

ENVIRONMENT COMMITTEE AGENDA

June 13, 2019 – North Conference Room

21630 11th Avenue South – Des Moines 98198

6:00 PM – 6:50 PM

1. Approval of the minutes of 5.9.2019 meeting (Chair to call the meeting to order at 6:00 pm)
2. CIP Project Updates (Informational – 6:00 to 6:30 pm)
Staff will provide an update on the 2019 Capital Improvement Projects.
3. Draft 2020-2025 SWM CIP (Informational - 6:30 to 6:50 pm)
Staff will present a draft SWM CIP for years 2020-2025.

DRAFT MINUTES - ENVIRONMENTAL COUNCIL COMMITTEE MEETING 5.9.2019

The meeting was called to order @ 6:00 PM, Thursday, May 9, 2019, in the Finance Department room @ 21630 11th Avenue South, Des Moines with the following in attendance:

Council Members

Traci Buxton (Chair)
Robert Back
Matt Pina

City Staff

Dan Brewer – Chief Operations Officer
Brandon Carver, PW Director
Loren Reinhold, SWM Utility Manager
Tyler Beekley, Civil Engineer II
Matt Hutchins, Assistant City Attorney
Peggy Volin, Admin Asst. II

AGENDA:

1. Approval of 3.14.2019 Minutes
2. NPDES Program Update
3. Draft 2019-2024 NPDES Permit
4. 2019 Work Plan

MEETING:

1. Approval of the minutes of 3.14.2019 meeting – unanimous approval.
2. NPDES Program Update: Tyler Beekley, SWM Civil Engineer II provided an update to the Committee on the NPDES Program by giving a brief history of the permit, an explanation of the various requirements and how we are meeting them, and future updates to the permit.
3. Draft 2019-2024 NPDES Permit: Tyler Beekley, SWM Civil Engineer II briefed the Committee on the status of the City's NPDES Permit. He stated that our current permit expires on July 31, 2019 and on August 1, 2019 a new permit will be issued and go into effect. Formal drafts of the new permit have been issued and final permits will be reissued on July 1, 2019 after the Department of Ecology considers all public comments and makes the final changes, the new permit will go into effect on August 1, 2019.
4. 2019 Work Plan – Loren Reinhold, SWM Engineering Manager briefly went over the final 2019 Work Plan for the Environment Committee. He explained that this work plan should be viewed as a living document and is open to items being added and/or removed throughout the year.

Meeting adjourned at 6:50 pm

Minutes respectfully Submitted by: Peggy Volin, Admin Asst II

CITY OF DES MOINES
DRAFT 2020-2025 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

Deedene Plat Outfall Replacement

451,828

Summary Project Description:

This project assumes the replacement of 300 linear feet of outfall pipe with outfall diffuser and dissipator pad, and installing 2 catch basins and 150 feet of 12-inch pipe with road restoration for redirecting flows from the west side of Marine View Drive to the east side of MVD to avoid the slide area

CIP Category: Surface Water Mgmt

Managing Department: Plan, Build & PW Admin

Justification/Benefits: In 2016, following heavy rains and shoreline erosion from high tides and strong waves, a landslide occurred at the base of the ravine adjacent to Puget Sound at 260th Street damaging the 8-inch storm pipe that serves the Deedene Plat as well as a short segment of Marine View Drive. This project assumes a full replacement of the existing storm outfall plastic (PVC) pipe that is buried with a more flexible and durable high-density polyethylene (HDPE) that is more appropriate for a slide area and can be placed above ground and anchored in a manner that protects the pipe if the earth shifts.

PROJECT SCOPE	
Expenditures	Total Budget
Design	166
Land & Right of Way	-
Construction	224
Contingency	20
Total Expenditures	410

ANNUAL ALLOCATION									
Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/18	2019	2020	2021	2022	2023	2024	2025		
100	66								
		224							
		20							
100	310	-	-	-	-	-	-	-	-

Funding Sources	
	Total Budget
Surface Water Utility	410
Total Funding	410

Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/18	2019	2020	2021	2022	2023	2024	2025		
100	310								
100	310	-	-	-	-	-	-	-	-

OPERATING IMPACT	
Operating Impact	6 Year Total
Revenue	-
Expenses	-
Net Impact	-

ANNUAL OPERATING IMPACT									
	2019	2020	2021	2022	2023	2024	2025		
	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-

Deepdene Plat Outfall Replacement



CITY OF DES MOINES
DRAFT 2020-2025 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

216th 11th Ave Intersection Pipe Replacement

451,831

Summary Project Description:

This project involves installing approximately 400 feet of 12-inch storm pipe and seven catch basins, removal of existing facilities (or abandonment in place filled with control density fill), and roadway restoration within the intersection area including trench patching, replacement of impacted curb, gutter, sidewalk, and pavement overlay).

CIP Category: Transportation - Capital Project
 Managing Department: Plan, Build & PW Admin

Justification/Benefits: Following inspection of the drainage system in preparation for the design of the Gateway Segment 3 Project, it was discovered that the storm system within the intersection of 216th Street and 11th Avenue was in very poor shape with segments of the system crushed and other segments partially full of standing water and unable to flow properly. All new drainage is proposed within the intersection with the project constructed as a separate bid schedule to the Gateway Segment 3 Project.

PROJECT SCOPE	
Expenditures	Total Budget
Design	30
Land & Right of Way	
Construction	230
Contingency	50
Total Expenditures	310

ANNUAL ALLOCATION									
Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/18	2019	2020	2021	2022	2023	2024	2025		
30									
		230							
		50							
30		280							

Funding Sources	
	Total Budget
Surface Water Utility	310
Total Funding	310

Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/18	2019	2020	2021	2022	2023	2024	2025		
30		280							
30		280							

OPERATING IMPACT	
Operating Impact	6 Year Total
Revenue	-
Expenses	-
Net Impact	-

ANNUAL OPERATING IMPACT									
	2019	2020	2021	2022	2023	2024	2025		
	-	-	-	-	-	-	-		
	-	-	-	-	-	-	-		



CITY OF DES MOINES
DRAFT 2020-2025 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

DMAMD 200th Stormwater Extension

451,000

Summary Project Description

Approximately 175 feet of new 12-inch storm pipe will be installed in the vicinity of the intersection of DMAMD and 200th Street. Costs include traffic control, deep trenching (average 9-feet deep) and shoring.

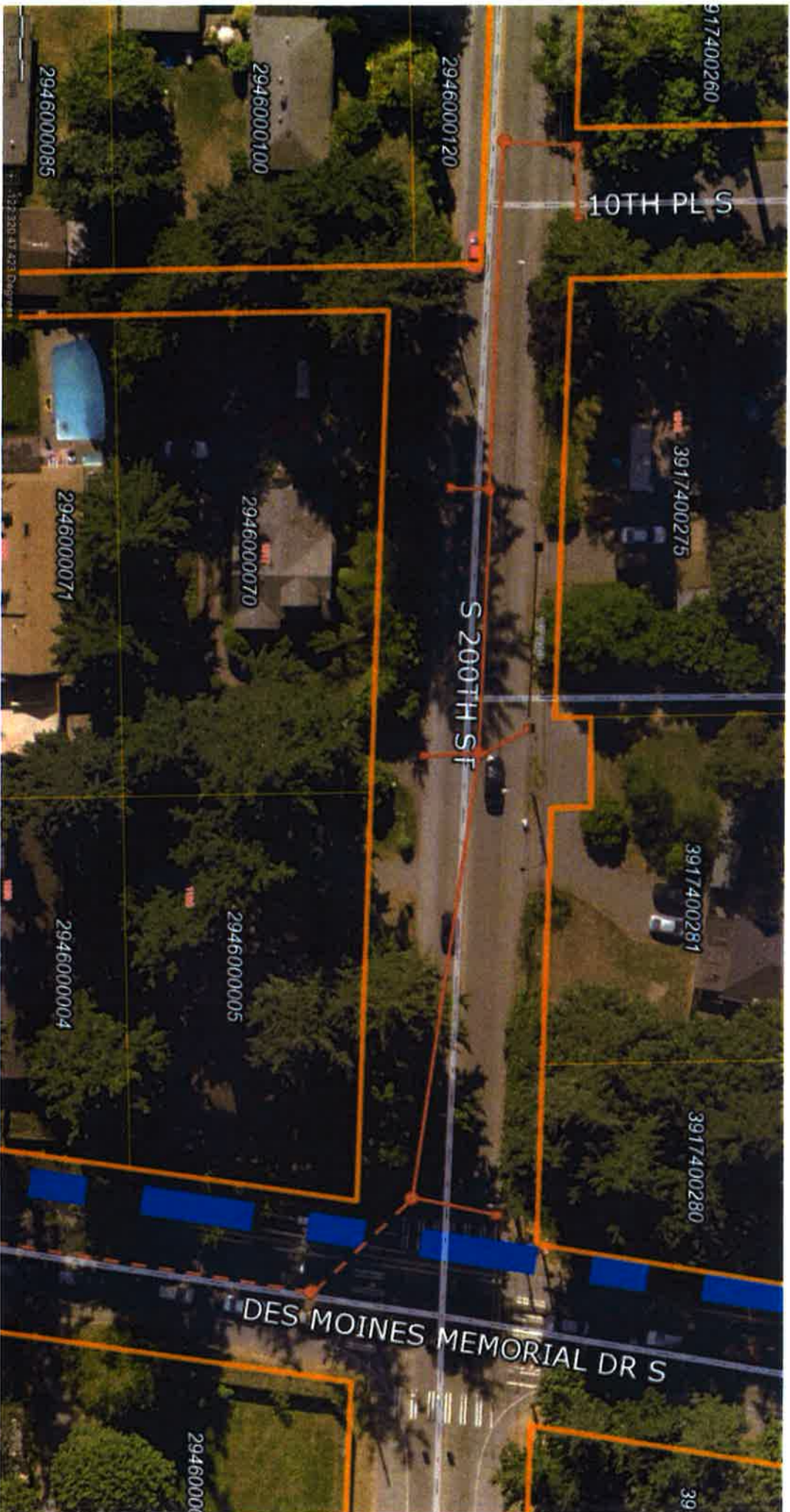
CIP Category: Surface Water Mgmt

Managing Department: Public Works

Justification/Benefits: Drainage along 200th Street discharges into a series of drywells (ground infiltration) located with the road sag just west of Des Moines Memorial Drive (DMAMD), which are prone to clogging and long term infiltration efficiencies resulting in flooding of the roadway. The new system along DMAMD will enable these drywells to be eliminated when future 200th Street drainage is connected to the new intersection drainage. Design and construction will be done by the City of SeaTac in accordance with an agency interlocal agreement.

PROJECT SCOPE			ANNUAL ALLOCATION									
Expenditures		Total Budget	Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
Design		6	12/31/18	2019	2020	2021	2022	2023	2024	2025		
Land & Right of Way		-										
Construction		155	-									
Contingency		59										
Total Expenditures		220										
Funding Sources			Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
Surface Water Utility		220	06/30/18	2019	2020	2021	2022	2023	2024	2025		
Total Funding		220										
OPERATING IMPACT			ANNUAL OPERATING IMPACT									
Operating Impact		6 Year Total	2019	2020	2021	2022	2023	2024	2025			
Revenue		-	-	-	-	-	-	-	-	-	-	-
Expenses		-	-	-	-	-	-	-	-	-	-	-
Net Impact		-	-	-	-	-	-	-	-	-	-	-

#N/A



CITY OF DES MOINES
DRAFT 2020-2025 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

Pond Safety Improvements

451

Summary Project Description:

This project adds or replaces dilapidated wooden fencing with vinyl coated chainlink fencing at the following areas: Fence replacement for the entire pond located on Marine View Drive across from Taco Time; new fencing around the control panel and pump station adjacent to Taco Time; wooden fence replacement to the pond on 250th Street w/o 16th Ave.; wooden fence replacement to the ponds at 194th/5th and 193rd w/o 6th. A total of approximately 1,500 feet of fencing with gate assemblies.

CIP Category: Surface Water Mgmt

Managing Department: Public Works

Justification/Benefits: Ponds that have wooden fencing bordering adjacent properties need to be replaced with more durable vinyl coated chainlink fencing that will last longer. Several of the ponds have fencing that have been damaged from high winds and need to be replaced. The Washington Cities Insurance Authority (WCIA) also recommends that ponds with permanent pools be contained with a 6-foot fence for safety. The newly built electrical control panel and pump station adjacent to Taco Time also needs to be enclosed with a fence for safety/security.

PROJECT SCOPE	
Expenditures	Total Budget
Design	-
Land & Right of Way	-
Construction	90
Contingency	-
Total Expenditures	90

ANNUAL ALLOCATION									
Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/18	2019	2020	2021	2022	2023	2024	2025		
-	-	-	-	-	-	-	-	-	-
48	42	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
48	42	-	-	-	-	-	-	-	-

Funding Sources	
	Total Budget
Surface Water Utility	90
Total Funding	90

Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/18	2019	2020	2021	2022	2023	2024	2025		
48	42	-	-	-	-	-	-	-	-
48	42	-	-	-	-	-	-	-	-

OPERATING IMPACT	
Operating Impact	6 Year Total
Revenue	-
Expenses	-
Net Impact	-

ANNUAL OPERATING IMPACT									
	2019	2020	2021	2022	2023	2024	2025		
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-

CITY OF DES MOINES
DRAFT 2020-2025 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

6th Ave/239th Pipe Replacement

451.813

Summary Project Description:

This project proposes to replace the existing 8-inch drainage system on the west side of 6th Ave S, and connect to the drainage system on 239th Street. This project will also install a new 18-inch HDPE storm drain outfall from 239th St. to Puget Sound. The stairway above the outfall pipe will be replaced as part of this project.

CIP Category: Surface Water Mgmt

Managing Department: Plan, Build & PW Admin

Justification/Benefits: During major storms the drainage system the small 8-inch conveyance system within 6th Avenue S, is overcome and overflows into the properties on the west side of the street. In addition, the outfall pipe from S. 239th is comprised of coated corrugated steel pipe that has separated in the lower section of the pipe that leads over the bank to the Sound. This project proposes to upgrade the 8-inch pipe on 6th Avenue to standard 12-inch and replace the corrugated steel outfall pipe with HDPE pipe. This project also proposes to replace the stairway that is located above the outfall pipe. This is a high-priority project (CIP-39) listed in the 2015 SWM Comprehensive Plan.

PROJECT SCOPE

Expenditures	Total Budget
Design	98
Land & Right of Way	-
Construction	167
Contingency	61
Total Expenditures	326

ANNUAL ALLOCATION

Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/18	2019	2020	2021	2022	2023	2024	2025	
-	98							
-			167					
-	10	51						
-	108	218						

Funding Sources

	Total Budget
Surface Water Utility	326
Total Funding	326

OPERATING IMPACT

Operating Impact	6 Year Total
Revenue	-
Expenses	-
Net Impact	-

ANNUAL OPERATING IMPACT

	2019	2020	2021	2022	2023	2024	2025
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-



CITY OF DES MOINES
DRAFT 2020-2025 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

Barnes Creek/Kent-Des Moines Rd Culvert

451

Summary Project Description:

Project improvements will include the installation of an approximately 100-foot long pre-cast concrete box culvert along with concrete wing-walls at both ends. The design of the culvert will be performed by the Washington State Department of Transportation per Local Agency Agreement QC82959. The design will meet current fisheries requirements. The dramatic elevation change from upstream to downstream and the need to moderate velocity for fish passage may require that a special energy dissipater and/or fish ladder be installed at the culvert outlet.

CIP Category: Surface Water Mgmt
 Managing Department: Plan, Build & PW Admin

Justification/Benefits: This culvert replacement is needed to convey peak predicted flows without flooding Kent-Des Moines Road. At this point a reinforced concrete box culvert is planned to replace the existing undersized culvert. However, the new culvert size will need to be designed to meet current Hydraulic Code to allow both high- and low-flow fish passage. An energy dissipater will be included at the downstream end of the culvert (with a fish ladder). This project was identified in the Lower Massey Creek Basin Plan and Alternative Analysis. A culvert survey made in 2015 indicated the existing culvert is in poor condition.

PROJECT SCOPE			ANNUAL ALLOCATION									
Expenditures		Total Budget	Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
Design		372	12/31/18	2019	2020	2021	2022	2023	2024	2025		
Land & Right of Way		20		20								
Construction		1,037		17		1,020						
Contingency		534		284	50	200						
Total Expenditures		1,963		464	279	1,220						
Funding Sources		Total Budget	Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
Surface Water Utility		1,963	12/31/18	2019	2020	2021	2022	2023	2024	2025		
Total Funding		1,963		464	279	1,220						
OPERATING IMPACT			ANNUAL OPERATING IMPACT									
Operating Impact		6 Year Total	2019	2020	2021	2022	2023	2024	2025			
Revenue		-	-	-	-	-	-	-	-	-	-	-
Expenses		-	-	-	-	-	-	-	-	-	-	-
Net Impact		-	-	-	-	-	-	-	-	-	-	-



CITY OF DES MOINES
DRAFT 2020-2025 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

Sub-Avg (2010 to 2010)

451

Summary Project Description:

This project proposes to install approximately 910 feet of 12 inch storm pipe, 9 catch basins along the west side of 8th Avenue and replace an existing manhole at the intersection of S 265th Place and 8th Avenue where the new storm drain system connects to the existing system.

CIP Category: Surface Water Mgmt
 Managing Department: Public Works

Justification/Benefits: Presently most of the runoff from 8th Avenue sheetflows on the properties west of 8th Avenue and is not collected into the existing system located on the east side of the road. The purpose of this project is to collect and prevent runoff from 8th Avenue from exacerbating a landslide hazard located west of the project. This is a high priority project listed in the 2015 SWM Comprehensive Plan.

PROJECT SCOPE	
Expenditures	Total Budget
Design	58
Land & Right of Way	-
Construction	199
Contingency	28
Total Expenditures	285

ANNUAL ALLOCATION									
Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12-31-18	2019	2020	2021	2022	2023	2024	2025		
	58								
			199						
	6	22							
	64	221							

Funding Sources	
	Total Budget
Surface Water Utility	285
Total Funding	285

Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12-31-18	2019	2020	2021	2022	2023	2024	2025		
	64	221							
	64	221							

OPERATING IMPACT	
Operating Impact	6 Year Total
Revenue	-
Expenses	-
Net Impact	-

ANNUAL OPERATING IMPACT									
	2019	2020	2021	2022	2023	2024	2025		
	-	-	-	-	-	-	-		
	-	-	-	-	-	-	-		



CITY OF DES MOINES
DRAFT 2020-2025 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

Soundview Dr./Redondo Beach Dr. Pipe Upgrade Project

451

CIP Category: Surface Water Management

Managing Department: Public Works

Justification/Benefits:

Summary Project Description:
 Install 250 feet linear feet of 12-inch storm pipe between Soundview Drive and Redondo Beach Drive. Relocate approximately 30 feet of 24-inch concrete pipe at the tributary crossing below Redondo Beach Drive north of 287th Street and replace the creek trash rack structure at 28742 Soundview Drive. Project also includes installation of 5 catch basins and pavement restoration.

PROJECT SCOPE	
Expenditures	Total Budget
Design	93
Land & Right of Way	-
Construction	125
Contingency	44
Total Expenditures	262

ANNUAL ALLOCATION						
Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/18	2019	2020	2021	2022	2023	2024
	93					
		125				
	9	35				
	102	160				

Funding Sources	
	Total Budget
Surface Water Utility	262
Total Funding	262

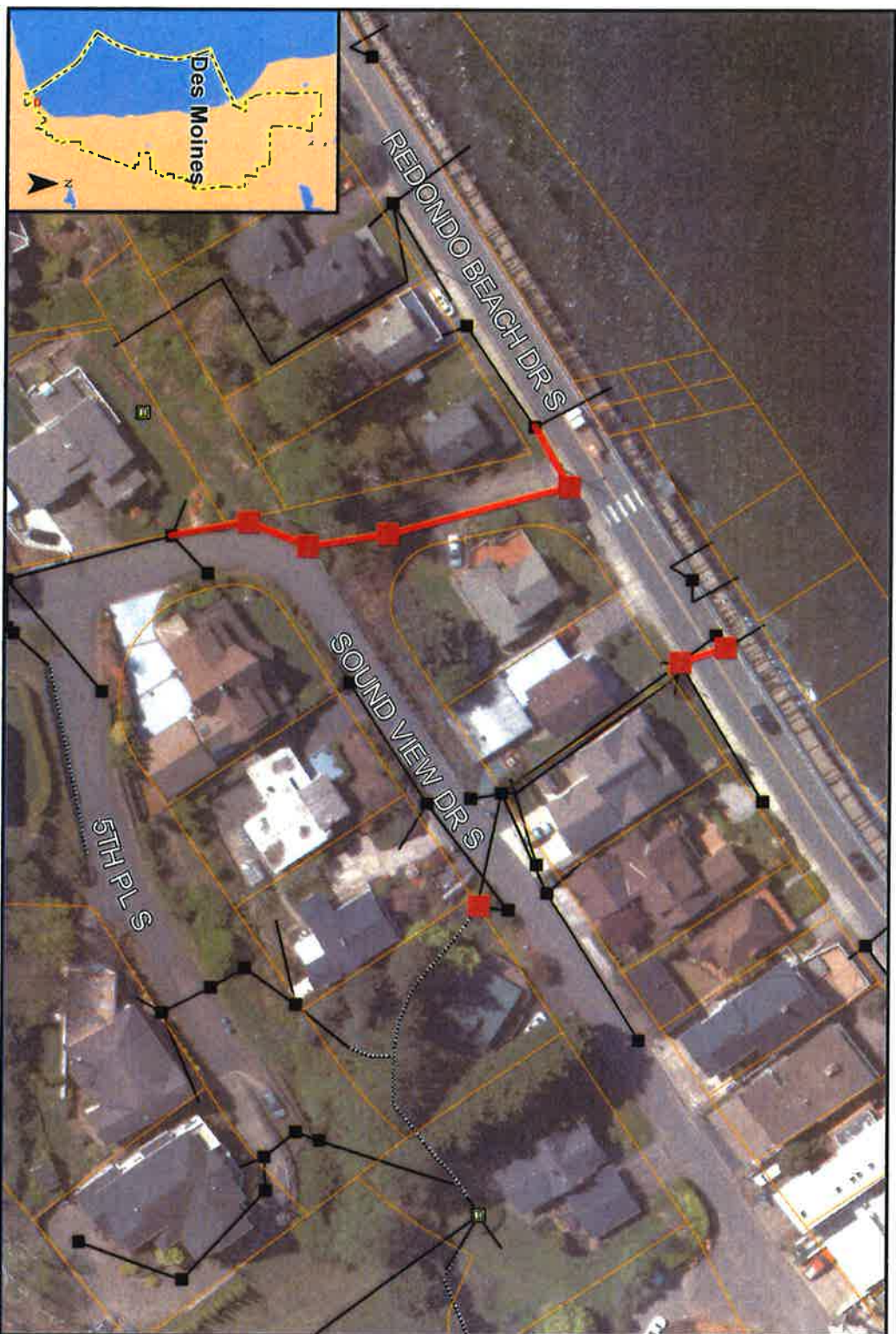
Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/18	2019	2020	2021	2022	2023	2024
	102	160				
	102	160				

OPERATING IMPACT	
Operating Impact	6 Year Total
Revenue	-
Expenses	-
Net Impact	-

ANNUAL OPERATING IMPACT						
	2019	2020	2021	2022	2023	2024
	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-

#N/A

Soundview Drive/Redondo Beach Drive Pipe Upgrade



CITY OF DES MOINES
DRAFT 2020-2025 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

N. Fork McSorley Ck Diversion

451

Summary Project Description:

This project proposes to install a diversion structure on 20th Ave. S. between S. 244th Pl. and 245th Pl. From the diversion structure a new 24-in storm bypass pipe will be installed on the west side of 20th Avenue, turn west and follow the south side of 245th Pl and then to McSorley Creek. This project also includes pavement restoration, replacement of curb and gutter and minimal dredging of McSorley Creek and bank stabilization near the discharge point of the bypass pipe.

CIP Category: Surface Water Mgmt
 Managing Department: Plan, Build & PW Admin

Justification/Benefits: When the Des Moines Trace Subdivision was developed in the early 1980's a segment of the north fork of McSorley Creek was relocated to a narrow rock lined channel within a 15-foot wide drainage easement along the north side of the subdivision (lots 14 through 25). Over time this channel has filled in with sediment and is overgrown with canary reed grass causing the channel to overflow and flood both the subdivision lots and the adjacent properties to the north. This project will provide a flow diversion whereby normal flows will continue into the creek section but high flows are bypassed to a lower point in the channel. As part of this project, the channel section across lots 17-25 will be dredged. This is a high-priority project (CIP-30) identified in the 2015 SWM Comprehensive Plan.

PROJECT SCOPE	
Expenditures	Total Budget
Design	174
Land & Right of Way	-
Construction	281
Contingency	83
Total Expenditures	538

ANNUAL ALLOCATION									
Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/18	2019	2020	2021	2022	2023	2024	2025		
-	174								
-		281							
-	17	66							
	191	347							

FUNDING SOURCES	
	Total Budget
Surface Water Utility	538
Total Funding	538

Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/18	2019	2020	2021	2022	2023	2024	2025		
-	191	347							
	191	347							

OPERATING IMPACT	
	6 Year Total
Revenue	-
Expenses	-
Net Impact	-

ANNUAL OPERATING IMPACT									
	2019	2020	2021	2022	2023	2024	2025		
-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-		
	-	-	-	-	-	-	-		



CITY OF DES MOINES
DRAFT 2020-2025 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

24th Ave Pipeline Replacement/ Upgrade 451.815

Summary Project Description

Replacement of existing storm drainage system on 24th Avenue from S. 224th to S. 227th Street with approximately 1100 feet of 36-inch pipe and from S. 223rd to S. 224th with approximately 570 feet of 24-inch diameter pipe. This project will coincide with the 24th Avenue S. Improvement Project (Transportation).

CIP Category: Surface Water Mgmt
 Managing Department: Plan, Build & PW Admin

Justification/Benefits: During major storms the drainage system along the east side of 24th Avenue between S. 226th and S. 227th overflows to the pipe system on the west side. These overflows bypass the trunk system which conveys flows to the City Park detention facility and flood properties south of 227th south of Pacific Middle School. This project is recommended in the 1992 Massey Creek Basin Plan and is identified as Projects No. 5 and 23 of the 2015 Surface Water Comprehensive Plan.

PROJECT SCOPE	
Expenditures	Total Budget
Design	77
Land & Right of Way	-
Construction	579
Contingency	180
Total Expenditures	836

ANNUAL ALLOCATION									
Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12-31-18	2019	2020	2021	2022	2023	2024	2025		
28	49								
-	-			579					
-	15		165						
28	64		744						

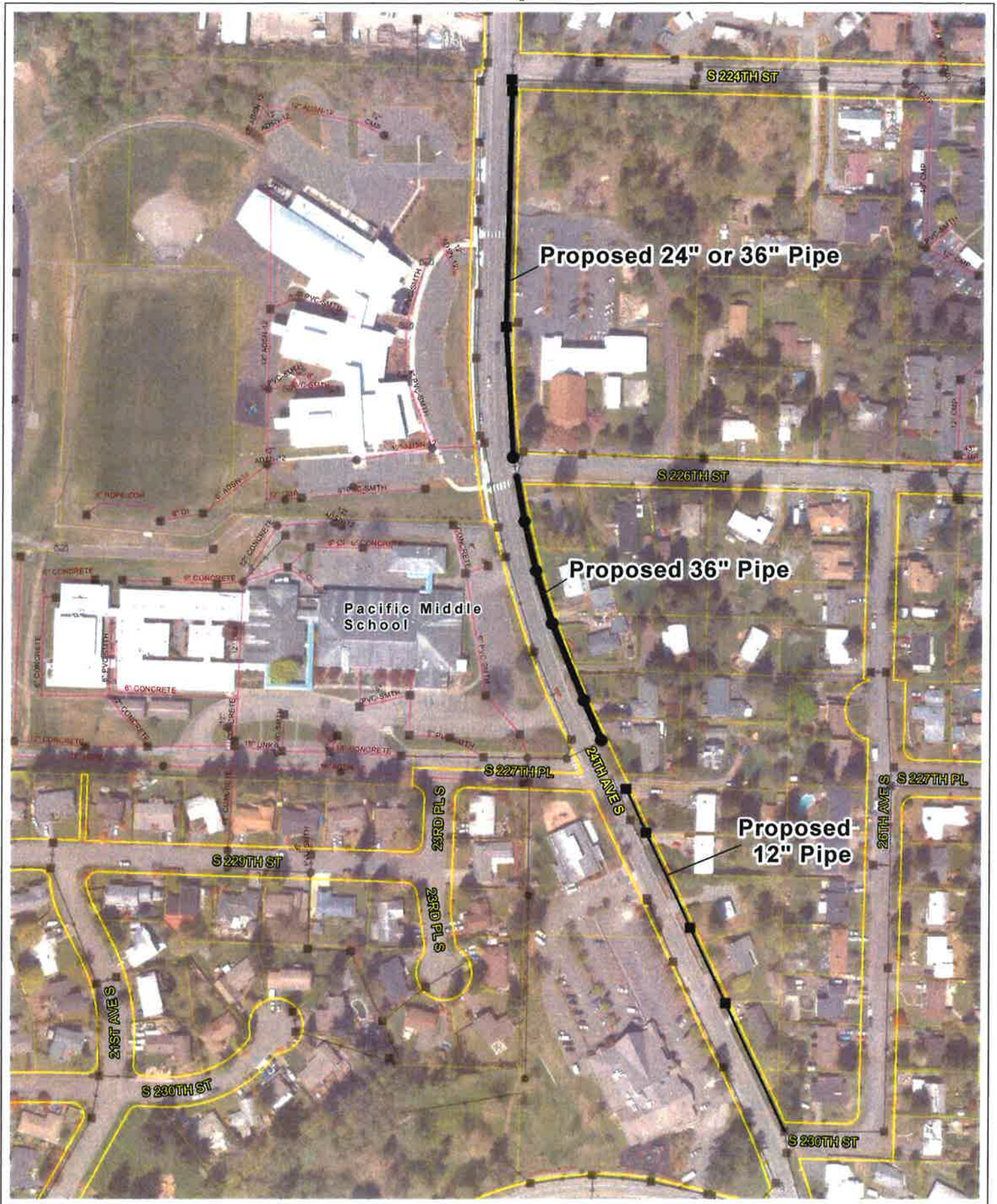
Funding Sources	
	Total Budget
Surface Water Utility	836
Total Funding	836

Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12-31-18	2019	2020	2021	2022	2023	2024	2025		
28	64		744						
28	64		744						

OPERATING IMPACT	
Operating Impact	6 Year Total
Revenue	-
Expenses	-
Net Impact	-

ANNUAL OPERATING IMPACT									
	2019	2020	2021	2022	2023	2024	2025		
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-

24th Ave S Storm Pipeline



Map Generated: Oct 19, 2013
File Name: 24th_Ave_Storm_Pipeline.mxd



Produced by
City of Des Moines GIS



CITY OF DES MOINES
DRAFT 2020-2025 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

DNMID 208th to 212th Pipe Project

451

Summary Project Description:

Replace approximately 1500 feet of existing roadside ditch and corrugated metal pipe along the west side of Des Moines Memorial Drive from 208th Street to 212th Street. Includes installation of 14 manhole structures and minimal road restoration.

CIP Category: Surface Water Mgmt

Managing Department: Plan, Build & PW Admin

Justification/Benefits: The ditch and culvert system along the west side of Des Moines Memorial Drive is insufficient to convey a 25-year storm causing water to pool in the south bound lane of Des Moines Memorial Drive. This project proposes to replace the existing corrugated metal pipe and ditch system with approximately 1500 feet of new 18-inch pipe that would connect to the pipe replacement work made on Des Moines Memorial Drive in 2014. This project is a high priority project (CIP-18) listed in the 2015 SWM Comprehensive Plan.

PROJECT SCOPE			ANNUAL ALLOCATION									
Expenditures		Total Budget	Project to Date 12/31/18	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
Design		119	-		119							
Land & Right of Way		-	-									
Construction		391	-			391						
Contingency		93	-			93						
Total Expenditures		603	-		119	484						

Funding Sources		Total Budget	Project to Date 12/31/18	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
Surface Water Utility		603	-		119	484						
Total Funding		603	-		119	484						

OPERATING IMPACT			ANNUAL OPERATING IMPACT						
Operating Impact		6 Year Total	2017	2020	2021	2022	2023	2024	2025
Revenue		-	-	-	-	-	-	-	-
Expenses		-	-	-	-	-	-	-	-
Net Impact		-	-	-	-	-	-	-	-



CITY OF DES MOINES
DRAFT 2020-2025 CAPITAL IMPROVEMENT PLAN
(Amount in Thousands)

KIDM /16th Avenue A Pipe Replacement

451

Summary Project Description:

CIP Category: Surface Water Mgmt
Managing Department: Plan, Build & PW Admin

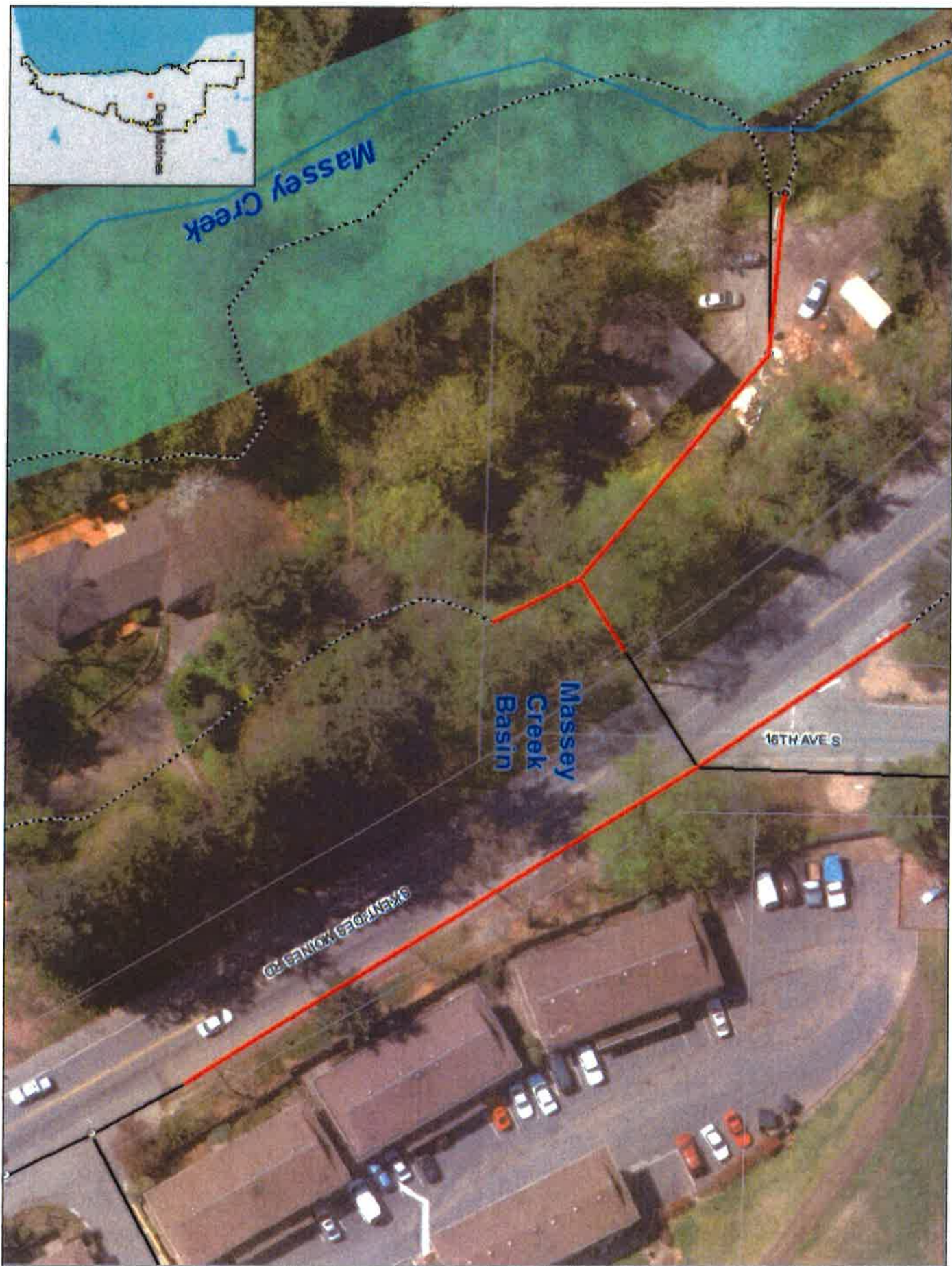
Replace approximately 300 feet of existing roadside ditch (east of 16th Avenue) along KDM Road with 24-inch storm pipe and connect to existing 18-inch culvert crossing KDM Rd at 16th Avenue. Install 50 feet new 24-inch storm drain southwest of KDM Road connecting to existing 18-inch culvert crossing and replace 350 feet of existing 24-inch corrugated metal pipe with larger 36-inch pipe downstream of the culvert crossing.

Justification/Benefits: During major storm events the capacity of the existing drainage system along Kent-Des Moines Road and the highway crossing will be exceeded causing runoff to overflow across KDM and flood the property downstream. In addition, the system on that property (located within a public drainage easement) that intercepts flows is also insufficiently sized and is prone to overtopping. This project proposes to replace the undersized pipes with 24-inch and 36-inch diameter pipes. This is a high-priority project (CIP-25A) listed in the 2015 SWM Comprehensive Plan and to be coordinated with projects CIP-4 and CIP-25B that would take a portion of the flows west to a new outfall pipe at Barnes Creek (rather than upsizing the 18-inch corrugated aluminum crossing below KDM Road)

PROJECT SCOPE		ANNUAL ALLOCATION									
Expenditures		Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
Total Budget		12/31/18	2019	2020	2021	2022	2023	2024	2025		
Design	54	-		54							
Land & Right of Way	-	-									
Construction	176	-			176						
Contingency	42	-			42						
Total Expenditures	272	-		54	218						

Funding Sources		Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
Total Budget		12/31/18	2019	2020	2021	2022	2023	2024	2025		
Surface Water Utility	272	-		54	218						
Total Funding	272	-		54	218						

OPERATING IMPACT		ANNUAL OPERATING IMPACT					
Operating Impact		2019	2020	2021	2022	2023	2024
Revenue	-	-	-	-	-	-	-
Expenses	-	-	-	-	-	-	-
Net Impact	-	-	-	-	-	-	-



CITY OF DES MOINES
DRAFT 2020-2025 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

216th Pl./ Marine View Dr. Pipe Upgrade

451

Summary Project Description:

This project proposes to upgrade the ditch along Des Moines Memorial Drive with 300 linear feet of new 18-inch diameter pipe and connecting to 170 linear feet of new larger 24-inch diameter storm system crossing the intersection of MVD (216th Place). The project also proposes to pipe the ditches on the west side of 6th Avenue connecting to the new pipe system on DMMD.

CIP Category: Surface Water Mgmt
 Managing Department: Plan, Build & PW Admin

Justification/Benefits: Previous upgrades have occurred within the storm system downstream of the project and west of the project along 216th Place. This project proposes to upslope the 18-inch crossing at Marine View Drive to 24-inch as well as pipe the ditch along Des Moines Memorial Drive. Along the storm segment below MVD near the border of Normandy Park and Des Moines is a buried inaccessible structure that may become blocked with debris and cause backup and flooding of the intersection and overflow to areas of recent landslide activity. This project will be coordinated with the City of Normandy Park (cost share for the portion of project within Normandy Park not shown). This is a high-priority project (CIP-17) listed in the 2015 SWM Comprehensive Plan.

PROJECT SCOPE	
Expenditures	Total Budget
Design	64
Land & Right of Way	-
Construction	210
Contingency	50
Total Expenditures	324

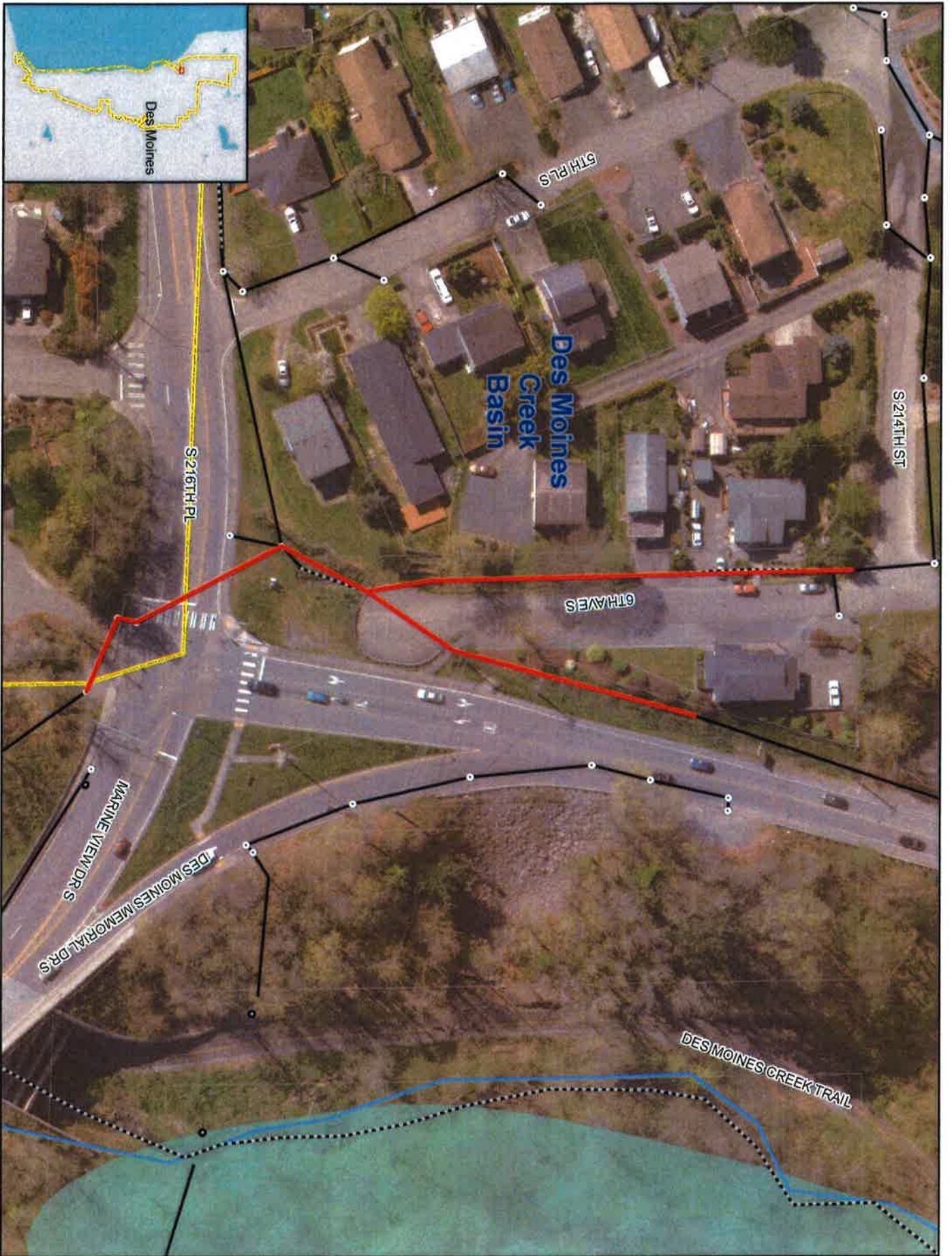
ANNUAL ALLOCATION									
Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/18	2019	2020	2021	2022	2023	2024	2025		
-			64						
-									
-					210				
-			13		37				
-			77	247					

Funding Sources	
Surface Water Utility	Total Budget
	324
Total Funding	324

Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/18	2019	2020	2021	2022	2023	2024	2025		
-			77	247					
-			77	247					

OPERATING IMPACT	
Operating Impact	6 Year Total
Revenue	-
Expenses	-
Net Impact	-

ANNUAL OPERATING IMPACT									
	2019	2020	2021	2022	2023	2024	2025		
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-



CITY OF DES MOINES
DRAFT 2020-2025 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

KDM/16th Ave B Pipe Replacement

451

Summary Project Description:

Install a new stormwater conveyance system on the west side of 16th Avenue S consisting of approximately 1220 feet of 12 inch pipe and 6 catch basins. Replace the existing ditch along the north side of Kent-DesMoines Road (KDM) with approximately 935 feet of 36 inch pipe and 9 storm drain manholes. The new 16th Ave S storm system will connect to the new system on KDM and outfall to Barnes Creek.

CIP Category: Surface Water Mgmt
 Managing Department: Plan, Build & PW Admin

Justification/Benefits: During periods of heavy rainfall, runoff from 16th Avenue will overtop Kent-Des Moines Road (KDM) and erode/flood the properties on the south side of the road. This project will better collect the runoff from the west side of 16th Avenue and the north side of KDM and allow the abandonment of at least one KDM storm crossing. The project will also enclose the existing ditch system along KDM for vehicle and pedestrian safety. This project is a high priority project (CIP-25B) listed in the 2015 SWM Comprehensive Plan.

PROJECT SCOPE	
Expenditures	Total Budget
Design	204
Land & Right of Way	-
Construction	695
Contingency	250
Total Expenditures	1,149

ANNUAL ALLOCATION									
Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/18	2019	2020	2021	2022	2023	2024	2025		
				204					
						695			
				41		209			
				245					
								904	

Funding Sources	
	Total Budget
Surface Water Utility	1,149
Total Funding	1,149

Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/18	2019	2020	2021	2022	2023	2024	2025		
				245					
						904			
				245					
								904	

OPERATING IMPACT	
Operating Impact	6 Year Total
Revenue	-
Expenses	-
Net Impact	-

ANNUAL OPERATING IMPACT									
	2019	2020	2021	2022	2023	2024	2025		
	-	-	-	-	-	-	-		
	-	-	-	-	-	-	-		

KDM / 16th Ave B



CITY OF DES MOINES
DRAFT 2020-2025 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

5th Ave/12th Street Pipe Upgrade

451

Summary Project Description:

Replacement of approximately 2,630 feet of cnp pipe with new 1,700 feet of 12-inch pipe and 930 feet of 18-inch pipe in the North Hill area in the vicinity of 212th Street and 5th Avenue South.

CIP Category: Surface Water Mgmt

Managing Department: Plan, Build & PW Admin

Justification/Benefits: This project will replace over 2,000 feet of aged corrugated metal pipe and upgrade over 900 feet of pipe to 18-inch pipe that has inadequate capacity during major storms. During two major storm events in 2013 and 2014, the pipe system overflowed creating significant erosion near the stairway at 212th Street and Des Moines Memorial Drive. The project will connect to the DMMD pipe upgrade installed in 2014. This project is identified as a high-priority project (CIP-16) in the 2015 Stormwater Comprehensive Plan.

PROJECT SCOPE			ANNUAL ALLOCATION									
Expenditures			Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
Total Budget			12/31/18	2019	2020	2021	2022	2023	2024	2025		
Design		170	-			170						
Land & Right of Way		-	-				578					
Construction		578	-				136					
Contingency		136	-									
Total Expenditures					170		714					

Funding Sources			Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
Total Budget			12/31/18	2019	2020	2021	2022	2023	2024	2025		
Surface Water Utility		884	-			170	714					
Total Funding						170	714					

OPERATING IMPACT			ANNUAL OPERATING IMPACT						
Operating Impact			2019	2020	2021	2022	2023	2024	2025
Revenue		-	-	-	-	-	-	-	-
Expenses		-	-	-	-	-	-	-	-
Net Impact			-	-	-	-	-	-	-



CITY OF DES MOINES
DRAFT 2020-2025 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

232nd Street (10th to 14th) Pipe Project

451

Summary Project Description:

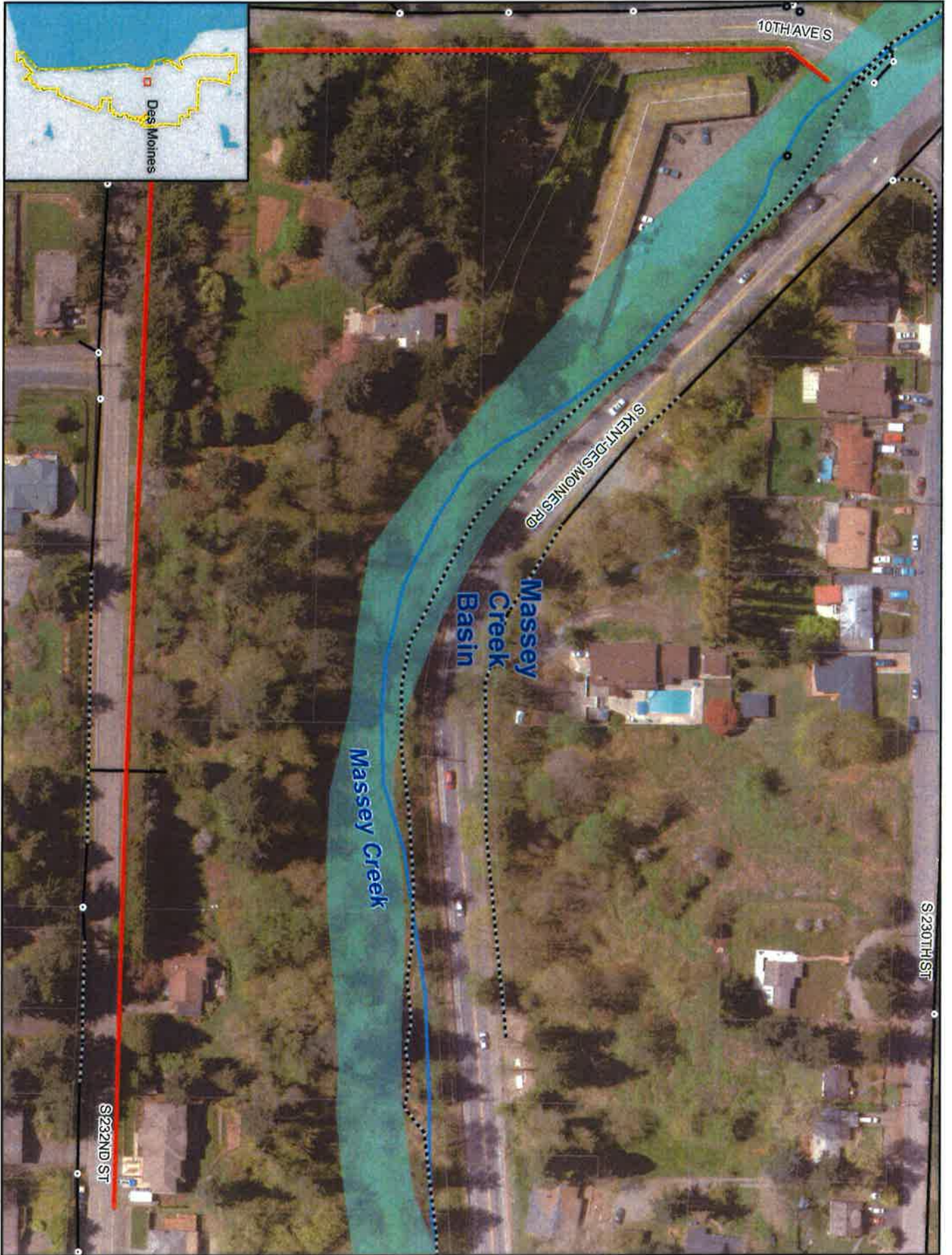
Install 2200-2300 linear feet of storm pipe along the north side of 232nd Street between 10th Avenue and 14th Avenue and along the east side of 10th Avenue between 232nd and Kent-Des Moines Road. Project also includes adding a 2-foot paved shoulder and curb on the north side of 232nd.

CIP Category: Surface Water Management

Managing Department: Public Works

Justification/Benefits: The drainage along 232nd is comprised of a ditch with a series of driveway culverts. The slope of the existing drainage system is extremely shallow and slow to drain and during certain storm events, flows encroach into the east bound travel lane. This proposed project will add a new drainage system to the north side of the 232nd (with lateral crossings to the south side) and replace the existing 12-inch storm drain along the east side of 10th Avenue with a larger 18-inch pipe before discharging to Massey Creek.

PROJECT SCOPE			ANNUAL ALLOCATION									
Expenditures		Total Budget	Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
Design		101	12/31/18	2019	2020	2021	2022	2023	2024	2025		
Land & Right of Way		-										
Construction		431										
Contingency		97										
Total Expenditures		629										
Funding Sources		Total Budget	Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
Surface Water Utility		629	12/31/18	2019	2020	2021	2022	2023	2024	2025		
Total Funding		629										
OPERATING IMPACT			ANNUAL OPERATING IMPACT									
Operating Impact		6 Year Total	2019	2020	2021	2022	2023	2024	2025			
Revenue		-	-	-	-	-	-	-	-	-	-	-
Expenses		-	-	-	-	-	-	-	-	-	-	-
Net Impact		-	-	-	-	-	-	-	-	-	-	-



CITY OF DES MOINES
DRAFT 2020-2025 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

Pipe Replacement Program

451,017

Summary Project Description:

Replacement of existing pipes based on customer request and video based condition assessment. This program is scheduled to be finished in 2022 but may extend longer depending on the results of the pipe assessment.

CIP Category: Surface Water Mgmt

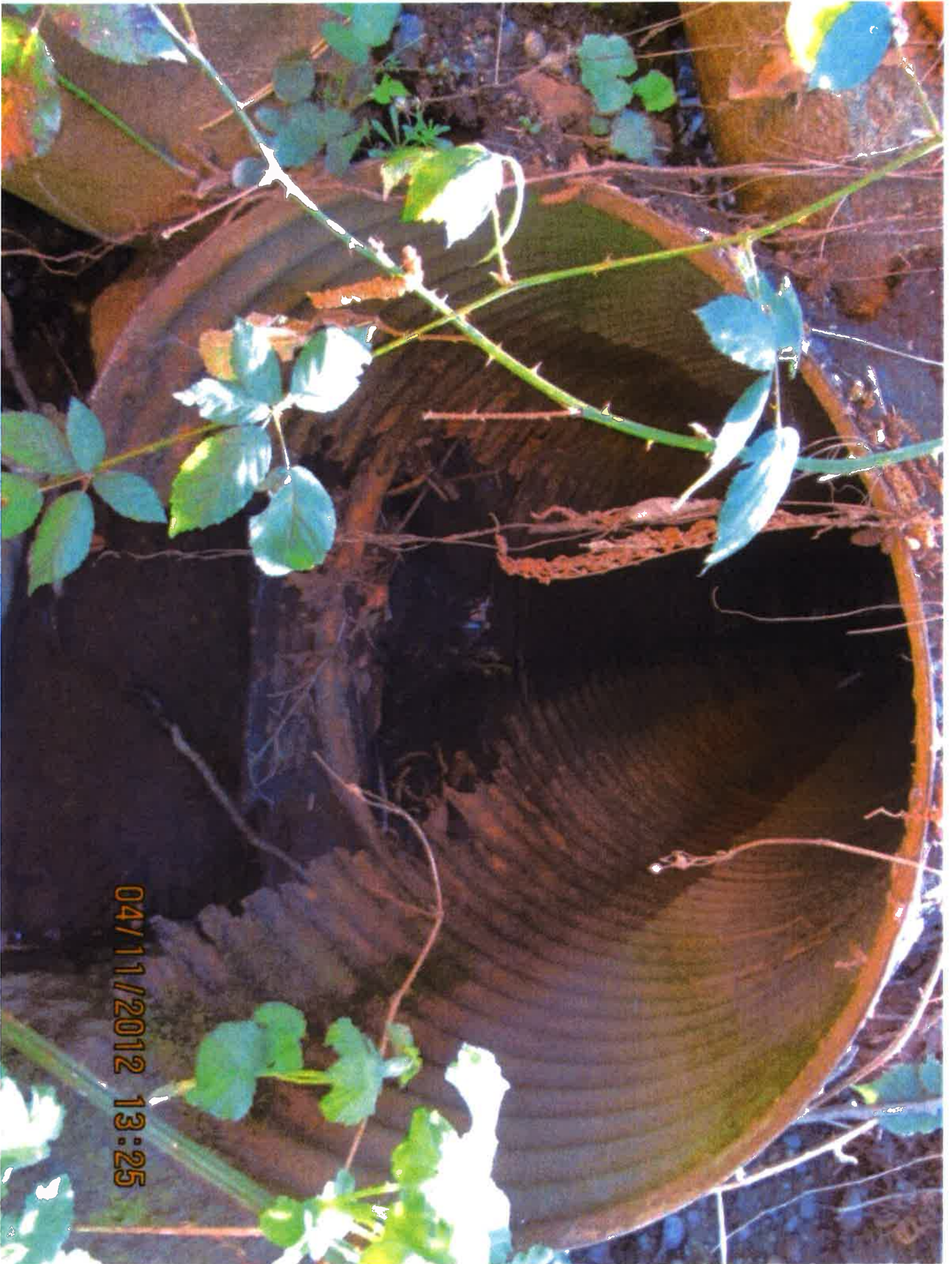
Managing Department: Plan, Build & PW Admin

Justification/Benefits: A video assessment of existing storm drain pipes is scheduled to begin in 2018. From the assessment a prioritized list of pipes needing replacement will be developed along with estimated costs.

PROJECT SCOPE			ANNUAL ALLOCATION									
Expenditures		Total Budget	Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
Design		34	12/31/18	2019	2020	2021	2022	2023	2024	2025		
Land & Right of Way		-										
Construction		226						226				
Contingency		69					10	59				
Total Expenditures		329					44	285				

Funding Sources		Total Budget	Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
Surface Water Utility		329	12/31/18	2019	2020	2021	2022	2023	2024	2025		
Total Funding		329					44	285				

OPERATING IMPACT			ANNUAL OPERATING IMPACT						
Operating Impact		6 Year Total	2019	2020	2021	2022	2023	2024	2025
Revenue		-	-	-	-	-	-	-	-
Expenses		-	-	-	-	-	-	-	-
Net Impact		-	-	-	-	-	-	-	-



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CITY OF DES MOINES
DRAFT 2020-2025 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

14th Ave (268th to 272nd) Pipe Upgrade

451

CIP Category: Surface Water Mgmt

Managing Department: Plan, Build & PW Admin

Summary Project Description:
 This project proposes to upgrade the ditch and driveway culvert system along the west side of 14th Avenue with a new storm pipe as well as replace the existing culverts below 272nd Street and 268th Street. This project includes 900 linear of 36-inch diameter pipe, 6 manhole structures, an outfall dissipator, and minimal road restoration.

Justification/Benefits: The culvert below 272nd Street is not sufficiently sized and is too shallow. During major storms the pipe system leading from the Redondo Riveria subdivision (south of 272nd) backs up creating significant flooding within the subdivision particularly in the vicinity of 275th Place and 15th Place. North of 272nd St, the drainage system on 14th Avenue is comprised of a shallow ditch system with driveway culverts that are easily blocked exacerbating the problem south of 272nd Street. There is also significant erosion due to a drop of grade at the downstream end of the culvert at S. 268th Street. This project proposes to replace the culverts at 272nd Street and 268th Street and install a new 36-inch pipe system on the west side of 14th Avenue from 272nd Street to 270th Street. This project is a high-priority project (CIP-36) listed in the 2015 SWM Comprehensive Plan.

PROJECT SCOPE	
Expenditures	Total Budget
Design	86
Land & Right of Way	-
Construction	365
Contingency	103
Total Expenditures	554

ANNUAL ALLOCATION									
Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/17	2018	2019	2020	2021	2022	2023	2024		
-						86			
-								365	
-						23		80	
-						109			445

Funding Sources	
	Total Budget
Surface Water Utility	554
Total Funding	554

Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/17	2018	2019	2020	2021	2022	2023	2024		
-						109			445
-						109			445

OPERATING IMPACT	
Operating Impact	6 Year Total
Revenue	-
Expenses	-
Net Impact	-

ANNUAL OPERATING IMPACT									
	2017	2019	2020	2021	2022	2023	2024		
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-



SENKIN, Steven (1986, p. 160). "Type Project"

CIP Category: Surface Water Management

Managing Department: Public Works

Justification/Benefits: The drainage from 16th Avenue discharges into a steep poorly established channel located in the rear of several properties of the Providential Soundview Estates subdivision. This channel is experiencing severe erosion and frequently becomes blocked with debris causing localized flooding to adjacent and downstream properties. Additionally, the existing ditch system located on the south side of 258th Street is not sufficient to convey large storms. This project proposes to pipe the channel as well as pipe the ditch along S. 258th Street.

PROJECT SCOPE	
Expenditures	Total Budget
Design	63
Land & Right of Way	48
Construction	265
Contingency	90
Total Expenditures	466

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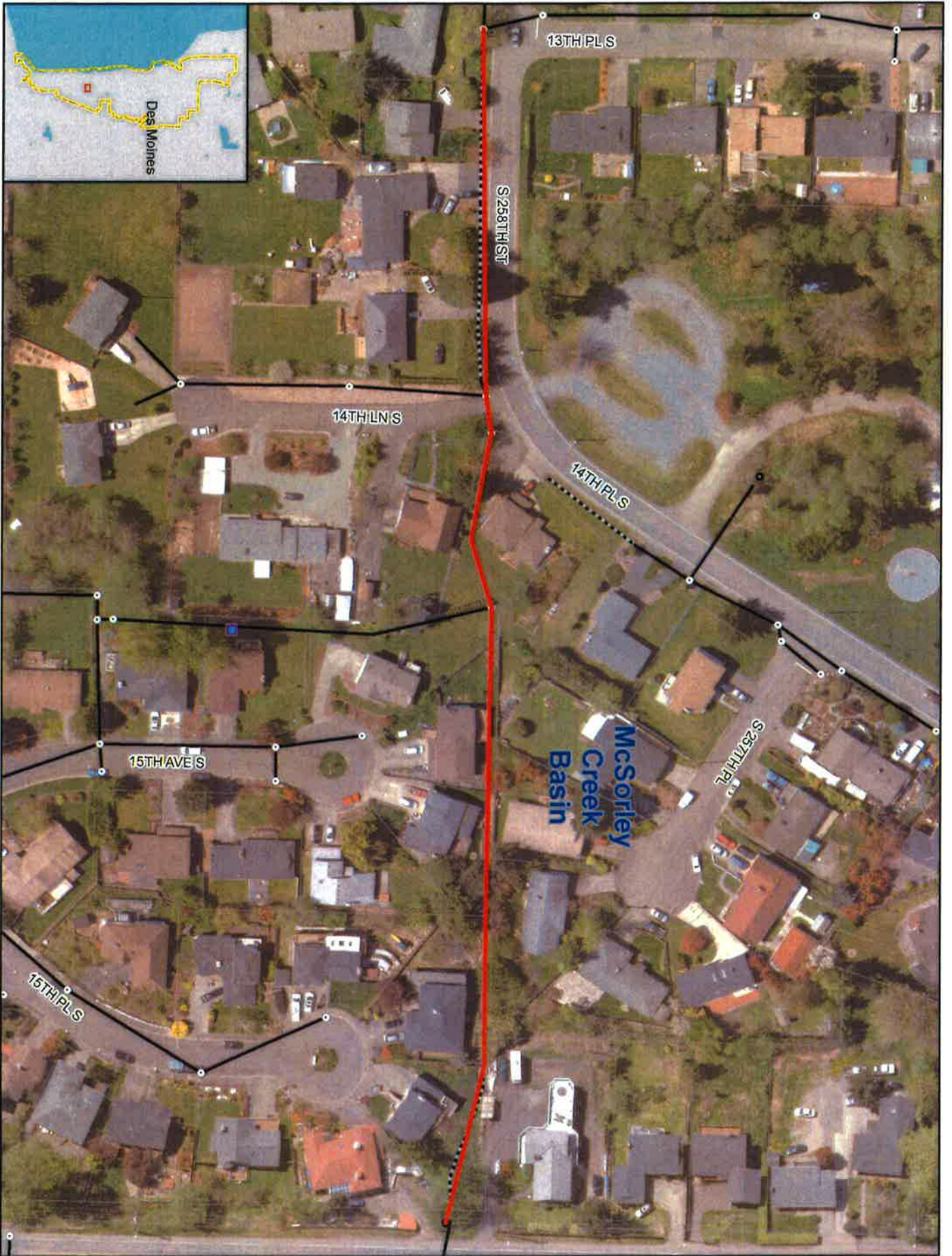
Funding Sources	Total Budget
Surface Water Utility	466
Total Funding	466

Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
02-04-04	2018	2020	2021	2022	2023	2024
					122	344
					122	344

OPERATING IMPACT		6 Year Total
Revenue		-
Expenses		-
Net Impact		-

	2019	2020	2021	2022	2023	2024	2025
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

#N/A



Summary Project Description:

Justification/Benefits: The purpose of the improvements is to replace existing corrugated metal piping and redirect a portion of the flows away from a drainage channel located within vacated 5th Place South that is prone to flooding as well as install new drainage along the the northwest side of 4th Place to minimize frequent localized flooding.

#N/A

