



Spring 2014
Water and Storm Water
Pre-construction meeting

WELCOME!

City of Rockford
Public Works Department
Water and Storm Water Pre-Construction Meeting
April 3, 2014 8:00 a.m.
City Yards Conference Room

Agenda

- 1. Staff Introduction – Jamie Rott**
- 2. Water IEPA Permit – Jamie Rott**
- 3. Water Main Construction**
 - a. Water System Shutdowns: Tim Holdeman**
 - b. Water Main Valve Shut-Off: Greg Cassaro**
 - c. Valve Operation: Greg Cassaro**
 - d. Tapping of Live Water Mains: Greg Cassaro**
 - e. Service Connections: Greg Cassaro**
 - f. Inspection: Marcy Leach and Greg Cassaro**
 - g. Disinfection: Nadine Miller**
 - h. Sampling and Analysis: Nadine Miller**
 - i. Operating Permit: Jamie Rott**
- 4. Standards – Chapter 12: Jamie Rott**
- 5. Hydrant Use Program: Jennifer Jackson**
 - a. Permitting process**
 - b. Meter rental**
- 6. Erosion and Sediment Control: Brad Holcomb**

Illinois EPA Water Construction Permit

- 4 copies of the permit shall be submitted to the City Engineer
- New Development: A Subdivision Plat shall be approved prior to IEPA permit approval
 - Once the plat is approved, a copy of the plan shall be submitted to Engineering
- Prior to starting any water main construction the Contractor shall notify Engineering
- Prior to starting any water main construction the Public Water Supply Construction permit must be approved



Timothy S. Hanson
Director
Public Works Department

PUBLIC WATER SUPPLY CONSTRUCTION PERMIT

SUBJECT: ROCKFORD (Winnebago County – 2010300)

Permit Issued to:

PERMIT NUMBER: XXc-XX

DATE ISSUED: Month XX, 2014

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:

Install approximately XXXX LF of 8” DI Water main, X – X” water service, X fire hydrants

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.

Matthew Vitner, P.E.
City Engineer
Department of 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

Water Main Construction

Water Main Shut Off

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

Water Main Construction

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

- Must obtain permission of the Water Superintendent, or his designee, prior to any water main valve shut off.
- Meet with Water Division personnel at least five (5) 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.

Water Main Construction

Section 1.6 - Requirements for Scheduled Water Main Valve Shut Off (Cont.):

- 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

Water Main Construction

Section 1.6 - Requirements for Scheduled Water Main Valve Shut Off (Cont.):

- 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.
- Notify Water Division Operations Center Operator upon completion of repairs and restoration of water service.

Water Main Construction

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

- 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.

Water Main Construction

Section 1.61 - Requirements for Unscheduled Water Main Valve Shut Off (cont.):

- Notify Water Division Operations Center (987-5712) A.S.A.P.
- Notify all customers of boil order (tags)
- 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.
- Notify Water Division Operations Center Operator upon completion of repairs and restoration of water service.

Water Main Construction

Valve Operation

- All valves inside the scope of work, shall be exercised and a condition assessment made by City of Rockford 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 City of Rockford staff **ONLY!**

HI-LOW Valve Manhole Covers

"HEAVY"



"LIGHT"



Water Main Construction

Tapping of Live Water Mains

- All taps performed on live water mains, must be completed by an Illinois licensed plumber and inspected by the City of Rockford Building Department.
- Anyone performing a live tap must notify Engineering

Water Main Construction

Service Connections

- Service taps are to be made only by the City of Rockford or upon approval from the Water Division for a licensed contract plumber to perform
- 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

Water Main Construction

Service Connections (Cont.)

- Service taps are to be made only by the City of Rockford or upon approval from the Water Division for a licensed contract plumber to perform
- 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
- All services boxes shall be placed at the property line

Water Main Construction

Horizontal Directional Boring

- 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

Water Main Construction

Inspection

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

Water Main Construction Disinfection

American Water Works Association (AWWA)

- **C651 – Water Main Disinfection**
 - B300 – Standard for Hypochlorite
 - B301 – Standard for Liquid Chlorine

Water Main Construction Disinfection

- Administrative Code Title 35; Section 602
- Administrative Code Title 35; Section 652
- City of Rockford Chapter II; Section 12
- Standard Specifications for Water & Sewer Main Construction in Illinois

Make sure the hydrant is sufficiently flushed to one ppm free chlorine before submitting your BacT sample

Water Main Construction - 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)

Water Main Construction

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 Construction

Operating Permit

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



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.



Water Distribution System Design and Specifications (Section 12)



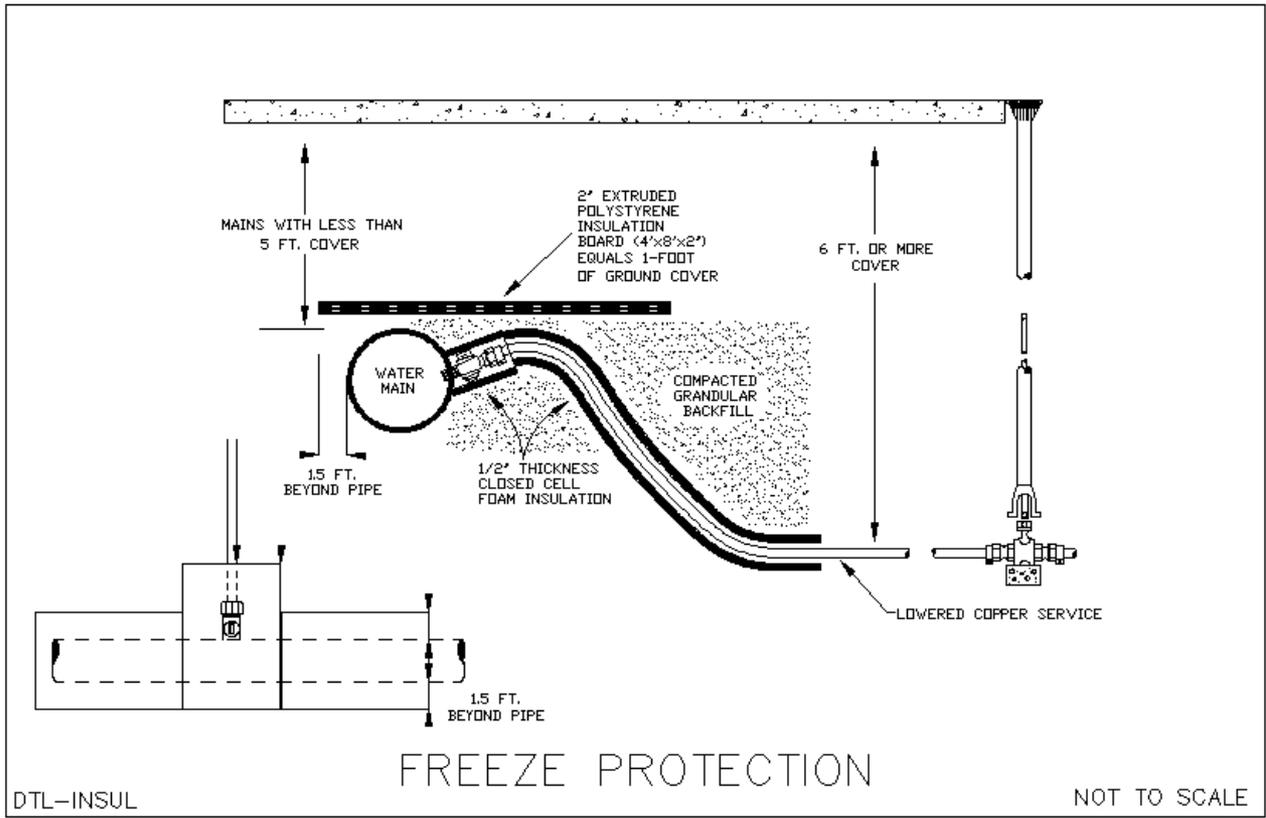
WATER DISTRIBUTION
SYSTEM DESIGN
AND
SPECIFICATIONS

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



Water Distribution System Design and Specifications (Section 12)

Hydrants and Valve Boxes

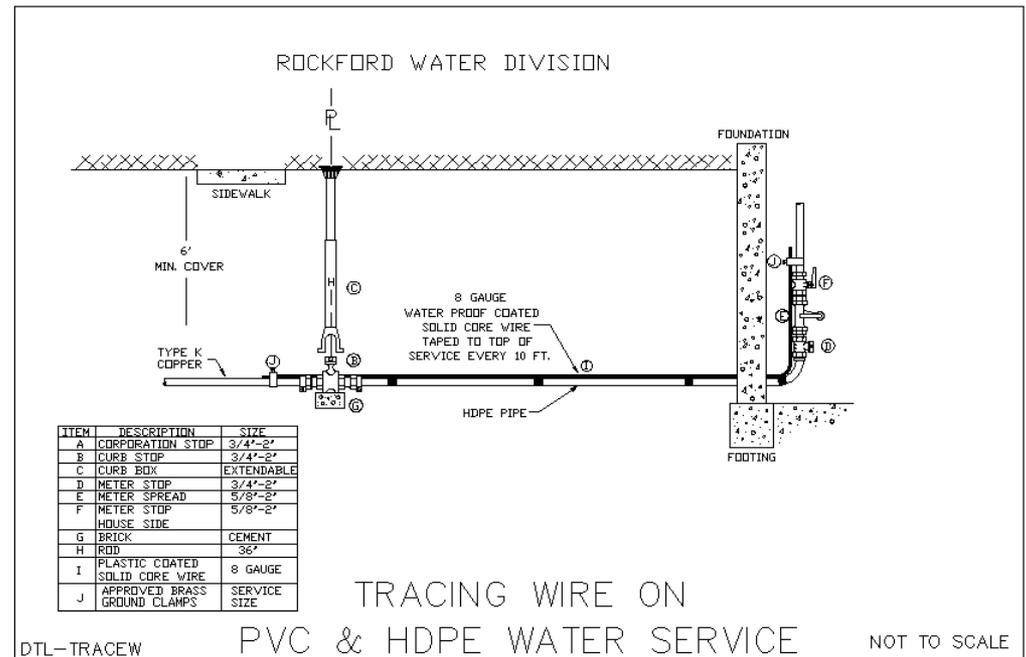
- Fire Hydrants (12.14)
 - nozzles and caps shall be lubricated immediately before or after installation

- Valve Boxes (12.16)
 - shall be Tyler/Union cast iron 6850 series with a debris cap and with an Adapter

Water Distribution System Design and Specifications (Section 12)

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



Water Distribution System Design and Specifications (Section 12)

Polyethylene Encasement of Water main (12.31)

- Poly Wrap required on ALL Projects
- Water main, 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

Initial requests can be made:

On line <http://www.rockfordil.gov/>

OR

By Phone (815) 967-4313

Hydrant Permit & Hydrant Meter Request

- **Information needed for Permit:**
 - Contractor name, address, phone number
 - Hydrant Location- you are requesting
 - Project Name
 - Project Location
 - Project Purpose
 - Dates the hydrant is needed

Hydrant Permit & Hydrant Meter Request

- All requests for hydrant use must be approved by Water Engineering and Water Quality- before you can pick up your meter and permits.
- Please Allow 24 Hours to process requests

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

Payment and Pick-up:

- Make your payment at City Hall 425 E. State St.
- When approval is made- we will contact you for pick-up
- Bring your receipt to Water Division 1111 Cedar St.

Hydrant Permit & Hydrant Meter Request

Cost: \$600.00 – 1 inch Meter

\$1000.00 – 2 inch Meter

- \$10.00 per month Hydrant use permit fee
- Water is billed \$4.78 per 100 cubic ft.
- Damage to meters is deducted from deposit

Hydrant Permit & Hydrant Meter Request

- **RETURNING YOUR METER:**

Bring To-

- Water Division located at **1111 Cedar Street**

WE will

- Read the meter
- Document your contract with the meter read
- Check for any damages to the meter
- Give you a signed copy as your receipt
- **ALL CONTRACTS EXPIRE 12-31-14 AND YOU MUST BRING IN YOUR METER AND UPDATE YOUR FORMS FOR THE 2015 SEASON**

Hydrant Permit & Hydrant Meter Request

Do

- Open/Close Hydrant slowly
- Use hydrant wrench provided
- Keep a copy of permit on-site
- Brace bottom of meter
- Store in warm place to avoid freezing
- Please report any problems to the Water division

Do not

- Leave meter unattended
- Open hydrants- unless approved

Hydrant Permit & Hydrant Meter Request

Using a hydrant without Authorization from the City of Rockford Engineering and Water Quality Dept. Could result in a fine.

Erosion and Sediment Control

- NPDES Municipal Separate Storm Sewer System (MS4) Stormwater permits requires municipalities to implement an erosion and sediment control inspection and enforcement program.
- All projects within City of Rockford limits must comply with the City's Subdivision review process as well as the Public Works Department - Engineering Division's Plat and Plan Review Process. Construction shall not begin until the City has completed it's review process and has issued approvals.
 - For City projects, SWPPP's and erosion control plans must be reviewed by the Stormwater & Environmental Team
- All projects requiring an IEPA General Construction Permit (ILR10) must submit the Notice of Intent (NOI) and SWPPP with the IEPA a minimum of 30 days prior to starting construction. A fee is required along with the submittal.
 - All City projects requiring a IEPA construction permit shall submit the NOI through the City's construction login page.
 - IEPA will not approve the permit without the SWPPP being electronically submitted.
 - City projects will also receive regulatory inspections and be inspected with same frequencies as private projects.

Erosion and Sediment Control

- In August of 2013 the Revised ILR10 General Construction Permit went into effect. All permitted sites must comply with the revised permit.
 - Permittees must update/revise their SWPPP's within 12 months of this permits effective date (August 1, 2013) to reflect the new requirements unless the permit is terminated prior to that date.
- Changes to the permit include:
 - Copies of NOI must be submitted to the local MS4.
 - Copy of the approval letter must be posted at site.
 - Offsite stockpiling of materials must be addressed.
 - Post-construction stormwater management measures must be considered.
 - Stabilization of working areas must be initiated within 1 working day of permanent or temporary cessation of earth disturbing activities on any portion of the site and shall be completed as soon as possible but in no more that 14 days.
 - Use of chemical treatments (polymers) and dewatering activities.
 - Rain event inspections must be completed within 24 hours of the end of a storm or by the end of the next business or work day.
 - Inspections can 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 a 0.5" or greater rain event or a discharge due to snowmelt occurs.

Erosion and Sediment Control

SIMPLY PUT.....

Compliance with the ILR10 permit is a must!



Erosion and Sediment Control

Inspections

- Unless requested all inspections are surprise visits. Appointments are not made.
- If work does not commence within 2 weeks of the start date on the Grading and Stormwater Discharge Application the permit is no longer valid until the City is informed of the new start date. Permit is valid for 2 years.
- The City will inspect any size construction site regardless of IEPA permitting requirements.,
- Inspection Types:
 - **Pre-Grading Inspection:** BMP's must be installed **prior** to the start of construction except in areas where clearing and grubbing is necessary for installation.
 - **Drive Through Inspections:** A visual observation assessing site conditions and BMP's installations.
 - **Full Erosion and Sediment Control Inspection:** Complete review of SWPPP, inspection records, ESC plan and site conditions.



Erosion and Sediment Control

Pre-Grading Inspection:

- BMP's must be installed prior to the start of construction except in areas where clearing and grubbing is necessary for installation.
- City shall perform pre-grading inspections on all sites adjacent to environmentally sensitive areas (wetlands, creeks, rivers, steep slopes, superfund sites, sites with endangered species, etc.) or as needed.
- City must be notified 48 hours prior to the start of grading in order to perform a pre-grading inspection.



Erosion and Sediment Control

Drive Through Inspections

- A visual observation assessing site conditions and BMP's installations.
 - Minor deficiencies will be addressed with the site manager.
 - Sites with major deficiencies shall receive a full ESC inspection.
 - Major deficiencies include: overall poor site conditions, poorly installed or failure of BMP's, evidence, or potential, of sediment leaving the site.

Does Your site look like
this?



Or This?



Erosion and Sediment Control

Full Erosion and Sediment Control Inspection

- Complete review of SWPPP, inspection records, ESC plan and site conditions.
 - Letter will be sent detailing deficiencies.
 - **Any site with deficiencies must provide certification to the City within 7 days that maintenance was completed.**
 - **Failure to do so will result in a Stop Work Order.**
- All sites requiring an IEPA general construction permit will receive a Full ESC inspection.
- Site that do not require an IEPA permit will be inspected at the City's discretion.



Erosion and Sediment Control

SWPPP Records

- Is a SWPPP Required?
 - Just because a site is less than 1 acres does not mean a SWPPP isn't required if its part of a larger common unit of development.
 - Sites that don't need a permit are still expected to have sound ESC principles.

- Is there a SWPPP?
 - The engineering plans is not the SWPPP!
 - BMP's being used must have specs in the SWPPP.

- Is the SWPPP onsite? In a safe, dry location?

- Are inspections being completed with deficiencies listed.
 - Deficiencies must be addressed as soon as possible. Note completion dates.
 - **As long as there's an active permit inspections must be completed.**

Stormwater Pollution Prevention Plan (SWPPP)
INSERT PROJECT NAME and DATE
ILEPA ILR10

Stormwater Pollution Prevention Plan (SWPPP)

For:

Insert Project Name
Insert Project Site Location/Address
Insert City, State, Zip Code
Insert Project Site Telephone Number (if applicable)

Owner:

Insert Company or Organization Name
Insert Name
Insert Address
Insert City, State, Zip Code
Insert Telephone Number
Insert Fax/Email

SWPPP Contact(s):

Insert Company or Organization Name
Insert Name
Insert Address
Insert City, State, Zip Code
Insert Telephone Number
Insert Fax/Email

SWPPP Preparation Date:

____/____/____

Estimated Project Dates:

Project Start Date: ____/____/____
Project Completion Date: ____/____/____

Erosion and Sediment Control

Discharge Point?

- Is the outlet stabilized?
- Are there indications of offsite discharges?
 - Sediment deposits
 - Sediment laden water
 - Downstream erosion
- See Title 35 of the Illinois Pollution Control Board,
 - Offensive Conditions (Part 302.203)
 - Offensive Discharges (Part 304.106)



Erosion and Sediment Control

Best Management Practices

Back of Curb Protection

- Silt Fence
- Cut Back Curb
- Wattles
- Erosion Control Blanket



Erosion and Sediment Control

Best Management Practices

Inlet Protection

- Do all inlets that received water from disturbed areas have protection?
- Are there affected inlets without protection?
- Is the inlet protection being maintained?



Erosion and Sediment Control

Best Management Practices

Perimeter Protection

- Is perimeter protection in place and functional
- Is it being maintained?
- Was it installed prior to the start of grading?



Erosion and Sediment Control

Best Management Practices

Stabilized Construction Entrances

- Are they installed
 - Are they being used

- Are they installed properly
 - Properly sized stone
 - Fabric installed underneath
 - Proper size



Erosion and Sediment Control

Best Management Practices

Street Sweeping

- Installing the stabilized construction entrance as specified can significantly reduce sweeping costs.
- If too much sediment is entering the street you need to determine why.



Erosion and Sediment Control

Best Management Practices

Stabilization

- Are areas not under construction stabilized?
- Is there adequate mulch cover until germination?



Erosion and Sediment Control

Best Management Practices

Concrete Washouts

- Are washouts in place and being maintained?
- Are there any inlets near the washout?



Erosion and Sediment Control

Best Management Practices

BMP's not on the Plan

- The SWPPP is a living document. As the project progresses so should the SWPPP.
- Nobody writes a perfect SWPPP. Plans need to match what is onsite!



Erosion and Sediment Control

Best Management Practices

Proper Installs & Uses

- Silt Fence
 - Proper splicing
 - Trenched properly & backfilled
 - Not in drainageway
- Erosion Control Blankets
 - Proper seed bed preparation
 - Enough staples
 - Correct type of ECB
- Straw Bales – break open and use for mulch



Erosion and Sediment Control

Best Management Practices

Other potential storm water contaminants

- Poorly maintained/leaky equipment
- Port-A-John location
- Fuel can/tank placement
- Trash & Debris



Erosion and Sediment Control

Terminating Permits

Where a site has completed final stabilization and all authorized stormwater discharges from construction activities are eliminated the permittee **MUST** submit a completed notice of termination.

- Final Stabilization All soil disturbing activities have been completed and:
 - A uniform perennial vegetative cover with a density of 70% for the area has been established on all unpaved areas.or
 - Equivalent permanent stabilization measures (riprap, gabions, or geotextiles) have been employed.



Development Inspections Sites & Subdivisions

- All projects shall have a Development Permit and Grading Permit prior to starting construction
- If work does not commence within 2 weeks of the listed start date on the Grading Permit then the permit is no longer valid until the City of Rockford is informed of the new start date. Permit is valid for two (2) years from date construction commences. Projects that extend beyond 2 years a new permit application and fee shall be submitted.

Development Inspections Sites & Subdivisions

- Prior to starting Grading work contact
Brad Holcomb (815)967-7061
- Prior to starting Water work contact
Jamie Rott (815)967-6742
- Prior to starting all other construction work contact
Jason Irvin (815)721-1419
- Right-of-Way Questions or Concerns contact
Warren Stahl (815)967-6945
- General Number (815) 987-5570

Questions?