



WELCOME!

To the Spring 2011 Water and Storm Water Pre-construction meeting

- Thank you for attending
- We hope you find this meeting helpful and informative
- Please feel free to ask questions

**City of Rockford
Public Works Department
Water and Storm Water Pre-Construction Meeting
March 8, 2011 8:00 a.m.**

Agenda

- 1. Staff Introduction – Marcy Leach and Tim Holdeman**
- 2. Water Main Construction**
 - a. Planning**
 - Water Construction Permit: Marcy Leach**
 - Water System Shutdowns: Tim Holdeman**
 - b. Construction: Greg Cassaro**
 - Water Main Valve Shut-Off**
 - Valve Operation**
 - Tapping of Live Water Mains**
 - Service Connections**
 - c. Inspection: Greg Cassaro**
 - d. Disinfection: Nadine Miller**
 - e. Sampling and Analysis: Nadine Miller**
 - f. Operating Permit: Marcy Leach**
- 4. City of Rockford Water Division Environmental Laboratory: Nadine Miller**
- 5. Standards – Chapter 12: Jeff Rostamo and David Peters**
- 6. Hydrant Use Program: Jennifer Jackson**
 - a. Permitting process**
 - b. Meter rental**
- 7. Erosion control: Brian Eber and Dean Kurth**
- 8. Upcoming Projects: Marcy Leach**

Water Main Construction

- Planning
- Construction
- Inspection
- Testing
- Disinfection
- Sampling



Planning – Illinois EPA Water Construction Permit

- 4 copies of the permit shall be submitted to the Engineering Supervisor
- In the case of new development, prior to approval of the IEPA permit the Subdivision Plat must be approved.
- Once approved 3 additional copies of the plans shall be submitted to the Engineering Supervisor
- Prior to starting any watermain construction the IEPA Construction permit must be approved.
- Prior to starting any watermain construction the Contractor shall notify the Engineering Supervisor



Timothy S. Hanson
Director
Public Works Department

PUBLIC WATER SUPPLY CONSTRUCTION PERMIT

SUBJECT: ROCKFORD (Winnebago County – 2010300)

Permit Issued to:

PERMIT NUMBER:

DATE ISSUED:

PERMIT TYPE:

Water Main

The issuance of this permit is based on plans and specifications prepared by the engineers/architects indicated, and are identified as follows. This permit is issued for the construction and/or installation of the public water supply improvements described in this document, in accordance with the provisions of the "Environmental Protection Act," Title IV, Sections 14 through 17, and Title X, Sections 39 and 40, and is subject to the conditions printed on the last page of this permit and the ADDITIONAL CONDITIONS listed below.

FIRM:

NUMBER OF PLAN SHEETS:

TITLE OF PLANS:

PROPOSED IMPROVEMENTS:

i.e., ***Install approx. 1,609 feet of 16-inch water main***

ADDITIONAL CONDITIONS:

1. This project has been reviewed for conformance with the requirements of the State of Illinois' Environmental Protection Agency and has been Generally Found to be Acceptable.
2. All water mains shall be satisfactorily disinfected prior to use. In accordance with the requirements of AWWA C651-99, at least one set of samples shall be collected from every 1,200 feet of new water main, plus one set from the end of the line and at least one set from each branch. Satisfactory disinfection shall be demonstrated in accordance with the requirements of 35 Ill. Adm. Code 652.203.
3. There are no further conditions to this permit.

Water Engineer
Department of Public Works
Water Division

Planning – General Provisions

- Section 1.6 - Requirements for Scheduled Water Main Valve Shut Off
- Section 1.6.1 - Requirements for Unscheduled (Emergency) Water Main Valve Shut Off

Section 1.6 - Requirements for Scheduled Water Main Valve Shut Off:

- Permission of the Water Superintendent, or his designee, prior to any water main valve shut off.
- Meet with Water Division personnel at least two (2) days prior to start of construction
- Coordinate exercising valves and determining valve shut off patterns during construction.
- The shut down shall be allowed to proceed only after the Water Division representative has determined that the required valves are functioning.

Section 1.61 - Requirements for Unscheduled Water Main Valve Shut Off:

- a) In the event the Contractor must perform an unscheduled water main valve shut off; the Contractor shall notify the Water Division Operations Center Operator (987-5712) as soon as possible.

Construction - General Provisions, Section 1.6 Scheduled Shutdowns

b) Minimum 24 hour notification to all customers of
boil order (tags)

For larger businesses, schools, etc. coordinate
shutdown in advance with Property Owner and
Project Manager

Construction - General Provisions, Section 1.6 Scheduled Shutdowns

- c) Notify the Water Division Operations Center (987-5712) prior to water main valve shut off and provide the following:
- Streets and boundaries of shut down
 - Time of shut down
 - Approximate duration of shut down
 - Number of customers affected
 - If non-residential customers (hospitals, nursing homes, restaurants, etc.) are affected, a count of how many individuals affected.
- d) Notify Water Division Operations Center Operator upon completion of repairs and restoration of water service.

Construction - General Provisions, Section 1.61 Unscheduled Shutdowns

- a) Notify Water Division Operations Center (987-5712) ASAP
- b) Notify all customers of boil order (tags)
- c) Provide the following:
 - Streets and boundaries of shut down
 - Time of shut down
 - Approximate duration of shut down
 - Number of customers affected
 - If non-residential customers (hospitals, restaurants, etc.) a count of how many individuals affected.
- d) Notify Water Division Operations Center Operator upon completion of repairs and restoration of water service.

Construction - Valve Operation

- All valves inside the scope of work, shall be exercised and a condition assessment made by C.O.R. Distribution staff.
- If any line stops are used, a fall back valve on both sides of the line stop will be identified and the above criteria shall apply.
- In the event of a line stop failure, the fall back valves will be used and all unforeseen shutdown provisions will apply.
- The primary contact for Water Distribution will be Greg Cassaro (779) 537-3219.
- All Hi-Lo Valves are marked with a special manhole cover, and all operation of these valves shall be by C.O.R. staff ONLY!!!

HI-LOW Valve Manhole Covers

"HEAVY"



"LIGHT"



Construction – Tapping of Live Water Mains

- All taps performed on live water mains, must be completed by an Illinois licensed plumber.
- Anyone performing a live tap must notify Engineering Supervisor
- All live taps must be witnessed and inspected by an Illinois licensed plumbing inspector

Construction – Service Connections

- Service taps are to be made only by the City of Rockford or upon approval from the Water Division, the contractor's licensed plumber
- A crimping tool shall not, be used to temporarily stop a water service
- Freezing of a service is the approved method of use for the City of Rockford

Inspection – Water Main Inspection

- All requests will be coordinated by the project manager.
- All inspections will be performed by the C.O.R. or their designee.
- All Illinois EPA and Plumbing regulations shall apply for inspection purposes.
- All requests for inspections shall be no less than 24 Hr advance notice.
- All Components needing inspections shall remain exposed until inspection is complete.

DO we want this slide?

- Installation shall be accomplished where required on the plans or in the Special Conditions
- Contractor responsible for repairs where underground pressure may cause heaving or damage to pavement and ground surfaces
- Contractor must submit boring/drilling pit locations to the Engineer for approval prior to beginning construction
- Installation shall be by a steerable drilling tool capable of installing continuous runs of pipe without intermediate pits
- Disposal of excess fluid and spoils shall be the responsibility of the Contractor

Disinfection

- Water main shall be disinfected, thoroughly flushed and sampled accordance with AWWA Standard C651 before being placed into service.
- AWWA Standard B300 shall be used for hypochlorite.
- AWWA Standard B301 shall be used for liquid chlorine.

Bacteriological Sampling and Analysis

The City of Rockford will perform **ALL** BacT analysis for City of Rockford construction projects.

- Sampling Requirements

- water main repair (no permit): 1 BacT sample - P&A (presence & absence method)
- upsizing or relocation of main (needing a permit): 1 BacT sample - MF (membrane filtration method)
- new construction (not routine & needing a permit): 1 BacT sample – MF (membrane filtration method)

Rockford Water Division Environmental Laboratory

- Location : 1111 Cedar Street
- Hours of Operation: 8:00 am – 2:00 pm,
Monday – Thursday
- Bacteriological Analysis Pricing
 - Membrane filtration: \$18.00
 - Presence & Absence: \$13.00

Rockford Water Division Environmental Laboratory

- Samples will be submitted in laboratory approved containers that are available at 1111 Cedar Street
- Samples will not be accepted without properly completed paperwork



Water Main Operating Permit

Excellence Everywhere

THE CITY OF
ROCKFORD
ILLINOIS, USA

Timothy S. Hanson
Director
Public Works Department

WATER MAIN OPERATING PERMIT
ROCKFORD (Winnebago County – 2010300)

1. Permit Number: _____ DATE ISSUED: _____

2. Title of Plans: _____

3. Design Engineering Firm: _____

4. Contractor: _____

5. Project Completion Date: _____

6. Bacteriological Test Passage Date: _____

7. Certified Water Operator Designated in Responsible Charge:
Name Tim Holdeman Certified Operator Classification A

8. Owner of the Completed Project City of Rockford

425 E State St. Rockford IL 61104
Street City State Zip Code

Signature _____ Date _____

Title Tim Holdeman: Superintendent Of Water

Certificate by Owner of Completed Project (or his agent). I/We hereby certify that the project named and described in Items 2 through 5 above has been constructed in accordance with plans and specifications approved by the Illinois Environmental Protection Agency and will be operated in accordance with the provisions of the Illinois Environmental Protection Act and Rules and Regulations adopted by the Illinois Pollution Control Board pursuant to provisions of the Act.

*****For City of Rockford Use Only*****

This Operating Permit: _____ is issued on _____. This permit is valid only for the work completed under the Construction Permit of the same number.

City of Rockford Public Works

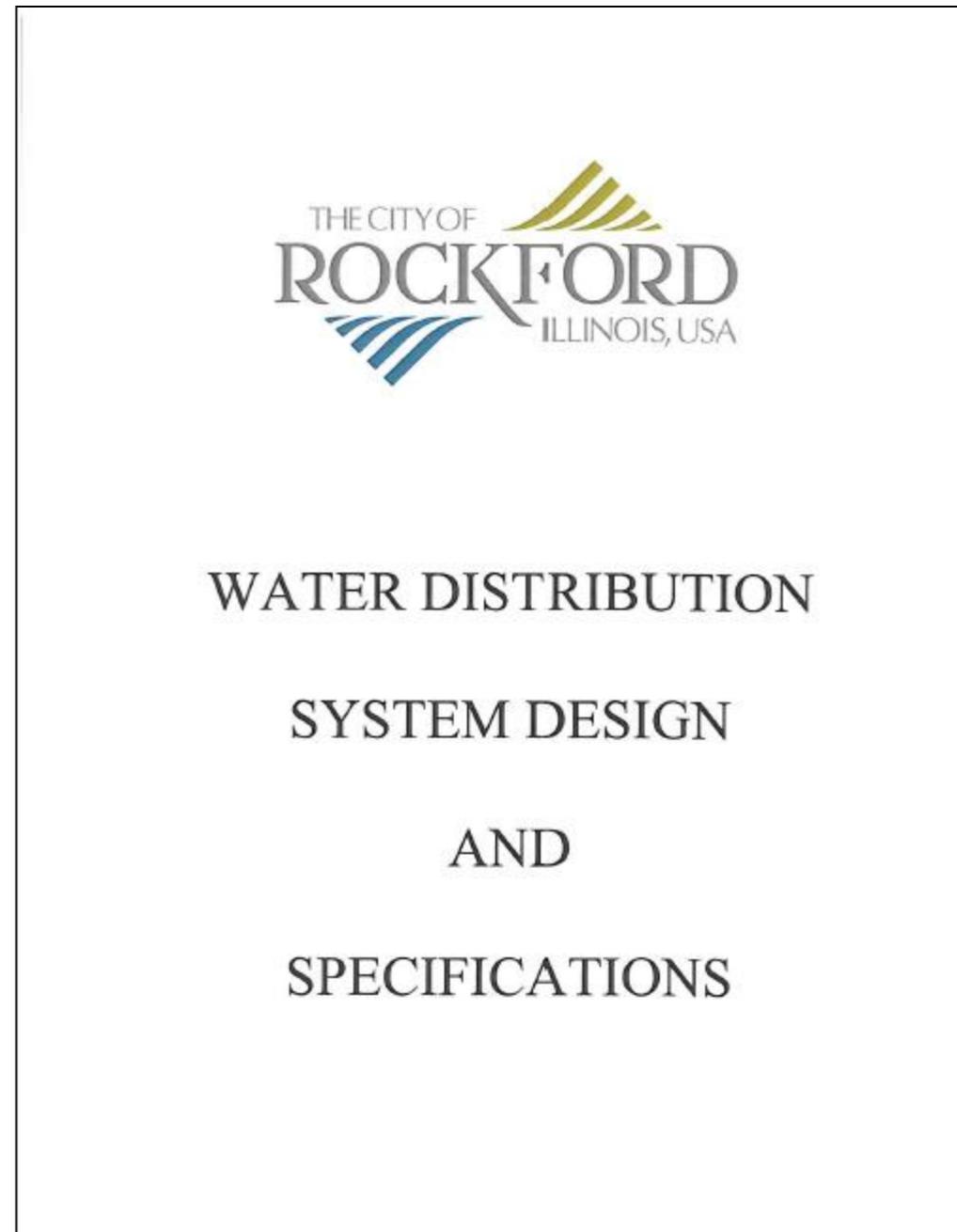
City of Rockford, Illinois USA
Lawrence J. Morrissey, Mayor

425 East State Street Rockford, Illinois 61104-1068 USA
(815) 987-5570 (815) 967-7058 fax www.rockfordil.gov

Operating Permit

- The City of Rockford, now, issues an Operating Permit once the watermain has passed all tests and has been accepted by the Water Engineer.
- This permit is kept on file with the Public Works Department

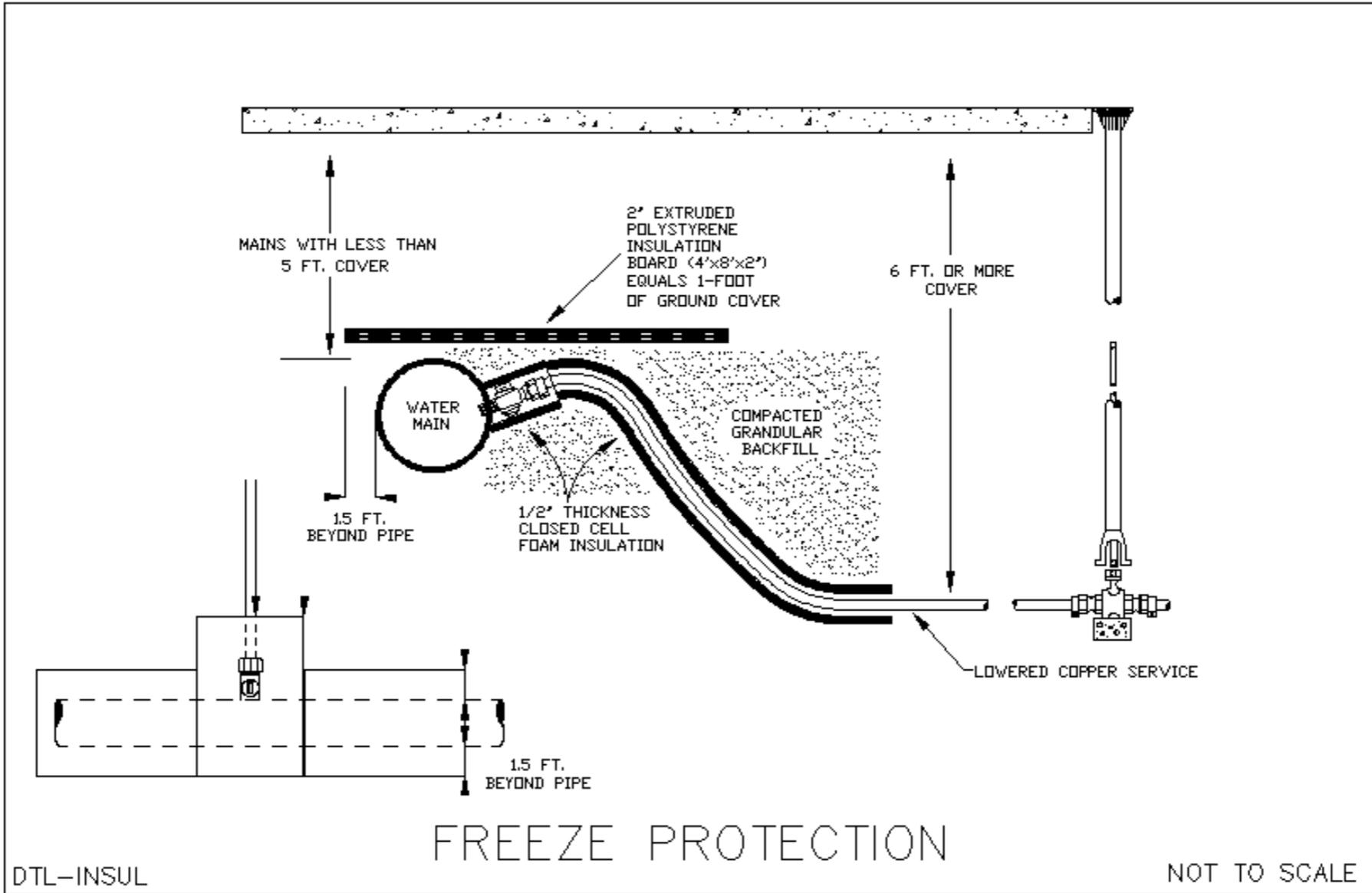
Water Distribution System Design and Specifications (Section 12)



12.5 Protection of Water Supplies

Water mains and services with less than five-foot (5) of cover shall be insulated.

- ½-in thick closed cell foam insulation
- Insulation board (polystyrene) over top
 - a minimum coverage of eighteen (18) inches beyond the outside edge of the pipe being covered
 - R-value of R-9 and comply with ASTM C 578-92 Type 1X
 - One 2-inch thick sheet of insulation is equivalent of 1 foot of ground cover



Hydrants and Valve Boxes

- Fire Hydrants (12.14)
 - nozzles and caps shall be lubricated immediately before or after installation
- Valve Boxes (12.16)
 - shall be Tyler/Union cast iron 6850 series with a debris cap and with an Adapter

HI-LOW Valve Manhole Covers

"HEAVY"

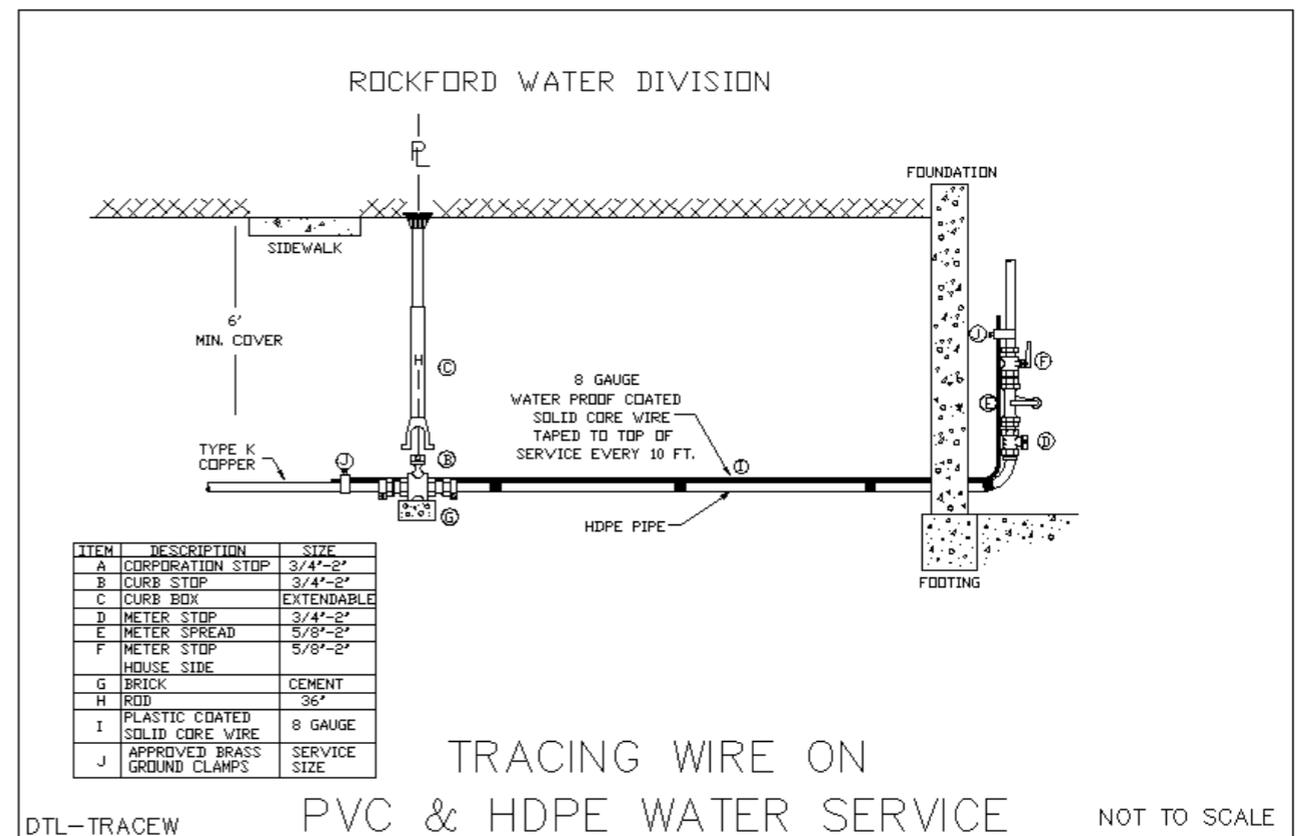


"LIGHT"



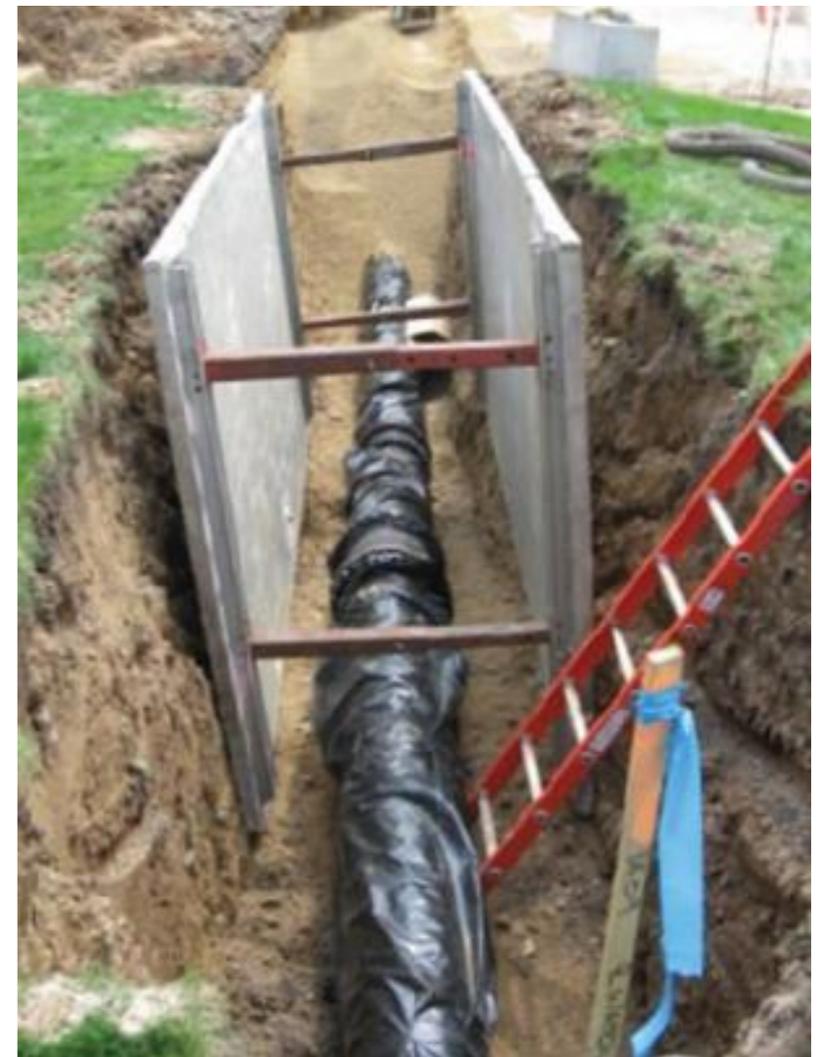
Tracer Wire for PVC and HDPE Services (12.19)

- Rated for underground service
- Along the length of the PVC or HDPE pipe
- Wire shall terminate at the meter connection



Polyethylene Encasement of Watermain (12.31)

- Poly Wrap required on ALL Projects
- Watermain, valves, fittings, hydrant barrels, and appurtenances, shall be fully encased
- Film shall be furnished in tube form
- Installed on the pipe prior to being lowered into the trench
- Overlap at all joints of one foot or more
- Overlap shall be secured in place with plastic adhesive tape wrapped
- Slack in the tubing film shall be folded over at the top of the pipe held in place with plastic adhesive tape applied at intervals of approximately three (3) feet along the pipe



Hydrant Permit & Hydrant Meter Request

- Request online or by phone
- <http://rockfordil.gov>
- Contact City of Rockford Water Division,
Customer Service - Jennifer Jackson (815) 961-
2403
- Business hours Monday thru Friday 8:00 a.m. to
5:00 p.m.

Hydrant Permit & Hydrant Meter Request

- **Initial information needed:**
 - Contractor name, address, phone number
 - Hydrant Location
 - Project Name
 - Project Location
 - Type of work
 - Dates the hydrant is needed

Hydrant Permit & Hydrant Meter Request

- Once the request is received by the Water Division.
- The information is entered into the commercial meter database.
- The information is then forwarded to Engineering and Water Quality for approval.
- Please Allow 1-2 days for processing

Hydrant Permit & Hydrant Meter Request

The Engineering and Water Quality Department reviews the hydrant location request for the following:

- The meter size
- How long it will be used
- How it will affect the water main
- How it will affect possible traffic flow when filling a water tanker truck

Hydrant Permit & Hydrant Meter Request

- Customer Service will contact the customer when the permit is approved.
- Contractor must then pay the deposit at City Hall
- The deposit is as follows:
 - \$600.00 for 1 inch meter
 - \$1000.00 for a 2 inch meter
- Contractor may then pick up the hydrant meter at 1111 Cedar St.

Hydrant Permit & Hydrant Meter Request

- When the Contractor has completed the job the meter must be returned to the City of Rockford, Water Division, at 1111 Cedar St.
- The meter contract is documented, fees calculated and submitted to the accounting department
- **IMPORTANT: Please be aware of permit expiration dates. If additional time is needed to complete your work, you must contact the Water Division for an extension of permit dates.**

Hydrant Permit & Hydrant Meter Request

- The Customer is billed for the following :
 - The water consumption
 - A fire hydrant maintenance fee - \$10.00 per month
 - Any damages to the meter or fittings
 - The deposit amount

NOTE: Using a hydrant without authorization from the City of Rockford could result in a fine.

Erosion and Sediment Control



IT'S THE LAW

10/25/2010

02/18/2011

Erosion and Sediment Control

- The City of Rockford has an IEPA NPDES Phase I Permit.
- Permit includes requirements to manage Erosion & Sediment Control: Construction Runoff.
- Ordinances are in place to support regulatory requirements of the permit.
- All City projects must follow IEPA ILR10 General Construction Permit & Illinois Urban Manual.
- Random site visit by City of Rockford Inspectors can be anticipated.



NPDES / Erosion Control Inspection Report

*City of Rockford - Department of Public Works
Storm Water Discharge Compliance*

Date of Inspection: _____ Report No.: _____ Permit No.: _____
 Name of Inspector: _____ Project Name: _____
 Type of Inspection: Weekly _____ Contact Name: _____
 Rain Event > 0.5" _____ Contact Phone No.: _____

Soil Stabilization Practices

In Plans	Installed	Deficient	Stabilization Practice Description	Comments
			Preservation of Mature Vegetation	
			Vegetated Buffer Strips	
			Protection of Trees	
			Temporary Erosion Control Seeding	
			Temporary Turf (Seeding, Class 7)	
			Temporary Mulching	
			Permanent Seeding	
			Erosion Control Blanket / Mulching	
			Sodding	
			Geotextiles	
			Other (specify)	

Structural Practices

In Plans	Installed	Deficient	Structural Practice Description	Comments
			Perimeter Erosion Barrier	
			Storm Drain Inlet Protection	
			Stabilized Construction Exits	
			Detention Pond Outlet Protection	
			Rock Curber Protection	
			Temporary Ditch Check	
			Sediment Trap	
			Temporary Sediment Basin	
			Temporary Stream Crossing	
			Turf Reinforcement Mats	
			Other (specify)	

If a practice is checked **Deficient**, then complete the Storm Water Deficiency Report Form, must be filed. The inspector shall make inspections as hereinafter required and shall either approve that portion of the work completed or shall notify the applicant wherein the work fails to comply with the erosion and sedimentation control plans as approved. In order to obtain inspections and to ensure compliance with the approved erosion and sedimentation control plan and this ordinance, the applicant shall notify the inspector within two (2) working days of the completion of the construction stages specified below:

- (a) Upon completion of installation of sediment and runoff control measures (including perimeter controls and diversions), prior to proceeding with any other earth disturbance or grading;
- (b) After stripping and clearing;
- (c) After seeding and landscaping deadlines; and
- (d) After final stabilization and landscaping, prior to removal of sediment controls.

If stripping, clearing, grading and site landscaping are to be done in phases or areas, the applicant shall give notice and request inspection at the completion of each of the above work stages in each phase or area.

The City of Rockford shall also reserve the right to inspect disturbed areas of the construction site that have not been finally stabilized, structural control measures, and locations where vehicles enter or exit the site at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater or equivalent snowfall.

Inspector's Signature: _____ Date: _____





**NPDES / Erosion Control
Deficiency Report**

City of Rockford
Dept. of Public Works
Stormwater Discharge Compliance

Date of Inspection: _____ Report No. _____ Permit # _____
Name of Inspector: _____ Project Name _____
Contact Name: _____
Phone: _____

The cause and description of the deficiency:

The actions taken to prevent any further deficiency:

Inspector's Signature: _____ Date: _____

Erosion and Sediment Control

- All City projects must follow IEPA ILR10 General Construction Permit & Illinois Urban Manual
 - City projects must implement Best Management Practices (BMP's) in prepared plans and specifications.
 - Weekly inspections of all BMP's are required by the field inspector and/or contractor.
 - Inspection must be completed within 24 hours of a precipitation event of 1/2" or more. Rain OR Snow equivalent.
 - All Erosion & Sediment Control inspection reports and other related documents must be submitted to the City of Rockford.

Erosion and Sediment Control

- Projects with Land Disturbance of one (1) acre or more
 - Must submit a City of Rockford Grading & Storm Water Discharge Permit Application.
 - Must submit Storm Water Pollution Prevention Plan (SWPPP) to City of Rockford Storm Water Section for approval prior to final plans.
 - Upon SWPPP approval, must submit Notice of Intent (NOI) to the IEPA. This requires the adherence to the IEPA's ILR10 General Permit
 - Approval from IEPA is a 30 day process and this must be completed **before** Construction activities can begin.

Erosion and Sediment Control

- Projects with Land Disturbance of one (1) acre or more
 - Requires SWPPP documents to be located on site and updated for current construction activities
 - Inspections are the same as previously discussed. Inspections must continue weekly until the construction site is deemed stabilized.
 - Once site is deemed “stabilized”, a Notice of Termination (NOT) must be submitted to the IEPA to notify them of construction completion.

Erosion and Sediment Control

- **Common BMP's used on City of Rockford Projects**
 - **Silt Fence** – These are most used and least maintained by contractors.
 - **Inlet Protection** – In general, the City considers the use of this a last resort. Prefer to keep sediment and debris in place and out of the area of the inlet all together. These need regular maintenance and cleaning. Preferable method is use of baskets with exoskeleton that hang inside structures.
 - **Temporary Concrete Washouts** – If concrete is being poured, you must use a washout.

Erosion and Sediment Control

- **Sediment Traps** – Used for de-watering (pumping out trenches). You are not allowed to pump directly into storm sewer system.
- **Good house keeping practices** – Includes removal of all tracked sediment from adjacent roadways, sidewalks, paths, driveways and properties. This is one of the biggest complaints the City receives from the public

QUESTIONS?

- Keep an eye for information and documents on the City's Website: www.rockfordil.gov
- <http://www.rockfordil.gov/public-works.aspx>

Water Projects 2011/2012

- Morgan Street Bridge
- Rockford Airport
- West State Street – Avon east to railroad tracks
- South Main Street – Cedar Street to Clifton Avenue
- Larchmont Subdivision
- Harrison Avenue- 11th Street to 20th Street