

CITY OF MARSHALL
CAPITAL IMPROVEMENT PLAN 2016-2022

Record #	Department (start with letter)	Project Title	Priority Ranking	Estimated Useful Life	Source of Funding	Project Narrative/Purpose	2016-2017 Expenditure	2017-2018 Expenditure	2018-2019 Expenditure	2019-2020 Expenditure	2020-2021 Expenditure	2021-2022 Expenditure	City Expenditure	Other Funds or Grant Share	Total Expenditure	Impact on Operating Budget	Type PC-Planning Commission C-Council	Infrastructure Type SD-Building & Improv. DP-Data Processing Eq. INF-Infrastructure Imp. LND-Land MCH-Machinery & Equip. VEH-Vehicle
1	Airport	Justification Study for Terminal Building	1	30	General Fund 5%, FAA Allocation 90%, State 5%	Study to determine needs, general concept, and preliminary cost of a new terminal building	\$1,500	\$0	\$0	\$0	\$0	\$0	\$1,500	\$28,800	\$30,000	None	C	BD
2	Airport	Design Terminal Building	2	30	General Fund 5%, FAA Allocation 90%, State 5%	The existing terminal building, due to it's age, requires improvements to maintain the use of the building.	\$2,250	\$0	\$0	\$0	\$0	\$0	\$2,250	\$42,750	\$45,000	Reduction in maintenance expenses.	PC	BD
3	Airport	Terminal Building Construction	2	30	General Fund 5%, FAA Allocation 90%, State 5%	The existing terminal building, due to it's age, requires improvements to maintain the use of the building.	\$0	\$0	\$25,847	\$0	\$0	\$0	\$25,847	\$491,094	\$516,941	Reduction in maintenance expenses.	PC	BD
4	Airport	Pavement Marking and Crack Sealing	2	10	General Fund 5%, FAA Allocation 90%, State 5%	Replacement of pavement markings and crack sealing as necessary	\$0	\$1,250	\$0	\$0	\$0	\$0	\$1,250	\$23,750	\$25,000	None	C	INF
5	Airport	Fencing along S. Kalamazoo Ave.	3	30	General Fund	Add fencing along the public ROW frontage of S. Kalamazoo Ave.	\$32,000	\$0	\$0	\$0	\$0	\$0	\$32,000		\$32,000	None	C	INF
6	Airport	Purchase Snow-Removal Equipment	3	30	General Fund 5%, FAA Allocation 90%, State 5%	Purchase snow-removal equipment for the airport. The airport does not have any dedicated equipment on site for snow removal. This equipment will help airport personnel keep pavements clear of snow and better serve the airport users. Purchase would be for (1) snowblower and (2) plow.	\$0	\$0	\$0	\$8,333	\$0	\$0	\$8,333	\$168,333	\$166,666	None.	C	VEH
7	Airport	Land Acquisition	2	30	General Fund 5%, FAA Allocation 90%, State 5%	This project is to acquire approximately 29 acres of property in easement. The property is located at the approach end of runway 28 and is needed for approach protection and future development of the RPZ control.	\$0	\$0	\$0	\$0	\$7,500	\$0	\$7,500	\$142,500	\$150,000	None.	PC	BD
8	Cemetery	Cemetery Water Distribution System	2	20	Cemetery Trust Fund	Replacing the current water distribution system will eliminate low breaks which will result in reduced water usage as a result of the leaks.	\$45,000	\$0	\$0	\$0	\$0	\$0	\$45,000		\$45,000	Reduction in maintenance and water loss	C	INF
9	Cemetery	Cemetery Road Paving Project	2	20	Cemetery Trust Fund	Finishing the drives in the cemetery will provide a clean and solid surface during inclement weather for those visiting their loved ones during a funeral service.	\$0	\$15,000	\$15,000	\$15,000	\$15,000		\$60,000		\$60,000	Reduction in maintenance	C	INF
10	Cemetery	Digitizing cemetery records	3	100	General Fund	Cemetery records can be digitized for posterity. An online forum could then be created wherein families can access and add to their history including profiles, pictures, etc. This could help reduce the number of requests made to the cemetery section.	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$8,000	\$36,000		\$36,000	Better access to records and information	C	N/A
11	Cemetery	Cemetery Expansion to Meet Future Demand	3	150	Cemetery Trust Fund	Cemetery has four sections left holding 600 spaces for purchase. The number available will shrink exponentially as families begin leaving trouble finding blocks of spaces available for family plots. This will drive many to seek alternate locations.	\$0	\$0	\$0	\$50,000	\$50,000		\$100,000		\$100,000	increase in potential revenue.	PC	LND
12	City Hall	Exterior Restoration	3	30	General Fund	Project will replace loose stones and joints on the facade of City Hall. It will be sealed appropriately to keep building viable.	\$75,000						\$75,000		\$75,000	Decrease maintenance and make City Hall more energy efficient.	C	BD
13	Dev't	Bus Replacement	1	7	100% Fed/State Grant	Replacement of busses for local transportation services. Replacement criteria based on age/mileage of vehicle	\$140,000	\$70,000	\$0	\$0	\$71,000	\$0	\$281,000		\$281,000	Reduced Maintenance Costs	C	VEH
14	Downtown Development Authority	Wayfinding signage	3	15	DDA Fund & Grants	Installation of directional signs in the downtown	\$0	\$50,000	\$0	\$0	\$0	\$0	\$50,000		\$50,000	Future replacement costs	C	INF
15	Downtown Development Authority	Parking lot lights	2	25	50% DCA & 50% Electric Funds	Replacement of 47 parking lot poles and lights with 70 LED lights and poles	\$12,500	\$12,500	\$12,500	\$12,500	\$0	\$0	\$50,000		\$50,000	Reduction in energy use and maintenance	C	INF
16	Downtown Development Authority	Market Study	1	5	DDA Fund 25%, General Fund 37.5%, Grant 37.5%	Market Study Update for the City of Marshall-- including all commercial districts and corridors into the city. This study is an important tool for recruiting new businesses, and providing information to existing businesses for marketing, promotions and business expansion ideas.	\$3,125	\$0	\$0	\$0	\$0	\$0	\$3,125	\$1,875	\$5,000	None.	C	NCNE
17	Downtown Development Authority	Farmers Market Pavilion	4	25	DDA 10%, Grant 90%	Construction of a pavilion to provide minimal shelter for Farmers Market and other community activities. As the demand for "farm to food" and "buying local produce" continues, federal tax dollars are being earmarked for Farmers Market projects. Staff will monitor the availability of grants for this project, and research potential locations).	\$5,000	\$35,000	\$0	\$0	\$0	\$0	\$40,000	\$315,000	\$355,000	None.	PC	BD
18	Downtown Development Authority	Flower Pots	3	15	DDA 50%, Grant 50%	Installation of large flower pots	\$7,500	\$0	\$0	\$0	\$0	\$0	\$7,500	\$7,500	\$15,000	\$3,000 annually	C	MC
19	Electric	Replace High School Underground exit cables at the South Substation	1	40	Electric Fund	Underground electric cable has a normal life expectancy of 40 years. Substation exits are a critical component of the electric system. The High School/Central exit of the South Substation is the normal electric route to the high school, Oakburn-Hoos, and 200 residential customers in Northeast Marshall and is over 40 years old. The cables should be replaced before cable failure start to develop.	\$200,000						\$200,000		\$200,000	None	C	INF
20	Electric	Parking lot lights	2	25	50% DCA & 50% Electric Funds	Replacement of 47 parking lot poles and lights with 70 LED lights and poles	\$12,500	\$12,500	\$12,500	\$12,500			\$50,000		\$50,000	Reduction in energy use and maintenance	C	INF
21	Electric	Engine #6 gauge panel replacement	2	20	Electric Fund	The controls for Engine #6 require modernizing from a manual push button/gauge system to a touch screen with graphic display which will simplify the operation of the unit.	\$60,000		\$0	\$0	\$0		\$60,000		\$60,000	None	C	INF
22	Electric	Replace Tie 1 and 2 underground cable	2	40	Electric Fund	A portion of the two main express feeder cables from Pearl St. Substation to the Powerhouse are underground and in a duct system. They have been in service for 35 years and have near their life expectancy. The feeder cables are the main source of power to the city's electric load and are the connection to the grid for the city's internal generation. Because they are a critical component of the electric system the cables should be modernized.			\$500,000	\$500,000			\$1,000,000		\$1,000,000	None	C	INF
23	Electric	Repair Brickhouse Walls	1	50	Electric Fund	Concrete block walls are crumbling along roof line and are in need of repair.	\$8,000	\$0	\$0	\$0	\$0		\$8,000		\$8,000	None	C	BD
24	Electric	Repair Brick (re back joints & seal)	2	50	Electric Fund	General maintenance of the brick structures. This is a historical site.	\$0	\$40,000	\$40,000		\$0		\$80,000		\$80,000	None	C	BD
25	Electric	Replace Windows	2	50	Electric Fund	Existing windows are the original single pane steel framed and not energy efficient. Many of the window sills and frames are deteriorated to the point that water is coming in and further damaging the building.	\$0	\$95,334	\$0	\$0	\$0		\$95,334		\$95,334	None	C	BD
26	Electric	Replace the underground electric cable exits from the Powerhouse	1	40	Electric Fund	There are eight antiquated three phase underground cable runs from the Powerhouse that are at least 60 years old. These cables are lead covered with oil filled terminations. The normal life expectancy of this type of cabling is 50 years. The underground system in the vicinity of Powerhouse should modernized as it is a critical component of the electric system.	\$150,000	\$500,000	\$500,000				\$1,150,000		\$1,150,000	None	C	INF
27	Electric	Replace the underground electric cable in the Wooded Lane area.	2	40	Electric Fund	The underground electric system in the Wooded Lane area is 35 years old. The normal life expectancy of this type of cable is 50 years. The proposal is to replace the total primary system cable and replace the secondary/service cables on an as needed basis.				\$100,000	\$100,000		\$200,000		\$200,000	None	C	INF
28	Electric	Relocation of Overhead Electric in South Alley between Jefferson Street and Hamilton Street and Eagle Street to Grand Street to Underground.	3	40	Electric Fund/DDA	The relocation of the overhead power lines in the South Alley between Jefferson and Hamilton and Grand and Eagle will complete the project that was started in 2007. This relocation will aid in fire responses and also help to clean up the rear facades of the business downtown.	\$0	\$0	\$0	\$0	\$400,000		\$400,000		\$400,000	None	C	INF
29	Electric	Retrofit Breakers in Plant #1 Switchgear	1	30	Electric Fund	The four 2,414.18 kv breakers are of a 1940's vintage and are over dated for fault interrupting capability. The breaker location can be retrofitted with modern breakers that meet fault current requirements. This project is a one breaker per year basis.	\$50,000	\$50,000	\$50,000	\$50,000	\$0		\$200,000		\$200,000	None	C	INF
30	Electric	New Brewer St. Electric Substation	1	75	Bond	Engineer, Design and Construct the new Brewer St. 15M/12.47kv Substation located just south of I-64. This project relieves overloads on the existing electric system and provides for a second 15kv source in the city when almost the total loss of electric service to the city if the existing single source is lost.	\$3,600,000						\$3,600,000		\$3,600,000	None	PC	INF
31	Electric	Pole Replacement and Line Reconstruction	1	50	Electric Fund	Most of the older poles in the City of Marshall are Crowsote treated poles and have a life expectancy of 30 - 40 years. Crowsote is not environmentally acceptable by today's standards. In most recent history the City has purchased Pines and CCA treated poles. Many of the poles in the City of Marshall's electric system are older than 60 years and are in need of replacement. The plan is to replace wooden poles and conductors (if needed) per year to get the poles in the system more environmentally friendly and safe.	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$480,000		\$480,000	None	C	INF
32	Electric	Circuit Reclosers and SCADA Operated Sectionalizing	2	20	Electric Fund	Auto-reclosers are used in coordinated system protection schemes for power distribution circuits. Auto-recloser/sectionalizing switches will make several pre-programmed attempts to re-energize the line unlike one shot fuses which require manual replacement. Strategically placed reclosers will modernize the system protection schemes to reduce customer interruption. This project is based on the installation of two (2) reclosers per year.		\$50,000	\$50,000	\$50,000	\$60,000	\$50,000	\$250,000		\$250,000	None	C	INF
33	Electric	Upgrade Plant #1 House Power Panels	1	30	Electric Fund	Maintain the equipment for safe and efficient operation by upgrading fuse-type panels with newer circuit breaker panels through a 4-year program. Old panels and wiring have been in place for 50+ years and could become a fire hazard.	\$7,500	\$7,500	\$7,500	\$0	\$0		\$22,500		\$22,500	None	C	INF
34	Electric	Rampway/Curb Maintenance	2	20	Electric Fund	Maintain the structures for safe & efficient operations to meet FERC mandates/scrubbing. This is a 5-year maintenance program of the concrete structures.	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000		\$75,000		\$75,000	None	C	INF
35	Electric	Pole Inventory and Inspection	3	10	Electric	Project will update the GIS by collecting vital information to improve efficiency of the electric department when responding to routine maintenance and emergency responses. Information collected will include size, type, attachments, and condition. Project will also include photographing the poles and loading them.	\$0	\$0	\$0	\$0	\$20,000	\$20,000	\$40,000		\$40,000	Increase in department efficiency	C	INF
36	Electric	Embankment Project	2	50	Electric Fund - Bond	The FERC is requiring that all trees, stumps and root system systems be removed from the eastern embankment between the railway's. This will require a geotechnical investigation be completed to determine to what extent the embankment must be excavated and replaced. This budgetary number was created assuming the top eight feet of the embankment would need to be removed and reconstructed.	\$100,000	\$700,000	\$0	\$0			\$800,000		\$800,000	None	C	INF

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37	Electric	Automated Meter Information Project	3	20	Electric Fund - Bond	This system will automate the collection of meter readings and data from a centrally located facility eliminating the need for door to door readings, reduce or eliminate inaccurate readings and flag problems or tampering with a meter. This system will also provide us with an Outage Management System (OMS), pinpointing back to what device (breaker, recloser, fault) the outage originates from therefore reducing outage response time. The system will be fully functional within existing ISRFI map framework and be ready for immediate integration with the proposed "mPower Innovations" AMI/OMS software. The system will consist of using future relevant data sources.	\$0	\$0	\$0	\$0	\$300,000	\$350,000	\$650,000	\$650,000	None	C	INF		
38	Electric	Sherman Drive/Wright Lane Upgrade	1	30	Electric Fund - Bond	The underground electric in this neighborhood originated in the mid 1960's. Underground electric becomes unreliable after 30 years and reaches the end of its life at approximately 30 - 40 years. Due to the age of the infrastructure, it is recommended to replace the existing primary lines.	\$200,000	\$300,000	\$0	\$0	\$0	\$700,000	\$700,000	\$700,000	None	C	INF		
39	Electric	W. Mich. Ave Overhead to Underground Conversion/Aesthetics Improvement	4	50	Bonding/Electric Fund	Convert overhead the overhead electric system to an underground duct system along west Michigan Ave. This will remove all of the overhead electric lines along and crossing West Michigan Ave.		\$300,000	\$1,000,000	\$1,000,000	\$1,000,000	\$3,300,000	\$3,300,000	\$3,300,000	None	C	INF		
40	Electric	Substation Relay Replacement	1	30	Electric Fund	Replace outdated substation relays with new microprocessor based relays. Brings system protection schemes to modern day technology.	\$30,000	\$30,000	\$30,000	\$0	\$0	\$90,000	\$90,000	\$90,000	None	C	INF		
41	Electric	Circuit Upgrade	2	50	Bonding	Partial Conversion of 4kv System to 12kv. This will relieve the heavily loaded 4kv system and reduce line losses.	\$0	\$0	\$0	\$220,000	\$400,000	\$480,000	\$1,850,000	\$1,850,000	None	C	INF		
42	Electric	Circuit Upgrade	3	30	Electric Fund	Revise and recondition 4kv circuits to provide for a more balanced and reliable system.	\$0	\$0	\$0	\$0	\$50,000	\$50,000	\$100,000	\$100,000	None	C	INF		
43	Electric	Circuit Upgrade	3	50	Electric Fund	Revise and recondition 12kv circuits to provide for a more balanced and reliable system.	\$0	\$0	\$0	\$0	\$165,000	\$113,000	\$278,000	\$278,000	None	C	INF		
44	Electric	Line Relocation	1	1	Electric Fund	Temporarily relocate three (3) circuits of overhead electric lines at the Marshall Ave. bridge crossing of the Kalamazoo River to facilitate the rehabilitation of the bridge.	\$75,000	\$75,000				\$150,000	\$150,000	\$150,000	None	C	INF		
45	Electric	Underground Line Relocation	1	40	Electric Fund	Re-route electric underground cables to maintain feed to old State Farm warehouse building due to the demolition of the main State Farm building.	\$100,000					\$100,000	\$100,000	\$100,000	None	C	INF		
46	Electric	Cost of Service Study	1	10	Electric Fund	Study to determine the various components of costs associated with operating, maintaining and financing of improvements, renewals and replacement of facilities.	\$30,000					\$30,000	\$30,000	\$30,000	None	C	N/A		
47	Fire	Structural Fire Fighting Protective Clothing Purchase	1	10	General Fund or FEMA Grant with a 5% match	With our turn-out gear being quickly outdated and non-compliant, it is imperative to set up a program to not only keep our fire fighters in current gear but to lessen the financial burden of having to make a one time purchase. This CIP should be placed in perpetuity so as to keep up with the ever changing standards and rules for protective clothing.	\$11,400	\$11,400	\$0	\$0	\$11,400	\$11,400	\$45,600	\$2,400	\$48,000	Currently the State of Michigan has mandated that all structural fire fighting protective clothing must meet or exceed the 2000 edition of the National Fire Protection Association's standard for structural fire fighting protective clothing. 24 of our fire fighters have this gear, 10 of our fire fighters are issued the 1997 edition of the N.F.P.A. standard for gear or in a combination thereof.	C	MC	
48	Fire	Personal Alert Safety System (P.A.S.S. Device) Replacement	2	5	General Fund	Comply with manufacturer's recommendation and MICHMA standards.	\$0	\$12,500	\$0	\$0	\$0	\$0	\$12,500	\$12,500	\$12,500	Our current inventory of P.A.S.S. Devices, purchased in 2004, are quickly reaching their end of life. Grace Industries, the manufacturer of our Super P.A.S.S. II, lists in their instruction and maintenance guide that the device needs to be retired from service 3-5 years from the date of purchase, depending on use and abuse. This is supported by N.F.P.A. 1982, 2007 edition and is updated by MICHMA by reference (1996 edition) in Part 74, Standards for Fire Fighting.	C	MC	
49	Fire	Knex Box	3	15	General Fund	Allow fire department to have one single key to enter buildings. Boxes will be installed in each fire vehicle.	\$9,200	\$0	\$0	\$0	\$0	\$0	\$9,200	\$9,200	\$9,200	None	C	MC	
50	Fire	Power Tools	4	5	General Fund	Power saws, chain saws, rescue saws, positive pressure fans. Current equipment does not meet minimum requirements.	\$0	\$0	\$0	\$0	\$9,000	\$0	\$9,000	\$9,000	\$9,000	Equipment is used for training and fire fighting techniques. Required equipment for life safety.	C	MC	
51	Fire	SCBA Gear	2	10	General Fund	Our current self contained breathing apparatus are out of compliance. Parts are no longer available. This will become a priority 1 in 17-18.	\$0	\$191,000	\$0	\$0	\$0	\$191,000	\$191,000	\$191,000		C	MC		
52	Fire	Thermal Imaging Camera	1	10	General Fund	Thermal Imaging Cameras are needed to find possible fire in confined or obstructed areas. This included inside walls, chimney, etc..	\$9,000	\$0	\$0	\$0	\$0	\$0	\$9,000	\$9,000	\$9,000	Current equipment is beginning to fail and the costs of repairs are not justified.	C	MC	
53	Fire	Confined Space Rope	4	5	General Fund	Used to tie off officers during SAR and for hoisting material to other floors in buildings and onto the roofs.	\$0	\$0	\$0	\$0	\$7,500	\$0	\$7,500	\$7,500	\$7,500	Currently ALL rope is out dated and had a recent failure during a training exercise.	C	MC	
54	Fire	Fire Hose	2	20	General Fund	Current hose is out of date for industry standard. It is currently allowed for 20 years. Our hose will need to be replaced in sections.	\$0	\$5,000	\$0	\$0	\$0	\$0	\$5,000	\$5,000	\$5,000	We will begin replacing hose to meet the needs for the next 20 years.	C	MC	
55	Fire	Hose Tester	3	10	General Fund	Current tester is beginning to need repairs and should be replaced in the next 3 years if possible.	\$0	\$5,100	\$0	\$0	\$0	\$0	\$5,100	\$5,100	\$5,100	needed to test hoses for failure and damage. Life safety issue.	C	MC	
56	Fire	Hose Washer	3	10	General Fund	Used to maintain and clean hose after use. This allows the life of the hose to be extended and reduce costs over time.	\$0	\$0	\$14,000	\$0	\$0	\$0	\$14,000	\$14,000	\$14,000	Current hose washer is showing signs of repair.	C	MC	
57	Fire	Pagers	1	8	General Fund	VHF Radios, pagers and base.	\$5,000	\$0	\$5,000	\$0	\$0	\$0	\$10,000	\$10,000	\$10,000	Replacement for on scene communications.	C	MC	
58	Fire	Rescue Tools	1	10	General Fund	New hydraulics on new pumpers warrants new equipment which will be compatible with surrounding Townships rescue vehicles.	\$8,700	\$0	\$0	\$0	\$0	\$0	\$8,700	\$8,700	\$8,700		C	MC	
59	Local Development Finance Authority	Watermain Loop	3	50	LDFA	Construction of a 12" water main from Woolley Drive & Kalamazoo Ave southward to the Brooks, then east to the Pratt Avenue outfall.	\$0	\$0	\$624,000	\$0	\$0	\$0	\$624,000	\$624,000	\$624,000	None	C	INF	
60	Local Development Finance Authority	Oliver Drive Extension	3	50	LDFA	Infrastructure installation to extend Oliver Street to the Udeli property.	\$0	\$400,000	\$0	\$0	\$0	\$0	\$400,000	\$400,000	\$400,000	Unknown	PC	INF	
61	Marshall House	Apartment Remodeling - 10 Units/Year	3	15	Marshall House Fund	Remove old and replace with new cabinets, countertops and floor coverings with vinyl base. Current items from original construction in 1979.	\$0	\$200,000	\$0	\$200,000	\$200,000	\$600,000	\$600,000	\$600,000	\$600,000	Add depreciation expense	C	BD	
62	Marshall House	Annual Vacancy Maintenance	1	5	Marshall House Fund	Carpeting, painting, vinyl and (4) ADA tub replacements when units become vacant.	\$13,250	\$13,250	\$13,250	\$13,250	\$13,250	\$66,250	\$66,250	\$66,250	\$66,250	To provide a clean & healthy unit that meets Fair Housing Requirements	C	BD	
63	Marshall House	Elevator Rehab	1	15	Marshall House Fund	Complete elevator replacement	\$300,000					\$300,000	\$300,000	\$300,000	\$300,000	Continual Service Issues for elevators that are past their lifespan have escalated the issue to a replacement phase.	C	BD	
64	Marshall House	Resurface and Seal Parking Lot	2	4	Marshall House Fund	Remove 1 1/2" of asphalt and pave new 1 1/2" layer of asphalt with 5 year seal coat and striping (43340 sq ft).	\$0	\$0	\$65,000			\$65,000	\$65,000	\$65,000	\$65,000	The condition of the parking lot is deteriorating and is anticipated to need attention soon.	C	LND IMPROV	
65	Marshall House	Curb Replacement	2	40	Marshall House Fund	Estimate replacing 20% of curbing	\$0	\$0	\$42,000	\$0	\$0	\$42,000	\$42,000	\$42,000	\$42,000	Original curbs are in fair condition per Physical Assessment of the site. To improve the rating from the REAC assessment.	C	LND IMPROV	
66	Marshall House	Phase 2 of Fire Board and Alarm System. Add Alarm Notifications to each unit	1	10	Crown Foundation	Replacement of entire fire panel system	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150,000	\$150,000	\$150,000	Continue to bring system up to NFPA code in phases	C	BD
67	Marshall House	Landscaping	2	15	Marshall House Fund	Removal of old landscape stone and fabric, remove vegetation, and prune existing bushes and trees. Areas of concentration are islands in parking lot, garage bed, and perimeter of the building.	\$21,500	\$0	\$0	\$0	\$0	\$0	\$21,500	\$21,500	\$21,500	Less Maintenance	C	LND IMPROV	
68	Marshall House	Sidewalk Replacement	2	1	Marshall House Fund	Allowance for replacement of deteriorated concrete sidewalk (10% replacement)	\$9,800	\$9,800	\$9,800	\$9,800	\$9,800	\$9,800	\$58,800	\$58,800	\$58,800	To improve the visible faults in the pavement and walkways and improve the deficiency rating from our REAC Assessment of the building.	C	LND IMPROV	
69	Marshall House	Public Restrooms	2	20	Marshall House Fund	Upgrade the public restrooms to ADA compliant status	\$0	\$0	\$15,000	\$0	\$0	\$0	\$15,000	\$15,000	\$15,000	Per Section 504/ADA Study, not in compliance	C	BD	
70	Marshall House	Office Remodel	2	20	Marshall House Fund	Upgrade the office to ADA compliant status	\$40,000	\$0	\$0	\$0	\$0	\$0	\$40,000	\$40,000	\$40,000	Per Section 504/ADA Study, not in compliance	C	BD	
71	Marshall House	Air Conditioners	2	20	Marshall House Fund	Purchase 55 new A/C units to provide A/C for all tenants	\$18,063	\$18,063	\$0	\$0	\$0	\$0	\$36,126	\$36,126	\$36,126	To provide adequate cooling for all tenants	C	BD	
72	Marshall House	Window Repair/Water Infiltration	1	40	Marshall House Fund	Replace and Repair the flashing of nine (9) apartment windows	\$0	\$40,000	\$40,000	\$0	\$0	\$0	\$60,000	\$60,000	\$60,000	To improve the status of the continual water damage caused by deteriorating flashing around the windows.	C	BD	
73	Marshall House	Sign Refurbishing	4	25	Marshall House Fund	Refurbish property sign where landscaping and electric for illuminating sign	\$0	\$0	\$32,400	\$0	\$0	\$0	\$32,400	\$32,400	\$32,400	To improve on the marketability of the Marshall House	C	LND IMPROV	
74	Marshall House	Curb Replacement	2	40	Marshall House Fund	Estimate replacing 20% of curbing	\$0	\$0	\$42,000	\$0	\$0	\$0	\$42,000	\$42,000	\$42,000	Original curbs are in fair condition per Physical Assessment of the site. To improve the rating from the assessment.	C	LND IMPROV	
75	Marshall House	Gazebo Refurbishing	2	25	Marshall House Fund	Refurbish gazebo, replace roof & add electric with lighting	\$0	\$17,750	\$0	\$0	\$0	\$0	\$17,750	\$17,750	\$17,750	Tenant request for improvements.	C	INF	
76	Marshall House	Ceiling Tiles	4	25	Marshall House Fund	Replace suspended ceiling tiles and lighting fixtures in common areas	\$0	\$0	\$50,000	\$0	\$0	\$0	\$50,000	\$50,000	\$50,000	Tiles are stained and are an item of concern for REAC scores, lighting is not adequate for tenants	C	BD	
77	Marshall House	Hallway Flooring	2	10	Marshall House Fund	Replace the flooring in hallways and elevator lobby area	\$9,500	\$9,500	\$9,500	\$9,500	\$0	\$0	\$38,000	\$38,000	\$38,000	improve on the appearance, carpet is badly stained and unable to be cleaned.	C	BD	
78	Marshall House	Heating System Flush	2	5	Marshall House Fund	Flush the sediment from the heating lines per floor	\$27,972	\$27,972	\$27,972	\$27,972	\$0	\$0	\$111,888	\$111,888	\$111,888	To improve the quality of heating throughout the building	C	BD	
79	Marshall House	Intercom Replacement	4	40	Marshall House Fund	Replace intercom system	\$0	\$27,500	\$0	\$0	\$0	\$0	\$27,500	\$27,500	\$27,500	Tenant requested improvements.	C	BD	

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80	Marshall House	Replace Steel Entrance Service Doors	2	20	Marshall House Fund	They are the original doors of the facility and have long outlived their expected life.	\$19,800	\$0	\$0	\$0	\$0	\$0	\$19,800		\$19,800	Replacement ensures safety and security of the building as well as increased energy efficiency. Will improve the deficiency rating on the Physical Assessment of the building.	C	BD	
81	Marshall House	Exterior Brick Finish Cleaned, Joints Re-tucked	2	4	Marshall House Fund	The re-sealing of the brick is the minimal amount of maintenance required to prevent further water infiltration into interior of apartments causing further damage.	\$0	\$39,840	\$0	\$0	\$0	\$0	\$39,840		\$39,840	Preserving brick and health and safety of tenants.	C	BD	
82	Marshall House	Brick Wall Tuck Point (Wall in receiving driveway)	1	10	Marshall House Fund	Repair mortar deterioration in brick wall	\$5,000	\$0	\$0	\$0	\$0	\$0	\$5,000		\$5,000	Restore brick wall to a stable state.	C	BD	
83	Marshall House	Renovation of Salon	4	20	Marshall House Fund	The salon and its equipment have long outlived its estimated useful lifespan.	\$0	\$0	\$6,000	\$0	\$0	\$0	\$6,000		\$6,000	Ensures a convenient service for tenants with limited mobility, especially during winter months.	C	BD	
84	Marshall House	Glass replacement in apartment windows	1	20	Marshall House Fund	Apartment windows have condensation trapped between the panes of glass per50 panes	\$6,903	\$6,903	\$0	\$0	\$0	\$0	\$13,806		\$13,806	Improves the integrity of the windows and will insure comfort and clearer visibility.	C	BD	
85	Marshall House	Access Panel Purchase and Installation	1	50	Marshall House Fund	Install panels in corridors to give access to the buildings plumbing system	\$6,113	\$0	\$0	\$0	\$0	\$0	\$6,113		\$6,113	No existing access to plumbing currently in the building. To rectify the current situation which is costly for repairs, installation of fire rated access panels will allow quick and accurate troubleshooting and reduce the cost repairs	C	BD	
86	Marshall House	Replace Water Softeners	2	10	Marshall House Fund	The water softeners will be exceeding their useful lifespan in fifteen years and will need to be replaced.	\$0	\$8,600	\$0	\$0	\$0	\$0	\$8,600		\$8,600	Increase energy savings and ensure continued efficient operations of appliances and fixtures.	C	BD	
87	Marshall House	Four Season Windows for Patio	2	10	Marshall House Fund	To provide 4 season windows on the patio area so residents may enjoy more of the outdoor type setting.	\$3,000	\$3,000	\$3,000	\$3,000			\$12,000		\$12,000	None	C	BD	
88	Motor Pool	Roof Replacement and Building Upgrades	1	75	General Fund	The roof has been inspected to determine the cost to fix the leaks. Because of the style of roof /walls are exposed and fixed so roof cannot extend and corrected repairs would be of little effect. \$10,000 would pay for an architect to inspect the building and form a plan for roof, sidewall repairs, infra-red heating design and insulation, \$200,000 should cover repairs based on a preliminary estimate of \$110,000 to replace the roof.	\$235,000	\$0	\$0	\$0	\$0		\$235,000		\$235,000	Reduction in Maintenance	C	BD	
89	Motor Pool	2017 Purchases	2	Variable	Motorpool	2 pickups (electric), brush chipper (diesel), zero turn (semetery), gator (rec), 2 cutters (police)	\$186,500	\$0	\$0	\$0	\$0		\$186,500		\$186,500	Reduction in Maintenance	C	VEH	
90	Motor Pool	2018 Purchases	2	Variable	Motorpool	WW Pickup, purchase Pickup, dpw plow truck, dpw 1-ton dump, crusher, lease for elec digger derrick, dpw bucket, dpw soil truck, dpw vector, dpw loader	\$0	\$271,000	\$0	\$0	\$0		\$271,000		\$271,000	Reduction in Maintenance	C	VEH	
91	Motor Pool	2019 Purchases	2	Variable	Motorpool	MP Pickup, cam 2 zero turn, police 2 cutters, rental payment \$106,000	\$0	\$0	\$105,500	\$0	\$0		\$105,500		\$105,500	Reduction in Maintenance	C	VEH	
92	Motor Pool	2020 Purchases	2	Variable	Motorpool	Equipment Replacement TBD	\$0	\$0	\$0	\$95,000	\$0		\$95,000		\$95,000	Reduction in Maintenance	C	VEH	
93	Motor Pool	2020 Purchases	2	Variable	Motorpool	Equipment Replacement TBD	\$0	\$0	\$0	\$0	\$209,000		\$209,000		\$209,000	Reduction in Maintenance	C	VEH	
94	Motor Pool	2021 Purchases	2	Variable	Motorpool	Equipment Replacement TBD	\$0	\$0	\$0	\$0	\$0	\$144,000	\$144,000		\$144,000	Reduction in Maintenance	C	VEH	
95	Parks	Steamer Park Development	1	20	General Fund Misc Grants	Site Levelling and Sidewalk	\$41,750	\$0	\$0	\$0	\$0		\$41,750		\$41,750	\$85,500	None	PGC	LND IMPROV
96	Parks	Steamer Park Development	1	20	General Fund Misc Grants	New Pavilion Construction	\$0	\$0	\$0	\$0	\$0		\$0		\$30,000	\$30,000	None	PGC	BD
97	Parks	Brooks Nature Park 16 x 20 Shelter	3	20	Special Projects Fund-Brooks Nature Project Fund Balance from 100% DNR Grants	This will be an area for those using the park to take refuge during adverse weather conditions. It will be open on four sides. This will be located near the front entrance of the Nature Area.	\$0	\$0	\$0	\$10,000	\$0		\$10,000		\$10,000	Increase in maintenance costs.	C	BD	
98	Parks	Phase V Riverwalk Design / Construction	3	30	General Fund 25%, Local Grant 75%	Design and construction of the next phase of Kalamazoo Riverwalk extending from Kalamazoo Ave. westerly to Pearl St. sub-station area.	\$0	\$0	\$0	\$37,500	\$375,000		\$412,500		\$1,237,500	\$1,650,000	Increase in maintenance costs.	PC	LND IMPROV
99	Parks	Playground Ground Cover replacement	2	10	General Fund	As suggested by the recent playground inspection new mulch should be install in all play structures throughout the city. Mulch needs to be replaced every 5 years.	\$10,000	\$0	\$0	\$0	\$0	\$10,000	\$20,000		\$20,000	Potential reduction in accident liability	C	NA	
100	Parks	Poured in Place Rubber Surface	1	15	General Fund	The existing rubber flooring inside Kids Kingdom is original to the construction and is missing in many areas.	\$30,000	\$0	\$0	\$0	\$0	\$0	\$30,000		\$30,000	Potential reduction in accident liability	C	LND IMPROV	
101	Parks	Improve Park Signage	2	15	General Fund, possibly DNR grants, local Foundations	Improve/Replace park signage	\$15,000	\$0	\$0	\$0	\$0	\$0	\$15,000		\$15,000	None	PC	NA	
102	Parks	Riverwalk tree clearance	1	10	General Fund	Riverwalk has been experiencing some damage due to trees for the past few years. Project will safely remove any tree that may damage the riverwalk and raise the canopy.	\$10,000	\$10,000	\$10,000	\$0	\$0		\$30,000		\$30,000	Reduction in repair cost.	C	LND IMPROV	
103	Parks	Ice skate rink and warming house	4	40	General Fund	Design and build a permanent winter/summer skate park complete with warming house, rentals, and concessions.	\$0	\$35,000	\$250,000	\$150,000	\$25,000	\$25,000	\$485,000		\$485,000	Increased maintenance costs	PC	BD	
104	Parks	Ketchum Park Overall Project	2	40	General Fund DNR/TFG \$300,000	This large scope park improvement project includes looped walking/biking trails, an interpretive overlook for the precinct and area, overlooks with benches & picnic tables along the trail, a picnic pavilion, and a pedestrian bridge providing a new connection (access point) to the northeast corner of the park (south area for the entire overall project)	\$0	\$1,169,390	\$0	\$0	\$0	\$0	\$1,169,390		\$300,000	\$1,469,390	None	PC	BD, INF
105	Parks	Ketchum Park Sub Project #1	2	40	Crozer Foundation	Main Park Overlook Structure and Bark Restoration (This is the match portion of the larger project, not in addition to the overall costs.)	\$0	\$0	\$0	\$0	\$0	\$0	\$0		\$100,000	\$100,000	None	PC	LND IMPROV
106	Parks	Ketchum Park Sub Project #2	2	5	Marshall Community Foundation	Main Overlook Seating Area & Main Overlook Design/Engineering (This is the match portion of the larger project, not in addition to the overall costs.)	\$0	\$0	\$0	\$0	\$0	\$0	\$0		\$60,000	\$60,000	None	PC	LND IMPROV
107	Parks	Ketchum Park Sub Project #3	2	40	Rotary Foundation	Main Overlook retaining wall and interpretive sign (This is the match portion of the larger project, not in addition to the overall costs.)	\$0	\$0	\$0	\$0	\$0	\$0	\$0		\$20,000	\$20,000	None	C	LND IMPROV
108	Parks	City entry sign repainting	2	10	General Fund	Decorative signs along the major entry routes into the city are in need of being repainted.	\$0	\$0	\$25,000	\$0	\$0		\$25,000		\$25,000	None	C	LND IMPROV	
109	Planning & Zoning	Non-Motorized Plan	2	5-10 years	General Fund	Consultant will assist City in adding an additional chapter to the Master Plan for a Non-Motorized Plan.	14,000	0	0	0	0		\$14,000		\$14,000	The addition of this plan will allow for mandatory NDOT sidewalk replacement in project areas and open the City to new grant possibilities.	PC	NA	
110	Police	Protective Vests	3	5	General Fund or Grant	Protective armor vests are worn by all personnel wearing a uniform. It is a contractual agreement that the City of Marshall provide the vests. It is also an industry standard to provide and wear the protective armor.	\$0	\$0	\$0	\$9,500	\$9,500	\$0	\$10,000		\$9,500	\$19,500	This is an officer safety issue and one that has proven to reduce or eliminate injuries and also saved lives. This has significant savings should a catastrophic event occur.	C	MC
111	Police	Police Vehicle Change-over	1	4	General Fund	To purchase all new equipment other than radios for the new vehicles beginning in 2011. This is due to the crown Victoria no longer be produced, therefore a new design vehicle will be utilized. This will not allow the current equipment to change-over to the new design.	\$13,000	\$6,300	\$6,500	\$6,500	\$6,500		\$38,800		\$38,800	Provide safety equipment and emergency equipment to all new vehicles.	C	MC	
112	Police	Police Vehicle Video Equipment	3	5	General Fund	Patrol car cameras are used daily by this agency. We utilize the cameras to document crimes, actions by offenders, and officers. The Marshall Police Department has a policy and Procedure stating that while on patrol the car video has to be on and functioning. The audio must be engaged whenever contact with the public is made. The cameras are an asset to the City of Marshall as it reduces liability and also aids in conviction of crimes.	\$0	\$0	\$6,000	\$6,000	\$6,000	\$0	\$18,000		\$4,000	\$22,000	The cameras provide crucial documentation of police practices public contacts. They are an industry standard and are useful in court presentations, training issues, and reduction liability.	C	MC
113	Police	Toughbook HQ Tablet	1	5	General Fund	Patrol car computers are used daily by this agency. We utilize the computers to document crimes, actions by offenders, officers, dispatch communications, GPS functions and officer safety. The Marshall Police Dept has a policy and procedure stating that while on patrol the computer has to be on and functioning. The computers are an asset to the City of Marshall as it reduces liability and also aids in patrol operations.	\$0	\$5,800	\$5,800	\$0	\$0	\$6,000	\$17,600		\$1,000	\$18,600	The computers provide crucial documentation of police reports, dispatch complaints, report writing, GPS functions etc for police operations while in the vehicle.	C	MC
114	Police	Tasers	2	7	General Fund	Current Tasers are no longer manufactured and replacement will be required within 2 years.	\$0	\$8,500	\$0	\$0	\$0	\$0	\$8,500		\$8,500	This is officer safety equipment	C	MC	
115	Police	Purchase Three AEDs	1	10	General Fund	Currently officers are trained to use AED to resuse heart attack victims but no equipment to use.	\$8,500	\$0	\$0	\$0	\$0	\$0	\$8,500		\$8,500		C	MC	
116	Police	Handguns	2	10	General Fund	Change over to new handguns. Current weapons are aging and will need to be replaced in FY16-17. Estimate is for 17 Handguns.	\$7,500	\$0	\$0	\$0	\$0	\$0	\$7,500		\$7,500		C	MC	
117	P&B Operations	P&B AM and Pave Asphalt Parking Lot, Add Electronic Gate to North Entrance	2	30	Department Cost Allocation - 55% Electric, 28% GF, 9% DART, 8% Water	Parking lot is deteriorating due to heavy vehicles (garbage trucks, fire trucks, delivery trucks, etc.) using the main parking lot to access the delivery doors and refuse sites. The parking lot was not designed for this kind of use. After paving, heavy traffic will be re-routed to the north side of the building.	\$0	\$0	\$140,000	\$0	\$0		\$140,000		\$140,000	Reduced maintenance expenses	C	BD	
118	P&B Operations	Remove and Replace Floor Covering	3	20	Department Cost Allocation - 55% Electric, 28% GF, 9% DART, 8% Water	Carpet is showing wear throughout the office portion of the Public Service Building.	\$0	\$140,000	\$0	\$0	\$0		\$140,000		\$140,000	None	C	LND IMPROV	
119	Recreation	Replacement of Athletic Field Light System	2	30	General Fund Transfer to Electric Fund	The current lights on diamond #1 & #2 are approaching the end of their expected life. The entire system should be replaced.	\$0	\$345,000	\$0				\$345,000		\$345,000	May be a slight decrease in utilities due to more efficient system.	C	MC	
120	Recreation	Dug Out	4	25	General Fund	To complete recent renovations to Athletic Field, dug outs for diamonds #1 & #2 can provide additional safety and protection to players, add a professional element to the facility and will be visually pleasing which may help expand programming.	\$0	\$0	\$0		\$30,000		\$30,000		\$30,000	Potential increased revenue by attracting additional tournaments.	C	LND IMPROV	
121	Recreation	Seal Coating Athletic Field Parking Lot & Pathways. Striping of Parking Lot	2	3-5	General Fund	Seal Coating Athletic Field Parking Lot & Pathways is considered routine maintenance. Seal Coated Sept. 2013.	\$10,000	\$0	\$0				\$10,000		\$10,000	Maintenance	C	LND IMPROV	
122	Recreation	Roofing - Athletic Field Concession/Restroom Building	4	25	General Fund	Replacement of shingles on Concession/Restroom Building.	\$0	\$0	\$11,500				\$11,500		\$11,500	Maintenance	C	BD	
123	Recreation	Outdoor Basketball Courts	3	20+	General Fund	This project will encompass a new full size outdoor basketball court on the south side of the Athletic Field. This will include excavating & leveling, base, backstop courts, (2) hoops, nets and strapping court lines.	\$20,000	\$0	\$0				\$20,000		\$20,000	Potential increased revenue by expanding programming opportunities. Provide another facet to the facility.	C	LND IMPROV	
124	Recreation	Additional Pavilion at the Athletic Fields	4	20+	General Fund	The Athletic Fields are used not only by Department sponsored activities but rentals and community use as well. A pavilion in between the outfield of diamond #3 & #4 would provide an additional picnic area.	\$0	\$0	\$10,000				\$10,000		\$10,000	No effect on operational revenues and expenditures anticipated.	PC	BD	

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125	Recreation	Dug-Outs, Diamond #3 & #4	3	25	General Fund	Dug-outs for diamonds #3 & #4 can provide additional safety and protection to players while expending from spectators which is desired for tournaments/league play. This will add a professional element to the facility and may help to expand programming/tournaments.	\$0	\$0	\$14,400	\$14,400			\$28,800	\$28,800	Dug-outs will have low maintenance. This extra amenity may help to attract more field rentals.	C	BD
126	Recreation	Replace Retaining Wall Diamond #3	2	25	General Fund	Replace Retaining Wall On Diamond #3 Located Behind The Backstop. Current Wall Is In Disrepair And Can Be Considered A Safety Concern. New Wall Will Be Designed To Accommodate A 6-8' Pathway Behind Backstop Allowing Accessibility To The Third Base Bench Area.	\$28,750	\$0	\$0	\$0	\$0		\$28,750	\$28,750	No Effect on Operational Revenues and Expenditures Anticipated.	C	LND IMPROV
127	Recreation	Replace Backstop Diamond #3	2	15	General Fund	Replace Current Backstop On Diamond #3. After Repair Attempts Backstop Continues To Be Unsatisfactory And It Times Interfere With Play.	\$8,050	\$0	\$0	\$0	\$0		\$8,050	\$8,050	No Effect on Operational Revenues and Expenditures Anticipated.	C	MC
128	Recreation	Asphalt Pathway	3	10	General Fund	Construct Asphalt Walking Pathway Behind Backstop of Diamond #3 Connecting to Pathway on the South, Along First Base Side of Field.	\$0	\$0	\$0	\$5,000	\$0		\$5,000	\$5,000	No Effect on Operational Revenues and Expenditures Anticipated. May Increase Potential for Future Funding.	C	LND IMPROV
129	Recreation	Asphalt Pathway	3	10	General Fund	Construct Asphalt Walking Pathway From Sand Volleyball Courts Connecting To Current Pathway West Of Diamond #2	\$8,600	\$0	\$0	\$0	\$0		\$8,600	\$8,600	No Effect on Operational Revenues and Expenditures Anticipated. May Increase Potential for Future Funding.	C	LND IMPROV
130	Recreation	Construct Retaining Wall & Asphalt Pathway	3	WALL 25, PATHWAY 10	General Fund	Construct a Retaining Wall Just South of Diamond #2 Along First Base Side of Field. New Retaining Wall Will Be Designed to Accommodate a 6-8' Pathway in Same Area.	\$0	\$28,750	\$0	\$0	\$0		\$28,750	\$28,750	No Effect on Operational Revenues and Expenditures Anticipated. May Increase Potential for Future Funding.	C	LND IMPROV
131	Recreation	Asphalt Pathway	3	10	General Fund	Construct Asphalt Walking Pathway From Parking Lot South, Interbetween Diamond #1 & #2. Construct Asphalt Walking Pathway Behind Scoreboard of Diamond #2 Connecting to Pathways Already in Place.	\$0	\$11,000	\$0	\$0	\$0		\$11,000	\$11,000	No Effect on Operational Revenues and Expenditures Anticipated. May Increase Potential for Future Funding.	C	LND IMPROV
132	Recreation	Asphalt Pathway	4	10	General Fund	Construct Asphalt Walking Pathway From Diamond #1 South, Along 3rd Base Side of Field. Construct Asphalt Walking Pathway Behind Scoreboard of Diamond #1. Both Projects Will Connect to Pathways Already in Place.	\$0	\$0	\$9,800	\$0	\$0		\$9,800	\$9,800	No Effect on Operational Revenues and Expenditures Anticipated. May Increase Potential for Future Funding.	C	LND IMPROV
133	Recreation	Feasibility Study	4	3-5	General Fund/Grants	Study to Explore the Feasibility of a City Owned/Operated Recreation Center.	\$0	\$0	\$0	\$57,500	\$0		\$57,500	\$57,500	A Recreation Center Could Potentially Increase Both Revenues and Expenditures.	C	N/A
134	Recreation	Asphalt Pathway	4	10	General Fund	Construct Asphalt Walking Pathway Behind Scoreboard of Diamond #4. This Will Connect to Pathway on the North, 3rd Base Side of the Field.	\$0	\$0	\$0	\$0	\$5,000		\$5,000	\$5,000	No Effect on Operational Revenues and Expenditures Anticipated. May Increase Potential for Future Funding.	C	LND IMPROV
135	Recreation	Purchase Copier/Printer	4	10	General Fund	The TASHGALA 3000T (Copier/Printer) Currently in Use Was Purchased Nov. 2010 With a Life Expectancy of 10 Yrs.	\$0	\$0	\$0	\$0	\$11,500		\$11,500	\$11,500	Purchase Will Allow In-House Printing, the Most Economical Option for the Department.	C	MC
136	Recreation	Purchase Play Equipment	4	20	General Fund	Install Play Equipment at the Athletic Field Along 3rd Base Side of Diamond #1.	\$0	\$0	\$0	\$0	\$40,250		\$40,250	\$40,250	No Effect on Operational Revenues and Expenditures Anticipated.	C	MC
137	Streets	Sidewalk Installation	1	25	Street Funds	Repair of miscellaneous unsafe sidewalk sections around the City.	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$90,000	\$90,000	Increased pedestrian safety.	C	INF
138	Streets	New Sidewalk Installation on Montgomery adjacent to Kids Kingdom	1	25	Street Funds	Install sidewalk from S. Marshall Ave to east edge of Ketchum Park, in conjunction with the DNR Trust Fund Grant as an in-kind service and match for the grant.	\$0	\$28,000	\$0	\$0	\$0	\$0	\$28,000	\$28,000		C	INF
139	Streets	S. Kalamazoo between Spruce St. & Page St. (west side only)	1	25	Street Funds	New sidewalk to replace the existing sidewalk in disrepair.	\$10,000	\$0	\$0	\$0	\$0	\$0	\$10,000	\$10,000	Increased pedestrian safety.	C	INF
140	Streets	N. Brewer St. (near North Dr. to MRLEC (east side only)	2	25	Street Funds	New sidewalk between North Dr. and the MRLEC building. This will require some retaining walls and tree trimming due to elevation issues.	\$48,000	\$0	\$0	\$0	\$0	\$0	\$48,000	\$48,000	Increased pedestrian safety.	C	INF
141	Streets	Bridge Replacement Monroe Street @ Rice Creek	2	30	MVH Major 6% - Bond, MDOT Grant 92%	Replacing of 100 year-old structure utilizing match from MDOT grant.	\$0	\$0	\$0	\$159,000	\$0		\$159,000	\$1,150,000	Increase safety and load handling of the bridge.	C	INF
142	Streets	Bridge Replacement Design - Marshall Ave @ Kalamazoo River	2	30	Street Funds	Engineering Construction Assistance due to MDOT Grant Driven Project	\$50,000	\$0	\$0	\$0	\$0		\$50,000	\$50,000	Increase safety and load handling of the bridge.	C	INF
143	Streets	Bridge Replacement Marshall Ave @ Kalamazoo River	2	30	MVH Major 6%, MDOT Grant 95%	Construction of 100 year-old structure utilizing match from MDOT grant.	\$126,500	\$0	\$0	\$0	\$0		\$126,500	\$2,403,500	Increase safety and load handling of the bridge.	C	INF
144	Streets	New Sidewalk Installation	3	25	Street Funds	Sidewalks include Michigan Avenue, North Drive from Midtown to Marshall Avenue, Pearl from Kalamazoo to Riverwalk Avenue, Forest Street, Oakdale, and Woodland Drive, Sherman from Providence to Verona Road, Habitat from Kalamazoo to Brewer East Drive from Forest to Myers, Prospect where missing, Greenfield from Verona to Michigan, Birch and Mulberry where missing.	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000		\$150,000	\$150,000	Increased cost in the form of sidewalk repairs.	C	INF
145	Streets	Street Sign Replacement	2	15	MVH Major 35%, MVH Local 65%	Signs will be replaced by City crews one quadrant per year. Street signs will begin to be replaced in the 6th year.	\$14,000	\$14,000	\$14,000	\$14,000	\$14,000		\$70,000	\$70,000	Better sign visibility and compliance with FHWA requirements.	C	INF
146	Streets	Barrierade Replacement	2	10	General Fund	Replacement of traffic barrierades and cones that are used for special events, maintenance, and construction.	\$0	\$5,000	\$0	\$0	\$0		\$5,000	\$5,000	None.	C	MC
147	Streets	2017 Local Street Rehabilitation	2	30	Street Funds	Repose Garham Street and Luggett Road and crowd it approximately 7.5 miles of road.	\$170,000	\$0	\$0	\$0	\$0		\$170,000	\$170,000	Reduction in maintenance cost.	C	INF
148	Streets	2018 Local Street Rehabilitation	2	30	Street Funds	Repose N. Liberty from Michigan Avenue to Forest Street and Locust Street.	\$0	\$225,000	\$0	\$0	\$0		\$225,000	\$225,000	Reduction in maintenance cost.	C	INF
149	Streets	Future Years Local Street Rehabilitation	2	30	Street Funds	FY 2019 to 2021 is a \$250k per Road Report. Project locations TBD.	\$0	\$0	\$250,000	\$250,000	\$250,000		\$750,000	\$750,000	Reduction in maintenance cost.	C	INF
150	Wastewater	I & I Study (inflow and infiltration)	2	15	Wastewater Fund	Asst. & I Study will determine where the infiltration and inflow areas are in the City's Sewer System. This will allow us to budget in the future the repairs of the City's sewers.	\$0	\$65,000	\$0	\$0	\$0		\$65,000	\$65,000	Reduction in Plant expenses and increase in capital outlay.	C	N/A
151	Wastewater	Sewage Receiving Station	4	20	Wastewater Fund - Bond	This project will provide a place for dumping sewage in Calhoun County. State laws require sewage to be dumped at an approved receiving station if within a 25 miles radius of such a station. Currently there is no such facility in Calhoun County. This is an investment in the environmental health of Calhoun County.	\$0	\$0	\$0	\$0	\$0	\$1,000,000	\$1,000,000	\$1,000,000	Increase in revenue and offsetting increase in expenditures.	C	INF
152	Wastewater	Automated Meter Information Project	2	20	Wastewater Fund - Bond or Installment Purchase Contract	This system will automate the collection of meter readings and data from a centrally located facility eliminating the need for door to door readings, reduce or eliminate inaccurate readings and flag problems or tampering with a meter. This system will also provide us with an Outage Management System (OMS), providing back to what device (Breaker, Waterbox, Fuse) the outage originates from thereby reducing outage response time. The system will be fully functional within existing ESRI map framework and be ready for immediate integration with the proposed "inPower innovation" AMI/OMS software. The system will be scalable and capable of pulling in all other available and future systems and data sources.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	Reduction in meter reading cost.	C	INF
153	Wastewater	South Marshall & Hughes LR Station Replacement	2	25	Wastewater Fund	Due to the age (20 yrs) and on-going maintenance to the lift station replacement is recommended. Electric will be upgraded to 480V for efficiency and equipment life.	\$300,000	\$0	\$0	\$0	\$0		\$300,000	\$300,000	New station will save on maintenance costs.	C	INF
154	Wastewater	Portals Road LR Station Replacement	2	25	Wastewater Fund	Due to the age (20 yrs) and on-going maintenance to the lift station replacement is recommended. Electric will be upgraded to 480V to phase for efficiency and equipment life.	\$300,000	\$0	\$0	\$0	\$0		\$300,000	\$300,000	Reduction in maintenance cost.	C	INF
155	Wastewater	New Sludge Thickening/Dewatering Process	3	20	Wastewater Fund	The current equipment will be 20 years old and the polymer (thickening agent) used in the process is no longer produced. A suitable replacement is not expected. We have enough polymer to last about 4 years at our current rate. With a new system, Class A biosolids may be achieved.	\$0	\$0	\$0	\$0	\$500,000		\$500,000	\$500,000	Increase in revenue from possible sale of biosolids.	C	INF
156	Wastewater	Grit Removal System/Headworks Upgrades	3	20	Wastewater Fund	A grit removal system and fine screening installed at the headworks will reduce wear on the pumps and piping in the plant.	\$0	\$0	\$0	\$1,200,000	\$0		\$1,200,000	\$1,200,000	Reduction in maintenance cost.	C	INF
157	Wastewater	New Raw Sewage Pump VFDs	2	10	Wastewater Fund	Current VFDs need to be replaced due to age. Adding a third VFD to our third pump will allow us to rotate the pumps and increase the useful life of all three raw sewage pumps. VFD's are Variable Frequency Drivers.	\$0	\$0	\$25,000	\$0	\$0		\$25,000	\$25,000	Reduction in maintenance cost.	C	INF
158	Wastewater	Channel Monitor Cartridge Replacement	1	5	Wastewater Fund	It is recommended by the manufacturer to replace the outer cartridge in the Channel Monitor every five years.	\$0	\$0	\$0	\$0	\$35,000		\$35,000	\$35,000	Reduction in maintenance cost.	C	INF
159	Wastewater	Muffin Monitor cartridge replacement	2	5	Wastewater Fund	It is recommended by the manufacturer to replace the outer cartridge in the in-line Muffin Monitor every five years. We have three of these units.	\$0	\$25,000	\$0	\$0	\$0		\$25,000	\$25,000	Reduction in maintenance cost.	C	INF
160	Wastewater	Concrete Tank Repairs	3	30	Wastewater Fund	Repairs to the Aging Concrete Tanks (CIRCA 1955 and 1975) Are Recommended to Extend the Life of the Facilities.	\$0	\$0	\$0	\$0	\$75,000		\$75,000	\$75,000	None.	C	INF
161	Wastewater	UV Disinfection system	4	25	Wastewater Fund	Replace Current Chlorine Disinfection With UV Light Disinfection.	\$0	\$0	\$0	\$0	\$0	\$1,060,000	\$1,060,000	\$1,060,000	Reduction in chemical cost. Possible increase in utility cost.	C	INF
162	Wastewater	Sewer Lining	1	30	Wastewater Fund	Project will line sewers which have experienced failure and root penetration. FY 16 - Forest Street and North Drive. FY 18 - TBD. FY 20 - TBD.	\$0	\$0	\$0	\$0	\$0	\$120,000	\$120,000	\$120,000	Reduction in maintenance and repair.	C	INF
163	Wastewater	Automated Sampler Replacement	1	15	Wastewater Fund	Replacement of aging automatic sampling equipment at the Plant.	\$25,000	\$0	\$0	\$0	\$0		\$25,000	\$25,000	Reduction in maintenance cost.	C	INF
164	Wastewater	Sewer Condition Assessment	1	10	Wastewater Fund	Telesive and evaluate the entire sanitary sewer collection system to assess and prioritize repairs. Software with assessment data will be developed into our current GIS.	\$150,000	\$150,000	\$150,000	\$7,500	\$7,500	\$7,500	\$472,500	\$472,500	Yrs. 1,2,3 - Equal payments for assessment, yrs. 4,5,6 and beyond annual license fee for the software associated with the assessment.	C	INF
165	Wastewater	Clarifier Rehabilitation	2	25	Wastewater Fund	Rehabilitate concrete and steel structures in each of 4 clarifiers due to age and corrosion. Rehab/Replace clarifier drive mechanisms due to age and wear. Coat all concrete surfaces with marine grade coating.	\$0	\$1,300,000	\$0	\$0	\$0	\$0	\$1,300,000	\$1,300,000	Reduction in maintenance cost.	C	INF

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166	Wastewater	Aeration Basin Rehabilitation	2	25	Wastewater Fund	Rehabilitate aeration basin due to age and corrosion. Replace all steel weirs and fiberglass gates and repair safety railings. Cover all concrete surfaces with marine grade coating.	\$0	\$0	\$500,000	\$0	\$0	\$0	\$0	\$500,000	\$500,000		C	INF
167	Water	Replace Chlorine Gas with Sodium Hypochlorite	4	20	Water Fund	Replace chlorine gas used for disinfecting the water with sodium hypochlorite. This is for safety reason. Presently the City is in compliance with MDEQ but regulations could change.	\$0	\$0	\$0	\$0	\$100,000	\$0	\$100,000	\$100,000	Increase in operational costs because sodium hypochlorite is a more expensive alternative.	C	INF	
168	Water	Replace Water Main on S. Marshall	1	30	Water Fund - Bond	Replace aging 8" & 4" water main on S. Marshall from Monroe to Hughes St. with 8" Ductile Iron. Project would coincide with bridge replacement on S. Marshall Ave.	\$181,000	\$0	\$0	\$0	\$0	\$0	\$181,000	\$181,000	Reduction in maintenance to structure, increase water quality and flow.	C	INF	
169	Water	Replace Existing 4" Water Main on S. Eagle and Jefferson	2	30	Water Fund -Bond	Replace existing 4" cast iron water main in two locations. Upgrade to Ductile Iron pipe . As recommended in the 2008 Master Plan.	\$0	\$0	\$0	\$0	\$300,000	\$0	\$300,000	\$300,000	Reduction in maintenance to structure, increase in water quality and flow.	C	INF	
170	Water	New Garage at Water Treatment Plant	2	30	Water Fund	Build pole style building for trucks and storage at the Water Treatment Plant. As suggested by the operational study in 2010.	\$190,000	\$0	\$0	\$0	\$0	\$0	\$190,000	\$190,000	Save time money and eliminate using space at the Public Services Building.	C	BD	
172	Water	Build New Treatment Plant at Well #5 Site. S. Kalamazoo behind Moorsaker	4	50	Water Fund - Bond	Install water main and build water treatment plant at #5 well site. This would add a backup in case of contamination to other four wells on Green St.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000,000	\$1,000,000	Increase utility use and chemical inventory	C	INF
173	Water	S. Marshall Ave. water main replacement	2	30	Water Fund	Replace aging 4 and 6 inch water main from Green St. to Clinton St. with 8 inch Ductile Iron Pipe	\$0	\$0	\$0	\$456,400	\$0	\$0	\$456,400	\$456,400	Reduction in maintenance to structure, increase in water quality and flow.	C	INF	
174	Water	Replace 8" Water main on Leggett with 8" Ductile Iron Pipe	2	30	Water Fund	Install 8" water main to replace aging 8" Cast Water Main on Leggett at time of road work	\$122,500	\$0	\$0	\$0	\$0	\$0	\$122,500	\$122,500	Reduction in maintenance to structure and increase water quality	C	INF	
175	Water	Replace aging 8" water main on W. Prospect	2	30	Water Fund - Bond	Install 8" Ductile Iron Water Main from Verona to Linden on W. Prospect	\$0	\$0	\$120,100	\$0	\$0	\$0	\$120,100	\$120,100	Reduction in maintenance to structure and increase water quality	C	INF	
176	Water	Install 18" EZ Valve at Water Plant	1	30	Water Fund	Install 18" EZ Valve outside Water Plant as suggested by DEQ	\$34,000	\$0	\$0	\$0	\$0	\$0	\$34,000	\$34,000	Reduction in maintenance to structure and increase control of water plant for future emergencies	C	INF	
177	Water	Water main replacement on S. Marshall and Homer Rd	2	30	Water Fund	Replace aging 4 and 6 inch water main on S. Marshall from Hughes St. to Raymond Rd. and on Homer Rd. from Hughes St. to CPW Garage	\$0	\$0	\$0	\$0	\$0	\$525,000	\$525,000	\$525,000	Reduction in maintenance to structure, increase water quality and flow.	C	INF	