

**City of Cedar Rapids
INFRASTRUCTURE COMMITTEE MEETING MINUTES
City Hall – Council Chambers
Tuesday, August 16, 2016**

Meeting was called to order at 4:00 p.m. by Council Member Scott Olson.

Committee Members Present: Council members Scott Olson, Chair; Ralph Russell and Justin Shields.

City Director Team: Jen Winter, Public Works Director; Emily Muhlbach, Communications Coordinator; Sandra Fowler, Assistant City Manager Development Services; Steve Hershner, Utilities Director; Jeff Pomeranz, City Manager.

Presenters: Mike Duffy, Street Superintendent; Jim Flamming, Utilities Process & Facilities Engineering Manager; Cara Matteson, Storm Water Coordinator; Matt Myers, Traffic Engineer; Doug Wilson, Engineering Program Manager.

1. Approval of Minutes from July 19, 2016 meeting.

ACTION: All in favor.

2. **Presentation** – WPCF Nutrient Reduction & Solids Facilities Plan – *Steve Hershner/Dave Dechant*
Update on the efforts that are currently underway to prepare the WPCF for future changes in regulatory requirements regarding nutrient removal and the need to renovate the 36-year-old solids handling/disposal process operation. The new nutrient removal requirements will be directly linked to how resources are covered, wastewater is treated, and solids will be generated or handled at the WPCF which is why these elements were combined for this planning effort. The Utilities Department is currently in the process of completing a study with the assistance of HDR, Inc. The final report will also serve as an update to the 2011 Solids Facilities Plan sections related to secondary treatment and solids handling in the 2006 WPCF Master Plan.

Response to Committee questions:

Is there additional funding/grants available? No. Legislature may have Water Quality funding for smaller municipalities.

How will this affect industries? Anything industries can do towards source reduction benefits everyone. Credits will be allowed based on efforts, and financial assistance for capital investments will come from revenue bonds or State Revolving Fund.

Is our facility the largest in the state? Des Moines handles more flow but Cedar Rapids Utilities Department Water Pollution Control Division has much larger organic strength component.

Cedar Rapids would be second in size after Des Moines in drinking water treatment capacity.

What needs to be done to plant? As facility is reaching life span (started operation November 1980) we need to look at future nutrient capacity and meeting regulations.

What resources could be captured? Biogas for natural gas distribution or electrical renewable energy credits and nutrients (mostly phosphorous) for possible sale and re-use.

How many industrial pretreatment facilities in use? Only two industries currently pre-treat any portion of their waste streams. Industries are categorized by user group; Group 3 = 9; Group 2 = 20 and all other residential/small commercial users are considered Group 3.

Industries currently pre-treating mainly focus on BOD and solids removal? Yes

Besides rate increase, is there a sinking fund that can be used towards improvements? Will follow-up with that information.

What are nutrient limits? Based on current waste strength we need to reduce influent levels by 66% for nitrogen and 75% for phosphorus.

What is nitrogen level in river? Depends on many variables, focus is on nitrate component as it relates to our drinking water. Nitrate has been measured at 18 milligrams per liter (mg/l) and in colder weather less than one mg/l. Phosphorus is weather event driven.

Will City be held to concentration? At the end of the nutrient reduction strategy process there will be an annual average concentration in milligrams per liter. Nutrient Reduction Strategy process includes, submitting biological nutrient removal feasibility study within two years of NPDES permit renewal and then negotiating technology standards with DNR. Timeframe would be 2-year feasibility study; 3 years' negotiation and refinement of rates; 5 years' for construction and then completion of an 18-month optimization study before discharge limits are formally amended into the facilities NPDES permit. Permit amendment discharge limits are based on operation of process constructed and the 18-month optimization period.

Recommending rate increases soon? Focus will initially be on capturing and using biogas, Infrastructure Committee and Council will be informed throughout this study, future proposed process changes and budget development on funding options and needs.

3. Recommendation/Presentation – Financial Options and Adoption of Storm/Sanitary Sewer Master Plans – *Dave Wallace/Casey Drew*

A presentation provided on financial considerations for both master plans along with preliminary timeline provided. Will continue to enhance plans over the next four years with renewal in five years. Request approval and recommendation to Council for adoption of 2016 Stormwater Masterplan and 2016 Sanitary Sewer Masterplan.

Response to Committee questions:

Besides revenue bonds are there other ways to fund? Moved away from General Obligation Bonds in 2007 and switched to revenue bonds that do not count against debt capacity.

Is 75% excessive revenue needed to retire bonds? Yes.

Is that indicative to Stormwater? Usually it is the norm for AA bonds.

What is done with excess revenues? Issue less revenue bonds and build Capital Improvement Programs.

Is public aware of bond to raise capital?

How are sanitary sewer needs determined to be immediate or 10 years? City continues to grow, maintenance needs

ACTION:

Recommend approval to Council for adoption of 2016 Stormwater Masterplan and 2016 Sanitary Sewer Masterplan.

4. Update – Paving for Progress – *Doug Wilson*

List of Paving for Progress projects bid for contractor construction and status was provided along with upcoming public hearings and bid openings. Projects scheduled for 2017/2018 with professional services agreements on Council agenda are E Avenue at Stoney Point Road to Highway 100; Cherokee Trail which includes E Avenue to Morgan Creek and Oakland Road/Old Marion Road. Planning phase for 6th Street from 33rd Avenue to Wilson Avenue to include bio swales and E Avenue NE near Tomahawk Park has infiltration practices and permeable pavement.

Response to Committee questions:

Are projects on schedule? Yes. Northwood and Wenig Road will be open tomorrow.

Storm water to drain from street

Sidewalks are not included in Paving for Progress funds? Correct.

Are curb repairs included? Yes, they are part of the street.

5. **Update** – Traffic Striping and Two-Way Conversions – *Matt Myers*

Information on current striping projects and status of two-way conversions was provided. Currently 49% of striping program completed. Looking at overtime and increasing seasonal in order to complete by second week in October. May be opportunity to move up the conversion of Oakland Road and Center Point Road.

6. **Update** – Upcoming Utility Projects to be Filed – *Bruce Jacobs*

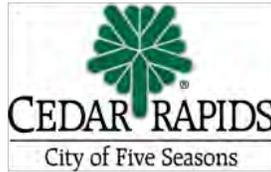
Filing plans and specifications for Water and WPC Plant projects provided. Water Main Projects planned in conjunction with Paving for Progress and other Public Works projects also presented. Update provided on USGS Aquifer study with cost split of 60% City and 40% Government.

7. **Public input**

Robin talked on point source solutions and that cities contribute 10% towards the problem. He commended Des Moines waterworks for being advocate.

The meeting was adjourned at 5:15 p.m.

Respectfully submitted,
Kathy Holmes, Administrative Assistant
City of Cedar Rapids Public Works Department



2017 INFRASTRUCTURE COMMITTEE MEETING SCHEDULE

City Services Center, 500 15th Ave. SW
Five Seasons Conference

Monthly on the 3rd Tuesday

Date	Time	Submittal Deadline for Agenda Items
Tuesday, January 17	4:00 p.m.	Thursday, January 5
Tuesday, February 21	4:00 p.m.	Thursday, February 9
Tuesday, March 21	4:00 p.m.	Thursday, March 9
Tuesday, April 18	4:00 p.m.	Thursday, April 6
Tuesday, May 16	4:00 p.m.	Thursday, May 4
Tuesday, June 20	4:00 p.m.	Thursday, June 8
Tuesday, July 18	4:00 p.m.	Thursday, July 6
Tuesday, August 15	4:00 p.m.	Thursday, August 3
Tuesday, September 19	4:00 p.m.	Thursday, September 7
Tuesday, October 17	4:00 p.m.	Thursday, October 5
Tuesday, November 21	4:00 p.m.	Thursday, November 9
Tuesday, December 12*	4:00 p.m.	Tuesday, December 7

*Second Tuesday of the month due to the Council meeting holiday schedule

Public Works Department

500 15th Avenue S.W. • Cedar Rapids, Iowa 52404-5837 • (319) 286-5802 • FAX (319) 774-5653



To: City Council Infrastructure Committee
From: Doug Wilson, PE, Paving for Progress Program Manager
Subject: Update – Paving for Progress
Date: October 18, 2016

Background:

Monthly update intended to provide status Paving for Progress.

Project Description:

Update on PFP projects done during the 2016 construction season.

Update:

Stats for the Year:

- PFP Road Improvement Projects projected to be completed in 2016 – **20**
- PFP Linear Miles in 2016 – **At least 6.3**
- Estimated Value of PFP Construction – **\$18m**
- Number of PFP Public Meetings Held by the End of 2016 – **28**
- Linear Miles of Sidewalk Built with PFP – **3 miles (of which 0.9 miles did not exist before)**
- Number of ADA Ramp Upgrades with PFP Projects – **135**

Street Segments at or near completion:

- 74th Street NE from White Ivy Place to C Ave
- West Post Rd NW from Plainview to E Ave Roadway
- Oakland Rd NE from H Ave to J Ave
- 8th Avenue SW from L Street SW to 7th Street SW
- 42nd St NE from Edgewood Rd to IA N RR
- McCarthy Road SE from 19th Street SE to Memorial Drive SE
- Leroy St SW from Johnson Ave to 1st Ave and Spencer Dr SW
- Park Place NE from Council Street to North Park Place Lane
- 3rd St SW from 16th Ave to 19th Ave
- Bramble Rd SW from 29th Ave to 33rd Ave
- Burch Ave NW from 24th St to 19th St
- Coral Ln SW from Cameo to Eden Ln
- F Av NE from Estroy to Old Marion
- Hazel Dr NE, North Intersection
- Mansfield Avenue SE from 30th Street to 31st Street
- 42nd St NE from I-380 to Wenig Rd
- B Avenue NW from Highland Dr to 8th St
- 7th Street SE from 4th Avenue to 12th Avenue
- Edgewood Road SW Improvements from E Avenue to F Avenue
- Cameo Ln SW from Pebble to 33rd Avenue



Street segments with possible completion in 2016:

- 34th St NE from 1st Av to w/o F Av
- 7th St SE from 10th Ave to 11th Ave
- Bayberry Dr SW from Cameo to Edgewood
- Carriage Dr SW from Bramble to Chapel
- Chapel Dr SW from 29th to Bayberry
- Eden Ln SW from Bayberry to 33rd
- F Av NW from 4th St to Ellis Blvd
- Madison St NE from Glass to 29th St
- Pebble Dr SW from Chapel to Bramble

Street segments that will carry over into 2017:

- 29th St Dr SE 1st Ave to Tama St
- Seminole Valley Road NE from Fords Crossing Road to 42nd Street NE
- 1st Avenue Bridge over Cedar River Repairs (Sub-structure)
- Council St NE from 48th to Pius

Requested time on agenda: 10 minutes.



To: City Council Infrastructure Committee
From: Matt Myers
Subject: Update – Striping and Two-Way Conversions
Date: October 11, 2016

Background:

Traffic operations includes signals, roadway markings, and signage impacting pedestrian/cyclist movements, and traffic flow.

Project Description:

Striping of streets and two-way conversions.

Update:

Striping Program

Long-line striping. Traffic Control and Operations staff was diverted to barricading and signing the evacuation boundaries for the flood. We lost approximately 1.5 weeks of striping due to the flood.

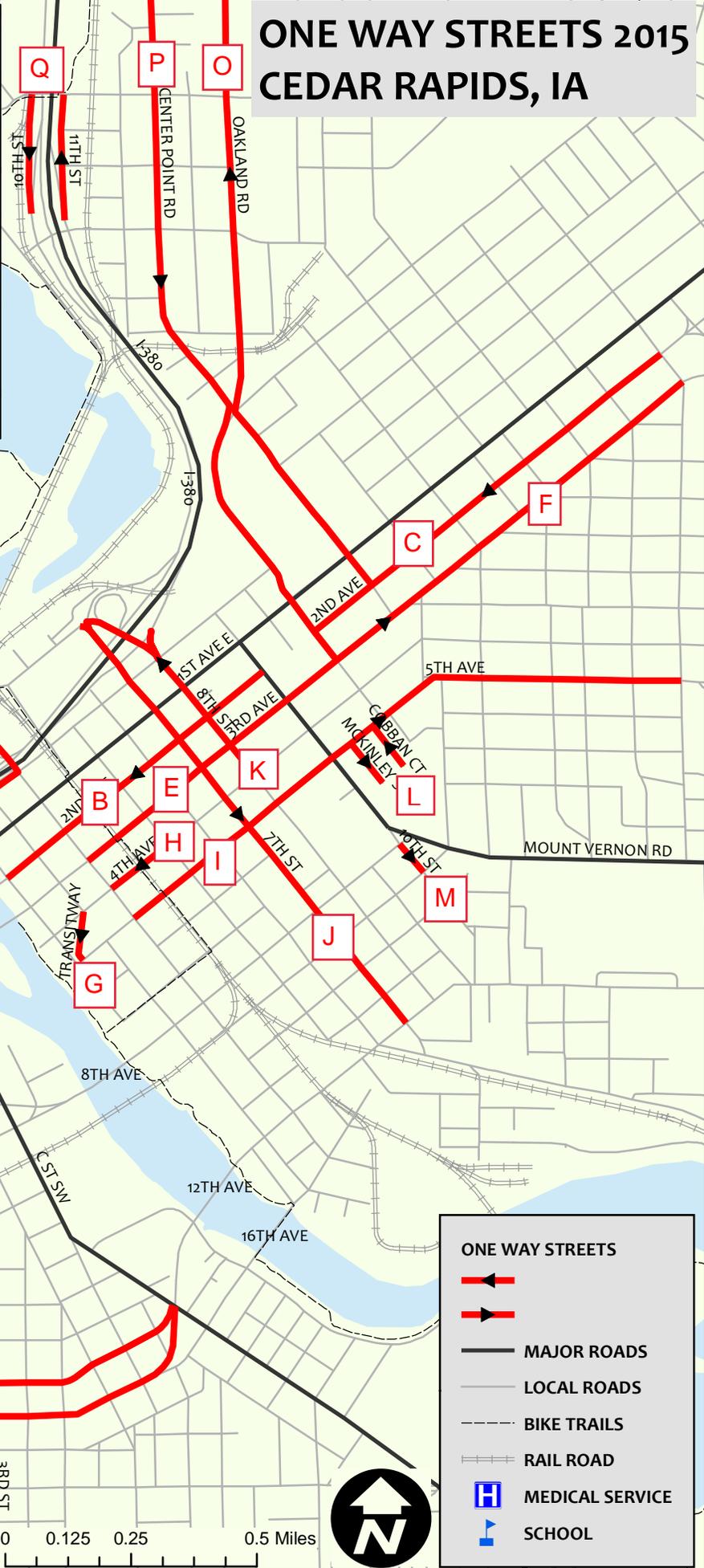
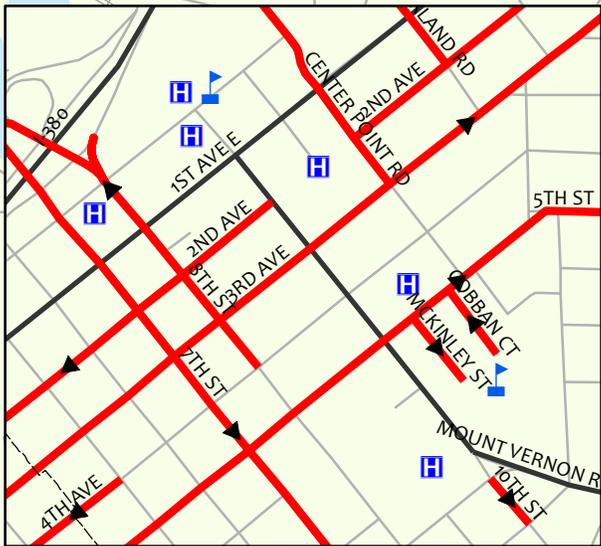
Two-way Conversions. Staff have reviewed the CIP program and will discuss staff recommendations for:

Oakland Road/Center Point Road NE
15th Avenue/16th Avenue SW

Railroad. No changes to report from last month.

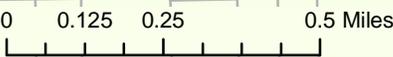
Requested time on agenda: 5 min

ONE WAY STREETS 2015 CEDAR RAPIDS, IA



ONE WAY STREETS

- ←
-
- MAJOR ROADS
- LOCAL ROADS
- BIKE TRAILS
- RAIL ROAD
- MEDICAL SERVICE
- SCHOOL





To: City Council Infrastructure Committee
From: Dave Wallace, Sewer Utility Engineering Manager
Subject: Update – Storm Sewer and Sanitary Sewer Capital Improvement Projects
Date: October 18, 2016

Update:

Ongoing items include:

Stormwater

- Stormwater Master Plan:
 - o O Avenue NW/Harrison Basin Drainage area: Modeling is complete with three detention basin projects identified.
 - o E Avenue NW/Vinton Ditch: Beginning basin level investigations and modeling to identify potential CIP projects.
 - o On call services have been added to evaluate effectiveness of green infrastructure/best management practices on street reconstruction projects.
- Penn Avenue NW at 1st Street Storm Sewer Repair
 - o Corps permit received – final design underway.
- 18th Street SW Detention Basin – To be bid this year or early next year for spring 2017 construction.
- Rockhurst Drive SW at 1st Avenue: Design is underway, anticipate fall 2017 bid.
- Deepwood Court SE, Cottage Grove Parkway and Cottage Grove Avenue: Modeling and evaluation phase is underway.

Sanitary Sewer

- Sanitary Sewer Master Plan:
 - o Policy discussions on future agendas to address private sources of infiltration and inflow (I/I).
 - o Next phase of the master plan update is to address regional sanitary sewer needs in growth areas, prioritize high I/I areas upstream of Morgan Creek Lift Station and review/modify the project prioritization template.
- Prairie Creek Trunk Sewer: Final design to begin on the next phases (J Street SW to Hawkeye Downs).

Upcoming Utilities Department Projects Anticipated To Have Plans
and Specifications Filed – October, November, December, January
Report for Council Infrastructure Committee on 10-18-2016

Filing Plans and Specifications

Water and WPC Plant Projects

Filing November 1 – WPCF Primary Sludge Screen Process Improvements (615212). The existing primary sludge screen at the WPCF is undersized for some loading conditions, lacks redundancy, and has reached the end of its expected life. The project will include the installation of a new screen and associated appurtenances. The existing screen will be left in place to serve as a backup unit to the new screen. The Engineer's opinion of probable cost was \$1,056,000 at the 90% design stage.

Filing January 10 – Kirkwood Elevated Tank (6250040). The project will include a new 1.5 million gallon composite elevated storage tank to replace the existing standpipe. The Engineer's opinion of probable cost was \$3,050,000 at the preliminary design stage.

Filing January 10 – WPC Electric Grid Improvements (615197). The existing plant electrical Main Switchgear, Capacitor Banks, and medium voltage cable are approaching the end of their predicted life and are in need of replacement. The project will also add several pad-mount isolation switches to allow for greater flexibility in powering the plant during maintenance outages.

Water Main Projects

The following water main work has been planned in conjunction with Paving for Progress (PfP) projects or other Public Works projects. Bid Dates:

Nov. 2 – 3012116-03 Seminole Valley Rd, Ph-2 (PfP) Estimated Project cost for this phase: \$3,574,000 (Water 2016029-02 Budget \$585,000)

Nov 16 – Waconia Av SW from Waconia Lane to Willow Creek Dr SW (PfP, Sewer & Water) Estimated Project Cost \$3.5M (Water 2016070-01 Budget \$530,000)

Dec. 7 – 3012155-02 3rd Ave SW from 6th Street SW to 1st Street SW (PfP) Estimated Project Cost \$1.414 M (Water 2016041 Budget \$200,000)

Dec. 14 – 3012154-02 16th Ave SE Extension from 4th to 5th St SE (PfP) Estimated Project Cost (TBD) (Water 2016094-01 Budget \$95,000)

Upcoming Public Hearings

November 15 – WPCF Primary Sludge Screen Process Improvements

January 24 – Kirkwood Elevated Storage Tank

January 24 – WPC Electric Grid Improvements

Kirkwood Tank Replacement Update

Demolition of the Kirkwood standpipe will be under way in October. Planning for the new elevated tank is under way, with a projected filing date in January or February of 2017. Conceptual renderings of the new tank are attached. Staff would like to discuss the Committee's impressions, and if the orientation of the lettering on the tank as shown looks satisfactory.



CEDAR RAPIDS

ROLLING RIDGE DR SW

SOUTH SIDE LOOKING NORTH



WEST SIDE LOOKING EAST



CEDAR RAPIDS

NORTH SIDE LOOKING SOUTH



FAR NORTH SIDE LOOKING SOUTH



FAR SOUTHWEST SIDE (I-380) LOOKING NORTHEAST



FAR WEST SIDE (I-380) LOOKING EAST



FAR NORTHWEST SIDE (I-380) LOOKING SOUTHEAST



FAR NORTHEAST SIDE (HWY 30) LOOKING SOUTHWEST



Infrastructure Committee Meeting Agenda Item Cover Sheet

Submitting Department: Public Works Department

Presenter at meeting: Cara Matteson

Phone Number/Extension: 5604

E-mail Address: c.matteson@cedar-rapids.org

Alternate Contact Person: Jen Winter

Phone Number/Extension: 5803

E-mail Address: J.Winter@cedar-rapids.org

Description of Agenda Item: Update on amendments made to Chapter 71 (Erosion and Sediment Control for Construction Sites) to include a new permit fee schedule for Major and Minor Erosion Control permits; Chapter 72 (Stormwater Management) to include topsoil preservation and restoration requirements for both private and public developments

Update:

Chapter 72 ('Topsoil') was taken to the Home Builders Association (HBA) for comments. It was agreed that City Staff would review the following items:

1. Section 72.102(a) - Topsoil definition.
 - a. HBA recommendation: change the topsoil definition to how the General Permit #2 has it defined, without the specific characteristics listed.
 - b. City Response: Change 3% organic matter to 2% organic matter. This definition is consistent with the Iowa Stormwater Management Manual.
2. Section 72.102(a) Topsoil Method definition ("minimum depth of 4-inches")
 - a. HBA recommendation: change the wording to "average depth of 4-inches"
 - b. City Response: The minimum depth of 4-inches was requested to be incorporated by the HBA and the City added this option. The City staff understands that some locations may be more challenging for depth achievement and that will be taken into consideration.
3. Section 72.205(c) - timeline of when Soil Quality Management Plan will be in effect.
 - a. HBA recommendation: make the wording more clear (did not agree with the intent)
 - b. City Response: Wording was changed to "Residential development and redevelopment projects shall retain existing topsoil on site and distribute the topsoil in a uniform, uncompacted manner after all public improvements are complete and prior to the sale of any individual lots. If developer retains all lots for development, topsoil shall be distributed in accordance with the Soil Quality Management Plan per lot."
4. Section 72.205(i)-performance data collection
 - a. HBA recommendation: more clearly define what will be done in regards to data collection.
 - b. City Response: The staff will collect data to evaluate the effectiveness of the program.
5. Soil Quality Management Plan
 - a. HBA recommendation: would like to see what the Soil Quality Management Plan looks like

- b. City Response: It is part of the Minor and Major Erosion Control Permit Application (see attached)

Action: These amendments have been added to Chapter 71 and Chapter 72 and scheduled for City Council:

October 25, 2016 4:00pm – Motion to set the public hearing

November 15, 2016 noon – Public Hearing and 1st reading

December 6, 2016 4:00pm – Public Hearing and 2nd reading

December 20, 2016 noon – Public Hearing and 3rd reading

Time Sensitivity: Normal

Estimated Presentation Time: 15 minutes

Budget Information (if applicable): NA

Explanation:

Chapter 71: Additional SWPPP requirements will ensure erosion control measures are implemented for all construction phases, as well as adequate documentation of erosion control efforts. Minor Erosion Control permit application requirements include additional erosion control plan elements to ensure a site has adequate controls. A permit fee schedule for both Minor and Major Erosion Control permits will support administration of the erosion control and topsoil program; to date, no permit fee has been established. Definition modifications and additions, and statements regarding publically-funded projects, are included to support implementation of the topsoil policy.

Chapter 72: The topsoil policy requires that existing topsoil be retained and redistributed on site in a uniform, uncompacted manner, and implementation of a Soil Quality Plan (soil management method(s) selected from Chapter 5, Section 6, Part F of the Iowa Stormwater Management Manual or 4-inch Topsoil Method) on private and public development sites requiring a Major or Minor Erosion Control permit. This will preserve benefits of healthy soil that removal of topsoil and construction activity diminishes or eliminates, by infiltrating stormwater and decreasing runoff, resulting in decreased flooding and erosion, water quality protection, and homeowner benefits.



City of Cedar Rapids

Minor Erosion Control Permit Application

(For Residential lots disturbing less than an acre of land)

Location of the Lot: _____
(Street address)

Lot Legal Description: _____

Lot Size: _____ Estimate Start Date: _____

Lot Transfer Agreement Information

Is the Development or Lot currently covered under a NPDES General Permit No.2? Yes No
(For listing of all residential developments covered under a IDNR's NPDES General Permit No.2 contact Cedar Rapids Development Service Department)

If "Yes" had you agreed and obtained an NPDES General Permit No.2 for the described lot above?

Yes No Developer (NPDES General Permit No.2 Part II.C.3.F)

(If "Yes" provide your lot's NPDES General Permit No.2 Auth.# below, a copy of the SWPPP, and the lot's "Transfer Agreement for Storm Water General Permit No.2 - Separate Authorization")

(If "No" submit a copy of the lot's "Transfer Agreement for Storm Water General Permit No.2.-Same Authorization".)

The Lot's NPDES General Permit No.2 Authorization # _____

The Applicant hereby certifies that the Storm Water Pollution Prevention Plan submitted with this Application complies with all of the requirements of the State NPDES General Permit No.2

Soil Quality Management and Restoration Plan

Soil Quality Management is an infiltration and soil profile restoration practice requirement of the City of Cedar Rapids Ch. 72- Stormwater Ordinance.

Select one of the eight methods from the Iowa Stormwater Manual to be implementing on site, or select the 4" Topsoil Method.

Method 1 Method 2 Method 3 Method 4

4" Topsoil Method (Sites may be subject to soil testing for performance data collection at the discretion of the City.)

Method 5 Method 6 Method 7 Method 8

(A description of methods 1-8 can be found in the "Iowa Stormwater Management Manual" Chapter 5, Section 6, Part F "Soil Quality Management and Restoration") <http://www.iowadnr.gov/Environmental-Protection/Water-Quality/NPDES-Storm-Water/Storm-Water-Manual>

Additional Information

Drainage Easements On Site: Yes No

If "Yes" and the easement has sustain vegetation, sediment controls need to be installed along the perimeter of the easement.

Geothermal Wells Installation: Yes No

Concrete Washout Facility: Provide One Site Community Washout Facility
(Must be maintained to functional conditions)

Location: _____

Permanent Stabilization Practice: Sodding Seeding & Mulching/Matting Both

(Matting will be required on all slopes 4:1 or greater regardless if hydro-seeding is utilized.)

A Minor Erosion Control Site Plan shall include the following:

A dimensioned drawing including the following:

- | | |
|---|--|
| 1) Property address and legal description; | 5) Proposed sediment controls description and placement; |
| 2) Property lines and any existing easements of record; | 6) Concrete washout facility; |
| 3) Limits of area of land-disturbing activities; | 7) Rock entrance drive; |
| 4) Existing and proposed ground elevations (2-foot maximum interval); | 8) Display future lot drainage design. |

Any Minor Erosion Control Plan submitted without any sediment & erosion control practices displayed will be considered incomplete and returned to applicant prior to review.

City of Cedar Rapids

Minor Erosion Control Permit Application

(For Residential lots disturbing less than an acre of land)

Name of Applicant: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Contact Name: _____ Phone # _____

Cell # _____ Email: _____

Name of Onsite Contact: _____

(If different from above)

Cell # _____ Email: _____

Terms

Submittal of an Erosion Control Plan addressing all Cedar Rapid's Municipal Code Chapter 71.04 Ordinance requirements.

I hereby certify the submitted Erosion Control Plan complies with the Cedar Rapid's Municipal Code Chapter 71.04 Ordinance, in which I assume full responsibility for the implementation and maintenance of all sediment and erosion control practices.

A Cedar Rapids Stormwater Official may revise the Erosion Control Plan to mitigate site specific issues as construction progresses.

Title Holder Signature: _____ Date: _____

(If different from Applicant)

Applicant Signature: _____ Date: _____

By signing this application I hereby certify all information provided above is accurate, and I understand the Minor Erosion Control Site Plan terms.