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Project Title:	Airport Ramp Expansion Project	**Project #:**	201621
Department:	Public Works - Airport	**Project Type:**	Airport
Phase:	Preliminary Design	**Sponsor:**	Kurt Stanich – Airport Manager
Budget Action:	As Planned	**Manager:**	Allison Bussler – DPW Director
Date:	August 13, 2016		

CAPITAL BUDGET SUMMARY

Year	2016	2017	2018	2019	2020	Total Project
Project Phase	Design & Construction	Construction	Construction			
Expenditure Budget	$325,000	$110,000	$190,000	$0	$0	$625,000
Revenue Budget (Airport Fund Balance)	$325,000	$110,000	$190,000	$0	$0	$625,000
Net County Cost	$0	$0	$0	$0	$0	$0

COST DOCUMENTATION		**REVENUE**	
Design & Engineering	$1,610,000	Federal Aviation Administration	$8,430,000
Construction	$7,670,000	Wisconsin Bureau of Aeronautics	$625,000
Contingency	$400,000	County Airport Fund Balance	$625,000
Total Project Cost	$9,680,000	Total Revenue	$9,680,000
EXPENDITURE BUDGET	$625,000	**REVENUE BUDGET**	$625,000

Project Scope & Description

This project will expand the South and West Airport Terminal Ramps to accommodate requests by Aeronautical Service Providers to construct corporate aircraft hangars. The grass islands that currently divide the main terminal ramp will be filled in with concrete creating more parking for transient aircraft and improve ramp operations. Additionally, the west terminal ramp will connect to the west corporate hangar area significantly increasing safety as well as improving timely delivery of fuel service to corporate customers.

The new design includes 37,700 square yards of new pavement on the West Terminal Ramp, 6,600 square yards on the Main Terminal Ramp, and 9,000 square yards on the South Ramp. Work also includes improvements to storm water management, airfield lighting and signage. All of these improvements have been identified in the Airport Master Plan and the Airport Layout Plan.

Location

Waukesha County Airport Terminal Ramp

Analysis of Need

The current extent of the terminal ramp was constructed with the Airport Terminal in 1997. It was designed to meet the projected demand for aeronautical service providers with the intent of expanding the ramp once demand for the available hangar lots was met. The current west terminal ramp can only accommodate one additional hangar building. Both Fixed Base Operators (FBO's), Atlantic Aviation and Stein's Aircraft Services, LLC., and one Aeronautical Service Provider, Spring City Aviation, Inc., have submitted conceptual plans for large corporate hangar buildings on the West and South Terminal Ramps. This proposed activity consumes all of the remaining lots on the west and south ramps and necessitates expanding both areas in order to realize the revenue from these hangar developments. As a condition of new FBO operating agreements with Stein's Aircraft Services and Atlantic Aviation (pending approval) and an Aeronautical Service Provider Agreement with Spring City Aviation, each are required to build an additional hangar in the terminal ramp area. Without this ramp expansion, these companies will be unable to operate out of their new facilities.

Currently, the west corporate hangar area can only be accessed by driving fuel trucks and airport service vehicles onto aircraft movement areas causing a safety hazard as identified by the Federal Aviation Administration's (FAA) Runway Safety Action Team (RSAT). Connecting these two areas will eliminate vehicles from the Aircraft Movement Areas and from the airport's busiest taxiway. Service to corporate flight operations like Flight for Life will become more timely providing great benefit to their critical operations.

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Project Title:	Airport Ramp Expansion Project	Project #:	201621
Department:	Public Works - Airport	Project Type:	Airport
Phase:	Preliminary Design	Sponsor:	Kurt Stanich – Airport Manager
Budget Action:	As Planned	Manager:	Allison Bussler – DPW Director
Date:	August 13, 2016		

The Main Terminal Ramp is divided by three grass islands. These were put in place during the 1997 construction to divide the main ramp from both the adjacent Taxiway and from the South Terminal Ramp. Changes in airport design, aircraft size and maneuverability, and increased demand for aircraft parking necessitate filling in these islands to make one contiguous ramp.

The three additional hangar lots and ability to handle more transient traffic will significantly increase revenues received (discussed below under ongoing operating costs) and assist the airport in reducing its reliance on County Tax Levy.

Alternatives

A smaller extension of the existing of the west ramp and south ramps would only accommodate the proposed hangar developments. The proposed project scope with a larger ramp expansion is expected to provide additional operational efficiencies and safety improvements.

Ongoing Operating Revenues/Costs

New hangar construction is expected to occur over three years (2016 – 2018) and estimated to result in approximately $84,000 in land lease revenues paid to the Airport. The new hangars will also support additional based aircraft at the Airport, increasing fuel revenues paid to the County (receive $0.10/gallon sold).

The new ramp space will result in additional ongoing costs for snow removal and pavement maintenance. As part of their future lease agreements, the hangar owners will pay for portions of the new pavement for which they are leasing (adjacent to their hangar lots). Ongoing costs for the remaining pavement will be paid for by the County, estimated at $8,000 annually for snow removal and $2,000 for pavement repairs and maintenance about five years after construction (first few years should need minimal repair).

Previous Action

- South and West terminal ramp expansion previously included in capital project #201311.
- Approved as a new project in Ordinance 171-030.

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Project Title:	Replace Brine Maker/Construct Canopy Roof	**Project #:**	201401
Department:	Public Works - Hwy Ops	**Project Type:**	Equipment Replacement
Phase:	Preliminary Design	**Sponsor:**	Public Works
Budget Action:	Delay	**Manager:**	Allison Bussler, DPW Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2015	2017	2018	Total
Project Phase	Budget & Concept Design		Construction	Project
Expenditure Budget	$10,500	$0	$313,200	$323,700
Revenue Budget	$0	$0	$0	$0
Net County Cost	$10,500	$0	$313,200	$323,700

COST DOCUMENTATION		**REVENUE**	
Design	$10,500		
Equipment	$190,000		
Construction	$100,000		
Contingency	$23,200		
Total Project Cost	$323,700	Total Revenue	$0
EXPENDITURE BUDGET	$323,700	**REVENUE BUDGET**	$0

Project Scope & Description

Replace existing brinemaker originally purchased in 2007 by Wisconsin Department of Transportation (WisDOT). Purchase of replacement brinemaker and five (5) additional 6,000 gallon tanks for salt brine storage and liquid blending of de-icing chemicals. Construct canopy roof off back of Highway Operations to shelter truck wash, liquid loading area and additional storage tanks. This project is being delayed to allow for the opportunity to negotiate with WisDOT to share the cost of a new brine-maker as part of a larger salt dome construction project.

Location

Highway Operations, 1641 Woodburn Road, Waukesha, WI 53188. Two of the five additional 6,000 gallon tanks will be located at the New Berlin and Sussex substations.

Analysis of Need/Return on Investment

The useful life of this type of equipment has not been established. We estimate that the existing brinemaker could have a useful life of 10 years. The Highway Operations Division has 100% of its trucks applying pre-wet to its salt as it comes off the salt spinner. Additionally, we anti-ice prior to storms and sell approximately 150,000 gallons of salt brine to other municipalities within Waukesha County and to the Jefferson County Highway Department.

It is essential that we continue to be able to produce salt brine as not using it as a pre-wet would increase our salt usage by at least 20%. When this project was proposed during 2013, the County used, on average, 16,532 tons of salt over the last 5 winter seasons. A 20% increase by not being able to pre-wet salt causing more bounce and scatter would add an additional 3,300 tons of salt use annually. At an average of $56 a ton, this would amount to an additional $184,880 cost on salt. Under this scenario, replacing the brinemaker would pay for itself in approximately 1.5 years.

The project includes the construction of a canopy roof to the Highway Operations building. The additional roofing is intended to provide cover from the elements while county staff refill trucks with salt brine during snow storms.

Alternatives

Replace equipment individually as it breaks down.

Ongoing Operating Costs

The current brinemaker continues to run with minimal costs to maintain at this point. We have spent approximately $500-700 per year on parts and sensors. This will continue to increase as the brinemaker ages.

Previous Action

- 2014-2018 capital plan: approved as new project
- 2015-2019 capital plan: approved as planned
- 2016-2020 capital plan: approved as planned

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Project Title:	Fuel Tank Replacement and Infrastructure Project	**Project #:**	201415
Department:	Public Works - Central Fleet	**Project Type:**	Equipment Replacement
Phase:	Formation	**Sponsor:**	Public Works
Budget Action:	As Planned	**Manager:**	Allison Bussler, DPW Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2018	2019	2020	2021	2022	2023	2024	Total
Project Phase	Constr	Constr	Constr	Constr	Constr	Constr	Constr	Project
Expenditure Budget	$400,000	$200,000	$200,000	$200,000	$200,000	$200,000	$100,000	$1,500,000
Revenue Budget	$0	$0	$0	$0	$0	$0	$0	$0
Net County Cost	$400,000	$200,000	$200,000	$200,000	$200,000	$200,000	$100,000	$1,500,000

COST DOCUMENTATION		**Item**	**Quantity**	**Price**	**Total Cost**
Tank Inspection & Testing	$20,000	Underground Tank Testing	5	$4,000	$20,000
Construction	$1,400,000	Underground tanks*	5	$150,000	$750,000
Contingency	$80,000	Above Ground Tanks*	25	$15,000	$375,000
		Monitors	5	$20,000	$100,000
Total Project Cost	$1,500,000	Card Readers	16	$15,000	$240,000
		Fuel Software Systems	2	$5,000	$10,000
		Signage/Fencing	All Sites		$5,000
EXPENDITURE BUDGET	$1,500,000	**Total**			$1,500,000

*Higher cost of underground tanks is partially due to larger capacity needed for highway operations at substations, including four 10,000 gallon tanks and one 6,000 gallon tank, and also due to necessary monitoring systems and electronic devices. By contrast smaller above ground tanks are needed at other locations and hold either 550 or 1,000 gallons. Previously, those underground tanks that could be replaced by above ground tanks were replaced, based on the implementation of a replacement plan in the early 1990s. Those underground tanks remaining were due to inadequate space (that would have required the purchase of additional land) and safety issues.

Project Scope & Description:

There are 16 vehicle fuel sites utilized by Waukesha County departments with a total of 30 tanks (5 Underground [UGT], and 25 Above Ground [AGT]). All tanks were installed in the early 1990's. The infrastructure is aging and will begin to exceed tank warranties and useful lives of technology and equipment associated with site operations. The 25 Above Ground and 5 Underground tanks will be replaced with similar tank styles, design, and capabilities. Note: all underground tanks are monitored with sensors designed to shut-off system operations immediately at time of detection thus eliminating the loss of fuel into the ground.

Funding for this project is spread out into later years, which allows for more initial research into replacement strategies and costs before committing too much funding. The concept for capital budgeting for tank replacement: $400,000 Capital dollars will be set aside beginning in 2018 and then $200,000 each year for a total $1.5 million funding level, replacing tanks as needed.

The budget strategy for the project is to fully fund the project and to utilize funds only as needed to complete improvements when necessitated by aging infrastructure. This strategy is similar to the method used in the Highway Paving program where funds are allocated to paving but not specifically to a location.

Location:

All 16 fuel sites that are utilized by Waukesha County Departments will require some form of replacements, upgrades and/or modifications. Sites include Highway Operations Center, Nashotah Substation, North Prairie Substation, Sussex Substation, New Berlin Substation, Nagawaukee Golf Course, Wanaki Golf Course, Moor Downs Golf Course, Nagawaukee Park, Nashotah Park, Menonomee Park, Fox Brook Park, Minooka Park, Fox River Park, Muskego Park, and Mukwonago Park.

Alternatives:

Three alternative options exist at this time: close the site(s), fuel off-site in the local area or consolidate fuel sites with other governmental agencies. None is an effective option given the nature of daily departmental operating procedures and emergency operation requirements.

Ongoing Operating Costs:

Waukesha County currently spends $40K annually to maintain all 16 of the vehicle fuel sites. The funding is contained within the Central Fleet Division's fuel budget.

Previous Action:

Regulatory requirements associated with the State of Wisconsin "Comm 10" statutes necessitated a fuel capital project in 2012-14 totaling $232K (project # 201211). The project focused on upgrading fuel dispenser spill containment and monitoring systems. The work contained in the 2012-14 project will not be duplicated in this project and therefore, no funds are anticipated to be duplicated in the future project. Approved as a new project in the 2014-2018 capital plan. Approved with delay in 2015-2019 capital plan. 2016-2020 capital plan: approved as planned.

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Project Title:	Communication Center Expansion	**Project #:**	200808
Department:	Public Works - Buildings	**Project Type:**	Facility Expansion
Phase:	Preliminary Design	**Sponsor:**	Gary Bell, Emerg. Prep. Director
Budget Action:	As Planned	**Manager:**	Allison Bussler, DPW Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2015	2016	2017	Total
Project Phase	Budget & Concept	Design	Construction	Project
Expenditure Budget	$45,000	$203,000	$3,483,000	$3,731,000
Revenue Budget	$0	$0	$708,400	$708,400
Net County Cost	$45,000	$203,000	$2,774,600	$3,022,600

COST DOCUMENTATION		**REVENUE**	
Architect	$248,000	Municipal Cost Share per ordinance*	$350,000
Construction	$2,976,000	New Berlin Joining fee for	$358,400
Contingency	$238,000	infrastructure received in 2012	
Survey/Soil Test/Permits/Etc	$28,000	and reserved in General Fund Balance	
Furniture	$241,000		
Total Project Cost	$3,731,000	Total Revenue	$708,400
EXPENDITURE BUDGET	$3,731,000	**REVENUE BUDGET**	$708,400
		*Future new large member that requires expansion	

Project Scope & Description

This project was proposed in 2008 and will incorporate space for the Waukesha Communications Center (WCC) to accommodate additional dispatch agencies and space for the Emergency Operations Center (EOC) to better handle countywide emergencies. This project adds an approximate total of about 7,500 square feet to the WCC. Based on further research, the hiring of a new director, EOC training exercises, and actual experience with a large incident, the project expands the EOC to properly necessitate these functions. The project will also include storage, a garage, and administrative space to free up existing space in the current facility to accommodate future county wide dispatch for all jurisdictions and have the needed space to better manage significant incidents.

Location

Waukesha County Communications Center, 1621 Woodburn Road, Waukesha, WI 53188

Analysis of Need

The existing facility was completed in 2004 and started operations that same year. The facility was designed to handle all the agencies that committed originally and a small increase to the number of agencies in the future. The current dispatch floor has workstations for fourteen 9-1-1 positions, one 9-1-1 supervisor position and two supervisor workstations. While the facility is capable of handling increases in activity and a small number of new partners in the existing structure, at some point the facility will need to expand to accommodate substantial growth due to more agencies joining. Since 2004, three police departments and three fire departments have been added to the WCC, as well as additional emergency management and Information Technology Division personnel. The most recent addition was in 2012 with New Berlin Police and Fire becoming part of the WCC. Within the next couple of years, growth is estimated to include additional police and fire departments, but the size of these agencies is unknown at this point. In addition, space is needed in the EOC to handle countywide incidents. The current square footage is insufficient for substantial growth due to new agencies.

Alternatives

- Until the building is expanded, the dispatch floor can be re-configured to add up to four 9-1-1/dispatch positions and convert the two supervisors' workstations to 9-1-1/dispatch workstations, but room for support staff, storage, meeting rooms, etc. is in short supply.
- Only allow one partner/agency and deny all other agency requests.
- Create new formula to better account for all cost of new agencies that join the dispatch center.

Ongoing Operating Costs

The major components of the building already exist. Additional space and equipment will require additional staff and increases in personnel, maintenance and utilities costs. Estimated costs will be determined as the project construction design plan is completed.

Previous Action

2008-2012 capital plan: approved as new. 2009-2013, 2010-2014, 2011-2015; 2013-2017 capital plans: delayed one year. 2012-2016 capital plan: cost update. 2014-2018 capital plan: approved as planned. 2015-2019 capital plan: scope and cost update. 2016-2020 capital plan: scope and cost update.

Project Title:	MHC Roof Replacement	**Project #:**	201412
Department:	Public Works - Buildings	**Project Type:**	Roof Replacement
Phase:	Formation	**Sponsor:**	Public Works
Budget Action:	As Planned	**Manager:**	Allison Bussler, DPW Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2017	2018	Total
Project Phase	Budget & Concept, Design	Construction	Project
Expenditure Budget	$15,000	$238,000	$253,000
Revenue Budget	$0	$0	$0
Net County Cost	$15,000	$238,000	$253,000

COST DOCUMENTATION		REVENUE	
Architect	$15,000		
Construction	$222,000		
Contingency	$16,000		
Total Project Cost	$253,000	Total Revenue	$0
EXPENDITURE BUDGET	$253,000	**REVENUE BUDGET**	$0

Project Scope & Description
This project is to replace 55,000 GSF (gross square feet) of 60 mil EPDM (rubber) roofing on the Mental Health Center.

Location
Mental Health Center, 1501 Airport Road, Waukesha, WI 53188

Analysis of Need
This Mental Health Center was constructed in 1994 and has the original roofing system. EPDM roofs are typically under warranty for 15 years and have a useful life expectancy between 15 and 20 years. The roof is 22 years old and has been patched and deteriorated due to sun exposure. At time of replacement the roof will be 24 years old.

Alternatives
Patch the roof when leaks develop.

Ongoing Operating Costs
Operating costs will be reduced for labor and materials associated with repairing leaks and associated damages.

Previous Action
2014-2018 capital plan: approved as new project
2015-2019 capital plan: approved as planned
2016-2020 capital plan: approved as planned

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Project Title:	Demolish Former Health & Human Services Building	**Project #:**	201503
Department:	Public Works - Buildings	**Project Type:**	Demolition
Phase:	Demolition	**Sponsor:**	Public Works
Budget Action:	As Planned	**Manager:**	Allison Bussler, DPW Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2015	2016	2017	Total
Project Phase	Design/Demolition	Demolition	Parking Const	Project
Expenditure Budget	$1,515,000	$1,785,000	$320,000	$3,620,000
Revenue Budget	$0	$0	$0	$0
Net County Cost	$1,515,000	$1,785,000	$320,000	$3,620,000

COST DOCUMENTATION		**REVENUE**	
Design*	$100,000	Most of project will be funded with	
Demolition/Parking	$3,220,000	appropriated Capital Project Fund Balance.	
Contingency	$300,000		
Total Project Cost	$3,620,000	Total Revenue	$0
EXPENDITURE BUDGET	$3,620,000	**REVENUE BUDGET**	$0

*Includes demolition consultant.

Project Scope & Description

This project includes the demolition of the former HHS buildings. The project includes the stabilization of site conditions, the construction of approximately 70 new public parking spaces and the preservation of the existing cellular tower/smoke stack.

Location: The former HHS building is located at 500 Riverview Drive, Waukesha, WI 53186.

Analysis of Need

The main building is over 100 years old (opened in 1910). As a result of a 1995 facilities improvement study of the Health and Human Services Building, the Waukesha County Board in 1995 approved expending nearly $1.3 million for building maintenance to extend the service life of the building 10-15 years. The facility analysis showed it would not have been a prudent use of tax dollars to make a greater investment in the building to extend the service life. The decision by the Waukesha County Board to extend the service life of the building 10-15 years started the planning process for a replacement Health and Human Services Building.

In 2010, the Waukesha County Board approved a capital project to construct a new Health and Human Services Building on the Moor Downs property to replace the former building. The new Health and Human Services Building was opened in 2013.

In 2013, Waukesha County evaluated use of the former Health and Human Services Building as temporary space for Courts operations during a future Courthouse remodeling project. The analysis showed that the former Health and Human Services Building would not have been suitable for this temporary use.

An extensive consulting report on survey/sampling during September/October 2015 identified higher levels of hazardous materials (e.g., asbestos, lead and mercury) than the initial estimate. More asbestos was found through this method of sampling (e.g., cutting holes in multiple wall and floor layers).

Alternatives & Previous Actions

- Retain the building and continue to incur repair, maintenance, and liability costs.
- Alternatives pursued and abandoned:

  Pursued County Board Resolution 168-R-007 to sell and relocate or tear down the former Waukesha County Health and Human Services Building. There were no proposals received for the sale and relocation that met the intent of the resolution, leaving building demolition as the recommended alternative.

  Pursued County Board adopted Resolution 169-R-006 to consider potential developer proposals for the former HHS building. During the summer of 2015, the County received one proposal, and the request for proposal committee deemed the proposal incomplete and recommending rejecting the proposal. The proposal was rejected by the County Board at the August Board meeting.
- 2016-2020 capital plan: scope and cost update

Ongoing Operating Costs

Operating costs to continue to repair and maintain the former HHS building are expected to be $58,000/yr. Insurance costs will continue to be incurred at $16,000/yr. Vandalism and other liability will continue to be a concern in a vacant building.

Project Title:	Highway Substations HVAC Upgrades	**Project #:**	201109
Department:	Public Works - Buildings	**Project Type:**	Mechanicals/Bldg Systems
Phase:	Construction	**Sponsor:**	Public Works
Budget Action:	C - $ Update	**Manager:**	Allison Bussler, DPW Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2014	2016	2017	Total
Project Phase	Budget & Concept Design	Construction	Construction	Project
Expenditure Budget	$36,000	$200,000	$200,000	$436,000
Revenue Budget	$0	$0	$0	$0
Net County Cost	$36,000	$200,000	$200,000	$436,000

COST DOCUMENTATION		**REVENUE**	
Architect	$36,000		
Construction	$368,000		
Contingency	$32,000		
Total Project Cost	$436,000	Total Revenue	$0
EXPENDITURE BUDGET	$436,000	**REVENUE BUDGET**	$0

Project Scope & Description

This project upgrades HVAC equipment controls at the four Highway Division substations. The project was bid in 2016 with the bids coming in over the consultants cost estimate for the project. The materials and labor were significantly higher than the consultant anticipated resulting in a budget increase for 2017.

Locations

Nashotah Substation–N46W33480 CTH R, Nashotah, WI 53058
New Berlin Substation–20300 W. Lawnsdale Road, New Berlin, WI 53058
North Prairie Substation–126 Oakridge Drive, North Prairie, WI 53153
Sussex Substation–N51W23093 Lisbon Road, Sussex, WI 53098

Analysis of Need

The equipment targeted to be replaced in this project has been identified to have reached the end of its useful life. Mechanical HVAC equipment normally has a useful life of approximately 25 years depending upon the quality of the equipment and the frequency of maintenance. With proper maintenance the useful life of the equipment can be extended. The substations were constructed as follows: Nashotah 1972 (44 years ago), New Berlin 1950 (66 years ago), North Prairie 1988 (28 years ago) and Sussex 1965 (51 years ago). The project proposes a concept and budget in 2014 to determine which equipment needs to be replaced, reconditioned or reused. This project will also allow the County to install high-efficiency equipment to reduce annual utility costs.

Alternatives

Repair or replace equipment when it breaks down.

Ongoing Operating Costs

Energy consumption will be modestly reduced with more efficient equipment.

Previous Action

- 2011-2015 capital plan: approved as a new project
- 2012-2016 capital plan: approved with cost update
- 2013-2017 capital plan: delayed
- 2014-2018 capital plan: approved as planned
- 2015-2019 capital plan: approved as planned
- 2016-2020 capital plan: approved with cost update

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Project Title:	HWY Ops-Fleet HVAC Upgrades	**Project #:**	201206
Department:	Public Works - Buildings	**Project Type:**	Mechanicals/Bldg Systems
Phase:	Preliminary Design	**Sponsor:**	Public Works
Budget Action:	C - $ Update	**Manager:**	Allison Bussler, DPW Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2015	2017	Total
Project Phase	Budget & Concept Design	Construction	Project
Expenditure Budget	$45,000	$847,000	$892,000
Revenue Budget	$0	$0	$0
Net County Cost	$45,000	$847,000	$892,000

COST DOCUMENTATION		**REVENUE**	
Design	$45,000		
Construction	$782,000		
Contingency	$65,000		
Total Project Cost	$892,000	Total Revenue	$0
EXPENDITURE BUDGET	$892,000	**REVENUE BUDGET**	$0

Project Scope & Description
This project will upgrade the HVAC infrastructure including pumps, motors, air handling units and heaters at the Highway Operations and Fleet Facilities.

Location
Highway Operations and Fleet Facilities, 1641 Woodburn Road, Waukesha, WI 53188

Analysis of Need
The Highway Operations Center was constructed in 1997 and the Fleet Garage was constructed in 1998. The LAW study is a planning document to help the county plan for equipment replacement at the end of a piece of equipment's useful life, but before it fails. The study identified approximately 63 individual pieces of HVAC-related equipment that should be upgraded or replaced at these facilities. Construction costs are updated based on budget and concept developed in 2016.

Alternatives
Replace equipment individually as it breaks down.

Ongoing Operating Costs
Energy consumption will be reduced by replacing older equipment with newer high efficiency equipment. Estimated energy consumption reductions to be determined as part of the budget and concept design in 2015.

Previous Action
2012-2016 capital plan: approved as new project.
2013-2017, 2014-2018, 2015-2019, 2016-2020 capital plan: approved as planned.

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Project Title:	Courthouse Project – Secure Courtroom Construction	**Project #:**	201418
Department:	Public Works - Buildings	**Project Type:**	New Building
Phase:	Formation	**Sponsor:**	Public Works
Budget Action:	As Planned	**Manager:**	Allison Bussler, DPW Director
Date:	August 31, 2016		

CAPITAL BUDGET SUMMARY

Year	2017	2018	2019	2020	Total
Project Phase	Budget & Concept	Design/Constr	Construction	Construction	Project
Expenditure Budget	$700,000	$8,000,000	$14,000,000	$13,700,000	$36,400,000
Revenue Budget	$0	$0	$0	$0	$0
Net County Cost	$700,000	$8,000,000	$14,000,000	$13,700,000	$36,400,000

COST DOCUMENTATION		**REVENUE**	
Design	$2,275,000		
Construction Management	$2,275,000		
Construction	$30,450,000		
Contingency	$1,400,000		
Total Project Cost	$36,400,000	Total Revenue	$0
EXPENDITURE BUDGET	$36,400,000	**REVENUE BUDGET**	$0

Project Scope & Description

The existing courthouse, located at 515 W. Moreland Blvd., was constructed in 1959 and remains structurally sound. The Courthouse currently houses the Judiciary, Clerk of Courts, Family Court Counseling, District Attorney's Offices (including Victim/Witness), The County Board Room, Information Technology and other miscellaneous functions. Throughout the life of the Courthouse, extensive remodeling has taken place to add additional courtrooms and reconfigure interior space to meet the expanding needs of the services located in the Courthouse. Operational and business inefficiencies, particularly for the courts systems, have been created due to both space and building limitations. In addition, existing courtrooms do not meet current design standards. Also, the Courthouse building infrastructure is approaching the end of its useful life.

The County retained Zimmerman Architectural Studios to develop a "Courthouse Study," (capital project #200914), to provide a comprehensive analysis of Courthouse space requirements and design needs. This study has been completed, and Zimmerman recommended a two-step design approach (below). This project is intended to address step 1. A separate future capital project will need to address step 2. While approving this project in the plan does not obligate future County Boards for step 2 (renovation of the existing courthouse facility as outlined in the aforementioned study, project #201705), it does reflect the County's future guidance for the overall courthouse project.

Step 1: Construction of a new 4 story, 8 courtroom facility and relocation of 8 existing courtrooms to the new facility. This work also includes the demolition of the existing 1959 jail.

Step 2: This future capital project would renovate the existing Courthouse facility in a 3 stage vertical segmented approach to provide newly renovated facilities for all divisions, except the secure courtrooms addressed in Step 1. Courthouse renovation will also include the installation of new state of the art mechanical, electrical, fire protection, window systems and new wall, floor and ceiling finishes in all renovated areas. This approach will not require temporary offsite relocation of Courthouse personnel.

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Project Title:	Courthouse Project – Secure Courtroom Construction	Project #:	201418
Department:	Public Works - Buildings	Project Type:	New Building
Phase:	Formation	Sponsor:	Public Works
Budget Action:	As Planned	Manager:	Allison Bussler, DPW Director
Date:	August 31, 2016		

At this time, there are a number of factors that may impact the design and the construction costs of future courthouse modernization projects. These factors make it difficult to provide detailed cost estimates for these projects. In 2013, Zimmerman Architectural Studios estimated the full courthouse remodel to cost approximately $95 million (in 2019 dollars), including $36.4 million for step 1 (in this project) and $58.6 million for step 2 (after adjusting design/construction management and contingency factors to County standards). However, many factors could impact that estimate including, but not limited to, incorporating additional operations to the courthouse space, future economic conditions and the maturing of the design process for the remaining 3 stages of work that are part of Step 2. Additional design work will be performed to finalize the staging of the remaining work during the design phase of the Secure Courtroom Construction project (Step 1). This cost estimate is subject to change as a result of the factors mentioned above.

Location
Waukesha County Courthouse, 515 West Moreland Blvd., Waukesha, WI 53188.

Analysis of Need

The existing Courthouse building, constructed in 1959, remains structurally sound. Over the years, extensive remodeling has taken place to add additional courtrooms and reconfigure interior space. Public access to the building is now limited to the main entrance (door #2) where security screening takes place. Customer circulation has been identified for improvement, particularly the Courts area. Due to the remodeling, some courtrooms are considered inadequate since the space and/or security does not measure up to current courtroom design standards.

Based on the needs identified by the County and analyzed by the consultant, the consultant has recommended the construction of a new 4-story Courts building adjacent and contiguous to the existing Courthouse and the relocation of 8 existing courtrooms to this building. This will address courtroom security needs, prisoner transport needs, and customer circulations needs. Due to the design of this new building, it will not be necessary to temporarily relocate any courtrooms or staff during construction.

The existing Courthouse is in need of complete replacement of its mechanical, electrical, plumbing, fire protection and window systems. The need for these replacements will coincide with the completion of the Courts Building and the vacating of 8 courtrooms in the existing Courthouse. The space left vacant by the courtrooms will be used in consideration with the consultant's recommendation for Step 2, as described previously in the Project Scope and Description.

At this time, there are a number of factors that may impact the design and the construction costs of future courthouse modernization projects. These factors make it difficult to provide detailed cost estimates for these projects. Those factors include but are not limited to: future economic conditions and the maturing of the design process for the remaining 3 stages of work that are part of step 2. Additional design work will be performed to finalize the staging of the remaining work during the design phase of the step 1 effort.

Alternatives
Continue to operate all County functions and services at their present location utilizing existing facilities, risking HVAC failure, and without gaining future HVAC, utility and staffing efficiencies.

Ongoing Operating Costs
Continue at the present energy consumption and maintenance required. The new project is expected to reduce energy costs given the opportunity to increase operational efficiency that state of the art equipment and windows provide.

Previous Action
- The Courthouse Study was completed in August, 2013
- Approved as a new capital project in the 2014-2018 capital plan
- 2015-2019 capital plan: approved as planned
- 2016-2020 capital plan: approved as planned

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Project Title:	Courthouse Project Step 2 – Courthouse Renovation	**Project #:**	201705
Department:	Public Works - Buildings	**Project Type:**	Renovation/Upgrade
Phase:	Formation	**Sponsor:**	Public Works
Budget Action:	New	**Manager:**	Allison Bussler
Date:	August 31, 2016		

CAPITAL BUDGET SUMMARY

Year	2021	2022	2023	2024	2025	Total
Project Phase	Budget & Concept Design	Design & Construction	Construction	Construction	Construction	Project
Expenditure Budget	$1,200,000	$8,000,000	$16,500,000	$16,450,000	$16,450,000	$58,600,000
Revenue Budget	$0	$0	$0	$0	$0	$0
Net County Cost	$1,200,000	$8,000,000	$16,500,000	$16,450,000	$16,450,000	$58,600,000

COST DOCUMENTATION		**REVENUE**	
Architect	$4,578,000		
Construction Management	$4,578,000		
Construction	$45,780,000		
Contingency	$3,664,000		
Total Project Cost	$58,600,000	Total Revenue	$0
EXPENDITURE BUDGET	$58,600,000	**REVENUE BUDGET**	$0

Project Scope & Description

The existing courthouse, located at 515 W. Moreland Blvd., was constructed in 1959 and remains structurally sound. The Courthouse currently houses the Judiciary, Clerk of Courts, Family Court Counseling, District Attorney's Offices (including Victim/Witness), the County Board Room, Information Technology and other miscellaneous functions. Throughout the life of the Courthouse, extensive remodeling has taken place to add additional courtrooms and reconfigure interior space to meet the expanding needs of the services located in the Courthouse. Operational and business inefficiencies, particularly for the courts systems, have been created due to both space and building limitations. In addition, existing courtrooms do not meet current design standards. Also, the Courthouse building infrastructure is approaching the end of its useful life.

The County retained Zimmerman Architectural Studios to develop a "Courthouse Study," (capital project #200914), to provide a comprehensive analysis of Courthouse space requirements and design needs. This study has been completed, and Zimmerman recommended a two-step design approach (below). This project is intended to address step 2.

Step 1: Construction of a new 4 story, 8 courtroom facility and relocation of 8 existing courtrooms to the new facility. This work also includes the demolition of the existing the 1959 jail. (capital project #201418 Secure Courtroom Construction.)

Step 2: This capital project would renovate the existing Courthouse building in a three-stage vertical segment approach to provide newly renovated facilities for all divisions, except the secure courtrooms addressed in step 1. Courthouse renovation will also include the installation of new state of the art mechanical, electrical, fire protection, window systems and new wall, floor and ceiling finishes in all renovated areas. This approach will not require temporary offsite relocation of Courthouse personnel.

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Project Title:	Courthouse Project Step 2 – Courthouse Renovation	Project #:	201705
Department:	Public Works - Buildings	Project Type:	Renovation/Upgrade
Phase:	Formation	Sponsor:	Public Works
Budget Action:	New	Manager:	Allison Bussler
Date:	August 31, 2016		

At this time, there are a number of factors that may impact the design and the construction costs of future courthouse modernization projects. These factors make it difficult to provide detailed cost estimates for these projects. In 2013, Zimmerman Architectural Studios estimated the full courthouse remodel to cost approximately $95 million (in 2019 dollars), including $36.4 million for step 1 (capital project #201418) and $58.6 million for step 2 (this project), after adjusting design/construction management and contingency factors to County standards. However, many factors could impact that estimate including, but not limited to, incorporating additional operations to the courthouse space, future economic conditions and the maturing of the design process.

Locations
Waukesha County Courthouse, 515 West Moreland Blvd., Waukesha, WI 53188.

Analysis of Need
The existing Courthouse building, constructed in 1959, remains structurally sound. Over the years, extensive remodeling has taken place to add additional courtrooms and reconfigure interior space. Public access to the building is now limited to the main entrance (door #2) where security screening takes place. Customer circulation has been identified for improvement, particularly the Courts area.

The existing Courthouse is in need of complete replacement of its mechanical, electrical, plumbing, fire protection and window systems. The need for these replacements will coincide with the completion of the Courts Building (step 1) and the vacating of 8 courtrooms in the existing Courthouse. The space left vacant by the courtrooms will be used in consideration with the consultant's recommendation for Step 2, as described previously in the Project Scope and Description.

At this time, there are a number of factors that may impact the design and the construction costs of future courthouse modernization projects. These factors make it difficult to provide detailed cost estimates for these projects. Those factors include but are not limited to: future economic conditions and the maturing of the design process for the remaining 3 stages of work that are part of step 2.

Alternatives
Continue to operate all County functions and services at their present location utilizing existing facilities, risking HVAC failure, and without gaining future HVAC, utility and staffing efficiencies.

Ongoing Operating Costs
Continue at the present energy consumption and maintenance required. The new project is expected to reduce energy costs given the opportunity to increase operational efficiency that state of the art equipment and windows provide.

Previous Action
- The Courthouse Study was completed in August, 2013.
- (Step 1) Approved as a new capital project in the 2014-2018 capital plan.
- (Step 1) 2015-2019 capital plan: approved as planned.
- (Step 1) 2016-2020 capital plan: approved as planned.

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Project Title:	UWW Roofing Upgrades	**Project #:**	201210
Department:	Public Works - Buildings	**Project Type:**	Roof Replacement
Phase:	Construction	**Sponsor:**	Public Works
Budget Action:	C - $ Update	**Manager:**	Allison Bussler, DPW Director
Date:	August 31, 2016		

CAPITAL BUDGET SUMMARY

Year	2012	2013	2014	2015	2016	2017	2018	Total
Project Phase	Design			Construction	Construciton		Construction	Project
Expenditure Budget	$67,000	$0	$0	$1,442,000	$700,000	$0	$1,000,000	$3,209,000
Revenue Budget	$0	$0	$0	$0	$0	$0	$0	$0
Net County Cost	$67,000	$0	$0	$1,442,000	$700,000	$0	$1,000,000	$3,209,000

COST DOCUMENTATION		**REVENUE**	
Architect	$67,000		
Construction	$2,852,000		
Contingency	$290,000		
Total Project Cost	$3,209,000	Total Revenue	$0
EXPENDITURE BUDGET	$3,209,000	**REVENUE BUDGET**	$0

Project Scope & Description

This project will repair and replace building envelope components on facilities at the University of Wisconsin–Waukesha (UWW) campus. The four main UWW campus facilities Northview/Library, Southview/Fine Arts, Commons/Administration/Westview and Fieldhouse are 50-years-old and constructed in 1966. The useful life of a roof ranges from 15 to 40 years depending on roof type. A 60 mil EPDM (rubber) roof usually lasts between 15 and 20 years. An asphalt ballasted roof has a useful life of 25 to 40 years. Extensive roof patching was undertaken in 2009 and tuck pointing completed in 2009 and 2010.

In the 2015-2019 capital plan, a portion of project funding originally planned for 2016 was delayed until 2018 to accommodate other priorities in the five-year capital plan. Funding remaining for 2015 and 2016 is budgeted to help ensure the roofs requiring more immediate attention are addressed in a timely manner. The roofs will continue to be monitored - and patched and repaired on an as needed basis. The 2016 bid results provided actual construction numbers for the 2018 project reducing the overall project cost by $1,000,000.

Location

UWW Campus, 1500 N. University Avenue, Waukesha, WI 53188

Analysis of Need

A February 2009 roofing survey was completed on UWW facilities indicated that significant roofing upgrades are required to maintain the integrity of the roofs.

Alternatives

Continue to patch the roof as leaks occur.

Ongoing Operating Costs

Operating costs will be reduced for labor and materials associated with repairing leaks and associated damages.

Previous Action

- 2012-2016 capital plan: approved as a new project
- 2013-2017 capital plan: delay
- 2014-2018 capital plan: approved as planned
- 2015-2019 capital plan: cost update, delay
- 2016-2020 capital plan: as planned

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Project Title:	CTH Q. Oconomowoc River Bridge	**Project #:**	201201
Department:	Public Works - Highways	**Project Type:**	Bridge
Phase:	Preliminary Design	**Road Name:**	County Line Road
Budget Action:	As Planned	**Manager:**	Allison Bussler, DPW Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2016	2017	2018	Total
Project Phase	Design	Right of Way	Construction	Project
Expenditure Budget	$119,000	$22,000	$112,000	$253,000
Revenue Budget	$0	$0	$0	$0
Net County Cost	$119,000	$22,000	$112,000	$253,000

COST DOCUMENTATION		**REVENUE**	
Design	$97,000	Federal Bridge Aid (Anticipated)	$450,000
State Review for Design	$22,000		
Land Acquisition	$22,000		
Construction	$472,000		
Construction Management	$66,000		
Contingency	$24,000		
Total Project Cost	$703,000	Total Revenue	$450,000
EXPENDITURE BUDGET	$253,000	**REVENUE BUDGET**	$0

Project Scope & Description

This project is a replacement of the CTH Q bridge over the Oconomowoc River. A single span slab bridge is anticipated, but various structure types will be investigated. The roadway will remain two lanes over the bridge and will be constructed to current standards. The roadway profile will likely need to be raised in elevation at the bridge to provide adequate navigational clearance. This will require reconstruction of additional approach roadway to match the profile. Right of way was purchased to the ultimate width of 100 feet in the 1960's for most of the expected project limits. Additional right of way and easements will be acquired as needed. Federal bridge aid is anticipated to be used on this project and at 80% of construction phase is estimated at $450,000.

Location

Towns of Merton and Erin

Analysis of Need

The existing bridge (P-67-0078) is a single-span steel deck girder structure constructed in 1925. The concrete deck was replaced and widened in 1981. The deck is in fair condition, though the deck edges are now spalling. The girder paint system has failed and girders have deteriorated with the loss of section near the abutments and on the outermost girders. The abutments are deteriorating with areas of delamination and spalling. The bridge is considered both "structurally deficient" and "functionally obsolete". The structure sufficiency number is 35.9, which indicates that structure replacement is warranted according to WisDOT guidelines and makes the bridge eligible for federal bridge replacement funding with a sufficiency below 50. The 2013 traffic volume on this roadway segment was 3,120 vehicles per day.

Alternatives

Rehabilitation, which does not address all structural and geometric deficiencies.

Ongoing Operating Costs

Maintenance costs will be reduced in the early years after construction beyond 2018.

Previous Action

- Approved as a new project in the 2012-2016 capital plan.
- Approved as planned in the 2013-2017 capital plan.
- Approved with a cost update in the 2014-2018 capital plan.
- Approved as planned in the 2015-2019 and 2016-2020 capital plans.

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Project Title:	CTH YY, Underwood Creek Structure	**Project #:**	201302
Department:	Public Works - Highways	**Project Type:**	Bridge
Phase:	Preliminary Design	**Road Name:**	Pilgrim Road
Budget Action:	As Planned	**Manager:**	Allison Bussler, DPW Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2017	2018	2019	Total
Project Phase	Design	Land	Construction	Project
Expenditure Budget	$170,000	$179,000	$1,017,000	$1,366,000
Revenue Budget	$0	$0	$0	$0
Net County Cost	$170,000	$179,000	$1,017,000	$1,366,000

COST DOCUMENTATION		**REVENUE**	
			$0
Design	$170,000		
Land Acquisition	$179,000		
Construction	$877,000		
Construction Management	$105,000		
Contingency	$35,000		
Total Project Cost	$1,366,000	Total Revenue	$0
EXPENDITURE BUDGET	$1,366,000	**REVENUE BUDGET**	$0

Project Scope & Description

This project is a replacement of the CTH YY structure over Underwood Creek. The roadway will remain two lanes over the structure but the substandard shoulder width will be improved to current standards. The project is not straight-forward due to a number of site constraints which include: Underwood Creek runs parallel to the highway for 300 feet; site is adjacent to a city park (Wirth Park); structure is in close proximity to a public street and park entrance; project site is near a railroad crossing, school, and cemetery. The 2035 Regional Transportation Plan calls for CTH YY to become a 4-lane facility. Design of the project will include study of various alignments of future 4-lane expansion to determine best location for a 2-lane bridge. Various structure types will be considered. The project may require stream relocation, bridge site relocation, park entrance relocation, an additional stream crossing structure at park entrance, relocation of an existing pedestrian bridge, removal of existing retaining wall, and changes to roadway vertical alignment. Right-of-way acquisition to the ultimate width of 120 feet is required. Significant additional easements are anticipated.

Location

City of Brookfield

Analysis of Need

The existing structure is a single-span, concrete slab that spans approximately 18 feet. Also, the structure was widened to its current width using pre-stressed girders. Dates of initial construction and widening are unknown. The roadway and bridge transferred from City of Brookfield to county jurisdiction in 2006. The abutments and superstructure are in poor condition, per the 2012 structure inspection report. The roadway over the structure is narrow, with minimal shoulders. Structure replacement is recommended. The structure has a span of 18 feet and is not classified as a bridge per Federal Highway Administration (FHWA) standards, and therefore is not eligible for federal bridge aid. Traffic volume on CTH YY in 2015 was 13,175 vehicles per day.

Alternatives

Rehabilitate the existing bridge, which does not address all structural and geometric deficiencies.

Ongoing Operating Costs

Initial maintenance costs may be reduced.

Previous Action

- Approved as a new project in the 2013-2017 capital plan.
- Approved as planned in the 2014-2018 and 2015-2019 capital plans.
- Approved as planned in the 2016-2020 capital plan.

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Project Title:	CTH Y, Pilak Creek Tributary Bridge Rplc	**Project #:**	201304
Department:	Public Works - Highways	**Project Type:**	Bridge
Phase:	Preliminary Design	**Road Name:**	Racine Avenue
Budget Action:	As Planned	**Manager:**	Allison Bussler, DPW Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2017	2018	2019	Total
Project Phase	Design	Land	Construction	Project
Expenditure Budget	$90,000	$24,000	$520,000	$634,000
Revenue Budget	$0	$0	$0	$0
Net County Cost	$90,000	$24,000	$520,000	$634,000

COST DOCUMENTATION		**REVENUE**	
			$0
Design	$90,000		
Land Acquisition	$24,000		
Construction	$448,000		
Construction Management	$18,000		
Contingency	$54,000		
Total Project Cost	$634,000	Total Revenue	$0
EXPENDITURE BUDGET	$634,000	**REVENUE BUDGET**	$0

Project Scope & Description

This project is a replacement of the CTH Y structure over an un-named tributary to Pilak Creek. The roadway will remain a two lane rural section over the structure. Various structure types will be considered. The City of Muskego is planning a bicycle facility along the west side of the highway. Accommodation of the bicycle facilities may require additional culvert length, as well as some land acquisition. Additional acquisition of easements may be required to construct this project.

Location

City of Muskego

Analysis of Need

The existing structure is a two-barrel corrugated steel plate arch. The structure was initially constructed in 1968 with a single barrel (84”x61”). A second barrel (103”x71”) was added in 1989. Both barrels are rusted through near the water line. The existing two-lane roadway over the structure has adequate shoulder width, and is consistent with the 2035 Regional Transportation Plan. The structure is not a bridge, as defined by Federal Highway Administration standards, and therefore is not eligible for federal bridge aid. The 2014 traffic volume on CTH Y was 11,517 vehicles per day.

Alternatives

Rehabilitate the existing structure, which is likely not cost effective.

Ongoing Operating Costs

Initial maintenance costs may be reduced.

Previous Action

- Approved as a new project in the 2013-2017 capital plan.
- Approved as planned in the 2014-2018 and the 2015-2019 capital plans.
- Approved as planned in the 2016-2020 capital plan.

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Project Title:	CTH I, Fox River Bridge	**Project #:**	201601
Department:	Public Works - Highways	**Project Type:**	Bridge
Phase:	Preliminary Design	**Road Name:**	River Road
Budget Action:	As Planned	**Manager:**	Allison Bussler, DPW Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2016	2017-19	2020	2021	Total
Project Phase	Concept	Budget	Design	Construction	Project
Expenditure Budget	$6,000	$0	$79,000	$96,000	$181,000
Revenue Budget	$0	$0	$0	$0	$0
Net County Cost	$6,000	$0	$79,000	$96,000	$181,000

COST DOCUMENTATION		**REVENUE**	
Budget/concept	$6,000	Federal Bridge Aid	$384,000
Design	$57,000		
State review for Design	$22,000		
Land Acquisition	$0		
Construction	$403,000		
Construction Management	$57,000		
Contingency	$20,000		
Total Project Cost	$565,000	Total Revenue	$384,000
EXPENDITURE BUDGET	$181,000	**REVENUE BUDGET**	$0

Project Scope & Description

This project is a rehabilitation of the CTH I bridge over the Fox River and is expected to include concrete deck replacement. In addition, the scope is expected to include railing replacement, approach paving, approach guardrail replacement, repair of riprap slope paving, and painting of the pier columns. The roadway will remain two lanes over the bridge. Right of way acquisition is not anticipated. The Waukesha County Bicycle Plan shows a proposed trail along the Fox River at the site of this project. This project does not include bridge widening for purpose of bicycle trail. Roadway shoulders over the bridge will accommodate bicycles. A bridge rehabilitation report will be necessary to verify the cost effectiveness of the proposed rehabilitation scope. Following WisDOT approval of the rehabilitation report, Waukesha County will apply for an estimated $384,000 in federal bridge aid.

Location

Town of Waukesha

Analysis of Need

The existing bridge (B-67-097) is a two-span, pre-stressed concrete girder structure that was constructed in 1965. A concrete overlay was placed on the deck in 1996. The substructure and girders are generally in good condition. The bridge is considered “structurally deficient” due to the condition of the deck. The deck edges and soffit underside are spalling. A thermal infrared scan of the wearing surface in 2014 indicates the concrete overlay is 22% delaminated. The riprap slope paving beneath the bridge has missing stone, and should be repaired. The paint system is in poor condition on the cast-in-place pier columns. The structure sufficiency number is 76.2, which indicates that structure rehabilitation is warranted according to WisDOT guidelines and makes the bridge eligible for federal bridge funding (rehabilitation) with a sufficiency below 80. The 2013 traffic volume on this roadway segment was 2,325 vehicles per day

Alternatives

Reconstruct the existing bridge, but will not be eligible for federal bridge aid.

Ongoing Operating Costs

Maintenance costs will be reduced in the early years after construction beyond 2021.

Previous Action

- New project in the 2016-2020 capital plan.

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Project Title:	CTH O & I Intersection Reconstruction	**Project #:**	201603
Department:	Public Works - Highways	**Project Type:**	Rehabilitation
Phase:	Preliminary Design	**Road Name:**	Moorland Road
Budget Action:	As Planned	**Manager:**	Allison Bussler, DPW Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2016	2017	2018	2019	2020	Total
Program Project		Design	Land Aquis	Const.		Project
Expenditure Budget	$0	$45,000	$50,000	$414,000	$0	$509,000
Revenue Budget	$0	$0	$0	$125,500	$0	$125,500
Net County Cost	$0	$45,000	$50,000	$288,500	$0	$383,500

COST DOCUMENTATION		**REVENUE**	
Design	$193,000	Surface Transportation	
WisDOT Design Review	$30,000	Program - Milwaukee (STP - M)	$1,840,000
Land Acquisition	$50,000		
Construction	$1,806,000	Developer Agreement 1 - Budgeted	$63,000
Construction Mgmt	$180,000	Developer Agreement 2 - Budgeted	$62,500
Contingency	$90,000		
Total Project Cost	$2,349,000	Total Revenue	$1,965,500
EXPENDITURE BUDGET	**$509,000**	**REVENUE BUDGET**	**$125,500**

Project Scope & Description

This project involves improvements to the intersection at Moorland Road and Beloit Road. Left turn lanes on Moorland Road will be turned into double left turn lanes; right turn islands will be added; Beloit Road will be restriped to provide two lanes in each direction; failing pavement on Moorland Road will be replaced; and traffic signals will be upgraded.

Proposed developments in the area have indicated the need for a number of incremental improvements at this intersection to meet their needs. Additionally, pavement conditions and future background growth have identified further deficiencies at this location. However, due to the proximity of I-43, it has been determined that a single project funded with developer, county and federal funding would disrupt traffic patterns less and cause less potential safety problems than a series of small incremental projects. The project has been approved for $1,840,000 in federal STP-M revenues.

Location

City of New Berlin

Analysis of Need

This intersection controls traffic on two heavily used roadways, Moorland Road and Beloit Road, and is a major gateway to New Berlin from I-43. Recent traffic impact studies conducted for developments in the area have shown that the intersection operates at a low level of service and that relatively small increases in traffic are having a large impact on the intersection operations. As more developments occur in the area, background traffic will grow. The existing intersection capacity is insufficient to meet the current and future traffic volumes and turning movements. Also, while the roadway was last rehabilitated in 2006, the latest Pavement Condition Index (PCI) for this segment is 45, the concrete pavement on Moorland Road is in poor condition and should be replaced. Traffic volumes within this segment of Moorland Road are currently 31,000 vehicles per day.

Alternatives

- Reconstruct the intersection to provide necessary additional capacity.
- Reconsider project in a future capital plan.

Ongoing Operating Costs

Minor operational cost increase due to increased size and number of turn lanes.

Previous Action

Project approved as new in 2016-2020 capital plan

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Project Title:	CTH D, Moraine Hills Drive Intersection	**Project #:**	201613
Department:	Public Works - Highways	**Project Type:**	Spot Improvement
Phase:	Formation	**Road Name:**	CTH D
Budget Action:	As Planned	**Manager:**	Allison Bussler, DPW Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2019	2020	2021	Total
Project Phase	Design	Land Acquis	Construction	Project
Expenditure Budget	$62,000	$365,000	$683,000	$1,110,000
Revenue Budget	$0	$0	$0	$0
Net County Cost	$62,000	$365,000	$683,000	$1,110,000

COST DOCUMENTATION		REVENUE	
Design	$62,000		
Land Acquisition	$365,000		
Construction	$594,000		
Construction Management	$59,000		
Contingency	$30,000		
Total Project Cost	$1,110,000	Total Revenue	$0
EXPENDITURE BUDGET	$1,110,000	**REVENUE BUDGET**	$0

Project Scope & Description

The purpose of this proposed project is to correct the safety problems along the curved segment of CTH D at Moraine Drive. Proposed improvements addressing the conditions described above and other existing potential hazards include:

1. Realign approximately 1,200 feet of CTH D with one gradual horizontal curve.
2. Widen the CTH D lane widths from 11' to 12', add shoulders that are 8 feet wide of which 3 feet are paved and the rest gravel and clear zones along this curve. Add pavement safety edges.
3. Improve clear zones to proper standards.
4. Add center line and shoulder rumble strip pavement markings to alert motorists approaching and driving through this curved highway segment.

Location

Town of Ottawa

Analysis of Need

A sharp horizontal curve at the intersection of CTH D and Moraine Hills Drive has been the site of a number of run off the road crashes. Not only is the curve at Moraine Hills Drive substandard but the approach alignments are such that in combination with the curve they form reverse curves as drivers approach the location. This combined with a relatively steep grade has been the cause of crashes. The crash rate for this location is 1.8 crashes per million vehicles entering, which includes one fatality. This rate is above the limit of 1.5 crashes per million vehicles entering above which action is recommended.

Alternatives

Improved signing and marking may reduce the crash rate but are not as effective as improving the roadway geometry per the recommended scope.

Ongoing Operating Costs

None

Previous Action

Approved as a new project in the 2016 - 2020 Capital Plan

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Project Title:	CTH E, Woodland Drive Intersection	**Project #:**	201614
Department:	Public Works - Highways	**Project Type:**	Spot Improvement
Phase:	Formation	**Road Name:**	CTH E
Budget Action:	As Planned	**Manager:**	Allison Bussler, Director DPW
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2020	2021	2022	Total
Project Phase	Design	Land Acquis.	Construction	Project
Expenditure Budget	$75,000	$116,000	$844,000	$1,035,000
Revenue Budget	$0	$0	$0	$0
Net County Cost	$75,000	$116,000	$844,000	$1,035,000

COST DOCUMENTATION		REVENUE	
Design	$75,000		
Land Acquisition	$116,000		
Construction	$734,000		
Construction Management	$73,000		
Contingency	$37,000		
Total Project Cost	$1,035,000	Total Revenue	$0
EXPENDITURE BUDGET	$1,035,000	**REVENUE BUDGET**	$0

Project Scope & Description

The purpose of this proposed project is to correct the safety problems along the curved segment of CTH E at Woodland Drive. Proposed improvements addressing the conditions described above and other existing potential hazards include:

1. Realign approximately 1,500 feet of CTH E with one gradual horizontal curve.
2. Widen the CTH E lane widths from 11' to 12', add shoulders that are 8 feet wide of which 3 feet are paved and the rest gravel and clear zones along this curve. Add pavement safety edges.
3. Improve clear zones to proper standards.
4. Add center line and shoulder rumble strip pavement markings to alert motorists approaching and driving through this curved highway segment.

Location

Town of Merton

Analysis of Need

A sharp horizontal curve at the intersection of CTH E just south of Woodland Drive has been the site of a number of run off the road crashes. Not only is the curve substandard, but on the north bound approach, there is also a sharp crest just to the south of its location, which limits drivers' sight distance. In combination with the horizontal curve, this causes an unsafe situation. The crash rate for this location is 1.433 crashes per million vehicles entering, which includes one fatality.

Alternatives

Improved signing and marking may reduce the crash rate but are not as effective as improving the roadway geometry per the recommended scope.

Ongoing Operating Costs

None

Previous Action

Approved as new project in 2016-2020 capital plan

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Project Title:	Waukesha West Bypass	**Project #:**	200917
Department:	Public Works - Highways	**Project Type:**	Jurisdictional Plan Implementation
Phase:	Construction	**Road Name:**	Meadowbrook Road/Merrill Hills Road
Budget Action:	Delay, C - $ Update	**Manager:**	Allison Bussler, DPW Director
Date:	August 30, 2016		

CAPITAL BUDGET SUMMARY

Year	2009	2010	2011	2012	2013	2016*	2017	Total
Project Phase	Design	Design	Right of Way	Right of Way	Construction	Construction	Construction	Project
Expenditure Budget	$250,000	$1,750,000	$2,000,000	$3,600,000	$1,220,000	$2,137,000	$660,000	$11,617,000
Revenue Budget*	$250,000	$0	$1,400,000	$3,600,000	$0	$200,000	$0	$5,450,000
Net County Cost	$0	$1,750,000	$600,000	$0	$1,220,000	$1,937,000	$660,000	$6,167,000

COST DOCUMENTATION		**REVENUE**	
Design	$3,382,000	Surface Transportation Program (STP)- (not budgeted)	$3,200,000
Land Acquisition	$5,600,000	STP - (Right of Way Acq.) budgeted State ROW reimbursement	$2,600,000 (State 100%)
Construction	$5,080,000	STP - (Right of Way Acq.) budgeted	$2,400,000
Construction Management	$508,000	County ROW reimbursement	(Cty 80%)
Contingency	$247,000	Capital project fund balance	$250,000
		WisDOT Reimbursement*	$200,000
Total Project Cost	$14,817,000	Total Revenue	$5,450,000
EXPENDITURE BUDGET	$11,617,000	**REVENUE BUDGET**	$5,250,000

*The County was notified that it will not be provided $200,000 by the Wisconsin Department of Transportation, which was budgeted in 2016 to cover the cost of designing the intersection of USH 18 and the Waukesha West Bypass. As a result, related expenditure appropriations of $200,000 will be decreased at year-end 2016.

Project Scope & Description

Waukesha County has signed a memorandum of understanding (MOU) with the Wisconsin Department of Transportation (WisDOT) and City of Waukesha for completion of the West Waukesha Bypass, which clearly defines each party's responsibility for the completion of the corridor.

Under the terms of the MOU, Waukesha County is responsible for the completion of the environmental Impact Statement (EIS) and the preliminary design for the entire corridor. This capital project will complete the preliminary design for the West Waukesha Bypass from STH 59 to I-94, real estate acquisition for the entire corridor south of Northview Road and the final design and construction of the West Bypass from USH 18 to Northview Rd. The roadway will be designed as a 4 lane facility.

The MOU further states that the City of Waukesha will construct the portion north of Northview Road. The Wisconsin Department of Transportation will construct the bypass between STH 59 and USH 18 and contribute toward the cost of real estate. Waukesha County will be responsible for real estate acquisition south of Northview Road up to the cost of $3 million (offset with 80% Federal funding) and the State of Wisconsin will reimburse the County for up to an additional $2.6 million for total land acquisition costs of $5.6 million. Waukesha County will also be responsible for the construction of the new roadway between USH 18 and Northview Road

As the Bypass will become a State Trunk Highway, a jurisdictional transfer agreement has been signed with WisDOT. STH 74 between STH 190 in Pewaukee and Menomonee Avenue in Lannon will be transferred to Waukesha County. CTH TT, Sunset to Northview and the new highway goes to the State jurisdiction.

Final design and real estate acquisition is now complete for the portion of the project from USH to Northview. Construction was due to begin in 2016 but was delayed due to difficulties in obtaining US Army Corps of Engineers permits. Construction for Waukesha County's portion of the project is now scheduled for 2017 and for the WisDOT portion of the project in 2018. Cost increases of $660,000 reflect inflation, higher costs for traffic control, and redesign costs related to the area around Sunset drive to completely avoid a fen. Avoidance of this fen saved significant cost for fen and upland mitigation (which would have been included in this cost update) and provided the impetus for Corps of Engineers to proceed with issuing permits.

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Project Title:	Waukesha West Bypass	**Project #:**	200917
Department:	Public Works - Highways	**Project Type:**	Jurisdictional Plan Implementation
Phase:	Construction	**Road Name:**	Meadowbrook Road/Merrill Hills Road
Budget Action:	Delay, C - $ Update	**Manager:**	Allison Bussler, DPW Director
Date:	August 30, 2016		

Location
City and Town of Waukesha

Analysis of Need
The St. Paul Avenue-Sunset Drive-Merrill Hills Road corridor is a two-lane roadway that has been acting as a de facto West Waukesha Bypass since the portion of CTH TT between USH 18 and Northview Road was opened in 1997. New development has occurred adjacent to CTH TT as well as the areas west and south of the corridor with traffic volumes along CTH TT north of USH 18 over 16,000 vehicles per day and approximately 12,000 vehicles per day south of USH 18 and along Sunset. Traffic volumes along St. Paul Avenue are over 20,000 vehicles per day. Typically, roadways are widened to four-lanes once traffic volumes reach 13,000 vehicles per day. From 2006 through 2008, there have been 145 crashes along the bypass route between Northview and STH 59 resulting in 56 injuries. Additionally, Merrill Hills Road has substandard vertical and horizontal alignment, shoulder widths are narrow and most intersections lack bypass lanes. Although development has slowed along the corridor, growth in the area continues at a slower pace. This continued growth and the projected use of the road for I-94 traffic relief for those going south will add further pressure to the existing under-capacity, substandard route, and if the roadway is not improved, will cause an increase in the rate of accidents and congestion.

Alternatives
Rehabilitate CTH TT, which may address some of the geometric needs of the roadway, but does not meet the long term capacity requirements of the corridor.

Ongoing Operating Costs
Waukesha County will lose 3.4 miles of two-lane highway but gain 4.9 miles of two-lane roadway and 3.6 miles of four-lane road, a net gain of 17.4 lane miles. The total annual operating cost increase is estimated at $114,000. Potential revenue offsets include about $22,000 in state revenue associated with more miles in the overall CTH system to maintain. Additional lane miles from this project may qualify for federal funding for future capital projects as needed. These estimates are based on full implementation of jurisdictional transfers that are expected to take place over multiple years.

Previous Action
Project 200009, widen CTH TT between USH 18 and Northview was approved in previous budgets but was removed from the 2009 capital plan pending negotiations with the State of Wisconsin and the City of Waukesha. This project for the construction of the entire Waukesha West Bypass includes project 200009. Approved as a new project by ordinance in 2009 in conjunction with approval of memorandum of understanding. Project expenditures have been modified for cost update in the 2011-2015 Plan. Approved with cost and revenue updates in the 2012-2016 capital plan. Approved with cost updates in 2013-2017 capital plan. Approved with cost updates in 2015-2019 capital plan. Approved with cost, revenue and scope updates in 2016-2020 capital plan.

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Project Title:	CTH I, CTH ES To CTH O Rehab	**Project #:**	201005
Department:	Public Works - Highways	**Project Type:**	Rehabilitation
Phase:	Preliminary Design	**Road Name:**	Beloit Road
Budget Action:	C - $ Update	**Manager:**	Allison Bussler, DPW Director
Date:	August 12, 2016		

Year	2015	2016	2017	2018	Total
Project Phase	Design	Land	Construction	Construction	Project
Expenditure Budget	$353,000	$1,164,000	$381,000	$0	$1,898,000
Revenue Budget	$0	$0	$0	$0	$0
Net County Cost	$353,000	$1,164,000	$381,000	$0	$1,898,000

COST DOCUMENTATION		**REVENUE**	
Design	$293,000	Surface Transportation Program -	$2,726,000
WisDOT Plan Review	$60,000		
Land Acquisition	$864,000		
Construction	$2,989,000		
Construction Management	$299,000		
Contingency	$119,000		
Total Project Cost	$4,624,000	Total Revenue	$2,726,000
EXPENDITURE BUDGET	$1,898,000	**REVENUE BUDGET**	$0

Project Scope & Description

This 1.8-mile long project involves the two-lane rehabilitation/reconstruction of CTH I to bring it up to current standards. Improvements may include: widening the roadway, shoulders and clear zone areas, regrading the ditches and drainage areas, and improving the side road intersections. This project will also improve the horizontal and vertical alignment east of Calhoun Road. The road base and surface will be crushed and re-laid with a new surface on the top. Land acquisition costs are reduced due to a reduction in right of way width from 100 feet to 80 feet between CTH ES and Calhoun Road.

Location

City of New Berlin

Analysis of Need

The roadway vertical and horizontal alignments are substandard. Additionally, many of the side ditches, shoulders, and clear zones are below current standards. This segment of highway also has a high accident rate. The eastern portion is quickly becoming developed and traffic on CTH I is increasing due to a new Children's Hospital facility and retail development which is being constructed at the corner of Moorland Road and CTH I. Other development is planned between Calhoun Road and Moorland Road. The 2012 traffic volume is 4,950 vehicles per day.

Alternatives

Re-pave CTH I. While addressing the pavement condition, this alternate will not address shoulder, drainage, and alignment issues that exist along CTH I.

Ongoing Operating Costs

Operating costs are not expected to change.

Previous Action

- 2011-2015 capital plan: approved as a new project.
- 2012-2016 capital plan: project approved as planned.
- 2013-2017, 2014-2018, 2015-2019, 2016-2020 Capital Plans: project approved as planned

Project Title:	CTH M, Calhoun Road to East County Line	**Project #:**	201008
Department:	Public Works - Highways	**Project Type:**	Priority Corridor
Phase:	Preliminary Design	**Road Name:**	North Avenue
Budget Action:	Delay, C-Scope, $ & Rev Update	**Manager:**	Allison Bussler, DPW Director
Date:	August 31, 2016		

Year	2015	2016	2017	2020	2021	Total
Project Phase	Design	Design/Land	Land	Const	Const	Project
Expenditure Budget	$1,098,000	$1,524,000	$2,132,000	$3,642,000	$1,300,000	$9,696,000
Revenue Budget	$0	$0	$0	$445,000	$0	$445,000
Net County Cost	$1,098,000	$1,524,000	$2,132,000	$3,197,000	$1,300,000	$9,251,000

COST DOCUMENTATION		**REVENUE**	
Design	$1,769,000	Federal Surface Transportation	$16,110,000
WisDOT Design Review	$362,000	Program - STP Funding	
Land Acquisition	$3,200,000	(Per State Municipal Agreements)	
Construction	$17,831,000		
Construction Management	$1,752,000	Local Municipality	$445,000
Contingency	$892,000		
Total Project Cost	$25,806,000	Total Revenue	$16,555,000
EXPENDITURE BUDGET	$9,696,000	**REVENUE BUDGET**	$445,000

Project Scope & Description

This project involves the reconstruction and widening of about 3.0 miles of CTH M (North Avenue) from Calhoun Road to 124th Street to four lanes and the replacement of a bridge over Underwood Creek. The use of a median or a two-way left turn lane to provide for left turn movements will be evaluated during the design phase of this project. The roadway alignment will stay at its present location. Land will be acquired to a distance of 60 feet from the roadway centerline and additional grading easements and vision corners as may be required.

Due to some anticipated high construction costs at or near Pilgrim Road, this project has been combined with project 201202 (CTH M, Calhoun Road to CTH YY) to form a single project to construct CTH M from Calhoun Rd to 124th St. To keep approved federal funding, the Wisconsin Department of Transportation needed to move all construction funding to 2020-21.

Total project costs remain approximately the same. Land acquisition costs are reduced about $1.3 million because less land will need to be acquired from the roadway center line (60 feet instead of 65 feet) than originally anticipated. Cost savings are offset by cost increases for anticipated inflation associated with moving construction work to 2020-21 and additional design cost for traffic studies and WisDOT review fees.

However, total net County costs (after applying revenues) decrease by about $780,000 due to an increase in estimated federal funding ($625,000), which was approved in two state municipal agreements, and capped at $16,110,000. In addition, approximately $445,000 of revenue from the City of Brookfield and Elm Grove is anticipated as the local share for sidewalks and other amenities, an increase of $155,000.

Location

City of Brookfield, Village of Elm Grove

Analysis of Need

CTH M or North Avenue has been identified as a priority corridor for widening to four lanes by the Department of Public Works. This portion of CTH M is shown as a four-lane roadway in the 2035 SEWRPC Jurisdictional Highway Plans for Waukesha County. Traffic volumes recorded in 2011 along this portion of CTH M range from approximately 14,400 vehicles per day (VPD) at Calhoun Road to 20,400 VPD at 124th Street. These volumes indicate that the existing two-lane roadway is beyond its operating capacity, and is in need of widening.

Alternatives

- Rehabilitate CTH M: This alternate will address pavement issues but will not provide the required level of Service or capacity warranted by traffic volumes, or improve ingress to the highway.
- Reconstruct CTH M to provide necessary additional capacity.

Ongoing Operating Costs

Operating costs are expected to increase by approximately $42,500 per annum for the additional lane miles after the 2020 construction phase is completed.

Previous Action

2010 -2014 capital plan: approved as a new project. 2011-2015, 2012-2016, 2013-2017, 2014-2018, 2016-2020 capital plans: approved with a cost update. 2014-2018, 2015-2019 capital plans: approved as planned.

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TRANSFERRED TO PROJECT #201008, DELETE THIS PROJECT #201202			
Project Title:	CTH M, Calhoun Rd – CTH YY	**Project #:**	201202
Department:	Public Works - Highways	**Project Type:**	Priority Corridor
Phase:	Preliminary Design	**Road Name:**	North Avenue
Budget Action:	Transferred to Project #201008, Delete	**Manager:**	Allison Bussler, DPW Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2016	2017	2018	2019	2020	Total
Project Phase	Design	Design/Land	Land	Construction		Project
Expenditure Budget	$324,000	$1,732,000	$0	$1,309,000	$0	$3,365,000
Revenue Budget	$0	$0	$0	$90,000	$0	$90,000
Net County Cost	$324,000	$1,732,000	$0	$1,219,000	$0	$3,275,000

COST DOCUMENTATION		REVENUE	
Design	$228,000	STP - M	$4,878,000
WisDOT Design Review	$96,000		
Land Acquisition	$1,732,000	City of Brookfield	$90,000
Construction	$5,406,000		
Construction Management	$511,000		
Contingency	$270,000		
Total Project Cost	$8,243,000	Total Revenue	$4,968,000
EXPENDITURE BUDGET	$3,365,000	**REVENUE BUDGET**	$90,000

Project Scope & Description

This project involves the reconstruction and expansion of approximately one mile of CTH M (North Avenue) from Calhoun Road to CTH YY (Pilgrim Road) to four lanes. The use of a median or a two-way left turn lane will be evaluated during the design phase of the project. The roadway alignment will stay at its present location. Land will be acquired to a distance of 60 feet from the roadway centerline with additional easements and vision corners as may be required. Federal aid of $4,878,000 and local funds of $90,000 are anticipated to be used on this project. Local funds are to be included to pay for sidewalks and additional amenities as requested by the City.

Location

City of Brookfield

Analysis of Need

CTH M or North Avenue has been identified as a priority corridor for widening to four lanes by the Department of Public Works. This portion of CTH M is shown as a four-lane roadway in the 2035 SEWRPC Jurisdictional Highway Plans for Waukesha County. Traffic volumes recorded in 2011 along this portion of CTH M are approximately 14,400 vehicles per day (VPD). These volumes indicate that the existing two-lane roadway is beyond the operating capacity, and is in need of widening.

Alternatives

- Rehabilitate CTH M: This alternate will address pavement issues but will not provide the capacity warranted by traffic volumes, or improve ingress to the highway.
- Reconstruct CTH M as described above.

Ongoing Operating Costs

Operating costs are expected to increase by approximately $13,700 per annum for the additional lane miles, after the planned 2019 construction is completed.

Previous Action

Approved as a new project in 2012-2016 plan
Approved with cost update in 2013-2017, 2014-2018, 2015-2019 plans
Delayed in 2015-2019 plan
Approved with a cost update in the 2016-2020 plan

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Project Title:	CTH XX, Pebble Brook Creek Bridge	**Project #:**	201402
Department:	Public Works - Highways	**Project Type:**	Bridge
Phase:	Preliminary Design	**Road Name:**	Oakdale Drive
Budget Action:	Delay	**Manager:**	Allison Bussler, DPW Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2014	2015-18	2019	2020	2021	Total
Project Phase	Concept		Design	R/W	Construction	Project
Expenditure Budget	$5,000	$0	$55,000	$11,000	$47,000	$118,000
Revenue Budget	$0	$0	$0	$0	$0	$0
Net County Cost	$5,000	$0	$55,000	$11,000	$47,000	$118,000

COST DOCUMENTATION		**REVENUE**	
Budget/Concept	$5,000	Federal Bridge Aid	$188,000
Design	$40,000	(Anticipated)	
State Review For Design	$15,000		
Land Acquisition	$11,000		
Construction	$184,000		
Construction Management	$42,000		
Contingency	$9,000		
Total Project Cost	$306,000	Total Revenue	$188,000
EXPENDITURE BUDGET	$118,000	**REVENUE BUDGET**	$0

Project Scope & Description

This project is an overlay of the CTH XX bridge over Pebble Brook Creek. A concrete overlay is anticipated, but several overlay types will be considered during design. Concrete repairs will be made to the spalled areas of the deck edges. Existing bridge railing may be salvaged/remounted or completely replaced with this project. Approach guardrail will be replaced to meet current standards. The asphalt bridge approaches will be repaved, and concrete approach slabs will be added at the structure. Right of way was purchased to the ultimate width of 100 feet at this bridge in the 1970's. No additional fee acquisition is anticipated. Some easements may be necessary due to the proximity to railroad right of way. The draft rehabilitation report indicates that construction costs should be $184,000, plus construction management and contingency. Federal bridge aid is anticipated to be used, and at 80% of construction phase, is estimated at $188,000. This project is delayed because the project was not approved for federal funding for the 2015 application. Waukesha County will again make application for funding in 2017.

Location - Town of Waukesha

Analysis of Need

The existing bridge (B-67-195) is a two-span concrete box culvert that was constructed in 1980. The roof of the box culvert serves as the roadway driving surface. Most of the box culvert is in good condition. However, approximately 5% of the top deck surface is delaminated, and some concrete is beginning to spall. The delamination is due to corrosion of the top mat of bar steel. This bar steel is not epoxy coated. There is also spalling of concrete along both edges of the deck (roof) at the drip edge. The approach guardrail is in poor condition and does not meet current standards. The roadway is functionally classified as a 'Principal Arterial'. The bridge is considered 'structurally deficient' due to its current condition rating. The structure sufficiency number is 51.1. This indicates that structure rehabilitation is warranted according to WisDOT guidelines which makes the bridge eligible for federal bridge rehabilitation funding when the sufficiency index is below 80. An independent engineering study report will need to be prepared for this project prior to application for federal bridge funding. This report verifies that the proposed project scope is a cost-effective rehabilitation strategy. The 2013 traffic volume on this roadway segment was 5,510 vehicles per day.

Alternatives

Reconstruct the existing bridge and roadway approaches to current WisDOT standards. This alternate, while addressing the deficiencies, is not warranted.

Ongoing Operating Costs

Maintenance costs will be reduced in the early years after construction beyond 2018.

Previous Action

- Approved as a new project in the 2014-2018 capital plan.
- Approved as planned in the 2015-2019 capital plan.
- Approved with Delay/Cost Update in the 2016-2020 capital plan.

Project Title:	CTH O, I-94 to USH 18	**Project #:**	201502
Department:	Public Works - Highways	**Project Type:**	Rehabilitation
Phase:	Formation	**Road Name:**	Moorland Road
Budget Action:	C - Rev Update	**Manager:**	Allison Bussler, DPW Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2019	2020	2021	2022	Total
Project Phase	Design	Land	Construction	Construction	Project
Expenditure Budget	$100,000	$500,000	$1,150,000	$0	$1,750,000
Revenue Budget	$0	$0	$0	$0	$0
Net County Cost	$100,000	$500,000	$1,150,000	$0	$1,750,000

COST DOCUMENTATION		**REVENUE**	
Design	$400,000	Surface Transportation Program - Milwaukee	$5,000,000
WisDOT Plan Review	$100,000		
Land Acquisition	$500,000		
Construction	$5,000,000		
Construction Management	$500,000		
Contingency	$250,000		
Total Project Cost	$6,750,000	Total Revenue	$5,000,000
EXPENDITURE BUDGET	$1,750,000	**REVENUE BUDGET**	$0

Project Scope & Description

This 0.8-mile long project involves the rehabilitation/reconstruction of CTH O to bring it up to current standards. Improvements will include: replacing the existing concrete pavement, reconfiguring intersections to improve safety, replacing older traffic signals, minor grading, and adding sidewalks and storm water improvements. Access to Brookfield Square Mall and other businesses adjacent to Moorland Road will need to be maintained during construction. Therefore, traffic control will be a major challenge for this project. Federal funds will be used to offset the cost of design and construction for this project. The Department will apply for $5,000,000 in federal STP-M funds for this project.

Location

City of Brookfield

Analysis of Need

The concrete pavement along this portion of Moorland Road (CTH O) has deteriorated to the point where it now has a pavement condition index (PCI) of 30 which is regarded as poor. A PCI of 20 would indicate that the pavement has failed. The roadway was first built in 1978 and was rehabilitated in 2001 but that rehabilitation is now at the end of its useful life; paving slabs have deteriorated; paving joints have faulted and the concrete pavement is in need of replacement. Pavement issues are further compounded by the fact that this portion of Moorland Road is one of the busiest on the County system with over 30,000 vehicles per day using the corridor, which serves as a major access road to Brookfield Square Mall and to the Bluemound Road corridor.

Alternatives

- Attempt further rehabilitation. This alternate is not recommended because it is not considered cost-effective due to the poor condition of the existing pavement and the high cost of traffic control needed to maintain traffic for this roadway.
- Reconstruct\rehabilitate CTH O as described above.

Ongoing Operating Costs

Operating costs are not expected to change.

Previous Action

- Approved as a new project in the 2015-2019 Capital Plan
- Approved as planned in the 2016-2020 Capital Plan

DELETE PROJECT			
Project Title:	CTH SR – Extension, STH 190 to CTH K	**Project #:**	201507
Department:	Public Works - Highways	**Project Type:**	Jurisdictional Plan Implementation
Phase:	Formation	**Road Name:**	Springdale Road
Budget Action:	Delete	**Manager:**	Allison Bussler, DPW Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY				
Year	2019	2020	2021	Total
Project Phase	Design	Design - R/W	Construction	Project
Expenditure Budget	$447,000	$1,783,000	$1,337,000	$3,567,000
Revenue Budget	$0	$0	$0	$0
Net County Cost	$447,000	$1,783,000	$1,337,000	$3,567,000

COST DOCUMENTATION		REVENUE	
Design	$447,000		
Land Acquisition	$1,783,000	STP - M	$5,350,000
Construction	$5,815,000	Surface Transportation Program	
Construction Management	$581,000	Milwaukee	
Contingency	$291,000		
Total Project Cost	$8,917,000	Total Revenue	$5,350,000
EXPENDITURE BUDGET	$3,567,000	**REVENUE BUDGET**	$0

Project Scope & Description

A study conducted in 2007 by the Waukesha County Department of Public Works to determine the feasibility of constructing the 1.90-mile extension of Springdale Rd from STH 190 to CTH K found that such an extension is possible. The route would generally follow a direct north-south course except in the vicinity of Capitol Airport where it would move to the west to minimize wetland impacts and stay out of the clear zone of the east-west runway at Capitol Airport. The feasibility study did not predict traffic volumes on the new roadway, instead it simply studied the impacts of a four-lane roadway – which is the Southeast Wisconsin Regional Planning Commission's recommended typical section for the roadway.

Based on traffic volumes on CTH V to the north (7,200 vehicles per day (VPD) in 2012), and existing CTH SR to the south (12,000 VPD in 2014), it is assumed that traffic volumes will not warrant the construction of a four-lane roadway in the first 20-year life cycle of the new facility. A two-lane roadway could be constructed initially. Once traffic warrants are met, the road could then be converted to a four-lane section. An in-depth traffic study will be needed as part of this project to derive anticipated traffic volumes which would confirm this assumption. If a four-lane roadway is found to be warranted initially, significantly greater funding would be needed for that larger roadway. Regardless of typical section, right of way would be purchased to the ultimate width of 130 feet.

The 2007 study also found that there are significant amount of wetlands – 8.6 acres along the route. It is assumed that these wetlands can be filled and those impacts mitigated at other sites. If it is not possible to place fill in the wetlands, then land bridges would need to be constructed the cost of which may add up to $19.0 million to the project.

Project assumes $5,350,000 of federal Surface Transportation Program – Milwaukee (STP – M) funding.

Location

City of Pewaukee and City of Brookfield

Analysis of Need

A recurring theme of the Highway network on the eastern side of Waukesha County is the lack of north-south roadways, which directly connect Washington County to Towns and Cities south of Menomonee Falls. Currently, the Pilgrim Rd/Moorland Rd corridor is the only direct connection from New Berlin to Germantown. The South Eastern Wisconsin Regional Planning Commission - Regional Transportation System Plan for 2035 plan calls for a 1.90-mile long extension of Springdale Road from Capitol Drive (STH 190) to Lisbon Road (CTH K). That extension would provide a new continuous north-south corridor from Greenfield Avenue (STH 59) to County Line Road (CTH Q). The provision of an extended Springdale Road would likely provide some relief to heavily used arterial roadways such as Barker Road and CTH F. It would also improve emergency response times for residents living east of the Canadian National Railroad and south of Lisbon Road.

Alternatives

- Construct the ultimate four-lane roadway. This project would almost double the cost of the project and may not be justified by the anticipated traffic volumes.
- Reconsider Barker Road corridor.

Ongoing Operating Costs:

Operational costs are expected to increase by an estimated $24,300

Previous Action: Approved as a County Board-added project in 2015-2019 capital plan,
Approved with revenue updates in 2016-2020 Capital Plan

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Project Title:	CTH O, CTH I to CTH ES	**Project #:**	201610
Department:	Public Works - Highways	**Project Type:**	Rehabilitation
Phase:	Formation	**Road Name:**	Moorland Road
Budget Action:	C - Rev Update	**Manager:**	Allison Bussler, DPW Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2020	2021	2022	Total
Project Phase	Design	Land Aquis.	Construction	Project
Expenditure Budget	$185,000	$961,000	$2,035,000	$3,181,000
Revenue Budget	$0	$0	$0	$0
Net County Cost	$185,000	$961,000	$2,035,000	$3,181,000

COST DOCUMENTATION		**REVENUE**	
WisDOT Design Review	$200,000	STP - M	$8,882,000
Design	$723,000	Surface Transportation Program - Milwaukee	
Land Acquisition	$961,000		
Construction	$8,851,000		
Construction Management	$885,000		
Contingency	$443,000		
Total Project Cost	$12,063,000	Total Revenue	$8,882,000
EXPENDITURE BUDGET	$3,181,000	**REVENUE BUDGET**	$0

Project Scope & Description

This 1.4-mile long project involves the rehabilitation/reconstruction of CTH O to bring it up to current standards. Improvements will include: replacing the existing concrete pavement, reconfiguring intersections to improve safety, replacing older traffic signals, minor grading, adding sidewalks and storm water improvements. Access to other businesses and residences adjacent to Moorland Road will need to be maintained during construction. Therefore, traffic control will be a major challenge for this project. This project will use federal funds to partially offset the cost of design and construction. The Department will apply for $8,882,000 in federal STP-M funds for this project.

Location

City of New Berlin

Analysis of Need

The concrete pavement along this portion of Moorland Road (CTH O) now has a pavement condition index (PCI) of 50 which is regarded as fair. While the PCI isn't in poor condition, the transverse and longitudinal joints show signs of significant deterioration, and it is anticipated that the roadway will be ready for a pavement replacement by 2022. The roadway was first built in 1978 and was rehabilitated in 2006 but that rehabilitation will be at the end of its useful life by 2022, and the concrete pavement will need to be replaced. Pavement issues are further compounded by the fact that this portion of Moorland Road is one of the busiest on the County system with over 30,000 vehicles per day using the corridor which serves as a major access road to Between I-43 and I-94.

Alternatives

Attempt further rehabilitation. This alternate is not recommended because it is not considered cost-effective due to the poor condition of the existing pavement and the high cost of traffic control needed to maintain traffic for this roadway.

Ongoing Operating Costs

Operating costs are not expected to change.

Previous Action

Approved as new project in the 2016-2020 Capital Plan

Project Title:	CTH C, Hasslinger Drive Intersection	**Project #:**	201611
Department:	Public Works - Highways	**Project Type:**	Spot Improvement
Phase:	Formation	**Road Name:**	Kettle Moraine Drive
Budget Action:	C - Rev Update	**Manager:**	Allison Bussler, DPW Director
Date:	August 15, 2016		

CAPITAL BUDGET SUMMARY

Year	2018	2019	2020	Total
Project Phase	Design	Land Acquis.	Construction	Project
Expenditure Budget	$18,100	$214,000	$82,700	$314,800
Revenue Budget	$0	$0	$0	$0
Net County Cost	$18,100	$214,000	$82,700	$314,800

COST DOCUMENTATION		**REVENUE**	
Design	$152,000	Federal Highway Safety	
WisDOT Review	$29,000	Improvement Program (HSIP)	
Land Acquisition	$214,000	Funding	$907,200
Construction	$719,000		
Construction Management	$72,000		
Contingency	$36,000		
Total Project Cost	$1,222,000	Total Revenue	$907,200
EXPENDITURE BUDGET	$314,800	**REVENUE BUDGET**	$0

Project Scope & Description

The purpose of this proposed project is to correct the safety problems along the curved segment of CTH C (Kettle Moraine Drive) at Hasslinger Drive. Proposed improvements addressing the conditions described above and other existing potential hazards include:

1. Realign approximately 2,200' of CTH C with one gradual horizontal curve.
2. Realign and combine Hasslinger Drive, the private Oakland Road and the driveway as one common intersection approach aligned perpendicular to CTH C. Include a right turn-only lane and acceleration taper along CTH C at this reconfigured 'T'-intersection. Combining the driveways will remove the visual effect for north bound traffic whereby the road appears to be straight – not curved.
3. Widen the CTH C lane widths from 11' to 12', its paved shoulders from 1' to 3' and clear zones along this curve. Add new pavement edges.
4. Add center line and shoulder rumble strip pavement markings to alert motorists approaching and driving through this curved highway segment.
5. Add intersection area highway lighting.

Waukesha County will apply for an estimated $907,200 in Federal Highway Safety Improvement Program funding to help fund this project.

Town of Merton

Analysis of Need

A sharp curve along CTH C (Kettle Moraine Drive) has an awkwardly configured intersection with a residential street (Hasslinger Drive), a driveway and a private road (Oakland Road). Drivers must react suddenly to the changing curve radii of its existing alignment. This rural highway intersection has among the highest collision rates along Waukesha's County Trunk Highways. There have been twenty-one (21) crashes reported during the past 13 years at this intersection where average daily traffic is approximately 3,800 vehicles/day for a crash rate of 1.174 per million vehicles. All of these crashes involved northbound vehicles running off the right side of CTH C at the midpoint of its curve. All but one had occurred with wet-snow pavement and/or dark conditions. One crash had a fatality and four others had severe injuries.

Alternatives

Changing this intersection to a full-way stop or a roundabout is not warranted and would not address the prevailing northbound traffic flow problem along CTH C.

Ongoing Operating Costs

None

Previous Action

Approved as a new project in the 2016-2020 Capital Plan

Project Title:	CTH V V, Hickory Street to CTH F	**Project #:**	201620
Department:	Public Works - Highways	**Project Type:**	Rehab/Jurisdictional Transfer
Phase:	Formation	**Road Name:**	Silver Spring Drive
Budget Action:	Delay, C – Scope, C - $ & Rev Update	**Manager:**	Allison Bussler, Director DPW
Date:	August 31, 2016		

CAPITAL BUDGET SUMMARY

Year	2017	2018	2019	Total
Project Phase		Design	Construction	Project
Expenditure Budget	$0	$5,000	$582,000	$587,000
Revenue Budget	$0	$0	$291,000	$291,000
Net County Cost	$0	$5,000	$291,000	$296,000

COST DOCUMENTATION		**REVENUE**	
		CHIP-D	$291,000
Design - in house	$0		
Soil Borings	$5,000		
Construction	$554,000		
Construction Management	$0		
Contingency	$28,000		
Total Project Cost	$587,000	Total Revenue	$291,000
EXPENDITURE BUDGET	$587,000	**REVENUE BUDGET**	$0

Project Scope & Description

The Village of Sussex and Waukesha County have signed a jurisdictional transfer agreement to transfer approximately half a mile of CTH V V (from Main Street to CTH F/Waukesha Avenue) to the Village. The Village has already taken the northwestern most portion of the roadway (Main Street to Hickory Street). The remaining portion (Hickory Street to CTH F) will not be transferred until this project is complete. The agreement would include a cost share agreement for any amenities that might be requested by the Village.

This project will rehabilitate 0.42 miles of CTH V V. The project scope includes manhole and culvert repairs, replacing broken and settled curbs, and repaving the roadway and restriping. The Department will use $291,000 in CHIP-D funding to offset the cost of this project.

Location

Village of Sussex

Analysis of Need

The existing pavements is nearing the end of its service life and is in need of resurfacing/rehabilitation and has a pavement condition index of 45 which is in the poor to fair range. The pavement deficiencies include transverse and longitudinal cracking, some alligator cracking and minor settlement/heaving. Some curb lines have settled and need replacing. There has also been settlement around some manholes. Some minor repair work has been identified to one of the box culverts on this portion of CTH V V. Traffic volumes along this portion of CTH V V are approximately 8,000 vehicles per day as measured in 2012.

Alternatives

- Repave CTH V V. While addressing pavement condition, this alternate does not address curb settlement, manhole or culvert issues along CTH V V.
- Reconstruction of the existing roadway. While addressing the issues this is a more expensive alternate.

Ongoing Operating Costs

This project once complete will lower the Departments operational costs.

Previous Action

- Approved as new project in 2016-2020 capital plan
- Jurisdictional Transfer Agreement approved in 2016 (Enrolled Ordinance 170-81)

Project Title:	CTH D, Calhoun Road to 124th Street Rehab	**Project #:**	201706
Department:	Public Works - Highways	**Project Type:**	Rehabilitation
Phase:	Formation	**Road Name:**	Cleveland Avenue
Budget Action:	New	**Manager:**	Allison Bussler, DPW Director
Date:	August 30, 2016		

CAPITAL BUDGET SUMMARY

Year	2017	2018	2019	2020	2021	Total
Project Phase	Design	Design	Design/Land	Land	Const	Project
Expenditure Budget	$66,000	$50,000	$506,000	$0	$0	$622,000
Revenue Budget	$0	$0	$0	$0	$0	$0
Net County Cost	$66,000	$50,000	$506,000	$0	$0	$622,000

COST DOCUMENTATION		**REVENUE**	
Design	$258,000	Federal Surface Transportation Program (STP) Funding	$2,287,000
WisDOT Design Review	$68,000		
Land Acquisition	$50,000		
Construction	$2,174,000		
Construction Management	$250,000		
Contingency	$109,000		
Total Project Cost	$2,909,000	Total Revenue	$2,287,000
EXPENDITURE BUDGET	$622,000	**REVENUE BUDGET**	$0

Project Scope & Description

This project is a rehabilitation of CTH D between Calhoun Rd and 124th Street and the rehabilitation of the culverts at Deer Creek. The roadway will be rehabilitated with minor shoulder and intersection improvements. The anticipated scope for the culverts includes culvert lining and grouting, headwall reconstruction, and approach ditch re-grading. Structure rehabilitation will effectively extend the life of the culvert structure, while avoiding the need to close the highway and excavate the deep roadway embankment for a stream diversion. However, the proposed rehab does not address structure widening that may be needed for highway expansion. Under this project, the roadway will remain two lanes. The acquisition of temporary easements is anticipated to construct this project.

Culvert rehabilitation was originally proposed in capital project #201303, CTH D, Deer Creek Bridge, but federal bridge aid funding was not available. However, federal Surface Transportation Program funding is available for structure rehabilitation under this broader road rehabilitation project. Waukesha County has been approved for $2,287,000 in Federal Aid to help fund the project.

Location

City of New Berlin

Analysis of Need

The pavement along this 3-mile long portion of CTH D is in poor condition and requires reconditioning. In 2013 the pavement inspection conducted along CTH D found that the Overall Condition Index for the pavement varies between 21 and 43, which is the poor to fair range. Shoulders are paved and relatively wide. Intersections have turn lanes although some minor grading may be needed to extend turn lanes.

The existing bridge (P-67-779) is a triple-barrel corrugated steel pipe culvert. Each barrel is 72-inches in diameter. The structure was initially constructed in 1959 with two culvert barrels. The culverts were lowered, and a third culvert barrel added in 1969 by a developer along with re-grading of Deer Creek. The structure now sits under a 30-feet high roadway embankment. The two original barrels are rusting through at the normal water line. The stone masonry headwalls are in poor condition. The riprap ditch at the northeast bridge approach is eroding. The existing structure appears to have adequate hydraulic capacity. The structure sufficiency number is 33.1, which indicates that structure replacement or rehabilitation is warranted according to WisDOT guidelines. The 2013 traffic volume on CTH D was 16,995 vehicles per day.

Alternatives

- Reconstruct the existing bridge
- Reconstruct the pavement

Ongoing Operating Costs

Initial maintenance costs may be reduced following construction.

Previous Action

Bridge rehabilitation portion originally proposed as a separate capital project #201303 (CTH D, Deer Creek Bridge).

DELETE PROJECT			
Project Title:	CTH D, Deer Creek Bridge	**Project #:**	201303
Department:	Public Works - Highways	**Project Type:**	Bridge
Phase:	Preliminary Design	**Road Name:**	Cleveland Avenue
Budget Action:	Delete	**Manager:**	Allison Bussler, DPW Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY				
Year	2013	2017	2018	Total
Project Phase	Concept	Design-R/W	Construction	Project
Expenditure Budget	$5,000	$110,000	$116,000	$231,000
Revenue Budget	$0	$0	$0	$0
Net County Cost	$5,000	$110,000	$116,000	$231,000

COST DOCUMENTATION		REVENUE	
Budget/Concept	$5,000	Federal Bridge Aid	$462,000
Design	$65,000	(Anticipated)	
Land Acquisition	$21,000		
WDOT Plan Review	$24,000		
Construction	$486,000		
Construction Management	$68,000		
Contingency	$24,000		
Total Project Cost	$693,000	Total Revenue	$462,000
EXPENDITURE BUDGET	$231,000	**REVENUE BUDGET**	$0

Project Scope & Description

This project is a rehabilitation of the CTH D bridge at Deer Creek. Anticipated scope includes culvert lining and grouting, headwall reconstruction, and approach ditch re-grading. Structure rehabilitation will effectively extend the life of the structure, while avoiding the need to close the highway and excavate the deep roadway embankment for a stream diversion. However, the proposed rehab does not address structure widening that may be needed for highway expansion. Under this project, the roadway will remain two lanes over the bridge. The acquisition of temporary easements is anticipated to construct this project. An independent engineering study report is being completed to verify the cost effectiveness of the proposed rehabilitation strategy. Waukesha County will apply for an estimated $462,000 in Federal Bridge Aid to help fund the project.

Location

City of New Berlin

Analysis of Need

The existing bridge (P-67-779) is a triple-barrel corrugated steel pipe culvert. Each barrel is 72-inches in diameter. The structure was initially constructed in 1959 with two culvert barrels. The culverts were lowered, and a third culvert barrel added in 1969 by a developer along with re-grading of Deer Creek. The structure now sits under a 30-feet high roadway embankment. The two original barrels are rusting through at the normal water line. The stone masonry headwalls are in poor condition. The riprap ditch at the northeast bridge approach is eroding. The existing structure appears to have adequate hydraulic capacity. The structure sufficiency number is 42.4, which indicates that structure replacement or rehabilitation is warranted according to WisDOT guidelines and makes the bridge eligible for Federal Bridge Aid (replacement or rehabilitation). The 2013 traffic volume on CTH D was 16,995 vehicles per day.

Alternatives

Reconstruct the existing bridge.

Ongoing Operating Costs

Initial maintenance costs may be reduced following construction.

Previous Action

- Approved as a new project in the 2013-2017 plan.
- Approved with a cost update in the 2014-2018 capital plan.
- Approved as planned in the 2015-2019 and 2016-2020 capital plans.

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Project Title:	Bridge Aid Program – Through 2017	**Project #:**	9131
Department:	Public Works - Highways	**Project Type:**	Bridge
Phase:	Program Project	**Road Name:**	
Budget Action:	As Planned	**Manager:**	Allison Bussler, Director DPW
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year Project Phase	Previous	2016	2017	2018	2019	2020	Total Project
Expenditure Budget	$180,000	$100,000	$100,000	$0	$0	$0	$380,000
Revenue Budget	$0	$0	$0	$0	$0	$0	$0
Net County Cost	$180,000	$100,000	$100,000	$0	$0	$0	$380,000

COST DOCUMENTATION		**REVENUE**	
Previous	$180,000		
2016 Appropriation	$100,000		
2017 Appropriation	$100,000		
2018 Appropriation	$0		
2019 Appropriation	$0		
2020 Appropriation	$0		
Total Project Cost	$380,000	Total Revenue	$0
EXPENDITURE BUDGET	$380,000	**REVENUE BUDGET**	$0

Project Scope & Description
The program provides assistance to municipalities for the replacement of large drainage structures. The project normally provides 50% of the funding for engineering, design, and construction of town-, village-, or city-initiated projects that do not receive federal or state aid.

Location
Various

Analysis of Need
Wisconsin Statute 82.08 requires the County to fund half the cost of construction or repair of local bridge and culvert projects initiated by townships. Such projects arise during the course of the budget year and funds are distributed on the basis of requests received. Requests that exceed the remaining funding for one year are carried over to the next year. This funding program has historically been expanded to cover all municipalities.

Alternatives
- County participation in the program is required by a statutory mandate.
- The County could opt out of participation with cities and villages.

Ongoing Operating Costs
The projects do not require departmental budget operating expenditures. Projects are reviewed by County engineering staff.

Previous Action
- 1996-2000 capital plan: approved as on going program project as planned.
- 1997-1999: funding suspended.
- Approved as planned in subsequent five-year plans.
- 2001-2005 to 2009-2013 capital plans: approved with additional years.
- 2010-2014 through 2014-2018 capital plans: funding suspended.
- Approved with cost update in 2015-2019 capital plan.
- Approved as planned in the 2016-2020 capital plan.

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Project Title:	Bridge Aid Program: 2018-2022	**Project #:**	201701
Department:	Public Works - Highways	**Project Type:**	Bridge
Phase:	Program Project	**Road Name:**	
Budget Action:	New	**Manager:**	Allison Bussler, Director DPW
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2018	2019	2020	2021	2022	Total
Project Phase						Project
Expenditure Budget	$100,000	$100,000	$100,000	$100,000	$100,000	$500,000
Revenue Budget	$0	$0	$0	$0	$0	$0
Net County Cost	$100,000	$100,000	$100,000	$100,000	$100,000	$500,000

COST DOCUMENTATION		**REVENUE**	
2018 Appropriation	$100,000		
2019 Appropriation	$100,000		
2020 Appropriation	$100,000		
2021 Appropriation	$100,000		
2022 Appropriation	$100,000		
Total Project Cost	$500,000	Total Revenue	$0
EXPENDITURE BUDGET	$500,000	**REVENUE BUDGET**	$0

Project Scope & Description

The program provides assistance to municipalities for the replacement of large drainage structures. The program normally provides 50% of the funding for engineering, design, and construction of town and village initiated projects that do not receive federal or state aid.

Locations

Various

Analysis of Need

Wisconsin Statute 82.08 requires the County to fund half the cost of construction or repair of local bridge and culvert projects initiated by townships. Such projects arise during the course of the budget year and funds are distributed on the basis of requests received. Requests that exceed the remaining funding for one year are carried over to the next year. This program has historically been expanded to cover all municipalities.

Alternatives

- County participation in the program is required by a statutory mandate.
- The county can opt out of participation with cities and villages.

Ongoing Operating Costs

The projects do not require departmental budget operating expenditures. Projects are reviewed by County engineering staff.

Previous Action

Capital Project 9131 – Bridge Aid Program through 2017.

Project Title:	Culvert Replacement Program Through 2017	**Project #:**	9817
Department:	Public Works - Highways	**Project Type:**	Bridge
Phase:	Program Project	**Road Name:**	Various
Budget Action:	As Planned	**Manager:**	Allison Bussler, DPW Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year Project Phase	Previous	2016	2017	2018	2019	2020	Total Project
Expenditure Budget	$1,920,000	$100,000	$100,000	$0	$0	$0	$2,120,000
Revenue Budget	$20,000		$0	$0	$0	$0	$20,000
Net County Cost	$1,900,000	$100,000	$100,000	$0	$0	$0	$2,100,000

COST DOCUMENTATION		**REVENUE**	
Previous	$1,920,000		
2016 Appropriation	$100,000	Village of Pewaukee Reimbursement	$20,000
2017 Appropriation	$100,000		
Total Project Cost	$2,120,000	Total Revenue	$20,000
EXPENDITURE BUDGET	**$2,120,000**	**REVENUE BUDGET**	**$20,000**

Project Scope & Description
Provide annual funding for a countywide culvert replacement program.

Location
Various

Analysis of Need
The Public Works Department replaces a number of culverts every year because of deterioration. This program is designed to address larger culvert structures that require extensive design, more land acquisition and higher construction costs. Generally the individual cost of culvert replacements is approximately $50,000 and do not warrant capital projects. However, when grouped together the annual costs exceed $100,000. The County averages one to two culvert replacements per year under this program. Individual culvert locations are not normally known until the year they are to be replaced. A culvert on CTH N over the Scuppernong River in the Town of Eagle is scheduled for replacement in 2017.

Alternatives
Schedule individual projects as needed.

Ongoing Operating Costs
The projects do not require departmental budget operating expenditures. Projects are reviewed by County engineering staff.

Previous Action
- 1998-2002 capital plan: project approved as a new program.
- 2001-2005 capital plan: approved as planned.
- 2002-2006 to 2013-2017 capital plans: approved with additional years.
- 2014-2018 capital plans: approved with cost and revenue updates.
- 2015-2019 Approved as planned.
- Approved as planned in the 2016-2020 capital plan.

Project Title:	Culvert Replacement Program 2018 - 2022	**Project #:**	201618
Department:	Public Works - Highways	**Project Type:**	Bridge
Phase:	Program Project	**Road Name:**	Various
Budget Action:	As Planned	**Manager:**	Allison Bussler, DPW Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year Project Phase	2018	2019	2020	2021	2022	Total Project
Expenditure Budget	$100,000	$100,000	$100,000	$100,000	$100,000	$500,000
Revenue Budget	$0	$0	$0	$0	$0	$0
Net County Cost	$100,000	$100,000	$100,000	$100,000	$100,000	$500,000

COST DOCUMENTATION		**REVENUE**	
2018 Appropriation	$100,000		
2019 Appropriation	$100,000		
2020 Appropriation	$100,000		
2021 Appropriation	$100,000		
2022 Appropriation	$100,000		
Total Project Cost	$500,000	Total Revenue	$0
EXPENDITURE BUDGET	**$500,000**	**REVENUE BUDGET**	**$0**

Project Scope & Description
Provide annual funding for a countywide culvert replacement program.

Location
Various

Analysis of Need
The Public Works Department replaces a number of culverts every year because of deterioration. This program is designed to address larger culvert structures that require extensive design, more land acquisition and higher construction costs. Generally the individual cost of culvert replacements is approximately $50,000 and do not warrant capital projects. However, when grouped together the annual costs exceed $100,000. The County averages one to two culvert replacements per year under this program. Individual culvert locations are not normally known until the year they are to be replaced.

Alternatives
Schedule individual projects as needed.

Ongoing Operating Costs
The projects do not require departmental budget operating expenditures. Projects are reviewed by County engineering staff.

Previous Action
Approved as a New project in the 2016-2020 capital plan.

Project Title:	Repaving Program 2013-2017	**Project #:**	200911
Department:	Public Works - Highways	**Project Type:**	Repaving
Phase:	Program Project	**Road Name:**	
Budget Action:	C - $ Update	**Manager:**	Allison Bussler, DPW Director
Date:	August 31, 2016		

CAPITAL BUDGET SUMMARY

Year	2013	2014	2015	2016	2017	Total
Project Phase						
Expenditure Budget	$1,200,000	$2,000,000	$3,000,000	$3,000,000	$3,250,000	$12,450,000
Revenue Budget	$0	$330,000	$330,000	$600,000	$600,000	$1,860,000
Net County Cost	$1,200,000	$1,670,000	$2,670,000	$2,400,000	$2,650,000	$10,590,000

COST DOCUMENTATION

	Paver Study	UWW Pav.	Hwy Paving & shouldering
2013	$20,000	$50,000	$1,130,000
2014	$70,000	$50,000	$1,880,000
2015	$50,000	$50,000	$2,900,000
2016	$50,000	$50,000	$2,900,000
2017	$50,000	$0	$3,200,000
Total Project Cost	$240,000	$200,000	$12,010,000
EXPENDITURE BUDGET			$12,450,000

REVENUE

County Highway Improvement Program (CHIP) and County Highway Improvement Program - Discretionary (CHIP-D)

	CHIP	CHIP-D	Total
2014	$330,000		$330,000
2015	$330,000		$330,000
2016	$300,000	$300,000	$600,000
2017	$300,000	$300,000	$600,000
Total Revenue	$1,260,000	$600,000	$1,860,000
REVENUE BUDGET			$1,860,000

Project Scope & Description

The project involves resurfacing or rehabilitation of county trunk highways to remove distressed areas and provide improved riding surfaces. It is the Department of Pubic Work's goal to pave approximately 20 lane miles of roadway on an annual basis. Crush, relay and surface or other alternative methods will be used as necessary in lieu of a simple patch and overlay. The project includes the cost of the ongoing Pavement Inspection Program, which determines the sections of highways to be repaved, along with the cost of shouldering, and parking lots at the Department's substation facilities. Beginning in 2017, about $50,000 budgeted annually for pavement work at the UW-Waukesha (UWW) Campus is transferred from this project to the UWW infrastructure improvement project (#201703).

Inflation and a reduced number of highway capital projects have caused a gradual reduction in the number of lane miles paved and hence we have seen our average pavement condition rating decline. An additional $300,000 is added in 2017 to reflect additional funding needed to maintain pavement condition at its current level.

Location

Various locations throughout the county.

Analysis of Need

The Department of Public Works presently maintains about 400 centerline miles of asphalt-surfaced roadways on the county trunk system and the parking lots at UW Waukesha. The typical useful life of pavement is 15 years. The Department reconstructed existing two-lane roadways to four-lane facilities. These four-lane facilities are now coming to the end of their design life and need repaving. As asphalt pavements age, the surface tends to rut and crack due to vehicle loads and weathering of the asphalt. The Department has initiated a pavement management program, using Cartegraph's Pavementview software to rate pavement conditions and manage pavement projects. The average Pavement Condition Index (PCI) of asphaltic pavements in 2015 was 62. It is the intention of this project to continue to maintain and improve current pavement conditions. Resurfacing projects take into consideration the PCI of existing pavements and classification of the road. The PCI ratings are updated on a rolling three-year schedule.

Alternatives

- Spot repairs and patching. The result will be a slight delay in the deterioration of the system.
- Resurface roadways based on pavement conditions determined by the PAVER pavement management system and Department review.

Ongoing Operating Costs

The cost of maintaining a two-lane roadway in good condition is projected to cost approximately $7,000 per mile annually (2013).

Previous Action

2009-2013 capital plan: approved as a new project. 2010-2014 and 2011-2015 capital plans: approved as planned. 2014-2018 capital plan: approved with revenue update. 2015-2019 capital plan approved as planned. 2016-2020 Capital plan approved with revenue changes.

Project Title:	Repaving Program 2018-2022	**Project #:**	201416
Department:	Public Works - Highways	**Project Type:**	Repaving
Phase:	Program Project	**Road Name:**	Various
Budget Action:	Accelerate, C - $ Update	**Manager:**	Allison Bussler, DPW Director
Date:	August 31, 2016		

CAPITAL BUDGET SUMMARY

Year	2018	2019	2020	2021	2022	Total
Project Phase						
Expenditure Budget	$4,450,000	$2,550,000	$3,700,000	$6,300,000	$4,150,000	$21,150,000
Revenue Budget	$0	$0	$0	$0	$0	$0
Net County Cost	$4,450,000	$2,550,000	$3,700,000	$6,300,000	$4,150,000	$21,150,000

COST DOCUMENTATION	Paver Study	Hwy Paving & Shouldering	Total	REVENUE	
2018	$50,000	$4,400,000	$4,450,000		
2019	$50,000	$2,500,000	$2,550,000		
2020	$50,000	$3,650,000	$3,700,000		
2021	$50,000	$6,250,000	$6,300,000		
2022	$50,000	$4,100,000	$4,150,000		
Total Project Cost	$250,000	$20,900,000	$21,150,000	Total Revenue	$0
EXPENDITURE BUDGET			$21,150,000	**REVENUE BUDGET**	$0

Project Scope & Description

The project involves resurfacing or rehabilitation of county trunk highways to remove distressed areas and provide improved riding surfaces. It is the Department of Pubic Work's goal to pave approximately 20 lane miles of roadway on an annual basis. Crush, relay and surface or other alternative methods will be used as necessary in lieu of a simple patch and overlay. The project includes the cost of the ongoing Pavement Inspection Program, which determines the sections of highways to be repaved, along with the cost of shouldering, and parking lots at the Department's substation facilities. Beginning in 2017, about $50,000 budgeted annually for pavement work at the UW-Waukesha (UWW) Campus is transferred from this project to the UWW infrastructure improvement project (#201703).

Inflation and a reduced number of highway capital projects has caused a gradual reduction in the number of lane miles paved and hence we have seen our average pavement condition rating decline. Additional funds are added in each year of this program to reflect additional funding needed to maintain pavement condition at its current level. In addition, funding is moved up from 2019 to 2018 to better balance resources in the overall capital plan.

Location

Various locations throughout the county.

Analysis of Need

The Department of Public Works presently maintains about 400 centerline miles of asphalt-surfaced roadways on the county trunk system and the parking lots at UW Waukesha. The typical useful life of pavement is 15 years. The Department reconstructed existing two-lane roadways to four-lane facilities. These four-lane facilities are now coming to the end of their design life and need repaving. As asphalt pavements age, the surface tends to rut and crack due to vehicle loads and weathering of the asphalt. The Department has initiated a pavement management program, using Cartegraph's Pavementview software to rate pavement conditions and manage pavement projects. The average Pavement Condition Index (PCI) of asphaltic pavements in 2015 was 62. It is the intention of this project to continue to maintain and improve current pavement conditions. Resurfacing projects take into consideration the PCI of existing pavements and classification of the road. The PCI ratings are updated on a rolling three-year schedule.

Alternatives

- Spot repairs and patching. The result will be a slight delay in the deterioration of the system.
- Resurface roadways based on pavement conditions determined by the PAVER pavement management system and Department review.

Ongoing Operating Costs

The cost of maintaining a two-lane roadway in good condition is projected to cost about $7,000 per mile annually (2013).

Previous Action

Approved as a new project in the 2014-18 capital plan. Approved as planned in 2015-2019 Capital Plan. Approved as planned in 2016-2020 Capital Plan.

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Project Title:	Signals & Safety Improvements	**Project #:**	200427
Department:	Public Works - Highways	**Project Type:**	Spot Improvement
Phase:	Program Project	**Road Name:**	
Budget Action:	As Planned	**Manager:**	Allison Bussler, DPW Director
Date:	August 30, 2016		

CAPITAL BUDGET SUMMARY

Year	2014	2015	2016	2017	2018	2019	Total Project
Expenditure Budget	$950,000	$842,400	$1,250,000	$1,250,000	$0	$0	$4,292,400
Revenue Budget	$0	$0	$0	$0	$0	$0	$0
Net County Cost	$950,000	$842,400	$1,250,000	$1,250,000	$0	$0	$4,292,400

COST DOCUMENTATION		**REVENUE**	
2014 Appropriation*	$950,000		
2015 Appropriation	$842,400		
2016 Appropriation	$1,250,000		
2017 Appropriation	$1,250,000		
		Federal HSIP (Highway Safety Improvement Program)	$4,003,000
Total Project Cost	$4,292,400	Total Revenue	$4,003,000
EXPENDITURE BUDGET	$4,292,400	**REVENUE BUDGET**	$0

*At year-end 2014, $250,000 of unspent appropriations were allowed to lapse since $250,000 of budgeted County Highway Improvement Program – Discretionary funding was not available for these projects, as originally budgeted.

Project Scope & Description

This program addresses roadway safety needs in two specific areas. Firstly, there are upgrades to existing traffic signals and new locations where traffic signals are warranted. Secondly, there are locations where there are significant safety issues. These may occur at intersections, or where there is poor roadway geometry. For the intersections that meet signal warrants, the Department will study signal and roundabout alternatives. For intersections that are upgraded, new equipment and some minor geometric updates will be included to increase intersection safety and performance. Where safety is the concern, the Department will conduct safety studies and proceed with the solution which best addresses the observed needs. The following projects will be studied, designed and constructed over the next two years (2016-17). Others may be added if funding allows. Beginning in 2018, intersection and safety projects will be introduced separately and evaluated on their merits against all other capital projects.

			COST ESTIMATE		
Intersection	**Location**	**Year**	**County Share (In Co. Budget)**	**HSIP Funded (Not in Co. Budget)**	**Total Cost Estimate**
CTH I, between Ehr DR and Point Dr: realign roadway to remove substandard curve (Revised increase of $84,000).	Town of Vernon	Design in 2016, Construction in 2017	$184,000	$1,092,000	$1,276,000
CTH YY and Burleigh Rd - Intersection: Upgrade existing signals and improve turn lanes and approaches (Revised increase of $140,000).	City of Brookfield	Design in 2014/16, Construction in 2017	$1,759,000	$0	$1,759,000
CTH V V, CTH E Intersection: Install roundabout to reduce crashes.	Town of Merton	Design in 2015/17, Complete construction in 2018	$316,000	$1,043,000	$1,359,000
CTH CI, County line to STH 67, safety project to improve signing, marking, improve lateral clearances (Revised increase of $19,000).	Towns of Eagle and, Ottawa	Design in 2016 & 2017, Construction in 2018	$49,000	$292,000	$341,000
CTH V V, Lilly Rd intersection: realign left turn lanes and upgrade traffic signal.	Village of Menomonee Falls	Design in 2015/16, Construction in 2017	$114,000	$716,000	$830,000
CTH KF/JK intersection: Add traffic signal and turn lanes to improve safety.	City of Pewaukee	Design in 2015/17, Construction in 2018	$200,000	$860,000	$1,060,000

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Project Title:	Signals & Safety Improvements	**Project #:**	200427
Department:	Public Works - Highways	**Project Type:**	Spot Improvement
Phase:	Program Project	**Road Name:**	
Budget Action:	As Planned	**Manager:**	Allison Bussler, DPW Director
Date:	August 30, 2016		

Analysis of Need

As the County's population continues to grow, roadway vehicular traffic volumes and crashes increase, resulting in the need to install new traffic signals or roundabouts, or make geometric changes to reduce crash rates, delays and congestion. Some existing signals are more than 20-years-old and are in need of new features such as turn arrows and pedestrian phases. Some high crash site locations do not meet traffic signal warrants and need to be addressed with other lower cost improvements.

Alternatives

- Use signing and marking to address crash issues. This alternate can reduce the number of crashes and should be used when appropriate, but it does not always bring crashes down to acceptable levels
- Implement improvements as described.

Ongoing Operating Costs

Increased costs of approximately $9,600 annually per new signal installation and additional lane miles.

Previous Action

- 2004-2008 capital plan: approved as a combined program.
- 2005-2009, 2006-2010, 2007-2011, 2008-2012 and 2011-2015 capital plans: approved as planned.
- 2009-2013 capital plan: cost update.
- 2010-2014 capital plan: approved use of stimulus funds.
- 2013-2017 capital plan: Cost update. Addition of HSIP funded project.
- 2014-2018 capital plan: add new projects, revenue update
- 2015-2019 capital plan: add new projects, revenue update
- 2016-2020 capital plan: add new projects, revenue update

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Project Title:	Energy Efficiency Improvements	**Project #:**	201208
Department:	Parks & Land Use	**Project Type:**	Renovation/Upgrade
Phase:	Program Project	**Sponsor:**	
Budget Action:	As Planned	**Manager:**	Dale Shaver, PLU Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	Previous	2014	2015	2016	2017	Total
Phase:	Design &	Design &	Design &	Design &	Design &	
Program Project	Installation	Installation	Installation	Installation	Installation	
Expenditure Budget	$705,000	$215,200	$75,000	$180,000	$260,000	$1,435,200
Revenue Budget	$0	$100,000	$75,000	$65,000	$0	$240,000
Net County Cost	$705,000	$115,200	$0	$115,000	$260,000	$1,195,200

COST DOCUMENTATION		**REVENUE**	
		General Fund Balance*	$823,200
Architect/Consultant	$50,000	*To fund non-enterprise, General Fund	
Construction	$425,000	improvements	
Contingency	$40,000		
Previous: 2012 through 2014	$920,200	Ice Arenas Fund Balance	$100,000
Total Project Cost	$1,435,200	Golf Course Fund Balance	$140,000
EXPENDITURE BUDGET	$1,435,200	**REVENUE BUDGET**	$240,000

Project Scope & Description

This project will continue the implementation of Energy Efficiency Improvements at Waukesha County facilities. Focus on sound return on investments will continue to demonstrate a sound business approach to energy saving and will provide the strong reduction of utility expenditures in the operating budget.

Energy efficiency improvements for years 2012 and 2013 consisted primarily of government center campus building lighting upgrades at the Courthouse and Mental Health Center. Year 2014 projects included: Installation of digital controls on all HVAC equipment at the high energy use County facilities such as Retzer Nature Center, Eble and Naga-Waukee Ice Arenas and Expo Arena to enable monitoring, troubleshooting and adjustment of the equipment through a central computer system. This enterprise energy management system maximizes the efficiencies of the HVAC system and saves significant staff cost in trouble shooting issues at remote locations. Currently the Department of Public Works – Facility Management Division has the Government Campus buildings on the system. Adding the additional buildings would save staff time and further leverage the existing technology. Funding for 2015 and 2016 will be used to install LED lighting at Wanaki and Naga-Waukee Golf Course and at the Retzer Nature Center.

The remaining lighting projects designed by Leedy and Petzold Associates that were not able to be funded under the former Energy Efficiency and Conservation Block Grant (EECBG) grant are now included in this capital project. The final lighting projects in 2017 will focus on buildings, parking lot lighting and interior lighting at park facilities.

Project Examples and projected ROI

2014	Eble Ice Arena	Facility HVAC Automation	2.6 years ROI
2014	Nagawaukee Ice Arena	Facility HVAC Automation	3.0 years ROI
2014	Retzer Nature Center	Facility HVAC Automation	6.0 years ROI
2014	Expo Arena, Eble Park Drive (Lighting)	Facility HVAC Automation	4.5 years ROI
2015-16	Wanaki GC, Naga-Waukee GC, Retzer Nature Center	Lighting LED upgrade	5.0 years ROI
2017	Parks:FoxR,FoxB,Muk, Mus, Nag, Nas	Lighting LED upgrade	5.5 years ROI

Location

Various Waukesha County owned facilities.

Analysis of Need

With improvements in lighting and mechanical equipment technology and the increasing cost of energy and water, it is in Waukesha County's best interest to continually evaluate opportunities to conserve energy and reduce utility costs. The individual projects submitted were selected based upon the returns on investment as well contributing to successful implementation of the Waukesha County Sustainability Plan.

Alternatives

Reconsider in a future capital plan.

Ongoing Operating Costs

Utility costs will continue to increase based on rate increases and consumption. The County can take steps to manage and reduce consumption. Energy consumption will be reduced by an overall estimated average of 18% based on the consultants design by replacing the existing lighting fixtures with the new higher efficiency lighting fixtures and with the addition of Building Automation Systems for high energy buildings.

Previous Action

Capital Project 200805 Energy Conservation completed in 2008 and 2009. Capital Project 200918 Energy Efficiency and Conservation Block Grant completed in 2010 and 2011. 2012-2016 capital plan: approved as a new project. 2013-2017 capital plan: approved as planned. 2014-2018 capital plan: approved with scope and cost updates. 2015-2019 capital plan: approved with scope and cost updates. 2016-2020 capital plan: accelerated with a change in scope and revenue update.

Project Title:	Camp Pow Wow Expansion	**Project #:**	201504
Department:	Parks & Land Use	**Project Type:**	Facility Expansion
Phase:	Preliminary Design	**Sponsor:**	
Budget Action:	As Planned	**Manager:**	Dale Shaver, PLU Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2015	2016	2017	2018	2019	2020	Total
Project Phase	Design/Engineering					Construction	Project
Expenditure Budget	$54,400	$0	$0	$0	$0	$695,600	$750,000
Revenue Budget	$0	$0	$0	$0	$0	$375,000	$375,000
Net County Cost	$54,400	$0	$0	$0	$0	$326,600	$375,000

COST DOCUMENTATION		**REVENUE**	
Design/Engineering	$54,400		
Construction	$644,000		
Contingency	$51,600		
		Partnership with ARCh	
Total Project Cost	$750,000	Total Revenue	$375,000
EXPENDITURE BUDGET	$750,000	**REVENUE BUDGET**	$375,000

Project Scope & Description

Since 1959, the Association for the Rights of Citizens with handicaps (ARCh) through Camp Pow Wow has been providing outdoor recreational opportunities for adults and children with disabilities. In 1998, in partnership with Waukesha County, a lodge was built in Menomonee Park as the camp's home base. Amenities include: a full-service kitchen, restrooms with showers, nurse's office, covered patio, indoor and outdoor fireplace, and heat and air conditioning.

Camp Pow Wow Lodge is reserved exclusively for ARCh annually from May through September. September through May the building is reservable to the public.

Expansion of the current facility will improve functional issues for the camp program and campers' personal health needs including separation of private nurse room, Americans with Disabilities Act (ADA) code updates, restroom expansion and improved energy efficiency. Site improvements will include accessible path connections and educational signage will increase usability and access of the site for camp programs.

Analysis of Need

Due to the success of Camp Pow Wow's programming, ARCh has expressed the need for expansion for several years. These improvements will allow ARCh to meet its program needs, comply with ADA codes and continue to retain and attract users of this unique program. Representatives of ARCh have offered to fundraise and partner with Waukesha County to assist with the expansion project. The ARCh organization celebrated its 55th Anniversary in 2014. Therefore, this is an opportune time to launch a fundraising campaign for expansion. The original construction was made possible through a 50/50 cost share agreement between the County. This expansion project is again proposed with a 50/50 cost share agreement between the County and ARCh.

Location

Menomonee Park is located in the northeastern section of Waukesha County in the Villages of Lannon and Menomonee Falls.

Alternatives

1. Allow camp to function within current space and functionality provided.
2. Partner with ARCh to update and expand the current facility to accommodate additional program participants and functionality desired.

Ongoing Operating Costs

Expected minimal increase in operating cost due to additional square footage and restroom plumbing fixtures. Some utility savings due to upgrading HVAC and lighting to more efficient equipment and fixtures.

Previous Action

Approved as a new project in the 2015-2019 Capital Plan. Delayed in 2016-2020 Capital Plan.

Project Title:	2020 Orthophotography	**Project #:**	201609
Department:	Parks & Land Use	**Project Type:**	Orthophotography
Phase:	Program Project	**Sponsor:**	
Budget Action:	As Planned	**Manager:**	Dale Shaver, PLU Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY		
Year	2020	Total
Project Phase	Project Work	Project
Expenditure Budget	$195,500	$195,500
Revenue Budget	$195,500	$195,500
Net County Cost	$0	$0

COST DOCUMENTATION		REVENUE	
Contract Costs	$195,500	Land Information System	
Contingency	$0	Fund Balance	$195,500
Total Project Cost	$195,500		
EXPENDITURE BUDGET	$195,500	**REVENUE BUDGET**	$195,500

Project Scope & Description

Aerial images were acquired for Waukesha County in 1963, 1970, 1975, 1980, 1985, and 1990 under programs administered by the Southeastern Wisconsin Regional Planning commission (SEWRPC). Higher precision Orthophotography (images that have been "ortho-rectified" to correct for distortion caused by the changes in terrain) were acquired in 1995, 2000, 2005, 2010 and 2015.

Orthophotography requires that a Digital Terrain Model (DTM) be created to allow the ortho-rectification process to be completed. The DTM can also be used to develop traditional contour line data files that display elevation as well as be input to computer models for developing construction design documents and computing such variables as slopes and erosion. The year 2015 capital project created a new DTM that supported the creation of a one-foot contour base file. That DTM was developed using a Light Detection and Ranging (LIDAR) data set captured as part of the capital project to increase the accuracy of the contour data.

This project will fund the acquisition of new Orthophotography in 2020 to continue the series and provide high quality imagery to support a variety of user needs including real estate analysis, development projects, property history analysis, research projects, emergency management, public infrastructure documentation and regulatory and planning activities in the County. In addition, a new LIDAR data set will be acquired. Beyond creating an updated elevation dataset, the new LIDAR dataset will allow data users to automatically detect areas of elevation change that occurred since the capture of the 2015 dataset.

Location

Parks and Land Use Department, 515 W. Moreland Boulevard, Waukesha, WI 53188

Analysis of Need

The orthophotography images, topographic maps and underlying DTM are used by the planning, parks, land conservation and transportation divisions for planning and development. Without current consistent information, inaccurate assumptions could be made resulting in costly changes in planned activities.

Alternatives

Do not create data.

Ongoing Operating Costs

None

Previous Action

- 2000 capital project ROD 9900.
- 2005 capital project 200508.
- 2006 capital project 200614.
- 2011/2015 capital project 201119

Project Title:	Wanaki Golf Course Bridge Replacement	**Project #:**	201309
Department:	Parks & Land Use	**Project Type:**	Bridge
Phase:	Construction	**Sponsor:**	
Budget Action:	Accelerate, C - $ Update, C – Rev Update	**Manager:**	Dale Shaver, PLU Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2013	2014	2016	2017	2018	2019	Total
Program Project	Design	Construction	Construction	Construction	Construction	Construction	Project
Expenditure Budget	$50,000	$160,000	$202,000	$465,000	$0	$0	$877,000
Revenue Budget	$50,000	$160,000	$202,000	$465,000	$0	$0	$877,000
Net County Cost	$0	$0	$0	$0	$0	$0	$0

COST DOCUMENTATION	Cost	**REVENUE**	
Design/Engineering	$80,000		
Bridge 4 Construction	$320,000	Golf Course Fund Balance	$412,000
Crossing 3B Removal	$14,000		
Bridge 3 Construction	$127,000	Tarmann Parkland Acquisition	
Crossing 3A Removal	$12,000	Fund Balance	$465,000
Crossing 2A Removal	$12,000		
Bridge 2 Construction	$124,500		
Bridge 1 Construction	$124,500		
Contingency	$63,000		
Total Project Cost	$877,000	Total Revenue	$877,000
EXPENDITURE BUDGET	**$877,000**	**REVENUE BUDGET**	**$877,000**

Project Scope & Description

2012 Bridge evaluations have revealed deteriorating conditions that have led to one bridge failure. Current bridge construction dates back to early 1970's, and consists of metal pipe culverts in the Fox River, with stone abutments and crushed stone fill and surfacing. Rain events cause flooding and washout of the six bridges. Bridge closures due to flooding cause golf course closure and loss of revenue following rain events. The proposed project will improve the flow of the Fox River, reduce the total number of bridge structures, and provide safe, compliant and aesthetic crossings of the river. The project proposes reducing six current bridges down to four structures to maintain golf course playability, allowing for use by course maintenance equipment, while reducing on-going structure maintenance cost. One precast concrete structure will be designed and rated to accommodate heavy loads of golf course maintenance equipment, while the other smaller steel truss structures will be rated for pedestrian/golf cart loads. Costs are updated to reflect higher-than-anticipated replacement costs for the bridge that will accommodate heavier equipment loads, based on project alterations needed to satisfy permitting requirement and construction market conditions. Bridge construction was originally planned for both 2017 and 2018, but is moved up to 2017 to help obtain more competitive project bids. Bridge replacement in 2017 will be funded with Tarmann Parkland Acquisition Fund Balance, in accordance with the policy adopted in enrolled ordinance 170-87.

Location

Wanaki Golf Course, located in the Village of Menomonee Falls.

Analysis of Need

A bridge evaluation conducted in 2012 identifies structural failures, and need for replacement. Original construction consists of metal culvert pipe and stone endwalls dating back to early 1970's. Metal culvert pipe has deteriorated and in some cases failed, necessitating limiting the loads on one of the bridges. The existing bridges have served a useful life of over 40 years. The current structures have been evaluated for the option of continuing to repair in specific areas, and attempt to extend the life of the structures. Removal of the existing structures will also improve flow of the Fox River in this area, and reduce continual damage to the stone surface and endwalls in large rain events.

Alternatives

The design team reviewed bridge locations, evaluated the repair of existing bridge types to extend the life of current structures; reviewed multiple bridge types including prefab steel, laminated wood, precast concrete bridges; analyzed reduction of number of bridges to reduce cost and impact to Fox River. Criteria for final design decisions included cost effectiveness, ability to obtain required regulatory permits, minimize impacts to floodplain, minimize disruption to play on the golf course, reduce long term maintenance, and aesthetics in the golf course setting.

Ongoing Operating Costs

It is expected that a reduction of labor and material costs to continuously repair existing structures will be realized. Future maintenance of new structures will be performed by golf course and parks staff. Removal of existing structures will reduce time spent on repair of the six bridges on an on-going basis, and improve the ability of the current staff to focus on golf course turf conditions. Savings will be realized to maintain four bridges, as opposed to the former six bridges, with one structure being more substantial to accommodate heavier loads, and the other structures to be lighter load ratings to accommodate pedestrian/golf car traffic.

Previous Action

Approved as a new project in the 2013-2017 plan. Approved as planned in the 2014-2018 plan. Approved with a change in scope, cost update and delay in the 2015-2019 plan. Delayed and approved with a cost update in the 2016-2020 plan. Approved with a cost update through enrolled ordinance 170-96.

Project Title:	Phase I: Waukesha-Brookfield Multi-Use Trail Project	**Project #:**	201407
Department:	Parks & Land Use	**Project Type:**	Trail System
Phase:	Preliminary Design	**Sponsor:**	
Budget Action:	C - $ Update	**Manager:**	Dale Shaver, PLU Director
Date:	August 15, 2016		

CAPITAL BUDGET SUMMARY

Year	2014	2015	2016	2017	2018	2019	Total
Program Project	Prelim Design	Design/Eng.	Design/Eng.	Design/Eng.	Construction	Construction	Project
Expenditure Budget	$50,000	$450,000	$0	$0	$1,994,800	$0	$2,494,800
Revenue Budget	$0	$427,500	$0	$0	$1,916,800	$0	$2,344,300
Net County Cost	$50,000	$22,500	$0	$0	$78,000	$0	$150,500

COST DOCUMENTATION		**REVENUE**	
Design	$500,000	Fed/State WisDOT	$1,995,800
Construction	$1,894,800	State WDNR	$198,000
Contingency	$100,000	City of Brookfield	$150,500
Total Project Cost	$2,494,800	Total Revenue	$2,344,300
EXPENDITURE BUDGET	$2,494,800	**REVENUE BUDGET**	$2,344,300

Project Scope & Description

In 2009, the Waukesha County Board adopted the updated Comprehensive Development Plan for Waukesha County. Through a collaborative effort between the Department of Parks and Land Use, the Department of Public Works, all municipalities within the County, the Wisconsin Department of Transportation, the Wisconsin Department of Natural Resources and the Southeast Wisconsin Regional Planning Commission (SEWRPC), an updated Bicycle Plan was developed and adopted by the Waukesha County Board as part of the Comprehensive Development Plan in 2012.

A component of the Bicycle Plan includes an approximately four-mile bike-pedestrian trail from the City of Waukesha at Frame Park, to the City of Brookfield at Mitchell Park, and the Brookfield redevelopment district along the old Chicago-Pacific Railroad. The initial phase of the project will include the 2-mile segment of the trail from a proposed trailhead located on North Avenue, south of Watertown Road, to a proposed trailhead located near the intersection of River Road and Brookfield Road. The project will be coordinated with the State of Wisconsin Department of Transportation, Department of Natural Resources, Army Corps of Engineers, City of Brookfield and City of Pewaukee. The trail will cross three roadways and the Fox River three times. The second phase, extending the trail segment to Frame Park in the City of Waukesha, will need to be considered in a future capital project. During the design phase, WisDOT notified the County of a requirement to construct a bridge over an active rail line along this segment, as opposed to an at-grade crossing, which would significantly increase costs. This segment will need to be re-evaluated for alternative routes or crossings to avoid bridge construction costs.

The Department of Parks and Land Use will secure funding from multiple sources. The project budget includes $1,995,800 (80:20 cost share reimbursable program) from the Wisconsin Department of Transportation through the Federal Transportation Alternatives Program (TAP) Grant. Of the remaining project costs, it is anticipated that $198,000 will come from the Wisconsin DNR Stewardship Program (50:50 cost share on most project cost). The City of Brookfield and Waukesha County will split the remaining costs. Project costs reflect the reduced scope and cost estimate updates obtained during the design phase of this project. The County does not anticipate plowing the trail in the winter. Depending on future use and demand, this trail may be maintained cooperatively with the Cities for year-round use.

Location

The project is located on the abandoned railroad corridor, with a southern trailhead terminus on North Avenue, just south of Watertown Road, in the City of Pewaukee, and a northern trailhead terminus at River Road/Brookfield Road in the City of Brookfield. Features or destinations along the trail include the GE Medical Training Center located on Watertown Road.

Analysis of Need

The project is identified as the northern phase of a north-south connector trail in the Waukesha County Bike/Pedestrian Plan. The ultimate connector trail will serve an estimated 120,000 people in the Waukesha-Pewaukee-Brookfield area. This project will connect public parks and green space, and is a re-use of an abandoned railroad corridor. The connector trail will offer economic benefits by connecting business and employment centers in the communities.

Alternatives

One alternative examined was to build a connector bicycle lane or paved shoulder facility as part of the CTH F overlay project (capital project #200905). However, it was a simple overlay project, and not a reconstruction project, and also has limited available right-of-way for separated trail purposes.

Ongoing Operating Costs

This project will generate an additional two lineal miles of trail to maintain. This facility will be maintained by the current parks staffing level located at Fox Brook Park, with assistance from the City of Brookfield Parks, Recreation & Forestry Department.

Previous Action Approved as a new project in the 2014-2018 Capital plan. Approved as planned in the 2015-2019 Capital plan. Delayed in the 2016-2020 Capital plan with a cost and revenue update.

Project Title:	Minooka Restroom Shelter	**Project #:**	201602
Department:	Parks & Land Use	**Project Type:**	New Building
Phase:	Preliminary Design	**Sponsor:**	
Budget Action:	C - $ Update	**Manager:**	Dale Shaver, PLU Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2016	2017	Total
Project Phase	Planning/Design	Construction	Project
Expenditure Budget	$50,000	$634,000	$684,000
Revenue Budget	$0	$0	$0
Net County Cost	$50,000	$634,000	$684,000

COST DOCUMENTATION		**REVENUE**	
Planning/Design	$55,000		
Construction - Building	$404,500		
Construction - Site Work	$192,000		
Contingency	$32,500		
Total Project Cost	$684,000	Total Revenue	$0
EXPENDITURE BUDGET	$684,000	**REVENUE BUDGET**	$0

Project Scope & Description

This project is for the construction of a new restroom and shelter at picnic area 3 at Minooka Park. The new restroom and shelter would be consistent with the park system standard design, similar to the new restrooms and shelters at Naga-Waukee, Minooka, Muskego, Nashotah and Mukwonago parks. The features include; restrooms and an open shelter, and grilling area. This proposed project will offer sufficient space to accommodate larger groups to serve the area's multi-purpose field regularly used for sporting events and activities.

The cost update for the project is based on final design work completed in 2016, which identified additional cost for required site work and utilities.

Location

Shelter 3 at Minooka Park: 1927 E Sunset Drive, Waukesha, WI 53186

Analysis of Need

The original shelter was constructed in the 1960's, the existing concrete is failing and does not meet current standards or codes. The Department of Parks and Land Use is proposing a new pavilion be constructed to meet the needs of the park patrons. Minooka Park has been a success and there exists a demand to add a reserve pavilion in Picnic Area 3. The location would take advantage of the current infrastructure of the existing parking lot.

Alternatives

Do not construct a new shelter or delay construction. However, there would be more opportunities to rent the shelter, which would increase revenue for the park.

Ongoing Operating Costs

Currently on the site there is a pit toilet and open shelter. Operation of the proposed building would be similar in costs to the existing facilities. However, revenue based on rental reservation and park entrance fees are projected to increase.

Previous Action

Formerly part of Restroom Project # 200505. The Minooka Restroom Shelter project was introduced as a new project in the 2016-2020 capital plan, with a delay and cost update, and project 200505 was closed out.

Project Title:	Menomonee Park Beach House Renovation	**Project #:**	201605
Department:	Parks & Land Use	**Project Type:**	Renovation/Upgrade
Phase:	Formation	**Sponsor:**	
Budget Action:	C - $ Update, C - Rev Update	**Manager:**	Dale Shaver, PLU Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2016	2017	2018	2019	2020	Total
Project Phase		Design/Engineering	Construction			Project
Expenditure Budget	$0	$93,000	$919,600	$0	$0	$1,012,600
Revenue Budget	$0	$0	$300,000	$0	$0	$300,000
Net County Cost	$0	$93,000	$619,600	$0	$0	$712,600

COST DOCUMENTATION		**REVENUE**	
Design	$93,000	WI DNR Stewardship	
Construction	$836,000	Grant Funding	$300,000
Contingency	$83,600		
Total Project Cost	$1,012,600	Total Revenue	$300,000
EXPENDITURE BUDGET	**$1,012,600**	**REVENUE BUDGET**	**$300,000**

Project Scope & Description

The existing Menomonee Park beach house was built in the mid 1970's as a bath house and shelter building. This project proposes remodeling of the beach house to replace the original mechanical systems, lighting, windows, and doors/frames while updating ADA accessibility to current code compliance. The lifeguard room will move to the front of the building facing the beach to improve safety. With the previous demolition of the recreation building at Menomonee Park, the project proposes to improve the former changing rooms, add more functional activity space, and partially enclose the previous open shelter areas of the beach house for increased seasonal rentals in response to increasing popular demand for day and overnight facility rentals in a park setting near a major metropolitan area. Storage areas will be incorporated into the remodeled building to benefit ARCh and the Camp Pow Wow beach programming. Proposed building renovation costs are estimated at $581,000 and the required utility and site improvements estimated at $255,000. Cost update includes additional design services for utility and site improvements. Project revenues include approximately $300,000 in WI Department of Natural Resources (DNR) Stewardship grant funding. The current proposed project scope is contingent upon award of grants.

Location

Menomonee Park is located in the northeastern section of Waukesha County in the Villages of Lannon and Menomonee Falls.

Analysis of Need

The existing beach house has exhibited signs of deterioration, and increased use and programming has resulted in the need for expansion. These renovations are recommended to extend the life of the building for another 30 years by improving rentability, increase building safety, accessibility and functionality for year round rentability, beach concessions and lifeguard program. Enclosing sections of the building will facilitate increased facility rental and separating access to restroom/showers for campers, beach users and facility rental clients. It should be noted that required utility updates have higher costs due to the high bed rock. Site improvements will be completed to increase accessibility and usability of beach and picnic area for the public and Camp Pow Wow program participants through paved walking paths around the facility, replace stairs with accessible ramp, and provide a beach foot wash station with separation of Pow Wow beach use area from the public. This project will provide improvements to the reduction of parking lot runoff into the lake through a bioswale retention area, thereby helping to maintain water quality in the beach area.

Alternatives

1. Remodel the structure to address mechanical, window, doorway, and lighting replacement.
2. Demolish the existing building and rebuild new. This would provide opportunity to maximize functionality and energy efficiency, but would add another estimated $500,000 to $750,000 to the cost.
3. Remodel the existing building and bring the building up to current codes plus maximize functionality of usable space and achieve revenue potential for rentals or beach user and campground entrance fees.

Ongoing Operating Costs

Expected operating costs would be equivalent to current conditions with some utility savings due to upgrading HVAC and lighting to more efficient equipment and fixtures. Increased revenue would result due to ability to rent year-round separated portions of the building, even during beach season.

Previous Action: Approved as new project in 2016-2020 Capital Plan.

Project Title:	Lake Country Trail STH 67 Underpass	**Project #:**	201607
Department:	Parks & Land Use	**Project Type:**	Trail System
Phase:	Preliminary Design	**Sponsor:**	
Budget Action:	Delay, C - $ Update	**Manager:**	Dale Shaver, PLU Director
Date:	August 12, 2016		

CAPITAL BUDGET SUMMARY

Year	2015	2016	2017	2018	2019	Total
Phase	Design/	Engineering	Utility/Design		Construction	Project
Expenditure Budget	$0	$229,000	$98,000	$0	$780,000	$1,107,000
Revenue Budget	$0	$50,000	$98,000	$0	$780,000	$928,000
Net County Cost	$0	$179,000	$0	$0	$0	$179,000

COST DOCUMENTATION		**REVENUE**	
2015 WisDOT Underpass Box - **In State Budget**	$500,000	Not in County Budget	
2015 Half of Utility Relocation Costs - **In Ocon. Budget**	$108,000	WisDOT Underpass Box	$500,000
2016/2017 Half of Utility Relocation Costs - **In County Budg**	$108,000	Ocon. Share of Utility Relocation	$108,000
2016/2017 Design and Engineering - **In County Budget**	$219,000		
2019 Construction - **In County Budget**	$780,000	Budgeted by County	
		80% Fed/State WisDOT Grant	$780,000
		10% State WDNR Grant	$98,000
		Ocon. Share of Engineering/Construct.	$50,000
Total Project Cost	$1,715,000	Total Revenue	$1,536,000
EXPENDITURE BUDGET	**$1,107,000**	**REVENUE BUDGET**	**$928,000**

Project Scope & Description

The south side of the City of Oconomowoc is seeing considerable growth as new residential, commercial and retail development in and around the Pabst Farms area continues to move forward. It is projected that as the growth continues, use will increase on the popular multi-use Lake Country Trail. As a component of the growth in the area, the major north-south connection from the City of Oconomowoc to Interstate 94, State Trunk Highway 67, is being improved and widened to three lanes in each direction to accommodate increased traffic. In order to create a safe crossing of this major roadway for trail users, a box tunnel was installed by WisDOT in 2015 as part of the STH 67 construction project, for future conversion into a trail underpass.

Waukesha County Department of Parks & Land Use (PLU) will collaborate with the City of Oconomowoc to construct appropriate entrances and exits to the box tunnel installed by WisDOT for an underpass for the Lake Country Trail. Funding will be secured from multiple sources. It is anticipated that 80% of the project construction and design costs will be funded through the Federal Transportation Alternatives Program (TAP) and 50% of remaining costs funded by the State Stewardship Grant program. Remaining costs for construction, utility relocation and engineering are anticipated to be split 50/50 with the City of Oconomowoc. The County was able to take advantage of a significant cost savings opportunity when The Wisconsin Department of Transportation agreed to contribute up to $500,000 up front in order to install the box tunnel during the STH 67 construction project. The collaboration with the City of Oconomowoc will also help to realize additional cost savings because the underpass project can be bid as a component of the City's annual road reconstruction bid package. Project costs and schedule have been updated to reflect TAP requirements for design and construction. This project is being delayed to accommodate the TAP funding timeline.

Location

Lake Country Trail intersection with State Trunk Highway 67 in the City of Oconomowoc.

Analysis of Need

The underpass will provide a safe and unimpeded crossing of the major roadway for trail users. It will also help to maintain efficient traffic flow by reducing congestion and time delays for motorists caused by substantial pedestrian and bicyclist clearance times when trail users are crossing the roadway.

A. Construct in 3-5 years.
B. Maintain as an at-grade crossing, but would be across six lanes of traffic, which is a safety issue.

Ongoing Operating Costs

The project will require maintenance for a new tunnel underpass along the Lake Country Trail. The maintenance will include the removal of debris, cleanup of vandalism, and monitoring of the operational condition of light fixtures. The underpass facility will be maintained by the City of Oconomowoc. Current staff at Naga-Waukee Park who maintain the Lake Country Trail will maintain the trail approaches and signage.

Previous Action

Approved as a new project in the 2016-2020 Capital plan.

Project Title:	University of Wisconsin Waukesha Site Infrastructure Improvements	**Project #:**	201703
Department:	Parks & Land Use	**Project Type:**	Concrete/Repaving
Phase:	Formation	**Sponsor:**	Parks and Land Use
Budget Action:	New	**Manager:**	Dale Shaver, PLU Director
Date:	August 25, 2016		

CAPITAL BUDGET SUMMARY

Year	2017	2018	2019	2020	Total Project
Project Phase	Design/Constr.	Design/Constr.	Design/Constr.	Design/Constr.	
Expenditure Budget	$182,400	$179,000	$379,000	$491,000	$1,231,400
Revenue Budget	$0	$0	$0	$0	$0
Net County Cost	$182,400	$179,000	$379,000	$491,000	$1,231,400

COST DOCUMENTATION		**REVENUE**	
Design/Engineering	$171,000		
Construction	$902,000		
Contingency	$158,400		
Total Project Cost	$1,231,400	Total Revenue	$0
EXPENDITURE BUDGET	$1,231,400	**REVENUE BUDGET**	$0

Project Scope & Description

Waukesha County owns the land and buildings, which serve as the University of Wisconsin - Waukesha campus. Waukesha County and the Regents of the University of Wisconsin entered into a Partnership Agreement on June 11, 1965 and later amended on July 1, 1970 and January 1, 2000 to detail County and University responsibilities related to the property. The Partnership Agreement details County responsibilities for maintenance items such as infrastructure, HVAC, plumbing, sidewalks, parking lots and landscaping. The Partnership Agreement terminates on June 30, 2040.

The proposed project will repair and replace existing deteriorating concrete walks, terraces, stairways, asphalt parking lots and update the conditions for ADA code compliance, safety, stormwater management, and improved ease of maintenance and campus function. All concrete projects will include erosion and sediment control, site preparation, drainage improvements, excavation, demolition, pavement installation and vegetative restoration. The project also includes consideration for reducing or eliminating concrete to save future operations and maintenance costs.

Location

The UWW campus is located on University Drive, south of Northview Road, and north of Summit Avenue in the City of Waukesha.

Analysis of Need

In 2015, an assessment of need and condition evaluation report was completed to review the existing conditions, identify improvements, and prioritize concrete walk, terrace and stairway segments for improvements. Priority segments are identified as areas that have failed or are in poor condition.

Alternatives

1. Continue to repair failed or poor condition areas as series of small projects.
2. Repair and replace site infrastructure over a shorter or longer period of time.

Ongoing Operating Costs

The proposed projects will help to reduce on-going operating costs for UWW involving maintenance, walk closures and potential risk areas. Reduction of total concrete square footage on campus will help to reduce future concrete replacement costs for the County.

Previous Action

None

Project Title:	Pavement Management Plan 2013-2017	Project #:	200824
Department:	Parks & Land Use	Project Type:	Repaving
Phase:	Program Project	Sponsor:	
Budget Action:	C - Rev Update	Manager:	Dale Shaver, PLU Director
Date:	August 31, 2016		

CAPITAL BUDGET SUMMARY

Year	2013	2014	2015	2016	2017	Total
Program Project						Project
Expenditure Budget	$0	$500,000	$800,000	$500,000	$600,000	$2,400,000
Revenue Budget	$0	$0	$0	$500,000	$315,000	$815,000
Net County Cost	$0	$500,000	$800,000	$0	$285,000	$1,585,000

COST DOCUMENTATION		REVENUE	
2013	$0	Tarmann Parkland Acquisition	
2014	$500,000	Fund Balance	$815,000
2015	$800,000		
2016	$500,000		
2017	$600,000		
Total Project Cost	$2,400,000	Total Revenue	$815,000
EXPENDITURE BUDGET '17	$500,000	**REVENUE BUDGET**	$815,000

Project Scope & Description

In cooperation with the Public Works Department, retained consultant services to update the Pavement Management Plan, originally done for the Parks System in 1995. The Plan establishes a uniform procedure for pavement maintenance by establishing a Pavement Condition Index (PCI). The PCI is a rated scale of 1-100 based on the state of the asphalt. Pavement repairs are scheduled based on rating. A PCI rating over 70 is satisfactory, and pavement ratings improve up to a scale maximum of 100. The goal is to maintain an average pavement PCI rating of 70 ("satisfactory") or better. The Expo center is not included in the current scope for major project or PCI calculation pending the completion of the Expo master plan. Money may be allocated at the Expo Center for minor repairs as necessary. This project is partially funded with Tarmann Parkland Acquisition Fund Balance, in accordance with the policy adopted in enrolled ordinance 170-87.

In 2017, the major projects include the Muskego Park entrance road and campground road, and Retzer Nature Center roadway.

Location

The Waukesha County Department of Parks and Land Use is responsible for the pavement management of the Government Center Complex, Expo, Parks, Ice Arenas, Golf Courses, Boat Launches and various other Waukesha County Facilities. The Department maintains 21 miles of road, 40 miles of paved trails, and 421,000 square yards of parking area.

Analysis of Need

In 1995 the Waukesha County Department of Parks and Land Use (PLU) retained consulting services to provide a Pavement Management Plan to assist in cost-effectively managing the pavement assets for the 6 largest parks. At that time there were 6 park facilities with 243,000 square yards of paved surface. Currently PLU maintains 876,498 square yards of paved surface around the Government Center, remote County facilities and the major parks. This represents approximately 3.6 times as much pavement to maintain. In 2007 the Department changed from the PASER rating to the PAVER system in an effort to coordinate pavement condition analysis and project bidding with the Department of Public Works to save program cost. The PAVER rating process included field surveys of pavement conditions, development of deterioration models, and preparation of a multi-year pavement management plan.

Approximately 80% of the budget will be used for major rehabilitation on sections selected with a PCI below 40. The remaining budget allocation is first utilized for preventative maintenance on sections with a PCI between 67 and 75, selected on best-first basis, concrete repairs and consulting. The goal of these practices is to maintain an average PCI of 70. Anticipated projects may be adjusted due to project coordination efficiencies or accelerated deterioration.

Alternatives

Spot repair with asphalt base patching or sealing road surface has been performed to maintain some function of the roadway or parking area. This could be continued on an annual basis, but will not achieve the desired surface performance or overall PCI rating goal. Reconstruction will be required sooner and risk issues would be more likely to occur.

Ongoing Operating Costs

Maintenance of the existing road conditions requires frequent patching and chip and seal applications in order to provide usable conditions. Operating costs within the next five years will be minimal with the proposed pavement improvements.

Previous Action

Approved as a new program project in the 1997-2001 Capital Plan, continued in the 1998-2002 Plan and 1999-2003 Capital Plan. Approved with a change in scope to include additional pavement in the 2000-2004 plan. Approved as planned in the 2001-2005 plan, 2002-2006 plan, 2003-2007 plan, 2004-2008 plan, 2005-2009 plan, 2006-2010 plan, 2007-2011 plan, and the 2008-2012 plan. Cost update in the 2009-2013 plan. Cost update in the 2010-2014 and 2012-2016 plan. Approved as planned in the 2013-2017 and 2014-2018 plans. Approved with cost update in the 2015-2019 plan. Approved with cost update in the 2016-2020 plan. Approved with a revenue update in enrolled ordinance 170-87.

Project Title:	Pavement Management Plan 2018-2022	**Project #:**	201406
Department:	Parks & Land Use	**Project Type:**	Repaving
Phase:	Program Project	**Sponsor:**	
Budget Action:	C - $ Update	**Manager:**	Dale Shaver, PLU Director
Date:	August 31, 2016		

CAPITAL BUDGET SUMMARY

Year	2018	2019	2020	2021	2022	Total
Program Project						Project
Expenditure Budget	$800,000	$700,000	$700,000	$700,000	$700,000	$3,600,000
Revenue Budget	$0	$0	$0	$0	$0	$0
Net County Cost	$800,000	$700,000	$700,000	$700,000	$700,000	$3,600,000

COST DOCUMENTATION		REVENUE	
2018	$800,000		
2019	$700,000		
2020	$700,000		
2021	$700,000		
2022	$700,000		
Total Project Cost	$3,600,000	Total Revenue	$0
		REVENUE BUDGET	$0

Project Scope & Description

In cooperation with the Public Works Department, retained consultant services to update the Pavement Management Plan, originally done for the Parks System in 1995. The Plan establishes a uniform procedure for pavement maintenance by establishing a Pavement Condition Index (PCI). The PCI is a rated scale of 1-100 based on the state of the asphalt. Pavement repairs are scheduled based on rating. A PCI rating over 70 is satisfactory, and pavement ratings improve up to a scale maximum of 100. The goal is to maintain an average pavement PCI rating of 70 ("satisfactory") or better. The Expo center is not included in the current scope for major project or PCI calculation pending the completion of the Expo master plan. Money may be allocated at the Expo Center for minor repairs as necessary.

Location

The Waukesha County Department of Parks and Land Use is responsible for the pavement management of the Government Center Complex, Expo, Parks, Ice Arenas, Golf Courses, Boat Launches and various other Waukesha County Facilities. The Department maintains 21 miles of road, 40 miles of paved trails, and 421,000 square yards of parking area.

Analysis of Need

In 1995 the Waukesha County Department of Parks and Land Use (PLU) retained consulting services to provide a Pavement Management Plan to assist in cost-effectively managing the pavement assets for the 6 largest parks. At that time there were 6 park facilities with 243,000 square yards of paved surface. Currently PLU maintains 876,498 square yards of paved surface around the Government Center, remote County facilities and the major parks. This represents approximately 3.6 times as much pavement to maintain. In 2007 the Department changed from the PASER rating, to the PAVER system in an effort to coordinate pavement condition analysis and project bidding with the Department of Public Works to save program cost. The PAVER rating process included field surveys of pavement conditions, development of deterioration models, and preparation of a multi-year pavement management plan.

Approximately 80% of the budget will be used for major rehabilitation on sections selected with a PCI below 40. The remaining budget allocation is first utilized for preventative maintenance on sections with a PCI between 67 and 75, selected on best-first basis, concrete replacement and consulting. The goal of these practices is to maintain an average PCI of 70. Anticipated projects may be adjusted due to project coordination efficiencies or accelerated deterioration.

In 2018, the cost increases from $700,000 to $800,000 for parking lots at the NagaWaukee Ice Arena, Government Center, Mental Health Center and Retzer Nature Center.

Alternatives

Spot repair with asphalt base patching or sealing road surface has been performed to maintain some function of the roadway or parking area. This could be continued on an annual basis, but will not achieve the desired surface performance or overall PCI rating goal. Reconstruction will be required sooner and risk issues would be more likely to occur.

Ongoing Operating Costs

Maintenance of the existing road conditions requires frequent patching and seal applications in order to provide usable conditions and extend pavement life. Operating costs within the next 5 years will be minimal with the proposed pavement improvements.

Previous Action

Pavement management prior to 2018 covered in project 200824. Approved as a new project in 2014-2018 plan. Approved with cost update in the 2015-2019 capital plan. Approved as planned in the 2016-2020 capital plan.

Project Title:	Security System Recording & Display Equipment Replacement	**Project #:**	201615
Department:	Sheriff's Department	**Project Type:**	Equipment Replacement
Phase:	Preliminary Design	**Sponsor:**	Sheriff's Department
Budget Action:	As Planned	**Manager:**	Mike Biagioli, IT Manager
Date:	August 30, 2016		

Year	2016	2017	2018	2019	2020	Total
Project Phase	Design/Analysis			Implementation		Project
Expenditure Budget	$55,000	$0	$0	$246,000	$0	$301,000
Revenue Budget	$55,000	$0	$0	$246,000	$0	$301,000
Net County Cost	$0	$0	$0	$0	$0	$0

COST DOCUMENTATION		**REVENUE**	
Software			
Hardware	$182,500	Jail Assessment Fund Balance Reserves	$301,000
Installation	$44,000		
Training	$0		
Licenses	$0		
Consulting/Implementation	$55,000		
Contingency	$19,500		
Total Project Cost	$301,000	Total Revenue	$301,000
EXPENDITURE BUDGET	$301,000	**REVENUE BUDGET**	$301,000

Project Scope & Description

The Waukesha County Jail has a security electronics system that includes:

- Approximately 320 analog cameras which, send camera images through coaxial cable to master control and other staff monitoring stations.
- 20 DVRs (digital video recorders) which, record and store camera images for approximately 30 days so that staff can access video following an event.
- 1 virtual matrix which connects all of these devices so that they can be utilized by staff to monitor the jail.

The security electronics system was installed in 2005 when the jail was constructed. Portions of the system have been replaced as they have failed including:

- the DVR equipment in 2013,
- the analog matrix switcher was replaced in 2015 to convert the analog matrix to a virtual matrix, and
- analog camera replacements which are funded through the jail equipment replacement plan.

The system is utilized 24 hours a day and is a vital component of the jail's safety and security monitoring ability. It is clear the system has a defined life span so the Sheriff's Department is requesting that portions of the system be replaced prior to failure. Per the current security electronics vendor, a seven year life (2013-2019) on the DVR equipment is appropriate as it is utilized 24-hours-a-day.

With this project, the Sheriff's Department is requesting to replace the current DVR system with a server based recording system. The current DVR system is utilized to record approximately 320 cameras and store those recordings for approximately 30 days. When staff require recordings of incidents or events, the system allows staff to review the recording to identify the desired event and save that event recording electronically or on a disk for future review. The system records over prior recordings so if a request is made for an incident that is older than the 30 day period, the recording is likely not available.

The server based system provides fail safe recording capabilities so if one portion of the system goes down, the live view and recordings of all the cameras are still maintained. The server based recording system will be supported longer than the current DVR system because it is going to support the most recent versions of Microsoft and will continue to allow the jail to continue to transition to a fully digital security electronics system. It should be noted that as long as the current cameras are analog cameras, they system will continue to be a digital/analog hybrid system.

This project also includes $30,000 to complete a study to review available alternatives for the replacement of the current video visitation system. The current video visitation equipment is eleven years old. The vendor that maintains the equipment indicates that, due to the age of the equipment, that it is nearing its useful life and that the Sheriff's Department should begin the process to plan its replacement. Since there are number of different replacement options that the Department could consider, funds to complete a study to identify replacement options, with the best return on investment, are being requested. Following the study, video visitation replacement is funded in a separate capital project (#201702).

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Project Title:	Security System Recording & Display Equipment Replacement	Project #:	201615
Department:	Sheriff's Department	Project Type:	Equipment Replacement
Phase:	Preliminary Design	Sponsor:	Sheriff's Department
Budget Action:	As Planned	Manager:	Mike Biagioli, IT Manager
Date:	August 30, 2016		

Location
Waukesha County Jail

Analysis of Need
The security electronics system is vital to the daily operations of the jail. Without the security electronics system, additional staff would be required to monitor movement into, out of, and throughout the jail in order to ensure that only authorized individuals are in the facility. This would result in significant additional personnel costs to provide necessary levels of operational and facility security.

Alternatives
The security electronics system is critical to the operation of the jail. As previously noted there are over 320 cameras in the jail to monitor doors, elevators, halls, pods, medical services, kitchen, laundry, program areas, etc.

Utilize overtime to monitor the building. The camera system is so vital to the daily operation of the jail that when portions of the system are down, additional staff are brought in on overtime to provide the monitoring ability that the cameras provide until the system is operational. Monitoring using personnel is extremely cost prohibitive. A correctional officer currently costs about $45 per hour of overtime on average (including WRS and Social Security) so the money budgeted for this project would only purchase about 5,500 hours of overtime, which would not even be enough funding for one person to monitor one post for an entire year so it is the option of last resort.

Replace the current DVR system with another DVR system. When the jail security electronics system was installed in 2005, digital security electronic systems were not the norm in the corrections field. Now, digital systems are becoming the industry standard. Although the current DVR equipment can accept both digital and analog camera equipment, when these replacement projects become necessary, it makes financial sense to upgrade the equipment so that it will be supported for the rest of the life of the equipment. The concern is that if the Department were to just replace the current DVR equipment with the same DVR equipment in 2019, the equipment might not be supported through the full useful life of the equipment or the Department might not be able to purchase replacement parts if the DVR equipment breaks.

Ongoing Operating Costs
The studies conducted in 2016 will help determine on-going costs associated with the security system recording equipment replacement as well as the replacement of the video visitation system. It should be noted that if the Department were to acquire digital cameras in the jail facility, the Department would need to pay a one-time software licensing cost for each camera that is installed in the security electronics system.

Previous Action
Approved as a new project in the 2016-2020 capital plan.

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Project Title:	Jail Video Visitation System Replacement	**Project #:**	201702
Department:	Sheriff's Department	**Project Type:**	Equipment Replacement
Phase:	Preliminary Design	**Sponsor:**	Sheriff's Department
Budget Action:	New	**Manager:**	Mike Biagioli, IT Manager
Date:	August 30, 2016		

CAPITAL BUDGET SUMMARY

Year	2017	2018	2019	
Project Phase		Implementation		Total Project
Expenditure Budget	$0	$450,000	$0	$450,000
Revenue Budget	$0	$450,000	$0	$450,000
Net County Cost	$0	$0	$0	$0

COST DOCUMENTATION		**REVENUE**	
Hardware/Software	$400,000	Jail Assessment	$450,000
Contingency	$50,000	Fund Balance Reserves	
Total Project Cost	$450,000	Total Revenue	$450,000
EXPENDITURE BUDGET	$450,000	**REVENUE BUDGET**	$450,000

Project Scope & Description

When the 2005 jail was planned on the current site, a decision was made that visitation with the public would be allowed only by video visitation. This option was selected due to operational efficiencies of video visits including reduced inmate transports; eliminating the opportunity for contraband entering the facility from visitors; and reduced monitoring requirements between inmate and visitor.

The current video visitation equipment is 11 years old. The vendor that maintains the equipment indicates that, due to the age of the equipment, the system is nearing the end of its useful life, and that the Sheriff's Department should begin the process to plan its replacement. The vendor further indicates that while replacement parts to repair the equipment are currently available, as the system continues to age, it will become more difficult to locate replacement parts. Based on the need to replace the system, the Sheriff's Department hired a consultant to conduct a study to investigate replacement options that could result in a new system.

Current System:

The video visitation system is an analog system that consists of approximately 95 video visitation booths located in the public visitation area and in the inmate pods. There is a Knox matrix audio/video switcher that connects the visitor to the inmate. This type of analog systems is being phased out in the electronic security industry.

Concerns with Current Video Visitation Process:

- ***The current video visitation process is staff intensive.*** The current system requires clerical staff to be made available during visitation hours so that they can check people in and set up the visits.
- ***The visitation process distracts correctional officers from their responsibility of supervising inmates*** *as the correctional officers need to direct inmates for video visits.*
- ***The current video visitation system is not convenient for the public.*** There is limited parking outside the jail. There are limited visitation hours due to staffing issues. Due to limited hours, each member of the public is only able to visit twice a week. The public lobby visitation booths can only accommodate two visitors at a time.
- ***The current video visitation process is not family friendly.*** Children are not permitted to be left unattended in the jail lobby. If a spouse of an inmate and their two children show up for a visit, the visit is not permitted because neither child can be left unattended (in either the visitation booth or in the lobby), nor can three people visit at one time.

Features of Video Visitation Systems:

Since the implementation of the current video visitation system in 2005, there have been technological improvements in video visitation systems that would result in a reduction of staff involvement in the video visitation process, make the video visitation process more convenient for the general and professional public, and generate additional ongoing money for the Sheriff's Department. New features in video visitation systems include:

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- ***Internet visits*** so the general public can visit from home and attorneys can visit from their office via the internet. There are many benefits which include the ability to conduct visits after the jail lobby has closed; public convenience as visitors do not have to drive to the jail or wait in line to visit; and an increase in revenue because the public and attorneys are charged a fee for off-site visits.
- ***Visit tracking*** ensures that visitation policies are applied consistently. This feature also allows the Department to generate additional revenue by charging individuals who choose to purchase additional visits.
- ***Conflict checking*** places restrictions on visitors so that they are not at the facility together if there are outside conflicts.

Location
Waukesha County Jail

Analysis of Need
Department of Corrections Administrative Code requires correctional facilities to provide an opportunity for visitation. The jail was not constructed to allow in-person visits, so this is critical equipment for the jail to ensure visits are permitted. Although the system is currently functioning and the current security electronics provider indicates the system can continue to be supported through proactive maintenance and continued repair, the Department does not want to wait until the point of failure before planning its replacement.

System Alternatives
1. Replace the current video visitation system with a comparable system fully funded by Waukesha County. By replacing the current system with a comparable system, the Sheriff's Department would forgo opportunities to utilize technology to improve efficiency, reduce staff involvement in the visitation process, and would be forgoing revenue associated with home or office visitation options.
2. Replace the current video visitation system with an enhanced system that would allow for home and office visits (as proposed in this project). While the Department would like to expand the current video visitation capabilities, Sheriff's Department staff do not possess the workload capacity or knowledge required to troubleshoot issues with offsite visits should they occur. The Department will need to contract with a provider that has a process in place to ensure success of offsite visits.

Regardless of which option is selected, the Department would like to be able to consider either adding or relocating some of the existing video visitation booths (currently located in the lobby, used by visitors) to the pods if there is adequate room and if it is not cost prohibitive. If the system that allows for off-site visitation was selected, the additional visitation booths in the pods could generate additional revenue for the Department by providing inmates with greater opportunity to visit.

System Acquisition Alternatives
The consultant's report included four different system acquisition options and four different capital and on-going costs associated with each option. The four options that were reviewed include:
1. Lease a combined inmate phone and video visitation system
2. Lease a stand-alone video visitation system
3. Lease a video visitation system through an existing inmate phone provider
4. Purchase and own an enhanced visitation system, with contracted system support

The consultant's study recommended option 4 as the most cost-effective, with the Sheriff's Department replacing the existing system with an enhanced video visitation system and contract with a video visitation software provider who will be responsible for remote management, maintenance and revenue collection for the Department.

Ongoing Operating Costs
Depending on the vendor selected, on-going operating costs could be addressed through a revenue-sharing arrangement between the video visitation software provider and the County. Dependent on the vendor selected, a portion of the revenue generated by the video visitation system would be retained by the vendor to compensate them for their staff time to troubleshoot technical issues, gather and disburse revenue and conduct maintenance issues on the system. Based on inquiries with similar video visitation systems, it is projected that the new system could generate $10,000-$15,000 annually.

Previous Action
Funding for system replacement study included in capital project #201615

Project Title:	HRIS / Payroll System Implementation	**Project #:**	201617
Department:	DOA - Information Technology	**Project Type:**	Information Technology
Phase:	Preliminary Design	**Sponsor:**	HR Mgr. Jim Richter & Accounting Services Mgr. Larry Dahl
Budget Action:	C - $ Update, C - Rev Update	**Manager:**	Mike Biagioli, IT Manager
Date:	August 30, 2016		

CAPITAL BUDGET SUMMARY

Year	2016	2017	2018	
Project Phase	Analysis Design	Software Selection/ Implementation	Implementation	Total Project
Expenditure Budget	$75,000	$400,000	$952,000	$1,427,000
Revenue Budget	$0	$0	$0	$0
Net County Cost	$75,000	$400,000	$952,000	$1,427,000

COST DOCUMENTATION		**REVENUE**	
Software	$320,000	EUTF & General Fund Balance	$1,352,000
Vendor Implementation	$300,000		
Consulting/Implementation	$552,000		
Training	$30,000		
Contingency	$225,000		
Total Project Cost	$1,427,000		
EXPENDITURE BUDGET	$1,427,000		

Project Scope & Description

This project addresses the procurement and replacement of the human resource and payroll system. Based on a 2016 study in the first year of this project, it has been determined that the current system is near the end of its life cycle. The current vendor is no longer providing enhancements, which does not provide the opportunity to create efficiencies and effective workflows and processes. The second year of the project funds the services of a consultant to assist in the assessment and selection of the appropriate software vendor. Project funds in the second year are also budgeted to begin implementation after vendor selection.

The new system will allow for process improvements in the area of integration between existing systems, a centralized database, the minimization of shadow systems, ability to establish electronic vs manual workflows and processes, more effective communications with management and employees, streamlined payroll processing, management query and reporting tools, and more cost effective software delivery by using cloud based systems. Specific HR and Payroll areas to be improved include benefits administration (including interfaces with third-party benefit providers), HR administration, Affordable Care Act management, new hire reporting to meet federal requirements, recruiting, employee self-service, document management, performance management, management reporting, and dashboards.

Location

All County departments.

Analysis of Need

The current payroll system has been in use since 2004, and will need to be replaced at some point in the next few years. The current vendor no longer provides enhancements which will enable the County to meet its regulatory reporting requirements. New system functionality will replace functionality that is now done through a variety of manual tasks. This project will also transition payroll and HR information systems from self-hosted applications to a cloud-based solution, freeing up internal IT resources and eliminating the server infrastructure environment supporting the current in-house systems.

Alternatives

- Continue with the current payroll system until replacement is required.
- Pursue the needed Human Resources functionality in a number of separate projects.

Ongoing Operating Costs: Ongoing cost impacts are expected to include annual software licensing and maintenance charges, partially offset by savings from operating efficiencies.

Previous Action

Approved as a new project in the 2016-2020 capital plan.

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