90
Softening Point, (AASHTO T 53), °F (°C)	-
Solubility, (AASHTO T 44), %	97.5 min.
Original DSR at 82 °C, (AASHTO T 315), kPa	-

Revise the last table of Article 1032.06 to add the following:

"QST-H1" for Use - Tack coat or fog coat & Prime Coat

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES

This work shall be according to Article 669 of the Standard Specifications and the following:

Qualifications. The term environmental firm shall mean an environmental firm with at least five (5) documented leaking underground storage tank (LUST) cleanups or that is pre-qualified in hazardous waste by the Department. Documentation includes but not limited to verifying remediation and special waste operations for sites contaminated with gasoline, diesel, or waste oil in accordance with all Federal, State, or local regulatory requirements and shall be provided to the Engineer for approval. The environmental firm selected shall not be a former or current consultant or have any ties with any of the properties contained within and/or adjacent to this construction project.

General. This Special Provision will likely require the Contractor to subcontract for the execution of certain activities.

All contaminated materials shall be managed as either "uncontaminated soil" or non-special waste. This work shall include monitoring and potential sampling, analytical testing, and management of a material contaminated by regulated substances. The Environmental Firm shall continuously monitor all soil excavation for worker protection and soil contamination. **Phase I Preliminary Engineering information is available through the District's Environmental Studies Unit.** Soil samples or analysis without the approval of the Engineer will be at no additional cost to the Department. The lateral distance is measured from centerline and the farthest distance is the offset distance or construction limit whichever is less.

The Contractor shall manage any excavated soils and sediment within the following areas:

Site 2973-1 – IDOT ROW

- Station 7+75 to Station 8+40 (University Street), 0 to 120 feet RT (PESA Site 2973-1, IDOT ROW, 3600 block of N. University Street, Peoria). This material meets the criteria of Article 669.09(a)(5) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: VOCs, SVOCs, and Metals.

Site 2973-4 – Vacant Land

- Station 111+45 to Station 111+75 (University Street), 0 to 100 feet LT (PESA Site 2973-4, Vacant Land, 3600 block of N. University Street, Peoria). This material meets the criteria of Article 669.09(a)(5) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: VOCs, SVOCs, and Metals.
- Station 7+75 to Station 8+40 (University Street), 0 to 100 feet LT (PESA Site 2973-4, Vacant Land, 3600 block of N. University Street, Peoria). This material meets the criteria of Article 669.09(a)(5) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: VOCs, SVOCs, and Metals.

Site 2973-5 – Vacant Lot

- Station 110+60 to Station 111+75 (University Street), 0 to 120 feet RT (PESA Site 2973-5, Vacant Land, 3622 N. University Street, Peoria). This material meets the criteria of Article 669.09(a)(5) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: VOCs, SVOCs, and Metals.

Site 2973-6 – Beachler's Vehicle Care and Repair

- Station 110+60 to Station 111+45 (University Street), 0 to 75 feet LT (PESA Site 2973-6, Beachler's Vehicle Care and Repair, 3623 N. University Street, Peoria). This material meets the criteria of Article 669.09(a)(5) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: VOCs, SVOCs, and Metals.

BDE SPECIAL PROVISIONS
For the April 22 and June 10, 2016 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
* 80274	2		Aggregate Subgrade Improvement	April 1, 2012	April 1, 2016
80192	3	X	Automated Flagger Assistance Device	Jan. 1, 2008	
80173	4		Bituminous Materials Cost Adjustments	Nov. 2, 2006	July 1, 2015
80241	5		Bridge Demolition Debris	July 1, 2009	
5026I	6		Building Removal-Case I (Non-Friable and Friable Asbestos)	Sept. 1, 1990	April 1, 2010
5048I	7		Building Removal-Case II (Non-Friable Asbestos)	Sept. 1, 1990	April 1, 2010
5049I	8		Building Removal-Case III (Friable Asbestos)	Sept. 1, 1990	April 1, 2010
5053I	9		Building Removal-Case IV (No Asbestos)	Sept. 1, 1990	April 1, 2010
80360	10	X	Coarse Aggregate Quality	July 1, 2015	
80198	11		Completion Date (via calendar days)	April 1, 2008	
80199	12		Completion Date (via calendar days) Plus Working Days	April 1, 2008	
80293	13		Concrete Box Culverts with Skews > 30 Degrees and Design Fills ≤ 5 Feet	April 1, 2012	April 1, 2015
* 80311	14		Concrete End Sections for Pipe Culverts	Jan. 1, 2013	April 1, 2016
* 80277	15	X	Concrete Mix Design – Department Provided	Jan. 1, 2012	April 1, 2016
80261	16		Construction Air Quality – Diesel Retrofit	June 1, 2010	Nov. 1, 2014
* 80029	17		Disadvantaged Business Enterprise Participation	Sept. 1, 2000	Jan. 2, 2016
* 80363	18		Engineer's Field Office	April 1, 2016	
80358	19		Equal Employment Opportunity	April 1, 2015	
* 80364	20	X	Errata for the 2016 Standard Specifications	April 1, 2016	
80229	21	X	Fuel Cost Adjustment	April 1, 2009	July 1, 2015
80304	22		Grooving for Recessed Pavement Markings	Nov. 1, 2012	Aug. 1, 2014
* 80246	23	X	Hot-Mix Asphalt – Density Testing of Longitudinal Joints	Jan. 1, 2010	April 1, 2016
* 80347	24		Hot-Mix Asphalt – Pay for Performance Using Percent Within Limits – Jobsite Sampling	Nov. 1, 2014	April 1, 2016
* 80336	25		Longitudinal Joint and Crack Patching	April 1, 2014	April 1, 2016
80045	26		Material Transfer Device	June 15, 1999	Aug. 1, 2014
* 80342	27		Mechanical Side Tie Bar Inserter	Aug. 1, 2014	April 1, 2016
80165	28		Moisture Cured Urethane Paint System	Nov. 1, 2006	Jan. 1, 2010
* 80361	29		Overhead Sign Structures Certification of Metal Fabricator	Nov. 1, 2015	April 1, 2016
* 80349	30		Pavement Marking Blackout Tape	Nov. 1, 2014	April 1, 2016
* 80298	31		Pavement Marking Tape Type IV	April 1, 2012	April 1, 2016
* 80365	32	X	Pedestrian Push-Button	April 1, 2016	
* 80359	33		Portland Cement Concrete Bridge Deck Curing	April 1, 2015	April 1, 2016
* 80353	34		Portland Cement Concrete Inlay or Overlay	Jan. 1, 2015	April 1, 2016
* 80338	35		Portland Cement Concrete Partial Depth Hot-Mix Asphalt Patching	April 1, 2014	April 1, 2016
* 80300	36		Preformed Plastic Pavement Marking Type D - Inlaid	April 1, 2012	April 1, 2016
80328	37		Progress Payments	Nov. 2, 2013	
3426I	38		Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
80157	39		Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	
* 80306	40	X	Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS)	Nov. 1, 2012	April 1, 2016
* 80340	41		Speed Display Trailer	April 2, 2014	April 1, 2016
80127	42		Steel Cost Adjustment	April 2, 2004	July 1, 2015
80362	43		Steel Slag in Trench Backfill	Jan. 1, 2016	
* 80317	44		Surface Testing of Hot-Mix Asphalt Overlays	Jan. 1, 2013	April 1, 2016

File Name	#		Special Provision Title	Effective	Revised
80355	45		Temporary Concrete Barrier	Jan. 1, 2015	July 1, 2015
20338	46		Training Special Provisions	Oct. 15, 1975	
80318	47		Traversable Pipe Grate	Jan. 1, 2013	April 1, 2014
80288	48	X	Warm Mix Asphalt	Jan. 1, 2012	April 1, 2016
80302	49		Weekly DBE Trucking Reports	June 2, 2012	April 2, 2015
80289	50		Wet Reflective Thermoplastic Pavement Marking	Jan. 1, 2012	
80071	51		Working Days	Jan. 1, 2002	

The following special provisions and recurring special provisions are in the 2016 Standard Specifications.

File Name	Special Provision Title	New Location	Effective	Revised
80240	Above Grade Inlet Protection	Articles 280.02, 280.04, and 1081.15	July 1, 2009	Jan. 1, 2012
80310	Coated Galvanized Steel Conduit	Article 811.03	Jan. 1, 2013	Jan. 1, 2015
80341	Coilable Nonmetallic Conduit	Article 1088.01	Aug. 1, 2014	Jan. 1, 2015
80294	Concrete Box Culverts with Skews ≤ 30 Degrees Regardless of Design Fill and Skews > 30 Degrees with Design Fills > 5 Feet	Article 540.04	April 1, 2012	April 1, 2014
80334	Concrete Gutter, Curb, Median, and Paved Ditch	Articles 606.02, 606.07, and 1050.04	April 1, 2014	Aug. 1, 2014
80335	Contract Claims	Article 109.09	April 1, 2014	
Chk Sht #27	English Substitution of Metric Reinforcement Bars	Article 508.09	April 1, 1996	Jan. 1, 2011
80265	Friction Aggregate	Articles 1004.01 and 1004.03	Jan. 1, 2011	Nov. 1, 2014
80329	Glare Screen	Sections 638 and 1085	Jan. 1, 2014	
Chk Sht #20	Guardrail and Barrier Wall Delineation	Sections 635, 725, 782, and 1097	Dec. 15, 1993	Jan. 1, 2012
80322	Hot-Mix Asphalt – Mixture Design Composition and Volumetric Requirements	Sections 312, 355, 406, 407, 442, 482, 601, 1003, 1004, 1030, and 1102	Nov. 1, 2013	Nov. 1, 2014
80323	Hot-Mix Asphalt – Mixture Design Verification and Production	Sections 406, 1030, and 1102	Nov. 1, 2013	Nov. 1, 2014
80348	Hot-Mix Asphalt – Prime Coat	Sections 403, 406, 407, 408, 1032, and 1102	Nov. 1, 2014	
80315	Insertion Lining of Culverts	Sections 543 and 1029	Jan. 1, 2013	Nov. 1, 2013
80351	Light Tower	Article 1069.08	Jan. 1, 2015	
80324	LRFD Pipe Culvert Burial Tables	Sections 542 and 1040	Nov. 1, 2013	April 1, 2015
80325	LRFD Storm Sewer Burial Tables	Sections 550 and 1040	Nov. 1, 2013	April 1, 2015
80337	Paved Shoulder Removal	Article 440.07	April 1, 2014	
80254	Pavement Patching	Article 701.17	Jan. 1, 2010	
80352	Pavement Striping - Symbols	Article 780.14	Jan. 1, 2015	
Chk Sht #19	Pipe Underdrains	Section 601 and Articles 1003.01, 1003.04, 1004.05, 1040.06, and 1080.05	Sept. 9, 1987	Jan. 1, 2007
80343	Precast Concrete Handhole	Articles 814.02, 814.03, and 1042.17	Aug. 1, 2014	
80350	Retroreflective Sheeting for Highway Signs	Article 1091.03	Nov. 1, 2014	
80327	Reinforcement Bars	Section 508 and Articles 421.04, 442.06, 1006.10	Nov. 1, 2013	
80344	Rigid Metal Conduit	Article 1088.01	Aug. 1, 2014	
80354	Sidewalk, Corner, or Crosswalk Closure	Article 1106.02	Jan. 1, 2015	April 1, 2015
80301	Tracking the Use of Pesticides	Article 107.23	Aug. 1, 2012	
80356	Traffic Barrier Terminals Type 6 or 6B	Article 631.02	Jan. 1, 2015	
80345	Underpass Luminaire	Articles 821.06 and 1067.04	Aug. 1, 2014	April 1, 2015

File Name	Special Provision Title	New Location	Effective	Revised
80357	Urban Half Road Closure with Mountable Median	Articles 701.18, 701.19, and 701.20	Jan. 1, 2015	July 1, 2015
80346	Waterway Obstruction Warning Luminaire	Article 1067.07	Aug. 1, 2014	April 1, 2015

The following special provisions require additional information from the designer. The additional information needs to be included in a separate document attached to this check sheet. 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

AUTOMATED FLAGGER ASSISTANCE DEVICES (BDE)

Effective: January 1, 2008

Description. This work shall consist of furnishing and operating automated flagger assistance devices (AFADs) as part of the work zone traffic control and protection for two-lane highways where two-way traffic is maintained over one lane of pavement. Use of these devices shall be at the option of the Contractor.

Equipment. AFADs shall be according to the FHWA memorandum, "MUTCD - Revised Interim Approval for the use of Automated Flagger Assistance Devices in Temporary Traffic Control Zones (IA-4R)", dated January 28, 2005. The devices shall be mounted on a trailer or a moveable cart and shall meet the requirements of NCHRP 350, Category 4.

The AFAD shall be the Stop/Slow type. This device uses remotely controlled "STOP" and "SLOW" signs to alternately control right-of-way.

Signs for the AFAD shall be according to Article 701.03 of the Standard Specifications and the MUTCD. The signs shall be 24 x 24 in. (600 x 600 mm) having an octagon shaped "STOP" sign on one side and a diamond shaped "SLOW" sign on the opposite side. The letters on the signs shall be 8 in. (200 mm) high. If the "STOP" sign has louvers, the full sign face shall be visible at a distance of 50 ft (15 m) and greater.

The signs shall be supplemented with one of the following types of lights.

(a) Flashing Lights. When flashing lights are used, white or red flashing lights shall be mounted within the "STOP" sign face and white or yellow flashing lights within the "SLOW" sign face.

(b) Stop and Warning Beacons. When beacons are used, a stop beacon shall be mounted 24 in. (600 mm) or less above the "STOP" sign face and a warning beacon mounted 24 in. (600 mm) or less above, below, or to the side of the "SLOW" sign face. As an option, a Type B warning light may be used in lieu of the warning beacon.

A "WAIT ON STOP" sign shall be placed on the right hand side of the roadway at a point where drivers are expected to stop. The sign shall be 24 x 30 in. (600 x 750 mm) with a black legend and border on a white background. The letters shall be at least 6 in. (150 mm) high.

This device may include a gate arm or mast arm that descends to a horizontal position when the "STOP" sign is displayed and rises to a vertical position when the "SLOW" sign is displayed. When included, the end of the arm shall reach at least to the center of the lane being controlled. The arm shall have alternating red and white retroreflective stripes, on both sides, sloping downward at 45 degrees toward the side on which traffic will pass. The stripes shall be 6 in. (150 mm) in width and at least 2 in. (50 mm) in height.

Flagging Requirements. Flaggers and flagging requirements shall be according to Article 701.13 of the Standard Specifications and the following.

AFADs shall be placed at each end of the traffic control, where a flagger is shown on the plans. The flaggers shall be able to view the face of the AFAD and approaching traffic during operation.

To stop traffic, the "STOP" sign shall be displayed, the corresponding lights/beacon shall flash, and when included, the gate arm shall descend to a horizontal position. To permit traffic to move, the "SLOW" sign shall be displayed, the corresponding lights/beacon shall flash, and when included, the gate arm shall rise to a vertical position.

If used at night, the AFAD location shall be illuminated according to Section 701 of the Standard Specifications.

When not in use, AFADs will be considered nonoperating equipment and shall be stored according to Article 701.11 of the Standard Specifications.

Basis of Payment. This work will not be paid for separately but shall be considered as included in the cost of the various traffic control items included in the contract.

80192

COARSE AGGREGATE QUALITY (BDE)

Effective: July 1, 2015

Revise Article 1004.01(b) of the Standard Specifications to read:

"(b) Quality. The coarse aggregate shall be according to the quality standards listed in the following table.

COARSE AGGREGATE QUALITY				
QUALITY TEST	CLASS			
	A	B	C	D
Na_2SO_4 Soundness 5 Cycle, ITP 104 [1/], % Loss max.	15	15	20	25 [2/]
Los Angeles Abrasion, ITP 96 [11/], % Loss max.	40 [3/]	40 [4/]	40 [5/]	45
Minus No. 200 (75 µm) Sieve Material, ITP 11	1.0 [6/]	---	2.5 [7/]	---
Deleterious Materials [10/]				
Shale, % max.	1.0	2.0	4.0 [8/]	---
Clay Lumps, % max.	0.25	0.5	0.5 [8/]	---
Coal & Lignite, % max.	0.25	---	---	---
Soft & Unsound Fragments, % max.	4.0	6.0	8.0 [8/]	---
Other Deleterious, % max.	4.0 [9/]	2.0	2.0 [8/]	---
Total Deleterious, % max.	5.0	6.0	10.0 [8/]	---
Oil-Stained Aggregate [10/], % max	5.0	---	---	

1/ Does not apply to crushed concrete.

2/ For aggregate surface course and aggregate shoulders, the maximum percent loss shall be 30.

3/ For portland cement concrete, the maximum percent loss shall be 45.

4/ Does not apply to crushed slag or crushed steel slag.

5/ For hot-mix asphalt (HMA) binder mixtures, except when used as surface course, the maximum percent loss shall be 45.

6/ For crushed aggregate, if the material finer than the No. 200 (75 µm) sieve consists of the dust from fracture, essentially free from clay or silt, this percentage may be increased to 2.5.

7/ Does not apply to aggregates for HMA binder mixtures.

8/ Does not apply to Class A seal and cover coats.

9/ Includes deleterious chert. In gravel and crushed gravel aggregate, deleterious chert shall be the lightweight fraction separated in a 2.35 heavy media separation. In crushed stone aggregate, deleterious chert shall be the lightweight fraction separated in a 2.55 heavy media separation. Tests shall be run according to ITP 113.

10/ Test shall be run according to ITP 203.

11/ Does not apply to crushed slag.

All varieties of chert contained in gravel coarse aggregate for portland cement concrete, whether crushed or uncrushed, pure or impure, and irrespective of color, will be classed as chert and shall not be present in the total aggregate in excess of 25 percent by weight (mass).

Aggregates used in Class BS concrete (except when poured on subgrade), Class PS concrete, and Class PC concrete (bridge superstructure products only, excluding the approach slab) shall contain no more than two percent by weight (mass) of deleterious materials. Deleterious materials shall include substances whose disintegration is accompanied by an increase in volume which may cause spalling of the concrete."

80360

CONCRETE MIX DESIGN – DEPARTMENT PROVIDED (BDE)

Effective: January 1, 2012
Revised: April 1, 2016

For the concrete mix design requirements in Article 1020.05(a) of the Standard Specifications, the Contractor has the option to request the Engineer determine mix design material proportions for Class PV, PP, RR, BS, DS, SC, and SI concrete. A single mix design for each class of concrete will be provided. Acceptance by the Contractor to use the mix design developed by the Engineer shall not relieve the Contractor from meeting specification requirements.

80277

ERRATA FOR THE 2016 STANDARD SPECIFICATIONS (BDE)

Effective: April 1, 2016

Page 84 Article 204.02. In the seventh line of the first paragraph change "AASHTO T 99 (Method C)" to "Illinois Modified AASHTO T 99 (Method C)".

Page 90 Article 205.06. In the first sentence of the third paragraph change "AASHTO T 99 (Method C)" to "Illinois Modified AASHTO T 99 (Method C)".

Page 91 Article 205.06. In the first sentence of the fourth paragraph change "AASHTO T 99 (Method C)" to "Illinois Modified AASHTO T 99 (Method C)", and in the second sentence change "AASHTO T 224" to "Illinois Modified AASHTO T 99 (Annex A1)".

Page 91 Article 205.06. In the second line of the fifth paragraph change "AASHTO T 191" to "Illinois Modified AASHTO T 191".

Page 91 Article 205.06. In the sixth line of the eighth paragraph change "AASHTO T 99 (Method C)" to "Illinois Modified AASHTO T 99 (Method C)".

Page 148 Article 302.09. In the second sentence of the fifth paragraph change "AASHTO T 191" to "Illinois Modified AASHTO T 191", and in the third sentence change "AASHTO T 99" to "Illinois Modified AASHTO T 99".

Page 152 Article 310.09. In the second sentence of the second paragraph change "AASHTO T 191" to "Illinois Modified AASHTO T 191", and in the third sentence change "AASHTO T 99" to "Illinois Modified AASHTO T 99".

Page 155 Article 311.05(a). In the first sentence of the fifth paragraph change "AASHTO T 99 (Method C)" to "Illinois Modified AASHTO T 99 (Method C)", and in the second sentence change "AASHTO T 224" to "Illinois Modified AASHTO T 99 (Annex A1)".

Page 155 Article 311.05(a). In the second line of the sixth paragraph change "AASHTO T 191" to "Illinois Modified AASHTO T 191".

Page 163 Article 351.05(a). In the second sentence of the fifth paragraph change "AASHTO T 99 (Method C)" to "Illinois Modified AASHTO T 99 (Method C)", and in the third sentence change "AASHTO T 224" to "Illinois Modified AASHTO T 99 (Annex A1)".

Page 163 Article 351.05(a). In the second line of the sixth paragraph change "AASHTO T 191" to "Illinois Modified AASHTO T 191".

Page 169 Article 352.11. In the second sentence of the fourth paragraph change "AASHTO T 191" to "Illinois Modified AASHTO T 191", and in the third sentence change "AASHTO T 134 (Method B)" to "Illinois Modified AASHTO T 134 (Method B)".

Page 169 Article 352.12. In the first sentence of the first paragraph change "AASHTO T 22" to "Illinois Modified AASHTO T 22", and in the second sentence change "AASHTO T 134 (Method B)" to "Illinois Modified AASHTO T 134 (Method B)".

Page 196 Article 406.07(a). After the footnotes in Table 1 - Minimum Roller Requirements for HMA add the following:

"EQUIPMENT DEFINITION

V_s - Vibratory roller, static mode, minimum 125 lb/in. (2.2 kg/mm) of roller width. Maximum speed = 3 mph (5 km/h) or 264 ft/min (80 m/min). If the vibratory roller does not eliminate roller marks, its use shall be discontinued and a tandem roller, adequately ballasted to remove roller marks, shall be used.

V_D - Vibratory roller, dynamic mode, operated at a speed to produce not less than 10 impacts/ft (30 impacts/m).

P - Pneumatic-tired roller, max. speed 3 1/2 mph (5.5 km/h) or 308 ft/min (92 m/min). The pneumatic-tired roller shall have a minimum tire pressure of 80 psi (550 kPa) and shall be equipped with heat retention shields. The self-propelled pneumatic-tired roller shall develop a compression of not less than 300 lb (53 N) nor more than 500 lb (88 N) per in. (mm) of width of the tire tread in contact with the HMA surface.

T_B - Tandem roller for breakdown rolling, 8 to 12 tons (7 to 11 metric tons), 250 to 400 lb/in. (44 to 70 N/mm) of roller width, max. speed = 3 1/2 mph (5.5 km/h) or 308 ft/min (92 m/min).

T_F - Tandem roller for final rolling, 200 to 400 lb/in. (35 to 70 N/mm) of roller width with minimum roller width of 50 in. (1.25 m). Ballast shall be increased if roller marks are not eliminated. Ballast shall be decreased if the mat shoves or distorts.

3W- Three wheel roller, max. speed = 3 mph (5 km/h) or 264 ft/min (80 m/min), 300 to 400 lb/in. (53 to 70 N/mm) of roller width. The three-wheel roller shall weigh 10 to 12 tons (9 to 11 metric tons)."

Page 331 Article 505.04(p). Under Range of Clearance in the first table change "in. x 10^{-6}" to "in. x 10^{-3}".

Page 444 Article 542.03. In the Notes in Table IIIB add "CPP Corrugated Polypropylene (CPP) pipe with smooth interior".

Page 445 Article 542.03. In the fourth column in Table IIIB (metric) change the heading for Type 5 pipe from "CPE" to "CPP".

Page 445 Article 542.03. In the Notes in Table IIIB (metric) change "PE Polyethylene (PE) pipe with a smooth interior" to "CPP Corrugated Polypropylene (CPP) pipe with smooth interior".

Page 449 Article 542.04(f)(2). In the third line of the second paragraph change "AASHTO T 99 (Method C)" to "Illinois Modified AASHTO T 99 (Method C)".

Page 544 Article 639.03. In the first sentence of the first paragraph change "AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, Traffic Signals," to "AASHTO "LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals,"".

Page 546 Article 640.03. In the first sentence of the first paragraph change "AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals" to "AASHTO "LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals"".

Page 548 Article 641.03. In the first sentence of the first paragraph change "AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaire and Traffic Signals," to "AASHTO "LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals,"".

Page 621 Article 727.03. In the first sentence of the third paragraph change "AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals" to "AASHTO "LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals"".

Page 629 Article 734.03(a). In the fourth line of the second paragraph change "AASHTO T 99 (Method C)" to "Illinois Modified AASHTO T 99 (Method C)".

Page 649 Article 801.02. In the first sentence of the first paragraph change "AASHTO's Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals" to "AASHTO "LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals"".

Page 742 Article 1003.04(c). Under Gradation in the table change "(see Article 1003.02(c))" to "(see Article 1003.01(c))".

Page 755 Article 1004.03(b). Revise the third sentence of the first paragraph to read "For Class A (seal or cover coat), and other binder courses, the coarse aggregate shall be Class C quality or better.".

Page 809 Article 1020.04(e). In the third line of the first paragraph change "ITP SCC-3" to "ITP SCC-4".

Page 945 Article 1069.05. In the first sentence of the tenth paragraph change ""Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals"" to "AASHTO "LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals"".

Page 961 Article 1070.04(b)(1). In the third sentence of the first paragraph change ""Standard Specifications of Structural Supports for Highway Signs, Luminaires and Traffic Signals" published by AASHTO" to "AASHTO "LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals"".

Page 989 Article 1077.01. In the second sentence of the first paragraph change "Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, as published by AASHTO" to "AASHTO "LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals"".

Page 1121 Article 1103.13(a). In the first line of the first paragraph change "Bridge Deck Approach Slabs." to "Bridge Deck and Approach Slabs.".

80364

FUEL COST ADJUSTMENT (BDE) (RETURN FORM WITH BID)

Effective: April 1, 2009
Revised: July 1, 2015

Description. Fuel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in fuel prices when optioned by the Contractor. The bidder shall indicate on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form or failure to indicate contract number, company name and sign and date the form shall make this contract exempt of fuel cost adjustments for all categories of work. Failure to indicate "Yes" for any category of work will make that category of work exempt from fuel cost adjustment.

General. The fuel cost adjustment shall apply to contract pay items as grouped by category. The adjustment shall only apply to those categories of work checked "Yes", and only when the cumulative plan quantities for a category exceed the required threshold. Adjustments to work items in a category, either up or down, and extra work paid for by agreed unit price will be subject to fuel cost adjustment only when the category representing the added work was subject to the fuel cost adjustment. Extra work paid for at a lump sum price or by force account will not be subject to fuel cost adjustment. Category descriptions and thresholds for application and the fuel usage factors which are applicable to each are as follows:

(a) Categories of Work.

(1) Category A: Earthwork. Contract pay items performed under Sections 202, 204, and 206 including any modified standard or nonstandard items where the character of the work to be performed is considered earthwork. The cumulative total of all applicable item plan quantities shall exceed 25,000 cu yd (20,000 cu m). Included in the fuel usage factor is a weighted average 0.10 gal/cu yd (0.50 liters/cu m) factor for trucking.

(2) Category B: Subbases and Aggregate Base Courses. Contract pay items constructed under Sections 311, 312 and 351 including any modified standard or nonstandard items where the character of the work to be performed is considered construction of a subbase or aggregate, stabilized or modified base course. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is a 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.

(3) Category C: Hot-Mix Asphalt (HMA) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 355, 406, 407 and 482 including any modified standard or nonstandard items where the character of the work to be performed is considered HMA bases, pavements and shoulders. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.

(4) Category D: Portland Cement Concrete (PCC) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 353, 420, 421 and 483 including any modified standard or nonstandard items where the character of the work to be performed is considered PCC base, pavement or shoulder. The cumulative total of all applicable item plan quantities shall exceed 7500 sq yd (6000 sq m). Included in the fuel usage factor is 1.20 gal/cu yd (5.94 liters/cu m) factor for trucking.

(5) Category E: Structures. Structure items having a cumulative bid price that exceeds $250,000 for pay items constructed under Sections 502, 503, 504, 505, 512, 516 and 540 including any modified standard or nonstandard items where the character of the work to be performed is considered structure work when similar to that performed under these sections and not included in categories A through D.

(b) Fuel Usage Factors.

English Units

Category	Factor	Units
A - Earthwork	0.34	gal / cu yd
B – Subbase and Aggregate Base courses	0.62	gal / ton
C – HMA Bases, Pavements and Shoulders	1.05	gal / ton
D – PCC Bases, Pavements and Shoulders	2.53	gal / cu yd
E – Structures	8.00	gal / $1000

Metric Units

Category	Factor	Units
A - Earthwork	1.68	liters / cu m
B – Subbase and Aggregate Base courses	2.58	liters / metric ton
C – HMA Bases, Pavements and Shoulders	4.37	liters / metric ton
D – PCC Bases, Pavements and Shoulders	12.52	liters / cu m
E – Structures	30.28	liters / $1000

(c) Quantity Conversion Factors.

Category	Conversion	Factor
B	sq yd to ton	0.057 ton / sq yd / in depth
	sq m to metric ton	0.00243 metric ton / sq m / mm depth
C	sq yd to ton	0.056 ton / sq yd / in depth
	sq m to metric ton	0.00239 m ton / sq m / mm depth
D	sq yd to cu yd	0.028 cu yd / sq yd / in depth
	sq m to cu m	0.001 cu m / sq m / mm depth

Method of Adjustment. Fuel cost adjustments will be computed as follows.

$CA = (FPI_P - FPI_L) \times FUF \times Q$

Where: CA = Cost Adjustment, $
FPI_P = Fuel Price Index, as published by the Department for the month the work is performed, $/gal ($/liter)
FPI_L = Fuel Price Index, as published by the Department for the month prior to the letting for work paid for at the contract price; or for the month the agreed unit price letter is submitted by the Contractor for extra work paid for by agreed unit price, $/gal ($/liter)
FUF = Fuel Usage Factor in the pay item(s) being adjusted
Q = Authorized construction Quantity, tons (metric tons) or cu yd (cu m)

The entire FUF indicated in paragraph (b) will be used regardless of use of trucking to perform the work.

Basis of Payment. Fuel cost adjustments may be positive or negative but will only be made when there is a difference between the FPI_L and FPI_P in excess of five percent, as calculated by:

Percent Difference = $\{(FPI_L - FPI_P) \div FPI_L\} \times 100$

Fuel cost adjustments will be calculated for each calendar month in which applicable work is performed; and will be paid or deducted when all other contract requirements for the items of work are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Return With Bid

ILLINOIS DEPARTMENT OF TRANSPORTATION

OPTION FOR FUEL COST ADJUSTMENT

The bidder shall submit this completed form with his/her bid. Failure to submit the form or properly complete contract number, company name, and sign and date the form shall make this contract exempt of fuel cost adjustments in all categories. Failure to indicate "Yes" for any category of work at the time of bid will make that category of work exempt from fuel cost adjustment. After award, this form, when submitted shall become part of the contract.

Contract No.: _____

Company Name: _____

Contractor's Option:

Is your company opting to include this special provision as part of the contract plans for the following categories of work?

Category A Earthwork.	Yes	☐
Category B Subbases and Aggregate Base Courses	Yes	☐
Category C HMA Bases, Pavements and Shoulders	Yes	☐
Category D PCC Bases, Pavements and Shoulders	Yes	☐
Category E Structures	Yes	☐

Signature: _____ **Date:** _____

80229

HOT-MIX ASPHALT - DENSITY TESTING OF LONGITUDINAL JOINTS (BDE)

Effective: January 1, 2010
Revised: April 1, 2106

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."

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

PEDESTRIAN PUSH-BUTTON (BDE)

Effective: April 1, 2016

Revise Article 888.03 of the Standard Specifications to read:

"**888.03 Installation.** The pedestrian push-button shall be located next to the curb ramp, sidewalk, or a paved clear space with a minimum size of 2.5 ft x 4.0 ft (760 mm x 1.22 m). The front face of the push-button should be even with the nearest edge of the curb ramp, sidewalk, or clear space but shall in no case be further away than 10 in. (250 mm). The height of the push-button should be 36 in. (900 mm) above the paved surface but shall in no case be less than 30 in. (760 mm) or more than 42 in. (1.05 m). The housing of the push-button shall be completely in contact with the post, pole, or extension arm on which it is mounted. The Contractor shall apply an anti-seize paste compound on all nuts and bolts prior to assembly. The methods of mounting both the pedestrian push-button and the sign shall be approved by the Engineer."

80365

RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (BDE)

Effective: November 1, 2012
Revise: April 1, 2016

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 produced by cold milling or crushing an existing hot-mix asphalt (HMA) pavement. 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 Bureau of Materials and Physical Research Policy Memorandum, "Reclaimed Asphalt Shingle (RAS) Sources", by weight of RAS. All RAS used shall come from a Bureau of Materials and Physical Research approved processing facility where it shall be ground and processed to 100 percent passing the 3/8 in. (9.5 mm) sieve and 93 percent passing the #4 (4.75 mm) sieve based on a dry shake gradation. RAS shall be uniform in gradation and asphalt binder content and 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. No additional RAP shall be added to the pile after the pile has been sealed. Stockpiles shall be sufficiently separated to prevent intermingling at the base. Stockpiles shall be identified by signs indicating the type as listed below (i.e. "Homogeneous Surface").

Prior to milling, the Contractor shall request the District provide documentation on the quality of the RAP to clarify the appropriate stockpile.

(1) Fractionated RAP (FRAP). FRAP shall consist of RAP from Class I, HMA (High and Low ESAL) 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 fractionated prior to testing by screening into a minimum of two size 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 shall pass the sieve size specified below for the mix into which the FRAP will be incorporated.

Mixture FRAP will be used in:	Sieve Size that 100 % of FRAP Shall Pass
IL-19.0	1 1/2 in. (40 mm)
IL-9.5	3/4 in. (20 mm)
IL-4.75	1/2 in. (13 mm)

(2) Homogeneous. Homogeneous RAP stockpiles shall consist of RAP from Class I, HMA (High and Low ESAL) mixtures and represent: 1) the same aggregate quality, but shall be at least C quality; 2) the same type of crushed aggregate (either crushed natural aggregate, ACBF slag, or steel slag); 3) similar gradation; and 4) similar asphalt binder content. If approved by the Engineer, combined single pass surface/binder millings may be considered "homogeneous" with a quality rating dictated by the lowest coarse aggregate quality present in the mixture.

(3) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I, HMA (High and Low ESAL) 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 prior to testing by crushing to where all RAP shall pass the 5/8 in. (16 mm) or smaller screen. Conglomerate RAP stockpiles shall not contain steel slag.

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

RAP/FRAP containing contaminants, such as earth, brick, sand, concrete, sheet asphalt, bituminous surface treatment (i.e. chip seal), pavement fabric, joint sealants, 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 not be intermingled. Each stockpile shall be signed indicating what type of RAS is present.

Unless otherwise specified by the Engineer, mechanically blending manufactured sand (FM 20 or FM 22) up to an equal weight of RAS with the processed RAS will be permitted to improve workability. The sand shall be "B Quality" or better from an approved Aggregate Gradation Control System source. The sand shall be 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. RAP/FRAP and RAS testing shall be according to the following.

(a) RAP/FRAP Testing. When used in HMA, the RAP/FRAP shall be sampled and tested either during or after stockpiling.

(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) 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.

Each sample shall be split to obtain two equal 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 or RAS blended with manufactured sand shall be sampled and tested during stockpiling according to Bureau of Materials and Physical Research Policy Memorandum, "Reclaimed Asphalt Shingle (RAS) Source".

Samples shall be collected during stockpiling 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 250 tons (225 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 or RAS blended with manufactured sand shall be stockpiled 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.

Before testing, each sample shall be split to obtain two test samples. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall perform a washed extraction and test for unacceptable materials on 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.

If the sampling and testing was performed at the shingle processing facility in accordance with the QC Plan, the Contractor shall obtain and make available all of the test results from start of the initial stockpile.

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

(a) Evaluation of RAP/FRAP Test Results. All of the extraction results shall be compiled and averaged for asphalt binder content and gradation, and when applicable G_{mm}. Individual extraction test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	FRAP/Homogeneous/ Conglomerate
1 in. (25 mm)	
1/2 in. (12.5 mm)	± 8 %
No. 4 (4.75 mm)	± 6 %
No. 8 (2.36 mm)	± 5 %
No. 16 (1.18 mm)	
No. 30 (600 µm)	± 5 %
No. 200 (75 µm)	± 2.0 %
Asphalt Binder	± 0.4 % 1/
G_{mm}	± 0.03

1/ The tolerance for FRAP shall be ± 0.3 %.

If more than 20 percent of the individual sieves and/or asphalt binder content tests are out of the above tolerances, the RAP/FRAP shall not be used in HMA unless the RAP/FRAP representing the failing tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

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)".

(b) Evaluation of RAS and RAS Blended with Manufactured Sand 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. Individual test results, when compared to the averages, 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)	± 2.0 %
Asphalt Binder Content	± 1.5 %

If more than 20 percent of the individual sieves and/or asphalt binder content tests are out of the above tolerances, or if the percent unacceptable material exceeds 0.5 percent by weight of material retained on the # 4 (4.75 mm) sieve, the RAS or RAS blend shall not be used in Department projects. All test data and acceptance ranges shall be sent to the District for evaluation.

1031.05 Quality Designation of Aggregate in RAP/FRAP.

(a) RAP. The aggregate quality of the RAP for homogeneous and conglomerate 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, Superpave/HMA (High ESAL), or (Low ESAL) IL-9.5L surface mixtures are designated as containing Class B quality coarse aggregate.

(2) RAP from Class I binder, Superpave/HMA (High ESAL) binder, or (Low ESAL) IL-19.0L binder mixtures are designated as containing Class C 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. Coarse and fine FRAP stockpiles containing plus #4 (4.75 mm) sieve coarse aggregate shall have a maximum tonnage of 5000 tons (4500 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 Bureau of Materials and Physical Research Aggregate Lab for MicroDeval Testing, according to ITP 327. A maximum loss of 15.0 percent will be applied for all HMA applications.

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

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

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

(2) Steel Slag Stockpiles. Homogeneous RAP stockpiles containing steel slag will be approved for use in all HMA (High ESAL and Low ESAL) Surface and Binder Mixture applications.

(3) Use in HMA Surface Mixtures (High and Low ESAL). RAP/FRAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall be FRAP or homogeneous in which the coarse aggregate is Class B quality or better. RAP/FRAP from Conglomerate stockpiles shall be considered equivalent to limestone for frictional considerations. Known frictional contributions from plus #4 (4.75 mm) homogeneous RAP and FRAP stockpiles will be accounted for in meeting frictional requirements in the specified mixture.

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

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

(6) When the Contractor chooses the RAP option, the percentage of RAP shall not exceed the amounts indicated in Article 1031.06(c)(1) below for a given Ndesign.

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

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

(1) RAP/RAS. When RAP is used alone or RAP is used in conjunction with RAS, the percentage of virgin asphalt binder replacement shall not exceed the amounts listed in the Max RAP/RAS ABR table listed below for the given Ndesign.

RAP/RAS Maximum Asphalt Binder Replacement (ABR) Percentage

HMA Mixtures 1/, 2/	RAP/RAS Maximum ABR %		
Ndesign	Binder/Leveling Binder	Surface	Polymer Modified
30	30	30	10

50	25	15	10
70	15	10	10
90	10	10	10

1/ For Low ESAL HMA shoulder and stabilized subbase, the RAP/RAS ABR shall not exceed 50 percent of the mixture.

2/ When RAP/RAS ABR exceeds 20 percent, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28). If warm mix asphalt (WMA) technology is utilized and production temperatures do not exceed 275 °F (135 °C), the high and low virgin asphalt binder grades shall each be reduced by one grade when RAP/RAS ABR exceeds 25 percent (i.e. 26 percent RAP/RAS ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28).

(2) FRAP/RAS. When FRAP is used alone or FRAP is used in conjunction with RAS, the percentage of virgin asphalt binder replacement shall not exceed the amounts listed in the FRAP/RAS table listed below for the given Ndesign.

FRAP/RAS Maximum Asphalt Binder Replacement (ABR) Percentage

HMA Mixtures 1/, 2/	FRAP/RAS Maximum ABR %		
Ndesign	Binder/Leveling Binder	Surface	Polymer Modified 3/, 4/
30	50	40	10
50	40	35	10
70	40	30	10
90	40	30	10

1/ For Low ESAL HMA shoulder and stabilized subbase, the FRAP/RAS ABR shall not exceed 50 percent of the mixture.

2/ When FRAP/RAS ABR exceeds 20 percent for all mixes, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28). If warm mix asphalt (WMA) technology is utilized and production temperatures do not exceed 275 °F (135 °C), the high and low virgin asphalt binder grades shall each be reduced by one grade when FRAP/RAS ABR exceeds 25 percent (i.e. 26 percent ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28).

3/ For SMA the FRAP/RAS ABR shall not exceed 20 percent.

4/ For IL-4.75 mix the FRAP/RAS ABR shall not exceed 30 percent.

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) RAP/FRAP and/or RAS. RAP/FRAP and/or RAS mix designs shall be submitted for verification. If additional RAP/FRAP and/or RAS stockpiles are tested and found that no more than 20 percent of the results, as defined under "Testing" herein, are outside of the control tolerances set for the original RAP/FRAP and/or RAS stockpile and HMA mix design, and meets all of the requirements herein, the additional RAP/FRAP and/or RAS stockpiles may be used in the original mix design at the percent previously verified.

(b) RAS. Type 1 and Type 2 RAS are not interchangeable in a mix design. A RAS stone bulk specific gravity (Gsb) of 2.300 shall be used for mix design purposes.

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

(a) RAP/FRAP. The coarse aggregate in all RAP/FRAP used shall be equal to or less than the nominal maximum size requirement for the HMA mixture being produced.

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 RAP feed system to remove or reduce oversized material. If material passing the sizing device adversely affects the mix production or quality of the mix, the sizing device shall be set at a size specified by the Engineer.

If the RAP/FRAP control tolerances or QC/QA test results require corrective action, the Contractor shall cease production of the mixture containing RAP/FRAP and either switch to the virgin aggregate design or submit a new RAP/FRAP design.

(b) 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.

(c) RAP/FRAP and/or RAS. HMA plants utilizing RAP/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 RAP/FRAP/RAS 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 RAP/FRAP material as a percent of the total mix to the nearest 0.1 percent.

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

(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).

e. RAP/FRAP/RAS weight to the nearest pound (kilogram).

f. Virgin asphalt binder weight to the nearest pound (kilogram).

g. Residual asphalt binder in the RAP/FRAP/RAS 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 in aggregate surface course (temporary access entrances only) and aggregate wedge shoulders, Type B 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 Bureau of Materials and Physical Research Policy Memorandum, "Reclaimed Asphalt Pavement (RAP) for Aggregate Applications".

(b) Gradation. One hundred percent of the RAP material shall pass the 1 1/2 in. (37.5 mm) sieve. The RAP material shall be reasonably well graded from coarse to fine. RAP material that is gap-graded or single sized will not be accepted."

80306

WARM MIX ASPHALT (BDE)

Effective: January 1, 2012
Revised: April 1, 2016

Description. This work shall consist of designing, producing and constructing Warm Mix Asphalt (WMA) in lieu of Hot Mix Asphalt (HMA) at the Contractor's option. Work shall be according to Sections 406, 407, 408, 1030, and 1102 of the Standard Specifications, except as modified herein. In addition, any references to HMA in the Standard Specifications, or the special provisions shall be construed to include WMA.

WMA is an asphalt mixture which can be produced at temperatures lower than allowed for HMA utilizing approved WMA technologies. WMA technologies are defined as the use of additives or processes which allow a reduction in the temperatures at which HMA mixes are produced and placed. WMA is produced by the use of additives, a water foaming process, or combination of both. Additives include minerals, chemicals or organics incorporated into the asphalt binder stream in a dedicated delivery system. The process of foaming injects water into the asphalt binder stream, just prior to incorporation of the asphalt binder with the aggregate.

Approved WMA technologies may also be used in HMA provided all the requirements specified herein, with the exception of temperature, are met. However, asphalt mixtures produced at temperatures in excess of 275 °F (135 °C) will not be considered WMA when determining the grade reduction of the virgin asphalt binder grade.

Equipment.

Revise the first paragraph of Article 1102.01 of the Standard Specifications to read:

"**1102.01 Hot-Mix Asphalt Plant.** The hot-mix asphalt (HMA) plant shall be the batch-type, continuous-type, or dryer drum plant. The plants shall be evaluated for prequalification rating and approval to produce HMA according to the current Bureau of Materials and Physical Research Policy Memorandum, "Approval of Hot-Mix Asphalt Plants and Equipment". Once approved, the Contractor shall notify the Bureau of Materials and Physical Research to obtain approval of all plant modifications. The plants shall not be used to produce mixtures concurrently for more than one project or for private work unless permission is granted in writing by the Engineer. The plant units shall be so designed, coordinated and operated that they will function properly and produce HMA having uniform temperatures and compositions within the tolerances specified. The plant units shall meet the following requirements."

Add the following to Article 1102.01(a) of the Standard Specifications.

"(11) Equipment for Warm Mix Technologies.

a. Foaming. Metering equipment for foamed asphalt shall have an accuracy of ± 2 percent of the actual water metered. The foaming control system shall be electronically interfaced with the asphalt binder meter.

b. Additives. Additives shall be introduced into the plant according to the supplier's recommendations and shall be approved by the Engineer. The system for introducing the WMA additive shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes."

Mix Design Verification.

Add the following to Article 1030.04 of the Standard Specifications.

"(e) Warm Mix Technologies.

(1) Foaming. WMA mix design verification will not be required when foaming technology is used alone (without WMA additives). However, the foaming technology shall only be used on HMA designs previously approved by the Department.

(2) Additives. WMA mix designs utilizing additives shall be submitted to the Engineer for mix design verification."

Construction Requirements.

Revise the second paragraph of Article 406.06(b)(1) of the Standard Specifications to read:

"The HMA shall be delivered at a temperature of 250 to 350 °F (120 to 175 °C). WMA shall be delivered at a minimum temperature of 215 °F (102 °C)."

Basis of Payment.

This work will be paid at the contract unit price bid for the HMA pay items involved. Anti-strip will not be paid for separately, but shall be considered as included in the cost of the work.

80288

10507b 105.07
UTILITIES – LOCATIONS/INFORMATION ON PLANS

Effective: November 8, 2013

The locations of existing water mains, gas mains, sewers, electric power lines, telephone lines, and other utilities as shown on the plans are based on field investigation and locations provided by the utility companies, but they are not guaranteed. Unless elevations are shown, all utility locations shown on the cross sections are based on the approximate depth supplied by the utility company. It shall be the Contractor's responsibility to ascertain their exact location from the utility companies and by field inspection.

10731 107.31
LOCATION OF UNDERGROUND STATE MAINTAINED FACILITIES

Effective: August 3, 2007 Revised: July 31, 2009

The Contractor shall be responsible for locating existing and proposed IDOT electrical facilities (traffic signal, overhead lighting, Intelligent Transportation System, etc.) prior to performing any work at his/her own expense if required. The Contractor shall also be liable for any damage to IDOT facilities resulting from inaccurate locating.

The Contractor may obtain, on request, plans for existing electrical facilities from the Department.

The Contractor shall also be responsible for locating and providing protection for IDOT facilities during all phases of construction. If at any time the facilities are damaged, the Contractor shall immediately notify the Department and make all necessary arrangements for repair to the satisfaction of the Engineer. This work will not be paid for separately, but shall be included in the contract bid price.

31101 311.01
SUBBASE GRANULAR MATERIAL

Effective: November 5, 2004

This work shall be in accordance with Section 311 of the Standard Specifications and as specified herein.

All Subbase Granular Material shall have a minimum IBR of 40.

40601 406.01
ANTI-STRIP ADDITIVE FOR HOT-MIX ASPHALT

Effective July 30, 2010

If an anti-stripping additive is required for any hot-mix asphalt in accordance with Article 1030.04(c), the cost of the additive will not be paid for separately, but shall be considered as included in the contract unit price bid for the hot-mix asphalt item(s) involved.

44003 440.03

PROTECTION OF FRAMES AND LIDS OF UTILITY STRUCTURES

Effective March 6, 1991 Revised January 1, 2007

This work shall consist of protecting frames and lids of utility structures in the pavement after the adjacent hot-mix asphalt surface has been removed to the required depth by cold milling or by hand methods.

After the area has been swept clean and before the lane is opened to traffic, a hot bituminous mixture shall be placed around the casting, flush with its surface and decreasing to a featheredge in a distance of 4 feet (1.2 m) around the entire surface of the casting. Cold mix or milled material will not be permitted. This mixture shall remain in place until the day surfacing operations are undertaken within the immediate area of the structure. Prior to placing the surface course, the temporary hot-mix asphalt mixture shall be removed and disposed of by the Contractor as specified in Article 202.03 of the Standard Specifications.

The temporary tapers and their removal shall be considered included in the contract unit price per Square Meter (Square Yard) for HOT-MIX ASPHALT SURFACE REMOVAL of the depth specified, and no additional compensation will be allowed.

44003b 440.03b

SURFACE REMOVAL, VARIABLE DEPTH

Description: This work shall consist of removing a portion of the existing hot-mix asphalt concrete surface course in accordance with the applicable portions of Section 440 and 1101 of the Standard Specifications, this special provision, details in the plans and as directed by the Engineer. The cold milled salvaged aggregate resulting from this operation shall become the property of the Contractor.

When the teeth become worn so that they do not produce a uniform surface texture, they shall all be changed at the same time (as a unit). Occasionally, individual teeth may be changed if they lock up or break, but this method shall not be used to avoid changing the set of teeth as a unit.

The moldboard is critical in obtaining the desired surface texture. It shall be straight, true, and free of excessive nicks or wear, and it shall be replaced as necessary to uniformly produce the required surface texture. Gouging of the pavement by more than 1/4 inch (6 mm) shall be sufficient cause to require replacement of all teeth. Occasional gouges, due to deteriorated pavement condition, or separation of lifts will not be cause to replace all teeth. The Engineer will be the sole judge of the cause of the pavement gouging and the corrective work required. Corrective work due to negligence or poor workmanship will be at the Contractor's expense.

Construction Requirements

General: Weather conditions, when milling work is performed, must be such that short term or temporary pavement markings can be placed the day the surface is milled in accordance with Section 703 "Work Zone Pavement Markings."

An automatic grade control device shall be used when milling mainline pavement and shall be capable of controlling the elevation of the drum relative to either a preset grade control stringline or a grade reference device traveling on the adjacent pavement surface. The automatic grade control device may be utilized on only one side of the machine with an automatic slope control device controlling the opposite side. The traveling grade reference device shall not be less than 30 feet (9 m) in length for rural areas. For urban areas, a device not less than 20 feet (6 m) in length will be required. When milling cross roads, turn lanes, intersections, crossovers, or other miscellaneous areas, the Engineer may permit the use of a matching shoe.

The Contractor shall use the new constructed gutter for longitudinal grade control and set the cross slope as indicated on the typical section drawings.

Surface tests will be performed according to Article 407.09(a) of the Standard Specifications. The profile will be taken 3 ft. (0.9 m) from and parallel to each edge of pavement and 3 ft. (0.9 m) from and parallel to the centerline on each side. If a shadow area is found at the 3 ft. (0.9 m) points, the pavement smoothness tester will be moved sufficient distance either side to measure the Contractor's milling efforts. If any (milled) surface variations found to be over 1/4" in 10' (6 mm in 3 m), then the roadway shall be re-profiled at no additional cost. In addition, the Contractor shall be responsible for refilling, with approved hot-mix asphalt mixtures, any area that lowered the pavement profile as a result of his faulty milling operations if directed by the Engineer. The Contractor shall be responsible for providing the pavement smoothness tester described elsewhere to retest the pavement profile obtained.

If the milling depth is intended to expose the original concrete pavement, then additional hand or machine work may be necessary to remove any remaining veneer of bituminous pavement which may be left in place behind the milling machine. Such work will be at the direction of the Engineer and at no extra cost to the State.

The Contractor shall provide a 10' (3 m) straightedge equipped with a carpenter's level or a 7' (2.1 m) electronic straightedge to check the cross slope of the roadway at regular intervals as directed by the Engineer.

Surface Texture: Each tooth on the cutting drum shall produce a series of discontinuous longitudinal striations. There shall be 16 to 20 striations (tooth marks) for each tooth for each 6' (1.8 m) in the longitudinal direction, and each striation shall be 1.7 inches ± 0.2 inch (43 ± 5 mm) in length after the area is planned by the moldboard. Thus, the planed length between each pair of striations shall be 2.3 inches ± 0.2 inch (58 ± 5 mm). There shall be 80 to 96 rows of discontinuous longitudinal striations for each 5' (1.5 m) in the transverse dimension. The areas between the striations in both the longitudinal and transverse directions shall be flat topped and coplaner. The moldboard shall be used to cut this plane; and any time the operation fails to produce this flat plane interspersed with a uniform pattern of discontinuous longitudinal striations, the operation shall be stopped and the cause determined and corrected before recommencing. Other similar patterns of uniform discontinuous longitudinal striations interspersed on a flat plane may be approved by the Engineer.

The startup milling speed shall be limited to a maximum of 50' (15 m) per minute. The Contractor shall limit his operations to this speed to demonstrate his ability to obtain the striations and rideability as described above. If the Contractor is able to demonstrate that he can consistently obtain the desired striations and rideability at a greater speed he will be permitted to run at the increased speed.

Cleanup: After cold milling a traffic lane and before opening the lane to traffic, the pavement shall be swept by a self-propelled street sweeper with power vacuum capability to prevent compaction of the cuttings onto the pavement. All loose material shall be removed from the roadway. Before the prime coat is placed, the pavement shall be cleaned of all foreign material to the satisfaction of the Engineer.

This cleanup work shall be considered included in the contract unit price per Square Yard (Square Meter) for SURFACE REMOVAL, VARIABLE DEPTH and no additional compensation will be allowed.

Method of Measurement:

Contract Quantities. The requirements for the use of Contract Quantities shall be Article 202.07(a) of the Standard Specifications.

Basis of Payment: The cold milling and planing will be paid for at the contract unit price per Square Yard (Square Meter) for SURFACE REMOVAL, VARIABLE DEPTH. Payment as specified will include variations in depth of cuts due to rutting, superelevations, and pavement crown and no additional compensation will be allowed.

55000 550.00
STORM SEWER, (WATER MAIN QUALITY PIPE)

Effective January 1, 2011
Revised August 1, 2014

This work consists of constructing storm sewer to meet water main standards, as required by the IEPA or when otherwise specified. The work shall be performed in accordance with applicable parts of Section 550 of the Standard Specifications, applicable sections of the current edition of the IEPA Regulations (Title 35 of the Illinois Administrative Code, Subtitle F, Chapter II, Section 653.119), the applicable sections of the current edition of the "Standard Specifications for Water and Sewer Main Construction in Illinois", and as herein specified.

This provision shall govern the installation of all storm sewers which do not meet IEPA criteria for separation distance between storm sewers and water mains. Separation criteria for storm sewers placed adjacent to water mains and water service lines are as follows:

(1) Water mains and water service lines shall be located at least 10 feet (3.05 meters) horizontally from any existing or proposed drain, storm sewer, sanitary sewer, or sewer service connections.

(2) Water mains and water service lines may be located closer than 10 feet (3.05 meters) to a sewer line when:

(a) Local conditions prevent a lateral separation of 10 feet (3.05 meters); and

(b) The water main or water service invert is 18 inches (460 mm) above the crown of the sewer; and

(c) The water main or water service is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.

(3) A water main or water service shall be separated from a sewer so that its invert is a minimum of 18 inches (460 mm) above the crown of the drain or sewer whenever water mains or services cross storm sewers, sanitary sewers or sewer service connections. The vertical separation shall be maintained for that portion of the water main or water services located within 10 feet (3.05 meters) horizontally of any sewer or drain crossed.

When it is impossible to meet (1), (2) or (3) above, the storm sewer shall be constructed of concrete pressure pipe, slip-on or mechanical joints ductile iron pipe, or PVC pipe equivalent to water main standards of construction. Construction shall extend on each side of the crossing until the perpendicular distance from the water main or water service to the sewer or drain line is at least 10 feet (3.05 meters). Storm sewer meeting water main requirements shall be constructed of the following pipe materials:

Concrete Pressure Pipe

Concrete pressure pipe shall conform to the latest ANSI/AWWA C300, C301, C302, or C303.

Joints shall conform to Article 41-2.07B of the "Standard Specifications for Water and Sewer Main Construction in Illinois."

Ductile Iron Pipe

Ductile Iron pipe shall conform to ANSI A 21.51 (AWWA C151), class or thickness designed per ANSI A 21,50 (AWWA C150), tar (seal) coated and/or cement lined per ANSI A 21.4 (AWWA C104), with a mechanical or rubber ring (slip seal or push on) joints.

Joints for ductile iron pipe shall be in accordance with the following applicable specifications.

1. Mechanical Joints - AWWA C111 and C600
2. Push-On Joints - AWWA C111 and C600

Plastic Pipe

Plastic pipe shall be marked with the manufacturer's name (or trademark); ASTM or AWWA specification; Schedule Number, Dimension Ratio (DR) Number or Standard Dimension Ratio (SDR) Number; and Cell Class. The pipe and fittings shall also meet NSF Standard 14, and bear the NSF seal of approval. Fittings shall be compatible with the type of pipe used. The plastic pipe options shall be in accordance with the following:

1. Polyvinyl Chloride (PVC) conforming to ASTM Standard D 1785. Schedule 80 is the minimum required for all pipe sizes, except when the pipe is to be threaded, and then it shall be Schedule 120. It shall be made from PVC compound meeting ASTM D 1784, Class 12454.
2. Polyvinyl Chloride (PVC) conforming to ASTM D 2241. A minimum wall thickness of

SDR 26 is required for all pipe sizes (Note: The lower the SDR number, the higher the wall thickness and pressure rating). It shall be made from PVC compound meeting ASTM D 1784, Class 12454.

3. Chlorinated Polyvinyl Chloride (CPVC) conforming to ASTM f 441. A minimum of Schedule 80 is required for all pipe sizes. Threaded joints are not allowed. It shall be made from CPVC compound meeting ASTM D 1784, Class 23447.
4. Chlorinated Polyvinyl Chloride (CPVC) conforming to ASTM F 442. A minimum wall thickness of SDR 26 is required for all pipe sizes (Note: The lower the SDR number, the higher the wall thickness and pressure rating). It shall be made from CPVC compound meeting ASTM D 1784.
5. Polyvinyl Chloride (PVC) conforming to ANSI/AWWA C900. A minimum of wall thickness of DR 25 is required for all pipe sizes (Note: The lower the DR number, the higher the wall thickness and pressure rating). It shall be made from PVC compound meeting ASTM D 1784, Class 12454.
6. Polyvinyl Chloride (PVC) conforming to ANSI/AWWA C905. A minimum of wall thickness of DR 26 is required for all pipe sizes (Note: The lower the DR number, the higher the wall thickness and pressure rating). It shall be made from PVC compound meeting ASTM D 1784, Class 12454.

Joining of plastic pipe shall be by push-on joint, solvent welded joint, heat welded joint, flanged joint, or threaded joint, in accordance with the pipe manufacturer's instructions and industry standards. Special precautions shall be taken to insure clean, dry contact surfaces when making solvent or heat welded joints. Adequate setting time shall be allowed for maximum strength.

Elastometric seals (gaskets) used for push-on joints shall comply with ASTM F477.

Solvent cement shall be specific for the plastic pipe material and shall comply with ASTM D 2564 (PVC) or ASTM F 493 (CPVC) and be approved by NSF.

This work will be measured and paid for at the contract unit price per Foot (Meter) for STORM SEWER (WATER MAIN QUALITY PIPE) of the diameter and type specified.

81000 810.00
CONDUIT, PUSHED OR TRENCHED

Effective October 1, 1991 Revised January 1, 2007

This work shall consist of furnishing and installing conduit under an existing roadway, driveway, or sidewalk, or trenched into the ground. The Contractor may substitute coilable polyethylene conduit of equal size.

In urban areas where the existing pavement is to be overlaid, if utility conflicts or other circumstances make a push impossible, then the Engineer may direct the Contractor to saw cut the pavement to install the conduit. This work shall consist of using a wheel saw to cut a 4" (100 mm) wide cut through the pavement and installing the conduit just below the pavement structure. The Contractor shall then backfill the cut with an approved bituminous concrete mixture. This work shall be performed before any rotomilling or overlaying of the pavement. The work of saw cutting the pavement and backfilling the cut will be paid for according to Article 109.04 of the Standard Specifications.

Basis of Payment. This work will be paid for at the contract unit price per Foot (Meter) for CONDUIT of the size and type specified, which price shall be payment in full for furnishing and installing the conduit and fittings complete.

110300 1103.00
PCC QC/QA ELECTRONIC REPORT SUBMITTAL

Effective April 26, 2013

The Contractor's QC personnel shall be responsible for electronically submitting PRO and IND MI 654 Air, Slump, Quantity and PRO MI 655 PCC Strength Reports to the Department. The format for the electronic submittals will be the PCC QC/QA reporting program, which will be provided by the Department. Microsoft Office 2007 or newer is required for this program which must be provided by the Contractor.

110303 1103.03
PCC AUTOMATIC BATCHING EQUIPMENT

Effective April 23, 2010 Revised November 8, 2013

Portland cement concrete provided shall be produced from batch plants that conform to the requirements of Article 1103.03 (a) and (b) of the Standard Specifications for Road and Bridge Construction. Semi-automatic batching will not be allowed.

In addition, the batching plant shall be a computerized plant interfaced with a printer and shall print actual batch weights, added water, tempering water, mixing time, and amount of each additive per batch. At the discretion of the Engineer, archived electronic versions of batch proportions will be acceptable. Truck delivery tickets will still be required as per Article 1020.11 (a)(7) of the Standard Specifications.

UNIVERSITY STREET WATERMAIN REPLACEMENT
FROM MERLE LANE TO WAR MEMORIAL DRIVE

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TITLE	PAGE
SUPPLEMENTAL TECHNICAL SPECIFICATIONS	
SUPPLEMENTAL TECHNICAL SPECIFICATIONS	10 PAGES

Supplemental Technical Specifications

The Technical Specification used for Developer Installed Mains shall be "The American Water Works Service Company Incorporated Standard Pipeline Specifications" dated 2008. The Supplemental Technical Specifications amend or supplement the technical specifications. All provisions, which are not so amended or supplemented by the Supplemental Technical Specifications, shall remain in full force and effect:

Engineer shall mean Illinois American Water representative

DIVISION 2 – Site Work

Section 2020 – Dewatering

Contractor shall ensure that trench is sufficiently dewatered as outlined in the specification. Contractor shall be responsible for obtaining and paying for any permits required for dewatering and disposal shall be at the discretion of the Developer and Developer's Engineer.

Section 2025 – Existing Utilities and Structures

Part 3.01 Local Illinois American contact shall be immediately notified of any conflicts or obstructions to the approved water main alignment. No deviations of the approved water main alignment shall be made without the consent and approval by Illinois American.

Part 3.04 D (3) Encasement of proposed watermain with water main grade PVC pipe at the consent of Illinois American. The use of casing spacers are not required in encasements of less than 30 feet. The ends of the encasing pipe shall be sealed.

Part 3.04 E Separation of Water Mains, Sanitary Sewer and Storm Sewers shall be constructed according to the Illinois Environmental Protection Agency Title 35, Subtitle F, Chapter II, Part 653, Section 653.119. Alternate solutions as presented in the Illinois Society of Professional Engineers "Standard Specifications for Water and Sewer main Construction in Illinois"; Fifth Edition shall be acceptable at the discretion of the Water Company Representative and the Illinois Environmental Protection Agency.

Section 2105 – Clearing and Grubbing

Payment shall be at the discretion of the Developer and Developer's Engineer.

Section 2210– Trenching, Backfilling and Compacting

Part 2.03– Illinois American does not require the use of bedding material for ductile iron and HDPE pipe, unless trench material is unacceptable or rock has

been encountered. Trench bottom shall be flat and shall be benched at each joint to allow full contact with length of pipe.

Part 3.03 Protection of trees and their root systems shall follow the requirements of the municipality that work is being conducted and at a minimum use the requirements as indicated in Part 3.03.

Part 3.05F. Trench Depth, Part (1) General – All trenches shall provide for a minimum cover over the pipe barrel to the top of finished grade as indicated in the following table, unless otherwise authorized by the Water Company Representative.

DISTRICT	MINIMUM COVER OVER PIPE BARREL
Cairo	36-inches
Interurban	42-inches
Alton	42-inches
Champaign	42-inches
Lincoln	42-inches
Pekin	42-inches
Peoria	42-inches
Chicago Metro	66-inches
Pontiac	48-inches
Streator	48-inches
Sterling	48-inches

Part 3.06 B Illinois American does not allow the use of PVC pipe at this time.

Part 3.08 Backfill under roadways shall follow the requirements of the municipality that work is being conducted.

Section 2458– Large Scale Horizontal Directional Drilling (HDD)

Part 1.02 Related Sections– Section 01300 does not apply, however please provide submittals of material to be used and explanation of the construction technique for consideration by Illinois American as described in Section 1.05.

Part 1.05 A (4) Proposed Alignment Proposed alignment shall have in line valves prior to and immediately following directional drilled section of main, unless otherwise authorized by Illinois American.

Part 3.06 C Additional cross bracing is required near the connection of HDPE pipe and Ductile Iron pipe. Consult with Illinois American for approved bracing methods.

Section 2540– Erosion and Sedimentation Control

Part 1.02 Standards – Developer shall meet all requirements of NPDES Storm Water Phase II Rules and shall provide conformation to the Water Company that a Notice of Intent has been filed where applicable.

Section 15171 – Tapping Sleeves, Saddles and Valves

Part 2.02 Tapping Sleeves and Valves - The Cast/ Ductile Iron Tapping Sleeves (short or long pattern) for cast, ductile iron and asbestos/ cement pipe mechanical joint ends shall be manufactured by one of the following approved manufacturers:

1) Mueller Company H615 (CI and DL pipe) or approved equal
2) Mueller Company H619 (A/C pipe) or approved equal

Resilient Seat Tapping Valves shall be manufactured by one of the following approved manufacturers:

1) Mueller Company T2360-16 (CI, DL and A/C pipe) or approved equal. Tapping valve shall have mechanical joint end.

The tapping valve opening direction is specified by the District in Table 4:

Table 4: Tapping Valve Opening Direction

DISTRICT		TAPPING VALVE OPENING DIRECTION
Southern	Alton	Right (clockwise)
	Cairo	Left (counter-clockwise)
	Interurban	Right (clockwise)
Northern	Lincoln	Left (counter-clockwise)
	Pekin	Left (counter-clockwise)
	Peoria	Left (counter-clockwise)
Eastern	Champaign	Left (counter-clockwise)
	Pontiac	Left (counter-clockwise)
	Streator	Left (counter-clockwise)
	Sterling	Left (counter-clockwise)
	Chicago Metro	Left (counter-clockwise)

Fabricated tapping sleeves for cast iron or asbestos/ cement pipe, stainless steel type, will be welded stainless steel tapping sleeve provided with a wrought, or full thickness cast, stainless steel flange, full seal gasket and 304 stainless steel bolts and nuts. Either the bolt or the nut will be coated with a plastic material to serve as a self-lubricant.

The fabricated tapping sleeve shall be manufactured by one of the following approved manufacturers:

1) JCM Industries, Inc. (Fabricated)
2) Ford Company (Fabricated)

Section 15181 – Fire Hydrants

Part 1.01 Scope – The contractor shall furnish the fire hydrant unless otherwise directed by the Water Company.

Part 2.01 Material – Fire hydrants shall be in accordance with the requirements as contained in ANSI/ AWWA C502-94 and shall have an epoxy coated in accordance with ANSI/ AWWA C550-90. The hydrant shall be a 5 ¼ inch barrel traffic model *(Peoria barrel size shall be 4 ½ inch)* with two (2) 2 ½ inch hose connections and one (1) 4 ½ inch pump nozzle, for installation in a 5 foot trench depth unless otherwise indicated by the Water Company.

Fire Hydrant Thread Type

National Standard (NS 2-1/2" Butt, 7-1/2 threads, thread O.D. 3.062")
(F-548 4-1/2" Butt, 4 threads)

Mueller Thread (D306 2-1/2" Butt, 6 threads, thread O.D. 3.082")
(F-548 4-1/2" Butt, 4 threads)

The hydrant thread type for each District are listed in Table 5:

Table 5: Hydrant Threads Type

	DISTRICT	FIRE HYDRANT THREAD TYPE	DIRECTION TO OPEN
Southern	Alton	National Standard	Left (Counter-clockwise)
	Cairo (1) *	Special Thread	Left (Counter-clockwise)
	Interurban	National Standard	Right (Clockwise)
	(Exceptions)		
	East St. Louis	Mueller Thread	Right (Clockwise)
	Alorton	Mueller Thread	Right (Clockwise)
	Brooklyn	Mueller Thread	Right (Clockwise)
	Cahokia - Maplewood	Mueller Thread	Right (Clockwise)
	Fairview – Caseyville	Mueller Thread	Right (Clockwise)
	Sauget	Mueller Thread	Right (Clockwise)
	National City	Mueller Thread	Right (Clockwise)
	Fairmont City	Mueller Thread	Right (Clockwise)
	Washington Pk	Mueller Thread	Right (Clockwise)
	Granite City	Mueller Thread	Right (Clockwise)
	Venice	Mueller Thread	Right (Clockwise)
Northern	Pekin	National Standard	Left (Counter-clockwise)
	Peoria(2)*	National Standard	Right (Clockwise)
	Lincoln	National Standard	Left (Counter-clockwise)
Eastern	Champaign	National Standard	Right (Clockwise)
	Pontiac(3)*	National Standard	Left (Counter-clockwise)
	Streator (4)*	National Standard	Left (Counter-clockwise)
	Sterling (5)*	National Standard	Left (Counter-clockwise)
	Chicago Metro	National Standard	Left (Counter-clockwise)

(1) Cairo- (A-263 2-3/8" Butt, 8 threads, thread O.D. 2.980")
(F-548 4-1/2" Butt, 4 threads, 1-3/8" pentagon operating nut)

(2) Peoria – (C-305 2-1/2" Butt, 7 threads, thread O.D. 3.068")
(Steamer Nozzle shall be 4" Butt, 4 threads, thread O.D. 4.955")

(3) Pontiac - (D-306 2-1/2" Butt. 7-1/2 threads, thread O.D. 3.062")
(4-1/2" (Large) Butt, 4 threads, 1-1/4" pentagon operating nut)

(4) Streator – (Steamer Nozzle shall be National Standard "Fine" Thread)

(5) Sterling – (Pumper nozzle shall be 4" and a 1-1/8" pentagon operating nut)

The fire hydrant shall be manufactured by one of the following approved manufacturers:

1) Mueller Company (Super Centurion)
2) ~~Clow (Medallion)~~

At the discretion of the Water Company the hydrant maybe required to include Hydra Shield Security Caps for each nozzle.

The hydrants shall be provided in the specified color as indicated by the Water Company.

CITY OF PEORIA
SUBCONTRACTOR PAYMENT FORM

PRIME CONTRACTOR

Name: _____

Address: _____

Phone: _____

Contact Person: _____

PROJECT

Name: _____

Pay Estimate No: _____

Percent Complete: _____%

Work Period: _____ to _____

INSTRUCTIONS: Complete the table below. If additional space is needed attach extra pages as needed and included all information listed in the table below; along with project name and prime contractor.

Subcontractor *(Name)*	**Payment Amount**	**Payment Type** *(F-full/ P-partial)*
	$	
	$	
	$	
	$	
	$	
	$	
Total Payment Amount for Work Completed	$	

This form is to verify the work completed and the amount paid to a subcontractor utilized on the above listed project. Under penalty of law for perjury or falsification, the undersigned certifies that the payment reported herein was made to the subcontractors listed.

_____ _____

Signature of Prime Contractor Date

CITY OF PEORIA
MONTHLY WORKFORCE ANALYSIS

Check appropriate status
_____**Contractor**
_____ **Subcontractor**

Month Ending_____

Name: _____

Address: _____

Contact Person: _____ Phone:_____

Project: _____

Date Work Started: _____ Percent Complete: _____%

Job Categories	Number of Employees				Hours of Employment									
	Total # of Employees		Total Minorities		African American		Asian/Pacific Islander		American Indian/Alaskan Native		Hispanic		White	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Foremen														
Electricians														
Glaziers														
Iron Workers														
Laborers														
Teamsters														
Millwrights														
Pipe Fitters														
Plumbers														
Plasterers														
Painters														
Roofers														
Operating Engs														
Tile Layers														
Sheet Metal Wkrs														
TOTALS														

Instructions: The total number of hours worked on the project (Hours of Employment), and the total number of individuals working on the project during the reporting period (Number of Employees) should be submitted on this form to the Project Resident Engineer <u>every month</u>. Each contractor and subcontractor should submit with this form certified payroll records for the period covered. The prime contractor is responsible for securing and submitting with his/her report, reports from all subcontractors.

CITY OF PEORIA
NOTIFICATION OF CHANGE IN PARTICIPATION

Type of Change
_____ Subcontractor. Complete Part 1
_____ Self-Performance. Complete Part 2

Date:_____

PRIME CONTRACTOR

Name: _____
Address: _____
_____
Phone: _____

PROJECT

Name:_____

PART 1

If changing from previously identified subcontractor to another, complete both From and To.

From Name _____
_____
Address _____
_____
_____
Phone _____
_____
Status _____ MBE _____ WBE _____ Non-M/WBE

To Name
Address
Phone
Status _____ MBE _____ WBE _____ Non-M/WBE
Contract Amount _____

Will scope of work change? _____ Yes _____ No
Describe change _____
_____
_____
Reason for Contractor Change _____
_____
_____

PART 2

Complete if deviating from intent to self-perform.

Prime Contractor will have to hire another contractor to perform work. _____ Yes _____ No

Change was due to _____ Emergency _____ Non-Emergency
Explain Situation _____
_____
_____

Describe good faith efforts to utilize M/WBE _____
_____
_____

Name of added Contractor _____
Address _____
_____
Phone _____
Status _____ MBE _____ WBE _____ Non-M/WBE Contract Amount _____
Scope of Work _____
_____

Signed: _____ _____
Contractor Title

APPENDIX B - Excerpts of Final Preliminary Site Investigation

****FINAL****

Preliminary Site Investigation Report
Six Potential Waste Sites
Along FAU 6593 (University Street)
Forrest Hill Avenue to War Memorial Drive
Peoria, Peoria County, Illinois

February 16, 2016

Prepared for:

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1. INTRODUCTION

This Preliminary Site Investigation (PSI) report was prepared for Crawford, Murphy & Tilly, Inc. (CMT). This PSI report evaluates potential waste sites identified by Andrews Engineering, Inc. (AEI) that are located along the existing right-of-way (ROW) where excavations associated with University Street are planned. This evaluation characterizes the nature and extent of contaminants in soils, if any, within the sampled areas and estimates the volume and cost to handle or dispose of such soils.

1.1. Investigation Objectives

The objectives of the investigation as defined in the work plan approved by CMT on February 11, 2015 are:

- Determine the nature and extent of soil contamination within the ROW.
- Based on the results of the soil chemical analyses, prepare a site investigation report with findings, conclusions, and recommendations which include the remediation scope of work. The remediation scope of work will include an estimate of contaminated soil excavation quantities and an estimated cost for remediation.
- Evaluate the potential for contaminant migration to surrounding properties within the project area and present recommendations for reducing or eliminating such migration, if necessary.

1.2. Background

A Preliminary Environmental Site Assessment (PESA) was conducted by AEI for the various properties along University Street in Peoria, Peoria County, Illinois. The PESA included a reconnaissance of the properties, a review of readily available records, a search of pertinent environmental databases, an evaluation of historical aerial photographs and maps, and a description of the local and regional geology and hydrogeology. The PESA report, dated December 19, 2014, provides a comprehensive review of history and environmental conditions of the project area based on available information. The PESA identified recognized environmental conditions (RECs) at sites adjacent to the areas of proposed construction excavation. CMT responded to the PESA by indicating a PSI of potential waste sites along University Street alignment was warranted. Excerpts of the PESA are presented in Appendix A.

On February 10, 2015, AEI submitted a work plan to conduct a PSI of six potential waste sites along University Street in Peoria, Peoria County, Illinois. As requested by CMT, AEI's investigation was limited to the proposed project area and did not extend to potential sources beyond the prescribed project area limits.

1.3. CMT Project Description & Sampling Rationale

CMT file information provided to AEI indicates proposed improvements along University Street include road resurfacing, sidewalk construction, driveway reconstruction, curb/gutter, storm sewer, and storm inlets. The proposed improvements require earth excavation.

Excavation areas located adjacent to potential waste sites are required to be investigated because these sites cannot be avoided during construction. According to CMT, the proposed construction excavations associated with improving University Street extend to a maximum depth of 4 feet below ground surface (bgs).

1.4. CMT Right-of-Way Acquisition

According to CMT's proposed plans, temporary easement is proposed at all of the subject potential waste sites under this contract.

2. INVESTIGATION PROCEDURES

The field investigation was completed in accordance with both the CMT-approved work plan for University Street, Forrest Hill Avenue to War Memorial Drive and State-approved standard operating procedures (SOPs) for field investigations.

2.1. Sample Identification Rationale

Individual sampling locations are identified with a unique alphanumeric identification code, described below.

- The first part of the identification designation is a number representing the project site. For example, all borings performed at the Sun Loan & Khoury's Cuisine site will start with a "62".
- Following these designations is a number for each boring with the first letter signifying media type. For example, the first soil boring to be conducted at the Sun Loan & Khoury's Cuisine site is designated "62-B01". The "B" indicates this is a soil boring.

2.2. Sampling Procedures

2.2.1 Soil Sampling Procedures

On February 11, 2015, AEI conducted a site reconnaissance to mark proposed boring locations for the utility locate conducted prior to the subsurface investigation. Boring locations were marked with regard to proposed excavation areas activities, apparent utility lines, and permanent structures within the project area.

On February 17 and 18, 2015, AEI and Fusion Construction Services, LLC advanced 12 soil borings using a Geoprobe® direct-push drilling unit. Soil samples were collected from the soil borings to define the general nature and extent of potential contamination related to the project site. After each boring was completed, the sampler was decontaminated with an Alconox® and distilled water solution. Each borehole was backfilled with bentonite chips.

All soil samples were field screened by visual and olfactory methods for the presence of contamination and then field screened with a photoionization detector (PID) for the presence of volatile organic compounds (VOCs). Soil cores were screened in two-foot intervals using a calibrated MiniRAE 2000 portable PID. AEI logged each soil boring by recording the depth interval, percent recovery, soil description, and headspace screening results. Boring logs are presented in Appendix B.

AEI collected 13 soil samples, including one duplicate sample, from the project area for laboratory analyses. Soil samples were collected from each soil boring in accordance with SW-846. Soil samples designated for analyses were placed into laboratory grade containers and delivered to the Teklab Environmental Testing Laboratory in Collinsville, Illinois. Sample identification, documentation, and chain-of-custody were conducted in accordance with IDOT approved SOPs. Each soil sample was analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, Toxicity Characteristic Leaching Procedure

(TCLP) and Synthetic Precipitation Leaching Procedure (SPLP) metals, pH and percent solids. A waste characterization soil sample was not collected.

2.3. Screening Levels

Soil analytical results for each parameter are compared to the Illinois EPA's table titled *Summary of Maximum Allowable Concentrations of Chemical Constituents in Uncontaminated Soil Used as Fill Material At Regulated Fill Operations (35 Ill. Adm. Code 1100.Subpart F).* Where applicable, the soil analytical results for relevant parameters are compared to the most stringent Tier 1 soil remediation objective for residential properties, as presented in Appendix B, Table A of TACO (35 Ill. Adm. Code 742). TCLP and SPLP analytical results are compared to 35 Ill. Adm. Code Part 742: Tiered Approach for Corrective Action Objectives (TACO) Class I groundwater remediation objectives. The magnitude of the analytical results relative to the screening levels determines how and where excavated soils are to be managed. Report qualifiers and acronyms for analytical tables are shown in Table 1. Table 2 provides the parameters and laboratory reporting limits which exceed the Maximum Allowable Concentrations and/or Class I groundwater remediation objectives. Based on the land use information provided in the PESA these constituents are not expected to be present in site soils. The remediation objectives for soil are shown in Tables 3 and 4.

Soil sample pH levels are compared to the acceptable range for disposal into a clean construction and demolition debris (CCDD) facility or an uncontaminated soil fill operation (USFO). 35 Ill. Adm. Code 1100 requires the pH measurement of soil to be from 6.25 to 9.0 to qualify for proper disposal. If the soil pH measurement falls outside of this range, the soil cannot be managed within a CCDD/USFO. Soils with a pH measurement outside of the acceptable range but otherwise not impacted by contaminants of concern (COCs) may be managed on-site and reused as backfill or off-site as uncontaminated soil so long as the soil does not go to a CCDD/USFO.

PID headspace screening results are compared to PID background readings. The PID instrument is accurate to 1 ppm between 0 and 10 ppm; therefore, any value equal to 1 or greater than the measured background level is considered "above background". Soil exhibiting PID readings above background cannot be accepted by a CCDD/USFO.

2.4. Evaluation of Sampling Results

AEI's field investigation uses pre-designated sampling and/or boring locations to provide an initial characterization of site conditions. The investigation was limited in terms of the number of samples collected. Consequently, the findings and conclusions of this investigation should be considered preliminary and subject to revision if additional site data becomes available.

When contaminated soil is found, the estimated volume of contaminated soil is based on the investigation findings and following assumptions:

- The horizontal length of contamination is determined by a rectangle encompassing the affected boring(s) extending laterally one-half the distance between the affected boring and the adjacent boring that does not contain a compound above a remedial objective or the adjacent property boundary. The horizontal width of contamination can be measured

from the centerline of the roadway to half the distance between the boring that does not have any exceedence or the construction limit.

- For VOCs, the vertical extent of contamination is conservatively interpreted by assuming the soil sample interval is impacted if the analytical results exceed the remedial objective or if PID headspace readings are observed above the respective background readings.
- The vertical extents of SVOC and inorganic compound contamination are generally assumed to extend from the surface to the depth interval where the exceedence of the remedial objective was observed.

3. FIELD INVESTIGATION RESULTS

This section summarizes AEI's field investigation activities including field observations, headspace screening results, a discussion of analytical results compared to soil remediation objectives, and an assessment of the nature and extent of contamination relative to proposed excavation and construction. The field investigation summaries are reported on a site-by-site basis.

3.1. Applicable Project Area Geology

3.1.1 Shallow Soils

In general, the soils observed within the proposed construction extents and depths are primarily clay and silty clay with occasional intervals of sand. Within the project area the Natural Resources Conservation Services (NRCS) has classified the soils as silty loams and urban land. Soils observed during the investigation are synonymous with the soils described by the NRCS. Groundwater was not encountered in any of the soil borings.

A detailed description of project geology and hydrogeology is presented in the AEI PESA in Appendix A. Soil boring logs are presented in Appendix B.

3.2. Site 53 – Unoccupied Property

3.2.1 Field Investigation Summary

Two soil samples, including one duplicate sample, were collected from boring 53-B01 between 0 and 2 feet bgs. The boring location is shown on Figure 2. AEI field personnel did not observe odors or staining indicative of contamination in soil samples collected from the boring and PID headspace screening readings were not detected above background (0 ppm).

3.2.2 Analytical Results

3.2.2.1 Soil

The analytical results for the soil samples are presented in Table 3a. Three VOCs and 15 metals were detected among the samples collected from site 53 between 0 and 2 feet bgs. Six metals were detected by SPLP analysis. Based on the results of SPLP analysis, TCLP analysis was not performed.

The pH measurement of sample 53-B01 (0-2 ft) was outside the acceptable range (6.24). The pH measurement of sample 53-B01 DUP (0-2 ft) was within the acceptable range.

3.2.3 Nature and Extent of Contaminants of Concern

3.2.3.1 Soil

As shown in Table 4, the COC in site soils is arsenic.

- **Arsenic** exceeded the Metropolitan Statistical Area (MSA) Maximum Allowable Concentration (MAC) as well as the most stringent TACO Tier 1 Soil Remediation Objective for Residential Properties in samples 53-B01 (0-2 ft) and 53-B01 DUP (0-2 ft).

Table 5 lists the COCs detected above applicable MACs and the estimated volume of impacted soil at each boring. Volumes of impacted soil are estimated without regard for property boundaries or planned excavation activities.

3.2.4 Construction Activities within Impacted Soil Areas

Proposed construction excavations for road resurfacing, sidewalk construction, driveway reconstruction, and curb/gutter are anticipated within the site area impacted by arsenic. As indicated by CMT, the maximum excavation depth is 2 feet bgs.

Table 6 summarizes the areas where construction excavation is anticipated to encounter soil assumed to contain COCs above applicable MACs. The table includes soil excavation volumes that are proposed within the impacted soil area that require proper handling and disposal if removed from the site. The assumed area of impacted construction excavation is depicted on Figure 2.

3.3. Site 54 – Unoccupied Property

3.3.1 Site Field Observations and Sampling Rationale

Two soil samples were collected from borings 54-B01 and 54-B02 between 0 and 2 feet bgs. The boring locations are shown on Figure 2. AEI field personnel did not observe odors or staining indicative of contamination in the soil samples collected from the borings, and PID headspace screening readings were not detected above background (0 ppm).

3.3.2 Analytical Results

3.3.2.1 Soil

The analytical results for the soil samples are presented in Table 3b. Five VOCs and 16 metals were detected among the samples collected from site 54 between 0 and 2 feet bgs. Eleven metals were detected by SPLP analysis. Based on the results of SPLP analysis, TCLP iron, lead, and manganese analyses were performed on one sample.

The pH measurement of the sample from boring 54-B02 was outside the acceptable range (9.22). The pH measurement of the sample from boring 54-B01 was within the acceptable range.

3.3.3 Nature and Extent of Contaminants of Concern

3.3.3.1 Soil

As shown in Table 4, the COCs in site soils are arsenic and manganese.

- **Arsenic** exceeded the MSA MAC as well as the most stringent TACO Tier 1 Soil Remediation Objective for Residential Properties in sample 54-B01 (0-2 ft).
- **Arsenic** exceeded the most stringent MAC but was below the MSA MAC and the most stringent TACO Tier I Soil Remediation Objective for Residential Properties in sample 54-B02 (0-2 ft).

- **Manganese** exceeded the MSA MAC but was below the most stringent TACO Tier 1 Soil Remediation Objective for Residential Properties in sample 54-B01 (0-2 ft).
- **TCLP/SPLP Manganese** exceeded the Tier I concentration for the soil component of the groundwater ingestion exposure route in sample 54-B01 (0-2 ft).

Table 5 lists the COCs detected above applicable MACs and the estimated volume of impacted soil at each boring. Volumes of impacted soil are estimated without regard for property boundaries or planned excavation activities.

3.3.4 Construction Activities within Impacted Soil Areas

Proposed construction excavations for road resurfacing, sidewalk construction, driveway reconstruction, and curb/gutter are anticipated within site areas impacted by COCs. As indicated by CMT, the maximum excavation depth is 2 feet bgs.

Table 6 summarizes the areas where construction excavation is anticipated to encounter soil assumed to contain COCs above applicable MACs. The table includes soil excavation volumes that are proposed within the impacted soil area that require proper handling and disposal if removed from the site. The assumed areas of impacted construction excavation are depicted on Figure 2.

3.4. Site 62 – Sun Loan & Khoury's Cuisine

3.4.1 Site Field Observations and Sampling Rationale

Two soil samples were collected from borings 62-B01 and 62-B02 between 0 and 4 feet bgs. The boring locations are shown on Figure 3. AEI field personnel did not observe odors or staining indicative of contamination in the soil samples collected from the borings, and PID headspace screening readings were not detected above background (0 ppm).

3.4.2 Analytical Results

3.4.2.1 Soil

The analytical results for the soil samples are presented in Table 3c. Six VOCs and 16 metals were detected among the samples collected from site 62 between 0 and 4 feet bgs. Eleven metals were detected by SPLP analysis. Based on the results of SPLP analysis, TCLP analysis was not performed.

The pH measurements of the samples from borings 62-B01 and -B02 were within the acceptable range.

3.4.3 Nature and Extent of Contaminants of Concern

3.4.3.1 Soil

As shown in Table 4, no COCs were found in site soils.

3.5. Site 63 – Parking Lot

3.5.1 Site Field Observations and Sampling Rationale

Two soil samples were collected from borings 63-B01 and 63-B02 between 0 and 4 feet bgs. The boring locations are shown on Figure 3. AEI field personnel did not observe odors or staining indicative of contamination in the soil samples collected from the borings, and PID headspace screening readings were not detected above background (0 ppm).

3.5.2 Analytical Results

3.5.2.1 Soil

The analytical results for the soil samples are presented in Table 3d. Six VOCs, two SVOCs, and 17 metals were detected among the samples collected from site 63 between 0 and 4 feet bgs. Six metals were detected by SPLP analysis. Based on the results of SPLP analysis, TCLP analysis was not performed.

The pH measurements of the samples from borings 63-B01 and -B02 were within the acceptable range.

3.5.3 Nature and Extent of Contaminants of Concern

3.5.3.1 Soil

As shown in Table 4, the COC in site soils is arsenic.

- **Arsenic** exceeded the most stringent MAC but was below the MSA MAC and the most stringent TACO Tier I Soil Remediation Objective for Residential Properties in sample 63-B02 (0-4 ft).

Table 5 lists the COCs detected above applicable MACs and the estimated volume of impacted soil at each boring. Volumes of impacted soil are estimated without regard for property boundaries or planned excavation activities.

3.5.4 Construction Activities within Impacted Soil Areas

Proposed construction excavations for road resurfacing, sidewalk construction, driveway reconstruction, curb/gutter, and storm inlets are anticipated within the site area impacted by arsenic. As indicated by CMT, the maximum excavation depth is 4 feet bgs.

Table 6 summarizes the areas where construction excavation is anticipated to encounter soil assumed to contain COCs above applicable MACs. The table includes soil excavation volumes that are proposed within the impacted soil area that require proper handling and disposal if removed from the site. The assumed area of impacted construction excavation is depicted on Figure 3.

3.6. Site 64 – ALDI's Grocery Store

3.6.1 Site Field Observations and Sampling Rationale

Three soil samples were collected from borings 64-B01 through 64-B03 between 0 and 4 feet bgs. The boring locations are shown on Figures 3 and 4. AEI field personnel did not observe odors or staining indicative of contamination in the soil samples collected from the borings, and PID headspace screening readings were not detected above background (0 ppm).

3.6.2 Analytical Results

3.6.2.1 Soil

The analytical results for the soil samples are presented in Table 3e. Seven VOCs, ten SVOCs and 16 metals were detected among the samples collected from site 64 between 0 and 4 feet bgs. Ten metals were detected by SPLP analysis. Based on the results of SPLP analysis, TCLP iron and lead analyses were performed among the samples.

The pH measurements of the samples from borings 64-B01 through -B03 were within the acceptable range.

3.6.3 Nature and Extent of Contaminants of Concern

3.6.3.1 Soil

As shown in Table 4, the COC in site soils is benzo(a)pyrene.

- **Benzo(a)pyrene** exceeded the most stringent MAC but was below the MAC within a populated area in a non-MSA county in sample 64-B02 (0-2 ft).

Table 5 lists the COCs detected above applicable MACs and the estimated volume of impacted soil at each boring. Volumes of impacted soil are estimated without regard for property boundaries or planned excavation activities.

3.6.4 Construction Activities within Impacted Soil Areas

Proposed construction excavations for road resurfacing, sidewalk construction, driveway reconstruction and curb/gutter are anticipated within the site area impacted by benzo(a)pyrene. As indicated by CMT, the maximum excavation depth is 2 feet bgs.

Table 6 summarizes the areas where construction excavation is anticipated to encounter soil assumed to contain COCs above applicable MACs. The table includes soil excavation volumes that are proposed within the impacted soil area that require proper handling and disposal if removed from the site. The assumed area of impacted construction excavation is depicted on Figure 3.

3.7. Site 72 – McDonald's

3.7.1 Site Field Observations and Sampling Rationale

Two soil samples were collected from borings 72-B01 and 72-B02 between 0 and 2 feet bgs. The boring locations are shown on Figure 5. AEI field personnel did not observe odors or

staining indicative of contamination in the soil samples collected from the borings, and PID headspace screening readings were not detected above background (0 ppm).

3.7.2 Analytical Results

3.7.2.1 Soil

The analytical results for the soil samples are presented in Table 3f. Two VOCs, two SVOCs and 16 metals were detected among the samples collected from site 72 between 0 and 2 feet bgs. Eleven metals were detected by SPLP analysis. Based on the results of SPLP analysis, TCLP iron, lead, and manganese analyses were performed on one sample.

The pH measurements of the samples from borings 72-B01 and -B02 were within the acceptable range.

3.7.3 Nature and Extent of Contaminants of Concern

3.7.3.1 Soil

As shown in Table 4, the COC in site soils is arsenic.

- **Arsenic** exceeded the MSA MAC as well as the most stringent TACO Tier 1 Soil Remediation Objective for Residential Properties in sample 72-B02 (0-2 ft).
- **Arsenic** exceeded the most stringent MAC but was below the MSA MAC and the most stringent TACO Tier I Soil Remediation Objective for Residential Properties in sample 72-B01 (0-2 ft).

Table 5 lists the COCs detected above applicable MACs and the estimated volume of impacted soil at each boring. Volumes of impacted soil are estimated without regard for property boundaries or planned excavation activities.

3.7.4 Construction Activities within Impacted Soil Areas

Proposed construction excavations for road resurfacing, sidewalk construction, driveway reconstruction, and curb/gutter are anticipated within site areas impacted by arsenic. As indicated by CMT, the maximum excavation depth is 2 feet bgs.

Table 6 summarizes the areas where construction excavation is anticipated to encounter soil assumed to contain COCs above applicable MACs. The table includes soil excavation volumes that are proposed within the impacted soil area that require proper handling and disposal if removed from the site. The assumed areas of impacted construction excavation are depicted on Figure 5.

4. CONCLUSIONS AND RECOMMENDATIONS

AEI investigation identified the presence of COCs in project area soils. The contaminant concentrations, pH, and PID headspace screening results were evaluated for each site to determine proper management requirements for soil removed from the sites during construction. The analytical results of soil sampling indicate impacts to soils above all applicable MAC objectives in three areas within the proposed areas of construction. Soils that exceed all applicable MACs must be handled and disposed of as non-special waste if removed from the construction site for disposal.

The analytical results of soil sampling indicate impacts to soils above either the most stringent MACs and/or the Tier 1 concentration for the soil component of the groundwater ingestion exposure route (Class I) in three areas among three sites within the proposed areas of construction. The aforementioned soils can be utilized within the construction limits as fill or managed off-site as "uncontaminated soil" to a CCDD/USFO within a MSA County.

Soils with a pH measurement outside of the acceptable range may not be managed within a CCDD/USFO.

Soils that do not exceed the most stringent MACs can be managed on-site as fill or off-site as uncontaminated soil.

4.1. Estimated Soil Management Volumes and Costs

4.1.1 Site 53 – Unoccupied Property

4.1.1.1 *Management of Excavated Soil*

The concentration of arsenic in the soil samples collected from soil boring 53-B01 exceeds all applicable MACs indicating the soil within the maximum excavation depth shall be managed as "non-special waste" providing that a "non-special waste certification" is submitted by the generator according to the conditions in 415 ILCS 5/22.48 and 415 ILCS 5/3.475. The property history and available analytical data indicate a "non-special waste certification" can be applied to soil anticipated to be excavated adjacent to and within this property during construction activities.

4.1.1.2 *Estimated Volume of Managed Soil*

Soils excavated from the area associated with soil boring 53-B01 (shown on Figure 2) between 0 and 2 feet bgs require special handling and proper disposal as non-special waste. The estimated maximum volume of impacted construction excavation soil that is required to be disposed of as non-special waste is approximately 31 cubic yards (see Table 6).

Construction excavation volume was estimated based upon information provided by CMT for the proposed University Street improvements. Road resurfacing, sidewalk construction, driveway reconstruction, and curb/gutter were assumed to have a maximum excavation depth of one foot.

4.1.1.3 *Estimated Soil Management Cost*

As shown in Table 7, the estimated cost to excavate, manage, and dispose of impacted soils, including the special waste plans and reports, and soil sample analyses, is approximately **$5,115.**

4.1.2 Site 54 – Unoccupied Property

4.1.2.1 *Management of Excavated Soil*

The concentration of arsenic in the soil sample collected from soil boring 54-B01 exceeds all applicable MACs indicating the soil within the maximum excavation depth shall be managed as "non-special waste" providing that a "non-special waste certification" is submitted by the generator according to the conditions in 415 ILCS 5/22.48 and 415 ILCS 5/3.475. The property history and available analytical data indicate a "non-special waste certification" can be applied to soil anticipated to be excavated adjacent to and within this property during construction activities.

The concentration of arsenic in the soil sample collected from soil boring 54-B02 exceeds the MAC and the MAC level for pH. Soil within the maximum excavation depth may be managed on-site as fill. In the event that the soil cannot be managed on-site, the soil should be managed as a "non-special waste" as described above.

4.1.2.2 *Estimated Volume of Managed Soil*

Soils excavated from the area associated with soil boring 54-B01 (shown on Figure 2) between 0 and 2 feet bgs require special handling and proper disposal as non-special waste. The estimated maximum volume of impacted construction excavation soil that is required to be disposed of as non-special waste is approximately 46 cubic yards (see Table 6).

Soils excavated from the area associated with soil boring 54-B02 (shown on Figure 2) between 0 and 2 feet bgs may be managed on-site or off-site as non-special waste. The estimated maximum volume of impacted construction excavation soil that may be required to be disposed of as non-special waste is approximately 41 cubic yards (see Table 6).

Construction excavation volume was estimated based upon information provided by CMT for the proposed University Street improvements. Road resurfacing, sidewalk construction, driveway reconstruction, and curb/gutter were assumed to have a maximum excavation depth of one foot.

4.1.2.3 *Estimated Soil Management Cost*

As shown in Table 7, the estimated cost to excavate, manage, and dispose of impacted soils, including the special waste plans and reports, and soil sample analyses, is approximately **$8,755.**

4.1.3 Site 62 – Sun Loan & Khoury's Cuisine

4.1.3.1 *Management of Excavated Soil*

Soils excavated adjacent to soil borings 62-B01 and 62-B02 are considered uncontaminated and its use is considered unrestricted. However, this conclusion is based on limited data points and any soil excavated in non-restricted areas which exhibits visual and/or olfactory evidence of contamination should be tested and appropriate management options evaluated. An Uncontaminated Soil Certificate form is included in Appendix D for this property for soil in the vicinity of borings 62-B01 and 62-B02.

4.1.4 Site 63 – Parking Lot

4.1.4.1 *Management of Excavated Soil*

The concentration of arsenic in the soil sample collected from soil boring 63-B02 exceeds the MAC. Soil within the maximum excavation depth may be managed on-site as fill, or managed off-site to a CCDD/USFO within a MSA County. An Uncontaminated Soil Certification form is included in Appendix D for this property. In the event that the soil cannot be managed on-site or to a CCDD/USFO, the soil should be managed as a "non-special waste" providing that a "non-special waste certification" is submitted by the generator according to the conditions in 415 ILCS 5/22.48 and 415 ILCS 5/3.475. The property history and available analytical data indicate a "non-special waste certification" can be applied to soil anticipated to be excavated adjacent to and within this property during construction activities.

Soils excavated adjacent to soil boring 63-B01 are considered uncontaminated and its use is considered unrestricted. However, this conclusion is based on limited data points and any soil excavated in non-restricted areas which exhibits visual and/or olfactory evidence of contamination should be tested and appropriate management options evaluated. An Uncontaminated Soil Certificate form is included in Appendix D for this property for soil in the vicinity of boring 63-B01.

4.1.4.2 *Estimated Volume of Managed Soil*

Soils excavated from the area associated with soil boring 63-B02 (shown on Figure 3) between 0 and 4 feet bgs may be managed on-site or to a CCDD/USFO. The estimated volume of impacted construction excavation soil that is anticipated for disposal in a CCDD/USFO is approximately 166 cubic yards (see Table 6).

Construction excavation volume was estimated based upon information provided by CMT for the proposed University Street improvements. Road resurfacing, sidewalk construction, driveway reconstruction, and curb/gutter were assumed to have a maximum excavation depth of one foot. Storm sewer inlets were assumed have a maximum excavation depth of four feet and trench width of two feet.

4.1.4.3 *Estimated Soil Management Cost*

As shown in Table 7, the estimated cost to excavate, manage, and dispose of impacted soils, including the special waste plans and reports, and soil sample analyses, is approximately **$13,890.**

4.1.5 Site 64 – ALDI's Grocery Store

4.1.5.1 *Management of Excavated Soil*

The concentration of benzo(a)pyrene in the soil sample collected from soil boring 64-B02 exceeds the MAC. Soil within the maximum excavation depth may be managed on-site as fill, or managed off-site to a CCDD/USFO within a MSA County. An Uncontaminated Soil Certification form is included in Appendix D for this property. In the event that the soil cannot be managed on-site or to a CCDD/USFO, the soil should be managed as a "non-special waste" providing that a "non-special waste certification" is submitted by the generator according to the conditions in 415 ILCS 5/22.48 and 415 ILCS 5/3.475. The property history and available analytical data indicate a "non-special waste certification" can be applied to soil anticipated to be excavated adjacent to and within this property during construction activities.

Soils excavated adjacent to soil borings 64-B01 and 64-B03 are considered uncontaminated and its use is considered unrestricted. However, this conclusion is based on limited data points and any soil excavated in non-restricted areas which exhibits visual and/or olfactory evidence of contamination should be tested and appropriate management options evaluated. An Uncontaminated Soil Certificate form is included in Appendix D for this property for soil in the vicinity of borings 64-B01 and 64-B03.

4.1.5.2 *Estimated Volume of Managed Soil*

Soils excavated from the area associated with soil boring 64-B02 (shown on Figure 3) between 0 and 2 feet bgs may be managed on-site or to a CCDD/USFO. The estimated volume of impacted construction excavation soil that is anticipated for disposal in a CCDD/USFO is approximately 60 cubic yards (see Table 6).

Construction excavation volume was estimated based upon information provided by CMT for the proposed University Street improvements. Road resurfacing, sidewalk construction, driveway reconstruction, and curb/gutter were assumed to have a maximum excavation depth of one foot.

4.1.5.3 *Estimated Soil Management Cost*

As shown in Table 7, the estimated cost to excavate, manage, and dispose of impacted soils, including the special waste plans and reports, and soil sample analyses, is approximately **$7,000.**

4.1.6 Site 72 – McDonald's

4.1.6.1 *Management of Excavated Soil*

The concentration of arsenic in the soil sample collected from soil boring 72-B02 exceeds all applicable MACs indicating the soil within the maximum excavation depth shall be managed as "non-special waste" providing that a "non-special waste certification" is submitted by the generator according to the conditions in 415 ILCS 5/22.48 and 415 ILCS 5/3.475. The property history and available analytical data indicate a "non-special waste certification" can be applied to soil anticipated to be excavated adjacent to and within this property during construction activities.

The concentration of arsenic in the soil sample collected from soil boring 72-B01 exceeds the MAC. Soil within the maximum excavation depth may be managed on-site as fill, or managed off-site to a CCDD/USFO within a MSA County. An Uncontaminated Soil Certification form is included in Appendix D for this property. In the event that the soil cannot be managed on-site or to a CCDD/USFO, the soil should be managed as a "non-special waste" as described above.

4.1.6.2 *Estimated Volume of Managed Soil*

Soils excavated from the area associated with soil boring 72-B02 (shown on Figure 5) between 0 and 2 feet bgs require special handling and proper disposal as non-special waste. The estimated volume of impacted construction excavation soil that is required to be disposed of as non-special waste is approximately 76 cubic yards (see Table 6).

Soils excavated from the area associated with soil boring 72-B01 (shown on Figure 5) between 0 and 2 feet bgs may be managed on-site or to a CCDD/USFO. The estimated volume of impacted construction excavation soil that is anticipated for disposal in a CCDD/USFO is approximately 90 cubic yards (see Table 6).

Construction excavation volume was estimated based upon information provided by CMT for the proposed University Street improvements. Road resurfacing, sidewalk construction, driveway reconstruction, and curb/gutter were assumed to have a maximum excavation depth of one foot.

4.1.6.3 *Estimated Soil Management Cost*

As shown in Table 7, the estimated cost to excavate, manage, and dispose of impacted soils, including the special waste plans and reports, and soil sample analyses, is approximately **$13,890.**

4.2. Soil Management Areas and Applicable Regulations

This section presents recommendations for proper management of soils based upon the results of AEI's investigation described herein.

4.2.1 Site 53 – Unoccupied Property

- Station 91+31 to Station 91+90, 0 to 45 feet RT along University Street (Unoccupied Property, PESA Site 53, 3212 N University Street): This material meets the criteria of Article 669.09(a)(5) and shall be managed in accordance to Article 669.09. COCs sampling parameters: Arsenic.

4.2.2 Site 54 – Unoccupied Property

- Station 91+90 to Station 92+78, 0 to 45 feet RT along University Street (Unoccupied Property, PESA Site 54, 3220 N University Street): This material meets the criteria of Article 669.09(a)(5) and shall be managed in accordance to Article 669.09. COCs sampling parameters: Arsenic and manganese.

- Station 92+78 to Station 93+63, 0 to 45 feet RT along University Street (Unoccupied Property, PESA Site 54, 3220 N University Street): This material meets the criteria of Article 669.09(a)(1) and shall be managed in accordance to Article 669.09. COCs sampling parameters: Arsenic.

4.2.3 Site 63 – Parking Lot

- Station 98+33 to Station 99+80, 0 to 75 feet LT along University Street (Parking Lot, PESA Site 63, 3403 N University Street): This material meets the criteria of Article 669.09(a)(2) and shall be managed in accordance to Article 669.09. COCs sampling parameters: Arsenic.

4.2.4 Site 64 – ALDI's Grocery Store

- Station 99+67 to Station 100+86, 0 to 55 feet RT along University Street (ALDI's Grocery Store, PESA Site 64, 3420 N University Street): This material meets the criteria of Article 669.09(a)(3) and shall be managed in accordance to Article 669.09. COCs sampling parameters: Benzo(a)pyrene.

4.2.5 Site 72 – McDonald's

- Station 107+57 to Station 108+55, 0 to 65 feet RT along University Street (McDonald's, PESA Site 72, 3600 N University Street): This material meets the criteria of Article 669.09(a)(2) and shall be managed in accordance to Article 669.09. COCs sampling parameters: Arsenic.

- Station 108+55 to Station 109+51, 0 to 65 feet RT along University Street (McDonald's, PESA Site 72, 3600 N University Street): This material meets the criteria of Article 669.09(a)(5) and shall be managed in accordance to Article 669.09. COCs sampling parameters: Arsenic.

4.3. Recommendations

4.3.1 Additional Investigations

Additional soil samples are not proposed at the project area. All environmental media collected have been analyzed and compared with maximum allowable remediation objectives and evaluated relative to proposed construction activities.

4.3.2 Construction Worker Health and Safety

This report presents analytical results of site soils. Construction worker health and safety are the sole responsibility of the construction contractor. OSHA regulations should be adhered to during all construction activities. Where the City of Peoria will be excavating and disposing of non-special waste, it is recommended a Health and Safety Plan be developed in accordance with 29 CFR 1910.120, and implemented during soil excavation activities.

5. REFERENCES

Andrews Engineering, Inc., February 2015. *Work Plan for the Preliminary Site Investigation of Six Potential Waste Sites Along FAU 6593 (University Street) From Forrest Hill Avenue to War Memorial Drive, Peoria, Peoria County, Illinois.*

Andrews Engineering, Inc. (AEI), December 19, 2014. Preliminary Environmental Site Assessment, North University Street, Peoria, Peoria County.

6. TABLES

Table 1	**Report Qualifiers and Acronyms for Analytical Tables**
Table 2	**Exceedences of Acceptable Detection Limits for Soil Results**
Tables 3a-f	**Soil Analytical Results**
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Table 1
Report Qualifiers and Acronyms for Analytical Tables
University Street: Forrest Hill Avenue to War Memorial Drive
Peoria, Peoria County, Illinois

Report Qualifiers and Acronyms:

J = Result is less than the reporting limit, but greater than or equal to the method detection limit. The concentration is an approximate value.
B = Compound was detected in the Method Blank and sample.
mg/kg = Milligrams per kilogram
mg/L = Milligrams per liter
ft = Feet
SPLP = Synthetic Precipitation Leaching Procedure
TCLP = Toxicity Characteristic Leaching Procedure
ND = Not Detected at or above the laboratory reporting limit.
NT = Not Tested
NA = No applicable comparison value is listed for this compound.
MAC = Maximum Allowable Concentrations of Chemical Constituents In Uncontaminated Soil Used as Fill Material At Regulated Fill Operations (35 Ill. Adm. Code 1100.Subpart F).
MSA = Metropolitan Statistical Area
m = As an alternative to the subject maximum allowable concentration value, compliance verification may be determined by comparing TCLP and/or SPLP results to the TACO Class I Soil Component of the Groundwater Ingestion Exposure Route objective (35 Ill. Admin. Code 742 Appendix A, Table A).

1 = Exceeds the most stringent MAC value.

2 = Exceeds the Outside a Populated Area MAC value.

3 = Exceeds the Populated Area in a Non-MSA County MAC value.

4 = Exceeds the Chicago Corporate Limits MAC value.

5 = Exceeds the Populated Area in a MSA, excluding Chicago value (least stringent).

6 = Exceeds Tier I concentration for the Soil Component of the Groundwater Ingestion Exposure Route, Class I (TACO Appendix B, Tables A and B). Where applicable, the Class I Standard has been substituted with the Achievable Detection Limit (ADL).

7 = Exceeds the most stringent TACO Tier 1 Soil Remediation Objective for Residential Properties. Where applicable, the Residential Standard has been substituted with the Achievable Detection Limit (ADL) or the applicable background value.

* = Exceeds the most stringent MAC value, but is below the most stringent TACO Tier 1 Soil Remediation Objectives for Residential Properties.

CCDD Eligible
not CCDD Eligible (greater than MSA MAC), but not non-special waste (below most stringent TACO Tier 1 Residential RO)
non-special waste (greater than MSA MAC, greater than most stringent TACO Tier 1 Residential RO)

Table 2
Exceedences of Acceptable Detection Limits for Soil Results
University Street: Forrest Hill Avenue to War Memorial Drive
Peoria, Peoria County, Illinois

Sample ID	Parameter	Units		MDL	Maximum Allowable Concentration	Class I	Matrix	Comment
53-B01	N-Nitrosodi-n-propylamine	mg/kg	ND	0.141	0.0018		Soil	MAC cannot be met by Method 8270
53-B01	Pentachlorophenol	mg/kg	ND	0.843	0.02		Soil	MAC cannot be met by Method 8270
53-B01 DUP	N-Nitrosodi-n-propylamine	mg/kg	ND	0.14	0.0018		Soil	MAC cannot be met by Method 8270
53-B01 DUP	Pentachlorophenol	mg/kg	ND	0.843	0.02		Soil	MAC cannot be met by Method 8270
54-B01	N-Nitrosodi-n-propylamine	mg/kg	ND	0.14	0.0018		Soil	MAC cannot be met by Method 8270
54-B01	Pentachlorophenol	mg/kg	ND	0.838	0.02		Soil	MAC cannot be met by Method 8270
54-B02	N-Nitrosodi-n-propylamine	mg/kg	ND	0.138	0.0018		Soil	MAC cannot be met by Method 8270
54-B02	Pentachlorophenol	mg/kg	ND	0.828	0.02		Soil	MAC cannot be met by Method 8270
62-B01	N-Nitrosodi-n-propylamine	mg/kg	ND	0.137	0.0018		Soil	MAC cannot be met by Method 8270
62-B01	Pentachlorophenol	mg/kg	ND	0.823	0.02		Soil	MAC cannot be met by Method 8270
62-B02	N-Nitrosodi-n-propylamine	mg/kg	ND	0.116	0.0018		Soil	MAC cannot be met by Method 8270
62-B02	Pentachlorophenol	mg/kg	ND	0.697	0.02		Soil	MAC cannot be met by Method 8270
63-B01	2,4,6-Trichlorophenol	mg/kg	ND	0.72	0.66		Soil	1:5 Dilution due to matrix interference
63-B01	2,4-Dichlorophenol	mg/kg	ND	0.691	0.48		Soil	1:5 Dilution due to matrix interference
63-B01	2,4-Dinitrotoluene	mg/kg	ND	0.594	0.25		Soil	1:5 Dilution due to matrix interference
63-B01	2,6-Dinitrotoluene	mg/kg	ND	0.617	0.26		Soil	1:5 Dilution due to matrix interference
63-B01	Benzo(a)pyrene	mg/kg	ND	0.095	0.09		Soil	1:5 Dilution due to matrix interference
63-B01	Bis(2-chloroethyl)ether	mg/kg	ND	0.811	0.66		Soil	1:5 Dilution due to matrix interference
63-B01	Carbazole	mg/kg	ND	0.697	0.6		Soil	1:5 Dilution due to matrix interference
63-B01	Dibenzo(a,h)anthracene	mg/kg	ND	0.095	0.09		Soil	1:5 Dilution due to matrix interference
63-B01	Hexachlorobenzene	mg/kg	ND	0.954	0.4		Soil	1:5 Dilution due to matrix interference
63-B01	Hexachloroethane	mg/kg	ND	0.954	0.5		Soil	1:5 Dilution due to matrix interference
63-B01	Nitrobenzene	mg/kg	ND	0.714	0.26		Soil	1:5 Dilution due to matrix interference
63-B01	N-Nitrosodi-n-propylamine	mg/kg	ND	0.629	0.0018		Soil	1:5 Dilution due to matrix interference
63-B01	Pentachlorophenol	mg/kg	ND	3.77	0.02		Soil	1:5 Dilution due to matrix interference
63-B02	Nitrobenzene	mg/kg	ND	0.293	0.26		Soil	1:2 Dilution due to matrix interference
63-B02	N-Nitrosodi-n-propylamine	mg/kg	ND	0.258	0.0018		Soil	1:2 Dilution due to matrix interference
63-B02	Pentachlorophenol	mg/kg	ND	1.55	0.02		Soil	1:2 Dilution due to matrix interference
64-B01	2,4,6-Trichlorophenol	mg/kg	ND	1.45	0.66		Soil	1:10 Dilution due to matrix interference
64-B01	2,4-Dichlorophenol	mg/kg	ND	1.39	0.48		Soil	1:10 Dilution due to matrix interference
64-B01	2,4-Dinitrotoluene	mg/kg	ND	1.19	0.25		Soil	1:10 Dilution due to matrix interference
64-B01	2,6-Dinitrotoluene	mg/kg	ND	1.24	0.26		Soil	1:10 Dilution due to matrix interference
64-B01	3,3'-Dichlorobenzidine	mg/kg	ND	2.3	1.3		Soil	1:10 Dilution due to matrix interference
64-B01	4-Chloroaniline	mg/kg	ND	1.39	0.7		Soil	1:10 Dilution due to matrix interference
64-B01	Benzo(a)pyrene	mg/kg	ND	0.192	0.09		Soil	1:10 Dilution due to matrix interference
64-B01	Bis(2-chloroethyl)ether	mg/kg	ND	1.63	0.66		Soil	1:10 Dilution due to matrix interference
64-B01	Carbazole	mg/kg	ND	1.4	0.6		Soil	1:10 Dilution due to matrix interference
64-B01	Dibenzo(a,h)anthracene	mg/kg	ND	0.192	0.09		Soil	1:10 Dilution due to matrix interference
64-B01	Hexachlorobenzene	mg/kg	ND	1.92	0.4		Soil	1:10 Dilution due to matrix interference
64-B01	Hexachlorocyclopentadiene	mg/kg	ND	1.17	1.1		Soil	1:10 Dilution due to matrix interference
64-B01	Hexachloroethane	mg/kg	ND	1.92	0.5		Soil	1:10 Dilution due to matrix interference
64-B01	Nitrobenzene	mg/kg	ND	1.43	0.26		Soil	1:10 Dilution due to matrix interference
64-B01	N-Nitrosodi-n-propylamine	mg/kg	ND	1.26	0.0018		Soil	1:10 Dilution due to matrix interference

Table 2
Exceedences of Acceptable Detection Limits for Soil Results
University Street: Forrest Hill Avenue to War Memorial Drive
Peoria, Peoria County, Illinois

Sample ID	Parameter	Units		MDL	Maximum Allowable Concentration	Class I	Matrix	Comment
64-B01	N-Nitrosodiphenylamine	mg/kg	ND	1.06	1		Soil	1:10 Dilution due to matrix interference
64-B01	Pentachlorophenol	mg/kg	ND	7.57	0.02		Soil	1:10 Dilution due to matrix interference
64-B02	2,4,6-Trichlorophenol	mg/kg	ND	1.52	0.66		Soil	1:10 Dilution due to matrix interference
64-B02	2,4-Dichlorophenol	mg/kg	ND	1.46	0.48		Soil	1:10 Dilution due to matrix interference
64-B02	2,4-Dinitrotoluene	mg/kg	ND	1.26	0.25		Soil	1:10 Dilution due to matrix interference
64-B02	2,6-Dinitrotoluene	mg/kg	ND	1.31	0.26		Soil	1:10 Dilution due to matrix interference
64-B02	2-Chlorophenol	mg/kg	ND	1.54	1.5		Soil	1:10 Dilution due to matrix interference
64-B02	3,3´-Dichlorobenzidine	mg/kg	ND	2.42	1.3		Soil	1:10 Dilution due to matrix interference
64-B02	4-Chloroaniline	mg/kg	ND	1.46	0.7		Soil	1:10 Dilution due to matrix interference
64-B02	Bis(2-chloroethyl)ether	mg/kg	ND	1.72	0.66		Soil	1:10 Dilution due to matrix interference
64-B02	Carbazole	mg/kg	ND	1.48	0.6		Soil	1:10 Dilution due to matrix interference
64-B02	Dibenzo(a,h)anthracene	mg/kg	ND	0.202	0.09		Soil	1:10 Dilution due to matrix interference
64-B02	Hexachlorobenzene	mg/kg	ND	2.02	0.4		Soil	1:10 Dilution due to matrix interference
64-B02	Hexachlorocyclopentadiene	mg/kg	ND	1.23	1.1		Soil	1:10 Dilution due to matrix interference
64-B02	Hexachloroethane	mg/kg	ND	2.02	0.5		Soil	1:10 Dilution due to matrix interference
64-B02	Nitrobenzene	mg/kg	ND	1.51	0.26		Soil	1:10 Dilution due to matrix interference
64-B02	N-Nitrosodi-n-propylamine	mg/kg	ND	1.33	0.0018		Soil	1:10 Dilution due to matrix interference
64-B02	N-Nitrosodiphenylamine	mg/kg	ND	1.11	1		Soil	1:10 Dilution due to matrix interference
64-B02	Pentachlorophenol	mg/kg	ND	7.98	0.02		Soil	1:10 Dilution due to matrix interference
64-B03	N-Nitrosodi-n-propylamine	mg/kg	ND	0.136	0.0018		Soil	MAC cannot be met by Method 8270
64-B03	Pentachlorophenol	mg/kg	ND	0.813	0.02		Soil	MAC cannot be met by Method 8270
72-B01	N-Nitrosodi-n-propylamine	mg/kg	ND	0.141	0.0018		Soil	MAC cannot be met by Method 8270
72-B01	Pentachlorophenol	mg/kg	ND	0.845	0.02		Soil	MAC cannot be met by Method 8270
72-B02	1,4-Dichlorobenzene	mg/kg	ND	2.02	2		Soil	1:10 Dilution due to matrix interference
72-B02	2,4,6-Trichlorophenol	mg/kg	ND	1.5	0.66		Soil	1:10 Dilution due to matrix interference
72-B02	2,4-Dichlorophenol	mg/kg	ND	1.53	0.48		Soil	1:10 Dilution due to matrix interference
72-B02	2,4-Dinitrotoluene	mg/kg	ND	1.32	0.25		Soil	1:10 Dilution due to matrix interference
72-B02	2,6-Dinitrotoluene	mg/kg	ND	1.37	0.26		Soil	1:10 Dilution due to matrix interference
72-B02	2-Chlorophenol	mg/kg	ND	1.61	1.5		Soil	1:10 Dilution due to matrix interference
72-B02	3,3´-Dichlorobenzidine	mg/kg	ND	2.54	1.3		Soil	1:10 Dilution due to matrix interference
72-B02	4-Chloroaniline	mg/kg	ND	1.53	0.7		Soil	1:10 Dilution due to matrix interference
72-B02	Benzo(a)pyrene	mg/kg	ND	0.212	0.09		Soil	1:10 Dilution due to matrix interference
72-B02	Bis(2-chloroethyl)ether	mg/kg	ND	1.8	0.66		Soil	1:10 Dilution due to matrix interference
72-B02	Carbazole	mg/kg	ND	1.55	0.6		Soil	1:10 Dilution due to matrix interference
72-B02	Dibenzo(a,h)anthracene	mg/kg	ND	0.212	0.09		Soil	1:10 Dilution due to matrix interference
72-B02	Hexachlorobenzene	mg/kg	ND	2.12	0.4		Soil	1:10 Dilution due to matrix interference
72-B02	Hexachlorocyclopentadiene	mg/kg	ND	1.29	1.1		Soil	1:10 Dilution due to matrix interference
72-B02	Hexachloroethane	mg/kg	ND	2.12	0.5		Soil	1:10 Dilution due to matrix interference
72-B02	Nitrobenzene	mg/kg	ND	1.58	0.26		Soil	1:10 Dilution due to matrix interference
72-B02	N-Nitrosodi-n-propylamine	mg/kg	ND	1.39	0.0018		Soil	1:10 Dilution due to matrix interference
72-B02	N-Nitrosodiphenylamine	mg/kg	ND	1.17	1		Soil	1:10 Dilution due to matrix interference
72-B02	Pentachlorophenol	mg/kg	ND	8.37	0.02		Soil	1:10 Dilution due to matrix interference

Table 3a
Soil Analytical Results
Site 53
Unoccupied Property
Peoria, Peoria County, Illinois

Sample ID	53-B01		53-B01 DUP		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2		0-2								
Sample Date	2/17/2015		2/17/2015								
PID	0		0								
Sample pH	6.24		6.94								
Matrix	Soil		Soil								
Volatile Organic Compounds (mg/kg)											
1,1,1-Trichloroethane	ND		ND		2	NA	NA	NA	NA	NA	2
1,1,2,2-Tetrachloroethane	ND		ND		NA	NA	NA	NA	NA	NA	0.0035
1,1,2-Trichloroethane	ND		ND		0.02	NA	NA	NA	NA	NA	0.02
1,1-Dichloroethane	ND		ND		23	NA	NA	NA	NA	NA	23
1,1-Dichloroethene	ND		ND		0.06	NA	NA	NA	NA	NA	0.06
1,2-Dichloroethane	ND		ND		0.02	NA	NA	NA	NA	NA	0.02
1,2-Dichloropropane	ND		ND		0.03	NA	NA	NA	NA	NA	0.03
1,3-Dichloropropene	ND		ND		0.005	NA	NA	NA	NA	NA	0.005
2-Butanone (MEK)	**J 0.023**		**J 0.029**		17	NA	NA	NA	NA	NA	17
2-Hexanone (MBK)	ND		ND		NA	NA	NA	NA	NA	NA	0.16
4-Methyl-2-pentanone (MIBK)	ND		ND		NA	NA	NA	NA	NA	NA	2.5
Acetone	**0.069**		**0.094**		25	NA	NA	NA	NA	NA	25
Benzene	ND		ND		0.03	NA	NA	NA	NA	NA	0.03
Bromodichloromethane	ND		ND		0.6	NA	NA	NA	NA	NA	0.6
Bromoform	ND		ND		0.8	NA	NA	NA	NA	NA	0.8
Bromomethane	ND		ND		0.2	NA	NA	NA	NA	NA	0.2
Carbon disulfide	ND		ND		9	NA	NA	NA	NA	NA	32
Carbon Tetrachloride	ND		ND		0.07	NA	NA	NA	NA	NA	0.07
Chlorobenzene	ND		ND		1	NA	NA	NA	NA	NA	1
Chloroethane	ND		ND		NA	NA	NA	NA	NA	NA	1,500
Chloroform	ND		ND		0.3	NA	NA	NA	NA	NA	0.3
Chloromethane	ND		ND		NA	NA	NA	NA	NA	NA	110
cis-1,2-Dichloroethene	ND		ND		0.4	NA	NA	NA	NA	NA	0.4
cis-1,3-Dichloropropene	ND		ND		NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ND		ND		0.4	NA	NA	NA	NA	NA	0.4
Ethylbenzene	ND		ND		13	NA	NA	NA	NA	NA	13
Methylene chloride	**J 0.001**		ND		0.02	NA	NA	NA	NA	NA	0.02
Methyl-tert-butyl-ether (MTBE)	ND		ND		0.32	NA	NA	NA	NA	NA	0.32
Styrene	ND		ND		4	NA	NA	NA	NA	NA	4
Tetrachloroethene	ND		ND		0.06	NA	NA	NA	NA	NA	0.06
Toluene	ND		ND		12	NA	NA	NA	NA	NA	12
trans-1,2-Dichloroethene	ND		ND		0.7	NA	NA	NA	NA	NA	0.7
trans-1,3-Dichloropropene	ND		ND		NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ND		ND		0.06	NA	NA	NA	NA	NA	0.06
Vinyl Acetate	ND		ND		10	NA	NA	NA	NA	NA	170
Vinyl Chloride	ND		ND		0.01	NA	NA	NA	NA	NA	0.01
Xylenes, total	ND		ND		5.6	NA	NA	NA	NA	NA	150

Table 3a
Soil Analytical Results
Site 53
Unoccupied Property
Peoria, Peoria County, Illinois

Sample ID	53-B01		53-B01 DUP		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2		0-2								
Sample Date	2/17/2015		2/17/2015								
PID	0		0								
Sample pH	6.24		6.94								
Matrix	Soil		Soil								
Semivolatile Organic Compounds (mg/kg)											
1,2,4-Trichlorobenzene	ND		ND		5	NA	NA	NA	NA	NA	5
1,2-Dichlorobenzene	ND		ND		17	NA	NA	NA	NA	NA	17
1,4-Dichlorobenzene	ND		ND		2	NA	NA	NA	NA	NA	2
2,4,5-Trichlorophenol	ND		ND		26	NA	NA	NA	NA	NA	270
2,4,6-Trichlorophenol	ND		ND		0.66	NA	NA	NA	NA	NA	0.66
2,4-Dichlorophenol	ND		ND		0.48	NA	NA	NA	NA	NA	1
2,4-Dimethylphenol	ND		ND		9	NA	NA	NA	NA	NA	9
2,4-Dinitrophenol	ND		ND		3.3	NA	NA	NA	NA	NA	3.3
2,4-Dinitrotoluene	ND		ND		0.25	NA	NA	NA	NA	NA	0.25
2,6-Dinitrotoluene	ND		ND		0.26	NA	NA	NA	NA	NA	0.26
2-Chloronaphthalene	ND		ND		NA	NA	NA	NA	NA	NA	49
2-Chlorophenol	ND		ND		1.5	NA	NA	NA	NA	NA	4
2-Methylnaphthalene	ND		ND		NA	NA	NA	NA	NA	NA	1.9
2-Methylphenol	ND		ND		15	NA	NA	NA	NA	NA	15
2-Nitroaniline	ND		ND		NA	NA	NA	NA	NA	NA	0.7
3,3'-Dichlorobenzidine	ND		ND		1.3	NA	NA	NA	NA	NA	1.3
4,6-Dinitro-2-methylphenol	ND		ND		NA	NA	NA	NA	NA	NA	6.3
4-Chloroaniline	ND		ND		0.7	NA	NA	NA	NA	NA	0.7
4-Methylphenol	ND		ND		NA	NA	NA	NA	NA	NA	3.9
4-Nitroaniline	ND		ND		NA	NA	NA	NA	NA	NA	0.14
4-Nitrophenol	ND		ND		NA	NA	NA	NA	NA	NA	630
Acenaphthene	ND		ND		570	NA	NA	NA	NA	NA	570
Acenaphthylene	ND		ND		85	NA	NA	NA	NA	NA	85
Anthracene	ND		ND		12,000	NA	NA	NA	NA	NA	12,000
Benzo(a)anthracene	ND		ND		0.9	0.9	0.9	1.1	1.8	NA	1.8
Benzo(a)pyrene	ND		ND		0.09	0.09	0.98	1.3	2.1	NA	2.1
Benzo(b)fluoranthene	ND		ND		0.9	0.9	0.9	1.5	2.1	NA	2.1
Benzo(g,h,i)perylene	ND		ND		2,300	NA	NA	NA	NA	NA	2,300
Benzo(k)fluoranthene	ND		ND		9	NA	NA	NA	NA	NA	9
Bis(2-chloroethyl)ether	ND		ND		0.66	NA	NA	NA	NA	NA	0.66
bis(2-chloroisopropyl)ether	ND		ND		NA	NA	NA	NA	NA	NA	2.4
Bis(2-ethylhexyl)phthalate	ND		ND		46	NA	NA	NA	NA	NA	46
Butyl benzyl phthalate	ND		ND		930	NA	NA	NA	NA	NA	930
Carbazole	ND		ND		0.6	NA	NA	NA	NA	NA	0.6
Chrysene	ND		ND		88	NA	NA	NA	NA	NA	88
Dibenzo(a,h)anthracene	ND		ND		0.09	0.09	0.15	0.2	0.42	NA	0.42
Dibenzofuran	ND		ND		NA	NA	NA	NA	NA	NA	3

Table 3a
Soil Analytical Results
Site 53
Unoccupied Property
Peoria, Peoria County, Illinois

Sample ID	53-B01		53-B01 DUP		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2		0-2								
Sample Date	2/17/2015		2/17/2015								
PID	0		0								
Sample pH	6.24		6.94								
Matrix	Soil		Soil								
Diethyl phthalate	ND		ND		470	NA	NA	NA	NA	NA	470
Dimethyl phthalate	ND		ND		NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	ND		ND		2,300	NA	NA	NA	NA	NA	2,300
Di-n-octyl phthalate	ND		ND		1,600	NA	NA	NA	NA	NA	1,600
Fluoranthene	ND		ND		3,100	NA	NA	NA	NA	NA	3,100
Fluorene	ND		ND		560	NA	NA	NA	NA	NA	560
Hexachlorobenzene	ND		ND		0.4	NA	NA	NA	NA	NA	0.4
Hexachlorobutadiene	ND		ND		NA	NA	NA	NA	NA	NA	2.2
Hexachlorocyclopentadiene	ND		ND		1.1	NA	NA	NA	NA	NA	10
Hexachloroethane	ND		ND		0.5	NA	NA	NA	NA	NA	0.5
Indeno(1,2,3-cd)pyrene	ND		ND		0.9	0.9	0.9	0.9	1.6	NA	1.6
Isophorone	ND		ND		8	NA	NA	NA	NA	NA	8
Naphthalene	ND		ND		1.8	NA	NA	NA	NA	NA	12
Nitrobenzene	ND		ND		0.26	NA	NA	NA	NA	NA	0.26
N-Nitrosodi-n-propylamine	ND		ND		0.0018	NA	NA	NA	NA	NA	0.0018
N-Nitrosodiphenylamine	ND		ND		1	NA	NA	NA	NA	NA	1
Pentachlorophenol	ND		ND		0.02	NA	NA	NA	NA	NA	0.03
Phenanthrene	ND		ND		210	NA	NA	NA	NA	NA	210
Phenol	ND		ND		100	NA	NA	NA	NA	NA	100
Pyrene	ND		ND		2,300	NA	NA	NA	NA	NA	2,300
Inorganic Compounds, Total (mg/kg)											
Antimony	ND		ND		5	NA	NA	NA	NA	NA	31
Arsenic	**13.1**	**1,3,5,7**	**14.5**	**1,3,5,7**	11.3	NA	11.3	NA	13	NA	13
Barium	**304**		**210**		1,500	NA	NA	NA	NA	NA	5,500
Beryllium	**0.91**		**1.04**		22	NA	NA	NA	NA	NA	160
Boron	**5.42**		**7.71**		40	NA	NA	NA	NA	NA	16,000
Cadmium	ND		ND		5.2	NA	NA	NA	NA	NA	78
Chromium	**22.5**	**1,***	**24.9**	**1,***	21	NA	NA	NA	NA	NA	230
Cobalt	**8.81**		**9.92**		20	NA	NA	NA	NA	NA	4,700
Copper	**23.4**		**23.4**		2,900	NA	NA	NA	NA	NA	2,900
Iron	**25600**	**1,3,5**	**28800**	**1,3,5**	15,000	NA	15,000	NA	15,900	NA	NA
Lead	**14.4**		**15.4**		107	NA	NA	NA	NA	NA	400
Magnesium	**3740**		**7300**		325,000	NA	NA	NA	NA	NA	325,000
Manganese	**477**		**517**		630	NA	630	NA	636	NA	1,600
Mercury	**0.018**		**0.018**		0.89	NA	NA	NA	NA	NA	10
Nickel	**24.3**		**25.9**		100	NA	NA	NA	NA	NA	1,600
Selenium	ND		ND		1.3	NA	NA	NA	NA	NA	390
Silver	ND		ND		4.4	NA	NA	NA	NA	NA	390
Thallium	ND		ND		2.6	NA	NA	NA	NA	NA	6.3
Vanadium	**39.8**		**45.1**		550	NA	NA	NA	NA	NA	550
Zinc	**B 67.8**		**B 69.5**		5,100	NA	NA	NA	NA	NA	23,000

Table 3a
Soil Analytical Results
Site 53
Unoccupied Property
Peoria, Peoria County, Illinois

Sample ID	53-B01		53-B01 DUP		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2		0-2								
Sample Date	2/17/2015		2/17/2015								
PID	0		0								
Sample pH	6.24		6.94								
Matrix	Soil		Soil								
SPLP Metals (mg/L)											
Antimony	ND		ND		m	NA	NA	NA	NA	0.006	NA
Barium	0.0095		0.0177		m	NA	NA	NA	NA	2	NA
Beryllium	ND		ND		m	NA	NA	NA	NA	0.004	NA
Boron	ND		ND		m	NA	NA	NA	NA	2	NA
Cadmium	ND		ND		m	NA	NA	NA	NA	0.005	NA
Chromium	ND		ND		m	NA	NA	NA	NA	0.1	NA
Cobalt	ND		ND		m	NA	NA	NA	NA	1	NA
Iron	1.95		3.58		m	NA	NA	NA	NA	5	NA
Lead	ND		ND		m	NA	NA	NA	NA	0.0075	NA
Manganese	0.0091		0.0153		m	NA	NA	NA	NA	0.15	NA
Mercury	ND		ND		m	NA	NA	NA	NA	0.002	NA
Nickel	ND		J 0.0039		m	NA	NA	NA	NA	0.1	NA
Selenium	ND		ND		m	NA	NA	NA	NA	0.05	NA
Silver	ND		ND		m	NA	NA	NA	NA	0.05	NA
Thallium	J 0.0003		J 0.0003		m	NA	NA	NA	NA	0.002	NA
Zinc	J 0.0079		0.0134		m	NA	NA	NA	NA	5	NA
TCLP Metals (mg/L)											
Antimony	NT		NT		m	NA	NA	NA	NA	0.006	NA
Barium	NT		NT		m	NA	NA	NA	NA	2	NA
Beryllium	NT		NT		m	NA	NA	NA	NA	0.004	NA
Boron	NT		NT		m	NA	NA	NA	NA	2	NA
Cadmium	NT		NT		m	NA	NA	NA	NA	0.005	NA
Chromium	NT		NT		m	NA	NA	NA	NA	0.1	NA
Cobalt	NT		NT		m	NA	NA	NA	NA	1	NA
Iron	NT		NT		m	NA	NA	NA	NA	5	NA
Lead	NT		NT		m	NA	NA	NA	NA	0.0075	NA
Manganese	NT		NT		m	NA	NA	NA	NA	0.15	NA
Mercury	NT		NT		m	NA	NA	NA	NA	0.002	NA
Nickel	NT		NT		m	NA	NA	NA	NA	0.1	NA
Selenium	NT		NT		m	NA	NA	NA	NA	0.05	NA
Silver	NT		NT		m	NA	NA	NA	NA	0.05	NA
Thallium	NT		NT		m	NA	NA	NA	NA	0.002	NA
Zinc	NT		NT		m	NA	NA	NA	NA	5	NA

Table 3b
Soil Analytical Results
Site 54
Unoccupied Property
Peoria, Peoria County, Illinois

Sample ID	54-B01		54-B02		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2		0-2								
Sample Date	2/17/2015		2/17/2015								
PID	0		0								
Sample pH	8.01		9.22								
Matrix	Soil		Soil								
Volatile Organic Compounds (mg/kg)											
1,1,1-Trichloroethane	ND		ND		2	NA	NA	NA	NA	NA	2
1,1,2,2-Tetrachloroethane	ND		ND		NA	NA	NA	NA	NA	NA	0.0035
1,1,2-Trichloroethane	ND		ND		0.02	NA	NA	NA	NA	NA	0.02
1,1-Dichloroethane	ND		ND		23	NA	NA	NA	NA	NA	23
1,1-Dichloroethene	ND		ND		0.06	NA	NA	NA	NA	NA	0.06
1,2-Dichloroethane	ND		ND		0.02	NA	NA	NA	NA	NA	0.02
1,2-Dichloropropane	ND		ND		0.03	NA	NA	NA	NA	NA	0.03
1,3-Dichloropropene	ND		ND		0.005	NA	NA	NA	NA	NA	0.005
2-Butanone (MEK)	**J 0.024**		**J 0.03**		17	NA	NA	NA	NA	NA	17
2-Hexanone (MBK)	ND		ND		NA	NA	NA	NA	NA	NA	0.16
4-Methyl-2-pentanone (MIBK)	ND		ND		NA	NA	NA	NA	NA	NA	2.5
Acetone	**0.091**		**0.082**		25	NA	NA	NA	NA	NA	25
Benzene	ND		**0.004**		0.03	NA	NA	NA	NA	NA	0.03
Bromodichloromethane	ND		ND		0.6	NA	NA	NA	NA	NA	0.6
Bromoform	ND		ND		0.8	NA	NA	NA	NA	NA	0.8
Bromomethane	ND		ND		0.2	NA	NA	NA	NA	NA	0.2
Carbon disulfide	ND		ND		9	NA	NA	NA	NA	NA	32
Carbon Tetrachloride	ND		ND		0.07	NA	NA	NA	NA	NA	0.07
Chlorobenzene	ND		ND		1	NA	NA	NA	NA	NA	1
Chloroethane	ND		ND		NA	NA	NA	NA	NA	NA	1,500
Chloroform	ND		ND		0.3	NA	NA	NA	NA	NA	0.3
Chloromethane	ND		ND		NA	NA	NA	NA	NA	NA	110
cis-1,2-Dichloroethene	ND		ND		0.4	NA	NA	NA	NA	NA	0.4
cis-1,3-Dichloropropene	ND		ND		NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ND		ND		0.4	NA	NA	NA	NA	NA	0.4
Ethylbenzene	ND		ND		13	NA	NA	NA	NA	NA	13
Methylene chloride	ND		ND		0.02	NA	NA	NA	NA	NA	0.02
Methyl-tert-butyl-ether (MTBE)	ND		ND		0.32	NA	NA	NA	NA	NA	0.32
Styrene	ND		ND		4	NA	NA	NA	NA	NA	4
Tetrachloroethene	ND		ND		0.06	NA	NA	NA	NA	NA	0.06
Toluene	ND		**J 0.002**		12	NA	NA	NA	NA	NA	12
trans-1,2-Dichloroethene	ND		ND		0.7	NA	NA	NA	NA	NA	0.7
trans-1,3-Dichloropropene	ND		ND		NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ND		ND		0.06	NA	NA	NA	NA	NA	0.06
Vinyl Acetate	ND		ND		10	NA	NA	NA	NA	NA	170
Vinyl Chloride	ND		ND		0.01	NA	NA	NA	NA	NA	0.01
Xylenes, total	ND		**J 0.002**		5.6	NA	NA	NA	NA	NA	150

Table 3b
Soil Analytical Results
Site 54
Unoccupied Property
Peoria, Peoria County, Illinois

Sample ID	54-B01		54-B02		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2		0-2								
Sample Date	2/17/2015		2/17/2015								
PID	0		0								
Sample pH	8.01		9.22								
Matrix	Soil		Soil								
Semivolatile Organic Compounds (mg/kg)											
1,2,4-Trichlorobenzene	ND		ND		5	NA	NA	NA	NA	NA	5
1,2-Dichlorobenzene	ND		ND		17	NA	NA	NA	NA	NA	17
1,4-Dichlorobenzene	ND		ND		2	NA	NA	NA	NA	NA	2
2,4,5-Trichlorophenol	ND		ND		26	NA	NA	NA	NA	NA	270
2,4,6-Trichlorophenol	ND		ND		0.66	NA	NA	NA	NA	NA	0.66
2,4-Dichlorophenol	ND		ND		0.48	NA	NA	NA	NA	NA	1
2,4-Dimethylphenol	ND		ND		9	NA	NA	NA	NA	NA	9
2,4-Dinitrophenol	ND		ND		3.3	NA	NA	NA	NA	NA	3.3
2,4-Dinitrotoluene	ND		ND		0.25	NA	NA	NA	NA	NA	0.25
2,6-Dinitrotoluene	ND		ND		0.26	NA	NA	NA	NA	NA	0.26
2-Chloronaphthalene	ND		ND		NA	NA	NA	NA	NA	NA	49
2-Chlorophenol	ND		ND		1.5	NA	NA	NA	NA	NA	4
2-Methylnaphthalene	ND		ND		NA	NA	NA	NA	NA	NA	1.9
2-Methylphenol	ND		ND		15	NA	NA	NA	NA	NA	15
2-Nitroaniline	ND		ND		NA	NA	NA	NA	NA	NA	0.7
3,3´-Dichlorobenzidine	ND		ND		1.3	NA	NA	NA	NA	NA	1.3
4,6-Dinitro-2-methylphenol	ND		ND		NA	NA	NA	NA	NA	NA	6.3
4-Chloroaniline	ND		ND		0.7	NA	NA	NA	NA	NA	0.7
4-Methylphenol	ND		ND		NA	NA	NA	NA	NA	NA	3.9
4-Nitroaniline	ND		ND		NA	NA	NA	NA	NA	NA	0.14
4-Nitrophenol	ND		ND		NA	NA	NA	NA	NA	NA	630
Acenaphthene	ND		ND		570	NA	NA	NA	NA	NA	570
Acenaphthylene	ND		ND		85	NA	NA	NA	NA	NA	85
Anthracene	ND		ND		12,000	NA	NA	NA	NA	NA	12,000
Benzo(a)anthracene	ND		ND		0.9	0.9	0.9	1.1	1.8	NA	1.8
Benzo(a)pyrene	ND		ND		0.09	0.09	0.98	1.3	2.1	NA	2.1
Benzo(b)fluoranthene	ND		ND		0.9	0.9	0.9	1.5	2.1	NA	2.1
Benzo(g,h,i)perylene	ND		ND		2,300	NA	NA	NA	NA	NA	2,300
Benzo(k)fluoranthene	ND		ND		9	NA	NA	NA	NA	NA	9
Bis(2-chloroethyl)ether	ND		ND		0.66	NA	NA	NA	NA	NA	0.66
bis(2-chloroisopropyl)ether	ND		ND		NA	NA	NA	NA	NA	NA	2.4
Bis(2-ethylhexyl)phthalate	ND		ND		46	NA	NA	NA	NA	NA	46
Butyl benzyl phthalate	ND		ND		930	NA	NA	NA	NA	NA	930
Carbazole	ND		ND		0.6	NA	NA	NA	NA	NA	0.6
Chrysene	ND		ND		88	NA	NA	NA	NA	NA	88
Dibenzo(a,h)anthracene	ND		ND		0.09	0.09	0.15	0.2	0.42	NA	0.42
Dibenzofuran	ND		ND		NA	NA	NA	NA	NA	NA	3

Table 3b
Soil Analytical Results
Site 54
Unoccupied Property
Peoria, Peoria County, Illinois

Sample ID	54-B01		54-B02		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2		0-2								
Sample Date	2/17/2015		2/17/2015								
PID	0		0								
Sample pH	8.01		9.22								
Matrix	Soil		Soil								
Diethyl phthalate	ND		ND		470	NA	NA	NA	NA	NA	470
Dimethyl phthalate	ND		ND		NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	ND		ND		2,300	NA	NA	NA	NA	NA	2,300
Di-n-octyl phthalate	ND		ND		1,600	NA	NA	NA	NA	NA	1,600
Fluoranthene	ND		ND		3,100	NA	NA	NA	NA	NA	3,100
Fluorene	ND		ND		560	NA	NA	NA	NA	NA	560
Hexachlorobenzene	ND		ND		0.4	NA	NA	NA	NA	NA	0.4
Hexachlorobutadiene	ND		ND		NA	NA	NA	NA	NA	NA	2.2
Hexachlorocyclopentadiene	ND		ND		1.1	NA	NA	NA	NA	NA	10
Hexachloroethane	ND		ND		0.5	NA	NA	NA	NA	NA	0.5
Indeno(1,2,3-cd)pyrene	ND		ND		0.9	0.9	0.9	0.9	1.6	NA	1.6
Isophorone	ND		ND		8	NA	NA	NA	NA	NA	8
Naphthalene	ND		ND		1.8	NA	NA	NA	NA	NA	12
Nitrobenzene	ND		ND		0.26	NA	NA	NA	NA	NA	0.26
N-Nitrosodi-n-propylamine	ND		ND		0.0018	NA	NA	NA	NA	NA	0.0018
N-Nitrosodiphenylamine	ND		ND		1	NA	NA	NA	NA	NA	1
Pentachlorophenol	ND		ND		0.02	NA	NA	NA	NA	NA	0.03
Phenanthrene	ND		ND		210	NA	NA	NA	NA	NA	210
Phenol	ND		ND		100	NA	NA	NA	NA	NA	100
Pyrene	ND		ND		2,300	NA	NA	NA	NA	NA	2,300
Inorganic Compounds, Total (mg/kg)											
Antimony	ND		ND		5	NA	NA	NA	NA	NA	31
Arsenic	**14.7**	1,3,5,7	**12.1**	1,3,*	11.3	NA	11.3	NA	13	NA	13
Barium	**202**		**175**		1,500	NA	NA	NA	NA	NA	5,500
Beryllium	**1.1**		**0.88**		22	NA	NA	NA	NA	NA	160
Boron	**7.76**		**7.57**		40	NA	NA	NA	NA	NA	16,000
Cadmium	**J 0.12**		**J 0.1**		5.2	NA	NA	NA	NA	NA	78
Chromium	**26.6**	1,*	**22.6**	1,*	21	NA	NA	NA	NA	NA	230
Cobalt	**10.9**		**10**		20	NA	NA	NA	NA	NA	4,700
Copper	**25.6**		**21.7**		2,900	NA	NA	NA	NA	NA	2,900
Iron	**29700**	1,3,5	**26100**	1,3,5	15,000	NA	15,000	NA	15,900	NA	NA
Lead	**14.5**		**14.5**		107	NA	NA	NA	NA	NA	400
Magnesium	**4160**		**3810**		325,000	NA	NA	NA	NA	NA	325,000
Manganese	**792**	1,3,5,*	**718**	1,3,5,*	630	NA	630	NA	636	NA	1,600
Mercury	**0.037**		**0.033**		0.89	NA	NA	NA	NA	NA	10
Nickel	**32**		**28.6**		100	NA	NA	NA	NA	NA	1,600
Selenium	ND		ND		1.3	NA	NA	NA	NA	NA	390
Silver	ND		ND		4.4	NA	NA	NA	NA	NA	390
Thallium	ND		ND		2.6	NA	NA	NA	NA	NA	6.3
Vanadium	**46.3**		**40.6**		550	NA	NA	NA	NA	NA	550
Zinc	**B 68.5**		**B 61.1**		5,100	NA	NA	NA	NA	NA	23,000

Table 3b
Soil Analytical Results
Site 54
Unoccupied Property
Peoria, Peoria County, Illinois

Sample ID	54-B01		54-B02		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2		0-2								
Sample Date	2/17/2015		2/17/2015								
PID	0		0								
Sample pH	8.01		9.22								
Matrix	Soil		Soil								
SPLP Metals (mg/L)											
Antimony	J 0.0005		0.0024		m	NA	NA	NA	NA	0.006	NA
Barium	0.149		0.0101		m	NA	NA	NA	NA	2	NA
Beryllium	J 0.0009		ND		m	NA	NA	NA	NA	0.004	NA
Boron	ND		ND		m	NA	NA	NA	NA	2	NA
Cadmium	ND		ND		m	NA	NA	NA	NA	0.005	NA
Chromium	0.0223		ND		m	NA	NA	NA	NA	0.1	NA
Cobalt	J 0.0061		ND		m	NA	NA	NA	NA	1	NA
Iron	24.4	6	1.22		m	NA	NA	NA	NA	5	NA
Lead	0.0087	6	ND		m	NA	NA	NA	NA	0.0075	NA
Manganese	0.392	6	0.018		m	NA	NA	NA	NA	0.15	NA
Mercury	ND		ND		m	NA	NA	NA	NA	0.002	NA
Nickel	0.0234		ND		m	NA	NA	NA	NA	0.1	NA
Selenium	ND		ND		m	NA	NA	NA	NA	0.05	NA
Silver	ND		ND		m	NA	NA	NA	NA	0.05	NA
Thallium	J 0.0005		ND		m	NA	NA	NA	NA	0.002	NA
Zinc	0.0595		J 0.0049		m	NA	NA	NA	NA	5	NA
TCLP Metals (mg/L)											
Antimony	NT		NT		m	NA	NA	NA	NA	0.006	NA
Barium	NT		NT		m	NA	NA	NA	NA	2	NA
Beryllium	NT		NT		m	NA	NA	NA	NA	0.004	NA
Boron	NT		NT		m	NA	NA	NA	NA	2	NA
Cadmium	NT		NT		m	NA	NA	NA	NA	0.005	NA
Chromium	NT		NT		m	NA	NA	NA	NA	0.1	NA
Cobalt	NT		NT		m	NA	NA	NA	NA	1	NA
Iron	2.39		NT		m	NA	NA	NA	NA	5	NA
Lead	ND		NT		m	NA	NA	NA	NA	0.0075	NA
Manganese	6.34	6	NT		m	NA	NA	NA	NA	0.15	NA
Mercury	NT		NT		m	NA	NA	NA	NA	0.002	NA
Nickel	NT		NT		m	NA	NA	NA	NA	0.1	NA
Selenium	NT		NT		m	NA	NA	NA	NA	0.05	NA
Silver	NT		NT		m	NA	NA	NA	NA	0.05	NA
Thallium	NT		NT		m	NA	NA	NA	NA	0.002	NA
Zinc	NT		NT		m	NA	NA	NA	NA	5	NA

Table 3c
Soil Analytical Results
Site 62
Sun Loan & Khoury's Cuisine
Peoria, Peoria County, Illinois

Sample ID	62-B01		62-B02		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-4		0-4								
Sample Date	2/18/2015		2/18/2015								
PID	0		0								
Sample pH	7.89		8.95								
Matrix	Soil		Soil								
Volatile Organic Compounds (mg/kg)											
1,1,1-Trichloroethane	ND		ND		2	NA	NA	NA	NA	NA	2
1,1,2,2-Tetrachloroethane	ND		ND		NA	NA	NA	NA	NA	NA	0.0035
1,1,2-Trichloroethane	ND		ND		0.02	NA	NA	NA	NA	NA	0.02
1,1-Dichloroethane	ND		ND		23	NA	NA	NA	NA	NA	23
1,1-Dichloroethene	ND		ND		0.06	NA	NA	NA	NA	NA	0.06
1,2-Dichloroethane	ND		ND		0.02	NA	NA	NA	NA	NA	0.02
1,2-Dichloropropane	ND		ND		0.03	NA	NA	NA	NA	NA	0.03
1,3-Dichloropropene	ND		ND		0.005	NA	NA	NA	NA	NA	0.005
2-Butanone (MEK)	**J 0.037**		**0.048**		17	NA	NA	NA	NA	NA	17
2-Hexanone (MBK)	ND		ND		NA	NA	NA	NA	NA	NA	0.16
4-Methyl-2-pentanone (MIBK)	ND		ND		NA	NA	NA	NA	NA	NA	2.5
Acetone	**0.076**		**0.091**		25	NA	NA	NA	NA	NA	25
Benzene	**0.001**		**0.003**		0.03	NA	NA	NA	NA	NA	0.03
Bromodichloromethane	ND		ND		0.6	NA	NA	NA	NA	NA	0.6
Bromoform	ND		ND		0.8	NA	NA	NA	NA	NA	0.8
Bromomethane	ND		ND		0.2	NA	NA	NA	NA	NA	0.2
Carbon disulfide	ND		ND		9	NA	NA	NA	NA	NA	32
Carbon Tetrachloride	ND		ND		0.07	NA	NA	NA	NA	NA	0.07
Chlorobenzene	ND		ND		1	NA	NA	NA	NA	NA	1
Chloroethane	ND		ND		NA	NA	NA	NA	NA	NA	1,500
Chloroform	ND		ND		0.3	NA	NA	NA	NA	NA	0.3
Chloromethane	ND		ND		NA	NA	NA	NA	NA	NA	110
cis-1,2-Dichloroethene	ND		ND		0.4	NA	NA	NA	NA	NA	0.4
cis-1,3-Dichloropropene	ND		ND		NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ND		ND		0.4	NA	NA	NA	NA	NA	0.4
Ethylbenzene	ND		**J 0.002**		13	NA	NA	NA	NA	NA	13
Methylene chloride	ND		ND		0.02	NA	NA	NA	NA	NA	0.02
Methyl-tert-butyl-ether (MTBE)	ND		ND		0.32	NA	NA	NA	NA	NA	0.32
Styrene	ND		ND		4	NA	NA	NA	NA	NA	4
Tetrachloroethene	ND		ND		0.06	NA	NA	NA	NA	NA	0.06
Toluene	ND		**0.005**		12	NA	NA	NA	NA	NA	12
trans-1,2-Dichloroethene	ND		ND		0.7	NA	NA	NA	NA	NA	0.7
trans-1,3-Dichloropropene	ND		ND		NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ND		ND		0.06	NA	NA	NA	NA	NA	0.06
Vinyl Acetate	ND		ND		10	NA	NA	NA	NA	NA	170
Vinyl Chloride	ND		ND		0.01	NA	NA	NA	NA	NA	0.01
Xylenes, total	**J 0.001**		**J 0.002**		5.6	NA	NA	NA	NA	NA	150

Table 3c
Soil Analytical Results
Site 62
Sun Loan & Khoury's Cuisine
Peoria, Peoria County, Illinois

Sample ID	62-B01		62-B02		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-4		0-4								
Sample Date	2/18/2015		2/18/2015								
PID	0		0								
Sample pH	7.89		8.95								
Matrix	Soil		Soil								
Semivolatile Organic Compounds (mg/kg)											
1,2,4-Trichlorobenzene	ND		ND		5	NA	NA	NA	NA	NA	5
1,2-Dichlorobenzene	ND		ND		17	NA	NA	NA	NA	NA	17
1,4-Dichlorobenzene	ND		ND		2	NA	NA	NA	NA	NA	2
2,4,5-Trichlorophenol	ND		ND		26	NA	NA	NA	NA	NA	270
2,4,6-Trichlorophenol	ND		ND		0.66	NA	NA	NA	NA	NA	0.66
2,4-Dichlorophenol	ND		ND		0.48	NA	NA	NA	NA	NA	1
2,4-Dimethylphenol	ND		ND		9	NA	NA	NA	NA	NA	9
2,4-Dinitrophenol	ND		ND		3.3	NA	NA	NA	NA	NA	3.3
2,4-Dinitrotoluene	ND		ND		0.25	NA	NA	NA	NA	NA	0.25
2,6-Dinitrotoluene	ND		ND		0.26	NA	NA	NA	NA	NA	0.26
2-Chloronaphthalene	ND		ND		NA	NA	NA	NA	NA	NA	49
2-Chlorophenol	ND		ND		1.5	NA	NA	NA	NA	NA	4
2-Methylnaphthalene	ND		ND		NA	NA	NA	NA	NA	NA	1.9
2-Methylphenol	ND		ND		15	NA	NA	NA	NA	NA	15
2-Nitroaniline	ND		ND		NA	NA	NA	NA	NA	NA	0.7
3,3´-Dichlorobenzidine	ND		ND		1.3	NA	NA	NA	NA	NA	1.3
4,6-Dinitro-2-methylphenol	ND		ND		NA	NA	NA	NA	NA	NA	6.3
4-Chloroaniline	ND		ND		0.7	NA	NA	NA	NA	NA	0.7
4-Methylphenol	ND		ND		NA	NA	NA	NA	NA	NA	3.9
4-Nitroaniline	ND		ND		NA	NA	NA	NA	NA	NA	0.14
4-Nitrophenol	ND		ND		NA	NA	NA	NA	NA	NA	630
Acenaphthene	ND		ND		570	NA	NA	NA	NA	NA	570
Acenaphthylene	ND		ND		85	NA	NA	NA	NA	NA	85
Anthracene	ND		ND		12,000	NA	NA	NA	NA	NA	12,000
Benzo(a)anthracene	ND		ND		0.9	0.9	0.9	1.1	1.8	NA	1.8
Benzo(a)pyrene	ND		ND		0.09	0.09	0.98	1.3	2.1	NA	2.1
Benzo(b)fluoranthene	ND		ND		0.9	0.9	0.9	1.5	2.1	NA	2.1
Benzo(g,h,i)perylene	ND		ND		2,300	NA	NA	NA	NA	NA	2,300
Benzo(k)fluoranthene	ND		ND		9	NA	NA	NA	NA	NA	9
Bis(2-chloroethyl)ether	ND		ND		0.66	NA	NA	NA	NA	NA	0.66
bis(2-chloroisopropyl)ether	ND		ND		NA	NA	NA	NA	NA	NA	2.4
Bis(2-ethylhexyl)phthalate	ND		ND		46	NA	NA	NA	NA	NA	46
Butyl benzyl phthalate	ND		ND		930	NA	NA	NA	NA	NA	930
Carbazole	ND		ND		0.6	NA	NA	NA	NA	NA	0.6
Chrysene	ND		ND		88	NA	NA	NA	NA	NA	88
Dibenzo(a,h)anthracene	ND		ND		0.09	0.09	0.15	0.2	0.42	NA	0.42
Dibenzofuran	ND		ND		NA	NA	NA	NA	NA	NA	3

Table 3c
Soil Analytical Results
Site 62
Sun Loan & Khoury's Cuisine
Peoria, Peoria County, Illinois

Sample ID	62-B01		62-B02		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-4		0-4								
Sample Date	2/18/2015		2/18/2015								
PID	0		0								
Sample pH	7.89		8.95								
Matrix	Soil		Soil								
Diethyl phthalate	ND		ND		470	NA	NA	NA	NA	NA	470
Dimethyl phthalate	ND		ND		NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	ND		ND		2,300	NA	NA	NA	NA	NA	2,300
Di-n-octyl phthalate	ND		ND		1,600	NA	NA	NA	NA	NA	1,600
Fluoranthene	ND		ND		3,100	NA	NA	NA	NA	NA	3,100
Fluorene	ND		ND		560	NA	NA	NA	NA	NA	560
Hexachlorobenzene	ND		ND		0.4	NA	NA	NA	NA	NA	0.4
Hexachlorobutadiene	ND		ND		NA	NA	NA	NA	NA	NA	2.2
Hexachlorocyclopentadiene	ND		ND		1.1	NA	NA	NA	NA	NA	10
Hexachloroethane	ND		ND		0.5	NA	NA	NA	NA	NA	0.5
Indeno(1,2,3-cd)pyrene	ND		ND		0.9	0.9	0.9	0.9	1.6	NA	1.6
Isophorone	ND		ND		8	NA	NA	NA	NA	NA	8
Naphthalene	ND		ND		1.8	NA	NA	NA	NA	NA	12
Nitrobenzene	ND		ND		0.26	NA	NA	NA	NA	NA	0.26
N-Nitrosodi-n-propylamine	ND		ND		0.0018	NA	NA	NA	NA	NA	0.0018
N-Nitrosodiphenylamine	ND		ND		1	NA	NA	NA	NA	NA	1
Pentachlorophenol	ND		ND		0.02	NA	NA	NA	NA	NA	0.03
Phenanthrene	ND		ND		210	NA	NA	NA	NA	NA	210
Phenol	ND		ND		100	NA	NA	NA	NA	NA	100
Pyrene	ND		ND		2,300	NA	NA	NA	NA	NA	2,300
Inorganic Compounds, Total (mg/kg)											
Antimony	ND		ND		5	NA	NA	NA	NA	NA	31
Arsenic	**5.05**		**8.42**		11.3	NA	11.3	NA	13	NA	13
Barium	**142**		**27**		1,500	NA	NA	NA	NA	NA	5,500
Beryllium	**0.68**		**0.22**		22	NA	NA	NA	NA	NA	160
Boron	**3.45**		**3.74**		40	NA	NA	NA	NA	NA	16,000
Cadmium	**0.31**		**J 0.12**		5.2	NA	NA	NA	NA	NA	78
Chromium	**11.3**		**5.2**		21	NA	NA	NA	NA	NA	230
Cobalt	**10.3**		**3.21**		20	NA	NA	NA	NA	NA	4,700
Copper	**9.4**		**7.22**		2,900	NA	NA	NA	NA	NA	2,900
Iron	**10400**		**7180**		15,000	NA	15,000	NA	15,900	NA	NA
Lead	**19.6**		**15**		107	NA	NA	NA	NA	NA	400
Magnesium	**1680**		**9210**		325,000	NA	NA	NA	NA	NA	325,000
Manganese	**1480**	**1,3,5,***	**340**		630	NA	630	NA	636	NA	1,600
Mercury	**0.03**		**J 0.004**		0.89	NA	NA	NA	NA	NA	10
Nickel	**13.2**		**6.3**		100	NA	NA	NA	NA	NA	1,600
Selenium	ND		ND		1.3	NA	NA	NA	NA	NA	390
Silver	ND		ND		4.4	NA	NA	NA	NA	NA	390
Thallium	ND		ND		2.6	NA	NA	NA	NA	NA	6.3
Vanadium	**27.1**		**10.3**		550	NA	NA	NA	NA	NA	550
Zinc	**B 40**		**B 27.3**		5,100	NA	NA	NA	NA	NA	23,000

Table 3c
Soil Analytical Results
Site 62
Sun Loan & Khoury's Cuisine
Peoria, Peoria County, Illinois

Sample ID	62-B01		62-B02		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-4		0-4								
Sample Date	2/18/2015		2/18/2015								
PID	0		0								
Sample pH	7.89		8.95								
Matrix	Soil		Soil								
SPLP Metals (mg/L)											
Antimony	**0.0027**		**J 0.0004**		m	NA	NA	NA	NA	0.006	NA
Barium	**0.0474**		**0.0137**		m	NA	NA	NA	NA	2	NA
Beryllium	**J 0.0003**		ND		m	NA	NA	NA	NA	0.004	NA
Boron	ND		ND		m	NA	NA	NA	NA	2	NA
Cadmium	ND		ND		m	NA	NA	NA	NA	0.005	NA
Chromium	**J 0.0043**		ND		m	NA	NA	NA	NA	0.1	NA
Cobalt	**J 0.0031**		ND		m	NA	NA	NA	NA	1	NA
Iron	**3.46**		**2.49**		m	NA	NA	NA	NA	5	NA
Lead	**0.0073**		**0.0075**		m	NA	NA	NA	NA	0.0075	NA
Manganese	**0.0359**		**0.0588**		m	NA	NA	NA	NA	0.15	NA
Mercury	ND		ND		m	NA	NA	NA	NA	0.002	NA
Nickel	**J 0.0047**		ND		m	NA	NA	NA	NA	0.1	NA
Selenium	ND		ND		m	NA	NA	NA	NA	0.05	NA
Silver	ND		ND		m	NA	NA	NA	NA	0.05	NA
Thallium	**J 0.0003**		ND		m	NA	NA	NA	NA	0.002	NA
Zinc	**0.0176**		**0.0183**		m	NA	NA	NA	NA	5	NA
TCLP Metals (mg/L)											
Antimony	NT		NT		m	NA	NA	NA	NA	0.006	NA
Barium	NT		NT		m	NA	NA	NA	NA	2	NA
Beryllium	NT		NT		m	NA	NA	NA	NA	0.004	NA
Boron	NT		NT		m	NA	NA	NA	NA	2	NA
Cadmium	NT		NT		m	NA	NA	NA	NA	0.005	NA
Chromium	NT		NT		m	NA	NA	NA	NA	0.1	NA
Cobalt	NT		NT		m	NA	NA	NA	NA	1	NA
Iron	NT		NT		m	NA	NA	NA	NA	5	NA
Lead	NT		NT		m	NA	NA	NA	NA	0.0075	NA
Manganese	NT		NT		m	NA	NA	NA	NA	0.15	NA
Mercury	NT		NT		m	NA	NA	NA	NA	0.002	NA
Nickel	NT		NT		m	NA	NA	NA	NA	0.1	NA
Selenium	NT		NT		m	NA	NA	NA	NA	0.05	NA
Silver	NT		NT		m	NA	NA	NA	NA	0.05	NA
Thallium	NT		NT		m	NA	NA	NA	NA	0.002	NA
Zinc	NT		NT		m	NA	NA	NA	NA	5	NA

Table 3d
Soil Analytical Results
Site 63
Parking Lot
Peoria, Peoria County, Illinois

Sample ID	63-B01		63-B02		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2		0-4								
Sample Date	2/18/2015		2/18/2015								
PID	0		0								
Sample pH	8.38		8.17								
Matrix	Soil		Soil								
Volatile Organic Compounds (mg/kg)											
1,1,1-Trichloroethane	ND		ND		2	NA	NA	NA	NA	NA	2
1,1,2,2-Tetrachloroethane	ND		ND		NA	NA	NA	NA	NA	NA	0.0035
1,1,2-Trichloroethane	ND		ND		0.02	NA	NA	NA	NA	NA	0.02
1,1-Dichloroethane	ND		ND		23	NA	NA	NA	NA	NA	23
1,1-Dichloroethene	ND		ND		0.06	NA	NA	NA	NA	NA	0.06
1,2-Dichloroethane	ND		ND		0.02	NA	NA	NA	NA	NA	0.02
1,2-Dichloropropane	ND		ND		0.03	NA	NA	NA	NA	NA	0.03
1,3-Dichloropropene	ND		ND		0.005	NA	NA	NA	NA	NA	0.005
2-Butanone (MEK)	**0.056**		**J 0.036**		17	NA	NA	NA	NA	NA	17
2-Hexanone (MBK)	ND		ND		NA	NA	NA	NA	NA	NA	0.16
4-Methyl-2-pentanone (MIBK)	ND		ND		NA	NA	NA	NA	NA	NA	2.5
Acetone	**0.106**		**0.109**		25	NA	NA	NA	NA	NA	25
Benzene	**0.003**		**J 0.001**		0.03	NA	NA	NA	NA	NA	0.03
Bromodichloromethane	ND		ND		0.6	NA	NA	NA	NA	NA	0.6
Bromoform	ND		ND		0.8	NA	NA	NA	NA	NA	0.8
Bromomethane	ND		ND		0.2	NA	NA	NA	NA	NA	0.2
Carbon disulfide	ND		ND		9	NA	NA	NA	NA	NA	32
Carbon Tetrachloride	ND		ND		0.07	NA	NA	NA	NA	NA	0.07
Chlorobenzene	ND		ND		1	NA	NA	NA	NA	NA	1
Chloroethane	ND		ND		NA	NA	NA	NA	NA	NA	1,500
Chloroform	ND		ND		0.3	NA	NA	NA	NA	NA	0.3
Chloromethane	ND		ND		NA	NA	NA	NA	NA	NA	110
cis-1,2-Dichloroethene	ND		ND		0.4	NA	NA	NA	NA	NA	0.4
cis-1,3-Dichloropropene	ND		ND		NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ND		ND		0.4	NA	NA	NA	NA	NA	0.4
Ethylbenzene	**J 0.003**		ND		13	NA	NA	NA	NA	NA	13
Methylene chloride	ND		ND		0.02	NA	NA	NA	NA	NA	0.02
Methyl-tert-butyl-ether (MTBE)	ND		ND		0.32	NA	NA	NA	NA	NA	0.32
Styrene	ND		ND		4	NA	NA	NA	NA	NA	4
Tetrachloroethene	ND		ND		0.06	NA	NA	NA	NA	NA	0.06
Toluene	**0.006**		ND		12	NA	NA	NA	NA	NA	12
trans-1,2-Dichloroethene	ND		ND		0.7	NA	NA	NA	NA	NA	0.7
trans-1,3-Dichloropropene	ND		ND		NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ND		ND		0.06	NA	NA	NA	NA	NA	0.06
Vinyl Acetate	ND		ND		10	NA	NA	NA	NA	NA	170
Vinyl Chloride	ND		ND		0.01	NA	NA	NA	NA	NA	0.01
Xylenes, total	**0.005**		ND		5.6	NA	NA	NA	NA	NA	150

Table 3d
Soil Analytical Results
Site 63
Parking Lot
Peoria, Peoria County, Illinois

Sample ID	63-B01		63-B02		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2		0-4								
Sample Date	2/18/2015		2/18/2015								
PID	0		0								
Sample pH	8.38		8.17								
Matrix	Soil		Soil								
Semivolatile Organic Compounds (mg/kg)											
1,2,4-Trichlorobenzene	ND		ND		5	NA	NA	NA	NA	NA	5
1,2-Dichlorobenzene	ND		ND		17	NA	NA	NA	NA	NA	17
1,4-Dichlorobenzene	ND		ND		2	NA	NA	NA	NA	NA	2
2,4,5-Trichlorophenol	ND		ND		26	NA	NA	NA	NA	NA	270
2,4,6-Trichlorophenol	ND		ND		0.66	NA	NA	NA	NA	NA	0.66
2,4-Dichlorophenol	ND		ND		0.48	NA	NA	NA	NA	NA	1
2,4-Dimethylphenol	ND		ND		9	NA	NA	NA	NA	NA	9
2,4-Dinitrophenol	ND		ND		3.3	NA	NA	NA	NA	NA	3.3
2,4-Dinitrotoluene	ND		ND		0.25	NA	NA	NA	NA	NA	0.25
2,6-Dinitrotoluene	ND		ND		0.26	NA	NA	NA	NA	NA	0.26
2-Chloronaphthalene	ND		ND		NA	NA	NA	NA	NA	NA	49
2-Chlorophenol	ND		ND		1.5	NA	NA	NA	NA	NA	4
2-Methylnaphthalene	ND		ND		NA	NA	NA	NA	NA	NA	1.9
2-Methylphenol	ND		ND		15	NA	NA	NA	NA	NA	15
2-Nitroaniline	ND		ND		NA	NA	NA	NA	NA	NA	0.7
3,3'-Dichlorobenzidine	ND		ND		1.3	NA	NA	NA	NA	NA	1.3
4,6-Dinitro-2-methylphenol	ND		ND		NA	NA	NA	NA	NA	NA	6.3
4-Chloroaniline	ND		ND		0.7	NA	NA	NA	NA	NA	0.7
4-Methylphenol	ND		ND		NA	NA	NA	NA	NA	NA	3.9
4-Nitroaniline	ND		ND		NA	NA	NA	NA	NA	NA	0.14
4-Nitrophenol	ND		ND		NA	NA	NA	NA	NA	NA	630
Acenaphthene	ND		ND		570	NA	NA	NA	NA	NA	570
Acenaphthylene	ND		ND		85	NA	NA	NA	NA	NA	85
Anthracene	ND		ND		12,000	NA	NA	NA	NA	NA	12,000
Benzo(a)anthracene	ND		ND		0.9	0.9	0.9	1.1	1.8	NA	1.8
Benzo(a)pyrene	ND		ND		0.09	0.09	0.98	1.3	2.1	NA	2.1
Benzo(b)fluoranthene	ND		J 0.051		0.9	0.9	0.9	1.5	2.1	NA	2.1
Benzo(g,h,i)perylene	ND		ND		2,300	NA	NA	NA	NA	NA	2,300
Benzo(k)fluoranthene	ND		ND		9	NA	NA	NA	NA	NA	9
Bis(2-chloroethyl)ether	ND		ND		0.66	NA	NA	NA	NA	NA	0.66
bis(2-chloroisopropyl)ether	ND		ND		NA	NA	NA	NA	NA	NA	2.4
Bis(2-ethylhexyl)phthalate	ND		ND		46	NA	NA	NA	NA	NA	46
Butyl benzyl phthalate	ND		ND		930	NA	NA	NA	NA	NA	930
Carbazole	ND		ND		0.6	NA	NA	NA	NA	NA	0.6
Chrysene	ND		ND		88	NA	NA	NA	NA	NA	88
Dibenzo(a,h)anthracene	ND		ND		0.09	0.09	0.15	0.2	0.42	NA	0.42
Dibenzofuran	ND		ND		NA	NA	NA	NA	NA	NA	3

Table 3d
Soil Analytical Results
Site 63
Parking Lot
Peoria, Peoria County, Illinois

Sample ID	63-B01		63-B02		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2		0-4								
Sample Date	2/18/2015		2/18/2015								
PID	0		0								
Sample pH	8.38		8.17								
Matrix	Soil		Soil								
Diethyl phthalate	ND		ND		470	NA	NA	NA	NA	NA	470
Dimethyl phthalate	ND		ND		NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	ND		ND		2,300	NA	NA	NA	NA	NA	2,300
Di-n-octyl phthalate	ND		ND		1,600	NA	NA	NA	NA	NA	1,600
Fluoranthene	ND		J 0.04		3,100	NA	NA	NA	NA	NA	3,100
Fluorene	ND		ND		560	NA	NA	NA	NA	NA	560
Hexachlorobenzene	ND		ND		0.4	NA	NA	NA	NA	NA	0.4
Hexachlorobutadiene	ND		ND		NA	NA	NA	NA	NA	NA	2.2
Hexachlorocyclopentadiene	ND		ND		1.1	NA	NA	NA	NA	NA	10
Hexachloroethane	ND		ND		0.5	NA	NA	NA	NA	NA	0.5
Indeno(1,2,3-cd)pyrene	ND		ND		0.9	0.9	0.9	0.9	1.6	NA	1.6
Isophorone	ND		ND		8	NA	NA	NA	NA	NA	8
Naphthalene	ND		ND		1.8	NA	NA	NA	NA	NA	12
Nitrobenzene	ND		ND		0.26	NA	NA	NA	NA	NA	0.26
N-Nitrosodi-n-propylamine	ND		ND		0.0018	NA	NA	NA	NA	NA	0.0018
N-Nitrosodiphenylamine	ND		ND		1	NA	NA	NA	NA	NA	1
Pentachlorophenol	ND		ND		0.02	NA	NA	NA	NA	NA	0.03
Phenanthrene	ND		ND		210	NA	NA	NA	NA	NA	210
Phenol	ND		ND		100	NA	NA	NA	NA	NA	100
Pyrene	ND		ND		2,300	NA	NA	NA	NA	NA	2,300
Inorganic Compounds, Total (mg/kg)											
Antimony	ND		ND		5	NA	NA	NA	NA	NA	31
Arsenic	6.91		11.9	1,3,*	11.3	NA	11.3	NA	13	NA	13
Barium	64.8		183		1,500	NA	NA	NA	NA	NA	5,500
Beryllium	0.52		0.81		22	NA	NA	NA	NA	NA	160
Boron	6.71		8.63		40	NA	NA	NA	NA	NA	16,000
Cadmium	J 0.15		J 0.18		5.2	NA	NA	NA	NA	NA	78
Chromium	51.2	1,*	25.7	1,*	21	NA	NA	NA	NA	NA	230
Cobalt	6.68		12.2		20	NA	NA	NA	NA	NA	4,700
Copper	14.4		19.6		2,900	NA	NA	NA	NA	NA	2,900
Iron	18900	1,3,5	26000	1,3,5	15,000	NA	15,000	NA	15,900	NA	NA
Lead	19.6		18.6		107	NA	NA	NA	NA	NA	400
Magnesium	11200		5600		325,000	NA	NA	NA	NA	NA	325,000
Manganese	739	1,3,5,*	1850	1,3,5,7	630	NA	630	NA	636	NA	1,600
Mercury	0.012		0.027		0.89	NA	NA	NA	NA	NA	10
Nickel	15.2		19.9		100	NA	NA	NA	NA	NA	1,600
Selenium	ND		J 0.45		1.3	NA	NA	NA	NA	NA	390
Silver	ND		ND		4.4	NA	NA	NA	NA	NA	390
Thallium	ND		ND		2.6	NA	NA	NA	NA	NA	6.3
Vanadium	38.2		42.3		550	NA	NA	NA	NA	NA	550
Zinc	B 62.3		B 65		5,100	NA	NA	NA	NA	NA	23,000

Table 3d
Soil Analytical Results
Site 63
Parking Lot
Peoria, Peoria County, Illinois

Sample ID	63-B01		63-B02		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2		0-4								
Sample Date	2/18/2015		2/18/2015								
PID	0		0								
Sample pH	8.38		8.17								
Matrix	Soil		Soil								
SPLP Metals (mg/L)											
Antimony	J 0.0003		J 0.0003		m	NA	NA	NA	NA	0.006	NA
Barium	0.0119		0.0223		m	NA	NA	NA	NA	2	NA
Beryllium	ND		ND		m	NA	NA	NA	NA	0.004	NA
Boron	ND		ND		m	NA	NA	NA	NA	2	NA
Cadmium	ND		ND		m	NA	NA	NA	NA	0.005	NA
Chromium	J 0.0057		J 0.0061		m	NA	NA	NA	NA	0.1	NA
Cobalt	ND		ND		m	NA	NA	NA	NA	1	NA
Iron	2.03		4.24		m	NA	NA	NA	NA	5	NA
Lead	ND		ND		m	NA	NA	NA	NA	0.0075	NA
Manganese	0.0183		0.015		m	NA	NA	NA	NA	0.15	NA
Mercury	ND		ND		m	NA	NA	NA	NA	0.002	NA
Nickel	ND		ND		m	NA	NA	NA	NA	0.1	NA
Selenium	ND		ND		m	NA	NA	NA	NA	0.05	NA
Silver	ND		ND		m	NA	NA	NA	NA	0.05	NA
Thallium	ND		ND		m	NA	NA	NA	NA	0.002	NA
Zinc	J 0.0084		0.0141		m	NA	NA	NA	NA	5	NA
TCLP Metals (mg/L)											
Antimony	NT		NT		m	NA	NA	NA	NA	0.006	NA
Barium	NT		NT		m	NA	NA	NA	NA	2	NA
Beryllium	NT		NT		m	NA	NA	NA	NA	0.004	NA
Boron	NT		NT		m	NA	NA	NA	NA	2	NA
Cadmium	NT		NT		m	NA	NA	NA	NA	0.005	NA
Chromium	NT		NT		m	NA	NA	NA	NA	0.1	NA
Cobalt	NT		NT		m	NA	NA	NA	NA	1	NA
Iron	NT		NT		m	NA	NA	NA	NA	5	NA
Lead	NT		NT		m	NA	NA	NA	NA	0.0075	NA
Manganese	NT		NT		m	NA	NA	NA	NA	0.15	NA
Mercury	NT		NT		m	NA	NA	NA	NA	0.002	NA
Nickel	NT		NT		m	NA	NA	NA	NA	0.1	NA
Selenium	NT		NT		m	NA	NA	NA	NA	0.05	NA
Silver	NT		NT		m	NA	NA	NA	NA	0.05	NA
Thallium	NT		NT		m	NA	NA	NA	NA	0.002	NA
Zinc	NT		NT		m	NA	NA	NA	NA	5	NA

Table 3e
Soil Analytical Results
Site 64
ALDI's Grocery Store
Peoria, Peoria County, Illinois

Sample ID	64-B01		64-B02		64-B03		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-4		0-2		0-4								
Sample Date	2/18/2015		2/18/2015		2/18/2015								
PID	0		0		0								
Sample pH	8.75		8.43		7.72								
Matrix	Soil		Soil		Soil								
Volatile Organic Compounds (mg/kg)													
1,1,1-Trichloroethane	ND		ND		ND		2	NA	NA	NA	NA	NA	2
1,1,2,2-Tetrachloroethane	ND		ND		ND		NA	NA	NA	NA	NA	NA	0.0035
1,1,2-Trichloroethane	ND		ND		ND		0.02	NA	NA	NA	NA	NA	0.02
1,1-Dichloroethane	ND		ND		ND		23	NA	NA	NA	NA	NA	23
1,1-Dichloroethene	ND		ND		ND		0.06	NA	NA	NA	NA	NA	0.06
1,2-Dichloroethane	ND		ND		ND		0.02	NA	NA	NA	NA	NA	0.02
1,2-Dichloropropane	ND		ND		ND		0.03	NA	NA	NA	NA	NA	0.03
1,3-Dichloropropene	ND		ND		ND		0.005	NA	NA	NA	NA	NA	0.005
2-Butanone (MEK)	J 0.039		J 0.03		J 0.032		17	NA	NA	NA	NA	NA	17
2-Hexanone (MBK)	ND		ND		ND		NA	NA	NA	NA	NA	NA	0.16
4-Methyl-2-pentanone (MIBK)	ND		ND		ND		NA	NA	NA	NA	NA	NA	2.5
Acetone	0.089		0.121		0.125		25	NA	NA	NA	NA	NA	25
Benzene	0.003		ND		ND		0.03	NA	NA	NA	NA	NA	0.03
Bromodichloromethane	ND		ND		ND		0.6	NA	NA	NA	NA	NA	0.6
Bromoform	ND		ND		ND		0.8	NA	NA	NA	NA	NA	0.8
Bromomethane	ND		ND		ND		0.2	NA	NA	NA	NA	NA	0.2
Carbon disulfide	ND		ND		ND		9	NA	NA	NA	NA	NA	32
Carbon Tetrachloride	ND		ND		ND		0.07	NA	NA	NA	NA	NA	0.07
Chlorobenzene	ND		ND		ND		1	NA	NA	NA	NA	NA	1
Chloroethane	ND		ND		ND		NA	NA	NA	NA	NA	NA	1,500
Chloroform	ND		ND		ND		0.3	NA	NA	NA	NA	NA	0.3
Chloromethane	ND		ND		ND		NA	NA	NA	NA	NA	NA	110
cis-1,2-Dichloroethene	ND		ND		ND		0.4	NA	NA	NA	NA	NA	0.4
cis-1,3-Dichloropropene	ND		ND		ND		NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ND		ND		ND		0.4	NA	NA	NA	NA	NA	0.4
Ethylbenzene	J 0.003		ND		ND		13	NA	NA	NA	NA	NA	13
Methylene chloride	J 0.001		ND		ND		0.02	NA	NA	NA	NA	NA	0.02
Methyl-tert-butyl-ether (MTBE)	ND		ND		ND		0.32	NA	NA	NA	NA	NA	0.32
Styrene	ND		ND		ND		4	NA	NA	NA	NA	NA	4
Tetrachloroethene	ND		ND		ND		0.06	NA	NA	NA	NA	NA	0.06
Toluene	0.007		ND		ND		12	NA	NA	NA	NA	NA	12
trans-1,2-Dichloroethene	ND		ND		ND		0.7	NA	NA	NA	NA	NA	0.7
trans-1,3-Dichloropropene	ND		ND		ND		NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ND		ND		ND		0.06	NA	NA	NA	NA	NA	0.06
Vinyl Acetate	ND		ND		ND		10	NA	NA	NA	NA	NA	170
Vinyl Chloride	ND		ND		ND		0.01	NA	NA	NA	NA	NA	0.01
Xylenes, total	0.006		ND		ND		5.6	NA	NA	NA	NA	NA	150
Semivolatile Organic Compounds (mg/kg)													
1,2,4-Trichlorobenzene	ND		ND		ND		5	NA	NA	NA	NA	NA	5
1,2-Dichlorobenzene	ND		ND		ND		17	NA	NA	NA	NA	NA	17
1,3-Dichlorobenzene	NT		NT		NT		NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	ND		ND		ND		2	NA	NA	NA	NA	NA	2
2,4,5-Trichlorophenol	ND		ND		ND		26	NA	NA	NA	NA	NA	270
2,4,5-Trichlorophenol	ND		ND		ND		0.66	NA	NA	NA	NA	NA	0.66
2,4-Dichlorophenol	ND		ND		ND		0.48	NA	NA	NA	NA	NA	1
2,4-Dimethylphenol	ND		ND		ND		9	NA	NA	NA	NA	NA	9
2,4-Dinitrophenol	ND		ND		ND		3.3	NA	NA	NA	NA	NA	3.3
2,4-Dinitrotoluene	ND		ND		ND		0.25	NA	NA	NA	NA	NA	0.25

Table 3e
Soil Analytical Results
Site 64
ALDI's Grocery Store
Peoria, Peoria County, Illinois

Sample ID	64-B01		64-B02		64-B03		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-4		0-2		0-4								
Sample Date	2/18/2015		2/18/2015		2/18/2015								
PID	0		0		0								
Sample pH	8.75		8.43		7.72								
Matrix	Soil		Soil		Soil								
2,6-Dinitrotoluene	ND		ND		ND		0.26	NA	NA	NA	NA	NA	0.26
2-Chloronaphthalene	ND		ND		ND		NA	NA	NA	NA	NA	NA	49
2-Chlorophenol	ND		ND		ND		1.5	NA	NA	NA	NA	NA	4
2-Methylnaphthalene	ND		ND		ND		NA	NA	NA	NA	NA	NA	1.9
2-Methylphenol	ND		ND		ND		15	NA	NA	NA	NA	NA	15
2-Nitroaniline	ND		ND		ND		NA	NA	NA	NA	NA	NA	0.7
3,3'-Dichlorobenzidine	ND		ND		ND		1.3	NA	NA	NA	NA	NA	1.3
4,6-Dinitro-2-methylphenol	ND		ND		ND		NA	NA	NA	NA	NA	NA	6.3
4-Chloroaniline	ND		ND		ND		0.7	NA	NA	NA	NA	NA	0.7
4-Methylphenol	ND		ND		ND		NA	NA	NA	NA	NA	NA	3.9
4-Nitroaniline	ND		ND		ND		NA	NA	NA	NA	NA	NA	0.14
4-Nitrophenol	ND		ND		ND		NA	NA	NA	NA	NA	NA	630
Acenaphthene	ND		ND		ND		570	NA	NA	NA	NA	NA	570
Acenaphthylene	ND		ND		ND		85	NA	NA	NA	NA	NA	85
Anthracene	ND		ND		ND		12,000	NA	NA	NA	NA	NA	12,000
Benzo(a)anthracene	ND		0.56		ND		0.9	0.9	0.9	1.1	1.8	NA	1.8
Benzo(a)pyrene	ND		0.509	1.2*	ND		0.09	0.09	0.98	1.3	2.1	NA	2.1
Benzo(b)fluoranthene	ND		0.66		ND		0.9	0.9	0.9	1.5	2.1	NA	2.1
Benzo(g,h,i)perylene	ND		J 0.338		ND		2,300	NA	NA	NA	NA	NA	2,300
Benzo(k)fluoranthene	ND		J 0.275		ND		9	NA	NA	NA	NA	NA	9
Bis(2-chloroethyl)ether	ND		ND		ND		0.66	NA	NA	NA	NA	NA	0.66
bis(2-chloroisopropyl)ether	ND		ND		ND		NA	NA	NA	NA	NA	NA	2.4
Bis(2-ethylhexyl)phthalate	ND		ND		ND		46	NA	NA	NA	NA	NA	46
Butyl benzyl phthalate	ND		ND		ND		930	NA	NA	NA	NA	NA	930
Carbazole	ND		ND		ND		0.6	NA	NA	NA	NA	NA	0.6
Chrysene	ND		0.558		ND		88	NA	NA	NA	NA	NA	88
Dibenzo(a,h)anthracene	ND		ND		ND		0.09	0.09	0.15	0.2	0.42	NA	0.42
Dibenzofuran	ND		ND		ND		NA	NA	NA	NA	NA	NA	3
Diethyl phthalate	ND		ND		ND		470	NA	NA	NA	NA	NA	470
Dimethyl phthalate	ND		ND		ND		NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	ND		ND		ND		2,300	NA	NA	NA	NA	NA	2,300
Di-n-octyl phthalate	ND		ND		ND		1,600	NA	NA	NA	NA	NA	1,600
Fluoranthene	ND		0.92		ND		3,100	NA	NA	NA	NA	NA	3,100
Fluorene	ND		ND		ND		560	NA	NA	NA	NA	NA	560
Hexachlorobenzene	ND		ND		ND		0.4	NA	NA	NA	NA	NA	0.4
Hexachlorobutadiene	ND		ND		ND		NA	NA	NA	NA	NA	NA	2.2
Hexachlorocyclopentadiene	ND		ND		ND		1.1	NA	NA	NA	NA	NA	10
Hexachloroethane	ND		ND		ND		0.5	NA	NA	NA	NA	NA	0.5
Indeno(1,2,3-cd)pyrene	ND		J 0.311		ND		0.9	0.9	0.9	0.9	1.6	NA	1.6
Isophorone	ND		ND		ND		8	NA	NA	NA	NA	NA	8
Naphthalene	ND		ND		ND		1.8	NA	NA	NA	NA	NA	12
Nitrobenzene	ND		ND		ND		0.26	NA	NA	NA	NA	NA	0.26
N-Nitrosodi-n-propylamine	ND		ND		ND		0.0018	NA	NA	NA	NA	NA	0.0018
N-Nitrosodiphenylamine	ND		ND		ND		1	NA	NA	NA	NA	NA	1
Pentachlorophenol	ND		ND		ND		0.02	NA	NA	NA	NA	NA	0.03
Phenanthrene	ND		J 0.325		ND		210	NA	NA	NA	NA	NA	210
Phenol	ND		ND		ND		100	NA	NA	NA	NA	NA	100
Pyrene	ND		0.746		ND		2,300	NA	NA	NA	NA	NA	2,300

Table 3e
Soil Analytical Results
Site 64
ALDI's Grocery Store
Peoria, Peoria County, Illinois

Sample ID	64-S01		64-S02		64-S03		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-4		0-2		0-4								
Sample Date	2/18/2015		2/18/2015		2/18/2015								
PID	0		0		0								
Sample pH	8.75		8.43		7.72								
Matrix	Soil		Soil		Soil								
Inorganic Compounds, Total (mg/kg)													
Antimony	ND		ND		ND		5	NA	NA	NA	NA	NA	31
Arsenic	8		7.01		10.5		11.3	NA	11.3	NA	13	NA	13
Barium	88.9		129		151		1,500	NA	NA	NA	NA	NA	5,500
Beryllium	0.54		0.54		0.78		22	NA	NA	NA	NA	NA	160
Boron	6.52		6.72		4.37		40	NA	NA	NA	NA	NA	16,000
Cadmium	0.29		0.31		ND		5.2	NA	NA	NA	NA	NA	78
Chromium	14.1		22.7	1*	15.9		21	NA	NA	NA	NA	NA	230
Cobalt	6.99		5.48		11.5		20	NA	NA	NA	NA	NA	4,700
Copper	13.7		15.1		10.1		2,900	NA	NA	NA	NA	NA	2,900
Iron	19800	1,3,5	16500	1,3,5	19000	1,3,5	15,000	NA	15,000	NA	15,900	NA	NA
Lead	14.7		72		15		107	NA	NA	NA	NA	NA	400
Magnesium	15300		13800		2290		325,000	NA	NA	NA	NA	NA	325,000
Manganese	565		446		849	1,3,5,*	630	NA	630	NA	636	NA	1,800
Mercury	0.028		0.033		0.017		0.89	NA	NA	NA	NA	NA	10
Nickel	17		14.6		9.82		100	NA	NA	NA	NA	NA	1,600
Selenium	ND		ND		ND		1.3	NA	NA	NA	NA	NA	390
Silver	ND		ND		ND		4.4	NA	NA	NA	NA	NA	390
Thallium	ND		ND		ND		2.6	NA	NA	NA	NA	NA	6.3
Vanadium	26.5		22.9		36.2		550	NA	NA	NA	NA	NA	550
Zinc	B 48.5		B 65.8		B 38.5		5,100	NA	NA	NA	NA	NA	23,000
SPLP Metals (mg/L)													
Antimony	J 0.0004		ND		ND		m	NA	NA	NA	NA	0.006	NA
Barium	0.0361		0.0187		0.0725		m	NA	NA	NA	NA	2	NA
Beryllium	J 0.0003		ND		J 0.0004		m	NA	NA	NA	NA	0.004	NA
Boron	ND		ND		ND		m	NA	NA	NA	NA	2	NA
Cadmium	ND		ND		ND		m	NA	NA	NA	NA	0.005	NA
Chromium	J 0.0073		ND		0.0114		m	NA	NA	NA	NA	0.1	NA
Cobalt	ND		ND		ND		m	NA	NA	NA	NA	1	NA
Iron	7.82	6	2.5		9.61	6	m	NA	NA	NA	NA	5	NA
Lead	0.0101	6	0.0072		ND		m	NA	NA	NA	NA	0.0075	NA
Manganese	0.0616		0.0306		0.0697		m	NA	NA	NA	NA	0.15	NA
Mercury	ND		ND		ND		m	NA	NA	NA	NA	0.002	NA
Nickel	J 0.0051		ND		J 0.0047		m	NA	NA	NA	NA	0.1	NA
Selenium	ND		ND		ND		m	NA	NA	NA	NA	0.05	NA
Silver	ND		ND		ND		m	NA	NA	NA	NA	0.05	NA
Thallium	ND		ND		J 0.0003		m	NA	NA	NA	NA	0.002	NA
Zinc	0.0307		0.0135		0.0295		m	NA	NA	NA	NA	5	NA
TCLP Metals (mg/L)													
Antimony	NT		NT		NT		m	NA	NA	NA	NA	0.006	NA
Barium	NT		NT		NT		m	NA	NA	NA	NA	2	NA
Beryllium	NT		NT		NT		m	NA	NA	NA	NA	0.004	NA
Boron	NT		NT		NT		m	NA	NA	NA	NA	2	NA
Cadmium	NT		NT		NT		m	NA	NA	NA	NA	0.005	NA
Chromium	NT		NT		NT		m	NA	NA	NA	NA	0.1	NA
Cobalt	NT		NT		NT		m	NA	NA	NA	NA	1	NA
Iron	0.0364		NT		1.61		m	NA	NA	NA	NA	5	NA
Lead	ND		NT		NT		m	NA	NA	NA	NA	0.0075	NA
Manganese	NT		NT		NT		m	NA	NA	NA	NA	0.15	NA
Mercury	NT		NT		NT		m	NA	NA	NA	NA	0.002	NA
Nickel	NT		NT		NT		m	NA	NA	NA	NA	0.1	NA
Selenium	NT		NT		NT		m	NA	NA	NA	NA	0.05	NA
Silver	NT		NT		NT		m	NA	NA	NA	NA	0.05	NA
Thallium	NT		NT		NT		m	NA	NA	NA	NA	0.002	NA
Zinc	NT		NT		NT		m	NA	NA	NA	NA	5	NA

Table 3f
Soil Analytical Results
Site 72
McDonald's
Peoria, Peoria County, Illinois

Sample ID	72-B01		72-B02		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2		0-2								
Sample Date	2/18/2015		2/18/2015								
PID	0		0								
Sample pH	7.69		8.72								
Matrix	Soil		Soil								
Volatile Organic Compounds (mg/kg)											
1,1,1-Trichloroethane	ND		ND		2	NA	NA	NA	NA	NA	2
1,1,2,2-Tetrachloroethane	ND		ND		NA	NA	NA	NA	NA	NA	0.0035
1,1,2-Trichloroethane	ND		ND		0.02	NA	NA	NA	NA	NA	0.02
1,1-Dichloroethane	ND		ND		23	NA	NA	NA	NA	NA	23
1,1-Dichloroethene	ND		ND		0.06	NA	NA	NA	NA	NA	0.06
1,2-Dichloroethane	ND		ND		0.02	NA	NA	NA	NA	NA	0.02
1,2-Dichloropropane	ND		ND		0.03	NA	NA	NA	NA	NA	0.03
1,3-Dichloropropene	ND		ND		0.005	NA	NA	NA	NA	NA	0.005
2-Butanone (MEK)	**J 0.032**		**J 0.026**		17	NA	NA	NA	NA	NA	17
2-Hexanone (MBK)	ND		ND		NA	NA	NA	NA	NA	NA	0.16
4-Methyl-2-pentanone (MIBK)	ND		ND		NA	NA	NA	NA	NA	NA	2.5
Acetone	**0.102**		**0.069**		25	NA	NA	NA	NA	NA	25
Benzene	ND		ND		0.03	NA	NA	NA	NA	NA	0.03
Bromodichloromethane	ND		ND		0.6	NA	NA	NA	NA	NA	0.6
Bromoform	ND		ND		0.8	NA	NA	NA	NA	NA	0.8
Bromomethane	ND		ND		0.2	NA	NA	NA	NA	NA	0.2
Carbon disulfide	ND		ND		9	NA	NA	NA	NA	NA	32
Carbon Tetrachloride	ND		ND		0.07	NA	NA	NA	NA	NA	0.07
Chlorobenzene	ND		ND		1	NA	NA	NA	NA	NA	1
Chloroethane	ND		ND		NA	NA	NA	NA	NA	NA	1,500
Chloroform	ND		ND		0.3	NA	NA	NA	NA	NA	0.3
Chloromethane	ND		ND		NA	NA	NA	NA	NA	NA	110
cis-1,2-Dichloroethene	ND		ND		0.4	NA	NA	NA	NA	NA	0.4
cis-1,3-Dichloropropene	ND		ND		NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ND		ND		0.4	NA	NA	NA	NA	NA	0.4
Ethylbenzene	ND		ND		13	NA	NA	NA	NA	NA	13
Methylene chloride	ND		ND		0.02	NA	NA	NA	NA	NA	0.02
Methyl-tert-butyl-ether (MTBE)	ND		ND		0.32	NA	NA	NA	NA	NA	0.32
Styrene	ND		ND		4	NA	NA	NA	NA	NA	4
Tetrachloroethene	ND		ND		0.06	NA	NA	NA	NA	NA	0.06
Toluene	ND		ND		12	NA	NA	NA	NA	NA	12
trans-1,2-Dichloroethene	ND		ND		0.7	NA	NA	NA	NA	NA	0.7
trans-1,3-Dichloropropene	ND		ND		NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ND		ND		0.06	NA	NA	NA	NA	NA	0.06
Vinyl Acetate	ND		ND		10	NA	NA	NA	NA	NA	170
Vinyl Chloride	ND		ND		0.01	NA	NA	NA	NA	NA	0.01
Xylenes, total	ND		ND		5.6	NA	NA	NA	NA	NA	150

Table 3f
Soil Analytical Results
Site 72
McDonald's
Peoria, Peoria County, Illinois

Sample ID	72-B01		72-B02		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2		0-2								
Sample Date	2/18/2015		2/18/2015								
PID	0		0								
Sample pH	7.69		8.72								
Matrix	Soil		Soil								
Semivolatile Organic Compounds (mg/kg)											
1,2,4-Trichlorobenzene	ND		ND		5	NA	NA	NA	NA	NA	5
1,2-Dichlorobenzene	ND		ND		17	NA	NA	NA	NA	NA	17
1,4-Dichlorobenzene	ND		ND		2	NA	NA	NA	NA	NA	2
2,4,5-Trichlorophenol	ND		ND		26	NA	NA	NA	NA	NA	270
2,4,6-Trichlorophenol	ND		ND		0.66	NA	NA	NA	NA	NA	0.66
2,4-Dichlorophenol	ND		ND		0.48	NA	NA	NA	NA	NA	1
2,4-Dimethylphenol	ND		ND		9	NA	NA	NA	NA	NA	9
2,4-Dinitrophenol	ND		ND		3.3	NA	NA	NA	NA	NA	3.3
2,4-Dinitrotoluene	ND		ND		0.25	NA	NA	NA	NA	NA	0.25
2,6-Dinitrotoluene	ND		ND		0.26	NA	NA	NA	NA	NA	0.26
2-Chloronaphthalene	ND		ND		NA	NA	NA	NA	NA	NA	49
2-Chlorophenol	ND		ND		1.5	NA	NA	NA	NA	NA	4
2-Methylnaphthalene	ND		ND		NA	NA	NA	NA	NA	NA	1.9
2-Methylphenol	ND		ND		15	NA	NA	NA	NA	NA	15
2-Nitroaniline	ND		ND		NA	NA	NA	NA	NA	NA	0.7
3,3´-Dichlorobenzidine	ND		ND		1.3	NA	NA	NA	NA	NA	1.3
4,6-Dinitro-2-methylphenol	ND		ND		NA	NA	NA	NA	NA	NA	6.3
4-Chloroaniline	ND		ND		0.7	NA	NA	NA	NA	NA	0.7
4-Methylphenol	ND		ND		NA	NA	NA	NA	NA	NA	3.9
4-Nitroaniline	ND		ND		NA	NA	NA	NA	NA	NA	0.14
4-Nitrophenol	ND		ND		NA	NA	NA	NA	NA	NA	630
Acenaphthene	ND		ND		570	NA	NA	NA	NA	NA	570
Acenaphthylene	ND		ND		85	NA	NA	NA	NA	NA	85
Anthracene	ND		ND		12,000	NA	NA	NA	NA	NA	12,000
Benzo(a)anthracene	ND		ND		0.9	0.9	0.9	1.1	1.8	NA	1.8
Benzo(a)pyrene	ND		ND		0.09	0.09	0.98	1.3	2.1	NA	2.1
Benzo(b)fluoranthene	ND		ND		0.9	0.9	0.9	1.5	2.1	NA	2.1
Benzo(g,h,i)perylene	ND		ND		2,300	NA	NA	NA	NA	NA	2,300
Benzo(k)fluoranthene	ND		ND		9	NA	NA	NA	NA	NA	9
Bis(2-chloroethyl)ether	ND		ND		0.66	NA	NA	NA	NA	NA	0.66
bis(2-chloroisopropyl)ether	ND		ND		NA	NA	NA	NA	NA	NA	2.4
Bis(2-ethylhexyl)phthalate	ND		ND		46	NA	NA	NA	NA	NA	46
Butyl benzyl phthalate	ND		ND		930	NA	NA	NA	NA	NA	930
Carbazole	ND		ND		0.6	NA	NA	NA	NA	NA	0.6
Chrysene	ND		ND		88	NA	NA	NA	NA	NA	88
Dibenzo(a,h)anthracene	ND		ND		0.09	0.09	0.15	0.2	0.42	NA	0.42
Dibenzofuran	ND		ND		NA	NA	NA	NA	NA	NA	3

Table 3f
Soil Analytical Results
Site 72
McDonald's
Peoria, Peoria County, Illinois

Sample ID	72-B01		72-B02		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2		0-2								
Sample Date	2/18/2015		2/18/2015								
PID	0		0								
Sample pH	7.69		8.72								
Matrix	Soil		Soil								
Diethyl phthalate	ND		ND		470	NA	NA	NA	NA	NA	470
Dimethyl phthalate	ND		ND		NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	ND		ND		2,300	NA	NA	NA	NA	NA	2,300
Di-n-octyl phthalate	ND		ND		1,600	NA	NA	NA	NA	NA	1,600
Fluoranthene	ND		J 0.27		3,100	NA	NA	NA	NA	NA	3,100
Fluorene	ND		ND		560	NA	NA	NA	NA	NA	560
Hexachlorobenzene	ND		ND		0.4	NA	NA	NA	NA	NA	0.4
Hexachlorobutadiene	ND		ND		NA	NA	NA	NA	NA	NA	2.2
Hexachlorocyclopentadiene	ND		ND		1.1	NA	NA	NA	NA	NA	10
Hexachloroethane	ND		ND		0.5	NA	NA	NA	NA	NA	0.5
Indeno(1,2,3-cd)pyrene	ND		ND		0.9	0.9	0.9	0.9	1.6	NA	1.6
Isophorone	ND		ND		8	NA	NA	NA	NA	NA	8
Naphthalene	ND		ND		1.8	NA	NA	NA	NA	NA	12
Nitrobenzene	ND		ND		0.26	NA	NA	NA	NA	NA	0.26
N-Nitrosodi-n-propylamine	ND		ND		0.0018	NA	NA	NA	NA	NA	0.0018
N-Nitrosodiphenylamine	ND		ND		1	NA	NA	NA	NA	NA	1
Pentachlorophenol	ND		ND		0.02	NA	NA	NA	NA	NA	0.03
Phenanthrene	ND		ND		210	NA	NA	NA	NA	NA	210
Phenol	ND		ND		100	NA	NA	NA	NA	NA	100
Pyrene	ND		J 0.219		2,300	NA	NA	NA	NA	NA	2,300
Inorganic Compounds, Total (mg/kg)											
Antimony	ND		ND		5	NA	NA	NA	NA	NA	31
Arsenic	13	1,3,*	14.9	1,3,5,7	11.3	NA	11.3	NA	13	NA	13
Barium	177		215		1,500	NA	NA	NA	NA	NA	5,500
Beryllium	1.03		1.12		22	NA	NA	NA	NA	NA	160
Boron	7.65		11.6		40	NA	NA	NA	NA	NA	16,000
Cadmium	ND		J 0.13		5.2	NA	NA	NA	NA	NA	78
Chromium	25	1,*	28.1	1,*	21	NA	NA	NA	NA	NA	230
Cobalt	10.5		8.8		20	NA	NA	NA	NA	NA	4,700
Copper	25.1		26		2,900	NA	NA	NA	NA	NA	2,900
Iron	28600	1,3,5	29500	1,3,5	15,000	NA	15,000	NA	15,900	NA	NA
Lead	14		19.6		107	NA	NA	NA	NA	NA	400
Magnesium	4070		4250		325,000	NA	NA	NA	NA	NA	325,000
Manganese	570		465		630	NA	630	NA	636	NA	1,600
Mercury	0.029		0.05		0.89	NA	NA	NA	NA	NA	10
Nickel	28.5		28.1		100	NA	NA	NA	NA	NA	1,600
Selenium	ND		ND		1.3	NA	NA	NA	NA	NA	390
Silver	ND		ND		4.4	NA	NA	NA	NA	NA	390
Thallium	ND		ND		2.6	NA	NA	NA	NA	NA	6.3
Vanadium	46.6		46.9		550	NA	NA	NA	NA	NA	550
Zinc	B 69		B 71.7		5,100	NA	NA	NA	NA	NA	23,000

Table 3f
Soil Analytical Results
Site 72
McDonald's
Peoria, Peoria County, Illinois

Sample ID	72-B01		72-B02		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2		0-2								
Sample Date	2/18/2015		2/18/2015								
PID	0		0								
Sample pH	7.69		8.72								
Matrix	Soil		Soil								
SPLP Metals (mg/L)											
Antimony	ND		J 0.0007		m	NA	NA	NA	NA	0.006	NA
Barium	0.0163		0.09		m	NA	NA	NA	NA	2	NA
Beryllium	ND		J 0.0007		m	NA	NA	NA	NA	0.004	NA
Boron	ND		ND		m	NA	NA	NA	NA	2	NA
Cadmium	ND		ND		m	NA	NA	NA	NA	0.005	NA
Chromium	ND		0.0171		m	NA	NA	NA	NA	0.1	NA
Cobalt	ND		J 0.005		m	NA	NA	NA	NA	1	NA
Iron	3.13		17.7	6	m	NA	NA	NA	NA	5	NA
Lead	ND		0.0133	6	m	NA	NA	NA	NA	0.0075	NA
Manganese	0.0116		0.23	6	m	NA	NA	NA	NA	0.15	NA
Mercury	ND		ND		m	NA	NA	NA	NA	0.002	NA
Nickel	ND		0.0178		m	NA	NA	NA	NA	0.1	NA
Selenium	ND		ND		m	NA	NA	NA	NA	0.05	NA
Silver	ND		ND		m	NA	NA	NA	NA	0.05	NA
Thallium	ND		J 0.0003		m	NA	NA	NA	NA	0.002	NA
Zinc	J 0.0098		0.0473		m	NA	NA	NA	NA	5	NA
TCLP Metals (mg/L)											
Antimony	NT		NT		m	NA	NA	NA	NA	0.006	NA
Barium	NT		NT		m	NA	NA	NA	NA	2	NA
Beryllium	NT		NT		m	NA	NA	NA	NA	0.004	NA
Boron	NT		NT		m	NA	NA	NA	NA	2	NA
Cadmium	NT		NT		m	NA	NA	NA	NA	0.005	NA
Chromium	NT		NT		m	NA	NA	NA	NA	0.1	NA
Cobalt	NT		NT		m	NA	NA	NA	NA	1	NA
Iron	NT		0.912		m	NA	NA	NA	NA	5	NA
Lead	NT		ND		m	NA	NA	NA	NA	0.0075	NA
Manganese	NT		6.43	6	m	NA	NA	NA	NA	0.15	NA
Mercury	NT		NT		m	NA	NA	NA	NA	0.002	NA
Nickel	NT		NT		m	NA	NA	NA	NA	0.1	NA
Selenium	NT		NT		m	NA	NA	NA	NA	0.05	NA
Silver	NT		NT		m	NA	NA	NA	NA	0.05	NA
Thallium	NT		NT		m	NA	NA	NA	NA	0.002	NA
Zinc	NT		NT		m	NA	NA	NA	NA	5	NA

Table 4
Summary of Impacts and Contaminants of Concern
Peoria, Peoria County, Illinois

NOTES:

	CCDD Eligible
	not CCDD Eligible (greater than MSA MAC), but not non-special waste (below most stringent TACO Tier 1 Re
	non-special waste (greater than MSA MAC, greater than most stringent TACO Tier 1 Residential RO)

Site 53
Unoccupied Property

Sample ID	53-B01		53-B01 DUP		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2		0-2								
Sample Date	2/17/2015		2/17/2015								
PID	0		0								
Sample pH	6.24		6.94								
Matrix	Soil		Soil								
Inorganic Compounds, Total (mg/kg)											
Arsenic	13.1	1,3,5,7	14.5	1,3,5,7	11.3	NA	11.3	NA	13	NA	13

Site 54
Unoccupied Property

Sample ID	54-B01		54-B02		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2		0-2								
Sample Date	2/17/2015		2/17/2015								
PID	0		0								
Sample pH	8.01		9.22								
Matrix	Soil		Soil								
Inorganic Compounds, Total (mg/kg)											
Arsenic	14.7	1,3,5,7	12.1	1,3,*	11.3	NA	11.3	NA	13	NA	13
Manganese	702	1,3,5,*	718		630	NA	630	NA	636	NA	1,600
SPLP Metals (mg/L)											
Manganese	0.392	6	0.018		m	NA	NA	NA	NA	0.15	NA
TCLP Metals (mg/L)											
Manganese	6.34	6	NT		m	NA	NA	NA	NA	0.15	NA

Site 62
Sun Loan & Khoury's Cuisine

Sample ID	62-B01	62-B02	[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-4	0-4							
Sample Date	2/18/2015	2/18/2015							
PID	0	0							
Sample pH	7.89	8.95							
Matrix	Soil	Soil							
No Contaminants of Concern Noted.									

Table 4

Summary of Impacts and Contaminants of Concern

Peoria, Peoria County, Illinois

NOTES:

	CCDD Eligible
	not CCDD Eligible (greater than MSA MAC), but not non-special waste (below most stringent TACO Tier 1 Re
	non-special waste (greater than MSA MAC, greater than most stringent TACO Tier 1 Residential RO)

Site 63

Parking Lot

Sample ID	63-B01		63-B02		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2		0-4								
Sample Date	2/18/2015		2/18/2015								
PID	0		0								
Sample pH	8.38		8.17								
Matrix	Soil		Soil								
Inorganic Compounds, Total (mg/kg)											
Arsenic	**6.91**		**11.9**	**1,3,***	11.3	NA	11.3	NA	13	NA	13

Site 64

ALDI's Grocery Store

Sample ID	64-B01		64-B02		64-B03		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-4		0-2		0-4								
Sample Date	2/18/2015		2/18/2015		2/18/2015								
PID	0		0		0								
Sample pH	8.75		8.43		7.72								
Matrix	Soil		Soil		Soil								
Semivolatile Organic Compounds (mg/kg)													
Benzo(a)pyrene	ND		**0.509**	**1,2,***	ND		0.09	0.09	0.98	1.3	2.1	NA	2.1

Site 72

McDonald's

Sample ID	72-B01		72-B02		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2		0-2								
Sample Date	2/18/2015		2/18/2015								
PID	0		0								
Sample pH	7.69		8.72								
Matrix	Soil		Soil								
Inorganic Compounds, Total (mg/kg)											
Arsenic	**13**	**1,3,***	**14.9**	**1,3,5,7**	11.3	NA	11.3	NA	13	NA	13

Table 5
Estimated Volumes of Impacted Soil
University Street: Forrest Hill Avenue to War Memorial Drive
Peoria, Peoria County, Illinois

Impacted Soil Sample	Contaminants of Concern	Applicable Screening Criteria Exceeded	Depth Interval of Impacted Soil Sample (feet bgs)	Estimated Surface Length of Impacted Soil (feet)	Estimated Surface Width of Impacted Soil (feet)	Estimated Vertical Extent of Impacted Soil (feet)	Estimated Volume of Impacted Soil (cubic yards)
Site 53, Unoccupied Property							
53-B01 & DUP	Arsenic	1,3,5,7	0-2	59	45	2	197
						Total Volume of Impacted Soil:	197
Site 54, Unoccupied Property							
54-B01	Arsenic, Manganese	1,3,5,6,7	0-2	88	45	2	293
54-B02	Arsenic	1,3,*	0-2	85	45	2	283
						Total Volume of Impacted Soil:	577
Site 63, Parking Lot							
63-B02	Arsenic	1,3,*	0-4	147	75	4	1,633
						Total Volume of Impacted Soil:	1,633
Site 64, ALDI's Grocery Store							
64-B02	Benzo(a)pyrene	1,2,*	0-2	119	55	2	485
						Total Volume of Impacted Soil:	485
Site 72, McDonald's							
72-B01	Arsenic	1,3,*	0-2	98	65	2	472
72-B02	Arsenic, Manganese	1,3,5,6,7	0-2	96	65	2	462
						Total Volume of Impacted Soil:	934

Applicable Screening Criteria

1 = Exceeds the most stringent MAC value.

2 = Exceeds the Outside a Populated Area MAC value.

3 = Exceeds the Populated Area in a Non-MSA County MAC value.

4 = Exceeds the Chicago Corporate Limits MAC value.

5 = Exceeds the Populated Area in a MSA, excluding Chicago value (least stringent).

6 = Exceeds Tier I concentration for the Soil Component of the Groundwater Ingestion Exposure Route, Class I (TACO Appendix B. Tables A and B). Where applicable, the Class I Standard has been substituted with the Achievable Detection Limit (ADL).

7 = Exceeds the most stringent TACO Tier 1 Soil Remediation Objectives for Residential Properties.

* = Exceeds the most stringent MAC value, but is below the TACO Tier 1 Soil Remediation Objectives for Residential Properties.

Table 6

Estimated Volumes of Impacted Construction Excavation Soil
University Street: Forrest Hill Avenue to War Memorial Drive
Peoria, Peoria County, Illinois

Impacted Soil Boring	Contaminants of Concern	Applicable Screening Criteria Exceeded	Impacted Stationing	Construction Excavation within Area of Impacted Soil	Estimated Vertical Extent of Impacted Construction Excavation Soil for Driveways, Sidewalk, and Curb/Gutter (feet)	Estimated Vertical Extent of Impacted Construction Excavation Soil for Storm Sewer Inlets (feet)	AutoCAD Calculated Area of Impacted Construction Excavation Soil for Driveways, Sidewalk, and Curb/Gutter (square feet)	AutoCAD Calculated Area of Impacted Construction Excavation Soil for Storm Sewer Inlets (square feet)	Estimated Volume of Impacted Construction Excavation Soil (cubic yards)	Off-site Management	
										Non-Special Waste	CCDD Eligible
Site 53, Unoccupied Property											
53-B01 & DUP	Arsenic	1,3,5,7	91+31 to 91+90, 0 to 45 feet RT	road resurfacing, sidewalk, driveway, curb/gutter	1	0	825	0	31	x	
Site 54, Unoccupied Property											
54-B01	Arsenic, Manganese	1,3,5,6,7	91+90 to 92+78, 0 to 45 feet RT	road resurfacing, sidewalk, driveway, curb/gutter	1	0	1255	0	46	x	
54-B02	Arsenic	1,3,*	92+78 to 93+63, 0 to 45 feet RT	road resurfacing, sidewalk, driveway, curb/gutter	1	0	1118	0	41	x	
Site 63, Parking Lot											
63-B02	Arsenic	1,3,*	98+33 to 99+80, 0 to 75 feet LT	road resurfacing, sidewalk, driveway, curb/gutter, inlet	1	4	4219	84	166		x
Site 64, ALDI's Grocery Store											
64-B02	Benzo(a)pyrene	1,2,*	99+67 to 100+86, 0 to 55 feet RT	road resurfacing, sidewalk, driveway, curb/gutter	1	0	1627	0	60		x
Site 72, McDonald's											
72-B01	Arsenic	1,3,*	107+57 to 108+55, 0 to 65 feet RT	road resurfacing, sidewalk, driveway, curb/gutter	1	0	2423	0	90		x
72-B02	Arsenic, Manganese	1,3,5,6,7	108+55 to 109+51, 0 to 65 feet RT	road resurfacing, sidewalk, driveway, curb/gutter	1	0	2064	0	76	x	

Applicable Screening Criteria

1 = Exceeds the most stringent MAC value.

2 = Exceeds the Outside a Populated Area MAC value.

3 = Exceeds the Populated Area in a Non-MSA County MAC value.

4 = Exceeds the Chicago Corporate Limits MAC value.

5 = Exceeds the Populated Area in a MSA, excluding Chicago value (least stringent).

6 = Exceeds Tier I concentration for the Soil Component of the Groundwater Ingestion Exposure Route, Class I (TACO Appendix B, Tables A and B). Where applicable, the Class I Standard has been substituted with the Achievable Detection Limit (ADL).

7 = Exceeds the most stringent TACO Tier 1 Soil Remediation Objectives for Residential Properties.

* = Exceeds the most stringent MAC value, but is below the TACO Tier 1 Soil Remediation Objectives for Residential Properties.

7. FIGURES

Figure 1: **Project Location Map**
FAU 6593 (University Street)
Peoria, Peoria County, Illinois

Figure 2: **Boring Location Map**
Sites 53 & 54
FAU 6593 (University Street)
Peoria, Peoria County, Illinois

Figure 2A: **Contaminants of Concern**
Sites 53 & 54
FAU 6593 (University Street)
Peoria, Peoria County, Illinois

Figure 3: **Boring Location Map**
Sites 62, 63 & 64
FAU 6593 (University Street)
Peoria, Peoria County, Illinois

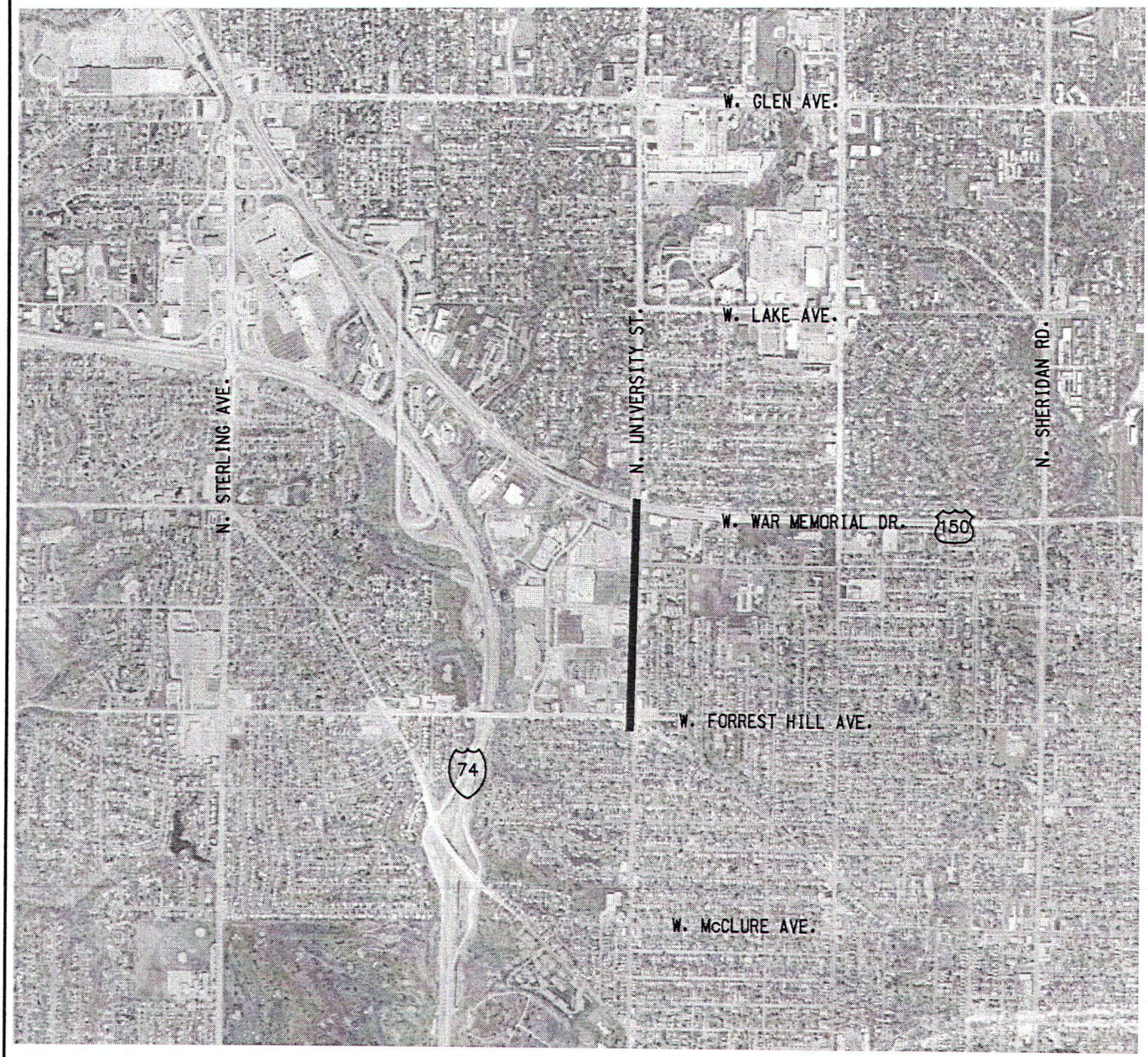
Figure 3A: **Contaminants of Concern**
Sites 63 & 64
FAU 6593 (University Street)
Peoria, Peoria County, Illinois

Figure 4: **Boring Location Map**
Site 64
FAU 6593 (University Street)
Peoria, Peoria County, Illinois

Figure 5: **Boring Location Map**
Site 72
FAU 6593 (University Street)
Peoria, Peoria County, Illinois

Figure 5A: **Contaminants of Concern**
Site 72
FAU 6593 (University Street)
Peoria, Peoria County, Illinois

\\aeeil\transfer files\CMT2015 Peoria\Forrest Hill to War Memorial (North)\DWG\WORKPLAN\CMT2015 PLM.dwg Tab: FIGURE 1



PROJECT AND SITE LOCATION MAP
FAU 6593 (UNIVERSITY STREET)

NOTE:
2005 ILLINOIS NATIONAL AERIAL PHOTOGRAPHY PROGRAM (NAPP) DIGITAL ORTHOPHOTOGRAPHY QUARTER (DOQ) OF THE PEORIA EAST & WEST QUADRANGLES FROM ILLINOIS NATURAL RESOURCES GEOSPATIAL DATA CLEARINGHOUSE.

0 2000 4000

SCALE: IN FEET

N

4

PROJECT LOCATION

ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO
Professional Design Engineering and Land Surveying Firm #184-001541

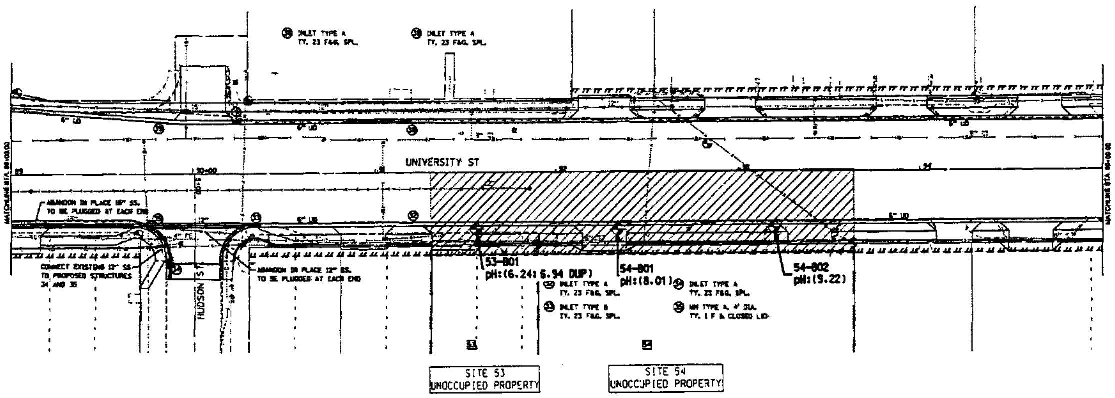
APPROVED BY: CEF | DESIGNED BY: CMT | DRAWN BY: MPN

PROJECT AND SITE LOCATION MAP

PLANS PREPARED FOR
CRAWFORD, MURPHY & TILLY, INC.
FAU 6593 (UNIVERSITY STREET)
FROM FORREST HILL AVE. TO WAR MEMORIAL DR.
PEORIA, PEORIA COUNTY, ILLINOIS

DATE: APRIL 2015
PROJECT ID: 150167
SHEET NUMBER:

FIG. 1



LEGEND

- SITE LIMIT
- SOIL BORING LOCATION
- (hatched) PROPOSED CONSTRUCTION EXCAVATION AREA WHERE CONTAMINANTS OF CONCERN IN SOIL EXCEED APPLICABLE MACS
- (open box) PROPOSED CONSTRUCTION EXCAVATION AREA WHERE CONTAMINANTS OF CONCERN IN SOIL EXCEED THE MOST STRINGENT MACS BUT ARE BELOW LOCATION SPECIFIC MACS FOR A METROPOLITAN STATISTICAL AREA OR WHERE SOIL EXCEEDS THE TIER 1 CONCENTRATION FOR THE SOIL COMPONENT OF THE GROUNDWATER INGESTION EXPOSURE ROUTE

NOTES

1. FIGURES SHOWN ARE SCANNED IMAGES TAKEN FROM DRAWINGS PROVIDED BY OTHERS WHICH MAY EFFECT SCALING.
2. ALL UTILITIES SHOWN ARE APPROXIMATE IN LOCATION. BORING LOCATIONS MUST BE VERIFIED AND THE UTILITIES FIELD STAKED BY UTILITY SEARCH IN ACCORDANCE WITH THE WORK PLAN.
3. CONTAMINANTS OF CONCERN TABLES SHOWN ON FIGURE 2A.

ANDREWS ENGINEERING, INC.

BORING LOCATION MAP

PLANS PREPARED FOR CRAWFORD, MURPHY & TILLY, INC.
SITES 53 & 54
FAU 6593 (UNIVERSITY STREET)
FROM FORREST HILL AVE. TO WAR MEMORIAL DR.
PEORIA, PEORIA COUNTY, ILLINOIS

DATE: APRIL 2015
PROJECT ID: 150167
SHEET NUMBER: FIG. 2

Site 53
Unoccupied Property

Sample ID	53-B01		53-B01 DUP		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2		0-2								
Sample Date	2/17/2015		2/17/2015								
PID	0		0								
Sample pH	6.24		6.94								
Matrix	Soil		Soil								
Inorganic Compounds, Total (mg/kg)											
Arsenic	13.1	1,3,5,7	14.5	1,3,5,7	11.3	NA	11.3	NA	13	NA	13

Site 54
Unoccupied Property

Sample ID	54-B01		54-B02		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2		0-2								
Sample Date	2/17/2015		2/17/2015								
PID	0		0								
Sample pH	8.01		9.22								
Matrix	Soil		Soil								
Inorganic Compounds, Total (mg/kg)											
Arsenic	14.7	1,3,5,7	12.1	1,3,*	11.3	NA	11.3	NA	13	NA	13
Manganese	702	1,3,5,*	718		630	NA	630	NA	636	NA	1,600
SPLP Metals (mg/L)											
Manganese	0.392	6	0.018		m	NA	NA	NA	NA	0.15	NA
TCLP Metals (mg/L)											
Manganese	8.34	6	NT		m	NA	NA	NA	NA	0.15	NA

NT = Not Tested
mg/kg = Milligrams per kilogram
mg/L = Milligrams per liter
TCLP = Toxicity Characteristic Leaching Procedure
SPLP = Synthetic Precipitation Leaching Procedure
MAC = Maximum Allowable Concentrations of Chemical Constituents in Uncontaminated Soil Used as Fill Material At Regulated Fill Operations (35 Ill. Adm. Code 1100.Subpart F).
MSA = Metropolitan Statistical Area
1 = Exceeds the most stringent MAC value.
2 = Exceeds the Outside a Populated Area MAC value.
3 = Exceeds the Populated Area in a Non-MSA County MAC value.
4 = Exceeds the Chicago Corporate Limits MAC value.
5 = Exceeds the Populated Area in a MSA, excluding Chicago value (least stringent).
6 = Exceeds Tier I concentration for the Soil Component of the Groundwater Ingestion Exposure Route, Class I (TACO Appendix B, Tables A and B).
7 = Exceeds the most stringent TACO Tier 1 Soil Remediation Objectives for Residential Properties.
* = Exceeds the most stringent MAC value, but is below the TACO Tier 1 Soil Remediation Objectives for Residential Properties.

CCDD Eligible
not CCDD Eligible (greater than MSA MAC), but not non-special waste (below most stringent TACO Tier 1 Residential RO)
non-special waste (greater than MSA MAC, greater than most stringent TACO Tier 1 Residential RO)

NO	DATE	REVISIONS DESCRIPTION	BY

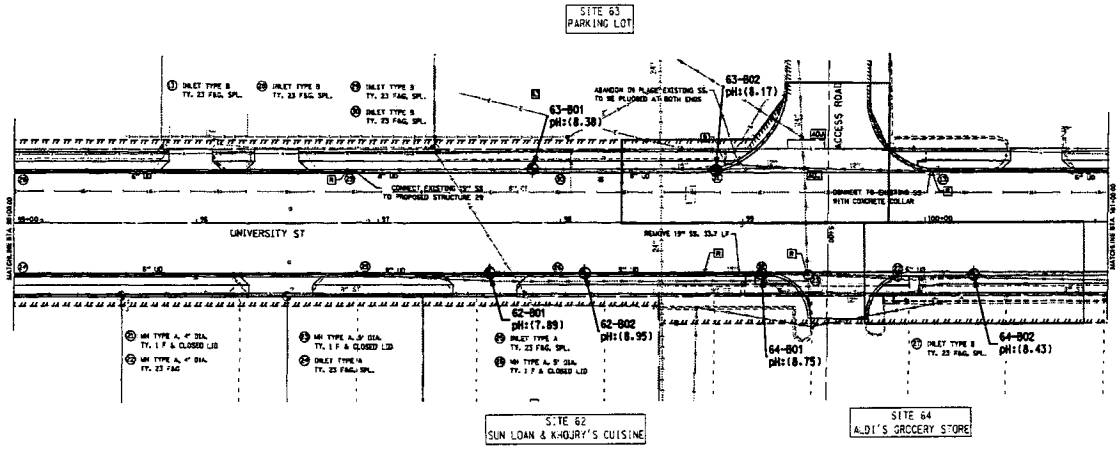
ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO
Professional Design Engineering and Land Surveying Firm #184-001541

APPROVED BY: CEF | DESIGNED BY: CMT | DRAWN BY: MPN

CONTAMINANANTS OF CONCERN

PLANS PREPARED FOR
CRAWFORD, MURPHY & TILLY, INC.
SITES 53 & 54
FAU 6593 (UNIVERSITY STREET)
FROM FORREST HILL AVE. TO WAR MEMORIAL DR.
PEORIA, PEORIA COUNTY, ILLINOIS

DATE: APRIL 2015
PROJECT ID: 150167
SHEET NUMBER:
FIG. 2A



LEGEND

- SITE LIMIT
- SOIL BORING LOCATION
- PROPOSED CONSTRUCTION EXCAVATION AREA WHERE CONTAMINANTS OF CONCERN IN SOIL EXCEED THE MOST STRINGENT MACS BUT ARE BELOW LOCATION SPECIFIC MACS FOR A METROPOLITAN STATISTICAL AREA OR WHERE SOIL EXCEEDS THE TIER 1 CONCENTRATION FOR THE SOIL COMPONENT OF THE GROUNDWATER INGESTION EXPOSURE ROUTE

NOTES

1. FIGURES SHOWN ARE SCANNED IMAGES TAKEN FROM DRAWINGS PROVIDED BY OTHERS WHICH MAY EFFECT SCALING.
2. ALL UTILITIES SHOWN ARE APPROXIMATE IN LOCATION. BORING LOCATIONS MUST BE VERIFIED AND THE UTILITIES FIELD STAKED BY UTILITY SEARCH IN ACCORDANCE WITH THE WORK PLAN.
3. CONTAMINANTS OF CONCERN TABLES SHOWN ON FIGURE 3A.

N

0 50 100

SCALE: IN FEET

ANDREWS ENGINEERING, INC.

BORING LOCATION MAP

PLANS PREPARED FOR
CRAWFORD, MURPHY & TILLY, INC.
SITES 62, 63 & 64
FAU 6351 (WAR MEMORIAL DR. SHEET)
FROM FORREST HILL AVE. TO WAR MEMORIAL DR.
PEORIA, PEORIA COUNTY, ILLINOIS

DATE: APRIL 2015
PROJECT #: 150147
SHEET NUMBER:

FIG. 3

Site 63
Parking Lot

Sample ID	63-B02		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-4								
Sample Date	2/18/2015								
PID	0								
Sample pH	8.17								
Matrix	Soil								
Inorganic Compounds, Total (mg/kg)									
Arsenic	11.9	1,3,*	11.3	NA	11.3	NA	13	NA	13

Site 64
ALDI's Grocery Store

Sample ID	64-B02		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2								
Sample Date	2/18/2015								
PID	0								
Sample pH	8.43								
Matrix	Soil								
Semivolatile Organic Compounds (mg/kg)									
Benzo(a)pyrene	0.509	1,2,*	0.09	0.09	0.98	1.3	2.1	NA	2.1

mg/kg = Milligrams per kilogram
MAC = Maximum Allowable Concentrations of Chemical Constituents In Uncontaminated Soil Used as Fill Material At Regulated Fill Operations (35 Ill. Adm. Code 1100.Subpart F).
MSA = Metropolitan Statistical Area
1 = Exceeds the most stringent MAC value.
2 = Exceeds the Outside a Populated Area MAC value.
3 = Exceeds the Populated Area in a Non-MSA County MAC value.
4 = Exceeds the Chicago Corporate Limits MAC value.
5 = Exceeds the Populated Area in a MSA, excluding Chicago value (least stringent).
6 = Exceeds Tier I concentration for the Soil Component of the Groundwater Ingestion Exposure Route, Class I (TACO Appendix B, Tables A and B).
7 = Exceeds the most stringent TACO Tier 1 Soil Remediation Objectives for Residential Properties.
***** = Exceeds the most stringent MAC value, but is below the TACO Tier 1 Soil Remediation Objectives for Residential Properties.

CCDD Eligible
not CCDD Eligible (greater than MSA MAC), but not non-special waste (below most stringent TACO Tier 1 Residential RO)
non-special waste (greater than MSA MAC, greater than most stringent TACO Tier 1 Residential RO)

REVISIONS
NO.	DATE	DESCRIPTION	BY

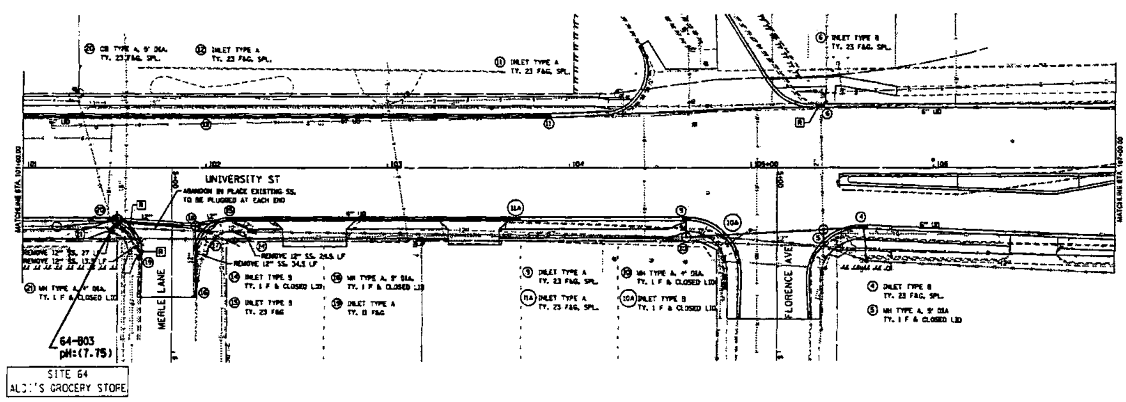
ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO
Professional Design Engineering and Land Surveying Firm 184-001841

APPROVED BY: CEF | DESIGNED BY: CMT | DRAWN BY: MPN

CONTAMINANTS OF CONCERN

PLANS PREPARED FOR
CRAWFORD, MURPHY & TILLY, INC.
SITES 63 & 64
FAU 6593 (UNIVERSITY STREET)
FROM FORREST HILL AVE. TO WAR MEMORIAL DR.
PEORIA, PEORIA COUNTY, ILLINOIS

DATE: APRIL, 2015
PROJECT ID: 150187
SHEET NUMBER:
FIG. 3A



LEGEND

- SITE LIMIT
- SOIL BORING LOCATION

NOTES

1. FIGURES SHOWN ARE SCANNED IMAGES TAKEN FROM DRAWINGS PROVIDED BY OTHERS WHICH MAY EFFECT SCALING.
2. ALL UTILITIES SHOWN ARE APPROXIMATE IN LOCATION. BORING LOCATIONS MUST BE VERIFIED AND THE UTILITIES FIELD STAKED BY UTILITY SEARCH IN ACCORDANCE WITH THE WORK PLAN.
3. NO CONTAMINANTS OFCONCERN NOTED FOR SITE 64.

ANDREWS ENGINEERING, INC.

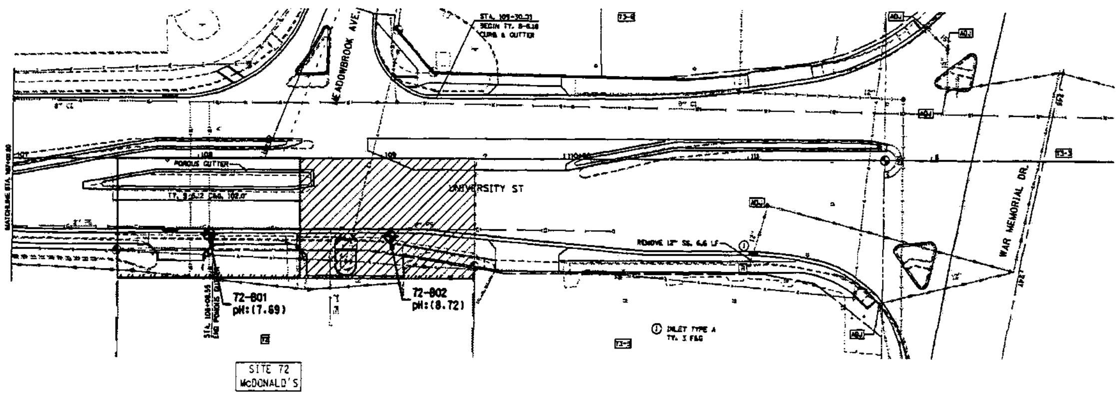
BORING LOCATION MAP

PLANS PREPARED FOR ...
CRAWFORD, MURPHY & TILLY, INC.
SITE 64
FAU 6593 (UNIVERSITY STREET)
FROM FORREST HILL AVE. TO WAR MEMORIAL DR.
PEORIA, PEORIA COUNTY, ILLINOIS

DATE: APRIL 2015
PROJECT ID: 150'67

FIG. 4

Appendix B-60



LEGEND

- SITE LIMIT
- SOIL BORING LOCATION
- PROPOSED CONSTRUCTION EXCAVATION AREA WHERE CONTAMINANTS OF CONCERN IN SOIL EXCEED APPLICABLE MACS
- PROPOSED CONSTRUCTION EXCAVATION AREA WHERE CONTAMINANTS OF CONCERN IN SOIL EXCEED THE MOST STRINGENT MACS BUT ARE BELOW LOCATION SPECIFIC MACS FOR A METROPOLITAN STATISTICAL AREA OR WHERE SOIL EXCEEDS THE TIER 1 CONCENTRATION FOR THE SOIL COMPONENT OF THE GROUNDWATER INGESTION EXPOSURE ROUTE

NOTES

1. FIGURES SHOWN ARE SCANNED IMAGES TAKEN FROM DRAWINGS PROVIDED BY OTHERS WHICH MAY EFFECT SCALING.
2. ALL UTILITIES SHOWN ARE APPROXIMATE IN LOCATION. BORING LOCATIONS MUST BE VERIFIED AND THE UTILITIES FIELD STAKED BY UTILITY SEARCH IN ACCORDANCE WITH THE WORK PLAN.
3. CONTAMINANTS OF CONCERN TABLES SHOWN ON FIGURE 5A.

ANDREWS ENGINEERING, INC.
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Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO

APPROVED BY: CEF | DESIGNED BY: CMT | DRAWN BY: MPN

BORING LOCATION MAP

PLANS PREPARED FOR
CRAWFORD, MURPHY & TILLY, INC.
SITE 72
FAU 6593 (UNIVERSITY STREET)
FROM FORREST HILL AVE. TO WAR MEMORIAL DR.
PEORIA, PEORIA COUNTY, ILLINOIS

DATE: APRIL 2015
PROJECT ID: 150167
SHEET NUMBER:

FIG. 5

REVISIONS: NO. | DATE | DESCRIPTION | BY

Site 72
McDonald's

Sample ID	72-B01		72-B02		[1] Most Stringent MAC	[2] Outside a Populated Area MAC	[3] Populated non-Metropolitan Statistical Area MAC	[4] Within Chicago Corporate Limits MAC	[5] Metropolitan Statistical Area MAC	[6] Class I Soil TCLP/SPLP Comparisons Only	[7] Most Stringent TACO Tier 1 Residential Objective
Sample Depth (ft)	0-2		0-2								
Sample Date	2/18/2015		2/18/2015								
PID	0		0								
Sample pH	7.69		8.72								
Matrix	Soil		Soil								
Inorganic Compounds, Total (mg/kg)											
Arsenic	13	1,3,*	14.9	1,3,5,7	11.3	NA	11.3	NA	13	NA	13

mg/kg = Milligrams per kilogram
MAC = Maximum Allowable Concentrations of Chemical Constituents In Uncontaminated Soil Used as Fill Material At Regulated Fill Operations (35 Ill. Adm. Code 1100.Subpart F).
MSA = Metropolitan Statistical Area
1 = Exceeds the most stringent MAC value.
2 = Exceeds the Outside a Populated Area MAC value.
3 = Exceeds the Populated Area in a Non-MSA County MAC value.
4 = Exceeds the Chicago Corporate Limits MAC value.
5 = Exceeds the Populated Area in a MSA, excluding Chicago value (least stringent).
6 = Exceeds Tier I concentration for the Soil Component of the Groundwater Ingestion Exposure Route, Class I (TACO Appendix B, Tables A and B).
7 = Exceeds the most stringent TACO Tier 1 Soil Remediation Objectives for Residential Properties.
***** = Exceeds the most stringent MAC value, but is below the TACO Tier 1 Soil Remediation Objectives for Residential Properties.

CCDD Eligible
not CCDD Eligible (greater than MSA MAC), but not non-special w aste (below most stringent TACO Tier 1 Residential RO
non-special w aste (greater than MSA MAC, greater than most stringent TACO Tier 1 Residential RO)

ANDREWS ENGINEERING, INC.

CONTAMINANTS OF CONCERN

PLANS PREPARED FOR
CRAWFORD, MURPHY & TILLY, INC.
SITE 72
FAU 8593 (UNIVERSITY STREET)
FROM FORREST HILL AVE. TO WAR MEMORIAL DR.
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FIG. 5A

Appendix C - Watermain Technical Specifications

UNIVERSITY STREET WATERMAIN REPLACEMENT
FROM MERLE LANE TO WAR MEMORIAL DRIVE

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SECTION 01000

SUMMARY OF WORK

PART 1: GENERAL

1.01 WORK UNDER THIS CONTRACT

A. Furnish all labor, materials ~~(except as herein noted)~~, equipment and means to construct the pipeline(s) and other Work as described in the Contract Documents and shown on the Drawings. The Work includes, but is not limited to, the following:

1. Sheeting, bracing and support of trench and adjoining ground where necessary.
2. Furnish and install thrust blocking and pipe restraints as required.
3. Handling drainage and water removal.
4. Guarding the site and materials on site.
5. Furnishing materials not provided by the owner to the site (see section 1.03)
6. Unloading, loading, hauling, distributing, laying and testing the pipe and appurtenances.
7. Excavation and backfilling of trenches and pits.
8. Removal of surplus excavated material and debris.
9. Installation of required pipe, fittings and appurtenances
10. Fire Service Line Transfers/Connections
11. Performance of pressure and leakage tests.
12. Disinfecting of pipeline (and dechlorination of discharge).
13. Site cleaning.
14. Ground restoration and planting.
15. Submit schedules, shop drawings and as-built records.
16. Erosion and sediment control.
17. Flush & clean
18. Call for utility locations
19. Collect bacteriological samples

B. Please refer to the Standard General Conditions of the Construction Contract for definitions of the Owner, Contractor, Engineer and other terminology that may be used in this specification.

C. The above general outline of principal features does not in any way limit the responsibility of the Contractor to perform all Work and furnish the required materials, equipment, labor and means as shown or required by the Contract Documents.

D. Materials, equipment, labor, etc., obviously a part of the Work and necessary for the proper operation and installation of same, although not specifically indicated in the Contract Documents, shall be provided as if called for in detail without additional cost to the Owner.

1.02 WORK BY ILLINOIS AMERICAN WATER COMPANY

A. Owner will perform certain items of Work related to this project which include the following

1. Mark locations of existing services, valves, mains, etc.
2. Other work, if any, as described below.
    A. Operate all valves necessary to shut-off, flush and reactivate its existing pipelines
    B. Install Pipe taps
    C. Install services during construction.
    D. Provide meter sets
    E. Install meters
    F. Fire Hydrant Removal/Abandonment
    G. Existing Watermain Cut and Caps

~~1.03 MATERIALS FURNISHED BY OWNER~~

~~A. The following materials may be furnished by the Owner and installed by the Contractor. All materials required to complete the Work, but not listed herein, shall be furnished and installed by the Contractor.~~

~~1. Owner shall furnish all pipe, valves, bends and appurtenances.~~
~~2. Owner shall furnish all material for service line reconnections.~~

1.04 LOCATIONS

A. Work is to be performed on Owner's property and/or public rights-of-ways or easements shown on the drawings and described in the Specifications. Work shall be performed by the Contractor within these limits.

B. It is the obligation and responsibility of the Contractor to determine the exact limitations of the rights-of-way and/or easements and any conditions limiting or affecting the use of the right of way by the Owner and/or the Contractor. All agreements respecting rights-of-way and the easements that are available to the Owner can be made available upon request. The Contractor agrees to indemnify and hold harmless the Owner against any claims made by any property owner, including any claim that the Contractor has failed to keep Contractor work, equipment, materials, or workmen within the limits authorized by the right-of-way and/or easement or any claim that the Contractor has failed to comply with any condition or requirement, or agreement respecting the right-of-way and/or easement.

C. Some of the locations shown or described in the Contract Documents, such as tie-ins, are approximate. It is the responsibility of the contractor for pinpointing the exact locations.

PART 2: PRODUCTS

2.01 GENERAL

Specifications for the materials and equipment to be provided by the Contractor are detailed in the respective Specification Sections.

PART 3: EXECUTION

3.01 FIELD SURVEY WORK

Lay out the Work in accordance with Contract Documents and Construction Plans. Owner will provide reference points as noted on the plans.

3.02 COORDINATION

A. Coordinate work, to phase the construction operations, and provide, install and maintain any temporary connections necessary to prevent interference to operation of Illinois American Water Company's facilities. Any construction work requiring the shutdown of facilities must be scheduled and performed only at such times as shall be authorized by the Illinois American Water Company. Such Work must be completed during the specific periods authorized by the Owner.

B. It may be necessary that Work will be performed during several shutdown periods and/or during periods of premium time payment to accomplish the desired construction. All costs to perform the Contractor's Work, including premium time payments, shall be borne by the Contractor and are included in the Contract Price.

3.03 REGULATORY REQUIREMENTS

Make necessary arrangements for obtaining and identifying all costs in connection with mandated third party inspections when the Work is to be done in the third party's transportation or utility right of way and an inspector must be assigned to the Project during the construction of the Work.

END OF SECTION

SECTION 01010

DRAWING INDEX

PART 1: GENERAL

1.01 DRAWINGS

A. The following drawings, dated February 2016, and prepared by Crawford, Murphy, & Tilly, Inc., accompany this Specification and are a part thereof. Drawings are the property of the Owner and shall not be used for any purpose other than that intended by the Specifications.

Sheet No.	*Title, Description*
C-1	*General Notes, Legend, & Location Map*
C-2	*Watermain – Sta. 0+00 to 5+00*
C-3	*Watermain – Sta. 5+00 to 10+00*
C-4	*Watermain – Sta. 10+00 to 10+46*
C-5	*Watermain – Details for Connections*
C-6	*Construction Details - 01*
C-7	*Construction Details - 02*

PART 2: PRODUCTS

Not Used

PART 3: EXECUTION

Not Used

END OF SECTION

SECTION 01075

BASIS OF PAYMENT

PART 1: GENERAL

1.01 SCOPE

Work to be performed under this Contract shall be paid for in accordance with the "Unit Prices" of the bid. The cost of labor, equipment, materials or work called for in the Specification, shown on the Drawings, or necessary for a complete and satisfactory installation of the watermain, but which are not specifically mentioned in this Section shall be included in the appropriate pay item by the Contractor at no additional expenses to the Owner.

1.02 PAYMENT ITEMS

The prices shown in the "Unit Prices" of the Bid include all costs to construct the water pipeline (s) under this Contract. Final payment will be made on the in place measurement of length(s) of pipeline(s) installed.

- **WATERMAIN, 8" DIAMETER, DUCTILE IRON, OPEN CUT**:

  The contract unit price shall include furnishing all labor, equipment and materials, which are necessary for installation of the watermain. Viton Gaskets (where indicated on the drawings), Joint Restraints, Tracer wire, location tape, polywrap, excavation, bedding, haunching, initial backfill, and disposal of any removed materials (soil, rock, watermain, water services, etc.) shall be included in the cost of the contract unit price of the watermain. The Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures necessary for the construction of the pipeline(s). The minimum width and depth of the pipe trench shall be in accordance with the requirements of Specification Section 02210.

- **WATERMAIN, 6" DIAMETER, DUCTILE IRON, OPEN CUT**

  The contract unit price shall include furnishing all labor, equipment and materials, which are necessary for installation of the watermain. Viton Gaskets (where indicated on the drawings), Joint Restraints, Tracer wire, location tape, polywrap, excavation, bedding, haunching, initial backfill, and disposal of any removed materials (soil, rock, watermain, water services, etc.) shall be included in the cost of the contract unit price of the watermain. The Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures necessary for the construction of the pipeline(s). The minimum width and depth of the pipe trench shall be in accordance with the requirements of Specification Section 02210.

- **WATERMAIN, 4" DIAMETER, DUCTILE IRON, OPEN CUT**

  The contract unit price shall include furnishing all labor, equipment and materials, which are necessary for installation of the watermain. Viton Gaskets (where indicated on the drawings), Joint Restraints, Tracer wire, location tape, polywrap, excavation, bedding, haunching, initial backfill, and disposal of any removed materials (soil, rock, watermain, water services, etc.) shall be included in the cost of the contract unit price of the watermain. The Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures necessary for the construction of the pipeline(s). The minimum width and depth of the pipe trench shall be in accordance with the requirements of Specification Section 02210.

- **16 INCH PVC SDR 21 CASING FOR WATER/SEWER CROSSING**

  The contract unit price shall include furnishing all labor, equipment and materials, including the casing pipe, installation of the watermain in the casing pipe, sealing of the casing, casing spacers and other operations involved with the installation of the pipe in the casing.

- **GATE VALVE AND BOX, 8" DIAMETER**

  The contract unit price shall include furnishing all labor, equipment and materials, which are necessary for installation of the gate valve and box.

- **GATE VALVE AND BOX, 6" DIAMETER**

  The contract unit price shall include furnishing all labor, equipment and materials, which are necessary for installation of the gate valve and box.

- **GATE VALVE AND BOX, 4" DIAMETER**

  The contract unit price shall include furnishing all labor, equipment and materials, which are necessary for installation of the gate valve and box.

- **DUCTILE IRON FITTINGS**

  The contract unit price shall include furnishing all labor, equipment, thrust block (if specified) and any other materials (including Viton Gaskets where indicated on the drawings), which are necessary for the installation of the ductile iron fittings. Measurement of fittings shall be based on the fittings actually installed and the weights of the respective compact fitting as listed in AWWA Standard C153.

- **FIRE HYDRANT (3-WAY)**

  The contract unit price shall include furnishing all labor, equipment and materials, which are necessary for the installation of the fire hydrant.

- **FLOWABLE BACKFILL (CLSM)**

  The contract unit price shall include furnishing all labor, equipment and materials, which are necessary for installation of selected granular backfill. No payment will be made for aggregate needed outside the maximum normal trench width as described in Specification Section 02210, Part 3.05, Paragraph D. If for any reason the trench width exceeds the maximum trench width defined in Paragraph D above, the Contractor shall provide the additional aggregated for bedding and backfilling at no cost to the Owner as described in Specification Section 02210, Part 3.05, Paragraph E. This pay item also includes the removal, hauling and proper disposal of all excavated material.

- **PAVEMENT REMOVAL**

  The contract unit price shall include furnishing all labor, equipment and materials, which are necessary for the removal of the existing pavement (bituminous and concrete). Saw cutting of the limits of the pavement removal to provide a straight smooth removal edge shall be included in the cost of the contract unit price of the pavement removal

- **CONCRETE PAVEMENT PLACEMENT**

  The contract unit price shall include furnishing all labor, equipment and materials, which are necessary for the placement of the concrete pavement. The concrete pavement shall match the existing pavement depth but shall not be less than 14 inches.

- **FIRE SERVICE TRANSFER**

  Payment will be made at the Contract Unit Price for the installation of each of the following:

  (1) Fire Service Transfers New and Renewal

  All of the above include complete installation in place including permanent restoration. Service transfers include installation of corporation and connection of existing service line shall be either union or length of pipe and union. Curb stops/valves will normally be installed at the tee. All installations shall be in accordance with Specification Section 15200 or 15205. Payment will be made under only one bid item per service.

- **WATERMAIN TESTING AND DISINFECTION**

  The contract unit price shall include furnishing all labor, equipment and materials, which are necessary for the testing and disinfection of the watermain.

PART 2: PRODUCTS - Not Used

PART 3: EXECUTION - Not Used

END OF SECTION

SECTION 01300

SUBMITTALS

PART 1: GENERAL

1.01 CONSTRUCTION SCHEDULE

A. Prepare and submit detailed progress schedules, schedule of values and shop drawing and sample submittal schedules to the Engineer. The schedule shall be in bar graph form and shall include, as a minimum, the following separate activities:

1. Physical construction (identifying mobilization, demobilization, setup time, lags, etc.).
2. Issuance by Contractor of purchase orders for material and equipment and submittal of shop drawings and samples to the Engineer.
3. Review by Engineer for each submittal of samples and shop drawings. Unless otherwise approved by the Engineer, allow ten (10) working days for Engineer to review each submittal.
4. Fabrication time for materials and equipment.
5. Delivery of materials and equipment.
6. Installation of materials and equipment.
7. Testing, start-up and training for individual pieces of equipment or entire systems as appropriate.
8. Weather affected activities.
9. Outages or interruptions of Owner's facilities required to perform work.
10. Demolition or removal work under this Contract.

B. Activity durations shall represent the best estimate of elapsed time considering the scope of the Work involved in the activity and the resources planned for accomplishing the activity expressed in working days.

C. Activity descriptions shall clearly define the scope of work associated with each activity.

D. Detail the construction work schedule to an extent that progress can be readily monitored on a weekly basis. In general, the construction work shall be detailed such that no construction activity shall have duration greater than fifteen (15) work days. As a minimum, each activity shall be coded by:

1. Activity type (i.e., submittal, Engineer's review, material order material delivery, pilot hole drilling, well testing, development, etc.).
2. Responsibility (i.e., Contractor, subcontractor A, subcontractor B, Owner, Engineer, etc.).
3. Area (i.e., Pilot Wells, Production Wells, sitework, etc.).

E. Develop the construction schedule as necessary to properly control and manage the project. The above schedule development requirements are a minimum.

F. The preliminary progress schedule shall be submitted in a bar graph format and shall include, as a minimum, a graphic representation of all significant activities and events involved in the construction of the project. The graphic representation and statement must clearly depict and describe the sequence of activities planned by the Contractor, their interdependence and the times estimated to perform each activity.

1.02 FINALIZING SCHEDULES

A. Prepare to present and discuss at the preconstruction meeting, the schedules submitted in accordance with this specification. Unless additional information is required to be submitted by the Contractor, the Engineer will, within 15 working days of the preconstruction conference, provide comments to the Contractor. Then resubmit the affected schedules addressing the Engineer's comments.

B. Approval of the final schedules by the Engineer is advisory only and shall not relieve the Contractor of responsibility for accomplishing the work within the Contract Times. Omissions and errors in the approved schedule shall not excuse performance less than that required by the Contract. Approval by the Engineer in no way makes the Engineer an insurer of the success of those schedules or liable for time or cost overruns flowing from shortcomings in such schedules.

1.03 REQUIREMENTS FOR CONFORMING TO SCHEDULE

A. Take such steps as will be necessary to improve progress, if, in the opinion of the Engineer, the Contractor falls behind the progress schedule. Engineer may require Contractor to increase the number of shifts and/or overtime operations, days of work, and/or the amount of construction planned, and to submit for approval such supplementary schedule or schedules as may be deemed necessary to demonstrate the manner in which the agreed rate of progress will be regained, all without additional cost to the Owner. An updated cash flow schedule will be required in this occurrence and will be provided with the supplementary schedules referenced above.

1.04 UPDATING SCHEDULES

A. Submit to the Engineer monthly updates of the schedules required per this specification section. Be prepared to discuss the monthly update and the subsequent monthly job meeting if such meetings are to be held.

B. Progress and shop drawing schedule updates shall reflect the progress to date by providing actual start dates for activities started, actual finish dates for completed activities, and identifying out of sequence work, schedule logic changes and any circumstances or events impacting the current schedule. The updates shall also contain the Contractor's best estimate of the remaining duration for activities not complete as of the date of the update. All graphic

presentations and other information required per the initial submittal of these schedules shall be provided with each update.

C. The cash flow schedules shall be updated to reflect any changes.

1.05 ADJUSTMENT OF PROGRESS SCHEDULE AND CONTRACT TIMES

A. If the Contractor desires to make changes in the method of operating which affect the approved progress schedule, notify the Engineer in writing stating what changes are proposed and the reason for the change. If the Engineer approves these changes, revise and submit for approval, without additional cost to the Owner, all of the affected portions of the schedule.

B. Shop drawings and samples which are not approved on the first submittal or within the schedule time shall be immediately rescheduled, as well as any work which fails to pass specified tests or has been rejected.

C. The Contract Times will be adjusted only for causes specified in the General Conditions. In the event the Contractor requests an adjustment of the Contract times, furnish such justification and supporting evidence as the Engineer may deem necessary for a determination as to whether the Contractor is entitled to an adjustment of Contract Times under the provisions of the General Conditions. The Engineer will, after receipt of such justification and supporting evidence, make findings of fact and will advise the Contractor in writing. If the Engineer finds that the Contractor is entitled to any adjustment of the Contract Times, the Engineer's determination as to the total number of days adjustment shall be based upon the currently approved progress schedule and on all data relevant to the adjustment. The Contractor acknowledges and agrees that actual delays in activities which, according to the progress schedule, do not affect the Contract completion date shown by the critical path in the schedule will not be the basis for an adjustment of Contract Times.

D. From time to time it may be necessary for the progress schedule and/or Contract Times to be adjusted by the Owner to reflect the effects of job conditions, weather, technical difficulties, strikes, unavoidable delays on the part of the Owner, and other unforeseeable conditions which may indicate schedule and/or Contract Times adjustments. Under such conditions, the Engineer shall direct the Contractor to reschedule the work and/or Contract Time to reflect the changed conditions. Revise the construction schedule accordingly. No additional compensation shall be made to the Contractor for such changes except as provided in the General Conditions. Unless otherwise directed, take all possible actions to minimize any extension to the Contract Times and any additional cost to the Owner.

1.06 CASH FLOW SCHEDULE

A. In addition to the Construction Schedule required above, submit to the Engineer, for approval, a Cash Flow Schedule. The Cash Flow Schedule shall show the amounts of money by months, which will be required to reimburse the Contractor for Work performed during each month of the Contract Time. The sum of all the

monthly cash requirements shall equal the total price of the Contract. The monthly cash requirements shall be proportioned with the aid of the Construction Schedule.

B. The approved Cash Flow Schedule will be used by the Owner to program funds for progress payments to the Contractor. Monthly payments will be made to the Contractor in accordance with the Contract Agreement, but at no time will the aggregate amount of payments exceed the accumulated amount of payments for the same period of the Cash Flow Schedule.

1.07 SHOP DRAWINGS

A. Promptly supply to the Engineer for approval, shop drawings with details and schedules for all items as noted in the Drawings and/or Specifications and/or required by the Engineer. Submittals are required for all equipment and materials to be installed on the job.

B. Five (5) copies of all drawings, schedules and brochures shall be submitted for approval. Black line prints, blue line prints or reproducible transparencies are required. Blueprints (white lines on a blue background) are not acceptable. Each submittal shall have the job name on it.

C. Submittals smaller than 8-1/2 by 11 inches shall be secured to paper 8-1/2 by 11 inches.

1.08 SAMPLES

When required by the Engineer or where noted in other Sections of these Specifications, samples of materials shall be submitted for approval.

1.09 PRE-CONSTRUCTION VIDEO/ELECTRONIC PHOTOS

A. Prior to mobilization at the site, furnish to the Engineer on DVD a video recording of all planned construction areas, material storage areas, areas adjacent to these areas, including but not limited to, streets, driveways, sidewalks, curbs, ditches, fencing, railing, visible utilities, retaining structures and adjacent building structures. The purpose of the video is to document existing conditions and to provide a fair measure of required restoration. Care should be taken to record all existing conditions which exhibit deterioration, imperfections, structural failures or situations that would be considered substandard. Notify the Engineer when the video is to be taken to provide the Engineer an option to be on site during the documenting of the project area.

B. The video shall be high quality, color and in an approved electronic format. Temporary lighting shall be provided as necessary to properly video areas where natural lighting is insufficient (indoors, shadows, etc.). The video shall include an audio soundtrack to provide the following information:

1. Detailed description of location being viewed referenced to Contract Drawings (i.e., well location, building designation, pipeline route etc.)

2. Direction (N, S, E, W, looking up, looking down, etc.) of camera view
3. Date, time, temperature, environmental conditions during recording.

Where required by Engineer, electronic photographs of specific locations shall be provided to supplement the electronic video.

C. Any areas not readily visible by video/photo methods shall be described in detail. Unless otherwise approved by Engineer, video shall not be performed during inclement weather or when the ground is covered partially or totally with snow, ice, leaves, etc.

D. As many recordings or photos as are necessary to satisfy the requirements of this section shall be prepared. The original documents shall be submitted to the Engineer accompanied by a detailed log of the contents of each DVD. The log should include location descriptions with corresponding file name to facilitate the quick location of information contained on the DVDs. The DVDs will be maintained by the Engineer during construction and may be viewed at any time by Contractor upon request. Upon final acceptance, the DVDs will become the permanent property of the Owner.

~~**1.10 PROGRESS PAYMENTS**~~

~~A. The detailed arrangement for submittal of progress payments shall be discussed at the preconstruction meeting. In general, progress payments shall be submitted monthly in a format acceptable to the Engineer. The progress payment request shall be based on the unit prices and should provide the percentage of completion, **total dollar value completed**, dollar value completed prior to the current payment, and the amount requested for this progress payment for each line item contained in the schedule of values. Progress payment requests for material and/or equipment suitably stored but not yet incorporated into the work shall be accompanied by a copy of the appropriate manufacturers invoice, shipping order, bill of lading, etc. and the progress payment amount shall be the direct cost to the Contractor, or subcontractor, for such material and/or equipment. Payment will not be made to the Contractor if, upon inspection by the Engineer, it is determined that the material and/or equipment does not conform to the requirements of the Contract Documents including proper storage, receipt of approved shop drawings, receipt of any special guarantees, Bonds, insurance coverage, any evidence of damage or imperfections, etc.~~

1.11 CONTRACTOR'S DAILY REPORTS

A. If requested by the Engineer or the Resident Project Representative, prepare and submit daily reports containing the following information:

1. The number of craftsmen and hours worked of each subcontractor,
2. The number of hours worked by each trade,
3. The number of hours worked of each type of equipment,
4. A description of work activities performed,
5. A description of any material or equipment deliveries,

6. Description of obstructions encountered,
7. The temperature and weather conditions.
8. Downtime due to equipment failure.
9. Detail cause for work delays.

B. The daily reports shall be submitted on a daily basis, by the end of the next business day.

C. Information provided on the daily report shall not constitute notice of delay or any other notice required by the Contract Documents. Notice shall be as required therein.

1.12 OPERATING AND MAINTENANCE INSTRUCTION MANUALS

A. Prepare complete written maintenance and operating instructions covering any equipment provided under this Contract. Divide the operating instructions into basic sections according to type of equipment.

B. Instructions shall describe all equipment and controls, their purpose, and their operation and use. Include maintenance checklists for use by the Owner's personnel and a complete listing of replacement parts with pertinent information relative to ordering such parts.

C. Submit instructions in duplicate draft form for review by the Engineer at least eight weeks prior to initial operation and in final form within thirty days after return of one copy of the draft with the Engineer's notations.

D. Prior to release of Final Payments, revise and resubmit copies of the instructions to accord with any changes in procedures or equipment made during start-up or initial operation. Resubmittals are also required for changes made during the guarantee period.

1.13 REQUIREMENTS FOR AMERICAN WATER ASSET VALUES

Provide a breakdown of the contract amount by Property Units in accordance with the list of Property Units that can be provided as requested. This process requires that the contractor assign the full cost of the project to lengths of pipe (by material and size), length of services (by material and size), hydrants, valves (by size), manholes and other fixtures (air relief valves, blowoffs, etc.) in the project. The submission must be approved by the Engineer to verify that the breakdown is realistic and reflects submitted contract unit prices.

1.14 AS BUILTS

Where identified as a product of the work, provide as built drawings adhering to the criteria provided here and that found in the special conditions.

A. Templates - All measurements and information shall be recorded on templates provided. No other backgrounds, templates nor formats will be accepted for the As-Built submission.

B. Recording the Information - Provide the Record As-Built information in both 'Electronic and Hard' copy mediums, with the exception of the Field Sketches. The Field Sketches are not required to be in the electronic format. The electronic medium format shall be in AutoCAD 2000 or later. The base drawing shall be drawn in Model Space at a scale of 1 to 1, in real world coordinates and all plotting, labeling and dimensioning shall be drawn from Paper Space. Templates shall not be modified or resized due to Optical Scanning requirements. The layering convention and color scheme shall follow the samples provided.

C. Coordinates – Provide the required survey coordinates in the State Plane Coordinate System unless otherwise noted. The drawing features included shall be as noted below (See 'Pipeline As-Built Drawing Procedure').

D. Submitting the Information - When the Record information is ready, submit 'Hard' copies of all the information, including sketches to the Engineer for approval. The electronic information shall be burned on a CD (CD-RW). The CD shall have an all white label with the following information on the upper half of the label in Arial 12 font:

Illinois American Water, *Peoria District*,
University Street Watermain Replacement
Attn: Christian Volz, P.E. LEED AP
7500 N Harker Drive, Peoria, IL. 61615

E. The Information Process - The Engineer will approve the submission or 'red line' any information needing to be corrected or added, and return it for resubmission. When the submittal is approved by the Engineer, provide two CD-RW's each containing all approved Record As-Built information in a clear face hard plastic CD jacket and one hard copy of all approved Record As-Built information (binder clipped together, not bound)

Initial submission must be provided within (14) calendar days of the 'Construction Completion' date, not including the restoration work. The Engineer will return the submission within (7) calendar days of receipt. The approved final submission must be provided within twenty-eight (28) calendar days from the 'Construction Completion' date, not including the restoration work.

F. General information required - At a minimum, all As-Built record drawings shall contain the following information:

1. North Arrow with North at the top of the drawing
2. Face of curb lines, easement lines, edge of pavement (EOP) or right-of-way lines
3. Business Unit (BU) Number (data provided by Engineer)
4. Plate Map number (data provided by Engineer)
5. All objects located shall be referenced to other objects with (3) perpendicular measurements. All such measurements shall be from permanent existing structures, such as catch basins, manholes, buildings, etc. (no utility poles)

6. The proposed pipeline 'line' designation shall be shown in bold or heavier line style per template and sample.

G. Pipeline information required - At a minimum, all As-Built record drawings shall contain the following information:

1. Title Block Information completed (note, any street with work performed in it must have it's name included in the title block)
2. Each drawing shall include only the work along one street block (transmission mains excluded). And include the intersecting street corners with the distance to the center line of each intersection. Include Match Lines if multiple drawings are required.
3. If more than one drawing is required, include an overall site plan of the whole project with a drawing key
4. Pipe diameter and material
5. Bill of Materials with arrow identifying where installed
6. Date the water main was put 'In-service' (data provided by Engineer)
7. Include valve, hydrant and tap/service identifying numbers for each (data provided by Engineer)
8. Reference the Point of Connection where the new main pipeline connects to existing Owner facilities and provide dimensions to nearest existing appurtenance
9. If project continues from an existing stub, a dimension from the center line of the nearest street intersection and existing line valve shall be included. Provide coordinates for the referenced existing valve.
10. If the project is a continuation of a previous project, reference the previous project reference number
11. All Valves, tees, horizontal/vertical bends, and the start and end of the new water main shall be located with coordinates in the specified format.
12. All connections, wet cuts and fittings not required to have coordinates shall be dimensionally located
13. Indicate abandoned pipe with type of material and length (if applicable)
14. Indicate and locate buried valves (if applicable) with coordinates in the specified format.
15. Provide measurement from face of curb or edge of pavement at every 250 foot maximum along the pipeline
16. At abrupt changes in pipe elevation, provide a referenced drawing showing the profile of the work and list the material used
17. Provide the depth from finish grade to top of pipe every 100 lf, and at the start and end of the new water main
18. Name of Contractor and Construction Inspector (full last name) on the project (locate in title block)

H Transmission Pipeline Information - Transmission Mains are typically 16" in diameter and larger; however, the Engineer may classify some 12" diameter pipe projects as a transmission main. Transmission main as-built drawings shall include all relevant information noted above and the following:

1. Title Sheet to include at a minimum:

    a. American Water District & Project name
    b. Project Business Unit Number (data provided by Engineer)
    c. Design Consultant Engineering Company name
    d. Project date
    e. County and Town
    f. List of drawings
    g. Drawing key with corresponding drawing reference
2. Include both Pipeline plan and profile views, and include both on the same sheet. Provide a detail sheet copying all valve cards (data provided by Engineer) listed those included and not included on the plan/profile sheets
3. Include drawing details of all interconnections
4. Provide the Manufacturer data for the pipe, fittings and appurtenances on the drawings
5. Show and identify all restraint locations
6. Include valves, bends, tees, and top of main elevation every 300 foot maximum with coordinates in the specified format.

I. Connection (Tap and Service) Drawing Information - Service drawings are required where services currently do not exist. This drawing can be incorporated into the Pipeline Drawing noted above. Service drawings shall be on the 11" x 17" template. The drawing shall contain the general information above and the following additional information:

    1. Title Block information completed
    2. Every service connection, service valve or curb stop, if installed, shall be located dimensionally with separate measurements for both the corporation and curb/meter box
    3. Valves shall be located with coordinates in the format specified
    4. Identify the main pipeline size, type and location from nearest face of curb or edge of pavement
    5. Tap number and house address shall be clearly shown at each location
    6. Show the size, length and service material
    7. Match lines and/or drawing key if more than one sheet

J. Field Sketches - Some items installed required separate detailed field sketches. This includes the following

    1. Valves (including Valves for Blow-offs) - Valve location measurements and information shall be shown on an 8½" x 11" sketch. Separate sketches <u>are</u> required for each valve, regardless of their proximity to each other. The sketch should be an enlarged and more detailed version of what is depicted on the Pipeline drawing. Any 'Blow-offs' installed with the work shall be shown in detail on a Valve sketch with the same level of information as a valve. At a minimum, all Valve sketches shall contain the following:

        a. Manufacturer, type, open direction and number of turns (confirm open direction upon delivery)

b. Main Pipeline type and size
c. Valves and Blow-off's shall be located with NJSPCS NAD 83 coordinates
d. Valve identifying number (data provided by Engineer)
e. Identify other valves, hydrants, fittings and blow-offs within the immediate vicinity
f. Identify permanent existing structures
g. At least (3) tie down measurements to valve from permanent existing structures including catch basins, manholes, buildings, curbs, etc. (no utility poles)

2. Hydrant - Submit hydrant location measurements and information on an 8½" x 11" sketch. Each 'hydrant' shall have a separate sketch. The sketch should be an enlarged and more detailed version of what is depicted on the Pipeline drawing. At a minimum, all Hydrant sketches shall contain the following:

    a. Manufacturer and hydrant number (data provided by Engineer)
    b. Bill of Material
    c. Hydrant valves shall be located with NJSPCS NAD 83 coordinates
    d. Record flow test results on sketch. If no test was required record static pressure (data provided by Engineer)
    e. Main Pipeline and lateral type and size
    f. Identify other valves, hydrants, fittings and blow-offs within the vicinity
    g. Identify permanent existing structures
    h. If an existing hydrant was relocated, reference the old hydrant number and it's BU (data provided by Engineer)

3. Tap (Service Connections Installed) -Tap location measurements and information shall be shown on an 8½" x 11" sketch. Each 'service' shall have a separate Tap sketch. The sketch should be an enlarged and more detailed version of what is depicted on the Pipeline drawing / Service drawing. At a minimum, all Tap sketches shall contain the following:

    a. Locate dimensionally the identified Service/Tap
    b. Sketch shall be oriented with the building receiving the service at the top of the sketch.
    c. Locate dimensionally the tapped water main from nearest face of curb or EOP
    d. Locate dimensionally the curb/meter box from nearest curb or EOP
    e. Tap identifying number (data provided by Engineer)
    f. House address number and Lot & Block number when applicable (data provided by Engineer)
    g. Length of 'Service'
    h. Valve ID Number (data provided by Engineer)
    i. Valves shall be located with NJSPCS NAD 83 coordinates
    j. Service to Service dimensions if less than 100 feet
    k. Identify anything that is underground within (6) feet of the service tap (i.e. blow-offs, chlorine tap, electric, gas, etc.)
    l. Separate measurements for both the corporation and curb/meter box

m. At least (3) tie down measurements to curb/meter box from permanent existing structures including catch basins, manholes, buildings, curbs, etc. (no utility poles)
n. When a service is renewed, the sketch should be labeled "Renew and Increase" and the customer's size and type of material should be recorded
o. Bill of Material used
p. Depth of service at curb

PART 2: PRODUCTS

1.01 TESTING DATA CERTIFICATES

Product testing shall comply with all respective AWWA standards. The certificates of compliance shall be electronically scanned and submitted by E-mail to the Engineer or by submitting the hard copy originals to the Engineer.

PART 3: EXECUTION

Not Used.

END OF SECTION

SECTION 01600

PRODUCTS

PART 1: GENERAL

1.01 PROTECTION OF MATERIAL AND EQUIPMENT

A. Provide for the safe storage of all material furnished or purchased until it has been incorporated in the completed project and accepted by the Engineer. Bear the risk of loss and/or damage to the materials and Work until the Work is finally accepted by the Engineer.

B. All electrical and mechanical equipment shall be stored in a warm, dry shelter with proper ventilation. Under no circumstances shall motors, electrical control equipment or any other electrical or mechanical equipment be stored under polyethylene plastic covers or tarpaulins. When space is available inside existing structures, and the Owner approves, the Contractor will be allowed to store equipment inside them. Should such space not be available, construct a shelter with a source of heat and proper ventilation as approved by the Engineer for the storage of equipment.

C. The interior of all pipe, fittings, and accessories shall be kept free from dirt, foreign matter and standing water at all times.

D. After valves and hydrants have been inspected, properly store them prior to use. In order to prevent entry of foreign material that could cause damage to the seating surfaces, the valves and hydrants shall be stored in a fully closed position unless recommended otherwise by the manufacturer. Resilient seated valves shall be stored in accordance with the manufacturer's recommendations. This may include storage with protective covers for rubber seats and in marginally open condition. Valves and hydrants shall be stored indoors unless otherwise approved by the Engineer.

E. If valves must be stored outdoors, protect the operating mechanism, such as gears, motor, actuators and cylinders, from weather elements. Valve ports and flanges must be protected from the weather and foreign materials. If valves are subject to extreme (freezing or excessively hot) temperatures, all water must be removed from the valve interior and the valve closed tightly before storage, unless specifically recommended otherwise by the manufacturer. Valves shall be stored on pallets with the discs in a vertical position to prevent rainwater from accumulating on top of the disc, seeping into the valve body cavity and freezing and cracking the casting.

1.02 SERVICING EQUIPMENT

A. Check all equipment upon acceptance to determine if oil reservoirs are full and areas to be greased are properly packed with grease. Provide the proper grease or oil for use in lubricating the required areas in the equipment. Any service to equipment while in storage, or installed pending acceptance, is the responsibility

of the Contractor and shall be performed per manufacturer's requirements, industry standards or as stated specifically in the technical specifications.

1.03 RESPONSIBILITY FOR MATERIAL AND EQUIPMENT

A. Under no circumstances shall pipe, valves, fittings, or appurtenances be dropped or dumped from any trucks or equipment. When received from the Carrier and at time of unloading, inspect all pipe and accessories for loss or damage. No shipment of material shall be accepted by the Contractor unless loss or damage has been described on the Bill of Lading by the Carrier's agent. Any discrepancies between the Bill of Lading and the physical material shall be noted on the Bill of Lading. All demurrage charges on carloads or truckloads of pipe or other material shall be paid by the Contractor.

B. After acceptance of material and/or equipment by Contractor at point of delivery, assume full responsibility for safe and secure storage, handling, servicing and installation of such material and/or equipment in accordance with manufacturer's recommendations, industry standards or specific requirements of the Contract Documents. Once in his possession, assume full responsibility for, and protect all material from theft and damage. Any lost or stolen materials shall be replaced at the Contractor's expense.

C. Re-inspect all material for defects, correct size, and quantity in the field prior to installation. Immediately report all material found to be defective, improperly sized, or deficient in quantity to the Owner.

D. The Contractor is responsible for all material furnished by the Contractor and Contractor suppliers. All such material which is defective in manufacture or has been damaged in transit or has been damaged after delivery shall be replaced by the Contractor at his expense.

E. Certain material and equipment will be furnished by the Owner as noted in the Contract Documents. The Contractor's responsibility for material and/or equipment furnished by the Owner shall begin upon the Contractor's acceptance of such material and/or equipment at the point of delivery. All material and equipment shall be examined and items found to be defective in manufacture and/or otherwise damaged shall be rejected by the Contractor at the time and place of delivery. The Owner will thereupon repair or replace the damaged items. Any material and/or equipment found to be defective prior to acceptance by the Engineer shall be repaired or replaced by Contractor at no additional cost to Owner unless Contractor submits proof that such defect was latent and could not have been detected by Contractor when performing their duties and responsibilities under these Contract Documents.

F. Contractor's and Owner's responsibilities for providing guarantees or warranty and manufacturer's representatives for service, inspection, certification of installation, installation, field training, start-up, etc. for material and/or equipment furnished by Owner shall be as follows unless otherwise specified: Owner will provide the warranty and Contractor is responsible for providing manufacturer's representatives for all necessary field service, start-up service, installation

certifications, installation, field training of Owner's personnel, etc. for Owner furnished material and/or equipment as required for acceptance of such material and/or equipment in the completed project.

PART 2: PRODUCTS

2.01 GENERAL

Unless otherwise specifically provided for in these Specifications, all equipment, materials and articles incorporated in the work shall be new, in current production and the best grade obtainable consistent with general construction usage.

2.02 COORDINATION OF DIMENSIONS

Verify and make necessary corrections to construction dimensions so that all specified and/or alternative equipment, which is approved by the Engineer, can be installed and will function within the intent of the Contract Drawings and Specifications. Promptly notify the Engineer of all necessary corrections required.

2.03 SAFETY AND HEALTH REQUIREMENTS

A. All materials, equipment, fixtures and devices furnished shall comply with applicable Laws and Regulations.

B. All material and equipment furnished and installed under this Contract shall be equipped with suitable and approved safety guards and devices required for the safety of the public and operating personnel. Such guards and safety devices shall be in accord with the latest requirements of safety codes approved by the American National Standards Institute as well as the safety requirements of applicable Laws and Regulations. Where said safety codes of the ANSI are incompatible with applicable Laws and Regulations, said Laws and Regulations shall prevail.

PART 3: EXECUTION

3.01 INSTALLATION

A. Material and equipment shall be installed in accordance with the appropriate Sections of these Specifications.

3.02 SERVICES OF MANUFACTURER'S REPRESENTATIVE

A. Arrange for a qualified service representative from each company, manufacturing or supplying certain equipment as required by the individual Specification Sections to perform the duties herein described.

B. After installation of the applicable equipment has been completed and the equipment is presumably ready for operation, but before it is operated by others, the representative shall inspect, operate, test, and adjust the equipment. The

inspection shall include, but shall not be limited to, the following points as applicable:

1. soundness (without cracked or otherwise damaged parts)
2. completeness in all details, as specified
3. correctness of setting, alignment, and relative arrangement of various parts
4. adequacy and correctness of packing, sealing and lubricants

C. The operation, testing, and adjustment shall be as required to prove that the equipment is left in proper condition for satisfactory operation under the conditions specified.

END OF SECTION

SECTION 01700

PROJECT CLOSEOUT

PART 1: GENERAL

1.01 TESTING OF FACILITIES

All work shall be tested under operating conditions and pressures and any leaks or malfunctions shall be repaired to the satisfaction of the Engineer at no additional expense to the Owner.

1.02 CLOSEOUT PROCEDURES

Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Engineer's inspection. Provide submittals to Engineer that are required by governing or other authorities. Submit Application for final payment identifying total adjusted Contract sum, previous payments, and sum remaining due.

1.03 PROGRESS CLEANING AND FINAL CLEANING

A. Periodically, or as directed during the progress of the Work, remove and properly dispose of the resultant dirt and debris and keep the premises reasonably clear. Upon completion of the Work, remove all temporary construction facilities and unused materials provided for the Work and put the premises in a neat and clean condition and do all cleaning required by the Specifications. Trash and combustible materials shall not be allowed to accumulate in construction locations.

B. Execute final cleaning prior to final inspection. Clean interior and exterior surfaces exposed to view; remove temporary labels, stains and foreign substances. Clean equipment and fixtures to a sanitary condition. Clean debris. Clean site; sweep paved areas, rake clean landscape surfaces. Remove waste and surplus materials, rubbish, and construction facilities from the site.

1.04 PROJECT RECORD DOCUMENTS

A. Maintain on site, one set of the following record documents; record actual revisions to the Work:

1. contract drawings
2. specifications
3. addenda
4. change orders and other modifications to the Contract
5. reviewed shop drawings, product data, and samples

Store record documents separate from documents used for construction. Record information concurrent with construction progress.

B. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:

1. manufacturer's name and product model and number
2. product substitutions or alternates utilized
3. changes made by addenda and modifications

C. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:

1. Measured well depths, screen, casing, and pump types and dimensions in relation to finished ground elevation.
2. Measured site location of well, vault and any other structures.
3. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
4. Field changes of dimension and detail.
5. Details not on original Contract Drawings.

Submit documents to Engineer with final Application for Payment.

1.05 SPARE PARTS AND MAINTENANCE MATERIALS

A. Contractor Purchased Material

1. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification sections.

2. Deliver to project site and place in location as directed; obtain receipt prior to final payment.

~~B. Owner Purchased Material~~

~~1. Return excess owner material to a location(s) specified by the Engineer within three (3) days of job completion.~~

1.06 GUARANTEES AND WARRANTIES

A. The Contractor expressly warrants that all workmanship and materials performed or furnished under this Contract will conform to the Specifications, Drawings, samples and other applicable descriptions furnished or adopted by the Contractor and with all applicable laws, provisions and requirements of the Contract Documents. Remedy any defects due to faulty materials or workmanship which are discovered within a period of one (1) year from the date of acceptance of the work in this project and pay for any damage resulting from faulty materials or workmanship. The Owner shall give notice of observed defects with reasonable promptness. The Contractor warranty hereunder is in addition to, and not in limitation of, any obligations found elsewhere in the Contract Documents, any special guarantees provided by the Contractor or Contractor suppliers, and any obligations imposed by law.

B. In addition to the above requirements, assign material and equipment guarantees and warranties from all manufacturers and suppliers to the Owner and deliver copies of such guarantees and warranties and the necessary assignments to the Owner in order to assure the Owner of the full benefit of such guarantees and warranties.

1.07 RESTORATION

A. Restore and/or replace paving, curbing, sidewalks, gutters, shrubbery, fences, sod or other disturbed surfaces and structures to a condition equal to that before the Work began and to the satisfaction of the Engineer and furnish all labor and materials incidental thereto. In restoring improved surfaces, new pavement is required.

B. No permanent bituminous top paving shall be placed within twenty (20) days, or other specified time frame required by law, after the backfilling shall have been completed, except by order of the Engineer. Temporary paving will be installed prior to the placement of permanent surfaces when required by the Engineer or by any federal, state or local governing body having jurisdiction over the site where the work is being performed. In any event, all permanent bituminous top paving shall be placed within forty five (45) days or other specified time required by law, after the backfill has been completed unless otherwise ordered by the Engineer.

1.08 MAINTENANCE OF SURFACES

Following the certification of completion by the Engineer, maintain the surfaces of paved and unpaved trenches and adjacent curbs and gutters, sidewalks, fencing, sod and other disturbed surfaces for a period of one (1) year thereafter or as required by state, county or local authorities unless otherwise stipulated by the Engineer. Supply all material and labor required for the maintenance of the trench surfaces and structures and perform the work in a manner satisfactory to the Engineer.

PART 2: PRODUCTS

Not Used.

PART 3: EXECUTION

Not Used.

END OF SECTION

FOCUS ON SAFETY

AMERICAN WATER

Safety Bulletin – October 2012

Pipe Cutting Requirements - Update

In June American Water issued interim requirements for the use of cut off saws. These interim requirements included prohibiting the use of diamond tipped blades in cut off saws. Since that time a work group was established to evaluate the use of pipe cutting tools and techniques.

This work group consisted of operations personnel and operational risk management staff. This workgroup represented a highly collaborative effort involving the review and research of pipe cutting tools. Additionally, several demonstrations of alternative pipe cutting tools were held.

As a result of their efforts, the work group established new pipe cutting requirements for American Water that were approved by state vice-presidents of operations. This effort was a collaborative process that evaluated safety, first and foremost, as well as operational considerations. Below is an update and summary of the new requirements designed to lower exposures to the potential hazards associated with the use of cut off saws.

- As communicated on June 1, 2012, the use of diamond tipped blades is prohibited in any cut-off saw application. Only abrasive blades will be used with cut-off saws.

- The use of cut-off and ring saws is banned in excavations and trenches. This is effective as soon as practical (upon attainment of approved, alternative cutting tools), and no later than January 1, 2013.

- The use of cut-off saws is only authorized for cutting pipe outside of a trench or excavation and must be limited to applications where alternative cutting methods are unsafe or not feasible or practical.

- Ring saws are allowed for cutting pipe outside an excavation only.

- To protect against kick back, cut off or ring saw blades cannot be re-introduced into a previous cut. For pipe cutting, the maximum pipe diameter that can be cut with a continuous or single pass cut will be dependent on work set up and blade size.

- Cut-off saws may be used for pavement cutting if equipped with approved abrasive blades and the saw is properly mounted in a cart approved by the manufacturer, and designed specifically for the saw model in use. If operational conditions are such that a cart cannot be used, the cart requirement is waived for that portion of the work only.

- Alternative cutting tools approved for use in excavations and trenches include:

  - Chain saws specifically approved and equipped with appropriate cutting chain for the pipe material,
  - Diamond Wire Guillotine saws,
  - Manual, pneumatic, and hydraulic powered wheel and snap cutters
  - Reciprocating saws, and
  - Hand saws

- Appropriate Personal Protective Equipment (PPE), must be worn for protection from the hazards associated with the cutting tool and process. PPE includes, as a minimum with all pipe cutting tools: safety glasses or goggles, gloves, safety shoes, hardhat, and Class II or III reflective garment (when in the road right-of-way). Additional PPE including face shield and hearing protection is required when using reciprocating, cut off, chain, ring or guillotine saws.

- All pipe inside an excavation is required to be supported before making any cuts to prevent pinching of the cutting tool

- Employees using gas, hydraulic and/or pneumatic powered saws to cut pipe will receive training/re-training by December 31 of this year. Delivery of new saws may impact this schedule. Only trained employees will be authorized to use this equipment.

- A job safety analysis must be prepared and reviewed with employees as part of their training prior to using cut-off or ring saws for any approved purpose. Should specific hazards or safety concerns exist at the jobsite, these will also be reviewed and mitigated to the extent possible prior to commencement of work.

- In addition to the above requirements, all manufacturer requirements and safety warnings must be followed.

- American Water Procurement has obtained substantially discounted pricing from Stanley Tools (hydraulic powered chain saws), and ICS (hydraulic and gasoline powered chain saws). These chain saws must be purchased through Grainger to receive the American Water discount.

- A health and safety practice will be issued outlining these requirements and other applicable safety considerations.

- As we transition to these new requirements, the June 1, 2012 interim requirements remain in effect.

APPLICATION TO CONTRACTORS AND SUBCONTRACTORS

Contractors and subcontractors performing work for American Water will conform to the following requirements. To the extent necessary, agreements and related statements of work will be amended to enforce the requirements.

- The use of cut-off and ring saws is prohibited in any trench or excavation.
- The use of diamond tipped blades is prohibited in any cut-off saw application. Only abrasive blades will be used with cut-off saws.
- The use of cut-off saws is only authorized for cutting pipe outside of a trench or excavation and should be limited to applications where alternative cutting methods are unsafe or not feasible or practical. All manufacturers' recommendations, warnings and safeguards must be followed.
- Ring saws are allowed for cutting pipe outside an excavation only on pipe diameters that allow for a single pass cut. All manufacturers' recommendations, warnings and safeguards must be followed.
- Cut-off and Ring saws may be used for pavement cutting if equipped with approved abrasive blades and the saw is properly mounted in a cart approved by the manufacturer and designed specifically for the saw model in use. If operational conditions are such that a cart cannot be used, the cart requirement is waived for that portion of the work only. All manufacturers' recommendations, warnings and safeguards must be followed.
- Contractors will be notified of these requirements by December 31, 2012 and expected to conform to these requirements no later than March 31, 2013.
- It remains the contractor/subcontractor's responsibility to train their respective employees on the proper use and application of all equipment, to follow manufacturer recommendations and to comply with all applicable Federal, State and local health and safety regulations.

In advance of your cooperation, thank you for ensuring we work safely and return home to our families each night without incident or injury.

SECTION 02020

DEWATERING

PART 1: GENERAL

1.01 GENERAL

A. Should water be encountered, furnish and operate pumping equipment of sufficient capacity to dewater the trench. Dewater the trench so that the laying and joining of the pipe is made in a dry environment so as to prevent water from entering the pipe during construction.

B. No additional sum will be allowed for any reasonably anticipated dewatering operation, overtime, equipment rental or any other expense incurred due to the occurrence of ground water, surface water or water from possible leakage of existing buildings, structures and piping in the vicinity of the Contractor's operations. If Contractor believes unreasonable, unanticipated wet conditions exist, immediately contact Engineer to decide appropriate measures and to determine whether Contractor is entitled to additional compensation.

C. Convey all trench water to a natural drainage channel or storm sewer without causing any property damage. Discharge shall be in strict accordance with state and/or local requirements.

D. Dispose of silt and debris which accumulates during construction in strict accordance with state and/or local requirements.

1.02 PERMITS

The Contractor shall obtain and pay for any permits required for dewatering and disposal.

PART 2: PRODUCTS

Not Used

PART 3: EXECUTION

Not Used

END OF SECTION

SECTION 02025

EXISTING UTILITIES AND STRUCTURES

PART 1: GENERAL

1.01 SCOPE OF WORK

Certain information regarding the reputed presence, size, character, and location of existing Underground Facilities such as pipes, drains, sewers, electrical lines, telephone lines, cable TV lines, gas lines, and water lines has been shown on the Contract Drawings and/or provided in the contract documents. This information with respect to Underground Facilities is provided by the Owner in accordance with conditions described in the General Conditions and for information purposes only. Contractor is responsible to determine actual location of all utilities in proximity to the work for the purposes of the preparation of their bid and during construction.

1.02 NOTIFICATION OF UTILITIES

Notify the applicable State Agency with jurisdiction over underground facilities and/or all utility companies that construction work under this Contract will pass through containing their underground facilities. Notify these parties in advance to support the construction work (**minimum 72 hours**). All excavation in the vicinity of existing underground utilities shall be performed in accordance with applicable regulations.

PART 2: PRODUCTS

2.01 MATERIALS

Furnish all materials for temporary support, adequate protection, and maintenance of all underground and surface utility structures, supports, drains, sewer and other obstructions encountered in the progress of the work.

PART 3: EXECUTION

3.01 OBSTRUCTIONS BY OTHER UTILITY STRUCTURES

Support, relocate, remove, or reconstruct existing utility structures such as conduits, ducts, pipes, branch connections to main sewers, or drains. The obstruction shall be permanently supported, relocated, removed or reconstructed where they obstruct the grade or alignment of the pipe. Contractor must do so in cooperation with the owners of such utility structures. Before proceeding, the Contractor must reach an agreement with the Engineer on the method to work around the obstruction.

No deviation shall be made from the required line or depth without the consent of the Engineer.

3.02 REPAIRS

A. Repair or replace any damage to existing structures, work, materials, or equipment incurred by Contractor's operations.

B. Repair all damage to streets, roads, curbs sidewalks, highways, shoulders, ditches, embankments, culverts, bridges, trees, shrubs or other public or private property caused by transporting equipment, materials or personnel to or from the work site. Make satisfactory and acceptable arrangements with the persons or agencies having jurisdiction over the damaged property concerning repair or replacement

C. Brace and support existing pipes or conduits crossing the trench, or otherwise exposed to prevent trench settlement from disrupting the line or grade of the pipe or conduit. Before proceeding, the Contractor must reach an agreement with the Engineer on the method of bracing and support. Repair or replace all utility services broken or damaged at once to avoid inconvenience to customers. Storm sewers shall not be interrupted overnight. Use temporary arrangements, as approved by the Engineer, until any damaged items can be permanently repaired. Maintain all items damaged or destroyed by construction and subsequently repaired.

D. Standard Detail 0201-0601-SD44 (attached) provides requirements for repair or replacement of sanitary or storm drains removed or damaged during installation of the water main.

3.03 RELOCATION

Relocate existing utilities or structures, where necessary, and restore it to a condition equal to that of the original facility. Obtain approval of the owner of the utility or structure prior to relocating and/or restoring the facility.

3.04 SEPARATION OF WATER MAINS AND SANITARY SEWERS

A. General

Consider the following factors when determining adequate separation:

(1) Materials and type of joints and restraints for water and sanitary sewer pipes,

(2) Soil conditions & backfill materials,

(3) Service and branch connections into the water main and sanitary sewer line,

(4) Compensating variations in horizontal and vertical separations,

(5) Space for repair and alterations of water and sanitary sewer pipes,

(6) Off-setting of pipes around manholes.

B. Parallel Installation

Lay water mains at least 10 feet horizontally from any existing or proposed sanitary sewer. Measure the distance from edge to edge. In cases where it is not practical to maintain a 10-foot separation, the applicable State Agency may allow deviation on a case-by-case basis, if supported by data from the Engineer. Such deviation may allow installation of the water main closer to a sanitary sewer, provided that the water main is laid in a separate trench or on an undisturbed earth shelf located on one side of the sanitary sewer at such an elevation that the bottom of the water main is at least 18 inches above the top of the sanitary sewer.

C. Crossings

Whenever water mains must cross sanitary sewer laterals or sanitary sewers, lay the water main at such an elevation that the bottom of the water main is 18 inches above the top of the sanitary sewer pipe. Maintain this vertical separation for the portion of the water main located within 10 feet horizontally of any sanitary sewer it crosses. The 10 feet is measured as a perpendicular distance from sanitary sewer line to the water line.

D. Exception

Notify the Engineer when it is impossible to obtain the proper horizontal and vertical separation as stipulated above. If directed by the Engineer, both the water main and sanitary sewer line shall be constructed of, mechanical joint ductile iron or welded joint protected steel pipe. Other types of restrained joints of equal or greater integrity may be used at the discretion of the Engineer after consultation with the applicable State Agency. Thermoplastic sanitary sewer pipe may be used provided mechanical or solvent weld pipe joints are used and accepted by the Engineer. Pressure test these joints before backfilling to assure that they are water tight. Where water mains must cross under a sanitary sewer, additional protection shall be provided by:

(1) A vertical separation of at least 18 inches between the bottom of the sanitary sewer and the top of the water line,

(2) Adequate structural support for the sanitary sewer to prevent excessive deflection of the joints and the settling on and breaking of the water line,

(3) Centering the section of water pipe at the point of the crossing so that the joints shall be equidistant and as far as possible from the sanitary sewer line.

Consult the applicable State Agency, through the Engineer, to discuss the use of double casing or concrete encasement of sanitary sewer and/or water lines as possible alternatives when the above conditions cannot be met.

3.05 SEPARATION OF WATER MAINS AND STORM SEWERS

Where water mains and storm sewers would run parallel, lay water mains at least 10 feet horizontally from the existing or proposed storm sewer (measured from edge to edge). Where storm sewers and water mains would cross, place water mains at least 12 inches from the storm sewer (measured from edge to edge). In cases were it is not practical to maintain the specified separation, the Engineer may allow deviation on a case by case basis or as clearly called out in the plans. If the Engineer deems that such deviation will be allowed, install the water main as directed by the Engineer in such a way that does not compromise more stringent and desired separation from sanitary sewers per subsection 3.04.

END OF SECTION

SECTION 02105

CLEARING AND GRUBBING

PART 1: GENERAL

1.01 PROTECTION

Protect existing trees, shrubs and bushes located outside the clearing limits from damage for the life of this Contract.

1.02 REQUIREMENTS OF REGULATORY AGENCIES

Comply with State and local code requirements when disposing of trees, shrubs and all other materials removed under this Specification Section.

1.03 DISPOSAL FEES

Bear all expenses to obtain a suitable disposal area, haul to the disposal area, pay disposal fees, and dump at the disposal area.

PART 2: PRODUCTS

2.01 MATERIALS AND EQUIPMENT

Provide all materials and equipment required to complete all clearing and grubbing in accordance with this Specification Section.

PART 3: EXECUTION

3.01 CLEARING AND GRUBBING

Clear and grub the minimum area required to provide space for construction operations.

A. Clear and grub the work site within easement and/or clearing limit lines shown on the Drawings or as shown elsewhere in the Contract Documents. Remove those items that are designated for removal or obstruct construction. This includes, but is not limited to; trees, downed timber, shrubs, bushes, vines, roots, stumps, undergrowth, rubbish, paving materials, debris, and all other objectionable materials. Site objects outside clearing limits shall not be removed. Only those portions of the construction area which are absolutely necessary and essential for construction shall be cleared. Minimize the length of time of ground disturbance as much as practical, especially within environmentally sensitive areas. Ground shall not be cleared and grubbed until immediately prior to construction.

B. Notify the Engineer of locations where additional trees and shrubs will interfere with installation of facilities. Do not remove additional trees or shrubs without written permission of Engineer. Conduct operations to

minimize disturbance of trees and shrubs. Trim trees and roots in accordance with the best horticultural practices, including sealing cuts to preserve the tree.

3.02 CLEARING (IMPROVED AREA)

A. Remove site improvement objects such as signs, lawn ornaments, etc. which interfere with construction. Removed site improvement objects shall be stored in a manner protecting objects for reinstallation after construction is complete. Relocate the mailbox as necessary. Provide temporary traffic control signs when permanent signs are removed for construction. Temporary signs shall be worded to match permanent signs, except as necessary to be compatible with construction operations.

B. Remove pavement, curb and sidewalk in accordance with applicable State Standards for Road and Bridge Construction and as specified in these Contract Documents. Saw cuts may be eliminated where paving abuts curb or roadway expansion joints or construction joints, and pavement can be removed without damaging or disturbing curbs or remaining pavement,. Remove sidewalks in full squares only. Saw cut sidewalks if no true joint exists.

3.03 DISPOSAL

A. Burning of logs, stumps, roots, cuttings and other material on the site will not be permitted.

B. All materials obtained as a result of the clearing and grubbing operations shall be disposed of in accordance with the requirements of the applicable governing agencies.

C. Chipping of brush materials will be permitted. However, Contractor shall bear all costs to dispose of the resultant chips at an approved location.

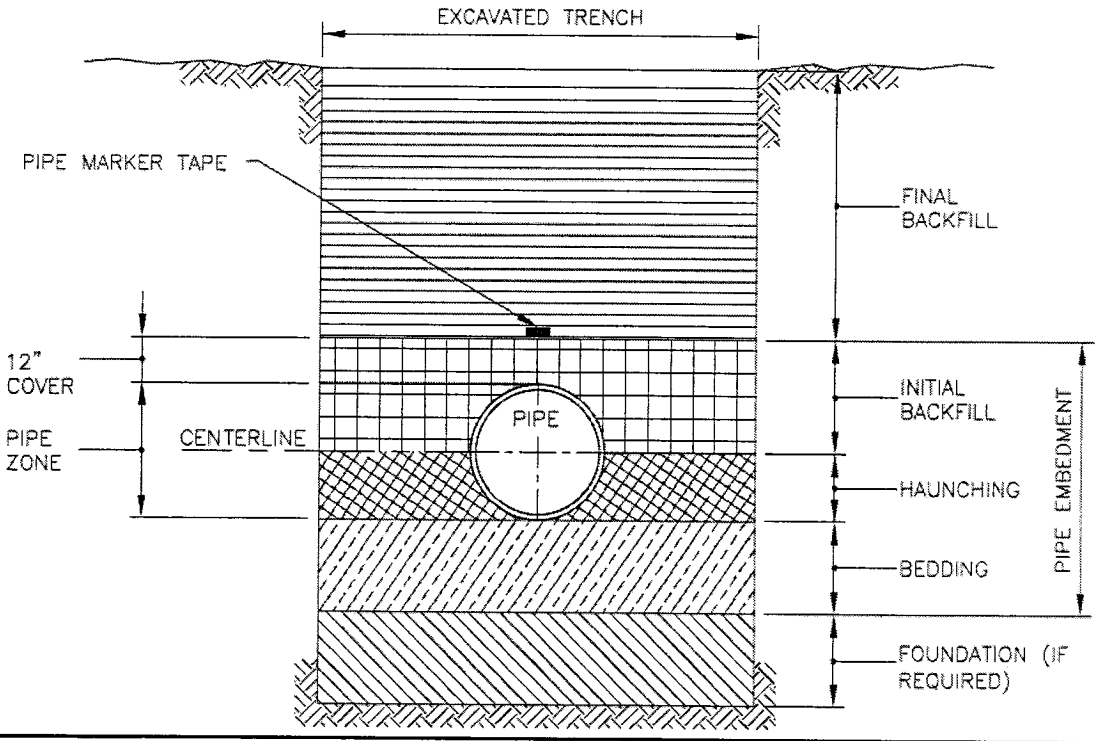
END OF SECTION

SECTION 02210

TRENCHING, BACKFILLING AND COMPACTING

PART 1: GENERAL

1.01 DEFINITIONS



TRENCH TERMINOLOGY

FOUNDATION: A FOUNDATION IS NECESSARY ONLY WHEN NATIVE SOILS ARE UNSTABLE. FOR SUCH CONDITIONS, THE TRENCH IS OVER-EXCAVATED AND A LAYER OF SUPPORTIVE MATERIAL IS PLACED AND COMPACTED TO PROVIDE A FIRM FOUNDATION FOR THE SUBSEQUENT PIPE EMBEDMENT MATERIALS.

EMBEDMENT: THIS ZONE IS THE MOST IMPORTANT IN TERMS OF PIPE PERFORMANCE. IT IS DIVIDED INTO THE FOLLOWING SUB ZONES:

- BEDDING: TYPICALLY SIX INCHES OF SUPPORTIVE, COMPACTED MATERIAL. THIS ZONE PROVIDES EVEN SUPPORT FOR THE PIPE AND BRINGS IT TO GRADE.
- HAUNCHING: EXTENDS FROM THE BOTTOM OF THE PIPE TO THE CENTERLINE OF THE PIPE. IT PROVIDES THE MOST RESISTANCE TO PIPE DEFLECTION. SPECIFYING PROPER MATERIALS AND COMPACTION ARE MOST IMPORTANT FOR THIS ZONE.
- INITIAL BACKFILL: EXTENDS FROM THE SPRINGLINE TO A POINT ABOVE THE TOP OF THE PIPE. THIS ZONE PROVIDES SOME PIPE SUPPORT AND HELPS TO PREVENT DAMAGE TO THE PIPE DURING PLACEMENT OF THE FINAL BACKFILL. THE COVER EXTENDS FROM THE TOP OF THE PIPE TO THE TOP OF THE INITIAL BACKFILL. THE DEPTH OF COVER SHOULD BE AS MUCH AS NECESSARY TO PROTECT THE PIPE DURING PLACEMENT OF THE FINAL BACKFILL. TWELVE INCHES IS A COMMON DEPTH OF COVER.

FINAL BACKFILL: THIS ZONE EXTENDS FROM THE TOP OF THE INITIAL BACKFILL TO THE TOP OF THE TRENCH. THIS ZONE HAS LITTLE INFLUENCE ON PIPE PERFORMANCE, BUT CAN BE IMPORTANT TO THE INTEGRITY OF ROADS AND STRUCTURES.

1.02 SUBMITTALS

A. All backfill materials (to be used for backfill, haunching, and bedding depending on local requirements), including common fill and selected fill [¾" clean granular fill, ¾" modified stone, ¾" minus granular fill, sand, ⅜" crushed wash rock, ½" wet smooth stone, or ½" pug mix] shall be approved by the Engineer prior to placing the materials in the pipe trench. Test all backfill materials, whether obtained from the trench excavation or from an off-site source, as directed by the Engineer.

B. All backfill materials must be approved by the Engineer before they are placed in the pipe trench. Submit samples of the materials to an approved testing agency for analysis as required by the Engineer. Submit the testing agency's test results and report to the Engineer. The report must state that the materials meet the requirements of these Specifications and the Specifications of Federal, State and local authorities (where applicable). Provide flowable fill in areas where it is required by the local street regulator, where the trench is subject to mine drainage and other areas specified in the drawings.

1.03 PROFILES AND TOPOGRAPHY

A. Contours, topography and profiles of the ground shown on the Drawings are believed to be reasonable approximations and are not guaranteed.

B. The Contractor accepts the construction site with the conditions that existed at the time of bidding.

PART 2: PRODUCTS

2.01 COMMON FILL

A. Common Fill shall be earth materials entirely free of: vegetation; trash; lumber; and frozen, soft or organic materials. No stones or rocks larger than the sizes listed below will be permitted in the Common Fill:

Common Fill-Type A: No stones or rocks larger than 1-inch
Common Fill-Type B: No stones or rocks larger than 4-inches (measured longest dimension). At the discretion of the Engineer and depending upon the quality of the material, stones and rocks up to a maximum of 6 inches may be allowed on the area one foot above the pipe.

B. Common fill material may be obtained from the trench excavation provided it has been tested in accordance with the requirements of Specification Section 2210.1.01 above and approved by the Engineer. Furnish the necessary approved common fill materials from an off-site source whenever approved material obtained from the trench excavation is insufficient to complete the backfill.

C. The use of common fill is permitted in some circumstances as initial backfill for HDPE pipe; however the size of stone and rock for backfill is limited in

accordance with the pipe diameter. The maximum stone or rock size is limited to 1/2" for pipes up to 4" diameter, 3/4" for pipes 6" to 8" diameter, 1" for pipes 10" to 16" diameter and 1-1/2" for larger pipes.

2.02 HAUNCHING FILL

A. Materials used for haunching around the pipe shall be coarse to fine, sandy natural soil material with maximum stone size of 1-inch or local approved selected backfill materials as noted on detail drawings and defined below in Specification Section 2210.2.03. The material shall conform to ASTM D 2487 "Standard Method for Classification of Soils for Engineering Purposes" using the "Unified Soil Classification System", except where a higher standard is required elsewhere in the Contract Documents or by rules or regulations of Federal, State or local governmental bodies having jurisdiction over the site of the Work.

B. The haunching material shall meet the Class II soil type designation. Class II soil types include GW, GP, SW and SP that are described as non-cohesive, well graded and containing some fines. Voids, finer grained soils or movement can allow undesirable migration of haunching material or migration of the trench sidewall material into the haunching material. In such instances place filter fabric, as directed by the Engineer, in the trench bottom and sides before placing the haunching material.

C. Haunching material may be obtained from the trench excavation provided it has been approved by the Engineer who may, at his discretion, require testing in accordance with the requirements of Specification Section 2210.1.01 above. Furnish the necessary approved haunching materials from an off-site source whenever approved material obtained from the trench excavation is insufficient to complete the haunching.

2.03 BEDDING FILL Bedding fill materials vary from state to state, see special conditions and detail drawings for the appropriate materials for local use.

A. ¾ inch clean granular fill material shall meet the sieve analysis requirements of AASHTO as follows 1" sieve passing 100%, ½" sieve passing 0-5% and sieve size No 4 passing 0-1%. This material may be wrapped in filter fabric (trench bottom, side, and over top of clean granular fill), as directed by the Engineer, to prevent the migration of finer grained soils into this material or the migration of this material into the trench bottom or sidewall.

B. ¾ inch Minus or Modified granular fill material contains additional fine material and may be used as noted in specific pipe specifications. Material shall meet the sieve analysis requirements of AASHTO as follows 1" sieve passing 100%, ¾" sieve passing 80-90%, No 4 sieve passing 25-50%, No 10 sieve passing 0-20% No 200 passing sieve 0-5%.

C. Sand – (California American) – Material shall be free of debris, organic matter, clay or any deleterious material. 100% of material shall pass a number 4 sieve and no more than 12% shall pass sieve number 200.

D. $^{3}/_{8}$" crushed wash rock (Arizona American) - Material shall be crushed rock as per Arizona MAG Section 701 except as modified below. The stones' weight loss shall not exceed 40 percent of 500 revolutions where tested in accordance with ASTM C-131. The stone shall not show a loss in excess of 12 percent when tested in accordance with AASHTO T-104 (Sodium Sulfate Soundness). A minimum of 75% of the material, by weight, retained on the No. 8 sieve, shall have at least one fractured face produced by the crushing operation. When tested in accordance with ASTM C-136 and C-117, gradation shall comply with the following table:

E. ½" wet smooth stone (Tennessee American)

F. ½" pug mix stone (Tennessee American)

2.04 FILTER FABRIC Filter fabric shall be non-woven, synthetic fiber material with sieve design to prevent the select material in the pipe bedding and haunching from migrating into the surrounding soils. The material shall have a minimum: thickness of 15 mils, tensile strength of 130 lbs., elongation at break of 64%, and trapezoidal tear strength of 70 lbs.

2.05 FLOWABLE FILL

A. Flowable fill is suitable for use as backfilling for utility trenches. The basic requirements for furnishing, mixing, and transporting flowable fill are as follows. Materials shall conform to the following standards: Cement ASTM C 150, Fly Ash ASTM C 618, Class C or Class F. Fine Aggregate shall be natural or manufactured sand, or a combination thereof, free from injurious amounts of salt, alkali, vegetable matter or other objectionable material. It is intended that the fine aggregate be fine enough to stay in suspension in the mortar to the extent required for proper flow. The fine aggregate shall conform to the following gradation:

Sieve Size	**% Passing**
3/4 inch	100
No. 200	0-10

If a flowable mixture cannot be produced, the sand may be rejected.

B. The following are given as typical mix designs for trial mixes. Adjustments of the proportions may be made to achieve proper solid suspension and optimum flowability. Admixtures may be used if desired to improve the characteristics of the mix. The suggested quantities of dry material per cubic yard are as follows:

- **Option 1**
  Cement 50 lbs, Fly Ash 250 lbs. Fine Aggregate 2910 lbs., Water approximately 60 gallons
- **Option 2**
  Cement 100 lbs. Fly Ash 250 lbs, Fine Aggregate 2800 lbs., Water approximately 60 gallons
- **Option 3**

Cement 100 lbs., Fly Ash 300 lbs., Fine aggregate 2600 lbs., Water approximately 70 gallons

C. Consistency may be tested by filling an open-minded three inch diameter cylinder six inches high to the top with flowable fill. The cylinder shall be immediately pulled straight up and the correct consistency of the flowable fill shall produce a minimum eight inch diameter circular-type spread with no segregation.

Materials are to be measured by weight and/or volumetric methods. The flowable fill may be mixed in a central concrete mixer, a ready mix truck, or by other acceptable methods. The flowable fill shall be transported to the point of placement in a revolving drum mixer or in an agitator unit.

D. Ductile Iron Pipe in Soil Soil shall be coarse to fine, sandy natural soil material with maximum stone size of 1-inch and shall meet ASTM D 2487 "Standard Method for Classification of Soils for Engineering Purposes". Scarify 2" deep before placing pipe.

PART 3: EXECUTION

3.01 CONSTRUCTION EQUIPMENT

All backfilling and materials handling equipment shall have rubber tires when mains are located in or adjacent to pavements. Crawler equipment shall be permitted when there is no danger of damaging pavement. It is the Contractor's responsibility, to repair, at their expense, any damages due to the use of any equipment to complete the work.

3.02 NOISE, DUST AND ODOR CONTROL

Conduct all construction activities so as to eliminate all unnecessary noise, dust and odors.

3.03 PROTECTION OF TREES

Take special care to avoid damage to trees and their root system. Open trenching shall not be used for established trees in areas marked on the plans and designated 'Root Protection Zone'. In these areas, methods to be used include tunneling or boring. In other areas where established trees are to remain with roots in the path of the trench line, the Engineer shall direct acceptable means to install pipe through tree roots. In these areas, methods to be used careful cutting (not ripping or tearing) of larger tree roots. In all cases, operate equipment within the limb spread in a manner which will not injure trees, trunks, branches or their roots. Pay particular attention when employing booms, storing materials, and handling excavated materials.

3.04 TRENCH SUPPORT

Support open cut excavation for mains where trenching may cause danger to life, unnecessary damage to street pavement, trees, structures, poles, utilities, or other private or public property. Support the sides of the excavation by adequate and suitable sheeting, shoring, bracing or other approved means in accordance with all applicable Federal, State, County, Municipal and OSHA rules and regulations during the progress

of the work, whenever and wherever it is necessary. Maintain the trench support materials and equipment in place until backfilling operations have progressed to the point where the supports may be withdrawn without endangering life or property per Article 6 on safety issues.

3.05 TRENCH EXCAVATION AND BOTTOM PREPARATION

A. General Excavation

General excavation shall consist of the satisfactory removal and disposal of all material taken from within the limits of the Work contracted, meaning the material lying between the original ground line and the finished ground line as shown on the Drawings regardless of whether the original ground line is exposed to air or is covered by water. Excavation below existing ground line to enable any required construction or removals is included. It is distinctly understood that any reference to earth, rock, silt, debris or other materials on the Drawings or in the Specifications is solely for the Owner's information and shall not be taken as an indication of classified excavation or the quantity of earth, rock, silt, debris or other material encountered.

Excavation to the lines and grades indicated on the Drawings or established in the field by the Engineer. Backfill over-excavated areas with approved fill material. All labor and materials shall be furnished at the Contractor's expense.

Keep all excavations free from water. Maintain groundwater a minimum of 6 inches below excavations. Remove soil which is disturbed by pressure or flow of groundwater and replace with free draining material.

Remove pavement over excavations made in paved roadways by saw cutting, milling, or removal by a trench machine. Cut the full depth of the pavement with straight lines and squared edges.

Dispose of excess excavated materials and excavated materials unsuitable for backfilling off site. Furnish the Engineer with satisfactory evidence that an appropriate disposal site was used.

B. Rock Excavation

If the Contract includes a unit price for rock excavation, it includes the removal, hauling, stockpiling and/or proper disposal the rock per the section 01700 Basis of Payment. Rock is defined as

- boulders or loose rock having a volume of one cubic yard or more;
- material which cannot be loosened or broken down by ripping with a hydraulic ripper or other Engineer approved devices and equipment designed to remove rock; or
- material that requires systematic blasting, backhoe ramming, barring, or wedging for removal.

Notify the Engineer promptly upon encountering rock. The Engineer's determination as to whether the material meets the definition of rock and Engineer's measurement of the volume of rock removal for which the Contractor is entitled to payment will be final and conclusive. No payment will be made for rock removed without Engineer's approval.

Strip rock for measurements as directed by the Engineer. No payment will be made for rock excavated or loosened before measurement. Only rock actually removed will be paid for, and in no case will payment be made for rock removal beyond the payment limits shown for a standard trench or more than 12" beyond the edge of a pipeline or 6" below its bottom for pipes of nominal OD 24 inches and less, unless such rock has been removed at the direction of Engineer.

C. Blasting Rock

Blasting is not allowed unless expressly permitted by the Engineer. Notify the Engineer in advance of blasting activity. Provide evidence to the Engineer that the proposed blasting will comply fully with Laws or Regulations.

Do not blast where limited or prohibited by any Federal, State or local laws or regulations, or in violation of any limitation or restriction contained in any right-of-way, or wherever specifically prohibited in any Drawing or other Contract Document. Do not blast within forty (40) feet of any pipe or structure without specific permission from the Owner. Properly cover blasts and protect the pipe or structure. Warn all persons in the vicinity. Blasting shall be at the risk of the Contractor who shall be liable for all damages to persons or property. Secure and pay for all necessary permits. Perform whatever pre-blast surveys and investigations that may be required by the circumstances and/or by Federal, State or local laws.

Prepare a blasting plan and submit it to the Engineer for approval prior to commencing any blasting work. The plan shall state all procedures and methods which will be used to monitor and mitigate the effect or impact of the proposed blasting work.

Employ an experienced blaster holding a blasting license issued by the applicable State to carry out the blasting work. Use, handle, and store explosives as prescribed by the applicable state and federal regulations. Keep all explosives in a safe place at a sufficient distance from the Work so that, in case of accident, no damage will occur to any part of the Work. Contractor shall be held responsible for and shall pay for all damage caused by blasting operations or accidental explosion.

D. Trench Width

Widths of trenches shall be held to a minimum to accommodate the pipe and appurtenances. The trench width shall be measured at the top of the pipe barrel and shall conform to the following limits:

Earth

Minimum: Outside diameter of the pipe barrel plus 8 inches, i.e., 4 inches each side.
Maximum: Nominal pipe diameter plus 24 inches.

Rock

Minimum: Outside diameter of the pipe barrel plus 24 inches, i.e., 12 inches each side.
Maximum: Normal pipe diameter plus 30 inches. (Contractor will only be compensated for the minimum described above.

E. Excessive Trench Width

Provide additional backfill, haunching, and bedding material, as specified in Specification Sections 2210.2.01, 2210.2.02, and 2210.2.03 as approved by the engineer to fill any trench excavation that exceeds the maximum trench width defined in Specification Section 2110.3.05.D. Dispose of excess excavated materials off site at no cost to the Owner. Furnish the Engineer with satisfactory evidence that an appropriate disposal site was used.

F. Trench Depth

(1) General Provide prescribed minimum cover from the top of the pipe barrel to the top of the finished grade of the roadway, unless otherwise authorized by the Engineer, or as shown on the plans.

(2) Earth Excavate to the depth required, so as to provide a uniform and continuous bearing and support for the pipe barrel on solid and undisturbed ground at every point between joints. It will be permissible to disturb the finished trench bottom over a maximum length of 18 inches near the middle of each length of pipe by the withdrawal of pipe slings or other lifting tackle. Provide bell holes. Prepare the finished trench bottom accurately using hand tools.

(3) Rock Excavate trenches in rock or boulders 6-inches below the pipe barrel for pipe 24-inches or less in diameter. Remove all loose material from the trench bottom. Prepare a pipe bed using bedding material as specified in Specification Section 2210.2.03.

(4) Unsuitable Bottom Notify the Engineer whenever unsuitable material is found below subgrade. Remove the material over the area and to the depth determined by the Engineer. Provide compacted bedding material as specified in Specification Sections 2210.2.03 to restore the trench bottom to the required grade in these areas.

G. Open Trench Length

The length or size of excavation shall be controlled by the particular surrounding conditions, but shall always be confined to the limits prescribed by Engineer. If the excavation becomes a hazard, or if it excessively restricts traffic at any point, Engineer may require special construction procedures such as limiting the length of the open trench or prohibiting stacking excavated material in the street. Take precautions to prevent injury to the public due to open trenches. All trenches, excavated material, equipment, or other obstacles which could be dangerous to the public, shall be well lighted.

3.06 TRENCH BACKFILLING - OPEN TERRAIN

All trench backfilling shall be compacted so that no settlement occurs and is stable with surrounding soil that also shall not have settled.

A. Ductile Iron Pipe and HDPE Pipe

(1) Bedding

a. In Suitable Soil See Section 2.03(c) for definition of soil and means of bedding.

b. In Rock or Unsuitable Soil When encountering rock or unsuitable material, prepare pipe bedding immediately before pipe is laid. In this instance, compact clean granular fill as described in Specification Section 2210.2.03 from 6" below the pipe to the bottom of the pipe.

(2) Haunching

Place haunching from the bottom of the pipe barrel to the centerline (springline) of the pipe barrel with Haunching Fill (Section 2.02) or clean, granular fill as described in Specification Sections 2210.2.02 and 2210.2.03. See Drawings for required haunching material. Take care to avoid injuring or moving the pipe. Place the material in uniform 6 to 12 inch loose layers and compact each layer so as to eliminate the possibility of settlement, pipe misalignment, or damage of joints.

(3) Initial Trench Backfill

Backfill from the centerline (springline) of the pipe barrel to 12 inches above the pipe with Common Fill-Type A or clean, granular fill as described in Specification Sections 2210.2.01 and 2210.2.03. See Drawings for required initial trench backfill material. Mechanical equipment may be used to place the backfill. Place the material in such a manner that the material does not free fall, but rather flows onto the previously placed material. Consolidate the backfill in such a manner as will ensure the minimum possible settlement and the least interference with traffic. Do not compact the backfill with mechanical equipment, such as wheeled vehicles, unless sufficient cover is provided over the pipe to prevent damage to the pipe.

(4) Final Trench Backfill

Backfill trench from 12 inches above the pipe to final grade with Common Fill-Type B, as described in Specification Section 2210.2.01. Mechanical equipment may be used to place the backfill. Place the material in such a manner that the material does not free fall, but rather flows onto the previously placed material. Consolidate the backfill in such a manner as will ensure the minimum possible settlement and the least interference with traffic. Do not compact the backfill with mechanical equipment, such as wheeled vehicles, unless sufficient cover is provided over the pipe to prevent damage to the pipe.

(5) Surface Conditions

Attend to the trench surface regularly during the course of the Contract. Take prompt corrective measures to correct any settlement or wash-out. Maintain the trench surface in a safe condition that does not interfere with natural drainage.

(6) Deficiency of Backfill

Any material required for backfilling the trenches or for filling depressions caused by settlement or wash-out shall be supplied and placed by the Contractor at his expense.

B. PVC

(1) Bedding

Prepare pipe bedding immediately before pipe is laid. Use compacted clean, granular fill as described in Specification Section 2210.2.03 from 6" below the pipe to the bottom of the pipe.

(2) Haunching and Initial Backfill

Place haunching and initial backfill from the bottom of the pipe barrel to 12 inches above the top of the pipe barrel with clean, granular fill as described in Specification Section 2210.2.03. When material with high void ratios (e.g. ¾ inch clean granular fill) are used for embedment, it is possible for fines in the trench walls to migrate into the voids. This can cause some loss of support. An alternative method is to install filter fabric in the boundary between the trench and the fill to prevent migration. Place the clean granular material in uniform 6 to 12 inch loose layers and compact each layer so as to eliminate the possibility of settlement, pipe misalignment, or damage of joints. Another alternative is to use materials containing fines, (e.g. ¾ inch minus or modified).

(3) Remaining Trench Backfill

Backfill from 12 inches above the pipe to finished grade with Common Fill-Type B, as described in Specification Section 2210.2.01. Mechanical equipment may be used to place the backfill. Place the material in such a manner that the material does not free fall, but rather flows onto the previously placed material. Consolidate the backfill in such a manner as will ensure the minimum possible settlement and the least interference with traffic. Do not compact the backfill with mechanical equipment, such as wheeled vehicles, unless sufficient cover is provided over the pipe to prevent damage to the pipe.

(4) Surface Conditions

Attend to the trench surface regularly during the course of the Contract. Take prompt corrective measures to correct any settlement or wash-out. Maintain the trench surface in a safe condition that does not interfere with natural drainage.

(5) Deficiency of Backfill

Any material required for backfilling the trenches or for filling depressions caused by settlement or wash-out shall be supplied and placed by the Contractor at his expense.

3.07 TRENCH BACKFILLING – Under or Within 18 inches of Driveways and Roads

A. Bedding

Install bedding for selected pipe material in accordance with Section 3.06.

B. Haunching and Backfill

Haunch around the pipe and fill the remainder of the excavation using clean, granular fill, as described in Specification Section 2210.2.03. Place the material in uniform 6 to 12 inch loose layers and compact each layer so as to eliminate the possibility of settlement, pipe misalignment, or damage of joints. Take care to avoid injuring or moving the pipe.

C. Surface Conditions

Attend to the trench surface regularly during the course of the Contract. Take prompt corrective measures to correct any settlement or wash-out. Maintain the trench surface in a safe condition that does not interfere with natural drainage.

D. Deficiency of Backfill

Any material required for backfilling the trenches or for filling depressions caused by settlement or wash-out shall be supplied and placed by the Contractor at his expense.

3.08 SPECIAL BACKFILLING (Under Roads – option to the Contractor)

A. Bedding

Install bedding for selected pipe material in accordance with Section 3.06.

B. Haunching and Initial Backfill

Place haunching and initial backfill from the bottom of the pipe barrel to 12 inches above the top of the pipe barrel with clean, granular fill as described in Specification Section 2210.2.03. When material with high void ratios (e.g. ¾ inch clean granular fill) are used for embedment, it is possible for fines in the trench walls to migrate into the voids. This can cause some loss of support. An alternative method is to install filter fabric in the boundary between the trench and the fill to prevent migration. Place the clean granular material in uniform 6 to 12 inch loose layers and compact each layer so as to eliminate the possibility of settlement, pipe misalignment, or damage of joints. Another alternative is to use materials containing fines, (e.g. ¾ inch minus or modified).

C. Remaining Trench Backfill

Backfill from the top of the pipe to subgrade, all cuts, excavations, or other damage done to the public right-of-way with flowable fill as described below. Use flowable fill when required as a condition of the right-of-way excavation permit.

(1) Flowable fill shall have the following characteristics:

a. Unconfined Compressive Strength (28 day) 50-150 psi.

b. Flow Test - diameter of spread $\leq$ 8 inches.

(2) Design: Submit the mix design to the Engineer for approval. A trial batch demonstration may be required. The mix design shall include a list of all ingredients, the source of all materials, the gradation of all aggregates, the names of all admixtures and dosage rates, and the batch rates. Document and justify minor mix design changes, after the trial batch verification, prior to implementation. This does not include adjustments to compensate for routine moisture fluctuations. Resubmit the mix design for approval of changes in the source of materials, the addition or deletion of admixtures, or changes in cementitious materials. The Contractor may be required to provide test data from a laboratory, inspected by the Cement and Concrete Reference Laboratory and approved by the Municipality, which shows the proposed mix design is in accordance with the requirements listed above.

(3) Flow Test: Place a three (3) inch diameter by six (6) inch high open ended cylinder on a smooth, nonporous, level surface and fill it to the top with the flowable fill. Pull the cylinder straight up within 5 seconds of filling. Measure the spread of the fill. The minimum diameter of the spread shall be eight (8) inches.

(4) Placement: Discharge the mixture from the mixing equipment into the space to be filled by a reasonable means. The flowable fill shall be brought up uniformly to the fill line. Each filling stage shall be as continuous as practicable. Do not place concrete on the flowable fill until all bleeding water has disappeared and the resistance, as measured by ASTM C403, is at least 60 psi, or as directed by Engineer. Do not place asphalt until at least 24 hours after the fill is completely in place.

(5) Limitations: Do not place flowable fill on frozen ground. Protect flowable fill from freezing until the material has stiffened and bleeding water has disappeared. As the temperature nears freezing, additional curing time may be needed.

D. Surface Conditions: Attend to the trench surface regularly during the course of the Contract. Take prompt corrective measures to correct any settlement or wash-out. Maintain the trench surface in a safe condition that does not interfere with natural drainage.

E. Deficiency of Backfill: Any material required for backfilling the trenches or for filling depressions caused by settlement or wash-out shall be supplied and placed by the Contractor at his expense.

3.09 QUALITY ASSURANCE TESTING

The Owner reserves the right to have the Contractor provide Independent Quality Assurance Testing for the backfill material, at the Contractor's expense.

3.10 TRENCH MAINTENANCE

Assume full responsibility for the condition of the trenches for a period of one (1) year from the date of the final acceptance of the Contractor's work, or as required by

state, county or local authorities, and any materials required for filling depressions caused by settlement or wash-out shall be supplied and placed by the Contractor at their expense.

END OF SECTION

SECTION 02558

IDENTIFICATION/LOCATION GUIDE

PART 1: GENERAL

1.01 SCOPE

A. Furnish and install identification tape and location wire over the centerline of buried potable water mains, hydrant branches, and trenched services as indicated in this specification or noted in the drawings.

PART 2: PRODUCTS

2.01 IDENTIFICATION TAPE

A. Identification Tape for Pipe

Identification tape shall be manufactured of polyethylene with a minimum thickness of 4-mils and shall have a 1-mil thick metallic foil core. The tape shall be highly resistant to alkalis, acid and other destructive agents found in soil. Tape width shall be a minimum of 3 inches and a maximum of 6 inches and shall have the background color specified below, imprinted with black letters. Imprint shall be as specified below and shall repeat itself a minimum of once every 2 feet for entire length of the tape.

B. Tape background colors and imprints shall be as follows:

Imprint	Background Color
"CAUTION CAUTION - WATER LINE BURIED BELOW"	Blue

C. Identification tape shall be "Terra Tape" as manufactured by Reef Industries, Inc., Houston, TX, or approved equal.

2.02 LOCATION WIRE

A. Location (Tracer) Wire for Polyvinyl Chloride and HDPE pipe (and other pipe where noted in the drawings or identified in special conditions)

Location wire shall be a direct burial #12 AWG Solid (.0808" diameter), 21% conductivity annealed copper-clad high carbon steel strength tracer wire, 380# average tensile break load, 30 mil. High molecular weight-high density blue polyethylene jacket complying with ASTM D1248, 30 volt rating. The wire shall be contiguous except at test stations, valve boxes, and where splicing is required. All splices shall be encased with a 3M-Gel Pack model No. 054007-09053. Wire insulation shall be highly resistant to alkalis, acid and other destructive agents found in soil.

B. Location Wire shall be from Copperhead Industries, LLC, part number 1230B-HS or approved equal.

C. If directional drilling is used for this project please refer to specification 02458 for the product description of location wire to be used with the directional drilling

2.03 RESTRAINED JOINT MARKING TAPE

A. Joint restraint tape is specifically to warn Water Company workers/contractors that the water main is joint restrained. It is not to be used in place of regular marking tape.

B. Restrained Joint Marking Tape (for with mains that are restrained joint as directed by the Engineer) shall be polyethylene 4-mill thick and 2 ½-inches wide with blue lettering on white background color and imprinted with the words "RESTRAINED JOINT" every 2 foot. The tape shall have an adhesive backer. The tape shall be highly resistant to alkalis, acid and other destructive agents found in soil.

C. Restrained Joint Gasket indicator tape shall be part number 515401-010 manufactured by St. Louis Paper & Box Company located at 3843 Garfield, St. Louis, MO 63113 or approved equal.

PART 3: EXECUTION

3.01 INSTALLATION OF IDENTIFICATION TAPE

A. Install the identification tape with all buried potable water lines in accordance with the manufacturer's installation instructions and as specified.

B. Install identification tape one foot above the top of the pipe.

3.02 INSTALLATION OF LOCATION (TRACER) WIRE

A. Install location wire with buried water lines in accordance with the manufacturer's installation instructions and as specified in Contract Documents.

B. Install the location wire directly on top of the buried pipe.

C. In all pipe installations, loop the location wire up into a Tracer Wire Access Box not the valve boxes for connection to a locating device. The wire shall be one continuous piece from access box to access box up to 1250 feet maximum.

3.03 INSTALLATION OF RESTRAINED JOINT MARKING TAPE

A. Install the joint marking tape by adhering directly to the pipe as it is installed. The marking tape shall be installed along the entire length of pipe, including around the circumference of the bells of all fittings and valves. The pipe must be free of any foreign matter along the surface of the pipe for the marking tape installation. If clear polywrap is used, the restrained joint tape can be applied on the top of the pipe so long as it is visible. Otherwise the joint marking tape shall be applied on top of the polywrap and secured so the tape is not shifted by backfilling.

B. The tape does not adhere in wet or cold conditions. The tape should be stored in temperatures above 50 degrees F until the time of application. The pipe must be free of frost and moisture along the surface of the pipe receiving the tape.

END OF SECTION

SECTION 15000

PIPING - GENERAL PROVISIONS

PART 1: GENERAL

1.01 DRAWINGS

Dimensions shown on Contract Drawings are approximate only. Verify all piping geometry in the field and to ensure proper alignment and fit of all piping consistent with the intent of the Contract Drawings. Submit field layout drawings as required for approval.

1.02 RELATED WORK

See Specification Section 01600.3.03-Responsibility for Material and Equipment.

PART 2: PRODUCTS

2.0l CONTRACTOR'S RESPONSIBILITY FOR MATERIAL

A. Examine all material carefully for defects. Do not install material which is known, or thought to be defective.

B. The Engineer reserves the right to inspect all material and to reject all defective material shipped to the job site or stored on the site. Failure of the Engineer to detect damaged material shall not relieve the Contractor from his total responsibility for the completed work if it leaks or breaks after installation.

C. Lay all defective material aside for final inspection by the Engineer. The Engineer will determine if corrective repairs may be made, or if the material is rejected. The Engineer shall determine the extent of the repairs.

D. Classify defective pipe prior to Engineer's inspection as follows:

1. Damage to interior and/or exterior paint seal coatings.
2. Damage to interior cement-mortar or epoxy lining.
3. Insufficient interior cement-mortar lining or epoxy thickness .
4. Excessive pitting of pipe.
5. Poor quality exterior paint seal coat.
6. Pipe out of round.
7. Pipe barrel area damaged to a point where pipe class thickness is reduced (all pipe).
8. Denting or gouges in plain end of pipe (all pipe).
9. Excessive slag on pipe affecting gasket seal (DI).
10. Any visible cracks, holes.
11. Embedded foreign materials.
12. Non-uniform color, density and other physical properties along the length of the pipe.

E. The Contractor shall be responsible for all material, equipment, fixtures, and devices furnished. These materials, equipment, fixtures and devices shall comply with the requirements and standards of all Federal, State, and local laws, ordinances, codes, rules, and regulations governing safety and health.

E. Take full responsibility for the storage and handling of all material furnished until the material is incorporated in the completed project and accepted by the Engineer. Contractor shall be solely responsible for the safe storage of all material furnished to or by him until incorporated in the completed project and accepted by the Engineer.

F. Load and unload pipe, fittings, valves, hydrants and accessories by lifting with hoists or skidding to avoid shock or damage. Do not drop these materials. Pipe handled on skidways shall not be skidded or rolled against other pipe. Handle this material in accordance with AWWA C600, C605 or C906 whichever is applicable.

G. Drain and store fittings and valves prior to installation in such a manner as to protect them from damage due to freezing of trapped water. Drain, store, and protect fittings and valves in accordance with Specification Section 01600.

2.02 PETROLATUM TAPE COATING

A. The tape coating shall be a cold applied, saturant tape made from either petrolatum or petroleum wax with a noncellulosic synthetic fiber fabric. The fabric shall be encapsulated and coated on both sides with the petrolatum or petroleum wax. The thickness of the tape shall be no less than 40 mil. The petrolatum or petroleum wax shall be at least 50% of the product by weight.

B. The tape coating shall be supplied in sheets, pads or rolls. Pads and sheets shall be sized to fit the area that is to be covered, allowing for an overlap per AWWA Standards.

2.03 RUBBERIZED-BITUMEN BASED SPRAY-ON UNDERCOATING

Subject to approval by the ENGINEER, an alternative corrosion protection for exposed buried metal is an aerosol applied rubberized coating. The material shall be rapid dry and specifically designed for corrosion protection. 3M Rubberized Underseal Undercoating 08883 or any equivalent rubberized-bitumen based spray-on undercoating may be used. Follow manufacturer's recommendations for storage and application.

PART 3: EXECUTION

3.01 INSTALLATION - GENERAL REQUIREMENTS

A. Lay and maintain all pipe to the required lines and depths. Install fittings, valves and hydrants in strict accordance with the Specifications at the required locations with joints centered, spigots home, and all valve and hydrant stems plumb. Do not deviate from the required alignment, depth or grade without the written consent of the Engineer.

B. Buried steel lugs, rods, brackets, and flanged joint nuts and bolts are not permitted unless specifically shown on the drawings or approved in writing by the ENGINEER. Cover any and all buried steel lugs, rods, brackets, and flanged joint nuts and bolts with approved coating in accordance with AWWA Standard C217 prior to backfilling. Encase the same in polyethylene encased if the specifications require polyethylene encasement of the pipe.

C. Lay all pipe to the depth specified. Measure the depth from the final surface grade to the top of the pipe barrel. The minimum pipe cover shall be as shown on the Drawings or as specified in the Specifications Special Conditions.

D. Do not lay pipe in a wet trench, on subgrade containing frost, or when trench conditions are unsuitable for such work. If all efforts fail to obtain a stable dry trench bottom and the Engineer determines that the trench bottom is unsuitable for such work, the Engineer will order the kind of stabilization to be constructed, in writing. In all cases, water levels must be at least 6" below the bottom of the pipe. See section 02020, Dewatering.

E. Thoroughly clean the pipes and fittings before they are installed. Keep these materials clean until the acceptance of the completed work. Lay pipe with the bell ends facing in the direction of laying, unless otherwise shown on the Drawings, or directed by the Engineer. Exercise care to ensure that each length abuts the next in such a manner that no shoulder or unevenness of any kind occurs in the pipe line.

F. Do not wedge or block the pipe during laying unless by written order of the Engineer.

G. Before joints are made, bed each section of pipe the full length of the barrel, at the required grade, and at the invert matching the previously laid pipe. Dig bell holes sufficiently large to permit proper joint making. Do not bring succeeding pipe into position until the preceding length is embedded and secure in place.

H. Take up and relay pipe that is out of alignment or grade, or pipe having disturbed joints after laying. Take up, such in-place pipe sections found to be defective and replace them with new pipe. Take up, relaying, and replacement will be at the Contractor's expense.

I. Place enough backfill over the center sections of the pipe to prevent floating. Take all other necessary precautions to prevent the floating of the pipeline by the accumulation of water in the trench, or the collapse of the pipeline from any cause. Place enough backfill over the center sections of the pipe to prevent floating. Should floating or collapse occur, restoration will be at the Contractor's expense.

J. Bedding materials and concrete work for the pipe bedding and thrust restraint shall be as specified in Divisions 2, 3, and 15 as well as detail drawings.

K. Prevent foreign material from entering the pipe while it is being placed. Do not place debris, tools, clothing, or other materials in the pipe during laying operations. Close all openings in the pipeline with watertight plugs when pipe laying is stopped at the close of the day's work, or for other reasons such as rest breaks or meal periods.

L. Only cut pipe with equipment specifically designed for cutting pipe such as an abrasive wheel, a rotary wheel cutter, a guillotine pipe saw, or a milling wheel saw. Do not use chisels or hand saws. Grind cut ends and rough edges smooth. Bevel the cut end slightly for push-on connections as per manufacturer recommendations.

M. In distributing material at the site of the Work, unload each piece opposite or near the place where it is to be laid in the trench. If the pipe is to be strung out, do so in a straight line or in a line conforming to the curvature of the street. Block each length of pipe adequately to prevent movement. Block stockpiled pipe adequately to prevent movement. Do not place pipe, material, or any other object on private property, obstructing walkways or driveways, or in any manner that interferes with the normal flow of traffic.

N. Exercise special care to avoid damage to the bells, spigots or flanged ends of pipe during handling, temporary storage, and construction. Replace damaged pipe that cannot be repaired to the Engineer's satisfaction, at the Contractor's expense.

O. Remove all existing pipe, fittings, valves, pipe supports, blocking, and all other items necessary to provide space for making connections to existing pipe and installing all piping required under this Contract.

P. Maintain the minimum required distance between the water line and other utility lines in strict accordance with all Federal, State, and local requirements and all right-of-way limitations.

Q. Provide and install polyethylene encasement for ductile iron pipe as required by the Drawing or Specification Special Conditions. See Specification Section 15130 or 15131, as applicable.

R. The maximum allowable deflection at the joints for push-on joint pipe shall be the lesser of manufacturer's recommendations or as described in the DIPRA Guideline, *Ductile Iron Pipe Joints and Their Uses*, as follows:

Size of Pipe	Deflection Angle	Maximum Deflection (18-ft. Length)	(20-ft. Length)
3"-12"	5 degrees	19"	21"
14"-42"	3 degrees	11"	12"
48"-64"	3 degrees	N/A	12"

S. Use short lengths of pipe (minimum length 3 feet, no more than three short sections), when approved by the Engineer, to make curves that cannot be made with full length sections of pipe without exceeding the allowable deflection. Making these curves will be at no additional cost to the Owner.

T. Furnish air relief valve assemblies in accordance with detail drawings provided or as specificied in the specification Special Conditions section. Engineer will provide standard detail for additional air release valve assemblies. Any deviation from the standard detail proposed by contractor must be approved in advance.

U. Exercise particular care so that no high points are established where air can accumulate. Install an air release valve and manhole, as extra Work to the Contract, when the Engineer determines that unforeseen field conditions necessitate a change in the pipe profile that requires the installation of an air release valve and manhole. If the Contractor requests a change in the pipe profile solely for ease of construction, and the requested change requires the installation of an air release valve and manhole as determined by the Engineer, the cost of furnishing and installing the air release valve and manhole will be at the expense of the Contractor.

3.02 CONSTRUCTION METHODS TO AVOID CONTAMINATION

A. Heavy particulates generally contain bacteria and prevent even very high chlorine concentrations from contacting and killing such organisms. It is essential that the procedures of this Specification Section be observed to assure that a water main and its appurtenances are thoroughly clean for the final disinfection by chlorination.

B. Take precautions to protect the interior of pipes, fittings, and valves against contamination. String pipe delivered for construction so as to keep foreign material out of the pipe. Close all openings in the pipeline with watertight plugs when pipe laying is stopped at the close of the day's work or for other reasons, such as rest breaks or meal periods. Use rodent-proof plugs approved by Engineer, where it is determined that watertight plugs are not practical and where thorough cleaning will be performed.

C. Delay in placement of delivered pipe invites contamination. The more closely the rate of delivery is correlated to the rate of pipe laying, the lower the likelihood of contamination. Complete the joints of all pipe in the trench before stopping work. If water accumulates in the trench, keep the plugs in place until the trench is dry.

D. When encountering conditions on pre-existing pipe that requires packing, employ yarning or packing material made of molded or tubular rubber rings, or rope of treated paper or other approved materials. Do not use materials such as jute, asbestos, or hemp. Handle packing material in a manner that avoids contamination.

E. Do not use contaminated material or any material capable of supporting prolific growth of microorganisms for sealing joints. Handle sealing material or gaskets in a manner that avoids contamination. The lubricant used in the installation of sealing gaskets shall be suitable for use in potable water. Deliver the lubricant to the job in closed containers and keep it clean.

F. If dirt enters the pipe, and in the opinion of the Engineer the dirt will not be removed by the flushing operation, clean the interior of the pipe by mechanical means, then swab with a 1% hypochlorite disinfecting solution. Clean using a pig, swab, or "go-devil" only when the Engineer has specified such and has determined that such operation will not force mud or debris into pipe joint spaces.

G. If the main is flooded during construction, the flooded section must be isolated from the remainder of the installation as soon as practical. Submit a plan to the Engineer on correcting the condition and do not proceed until authorized by the Engineer. Replace or fully clean and disinfect the affected pipe at no additional cost to the Owner.

3.03 VALVE INSTALLATION

A. Prior to installation, inspect valves for direction of opening, freedom of operation, tightness of pressure containing bolting, cleanliness of valve ports and especially of seating surfaces, handling damage, and cracks. Correct defective valves or hold for inspection by the Engineer.

B. Set and join to the pipe in the manner specified in Specification Section 3.01. Provide valves with adequate support, such as crushed stone and concrete pads, so that the pipe will not be required to support the weight of the valve. Set truly vertical. After field installation of the valve all exposed ferrous restraint materials and external bolts except the operating nut shall receive a layer of petrolatum tape coating or, where approved, rubberized-bitumen based spray-on undercoating applied before backfill. If polyethylene is applied to the pipe, the entire valve shall be encased in polyethylene encasement prior to backfill. The polyethylene encasement shall be installed up to the operating nut leaving the operating nut exposed and free to be operated.

C. Provide a valve box for each valve. Set the top of the valve box neatly to existing grade, unless directed otherwise by the Engineer. Do not install in a way that allows the transfer shock or stress to the valve. Center and plumb the box over the wrench nut of the valve. Do not use valves to bring misaligned pipe into alignment during installation. Support pipe in such manner as to prevent stress on the valve. See Standard Detail 0201-0601-SD59 for a typical valve box installation detail.

D. Provide valve marking posts, when authorized by the Owner, at locations designated by the Engineer and in accordance with detail drawings (included at the end of this Specification Section). Payment will be made per post in accordance with supplemental unit price schedule.

3.04 THRUST RESTRAINT

A. Provide all plugs, caps, tees, and bends (both horizontal and vertical) with concrete thrust blocking and/or restrained joint pipe as represented on the Drawings, or specified in the Specification Special Conditions.

B. Place concrete thrust blocking between undisturbed solid ground and the fitting to be anchored. Install the concrete thrust blocking in accordance with Specification Section 3300 and standard details provided. Locate the thrust blocking to contain the resultant thrust force while keeping the pipe and fitting joints accessible for repair, unless otherwise shown or directed.

C. Provide temporary thrust restraint at temporary caps and plugs. Submit details of temporary restraint to the Engineer for approval.

D. At connections with existing water mains where there is a limit on the time the water main may be removed from service, use metal harnesses of anchor clamps, tie rods and straps; mechanical joints utilizing set-screw retainer glands; or restrained push-on joints as permitted by Engineer. No restraining system can be installed without the approval of the Engineer. Submit details of the proposed installation to the Engineer for approval. For pipe up to 12 inches in size, use a minimum of two 3/4-inch tie rods. If approved for use, install retainer glands in accordance with the manufacturer's instructions. Material for metal harnessing and tie-rods shall be ASTM A36 or A307, as a minimum requirement.

E. Protection of Metal Harnessing: Protect ties rods, clamps and other metal components against corrosion by hand application of petrolatum tape and by encasement of the entire assembly with 8-mil thick (12 mil thick in corrosive soils) loose polyethylene film in accordance with AWWA C105. Apply tape on all exposed tie rods prior to installing polyethylene.

3.05 TYPICAL INSTALLATION DETAILS

The list of Standard Details listed below are attached to the specification 01010.

END OF SECTION

SECTION 15020

DISINFECTING PIPELINES

PART 1: GENERAL

1.01 SCOPE OF WORK

Flush and disinfect all pipelines installed under this Contract if indicated in the summary of work. This would include furnishing the necessary labor, tools, transportation, and other equipment for the operation of valves, hydrants, and blowoffs during the chlorination. Install, and if directed remove, all chlorination taps required for disinfection. The cost of this work shall be included in the bid item for pipe installation. The disinfection will be performed under the supervision of Owner.

1.02 WORK BY OWNER

The Owner reserves the option to provide/furnish the chlorine and chlorination equipment. The Owner will furnish water for testing, flushing and disinfecting pipelines. The Owner will also perform bacteriological testing and may collect the sample.

1.03 PROTECTION

Chlorine disinfection and dechlorination shall be under the direct supervision of someone familiar with the physiological, chemical, and physical properties of the form of chlorine used. They shall be trained and equipped to handle any emergency that may arise. All personnel involved shall observe appropriate safety practices to protect working personnel and the public.

The forwards of AWWA Standards B300 and B301 contain information and additional reference material regarding the safe handling of hypochlorites and liquid chlorine. The Contractor shall familiarize himself with this information prior to performing any disinfection work.

1.04 RELATED WORK

Observe the precautions described in Specification Section 15000 to avoid contamination during installation of the pipeline.

1.05 REFERENCES

Refer to current AWWA Standard for Disinfecting Water Mains C651.

PART 2: PRODUCTS

2.01 MATERIALS AND EQUIPMENT

A. Furnish liquid chlorine and injection equipment and/or calcium hypochlorite (HTH) as needed to disinfect all pipelines and appurtenances.

B. Liquid chlorine contains 100% available chlorine and is packaged in steel containers, usually of 100 lb, 150 lb, or 1 ton net chlorine weight. Liquid chlorine is to be furnished in accordance with AWWA B301.

C. Calcium hypochlorite is available in granular form or in approximately 5-g tablets, and contains approximately 65% available chlorine by weight and is employed in calculations used in this specification. The material should be stored in a cool, dry, and dark environment to minimize its deterioration. Do not use calcium hypochlorite intend for swimming pool disinfection, as this material (containing trichloroisocyanuric acid) has been sequestered and is extremely difficult to eliminate from the pipe after the desired contact time had been achieved.

D. Calcium hypochlorite must conform to AWWA B300.

PART 3: EXECUTION

3.01 PREPARATION

All pipelines shall be pressure and leak tested, flushed, and cleaned of debris and dirt prior to application of the disinfectant. Flushing shall continue until the volume in the newly installed main has turned over at least one time unless the Engineer determines that conditions do not permit the required volume to be safely discharged to waste.

3.02 APPLICATION OF DISINFECTANT

Methods to be used for disinfection are those detailed in ANSI/AWWA C651 Disinfecting Water Mains.

3.03 WATER MAINS

Three (3) methods of chlorination are described below. The third method, using tablets of hypochlorite, is only permitted by expressed approval of the Engineer and under no circumstance allowed for projects of 2000 feet or more. Otherwise, information in the forward of AWWA Standard C651 will be helpful in determining the best method to be used.

A. Continuous Feed Method

1. Set up

The continuous feed method consists of completely filling the main to remove all air pockets, flushing the completed main to remove particulates, and then refilling the main with chlorinated potable water. The potable water shall be chlorinated, so that after a 24-hour holding period in the main, there will be a free chlorine residual of not less than 10 mg/L in collected samples.

Chlorine can be applied in advance of preliminary flushing by swabbing joints with bleach or placing hypochlorite granules in the pipe in areas where contamination is suspected. In any such case, the contractor shall make sure and take appropriate action to make sure that the flushed water is dechlorinated.

Preliminary flushing. Prior to being chlorinated, fill the main to eliminate air pockets and flush to remove particulates. The flushing velocity in the main shall be not less than 2.5 fps unless the Engineer determines that conditions do not permit the required flow to be discharged to waste. Table 1 shows the rates of flow required to produce a velocity of 2.5 fps in pipes of various sizes.

NOTE: Flushing is no substitute for preventive measures during construction. Certain contaminants such as caked deposits resist flushing at any feasible velocity.

TABLE 1
Required Flow and Openings to Flush Pipelines
(40 psi Residual Pressure in Water Main)*

Pipe Diameter (inches)	Flow required to produce 2.5 fps velocity in main (gpm)	Size of Tap. (inches) Number of taps on Pipe† 1	1-1/2	2	Number of 2-1/2 in. Hydrant Outlets to Use
4	100	1	-	-	1
6	200	-	1	-	1
8	400	-	2	1	1
10	600	-	3	2	1
12	900	-	-	2	2
16	1600	-	-	4	2

*With a 40 psi pressure in the main with the hydrant flowing to atmosphere, a 2½-inch hydrant outlet will discharge approximately 1,000 gpm and a 4½-inch hydrant outlet will discharge approximately 2,500 gpm.

† Number of taps on pipe based on discharging through 5 feet of galvanized iron pipe with one 90 degree elbow.

In mains of 24-inches or larger diameter, an acceptable alternative to flushing is to broom-sweep the main, carefully removing all sweepings prior to chlorinating the main.

2. Chlorinating the Main.

a. Flow water from the existing distribution system or other approved source of supply at a constant, measured rate into the newly laid water main. In the absence of a meter, approximate the rate by placing a pitot gauge in the discharge or measuring the time to fill a container of known volume.

b. At a point not more than 10 feet downstream from the beginning of the new main, dose the water entering the new main with chlorine fed at a constant rate such that the water will have not less than 25 mg/L free chlorine. Measure the chlorine concentration at regular intervals to ensure that this concentration is provided. Measure chlorine in

accordance with the procedures described in the current edition of the AWWA Manual M12 or of *Standard Methods for the Examination of Water and Wastewater.*

c. Table 2 gives the amount of chlorine required for each 100 feet of pipe of various diameters. Solutions of 1 percent chlorine may be prepared with calcium hypochlorite and the table indicates the appropriate amount of the 65% calcium hypochlorite. If using other concentrations of calcium hypochlorite, a properly adjusted weight must be used. A 1 percent chlorine solution requires 1 pound of calcium hypochlorite in 8 gallons of water.

TABLE 2
Chlorine and Hypochlorite Required to Produce 25 mg/L Concentration in 100 feet of Pipe by Diameter

Pipe Diameter inches	100 Percent Chlorine lbs	65 Percent Hypochlorite lbs	1 Percent Chlorine Solutions gallons
4	0.013	0.020,	0.16
6	0.030	0.046	0.36
8	0.054	0.083	0.65
10	0.085	0.131	1.02
12	0.120	0.185	1.44
16	0.217	0.334	2.60

d. During the application of chlorine, position valves so that the strong chlorine solution in the main being treated will not flow into water mains in active service. Do not stop the chlorine application until the entire main is filled with heavily chlorinated water. Keep the chlorinated water in the main for at least 24 hours. During this time, operate all valves and hydrants in the section treated in order to disinfect the appurtenances. At the end of this 24-hour period, the treated water in all portions of the main shall have a residual of not less than 10 mg/L free chlorine.

e. Hypochlorite solution may be applied to the water main with a gasoline or electrically powered chemical feed pump designed for feeding chlorine solutions. Feed lines shall be of such material and strength as to safely withstand the corrosion caused by the concentrated chlorine solutions and the maximum pressures that may be created by the pumps. Check all connections shall for tightness before the solution is applied to the main.

f. If gaseous chlorine in solution is permitted by the Engineer and proposed by the contractor, the preferred equipment for the gas application employs a feed vacuum-operated chlorinator to mix the chlorine gas, in combination with a booster pump for injecting the chlorine gas solution water into the main to be disinfected. Direct feed chlorinators cannot be used. (A direct feed chlorinator is one which operates solely from the pressure in the chlorine cylinder.)

B. Slug Method

1. Setup

a. The slug method consists of placing calcium hypochlorite granules in the main during construction; completely filling the main to eliminate all air pockets, flushing the main to remove particulates, and slowly flowing a slug of water containing 100 mg/L of free chlorine through the main so that all parts of the main and its appurtenances will be exposed to the highly chlorinated water for a period of not less than 3 hours.

2. Chlorinating the main.

a. At the option of the OWNER, place calcium hypochlorite granules in the main during construction. The purpose of this procedure is to provide a strong chlorine concentration in the first flow of flushing water especially to fill annular spaces in pipe joints. Flush the main to eliminate air and remove particulates to include management of dechlorination and discharged water.

b. At a point not more than 10 feet downstream from the beginning of the new main, dose the water entering the new main with chlorine fed at a constant rate such that the water will have not less than 100 mg/L free chlorine. Measure the chlorine concentration at regular intervals to ensure that this concentration is provided. Measure chlorine in accordance with the procedures described in the current edition of the AWWA Manual M12 or of *Standard Methods for the Examination of Water and Wastewater*. The chlorine shall be applied continuously and for a sufficient period to develop a solid column or "slug" of chlorinated water that will, as it moves through the main, expose all interior surfaces to a concentration of approximately 100 mg/L for at least 3 hours.

c. The free chlorine residual shall be measured in the slug as it moves through the main. If at any time it drops below 50 mg/L, stop the flow, relocate the chlorination equipment to the head of the slug, and as flow is resumed, apply chlorine to restore the free chlorine in the slug to not less than 100 mg/L.

d. As the chlorinated water flows past fittings and valves, operate related valves and hydrants so as to disinfect appurtenances and pipe branches.

C. Tablet Method

1. Setup

a. The tablet method consists of adhering calcium tablets in the water main as it is being installed and then filling the main with potable water when installation is completed. This method may be used only if the pipes and

appurtenances are kept clean and dry during construction and with permission by the Engineer for short main installations.

2. Chlorinating the Main –

a. Placing of calcium hypochlorite tablets - *Placing of calcium hypochlorite tablets.* During construction, 5-g calcium hypochlorite tablets shall be placed in each section of pipe. Also, one such tablet shall be placed in each hydrant, hydrant branch, and other appurtenance. The number of 5-g tablets required for each pipe section shall be *0.0012* d^2L rounded to the next higher integer, where *d is* the inside pipe diameter, in inches, and L is the length of the pipe section, in feet. Table *1* shows the number of tablets required for commonly used sizes of pipe. The tablets shall be attached by a food-grade NSF approved adhesive. There shall be no adhesive on the tablet except on the broadside attached to the surface of the pipe and no adhesive applied or spilled on the pipe surface. Excess adhesive must be removed immediately using mechanical means or an NSF approved adhesive solvent. Attach all the tablets inside and at the top of the main, with approximately equal numbers of tablets at each end of a given pipe length. If the tablets are attached before the pipe section is placed in the trench, their position shall be marked on the section so it can be readily determined that the pipe is installed with the tablets at the top.

		Length of Pipe Section, ft (m)				
Pipe Diameter		**13(4.0) or less**	**18(5.5)**	**20(6.1)**	**30(9.1)**	**40(12.2)**
in.	*(mm)*	Number of 5-g Calcium Hypochlorite Tablets				
6	(150)	1	1	1	2	2
8	(200)	1	2	2	3	4
12	(300)	3	4	4	6	7
16	(400)	4	6	7	10	13

b. *Filling and contact.* When installation has been completed, the main shall be filled with water at a rate such that water within the main will flow at a velocity no greater than 1 ft/s (0.3 m/s). Precautions shall be taken to ensure that air pockets are eliminated. This water shall remain in the pipe for at least 24 hours. If the water temperature is less than 41°F (5°C), the water shall remain in the pipe for at least 48 hours.

3.04 DISPOSAL OF HEAVILY CHLORINATED WATER

A. Do not keep heavily chlorinated water in contact with pipe for more than 48 hours after the applicable retention period. In order to prevent damage to the pipe lining or corrosion damage to the pipe itself, flush the heavily chlorinated water from the main fittings, valves, and branches until chlorine measurements

show that the concentration in the water leaving the main is no higher than that generally prevailing in the system or is acceptable for domestic use. Take all steps necessary to dechlorinate water where required per section 3.04B and 3.04C below. Contact the local sewer department to arrange for disposal of the heavily chlorinated water to the sanitary sewer if applicable.

B. Neutralize the chlorine residual of the water being disposed of by treating with one of the chemicals listed in Table 3. Select an alternative disposal site if a sanitary sewer system is unavailable for disposal of the chlorinated water.

C. The proposed alternative disposal site shall be inspected and approved of by the Engineer. Apply a reducing agent to the chlorinated water to be wasted to completely neutralize the chlorine residual remaining in the water. (See Table 3 for neutralizing chemicals. Do not overdose neutralizing chemicals as this may result in adverse environmental impacts. Only dose the amount required to neutralize the amount of chlorine present). Contact federal, state and local regulatory agencies, where necessary, to determine special provisions for the disposal of heavily chlorinated water.

Table 3
Pounds of chemicals required to neutralize various
Residual chlorine concentrations in 100,000 gallons of water.

Residual Chlorine Concentration	Sulfur Dioxide	Sodium Bisulfite	Sodium Sulfite	Sodium Thiosulfate	Ascorbic Acid
mg/L	(SO_2)	($NaHSO_3$)	(Na_2SO_3)	($Na_2S_2O_3 \cdot 5H_2O$)	($C_6O_8H_6$)
1	0.8	1.2	1.4	1.2	2.1
2	1.7	2.5	2.9	2.4	4.2
10	8.3	12.5	14.6	12.0	20.9
50	41.7	62.6	73.0	60.0	104.0

D. Test for chlorine residual throughout the disposal process to be sure that the chlorine is neutralized

E. Submit a plan of disposal of flushed water to the Engineer for approval

3.05 BACTERIOLOGICAL TESTING

A. After final flushing and before the water main is placed in service, the first of two consecutive sets of acceptable samples can be collected from the new main. The second set of samples must be taken at least 24 hours after the first set of samples. The main should not be flushed between collection of the first and second set of samples except to clear the sample site to collect the second sample. At least one set of samples shall be collected from every 1,200 feet, of the new water main, plus one set from the end of the line and at least one set from each branch when possible or as required by regulatory requirements.

B. Samples shall be collected by a person knowledgeable in collecting samples for bacteriological sampling or arrange for the Owner to collect the sample. Coordinate with Owner and submit samples to the Owner for testing of bacteriological (chemical and physical) quality. Testing will be in accordance with Standard Methods of the Examination of Water and Wastewater. Samples shall show the absence of coliform organisms; and the presence of a chlorine residual. Samples shall also be tested for turbidity, pH, and standard heterotrophic plate count (HPC). HPC levels must be consistent with levels normally found in the distribution system to which the new main is connected.

C. Bacteriological tests must show complete absence of coliforms and acceptable HPCs. If tests show the presence of coliform or unacceptable HPCs, perform additional flushing and disinfection of the pipeline until acceptable tests are obtained, all at no cost to the Owner. The Contractor will not be charged for the additional testing performed by the Owner.

3.06 RETESTING AND TESTING SOURCE WATER

A. At the time of initial flushing the main to remove material and test for air pockets, Contractor may request the Owner to continue flushing until the desired chlorine residual is met at the discharge point. Notification must be provided in advance and the Contractor shall be prepared to test for chlorine at intervals of no more than five minutes as the water clears. This will provide the Contractor with some assurance that the source water is chlorinated.

B. If the subsequent tests for bacteriological contamination conducted by the Contractor fail, the Contractor may request the Owner to continue flush from the source water into the new pipe system until a chlorine residual is found at the discharge point. Notification must be provided in advance and the Contractor shall be prepared to test for chlorine at intervals of no more than five minutes as the water clears. The operation of all existing system valves shall be by the Owner at the Contractor expense and the discharge point must be opened prior to opening existing valves to avoid contamination. This will provide the Contractor with some assurance that the source water is chlorinated for subsequent tests.

END OF SECTION

SECTION 15025

CLEANING PIPELINES

PART 1: GENERAL

1.01 SCOPE OF WORK

Clean the pipelines installed under these Contract Documents using foam pigs, swabs, or "go-devils", as described herein, whenever normal flushing will not sufficiently remove dirt and debris that was introduced during construction.

1.02 GENERAL

Normal pipeline flushing is often inadequate to remove all the entrapped air, loose debris, and other objects that may have been left in the main during installation. In such cases, use polyurethane foam pigs and/or polyurethane hard foam swabs to remove all foreign matter from the pipeline (i.e. "pig" the pipeline). Clean the pipeline per the requirements of this Specification Section prior to testing and disinfecting the main.

1.03 RELATED WORK

See Specification Section 15000.3.02 - Construction Methods to Avoid Contamination and Specification Section 15020.3.01 - Preparation (prior to disinfecting pipelines).

1.04 PROTECTION DURING FLUSHING AND CLEANING

Coordinate with Engineer and Owner before flushing to ensure that an adequate volume of flushing water is available, at sufficiently high pressure. Determine if the water can be disposed of safely. Notify the Owner, Engineer, and the following prior to flushing, or cleaning:

a. Fire Department
b. Other utilities, such as gas, electric and telephone companies, who may have underground facilities in the area.
c. Customers who may be inconvenienced by reduced pressure or dirty water.

Coordinate with Owner to isolate the section to be flushed from the operating distribution system. Close valves slowly to prevent water hammer. Open the fire hydrant or blow-off valve slowly until the desired flow rate is obtained. When flushing from a dry barrel fire hydrant, use the gate valve upstream of the hydrant for throttling purposes. Open the hydrant valve fully to prevent water from escaping into the ground through the fire hydrant barrel drain.

Protect the work staff and the public during operation of hydrants and valves. Keep children away from the flow of flushing water. Where practical employ energy

dissipaters to help avoid damage to property and the flooding of streets. The safety considerations also apply to main cleaning. See General Conditions Article 6.

PART 2: PRODUCTS

2.01 MATERIALS AND EQUIPMENT

Furnish the foam cleaning plugs (swabs or pigs), labor, and equipment as needed to pig all pipelines. Furnish all materials required for the expulsion of air and other debris from pipelines. Do not use of pipe cleaning plugs which utilize Bristles, wire brushes, carbide abrasives, steel studs, or any other Type abrasive unless specifically approved by the Engineer. Consult a manufacturer of pipe cleaning plugs, such as Knapp Polly Pig (Houston, Texas), to determine the type and size of cleaning plug best suited for the application. Two types of plugs shall be considered and are described as follows:

A. Swabs

Swabs used for cleaning mains shall be made of polyurethane foam. This foam has a density of 1 to 2 pounds per cubic feet. Swabs shall be purchased from commercial manufacturers of swabs for pipes. Both soft and hard grade foam swabs are available. New mains are typically cleaned with hard foam swabs.

Use swabs cut into cubes and cylinders slightly larger than the size of the pipe to be cleaned. Cubes one inch larger in dimension than the nominal diameter of the pipe being cleaned have worked well for cleaning pipes up to 12-inches in diameter. For mains greater than 12-inches in diameter, the swab diameter must be considered individually for each operation. For new mains, swabs 3-inches larger than the pipe diameter have worked well. Swabs for the larger mains are usually 1-1/2 times the diameter in length.

B. Pigs

The other type of cleaning plug available is called a pig. Pigs, if used, shall be commercially manufactured for the specific purpose of cleaning pipes. They shall be made of polyurethane foam weighing 2 to 15 lb./cu.ft. Pigs are bullet shaped and come in various grades of flexibility and roughness. Pigs are typically 1/4 -inch to 1/2-inch larger in diameter than the pipe to be cleaned.

PART 3: EXECUTION

3.01 PLUG INSTALLATION AND REMOVAL

Furnish all equipment, material, and labor to satisfactorily expose cleaning wyes, or other entry or exit points. Remove cleaning wye covers, etc., as required by the Engineer to insert the plugs into the mains.

If approved by the Engineer, stripped fire hydrants, air valves and blow-offs may serve as entry and exit points for smaller sized mains. The Engineer will examine these

appurtenances and the connecting laterals to ensure that adequate openings exist through which a plug may be launched.

If these appurtenances are used, a special launcher is required to ease the insertion and launching of the plug. If available, a pressurized water source such as a fire hydrant can be used to launch the plug. If water from the system is not available nearby, use a water truck with pump.

If hydrants are used as entry and/or exit points, remove the internal mechanisms and plug the drains under the supervision of the Engineer. Insert the plug and replace the cap with a special flange with a 2-1/2-inch fitting. Connect the 2-1/2-inch fitting, with a pressure gauge and valve, to a pressurized water source. After closing the last valve isolating the section to be cleaned, open the hydrant supply valve. Propel the swab or pig into the main by opening the exit valve.

In mains greater than 8-inches, wyes shall be used at the entry and exit points. Fabricate the wye section one size larger than the main to ease the insertion and extraction of the plug. The use of wyes, as with the previously mentioned appurtenances, requires an outside source of pressurized water for launching. Cap the wye with a flange with a 2 to 6 inch fitting for connecting to the pressurized water source.

Many pigs are harder to insert into a pipe since they are less flexible than swabs,. Other methods acceptable to insert pigs include:

1. winching with a double sling,
2. winching with a rope attached to the pig,
3. compression with a banding machine prior to insertion, and
4. the use of a specially designed tapered steel pipe which is removed after use.

During swab or pig installation, leave as much water as possible in the main to be cleaned. The water suspends the material being removed from the pipe and minimizes the chance of the material forming a solid plug. Water in the pipe also keeps the swab or pig from traveling through the pipe at excessive rates. If swabs or pigs travel too fast, they will remove less material and wear more rapidly.

At the exit point or blow-off, install a wye long enough to house the swab or pig. Attach temporary piping to the end cap to allow the drainage of the water.

Take precautions to prevent backflow of purged water into the main when the cleaning plug exits through a dead end main. This can be accomplished by installing mechanical joint bends and pipe joints to provide a riser out of the trench. Additional excavation of the trench may serve the same purpose.

3.02 PRE-CLEANING PROCEDURES

A. Prepare a written cleaning plan for the Engineer's review,

B. Suggested pre-cleaning procedures include:

1. Identify mains to be cleaned on a map. Mark the location of the entry, water supply, exit points, any blow-offs to be used, valves to be closed, and the path of the swab or pig.

2. Under the Engineer's supervision and with Owner staff as required, inspect and operate all valves and hydrants to be used in the cleaning operation to ensure their correct operation and a tight shutdown.

3. Check location and type of hydrants, launch and exit location, and blow-offs to be used. Make blow-off tap connections, if necessary.

4. The Owner will notify customers served by the main to be cleaned that their water will be off for a specified period of time on the day of the cleaning.

5. The Owner will identify customers who may require temporary services during the main cleaning operation. The Contractor shall provide the temporary connections.

6. Determine the number and size of plugs to be used.

3.03 CLEANING PROCEDURE

Clean the pipeline using the following procedures and the Contractor's cleaning plan, as approved by the Engineer.

A. Swab Cleaning Procedures

1. Open the water supply upstream of the swab. Throttle the flow in the main at the discharge (plug exit) point so that the swab passes through the main at a speed of 2 to 4 fps. (At this velocity, swabs will effectively clean pipes for distances of up to 4,000 feet before disintegrating to a size smaller than the main.) Use pitot gauges at the exist hydrant or blow-off to estimate the flowrate in the main.

2. Note the time of entry of the swab into the main and estimate its time of exit. If the swab does not reach the exit point in the estimated time plus ten minutes, then a blockage has probably occurred. Reverse the flow in the main and note the time required for the swab to reach the original entry point. From the return travel time, estimate the location of the blockage. The Engineer may require the use of a swab containing a transmitter to accurately locate the blockage.

3. Swab repeatedly as needed. Stop swabbing when the water behind the swab emerging at the exit clears up within one minute. Account for all swabs inserted into the main.

4. After the last swab has been recovered, flush the main to remove swab particles. This may require up to an hour of flushing.

B. Pig Cleaning Procedures

1. Remove all air valves along the line. Ensure that each isolating valves to the air release valve are completely closed. Operate system to prevent undesired build up of air while air release valves are out of service.

2. If the pig is inserted directly into the main, set it in motion by opening the upstream gate valve and a downstream fire hydrant or blow-off valve (usually the valve on the capped end at the exit point). If the pig is launched from a wye, fire hydrant, or other appurtenance, use an external pressurized water source to inject the pig into the main as described in Specification Section 3.01.

3. Once the pig is launched, control its speed by throttling the discharge at a downstream fire hydrant or blow-off. Operate pigs at the typical speed of 1 fps. This slow speed will help prevent pressure surges when the pig passes through undersized valves, enters smaller pipes, or turns through tees or crosses. Speeds of up to 2 fps. can be used on straight runs with no restrictions or sharp turns.

4. Make sufficient passes of the pig to obtain thorough cleaning. Two pigs may be used in tandem to save time and water. Sufficient cleaning is established when the water discharging after the pig becomes clear within one minute.

3.04 POST CLEANING PROCEDURE

After successful cleaning; test, flush, and disinfect the main in accordance with applicable sections of these Specifications.

END OF SECTION

SECTION 15030

PRESSURE AND LEAKAGE TESTS

PART 1: GENERAL

1.01 SCOPE OF WORK

Test all piping, valves, and appurtenances installed under these Contract Documents. Testing shall be performed concurrent with installation. Do not install more than 1,200 feet of pipe without being tested, unless approved by the Engineer.

1.02 SUBMITTALS

Prepare and submit schedules and procedures to the Engineer for testing of all parts of the water main installed in accordance with these Contract Documents. Submit the schedule at least seven days prior to any testing.

PART 2: PRODUCTS

2.01 EQUIPMENT

Furnish the pump, pipe connections, and all necessary apparatus for the pressure and leakage tests including gauges and metering devices. The Owner reserves the option to furnish the gauges and metering devices for the tests. Excavate, backfill, and furnish all necessary assistance for conducting the tests.

PART 3: EXECUTION

3.01 GENERAL

A. Perform hydrostatic pressure and leak tests in accordance with AWWA C600, Section 4 - Hydrostatic Testing after the pipe or section of pipe has been laid, thrust blocking cured (min. 5 days), and the trench is completely or partially backfilled. Where practical, testing shall be performed fully isolated from the active distribution system.

B. The Contractor may, at his option, completely backfill the trench or partially backfill the trench over the center portion of each pipe section to be tested. However, the Engineer may direct the Contractor to completely backfill the trench if local traffic or safety conditions require.

C. For system operating pressures of 200 psi or less, perform the hydrostatic test at a pressure of no less than 100 psi above the normal operating pressure without exceeding the rating of the pipe and appurtenances. For system operating pressures in excess of 200 psi, perform the hydrostatic test at a pressure that is 1.5 times the normal operating pressure, but no more than the design rating of the pipe and appurtenances.

D. Valves shall not be operated in either direction at a differential pressure exceeding the rated valve working pressure. A test pressure greater than the rated valve working pressure can result in trapped test pressure between the gates of a double-disc gate valve. For tests exceeding the rated valve working pressure, the test setup should include a provision, independent of the valve, to reduce the line pressure to the rated valve working pressure on completion of the test. The valve can then be opened enough to equalize the trapped pressure with the line pressure, or the valve can be fully opened if desired.

E. The test pressure shall not exceed the rated working pressure or differential pressure of the valves when the pressure boundary of the test section includes closed, resilient-seated gate valves or butterfly valves.

F. Attach a tapping sleeve and valve assembly to the main. Pressure test the assembly prior to making the tap. The required test pressure shall be determined in the same manner as for pipe. The test is acceptable if there is no pressure drop in 15 minutes at test pressure.

3.02 FILLING AND TESTING

A. Slowly fill each segregated section of pipeline with water ensuring that all air is expelled. Extreme care must be taken to ensure that all air is expelled during the filling of pipe. The line shall stand full of water for at least twenty-four hours prior to testing to allow all air to escape. If necessary, tap the main at points of highest elevation to expel air as the pipe is filled. Remove the corporation stops and plug the taps after successfully filling the pipeline and expelling all air as approved by the Engineer.

B. Apply the specified test pressure, measured at the point of lowest elevation, using a pump connected to the pipe in a manner satisfactory to the Engineer. If the elevation of the high point of the pipeline being tested is such that the pressure during testing will be below 85% of the required test pressure, the Engineer will require a separate test to be performed on this section of pipeline. In lieu of a separate test, the test pressure measured at the lowest elevation may be increased, within the pressure rating of the pipeline material, such that the resulting pressure at the highest point exceeds 85% of the required test pressure. The test will be conducted for at least two hours at the required test pressure ± 5 psi.

C. Conduct a leakage test concurrently with the pressure test. Leakage is defined as the volume of the water that must be supplied into the newly laid pipeline to maintain pressure within 5 psi of the test pressure after it is filled and purged of air. Measure the volume of water using a calibrated container or meter.

D. No pipeline installation will be accepted by the Engineer if the leakage is greater than that shown in the following table:

Allowable Leakage per 1000 ft. of Pipeline*---gph

Avg. Test Pressure	Nominal Pipe Diameter—*in.*													
psi	4	6	8	10	12	14	16	18	20	24	30	36	42	48
450	0.57	0.86	1.15	1.43	1.72	2.01	2.29	2.58	2.87	3.44	4.30	5.16	6.02	6.88
400	0.54	0.81	1.08	1.35	1.62	1.89	2.16	2.43	2.70	3.24	4.05	4.86	5.68	6.49
350	0.51	0.76	1.01	1.26	1.52	1.77	2.02	2.28	2.53	3.03	3.79	4.55	5.31	6.07
300	0.47	0.70	0.94	1.17	1.40	1.64	1.87	2.11	2.34	2.81	3.51	4.21	4.92	5.62
275	0.45	0.67	0.90	1.12	1.34	1.57	1.79	2.02	2.24	2.69	3.36	4.03	4.71	5.38
250	0.43	0.64	0.85	1.07	1.28	1.50	1.71	1.92	2.14	2.56	3.21	3.85	4.49	5.13
225	0.41	0.61	0.81	1.01	1.22	1.42	1.62	1.82	2.03	2.43	3.04	3.65	4.26	4.86
200	0.38	0.57	0.76	0.96	1.15	1.34	1.53	1.72	1.91	2.29	2.87	3.44	4.01	4.59
175	0.36	0.54	0.72	0.89	1.07	1.25	1.43	1.61	1.79	2.15	2.68	3.22	3.75	4.29
150	0.33	0.50	0.66	0.83	0.99	1.16	1.32	1.49	1.66	1.99	2.48	2.98	3.48	3.97
125	0.30	0.45	0.60	0.76	0.91	1.06	1.21	1.36	1.51	1.81	2.27	2.72	3.17	3.63
100	0.27	0.41	0.54	0.68	0.81	0.95	1.08	1.22	1.35	1.62	2.03	2.43	2.84	3.24

*If the pipeline under test contains sections of various diameters, the allowable leakage will be the sum of the computed leakage for each size. The table has been generated from the formula: $L = \frac{S*D*P^{1/2}}{148{,}000}$ where L is the allowable leakage in gallons per hour, S is the length of pipe in feet, D is the nominal pipe diameter in inches, and P is the test pressure in psig.

E. Should any test disclose damaged or defective materials or leakage greater than that permitted, the Contractor shall, at Contractor's expense, locate and repair and/or replace the damaged or defective materials. Materials used for repair must be approved by the Engineer and meet the specifications. Repeat the tests until the leakage is within the permitted allowance and is satisfactory to the Engineer.

END OF SECTION

SECTION 15106

DUCTILE IRON PIPE AND FITTINGS
(Contractor Furnished)

PART 1: GENERAL

1.01 COORDINATION OF WORK

Connection to existing pipelines may require shutdown of Owner facilities. Closely coordinate construction work and connections with the Owner through the Engineer. The Engineer, in consultation with the Owner, may select the time for connection to existing pipelines, including Saturdays, Sundays, or holidays, which, in the opinion of the Engineer, will cause the least inconvenience to the Owner and/or its customers. Make such connections at such times as may be directed by the Owner, at the Contract prices, with no claim for premium time or additional costs.

1.02 RELATED WORK

Piping - General Provisions - Specification Section 15000

1.03 SUBMITTALS

Submit shop drawings and manufacturer's literature for all Contractor supplied materials promptly to the Engineer for approval in accordance with Specification Section 1300.

1.04 REFERENCES

Refer to current AWWA Standards:

AWWA C104 - American National Standard for Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water

AWWA C105 - American National Standard for Polyethylene Encasement for Ductile-Iron Pipe Systems

AWWA C110 - American National Standard for Ductile-Iron and Gray-Iron Fittings, 3-inch through 48-inch, for Water and Other Liquids

AWWA C111 - American National Standard for Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings

AWWA C115 - American National Standard for Flanged Ductile-Iron Pipe with Ductile-Iron or Gray-Iron Threaded Flanges

AWWA C116 - American National Standard for Protective Fusion-Bonded Epoxy Coatings for the Interior and Exterior Surfaces of Ductile-Iron and Gray-Iron Fittings for Water Supply Service

AWWA C150 - American National Standard for the Thickness Design of Ductile-Iron Pipe

AWWA C151 - American National Standard for Ductile-Iron Pipe, Centrifugally Cast, for Water

AWWA C153 - American National Standard for Ductile-Iron Compact Fittings, 3-inch through 24-inch and 54-inch through 64-inch, for Water Service

AWWA C600 -- AWWA Standard for Installation of Ductile-Iron Water Mains and Their Appurtenances

PART 2: PRODUCTS

Research has documented that certain elastomers (such as those used in gasket material) may be subject to permeation by lower-molecular weight organic solvents or petroleum products. Products supplied under this Specification Section assume that petroleum products or organic solvents will not be encountered. If during the course of pipeline installation the Contractor identifies, or suspects the presence of petroleum products or any unknown chemical substance, notify the Engineer immediately. Stop installing piping in the area of suspected contamination until direction is provided by the Engineer.

2.01 PIPE MATERIAL

A. General

Ductile iron pipe shall conform to the latest specifications as adopted by the American National Standards Institute, Inc., (ANSI) and the American Water Works Association (AWWA). Specifically, ductile iron pipe shall conform to AWWA Standard C151.

The pipe or fitting exterior shall be coated with a bituminous coating in accordance with AWWA Standard C151. The pipe or fitting interior shall be cement mortar lined and seal coated in compliance with the latest revision of AWWA Standard C104.

B. Quality

Pipe and fittings shall meet the following minimum quality requirements by conforming to the following:

1. AWWA C105 / ANSI A21.5 Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water Polyethylene Encasement for Ductile-Iron Pipe Systems
2. AWWA C110 / ANSI A21.10 Ductile Iron and Gray Iron Fittings, 3 NPS through 48 NPS for Water AWWA C111 / ANSI A21.11 Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
3. AWWA C115 / ANSI A21.15 Flanged Ductile-Iron Pipe with Ductile-Iron or Gray-Iron Threaded Flanges
4. AWWA C116 / ANSI A21.16 Protective Fusion-Bonded Epoxy Coating for the Interior and Exterior Surfaces of Ductile-Iron and Gray-Iron Fittings for Water Supply Service
5. AWWA C150 / ANSI A21.50 Thickness Design of Ductile-Iron Pipe

6. AWWA C151 / ANSI A21.51 Ductile-Iron Pipe, Centrifugally Cast, for Water
7. AWWA C153 / ANSI A21.53 Ductile-Iron Compact Fittings, 3 NPS through 24 NPS and 54 NPS through 64 NPS, for Water Service

Ductile iron water pipe and fittings will be accepted on the basis of the Manufacturer's certification that the material conforms to this specification. The certification for iron fittings shall list a fitting description, quantity, bare fitting weight and source, (AWWA Standard C110, C153 or Manufacturer, if fitting is not listed in either standard). The certification shall accompany the material delivered to the project site. The Owner reserves the right to sample and test this material subsequent to delivery at the project site. If foreign manufactured fittings are provided, then the Contractor is obligated to notify the Engineer with a submittal and provide the necessary documentation to satisfy the Engineer and the Owner that the materials provided meet the specified AWWA standards and, among other documentation that may be required, provide certificates of compliance on the component supplied.

C. Pipe Class

The pressure class of pipe to be furnished shall be in accordance with Table 1 and the notes listed below.

Table 1
MINIMUM RATED WORKING PRESSURE
FOR DUCTILE IRON PIPE MANUFACTURED IN ACCORDANCE
WITH AWWA Standard C151

Pipe Size (Inch)	Pressure Class
6	350
8	350
12	350
16	300
20	300
24	250

NOTES:

1. Larger pipe sizes up to 54-inch can be installed as pressure Class 200 with cover up to nine (9) feet and an operating pressure of 200 psi, where approved by the Engineer. When trench depths exceed fifteen (15) feet for pipe sizes of 16-inch or larger, the Engineer shall direct the Contractor on the proper class pipe to use.

2. The noted pressure class is adequate to support 3/4 and 1-inch corporation stops. Use a full saddle for larger taps (e.g.., air relief valves or larger corporations) due to limited wall thickness.

3. There are special conditions where a larger wall thickness is required. The Engineer shall direct the Contractor on the proper pressure class pipe to use in specific instances; e.g. at treatment plant or booster station sites where frequent excavation can be anticipated in the vicinity of pipe, where

the pipeline is laid on a river channel bottom to prevent external damage to the pipe and minimize the potential for costly pipe replacement, etc.

D. Testing

Perform a hydrostatic test of all pipe and appurtenances as required by AWWA Standard C151 and Specification Section 15030.

E. Joints

1. Mechanical and Push-On

Mechanical and push-on joints including accessories shall conform to AWWA Standard C111.

2. Flanged

Flanged joints shall conform to AWWA Standard C110 or ANSI B16.1 for fittings and AWWA Standard C115 for pipe. Do not use flanged joints in underground installations except within structures.

Furnish all flanged joints with 1/8-inch thick, red rubber or styrene butadiene rubber gaskets. The bolts shall have American Standard heavy unfinished hexagonal head and nut dimensions all as specified in American Standard for Wrench Head Bolts and Nuts and Wrench Openings (ANSI B18.2). For bolts of 1-3/4-inches in diameter and larger, bolt studs with a nut on each end are recommended. The high-strength, low-alloy steel for bolts and nuts shall have the characteristics listed in Table 6 of AWWA Standard C111. Exposed bolts and nuts in aggressive soils shall be Xylan or FluoroKote #1.

3. Restrained Joint Pipe

Restrained joints for pipes shall be of the boltless push-on type which provides joint restraint independent of the joint seal. Restrained push-on joints allowed for pipe only shall have accessories conforming to AWWA Standard C111. Restrained system shall be suitable for the following minimum working pressures:

Size (Inch)	Pressure (psi)
Less than 20"	350
20"	300
24"	250
30" - 64"	200

F. Suppliers

Suppliers acceptable to American Water are

1. United States Pipe & Foundry Co.
   1101 East Pearl Street
   Burlington, NJ 08016

2. Griffin Pipe Products Company
   1100 West Front Street
   Florence, NJ 08518

3. McWane Cast Iron Pipe Co.
   P. O. Box 607
   Birmingham, AL 35201

4. American Cast Iron Pipe Company
   2916 16h Street North
   Birmingham, AL 35207

2.02 FITTINGS

A. Ductile Iron Fittings

Standard fittings shall be ductile iron conforming to AWWA Standard C110. Compact ductile iron fittings shall meet the requirements of AWWA Standard C153.

1. Working Pressures

Fittings shall be suitable for the following working pressures unless otherwise noted in AWWA Standard C110 or C153:

	Pressure (psi)	
	Compact Fittings	Standard Fittings
Size	Ductile Iron	Ductile Iron
3" - 24"	350	250 , 350 (with special gaskets)
30" - 48"	250	250
54" - 64"	150	N/A

The use of standard ductile iron fittings having a 250 psi pressure rating with ductile iron pipe (having a rating of 350 psi) is not permitted except by the expressed written approval by the Engineer.

2. Coating and Lining

The fittings shall be coated on the outside with a petroleum asphaltic coating in accordance with AWWA Standard C110 or fusion coated epoxy in accordance with AWWA Standard C116 and lined inside with cement-mortar and seal coated in accordance with AWWA Standard C104 or fusion coated epoxy in accordance with AWWA Standard C116.

B. Suppliers acceptable to American Water are

1. (Sigma through) United States Pipe & Foundry Co.
   1101 East Pearl Street
   Burlington, NJ 08016

2. (Tyler Union –domestic only)
   McWane Cast Iron Pipe Co.
   P. O. Box 607
   Birmingham, AL 35201

3. American Cast Iron Pipe Company
   2916 16h Street North
   Birmingham, AL 35207

B. Joints

1. Mechanical and Push-On

Mechanical and push-on joints including accessories shall conform to AWWA Standard C111. Anti-Rotation I T-Bolts shall be used on mechanical joints shall be of domestic origin, high strength, low alloy steel bolts only, meeting the current provisions of American National Standard ANSI/AWWA C111/A21.1-90 for rubber gasket joints for cast iron or ductile iron pipe and fittings. Bolt manufacturer's certification of compliance must accompany each shipment. T-bolts shall be Xylan or FluoroKote #1, (corrosion resistant) to handle corrosive conditions on any buried bolts.

2. Flanged

Flanged joints shall meet the requirements of AWWA Standard C115 or ANSI B16.1. Do not use flanged joints in underground installations except within structures. Furnish all flanged joints with a minimum 1/8-inch, thick red rubber or styrene butadiene rubber gasket. The bolts shall have American Standard heavy unfinished hexagonal head and nut dimensions all as specified in ANSI B18.2. Xylan or FluoroKote #1 Hex Bolts (corrosion resistant) to handle corrosive conditions shall be used on any buried flanged bolts. Flange gaskets shall be rubber in composition; paper gaskets are not permitted.

Bolts and nuts hall be threaded in accordance with ASME/ANSI B1.1, Unified Inch Screw Threads (UN and UNR Thread Form) class 2A external and class 2B internal. For bolts of 1-3/4-inches in diameter and larger, bolt studs with a nut on each end are recommended. Material for bolts and nuts shall conform to ASTM A307, 60,000 PSI Tensile Strength, Grade B, unless otherwise specified. Bolt manufacturer's certification of compliance must accompany each shipment.

3. Restrained

Restrained joints for valves and fittings shall be of the boltless push-on type which provides joint restraint independent of the joint seal. Field Lok gaskets are not permitted on valves or fittings. Restrained push-on joints allowed for pipe only shall have accessories conforming to AWWA Standard C111. Restrained system shall be suitable for the following minimum working pressures:

Size	Pressure (psi)
Less than 20"	350
20"	300
24"	250
30" - 64"	250

Where adjacent fittings are to be placed (as in a mechanical joint hydrant tee and a mechanical joint hydrant valve), the use of a suitably sized Foster adaptor is permitted to facilitate restraint between the fittings.

PART 3: EXECUTION

3.01 INSTALLATION

Follow the provisions of Specification Section 15000 and 02210 in addition to the following requirements:

A. Push-On Joints

Clean the surfaces that the gasket will contact thoroughly, just prior to assembly using a bacteria free solution (bleach, potable water or NSF approved material). Insert the gasket into the groove in the bell. Apply a liberal coating of special lubricant to the gasket and the spigot end of the pipe before assembling the joint. Center the spigot end in the bell and push home the spigot end.

B. Mechanical Joints

Clean and lubricate all components with soapy water prior to assembly. Slip the follower gland and gasket over the pipe plain end making sure that the small side of the gasket and lip of the gland face the bell socket. Insert the plain end into socket. Push gasket into position with fingers. Seat gasket evenly. Slide gland into position, insert bolts, and tighten nuts by hand. Tighten bolts alternately (across from one another) to the recommended manufacturing rating or if not provided, to the following normal torques:

Bolt Size	Range of Torque In Foot-Pounds
5/8"	40 - 60
3/4"	60 - 90
1"	70 - 100

1-1/4"	90 - 120

After field installation, all bolts shall receive petrolatum tape or petroleum wax protection or other approved coating material. Protection shall be applied before applying polywrap per specification 15131.

C. Restrained Joints

1. Ball and Socket

Assemble and install the ball and socket joint according to the manufacturer's recommendations. Thoroughly clean and lubricate the joint. Check the retainer ring fastener.

2. Push-On

Assemble and install the push-on joint according to the manufacturer's recommendations. Thoroughly clean and lubricate the joint. Check the retainer ring fastener.

Protect pipe from damage from the jacking device (backhoe bucket, pipe jack, etc.) when "pushing home" any pipe by using wood or other suitable (non metallic) material.

(3) Mechanical Joint

Assemble and install the mechanical joint according to the manufacturer's recommendations. Thoroughly clean and lubricate the joint. Use approved restrained joint device on fittings and valves where required and approved for use by Engineer.

D. Pipe Protection

Protect pipe from damage from the jacking device (backhoe bucket, pipe jack, etc.) when "pushing home" any pipe. Wood or other suitable material (non metallic) shall be used to push home the pipe.

E. Gaskets

Gaskets shall be as provided or recommended by the manufacturer and satisfy AWWA standard C111 in all respects. As noted in the products section of this specification, some gasket materials are prone to permeation of certain hydrocarbons which may exist in the soil (see part 2). Under these conditions and at the Engineer's discretion require contractor to provide FKM (Viton, Flourel) gasket material in areas of concern.

END OF SECTION

SECTION 15131

PIPING SPECIALTIES
(Contractor Furnished)

PART 1: GENERAL

1.01 SCOPE

This Specification Section covers the furnishing and installation of miscellaneous piping specialties as shown on the Drawings or as required to fulfill the intent of the project.

PART 2: PRODUCTS

2.01 POLYETHYLENE ENCASEMENT

A. Polyethylene encasement shall conform to AWWA Standard C105. The polyethylene film supplied shall be translucent and blue in color (or as specified in section 01011) and distinctly marked (at minimum 2 foot intervals) with the following information:

1. manufacturer's name (or trademark),
2. year manufactured,
3. minimum film thickness and material type (LLDPE or HDCLPE),
4. range of nominal pipe diameter size
5. ANSI/AWWA C105/A21.5 (compliance)
6. A warning "WARNING–CORROSION PROTECTION-REPAIR ANY DAMAGE
7. labeled "WATER"

B. Tape shall be polyethylene compatible adhesive and a minimum of 1.5" wide. Shall be Scotchwrap #50, Fulton #355, or Polyken #900.

C. Store all polyethylene encasement out of the sunlight. Exposure of wrapped pipe should be kept to a minimum.

D. Suppliers of polyethylene encasement include .....

2.02 VALVE BOXES

A. All valves shall be provided with valve boxes of a design approved by the Engineer. Valve boxes shall be of the standard, adjustable, cast iron extension type, multiple piece, 5-1/4-inch shaft, screw type, and of such length as necessary to extend from the valve to finished grade. Cast iron valve boxes shall be hot coated inside and out with an asphaltic compound.

B. Valve boxes shall be manufactured by one of the following "approved manufacturers: Bingham & Taylor, Mueller, Handley Industries, A.Y. McDonald, Quality Water Products, or Clay and Bailey.

C. Valve box bases shall conform to the following:

Valve Size	Base
4" and smaller	round, 8" in height, 10-7/8" diameter at bottom
6" and 8"	round, 11" in height, 14-3/8" diameter at bottom
10" and larger	oval, 11" in height, 15" x 11-1/8" diameter at bottom

2.03 RODS, BOLTS, LUGS AND BRACKETS

A. All steel rods, bolts, lugs and brackets, shall be ASTM A36 or A307 carbon steel with xylan coating as a minimum requirement. The bolts shall have American Standard heavy unfinished hexagonal head and nut dimensions all as specified in ANSI B18.2. Xylan or FluoroKote #1 T-Bolts, corrosion resistant to handle corrosive conditions shall be used on any buried flanged bolts.

B. After field installation, all steel surfaces shall receive a petrolatum wax tape coating in accordance with AWWA Standard C217. Suppliers include, but are not limited to, Tapecoat® Envirotape® and Denso Densyl Tape. Surface preparation and tape installation shall be in accordance with ASTM C217 and the manufacturer's recommendations. Subject to approval by the ENGINEER, an alternative corrosion protection for exposed buried metal is an aerosol applied rubberized coating. The material shall be rapid dry and specifically designed for corrosion protection. 3M Rubberized Underseal Undercoating 08883 or any equivalent rubberized-bitumen based spray-on undercoating may be used. Follow manufacturer's recommendations for storage and application.

2.04 RETAINING GLANDS

A. All retaining glands shall be ductile iron with ductile iron set screws. Pressure ratings for use with ductile iron pipe shall be a minimum of 250 psi. Retainer Glands shall be coated with electrostatically applied baked-on polyurethane coating or approved equal. Locking wedges, bolts, and set screws shall be coated with Xylan or FluoroKote #1.

B. Retaining glands shall be manufactured by one of the following "approved manufacturers."

EBBA Iron, Inc.
PO Box 857

Eastland Texas 76448

2.05 TEST /TRACER BOXES

A. All test/tracer boxes shall be 18" plastic box flared and squared at base and have a 4" I.D. with a 1 ½" cast iron flange. Lid shall be a one piece locking lid with "Test Station" marked on lid and shall contain 5 screw-type brass terminals on a non conductive terminal board.

B. Test/tracer boxes shall be manufactured by one of the following "approved manufacturers":

Handley Industries, Inc.
2101 Brooklyn Rd.
Jackson, MI 49203
Model T-45

2.06 MARKING POSTS

A. All marking posts shall be Rhino FiberCurve™ with PolyTechCoating or equivalent fiber-composite marking posts. The color shall be standard blue for water and the length shall be a minimum 66-inches. The decals be UV stable all weather type with a no dig symbol and white and contrasting white and blue vertical lettering: Butterfly and Gate Valves decals (Rhino GD-5226C) Blow-Offs decals (Rhino GD-5411C) Pipeline decals (Rhino GD-1333C).

B. Marking Posts shall be manufactured by one of the following "approved manufacturers":

Rhino
280 University Drive Southwest
Waseca, MN 56093
1-800-522-4343

Carsonite International
605 Bob Gifford Boulevard
Early Branch, SC 29916
1-800-648-7916

PART 3: EXECUTION

3.01 INSTALLATION

Install "piping specialties" in accordance with the general provisions provided in Specification Sections 01100 and15000 and the following:

A. Polyethylene Encasement

1. Encase piping in polyethylene as required to prevent contact with surrounding backfill and bedding material in all areas shown on the plans or designated by the Engineer. Polyethylene shall be 12 mils .
2. Install the polyethylene wrap material in accordance with the DIPRA Field Polyethylene Installation Guide and AWWA Standard C105. Polyethylene shall fit snugly and not tightly stretched. All holes or tears shall be repaired with tape. Large holes or tears shall be

repaired by taping another piece of polyethylene over the hole. Tape or plastic tie straps at joint overlaps and at every 3 foot interval.

3. Dig bell holes and slide polywrap over the adjacent pipe and provide a minimum of 1 foot of overlap. Tightly secure bottom of polywrap using two to three passes of polyethylene tape on the pipe to polywrap connection and the overlap polywrap to polywrap connection.
4. Where polyethylene wrapped pipe being installed connects to a pipe that is not wrapped (including existing pipe), extend the wrap a minimum of 3 feet onto the previously uncovered pipe. This includes service lines which may be wrapped in polyethylene or dielectric tape.
5. Exposure of wrapped pipe to sunlight should be kept to a minimum. Pipe can be stored with the polywrap on for a maximum of 30 days.
6. At no time shall the polywrapped pipe be subjected to a point load during handling, temporary storage, or installation. The polywrap must be moved away from the timbers or hoisting device while on the pipe to prevent point loads and resulting pin holes.
7. Direct service taps for polyethylene encased pipe shall follow the procedure described in AWWA Standard C600. Access to the main for tapping through polyethylene is accomplished by making two to three passes of polyethylene tape around the pipe and over the polywrap. The tap is to be made directly through the tape and polywrap.
8. Tape shall be polyethylene compatible adhesive and a minimum of 1.5" wide. Shall be Scotchwrap #50, Fulton #355, or Polyken #900.

B. Valve Boxes

Valve boxes shall be supported so that no load can be transmitted from the valve box to the valve. See Detail Drawing 0201-0601-SD59. Install a self-centering alignment ring at the operating nut American Flow Control, or equal or otherwise make sure that the bottom of the box is centered over the operating and runs perpendicular to the horizontal.

C. Test/Tracer Wire Boxes

Boxes shall placed at areas designated in the plans and shall be flush with existing grade unless otherwise noted.

D. Marker Posts

Install Marker Posts using equipment designed for its installation per manufacturer guidelines and place at locations noted in the drawings or as approved by Engineer.

E. Corporations and Curb Stops

Service line piping shall be compatible with corporation and curbs stops provided with appropriate protection between dissimilar materials and a minimum of interconnecting fittings

END OF SECTION

SECTION 15151

GATE VALVES
(Contractor Furnished)

PART 1: GENERAL

1.01 SCOPE

Furnish, install, and test all gate valves shown on the Drawings.

1.02 SUBMITTALS

Submit shop drawings and manufacturer's literature to the Engineer for approval in accordance with Specification Section 1300.

1.03 RELATED WORK

Specification Section 15000 - Piping - General Provisions.

PART 2: PRODUCTS

2.01 SMALL GATE VALVES

A. All gate valves, 3 inches through 12 inches NPS, shall be iron body, resilient-seated, nut-operated, non-rising stem gate valves suitable for buried service. The valve interior and exterior shall be epoxy coated at the factory by the valve manufacturer in accordance with AWWA Standard C550 (6-8 mil average, 4 mil minimum). The valves shall be designed for a minimum differential pressure of 250 psi and a minimum internal test pressure of 500 psi unless otherwise noted on the plans. Valves shall be designed to operate in the vertical position.

B. Valves shall comply fully with AWWA Standard C509. Valve ends shall be push on joint or MJ (when restrained), or as shown on the plans or approved in writing in accordance with AWWA Standard C111. Stems shall be made of a low zinc alloy in accordance with AWWA C509 4.2.2.4.3. Stem seals shall be double O-ring stem seals. Square operating nuts conforming to AWWA Standard C509 shall be used. Valves shall open (left or right) in accordance with the Owner's standard. All valve materials shall meet the requirements of NSF 61.

C. Test valves (Operation Test and Hydrostatic Tests) at the manufacturer's plant in accordance with AWWA Standard C509. Provide the Engineer with certified copies of all tests prior to shipment. The Engineer reserves the right to observe all tests.

D. Acceptable manufacturers: Mueller Company, Decatur, Illinois; ~~Clow Canada, Hamilton, Ontario; M&H Valve, Anniston, Alabama; United State Pipe and Foundry Burlington, New Jersey; American Flow Control, Birmingham, Alabama~~.

2.02 LARGE GATE VALVES

A. Gate valves larger than 12-inches NPS shall be iron body, double disc (metal to metal seat), parallel seats, bronze mounted, rubber O-ring packing seals, epoxy coated interior and exterior meeting the requirements of AWWA Standard C550, and conforming to AWWA Standard C500. Stems shall be made of a low zinc alloy in accordance with AWWA C500 4.2.2.4.3. All valves shall have openings through the body of the same circular area as that of the pipe to which they are attached. All valves furnished shall open (left or right) in accordance with the Owner's standard. All valve materials shall meet the requirements of NSF 61.

B. Test valves (Operation Test and Hydrostatic Tests) at the manufacturer's plant in accordance with AWWA Standard C515. Provide the Engineer with certified copies of all tests prior to shipment. The Engineer reserves the right to observe all tests.

C. Valves shall have mechanical joint ends unless otherwise designated on the plans or approved by the Engineer.

D. The valves shall be designed for a minimum differential pressure of 150 psi and a minimum internal test pressure of 300 psi, unless otherwise noted on the plans. Make all valves tight under their working pressures after they have been placed and before the main is placed in operation. Any defective parts shall be replaced at the Contractor's expense.

E. Acceptable manufacturers: Mueller Company, ACIPCO (American Flow Control division, Waterous only), McWane, Inc. (Clow and M&H Divisions only), U.S. Pipe, and Crane Co. (Stockham Division only).

PART 3: EXECUTION

3.01 INSTALLATION

Install the valves in strict accordance with the requirements contained in Specification Section 15000 and detail drawings. All large gate valves shall be restrained.

3.02 PROTECTION

After field installation of the valve all external bolts except the operating nut shall receive a layer of tape coating or approved rubberized-bitumen based spray-on undercoating applied before backfill. If polyethylene is applied to the pipe, the entire valve shall be encased in polyethylene encasement prior to backfill. The polyethylene encasement shall be installed up to the operating nut leaving the operating nut exposed and free to be operated. Valve box shall be installed per Piping Specialties Specification 15130 or 15131.

END OF SECTION

SECTION 15171

TAPPING SLEEVES, SADDLES AND VALVES
(Contractor Furnished)

PART 1: GENERAL

1.01 SCOPE

Furnish, install and test all tapping sleeves, tapping valves, and tapping saddles as shown on the Drawings.

1.02 RELATED WORK

Specification Section 15000 - Piping - General Provisions

1.03 SUBMITTALS

Submit shop drawings and manufacturer's literature to the Engineer for approval in accordance with Specification Section 1300.

PART 2: PRODUCTS

2.01 GENERAL

All tapping sleeves, saddles and valves shall be designed for a working pressure of at least 250 psig for 12-inch and smaller. The valves shall be designed for a minimum differential pressure of 250 psi and a minimum internal test pressure of 500 psi unless otherwise noted on the plans.

2.02 DUCTILE IRON TAPPING SLEEVES

Verify the type of existing pipe and the outside diameter of the pipe on which the tapping sleeve is to be installed.

Tapping sleeves shall be ductile iron dual compression type unless otherwise specified on the Drawings. The Drawings may require the use of corrosion resistant tapping sleeves in addition to polywrap in areas with corrosive soils. The sleeves shall be made in two halves which can be assembled and bolted around the main. Sleeves shall meet the requirements of NSF 61. Outlet flanges shall conform to the flange requirements of AWWA C110. All valves furnished shall open (left or right) in accordance with the Owner's standard.

Acceptable manufacturers: McWane (Clow and M&H), U.S. Pipe (Mueller), and AFC (Waterous).

2.03 TAPPING VALVES

The horizontal tapping valve shall conform to the applicable requirements of AWWA Standard C509. All tapping valves, 3 inches through 12 inches NPS, shall be ductile

iron body, resilient-seated, nut-operated, non-rising stem gate valves suitable for buried service. The valve interior and exterior shall be epoxy coated at the factory by the valve manufacturer in accordance with AWWA Standard C550 (6-8 mil average, 4 mil minimum). The tapping valves shall have flanged inlets with mechanical joint outlets, enclosed bevel gears, bypass valve, rollers, tracks and scrapers. All valves furnished shall open (left or right) in accordance with the Owner's standard.

Acceptable manufacturers: McWane (Clow and M&H), U.S. Pipe (Mueller), and AFC (Waterous).

2.04 STAINLESS STEEL TAPPING SLEEVES

The stainless steel band flange shall be manufactured in compliance with AWWA C207, Class D ANSI B.16.1 drilling, recessed for tapping valve MSS-SP60. Mechanical Joint tapping sleeve outlet shall meet or exceed all material specifications as listed below and be suitable for use with standard mechanical joint by mechanical joint resilient wedge gate valves per ANSI/AWWA C509-94 and be NSF 61 approved.

A. Tapping sleeves from 4" through 12"
Tapping sleeves to be attached to 4" through 12" nominal pipe diameter shall meet the following minimum requirements.

1. The entire fitting shall be stainless steel type 304 (18-8). The body, lug, and gasket armor plate shall be in compliance with ASTM A240. The Flange shall be cast stainless steel in compliance with ASTM A743. The MJ outlet shall be one-piece casting made of stainless steel. The test plug shall be ¾" NPT in compliance with ANSI B2.1 and shall be lubricated or coated to prevent galling. All metal surfaces shall be passivated after fabrication in compliance with ASTM A-380.
2. The gasket shall provide a 360-sealing surface of such size and shape to provide and adequate compressive force against the pipe after assembly, to affect a positive seal under the combinations of joint and gasket tolerances. The materials used shall be vulcanized natural or vulcanized synthetic rubber with antioxidant and antiozonant ingredients to resist set after installation. No reclaimed rubber shall be used. A heavy-gauge-type 304-stainless armor plate shall be vulcanized into the gasket to span the lug area.
3. The lugs shall be heliarc welded (GMAW) to the shell. The lug shall have a pass-through-bolt design to avoid alignment problems and allow tightening from either side of the main. Bolts shall NOT BE integrally welded to the sleeve. Finger Lug designs are not approved; it is the intent of these specifications to allow a tapping sleeve that has a lug design similar to the approved models.
4. Bolts and nuts shall be type 304 (18-8) stainless steel and Teflon coated or as specified in the bolt section below at the discretion of the Engineer. Bent or damaged units will be rejected.
5. Quality control procedures shall be employed to insure that the shell, lug, (4" and Larger Nominal Pipe Diameter) armor plate, gasket and related hardware are manufactured to be free of any defects. Each unit, after proper installation, shall have a working-pressure rating up to 250 psi.

6. The sleeve construction shall provide a positive means of preventing gasket cold flow and/or extrusion.
7. Each sleeve shall be stenciled, coded or marked in a satisfactory manner to identify the size range. The markings shall be permanent type, water resistant, that will not smear or become illegible.

B. Tapping sleeves from 16" and larger
Tapping sleeves attached to 16" and larger nominal pipe diameter shall meet the following minimum requirements:

1. The body shall be in compliance with ASTM A285, Grade C or ASTM A36. The test plug shall be ¾" NPT conforming to ANSI B2.1.
2. The gasket shall provide a watertight sealing surface of such size and shape to provide an adequate compressive force against the pipe. After assembly, the gasket will insure a positive seal under all combinations of joint and gasket tolerances. Gaskets shall be formed from vulcanized natural or vulcanized synthetic rubber with antioxidant ingredients to resist set after installation. No reclaimed rubber shall be used.
3. Bolts and nuts shall be high strength, corrosion resistant, low alloy, pre AWWA C111, ANSI A21.11 and as specified in the subsection on bolts in this specification.
4. Quality control procedures shall be employed to insure that the shell, gaskets, and related hardware area are manufactured to be free of visible defects. Each unit, after proper installation, shall have a working-pressure rating up to 200 psi.
5. Unless otherwise noted, unit shall be protected by electrostatically applied baked epoxy or polyurethane.
6. Units for concrete, steel cylinder pipe shall be furnished with load bearing setscrews on the gland flange to transfer loads on the outlet away from the steel cylinder and onto the sleeve. Epoxy –coated tapping sleeves do not require grout seal cavity (AWWA M-9 Manual).
7. Each sleeve shall be stenciled, coded or marked in a satisfactory manner to identify the size range. The marking shall be permanent type, water resistant, that will not smear or become illegible.

2.05 FABRICATED STEEL TAPPING SLEEVES

The fabricated steel tapping sleeve shall be manufactured in compliance with AWWA C207. Sleeves shall be fabricated of minimum three-eights (3/8) inch carbon steel meeting ASTM A285 Grade C. Outlet flange shall meet AWWA C-207, Class "D" ANSI 150 lb. drilling and be properly recessed for the tapping valve. Bolts and nuts shall be high strength low alloy steel to AWWA C111 (ANSI A21.11). Gasket shall be vulcanized natural or synthetic rubber. Sleeve shall have manufacturer applied fusion bonded epoxy coating, minimum 12 mil thickness., Class D ANSI B.16.1 drilling, recessed for tapping valve MSS-SP60. Mechanical Joint tapping sleeve outlet shall meet or exceed all material specifications as listed below and be suitable for use with standard mechanical joint by mechanical joint resilient wedge gate valves per ANSI/AWWA C509-94 and be NSF 61 approved.

2.06 TAPPING SADDLES

Unless otherwise specified by the Drawings, tapping saddles conform to the requirements of AWWA Standard C800 for the High Pressure class tapping saddles. Tapping saddles shall consist of ductile iron outlet castings, attached to the pipeline with high strength stainless steel straps. Castings shall be sealed to pipeline with O-ring seals. Saddles shall have ANSI A21.10 flanged outlets counterbored for use with tapping valves and tapping equipment.

2.06 BOLTS

All bolts shall have American Standard heavy unfinished hexagonal head and nut dimensions all as specified in ANSI B18.2. Bolts shall be Xylan or FluoroKote #1 suitable for direct bury in corrosive soils.

PART 3: EXECUTION

3.01 INSTALLATION

Install the tapping sleeves, saddles, and valves in strict accordance with the requirements of Specification Section 15000. Install the tapping sleeves, tapping saddles, and tapping valves in accordance with the manufacturer's instructions. The tapping procedure is to be in accordance with the tapping machine manufacturer's instructions.

3.02 PROTECTION

After field installation of the valve all external bolts except the operating nut shall receive a layer of tape coating or approved rubberized-bitumen based spray-on undercoating applied before backfill. If polyethylene is applied to the pipe, the entire sleeve and valve assembly shall be encased in polyethylene encasement prior to backfill. The polyethylene encasement shall be installed up to the operating nut leaving the operating nut of the tapping valve exposed and free to be operated

3.03 PRELIMINARY TESTING

Perform a hydrostatic test of the tapping sleeve and valve assembly in accordance with Specification Section 15030 after installation of the tapping sleeve and valve, but prior to making the tap. The test shall be made with the valve open using a tapped mechanical joint cap. No leakage is acceptable. The test pressure shall be maintained for a minimum of 15 minutes.

Perform hydrostatic test of tapping saddles in accordance with AWWA Standard C800.

END OF SECTION

SECTION 15181

FIRE HYDRANTS
(Contractor Furnished)

PART 1: GENERAL

1.01 SCOPE

Furnish all labor, material, tools, and equipment required to install fire hydrants at the location shown on the plans, or where designated by the Engineer.

PART 2: PRODUCTS

2.01 MATERIAL

A. All fire hydrants shall be ductile iron and conform to the requirements of AWWA C502, traffic-model break-away type fire hydrants.

B. Contact the local water district and obtain written fire hydrant mechanical details for the water district prior to ordering any fire hydrants for the Work. All fire hydrants shall open left or right as required and be clearly marked on the top of the hydrant with a 1-1/2" pentagon top nut and have not less than two (2) O- ring stem seals. The number and sizes of hose nozzle outlets is dependent on the local regulation. (Most typical is two (2) bronze male threaded 2-1/2" hose outlet nozzles and one (1) bronze male threaded 4-1/2" pumper outlet nozzle with American National Fire Hose Connection Screw Threads (NH).) The hydrant shall be break-away traffic flange, 5-1/4" valve opening, 6" mechanical joint pipe connection. The hydrant interior and exterior shall be epoxy coated at the factory by the hydrant manufacturer in accordance with AWWA Standard C550 (6-8 mil average, 4 mil minimum). The Contractor shall contact the local water district and obtain written fire hydrant mechanical details for the water district prior to ordering any fire hydrants in accordance with the drawings

D. All hydrant materials shall meet the requirements of NSF 61.

E. Acceptable manufacturers and models, subject to the specifications set forth, include:

- ~~American Darling B-84-B, 5-1/4" valve opening (by the American Flow Control Division of ACIPCO)~~
- ~~Kennedy Guardian, 5-1/4" valve opening (by Kennedy Valve Company Division of McWane, Inc.)~~
- Mueller Super Centurion 250, Model A-423, 5-1/4" valve opening

PART 3: EXECUTION

3.01 INSPECTION PRIOR TO INSTALLATION

A. Contractor shall inspect all fire hydrants upon receipt. Cycle each hydrant to full open and full closed positions to ensure that no internal damage or breakage has occurred during shipment and handling. Check all external bolts for proper tightness.

B. After inspection, close the hydrant valves and replace the outlet nozzle caps to prevent the entry of foreign matter. Protect stored hydrants from the weather/elements with the inlets facing downward.

3.02 INSTALLATION

A. Locate hydrants on the plans or as directed by the Engineer and in compliance with local regulations. The location shall provide complete accessibility and minimize the possibility of damage from vehicles or injury to pedestrians. When placed behind the curb, the hydrant barrel shall be set so that no portion of the pumper or hose nozzle cap will be less than eighteen to twenty- four inches, depending on local requirements, from the gutter face of the curb. All hydrants shall stand plumb with the pumper nozzle facing the curb. Set hydrants with nozzles at least eighteen inches above the finished grade as shown on the plans. Set the break flange at least two but no more than six inches above finished grade, or as directed by the Engineer. Connect each hydrant to the main with a six inch branch connection controlled by an independent six inch gate valve, unless otherwise shown on the plans. All hydrants assemblies must be restrained from the hydrant back to the main.

B. The Engineer may authorize hydrant protection using steel pipe bollards when hydrant installations have a greater than normal exposure to vehicular damage (e.g. parking lot installations, unusual driving situation, etc.). Install all such protection designated by the Engineer. Locate bollards as necessary adjacent to the hydrant and in such a manner as to not interfere with the ability to connect hoses or operate the hydrant as per detail drawing. Additionally, locate the bottom of the bollard and encasement above the hydrant supply piping and valve to prevent the possibility of damage to the piping should the bollard be displaced when hit. Payment for bollards shall be per the supplemental unit price schedule.

C. Unless otherwise directed by the Engineer, excavate a drainage pit two feet in diameter and two feet deep below but not beyond each hydrant. Fill the pit with compacted ¾ inch clean granular under and around the base of the hydrant to a level 12 inches above the hydrant drain opening. No hydrant drainage pit shall be connected to a sewer.

D. Cover the drainage area with geotextile fabric. The fabric shall completely isolate the gravel or stone so that no fill material or adjacent earth comes in contact with pit material.

E. Notify the Engineer of situations where the ground water table is above the drain opening of dry barrel hydrants. If directed by Engineer, plug the drain opening using a method acceptable to the hydrant manufacturer. No drainage pit is required when the hydrant drain is plugged. Mark the hydrant, in a manner acceptable to the Owner, to indicate that the drain opening has been plugged. Operation of a hydrant

with plugged drain leaves the hydrant barrel full of water. Pump the hydrant barrel dry after each use.

F. Reaction or thrust blocking at the base of each hydrant must not obstruct the drainage outlet of the hydrant. The size and shape of concrete thrust backing and the number and size of tie rods, when required, shall be approved by the Engineer. Use the thrust blocking material specified in Specification Section 3300. See Specification Section 15000 for tie rod requirements.

3.03 TESTING

After installation and before backfilling (and after pressure testing the water main) test the hydrant as follows:

A. Pressure Test
   1. Open the hydrant fully and fill with water; close all outlets.
   2. To prevent caps from being blow off dry-barrel hydrants and to prevent other possible damage, vent air from the hydrant by leaving one of the caps slightly loose as the hydrant is being filled. After all air has escaped, tighten the cap before proceeding.
   3. Apply line pressure.
   4. Check for leakage at flanges, nozzles and operating stem.
   5. If leakage is noted, repair or replace components or complete hydrant until no leaks are evident.

B. Drainage Test for Dry-Barrel Hydrants
   1. Following the pressure test, close hydrant.
   2. Remove one nozzle cap and place pylon or hand over nozzle opening.
   3. Drainage rate should be sufficiently rapid to create a noticeable suction.
   4. After backfilling, operate the hydrant to flush out any foreign material.
   5. Tighten nozzle caps, them back them off slightly so that they will not be excessively tight; leave tight enough to prevent removal by hand.

C. Paint all hydrant above the bury line in accordance with the local operations standards. Touch up paint (as specified by the OWNER under Special Conditions) shall be applied upon completion of installation as needed. Take extreme care to avoid getting any paint on the "O" ring under the top operating nut or on the hydrant nozzles. Should paint be found on the "O" ring, the Contractor shall remove the paint and replace the "O" ring at his expense. Any paint on the hydrant nozzles shall be removed at the Contractor's expense.

END OF SECTION

SECTION 15185

ABANDONMENT OF MAINS AND HYDRANTS

PART 1: GENERAL

1.01 SCOPE

A. Transfer all services from main to be abandoned to the new main, make designated connections to existing water lines, and install new hydrants. Upon completion, testing and satisfactory operation of the new mains and connections, cut the existing pipeline to provide a break between the portion of the system remaining in use and the portion to be abandoned, remove all hydrants designated to be abandoned and cap all remaining live ends of the existing mains including hydrant laterals. Completely cover existing hydrants designated to be abandoned to prohibit use until the hydrants are removed. Remove and deliver hydrants to the Owner or disposed of as directed by the Engineer. Remove valve boxes of abandoned valves as directed by the Engineer.

B. Cutting and Plugging (Capping)

Cut the existing pipe at the point shown on the plans or designated by the Engineer. The method of cutting shall be approved by the Engineer. The plugs and/or caps used in connection with the work under this item shall be either mechanical joint or slip joint as compatible with the pipe being capped and shall be manufactured in accordance with AWWA Specification C-110. After the plug or cap is installed, provide the required blocking to adequately brace the plug or cap. Blocking may be used temporarily against the abandoned pipe. However, the permanent blocking shall be installed such that future disturbances of the abandoned pipe shall not affect the permanent blocking. After the water line has been plugged or capped and the permanent blocking has been installed, backfill the excavation as specified under Section 02210.

Note: The cost of all work associated with abandonment of existing pipelines and hydrants shall be included in the price of the cut and plug bid item if provided. Otherwise the cost shall be incorporated in the cost of installing the main that is replacing the abandoned pipe.

C. Treating Remaining Pipe in Place

Water mains will generally remain in place without further action unless otherwise directed by the ENGINEER. There may be water mains that are judged to be of questionable structural condition and may be specified for filling with grout or flowable fill. The contract documents will

identify any main or section of main that is to be filled. Pipe located above ground (mounted on bridges, etc.) will be removed.

1.02 REFERENCES

AWWA M16 Manual, Work practices for Asbestos Cement Pipe

PART 2: PRODUCTS

Not Used

PART 3: EXECUTION

Where AC pipe removal is required, pipe cutting and removal shall only be handled by a company specialized in handling AC pipe who will strictly adhere to the AWWA M16 Manual, Work practices for Asbestos Cement Pipe.

END OF SECTION

SECTION 15191

AIR RELEASE, BLOW-OFF OUTLETS AND RELATED COMPONENTS
(Contractor Furnished)

PART 1: GENERAL

1.01 SCOPE

Furnish and install air release and blow-off outlets at the locations shown on the Drawings or as directed by the Engineer.

1.02 SUBMITTALS

Submit shop drawings and manufacturer's literature for equipment to be supplied to the Engineer for approval in accordance with Specification Section 1300. All Products shall meet the requirements of NSF 61

1.03 REFERENCES

Refer to current AWWA Standards: AWWA Standard for Air-Release, Air/Vacuum, and Combination Air Valves for waterworks Service C512

PART 2: PRODUCTS

2.01 COMBINATION AIR/VACUUM RELEASE VALVES

Provide 1" APCO Model No. 143C as manufactured by Valve and Primer Corporation (Schaumburg, IL) or 1" Valvematic (Elmhurst, IL) Model 201 for mains 12" and smaller unless noted otherwise on the plans. Provide 2" APCO Model No. 145C as manufactured by Valve and Primer Corporation or Valvematic Model 202C for mains 16" and larger unless noted otherwise on the plans. Combination valves shall be double acting to prevent accumulation of air in the pressurized main and to permit air to enter the pipe when pressure seriously drops. Bodies shall be cast iron with stainless steel floats.

2.02 BLOWOFF FLUSHING HYDRANT ASSEMBLY

Blow off assembly for underground applications shall be designed to fit within a standard valve box. In areas prone to cold weather they shall be self draining and non-freezing. All working parts shall be serviceable from above with no digging required. They shall be operated such that the device goes from full open to full close in a ¼ turn clockwise turn. Approved types of flushing hydrants are Tru-Flo Model TF 500 by the Kupferle Foundry or equal.

2.03 COPPER PIPE

Copper pipe shall be Type L or Type K, as specified in plans, meeting the requirements of ASTM Standard B88.

2.04 CORPORATION STOPS

Corporation stops shall be of the brass ball valve type manufactured in accordance with AWWA Standard C800. The inlet connection shall have standard AWWA tapered threads unless otherwise required by the Engineer. The outlet connection shall be a compressed fitting end. The sizes shall range from 1/2" to 2" and shall match the size of specified copper pipe material.

Acceptable manufacturers and model numbers are:

- Ford Meter Box Company - FB400 thru FB1600
- Mueller – B-25000
- A.Y. McDonald – 4701B Series

2.06 CURB STOPS

Curb stops shall be bronze body construction, ball valves, with Double O-ring stem seals. Curb stops shall conform to AWWA Standard C800. End connections shall be suitable for flared copper connection. If required by the Engineer, valves shall be furnished with square gate valve operating nuts. Sizes shall be from 3/4" to 2" and shall match the service line size.

Acceptable manufacturers and model numbers:

- Ford Meter Box Company – B22 Series
- Mueller - B-25204
- A.Y. McDonald - 6100 Series

2.07 CURB BOXES

Curb boxes shall be standard cast iron, sliding or screw type, 1" or 2-1/2" as required, complete with lid and head bolt. Boxes shall be adjustable from 18-inches to 66-inches. The box size will be determined by the Engineer.

Acceptable manufacturers:

- Bingham & Taylor
- Mueller
- Handley Industries
- Clay & Bailey
- A.Y. McDonald
- Quality Water Products

2.08 MISCELLANEOUS SERVICE LINE FITTINGS

Miscellaneous service line fittings such as couplings, adaptors, saddles, bends, plugs, water service electrical insulators, etc. shall conform to AWWA Standard C800.

Acceptable manufacturers:

- Ford Meter Box
- Müeller
- A.Y. McDonald

PART 3: EXECUTION

3.01 INSTALLATION

See Specification Section 15000 for pipe installation. See Detail Drawings showing installation details for air/vacuum release valve assemblies and air blow-off assemblies. See section 15200 for information about selected components (copper pipe, corporation stops, curb stops, curb boxes) common to service lines.

3.02 INSTALLATION OF CORPORATION STOPS

A. Use experienced craftsmen familiar with installation of water service lines when tapping water mains. Make all taps with a suitable tapping machine (Mueller, Ford, Hays or Dresser type) using the proper combined drill and tap. Hand held drilling equipment is not acceptable.

B. Inspect corporation stops for cleanliness, damaged threads, and proper operation of the ball valve prior to installation. Do not install corporation stops that fail this inspection.

C. The main may be tapped at the horizontal centerline on the top of the pipe as shown on Detail Drawings. Use a tapping saddle when the water main wall thickness or material (plastic, concrete or asbestos cement pipeline material) make it unsuitable for direct tapping.

D. Install all corporation stops so that between 2 and 3 threads extend beyond the inside wall of the main. If necessary, make a test tap with the boring bar marked to the proper depth. The corporation stop, when properly installed, will not be shouldered with the main. Do not use lubricants of any type when installing the corporation stop.

E. Use the procedure outlined in AWWA Standard C600 for installing taps on grey iron or ductile iron mains encased in polyethylene.

3.03 INSTALLATION OF BLOWOFF/DISCHARGE LINE AND FITTINGS

A. Excavate, backfill, and restore the surface in accordance with Division 2 of these Specifications.

B. Install copper pipe between the corporation stop and the curb stop or air release valve location making only gradual changes in grade or alignment, as required. Do not make bends greater than 15 degrees in any direction. Install curb stops with the operating nut in the vertical position

C. Open the corporation stop slowly to fill the service line. When the line is full and all air has been removed, completely open the corporation. Perform a visual leak inspection of all piping, fittings, and taps prior to backfilling. Zero leakage is allowed in 10 minutes.

D. Provide polyethylene encasement, or other protective wrap approved by the Engineer, on all Service Lines (pile, valves, stops, etc.) unless they are made of different materials than the grey-iron or ductile iron main or not subject to aggressive soils. Polyethylene encasement shall extend along the service line for its entire length.

E. Install the curb box centered over the nut. Install and adjust the curb boxes to be flush with finished grade. Install and lock the lids on the curb boxes. Discharge piping to the surface, if provided, shall be schedule 40 galvanized steel or schedule 40 PVC and properly supported.

END OF SECTION