

**SPECIAL MEETING
MANDAN CITY COMMISSION
WORKING SESSION, AGENDA
NOVEMBER 15, 2016
VETERANS' CONFERENCE ROOM
MANDAN CITY HALL
*FOLLOWING REGULAR MEETING
www.cityofmandan.com**

- A. ROLL CALL:
1. Roll call of all City Commissioners.
- B. NEW BUSINESS:
1. Discussion regarding Hub City Funds
- C. FUTURE MEETING DATES FOR BOARD OF CITY COMMISSIONERS:
1. December 6, 2016
2. December 20, 2016
3. January 3, 2017
- D. ADJOURN

**HUB CITY PROJECTS
CASH FLOW ANALYSIS**

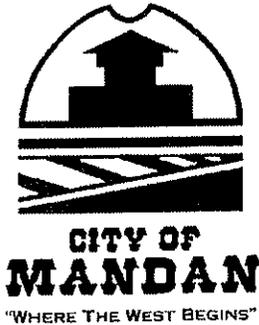
ACTUAL (AS OF NOVEMBER 2016)

	<u>Project Expenditures</u>						<u>Cash Balance</u>
	<u>Revenue</u>	<u>Public Works</u>			<u>2017 Budget</u>		
		<u>Facility Improvements</u>	<u>Phase 2</u>	<u>Phase 3</u>	<u>General Fund</u>	<u>Cemetery Fund</u>	
<u>2015</u>							
September	\$ 187,500						\$ 187,500
October	\$ 187,500						\$ 375,000
November	\$ 187,500						\$ 562,500
December	\$ 187,500						\$ 750,000
<u>2016</u>							
January	\$ 187,500						\$ 937,500
February	\$ 187,500						\$ 1,125,000
March	\$ 187,500						\$ 1,312,500
April	\$ 187,500						\$ 1,500,000
May	\$ 187,500						\$ 1,687,500
June	\$ 187,500						\$ 1,875,000
July	\$ 187,500						\$ 2,062,500
August	\$ 187,500						\$ 2,250,000
September	\$ 166,667	\$ (17,994)					\$ 2,398,673
October	\$ 166,667						\$ 2,565,340
November	\$ 166,667	\$ (34,989)					\$ 2,697,018
December	\$ 166,667						\$ 2,863,684
<u>2017</u>							
January	\$ 166,667						\$ 3,030,351
February	\$ 166,667						\$ 3,197,018
March	\$ 166,667						\$ 3,363,684
April	\$ 166,667						\$ 3,530,351
May	\$ 166,667						\$ 3,697,018
June	\$ 166,667						\$ 3,863,684
July	\$ 166,667						\$ 4,030,351
August	\$ 166,667						\$ 4,197,018
Total	\$ 4,250,000	\$ (52,983)	\$ -	\$ -	\$ -	\$ -	

**HUB CITY PROJECTS
CASH FLOW ANALYSIS**

BUDGET

	<u>Revenue</u>	<u>Project Expenditures</u>			<u>2017 Budget</u>		<u>Cash Balance</u>
		<u>Public Works Facility Improvements</u>	<u>Phase 2</u>	<u>Phase 3</u>	<u>General Fund</u>	<u>Cemetery Fund</u>	
<u>2015</u>							
September	\$ 187,500						\$ 187,500
October	\$ 187,500						\$ 375,000
November	\$ 187,500						\$ 562,500
December	\$ 187,500						\$ 750,000
<u>2016</u>							
January	\$ 187,500						\$ 937,500
February	\$ 187,500						\$ 1,125,000
March	\$ 187,500	\$ (1,300,000)					\$ 12,500
April	\$ 187,500						\$ 200,000
May	\$ 187,500						\$ 387,500
June	\$ 187,500						\$ 575,000
July	\$ 187,500						\$ 762,500
August	\$ 187,500						\$ 950,000
September	\$ 166,667						\$ 1,116,667
October	\$ 166,667						\$ 1,283,333
November	\$ 166,667						\$ 1,450,000
December	\$ 166,667						\$ 1,616,667
<u>2017</u>							
January	\$ 166,667				\$ (553,000)	\$ (10,000)	\$ 1,220,333
February	\$ 166,667						\$ 1,387,000
March	\$ 166,667						\$ 1,553,667
April	\$ 166,667						\$ 1,720,333
May	\$ 166,667						\$ 1,887,000
June	\$ 166,667						\$ 2,053,667
July	\$ 166,667						\$ 2,220,333
August	\$ 166,667						\$ 2,387,000
Total	\$ 4,250,000	\$ (1,300,000)	\$ -	\$ -	\$ (553,000)	\$ (10,000)	



New Business No. 5

Board of City Commissioners

Agenda Documentation

MEETING DATE: March 1, 2016
PREPARATION DATE: February 25, 2016
SUBMITTING DEPARTMENT: Administration
DEPARTMENT DIRECTOR: Jim Neubauer, City Administrator
PRESENTER: Jim Neubauer, City Administrator
SUBJECT: Hub City Funding

STATEMENT/PURPOSE: To consider project prioritization for Hub City funding.

BACKGROUND/ALTERNATIVES: Projects approved to move forward resulting from Hub City funds are being evaluated based on the possibility that the funding may be reduced.

We began receiving funds in monthly installments in September 2015. These funds amount to \$187,500/month and thru February 2016 we have accumulated \$1.125M.

In light of declining oil tax revenues to the State of North Dakota, the funding source, we felt it advisable to revisit the projects in case there would be a decrease in funding. Senator Cook has indicated that a reduction in Hub City funding would be unlikely, however, it is possible.

Management team members have met on two separate occasions to prioritize the projects that were selected for funding and are providing this information for Board consideration and discussion.

Projects have been categorized in Phase 1, 2 and 3 based upon projects that were felt a high priority, the desire show tangible results from the funding, and consideration for those projects with alternative funding sources. Phase 1 and 2 projects are building projects which don't have a readily available source of funding. Phase 3 projects are those which have an alternate source of funding. The Phase 3 projects could be paid out of the utility funds and the general fund. If the full amount of Hub City dollars becomes available the utility funds and general fund would be replenished with the Hub City dollars. In essence all projects move forward with funding either from Hub City dollars or utility funds and general fund.

Consideration was given to the cash flow analysis and we would not recommend moving forward with bidding and awarding of the construction projects until funds have been received.

The Public Works projects of the office and cold storage additions along with the clear span building for sand piles were selected as the top priority based on existing needs and the lack of space to house current equipment based on the city's growth over the past several years. Requests for architectural service proposals will soon be received and by the end of March 2016 we would have secured adequate dollars to move forward to construct this project.

The Fire Station would be the second priority and requests for architectural services will be received February 26, 2016. We recommend moving forward to have the station designed and ready for bid. This portion of the project would be completed this fall which means the funding would be secured to pay for those services and we would have a much better idea if the full \$1.6M budgeted for this project is secure. The timeframe for bidding the project would be the winter of 2016-2017 with shovels in the ground in the spring of 2017.

The Phase 3 projects all have alternate funding sources from the Water/Sewer Utility fund to the Storm Water Utility fund and General fund, and thus we recommend moving forward with those projects and if Hub City dollars are secured, we would reimburse those funds.

ATTACHMENTS: Hub City Phase Projects & Cash Flow Analysis of Hub City Funds

FISCAL IMPACT:

STAFF IMPACT: n/a

LEGAL REVIEW: n/a

RECOMMENDATION: This information is being provided for commission discussion.

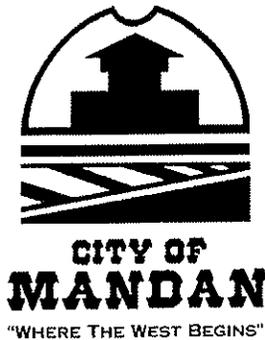
SUGGESTED MOTION:

HUB City Projects

Department	Project	Justification	Amount Budgeted	Priority	Alternate Funding Source	Phase 1	Phase 2	Phase 3
Fire	North Fire Station	Accommodate Future Growth NW Mandan	\$1,600,000	4	Arch. Fees for design \$100,000		\$ 1,600,000	
Planning & Engineering	Study - City Share of Met Planning Org	Citywide benefit	\$63,200	5	Met. Planning Org. Studies, Committed, Alternate Funding Source = General Fund			\$ 63,200
Planning & Engineering	Land Purchase future Reservoir/Tower NW Mandan	Accommodate Future Growth NW Mandan	\$100,000	6	low priority 5-10 years before needed, risk of waiting land prices go up, could take out an option to purchase	Obtain Option to buy		\$ 100,000
Planning & Engineering	Study - Engineering Fees, Master Lift-Gravity to WWTP	Citywide benefit	\$400,000	8	risk of failure, need to assess the forremain, Alternate Funding Utility Fund. Start Process in 2016			\$ 400,000
Planning & Engineering	Water Line - Trunk 12" Old Red Trail - Reconstruct	Accommodate Future Growth NW Mandan	\$600,000	7	Alternate funding from Utility fund paid over 20 years			\$ 600,000
Planning & Engineering	Study - Storm Water City Wide Master Planning - Year 1	Citywide benefit	\$100,000	9	assist in development by looking at regional storm water system, Alternate Funding = Storm Water Utility Fund			\$ 100,000
Planning & Engineering	Study - Storm Water City Wide Master Planning - Year 2	Citywide benefit	\$100,000	9	assist in development by looking at regional storm water system, Alternate Funding = Storm Water Utility Fund			\$ 100,000
Planning & Engineering - WTP	Hydrocarbon detector	Citywide benefit	\$30,000	1	Utility Fund			\$ 30,000
Public Works	Clear Span Building for Sand Piles	Citywide benefit	\$300,000	3		\$ 300,000		
Public Works	Office & Cold Storage	Accommodate Existing Needs	\$1,000,000	2		\$ 1,000,000		
Total		Total Allocation	\$4,293,200			Phase 1 \$ 1,300,000	Phase 2 \$ 1,600,000	Phase 3 \$ 1,393,200
						Total \$ 2,900,000		Total \$ 4,293,200

**HUB CITY PROJECTS
CASH FLOW ANALYSIS**

	<u>Revenue</u>	<u>Project Expenditures</u>			<u>Cash Balance</u>
		<u>Phase 1</u>	<u>Phase 2</u>	<u>Phase 3</u>	
<u>2015</u>					
September	\$ 187,500				\$ 187,500
October	\$ 187,500				\$ 375,000
November	\$ 187,500				\$ 562,500
December	\$ 187,500				\$ 750,000
<u>2016</u>					
January	\$ 187,500				\$ 937,500
February	\$ 187,500				\$ 1,125,000
March	\$ 187,500	\$ (1,300,000)			\$ 12,500
April	\$ 187,500				\$ 200,000
May	\$ 187,500				\$ 387,500
June	\$ 187,500				\$ 575,000
July	\$ 187,500				\$ 762,500
August	\$ 187,500				\$ 950,000
September	\$ 187,500				\$ 1,137,500
October	\$ 187,500				\$ 1,325,000
November	\$ 187,500				\$ 1,512,500
December	\$ 187,500		\$ (1,600,000)	\$ (100,000)	\$ -
<u>2017</u>					
January	\$ 187,500			\$ (187,500)	\$ -
February	\$ 187,500			\$ (187,500)	\$ -
March	\$ 187,500			\$ (187,500)	\$ -
April	\$ 187,500			\$ (187,500)	\$ -
May	\$ 187,500			\$ (187,500)	\$ -
June	\$ 187,500			\$ (187,500)	\$ -
July	\$ 185,000			\$ (185,000)	\$ -
Total	<u>\$ 4,310,000</u>	<u>\$ (1,300,000)</u>	<u>\$ (1,600,000)</u>	<u>\$ (1,410,000)</u>	



Board of City Commissioners

Agenda Documentation

MEETING DATE: November 17, 2015
PREPARATION DATE: November 13, 2015
SUBMITTING DEPARTMENT: Administration
DEPARTMENT DIRECTOR: Jim Neubauer, City Administrator
PRESENTER: Jim Neubauer, City Administrator
SUBJECT: Hub City Funding Uses

STATEMENT/PURPOSE: To consider options relative to Hub city funds appropriated during the 2015 legislative session.

BACKGROUND/ALTERNATIVES: Discussion at the November 3, 2015 working session narrowed down potential uses for Hub City funds. Discussion lead to projects that address current needs due to population growth over the past several years. Mayor Van Beek, Commissioner Tibke, Finance Director Welch and I met with Senator Cook on Monday to discuss the potential and proposed uses of this funding source.

In a nutshell, projects that would normally be special assessed city wide, have mill levy implications city wide or utility rates would be good candidates, roads, water, sewer infrastructure and public buildings.

Greg asked Senator Cook if the City would not be able to use Hub City funds for a new Fire Station or Public Works Facility then the City would need to issue General Obligation Bonds for those facilities with a Citywide Mill Levy to pay back the Bonds. In response to that, Senator Cook said the Fire Station would be a good use of the Hub City funds for that purpose. While he didn't specify the Public Works Facility directly in his response, I interpreted his answer to include all projects that would have a Citywide cost impact to all property owners whether through special assessments, property taxes, or utility rates. Fire station and Public works would be paid for via city wide property taxes as outlined above and thus Hub city funds would be a good funding source. It is a commission choice on how to best spend the funds.

We went through the list of priorities as discussed at the working session and he did not take issue with any of them.

We should also look at what projects we might have on the horizon that we would request Hub City funding for to start the 2017 legislative session.

The projects are as follows:

1) Planning & Engineering:

a. Water Treatment Plant

i. Hydro Carbon Detector

With the increase in drilling near or around Lake Sakakawea and the Missouri River early detection of hydro carbons early detection is important to our water supply.

b. Bismarck – Mandan Metropolitan Planning Organization,

i. City share of Metro Planning Organization (MPO) studies:
(included in the 2016 budget)

The MPO initiates (with local jurisdiction input) and manages studies that are used as a basis for identifying and completing transportation projects in the metropolitan area. The majority of those studies (typically 80%) are paid for by the MPOs allotment of funds divvied by the Federal Highway Administration, but a local share is expected also. The locals' share is determined by the benefit of any particular jurisdiction from that study.

1. Studies and our local share for them in 2016 include;

- a. Low cost improvements for local roadways
- b. Mandan Downtown sub-area study
- c. School area safety study

c. Land Purchase Future Water Reservoir

In order to best serve the NW growth area of the city, an elevated storage tank and/or a reservoir are needed to provide peak hour demands, assure dependable domestic service, and meet fire flow demands in case of emergency. It is estimated that approximately 5 acres of land would be needed.

d. Expand ORT transmission water line from 6" to 12":

Identified in a 2013 amendment to our water distribution masterplan is an upsizing of the existing 6" watermain that is in the ditch just north of Old Red Trail, along the very same stretch of road that is scheduled to be reconstructed next year. This line is the main water artery from the Sunset reservoir to the properties in NW Mandan. As it exists as a 6" line, the rate of growth in NW Mandan will push its capacity. Additionally, it will serve as the transmission line for a future reservoir needed in this area of town which will require the 12" size. We recommend expanding this 6" to a 12" with the reconstruction of the ORT roadway scheduled for next year to

minimize construction impacts in the area and get ahead of the water demand.

- e. Engineering Fees to assess and plan sanitary sewer line improvements from master lift station to Waste Water Treatment Facility (WWTF):

There are indications that the two existing forcemain lines from the master lift to the WWTF are in need of assessment to evaluate if a lining project is needed, and what kind of lining project that may be. Our wastewater Capital Improvement Plan (CIP) has estimated this assessment to be about \$281K. The CIP also identified the need to replace our master lift station, within the next 5 yrs., with all new equipment as it is 30yrs old and coming up on its useful life. To replace the master lift station and line the forcemain pipes, our CIP has estimated a total project of about \$4.2M. Our office has contemplated the feasibility of laying gravity pipe from the master lift to the WWTF. This would be a huge undertaking as it would likely take a 30" pipe or bigger to be laid approximately 3 miles in non-ideal soil conditions through new development (Lakewood subdivisions). The cost of this would likely be more than replacing the lift station and lining the forcemain, but it has the potential stand the test of time much better than replacing the master lift and lining the forcemain and would dramatically reduce maintenance for that segment of the system as well as improve treatment efficiency and reduce environmental hazards and operational costs at the treatment plant.. About $\frac{3}{4}$ of the city's sewage is handled by that segment of the city's system.

- f. Stormwater Masterplan: (already included the first $\frac{1}{2}$ of the study \$100,000 in 2016 budget; $\frac{2}{2}$ would be \$100,000 in 2017)

Proper stormwater management is a common complaint to our department, and for good reason. If not properly controlled, runoff water from springs melt, and from powerful storms have the potential to cause a substantial amount of property damage. A formal effort towards stormwater management was implement in 2006 with the city adopting an ordinance to require stormwater management planning. Our ordinance demands that multi-family, commercial, and industrial sites, along with residential subdivisions submit a stormwater management plan before proceeding with their development.

Currently, each site or subdivision is on their own to manage the stormwater from their property. This has caused a temptation by some to skirt the rules as the requirement to store stormwater on valuable property can be unpopular. It has also resulted in dozens of small ponds throughout the city that are being maintained by the property owners with varying

degrees of effectiveness. Other cities throughout the state have had success with city regional ponds initiated by the city for which the adjacent upstream development could shed to and that regional pond could provide needed detention for stormwater in that larger drainage area rather than the site specific ponds we currently have. This study would take a look at growth areas throughout the city and see if a regional pond might work for those areas. In addition, the study should take it further and size such potential ponds, come up with preliminary estimates to construct. We will also want a recommended process to recoup the costs of building any regional pond from the benefitting properties to come from the study.

Another aspect of this is the need to look at stormwater quality. Tesoro has been concerned about the impact of upstream development on their ability to meet their discharge permit. Treating stormwater can't be accomplished effectively in small ponds serving individual developments. It has to be done in constructed regional facilities.

Other aspects of the study could include an audit of our department's current stormwater management practices and recommendations to improve efficiency. Also, could include some advice on complying with our MS4 permit, a permit issued by the state health department that keeps the city in good standing to discharge stormwater into waters of the state (local rivers and streams). It is anticipated that this study would be conducted in 2016 and 2017.

g. Public Works

i. Clear Span Structure for Salt Sand Storage

The need for a structure to cover our salt/sand piles to keep material from blowing onto neighboring properties and to keep the weather off the material to prevent its deterioration. Growth in the city causes an increased need for material, and by covering the piles will keep the integrity of the material longer, and thus requiring less product.

ii. Office and Cold Storage

To provide privacy for director and other superintendents in addition to a conference area. Increase growth in the city has caused the need for additional equipment and personnel. Ten dump trucks including sanders are sitting outside along with a duropatcher, crack sealers, asphalt machine, 10 pickup trucks and various other equipment are housed outside. Expansion of the public works building will allow indoor storage of this equipment along with an expanded mechanics area.

h. North Fire Station

In general response times to the northwest area of Mandan exceed the National Fire Protection Association (NFPA) recommendations of 5 minutes or less. This is a growing area of Mandan and at times calls exceed 10 minutes. We are currently in the process of bidding a new engine and thus would not need to purchase additional equipment at this time. Funding for firefighters will need to be addressed in future budgets.

ATTACHMENTS: Timelines for project implementation

FISCAL IMPACT: The very preliminary estimates for the above projects amount to \$4.293M. Our Hub City funding is estimated to be \$4.3M

STAFF IMPACT: All projects will involve significant staff time in planning and implementation.

LEGAL REVIEW: n/a

RECOMMENDATION: I recommend the commission authorize staff to move forward on the projects outlined above. Many of the initial steps will involve bringing request for proposals back to the commission for their consideration.

SUGGESTED MOTION: I move to authorize staff to move forward on the projects outlined above.

PLANNING AND ENGINEERING SCHEDULE OF HUB CITY FUNDED STUDIES AND PROJECTS
 Author: Austin Frensch, Planning and Engineering Director
 Date: November 11, 2015

Item	Task	Project No.	Start	End	Days	Weeks	2015	2016	2017
1	Water Treatment Plant Upgrade	151114	1/1/14	12/31/15	62	1.5	100%	0%	0%
2	Water Treatment Plant Upgrade	151114	1/1/14	12/31/15	62	1.5	100%	0%	0%
3	Water Treatment Plant Upgrade	151114	1/1/14	12/31/15	62	1.5	100%	0%	0%
4.1	Water Treatment Plant Upgrade	151114	1/1/14	12/31/15	62	1.5	100%	0%	0%
4.2	Water Treatment Plant Upgrade	151114	1/1/14	12/31/15	62	1.5	100%	0%	0%
4.3	Water Treatment Plant Upgrade	151114	1/1/14	12/31/15	62	1.5	100%	0%	0%
5	Water Treatment Plant Upgrade	151114	1/1/14	12/31/15	62	1.5	100%	0%	0%
6	Water Treatment Plant Upgrade	151114	1/1/14	12/31/15	62	1.5	100%	0%	0%
7	Water Treatment Plant Upgrade	151114	1/1/14	12/31/15	62	1.5	100%	0%	0%
8	Water Treatment Plant Upgrade	151114	1/1/14	12/31/15	62	1.5	100%	0%	0%
9	Water Treatment Plant Upgrade	151114	1/1/14	12/31/15	62	1.5	100%	0%	0%
10	Water Treatment Plant Upgrade	151114	1/1/14	12/31/15	62	1.5	100%	0%	0%
11	Water Treatment Plant Upgrade	151114	1/1/14	12/31/15	62	1.5	100%	0%	0%
12	Water Treatment Plant Upgrade	151114	1/1/14	12/31/15	62	1.5	100%	0%	0%
13	Water Treatment Plant Upgrade	151114	1/1/14	12/31/15	62	1.5	100%	0%	0%
14	Water Treatment Plant Upgrade	151114	1/1/14	12/31/15	62	1.5	100%	0%	0%
15	Water Treatment Plant Upgrade	151114	1/1/14	12/31/15	62	1.5	100%	0%	0%
16	Water Treatment Plant Upgrade	151114	1/1/14	12/31/15	62	1.5	100%	0%	0%
17	Water Treatment Plant Upgrade	151114	1/1/14	12/31/15	62	1.5	100%	0%	0%
18	Water Treatment Plant Upgrade	151114	1/1/14	12/31/15	62	1.5	100%	0%	0%
19	Water Treatment Plant Upgrade	151114	1/1/14	12/31/15	62	1.5	100%	0%	0%
20	Water Treatment Plant Upgrade	151114	1/1/14	12/31/15	62	1.5	100%	0%	0%

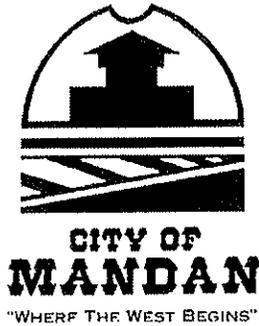
Public Works Equipment/Salt Storage and Office Expansion Project Timeline

2015	November	Approval of Board for \$1.3 Million of Hub City Funding for expansion of storage building, expansion of PW office building, and Salt/Sand building at the PW's present location.
2015	December	Advertise for Architectural/Engineer RFP
2016	January	Review RFP's
2016	February	Approve Architect/Engineer
2016	March	Begin Building Plans
2016	June	Advertise for Bids
2016	August	Award Bids
2016	September	Begin Construction – footings
2016	October	Construction – salt/sand building
2016	November	Construction - building
2017	May	Occupy Shop/Office

Mandan Fire Station 3 Project Timeline

2015	November	Approval of Board for estimated 6700 square foot fire station
2015	December	Advertise for Architectural/Engineer RFP
2016	January	Review RFP's
2016	March	Approve Architect/Engineer
2016	April	Begin Building Plans
2016	May	Soil Tests and Site Plan
2016	October	Advertise for Bids
2016	December	Award Bids
2017	March	Begin Construction
2017	December	Construction Complete
2018	January	Occupy Station

Station 2 architectural services began April 2007 with construction complete February 2009. Bids were opened March 25, 2008 and placed on city agenda April 29, 2008. Per square foot cost came in at \$136.00, including furniture & appliances, with a total of 7,744 square feet.



Board of City Commissioners

Agenda Documentation

MEETING DATE: November 3, 2015
PREPARATION DATE: October 30, 2015
SUBMITTING DEPARTMENT: Administration
DEPARTMENT DIRECTOR: Jim Neubauer, City Administrator
PRESENTER: Jim Neubauer, City Administrator
SUBJECT: Hub City Funding Uses

STATEMENT/PURPOSE: To consider options relative to Hub city funds appropriated during the 2015 legislative session.

BACKGROUND/ALTERNATIVES: Departments have been working diligently to determine potential uses for the Hub City funds as appropriated by the 2015 Legislative Assembly. \$4.3M was appropriated, and is currently being transferred to the city on a monthly basis. We have received two installments of \$187,000 each or \$374,000 to date.

While there were no restrictions placed on the use of these funds, discussions with area legislators indicate a few things:

- 1) Utilizing these funds for infrastructure in areas of growth is favorable.
- 2) Continued Hub city funding will be a challenge in future sessions.
- 3) Using these funds to match other grant dollars may not be looked upon favorably, as like to see local dollars into projects rather than fully funded by grants

Our goal has been to provide the commission with a number of projects for your consideration. As with all projects, some have higher priorities than others; however, It could be argued all have a city wide benefit. This occurs by utilizing the Hub City funds to pay for a projects that might otherwise require property taxes or utility funds which affect all of our residents.

Projects on the attached list are relatively self-explanatory; however, some of the engineering projects require a bit more explanation.

Planning and Engineering Hub City Candidate Projects Report

October 30, 2015

In order to better understand the need for infrastructure projects that may be best candidates for hub city funding, the planning and engineering department offers the following discussion of those listed below.

City share of Metro Planning Organization (MPO) studies: (included in the 2016 budget)

The MPO initiates (with local jurisdiction input) and manages studies that are used as a basis for identifying and completing transportation projects in the metropolitan area. The majority of those studies (typically 80%) are paid for by the MPOs allotment of funds divvied by the Federal Highway Administration, but a local share is expected also. The locals' share is determined by the benefit of any particular jurisdiction from that study.

Studies and our local share for them in 2016 include;

- 1) Low cost improvements for local roadways (\$3,600)
- 2) Mandan Downtown sub-area study (\$50,000)
- 3) School area safety study (\$9,600)
- 4) Aerial photos and contours (\$3,114)

For a total of **\$66,314**.

Engineering Fees to assess and plan sanitary sewer line improvements from master lift station to Waste Water Treatment Facility (WWTF):

There are indications that the two existing forcemain lines from the master lift to the WWTF are in need of assessment to evaluate if a lining project is needed, and what kind of lining project that may be. Our wastewater Capital Improvement Plan (CIP) has estimated this assessment to be about \$281K. The CIP also identified the need to replace our master lift station, within the next 5 yrs., with all new equipment as it is 30yrs old and coming up on its useful life. To replace the master lift station and line the forcemain pipes, our CIP has estimated a total project of about \$4.2M. Our office has contemplated the feasibility of laying gravity pipe from the master lift to the WWTF. This would be a huge undertaking as it would likely take a 30" pipe or bigger to be laid approximately 3 miles in non-ideal soil conditions through new development (Lakewood subdivisions). The cost of this would likely be more than replacing the lift station and lining the forcemain, but it has the potential stand the test of time much better than replacing the master lift and lining the forcemain and would dramatically reduce maintenance for that segment of the system as well as improve treatment efficiency and reduce environmental hazards and operational costs at the treatment plant.. About ¾ of the city's sewage is handled by that segment of the city's system. Given the CIP cost to assess of about \$281K, and adding a prelim report and cost estimate to compare the two approaches, our preliminary estimate for all that needs to be assessed and studied regarding the master lift is **\$400K**.

Future Reservoir Site Purchase:

In order to best serve the NW growth area of the city, an elevated storage tank and/or a reservoir are needed to provide peak hour demands, assure dependable domestic service, and meet fire flow demands in case of emergency. It is estimated that approximately 5 acres of land would be needed for such a site. At \$15K/acre for raw land on the outskirts of the city, the land may cost about **\$75K**.

Expand ORT transmission water line from 6" to 12":

Identified in a 2013 amendment to our water distribution masterplan is an upsizing of the existing 6" watermain that is in the ditch just north of Old Red Trail, along the very same stretch of road that is scheduled to be reconstructed next year. This line is the main water artery from the Sunset reservoir to the properties in NW Mandan. As it exists as a 6" line, the rate of growth in NW Mandan will push its capacity. Additionally, it will serve as the transmission line for a future reservoir needed in this area of town which will require the 12" size. We recommend to expand this 6" to a 12" with the reconstruction of the ORT roadway scheduled for next year to minimize construction impacts in the area and get ahead of the water demand. Preliminary estimate is for **\$600K**.

North 1806 growth area trunk sewer:

To unlock the development potential along 1806 up to about 39th Street north (growth areas A1, A2, and A3 on masterplan) sewer trunk lines are necessary. As outlined on the masterplan, to serve areas A1-A3, trunk sewer and a lift station would need to be installed approximately 5,500' north of the intersection of 1806 and Collins. To unlock a sizable growth area A4, the sewer trunk would need to be taken up to 1806/38th Street and another lift station would need to be added. Just the trunk sewer and lift stations along 1806 are preliminarily estimated to cost about **\$3.6M** if just to the point that serves A1-A3, or **\$5.1M** if served A1-A4.

West of High School growth area trunk sewer:

To unlock the development potential west of the high school in west Mandan, about 1 mile of trunk sewer will be needed. Our department believes that if properly planned, this sewer can be installed as all gravity line, therefore no need for an undesirable lift station. The approximate cost for this trunk sewer is about **\$1,000,000**.

Stormwater Masterplan: (already included the first ½ of the study \$100,000 in 2016 budget; 2/2 would be \$100,000 in 2017)

Proper stormwater management is a common complaint to our department, and for good reason. If not properly controlled, runoff water from springs melt, and from powerful storms have the potential to cause a substantial amount of property damage. A formal effort towards stormwater management was implemented in 2006 with the city adopting an ordinance to require stormwater management planning. Our ordinance demands that multi-family, commercial, and industrial sites, along with residential subdivisions submit a stormwater management plan before proceeding with their development.

Currently, each site or subdivision is on their own to manage the stormwater from their property. This has caused a temptation by some to skirt the rules as the requirement to store stormwater on valuable property can be unpopular. It has also resulted in dozens of small ponds throughout the city that are being maintained by the property owners with varying degrees of effectiveness. Other cities throughout the state have had success with city regional ponds initiated by the city for which the adjacent upstream development could shed to and that regional pond could provide needed detention for stormwater in that larger drainage area rather than the site specific ponds we currently have. This study would take a look at growth areas throughout the city and see if a regional pond might work for those areas. In addition, the study should take it further and size such potential ponds, come up with preliminary estimates to construct. We will also want a recommended process to recoup the costs of building any regional pond from the benefitting properties to come from the study.

Another aspect of this is the need to look at stormwater quality. Tesoro has been concerned about the impact of upstream development on their ability to meet their discharge permit. Treating stormwater can't be accomplished effectively in small ponds serving individual developments. It has to be done in constructed regional facilities.

Other aspects of the study could include an audit of our department's current stormwater management practices and recommendations to improve efficiency. Also, could include some advice on complying with our MS4 permit, a permit issued by the state health department that keeps the city in good standing to discharge stormwater into waters of the state (local rivers and streams). It is anticipated that this study would be conducted in 2016 and 2017. The estimate for completing such a study is about **\$200K**.

Roundabout at Collins and ORT:

There has been some discussion about installing a roundabout at Collins and Old Red Trail instead of signals. A study is needed to determine if this is feasible and develop a cost estimate. Study estimated at **\$30K**.

Hydrocarbon Detector:

This is a detection device that would be used at the water treatment facility to detect any hydrocarbons (chief component in petroleum and natural gas) that may be in the river so that the water treatment staff can respond accordingly. Device costs an estimated **\$30K**.

Emergency Generator:

An emergency generator is needed at the south side reservoir and pump station in order to assure consistent service to the southeast and southwest areas of town. Funds have been obtained through an emergency management grant for this generator, but the city still has a local share of **\$40K**.

Engineering Fees to move water lines off of Tesoro property:

We have a non-ideal alignment of water transmission lines through the Tesoro property. There is no indication at this time that the condition of those transmission lines warrants replacement. It is not a line identified in our CIP as needing to be replaced. A prelim study and estimate should be able to identify the best alignment for that line off the Tesoro property and the cost associated with the realignment. Estimated cost for the prelim engineering study and estimate of **\$50K**.

Conclusion:

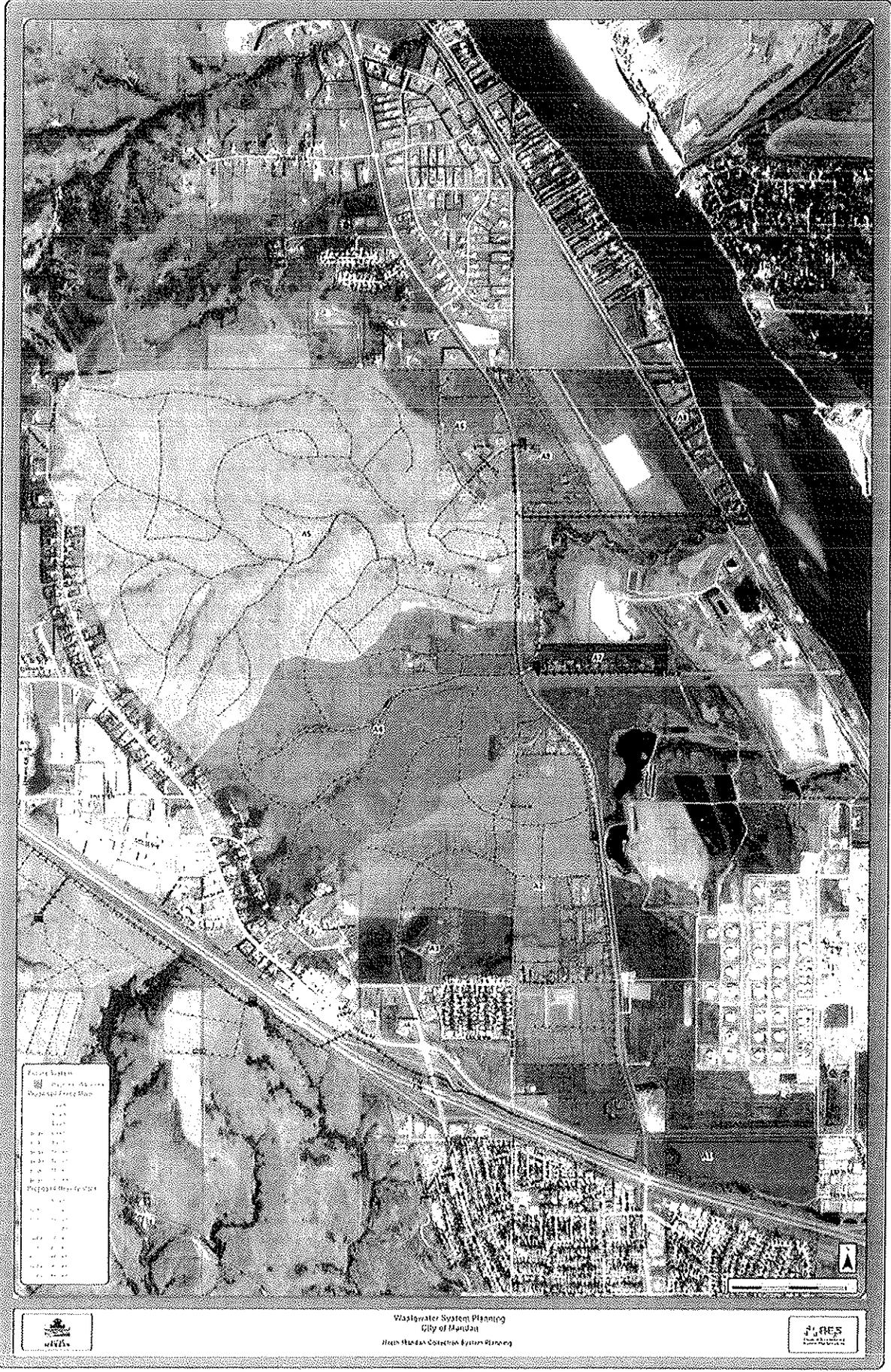
Aside from these projects, we have many more that have been identified within our masterplanning studies for our water and wastewater systems. The nature of most of those projects is to address aging components of the existing system.

On the transportation side, we have some projects on the NDDOT STIP (Statewide Transportation Improvement Program) for which we receive federal and state funding for but must come up with a local match, typically either 10%-20% of the project cost, depending on the roadway classification.

If commission would like to delve deeper into these projects that were not described here as possible uses for hub city funding, or if commission has any other ideas for uses of hub city funding involving infrastructure, please let us know.

Justin Froseth
Planning and Engineering Director

<u>Department</u>	<u>Project</u>	<u>Estimated Cost</u>	<u>Justification</u>	
Administration	City Hall - Evaluate other downtown location	\$15,000		
Administration	City Hall - Purchase Land	\$300,000		
Administration	City Hall - Replace or Renovate	\$12,500,000		
Administration	City Hall- Plan to phase in renovations	\$15,000		
Assessing	Office Furniture - Depending on split		Growth in Department	
Building Inspection	Office Furniture - Depending on split		Growth in Department	
Finance				
Fire	North Fire Station	\$2,500,000	Accommodate Future Growth NW Mandan	
General	Lower Heart Flood Control			
Morton-Mandan Public Library	Building Improvements	\$1,000,000	Maintenance Issues	
Municipal Court	Possible move to M. County	\$30,000	Safety Issues	
Planning & Engineering	Land Purchase future Reservoir/Tower NW Mandan	\$75,000	Accommodate Future Growth NW Mandan	
Planning & Engineering	Matching Funds Arterial Projects - Main St. ADA	\$110,000	Citywide benefit	
Planning & Engineering	Matching Funds Arterial Projects - Main Street Signals	\$150,000	Citywide benefit	
Planning & Engineering	Matching Funds Arterial Projects - Memorial Hwy Signals	\$94,500	Citywide benefit	
Planning & Engineering	Matching Funds Arterial Projects - Old Red Trail Reconstruct- Street	\$800,000	Accommodate Future Growth NW Mandan	
Planning & Engineering	Matching Funds Arterial Projects - Sunset Drive (Water Sewer Street Lights(City share street, lights, water & Sewer)	\$837,000	Citywide benefit	
Planning & Engineering	Matching Funds Arterial Projects - Twin City Signals	\$25,000	Citywide benefit	
Planning & Engineering	Matching Funds Arterial Projects 27th St Reconstruct	\$191,000	Accommodate Future Growth NW Mandan	
Planning & Engineering	Sanitary Sewer North 1806 Growth Area A1 - A3	\$3,600,000	Accommodate Future Growth NW Mandan	
Planning & Engineering	Sanitary Sewer North 1806 Growth Area A3 - A4	\$1,500,000	Accommodate Future Growth NW Mandan	
Planning & Engineering	Sanitary Sewer Trunk - West of Boundary Road	\$1,000,000	Accommodate Future Growth W Mandan	
Planning & Engineering	Study - City Share of Met Planning Org	\$63,200	Citywide benefit	\$63,200
Planning & Engineering	Study - Engineering Fees, Master Lift- Gravity to WWTP	\$400,000	Citywide benefit	
Planning & Engineering	Study - Engineering Fees, move water lines off Tesoro Property	\$50,000	Citywide benefit	
Planning & Engineering	Study - Roundabout Collins & ORT	\$30,000	Accommodate Future Growth NW Mandan	
Planning & Engineering	Study - Storm Water City Wide Master Planning	\$200,000	Citywide benefit	\$100,000 \$100,000
Planning & Engineering	Water Intake Structure		Citywide benefit	
Planning & Engineering	Water Line - Trunk 12" Old Red Trail - Reconstruct	\$600,000	Accommodate Future Growth NW Mandan	
Planning & Engineering WIP	City Share - Emergency Generator	\$40,000	Growth SE Area	



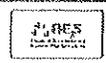
Flow System

- 10" - 12" (1000 - 1500)
- 12" - 15" (1500 - 2500)
- 15" - 18" (2500 - 4000)
- 18" - 24" (4000 - 6000)
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- 30" - 36" (10000 - 15000)
- 36" - 42" (15000 - 25000)
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Wastewater System Planning
 City of Mandan
 High Mandan Collection System Planning



PARK/SCHOOL SITE

Christianson's First
Mandan, ND
4.24.15

