

Beaumont-Cherry Valley Water District Special Board Meeting May 5, 2022

Item 2

STAFF REPORT

TO: Board of Directors

FROM: Dan Jaggers, General Manager

SUBJECT: Approve Procurement of Materials for Replacement Pipeline Projects

within Grand Avenue Generally Located Between Martin Lane and

Bellflower Avenue

Staff Recommendation

Consider the following:

- 1. Approve Procurement of Materials for a not to exceed amount of \$46,200.00 for a portion of Replacement Pipeline Project Pipeline 6A within Grand Avenue further identified as a portion of BCVWD Master Plan Pipeline P-3040-0019 in the 2016 Potable Water Master Plan (Master Plan).
- 2. Approve Procurement of Materials for a not to exceed amount of \$281,400.00 for a new Replacement Pipeline Project within Grand Avenue identified as Pipeline No. 7 and further identified as portions of BCVWD Master Plan Pipeline P-3040-0027 in the Master Plan.
- 3. Discuss and consider the approval for procurement of materials to replace existing asbestos concrete (AC) pipe at a not to exceed amount of \$86,500 for a new Replacement Pipeline Project within Grand Avenue identified as portions of the existing Grand Avenue pipelines (not currently considered in the District Master Plan) between Noble Street and El Monte Drive. Said Pipeline is identified herein as Pipeline No. 8.

Background

Riverside County Flood Control and Water Conservation District's (RCFC&WCD) contractor is proceeding with the storm drain installation project along Grand Avenue, and as work has commenced, District staff has identified that the use of heavy equipment as well as construction activities associated with the project is creating additional stress to existing District pipelines located in Grand Avenue. Staff further identifies additional areas of concern which consist of three separate existing pipelines located in Grand Avenue and not yet addressed by the District pipeline relocation project. These pipelines are identified as numbers 6A, 7, and 8 which continues the project naming nomenclature previously used for the District pipeline relocation project associated with the MDP Line 16 project. Said pipelines are generally located in Grand Avenue between Martin Lane and Bellflower Avenue, more specifically as set forth on Table 1, hereafter:



Table 1 Pipeline 6A, 7, and 8 Information

Pipeline Description	CIP Budget	Approximate Length (LF)	Location (to and from)
Pipeline 6A P-3040-0019	\$267,236.00	510 LF	Martin Lane to 510' east of Martin Lane
Pipeline 7 P-3040-0027	\$890,400.00	2,320 LF	Jonathan Avenue to Bellflower Avenue
Pipeline 8	0	870 LF	Noble Street to El Monte Drive

A description of each proposed project procurement activity is generally described below. These activities will be bid as a District furnished and contractor installed project and will be brought to the Board for approval.

- Pipeline 6A is located within the limits of an 8" pipeline replacement project identified in the 2016 Potable Water Master Plan (Master Plan) as P-3040-0019, a portion of which was recently replaced after Board Approval occurred on April 7, 2022. The entire project scope of pipeline P-3040-0019 in the Master Plan extends from Noble Street to Martin Lane. Based on recent construction activities related to the storm drain project, the District has experienced issues with the remaining portion of the existing pipeline which would be replaced with the completion of Pipeline 6A (P-3040-0019). District staff recommends that the Board of Directors approve the authorization of procurement of materials for Pipeline 6A which is necessary to complete the final portion of Pipeline P-3040-0019.
- Pipeline 7 is located within the limits of a pipeline replacement project identified in the Master Plan as P-3040-0027. District staff recommends that the Board of Directors approve the authorization of procurement of materials for Pipeline 7 which is necessary to complete the final portions (three segments) of Pipeline P-3040-0027. Pipeline 7's proposed total alignment of the 12" P-3040-0027 pipeline is approximately 2,650 LF, however 332 LF was recently realigned to avoid catch basin conflicts.
- Pipeline 8 is not identified in the Master Plan and is believed to be 4" and 6" AC pipeline materials which should be replaced prior to completion of storm drain paving activities. While the District has not had issues with the AC pipeline materials in this area from a maintenance activity, this proposed replacement project would provide the District with the opportunity to upgrade the material to the current 8" District standard as well as add fire hydrants in this area. District staff recommends that the Board of Directors approve the authorization of procurement of materials for Pipeline 8.

At the April 28, 2022, Engineering Workshop, the Board discussed the feasibility of the construction of the replacement pipelines stated above within Grand Avenue identified as Pipelines P-3040-0019, P-3040-0027 in the 2016 Potable Water Master Plan and in previous Capital Improvement Budgets prior to 2021 (see Attachment 1).

The Board also inquired about other pipeline segments located within Grand Avenue identified in the Figures included in Attachment 1 as "fairly new" piping. District staff has reviewed the "fairly



new" pipeline identified on Attachment 1 between Chery Avenue and Jonathan Avenue and has found that an 8" DIP pipeline was installed in this area in approximately 2007 to 2008.

Summary

As of May 4, 2022, the replacement pipelines identified as 1 through 5 in the MDP Line 16 Pipeline Replacement Project have been constructed, mainline system has been connected, and final trench paving have been completed. A complete description of proposed Pipelines 6A, 7, and 8 are as follows:

Pipeline 6A: District staff has identified that the associated cost for the procurement of materials for replacement pipeline 6A is estimated to be \$46,200.00. Upon Board approval and authorization, District staff proposes to order materials and equipment necessary for the Pipeline 6A project construction. See Figure 1 for the approximate location of Pipeline 6A.

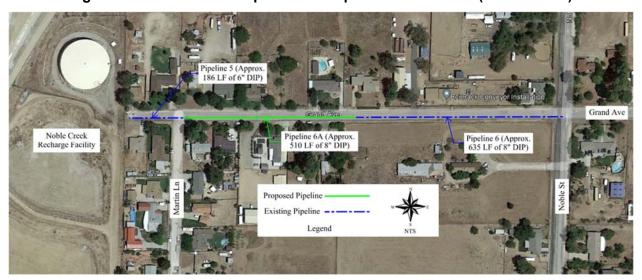


Figure 1 Grand Avenue Replacement Pipeline 6A Location (P-3040-0019)

Pipeline P-3040-0019, as identified in the 2016 Master Plan and 2017 CIP, is more specifically identified as an 8" pipeline to be replaced with an approximate length of 1,300 LF. Said 2017 Capital Improvement Plan (CIP) further identified a replacement cost of \$282,670 (2019 dollars). The Pipeline 6A proposed replacement component will complete the remaining portion of the Project or 510 LF of 1,300 LF.

District staff believes that Pipeline 6A could be constructed prior to the commencement of the paving portion of the storm drain project, if the materials are procured soon enough, and the project is bid and authorized in the immediate future.

Pipeline 7: District staff has identified that the associated cost for the procurement of materials for replacement Pipeline 7 (three segments) is estimated to be \$281,400.00. Upon Board approval and authorization, District staff proposes to order materials and equipment necessary for the Pipeline 7 project construction. See Figure 2 for the approximate location of Pipeline 7.

To avoid interference of the P-3040-0027 replacement pipeline construction, when compared to the RCFC&WCD's contractor's construction schedule for the MDP Line 16 Storm Drain project, District staff identifies that there is an approximate 10-week window between proposed storm



drain construction in the area and before repaving is to occur. This 10-week window will be approximately between August 15, 2022, to October 25, 2022. District staff believes this would be the best period to construct Pipeline 7's three pipeline segments (P-3040-0027).

The total Pipeline 7 (P-3040-0027) project within Grand Avenue consists of approximately 2,650 LF of 12" ductile iron pipe (DIP). However, approximately 332 LF of 12" DIP was constructed as a part of the MDP Line 16 Pipeline Replacement project to avoid conflict with the proposed storm drain. There is approximately 2,320 LF of pipeline P-3040-0027 remaining to be constructed. See Figure 2 below for the approximate location of P-3040-0027.



Figure 2 Grand Avenue Replacement 7 Pipeline Location (P-3040-0027)

Two (2) pipelines in the MDP Line 16 Pipeline Replacement Project (Pipelines No. 2 and No. 3) fall within the limits of the District pipeline replacement project identified as P-3040-0027. The two (2) pipelines relocated as part of the MDP Line 16 Pipeline Relocation Project consisted of approximately 332 LF of 12" diameter DIP within the limits of the P-3040-0027 project scope.

District staff identifies that, per the MDP Line 16 Storm Drain plans, the north half of the existing pavement where the storm drain is proposed will be completely re-constructed and the south half of the existing pavement along Grand Avenue between Jonathan Avenue and Bellflower Avenue is proposed to receive a fog seal treatment in the location where the proposed 12" DIP pipeline is planned. Therefore, there may not be any realized cost savings from a pavement repair or replacement activity.

Pipeline 8: District staff has identified that the associated cost for the procurement of materials for replacement pipeline 8 is estimated to be \$86,500.00. Upon Board approval and authorization, District staff proposes to order materials and equipment necessary for the Pipeline 8 project construction. See Figure 3 for the approximate location of Pipeline 8.



Figure 3 Grand Avenue Replacement 8 Pipeline Location



District staff identifies that, per the MDP Line 16 Storm Drain plans, the north half of the existing pavement where the storm drain is proposed will receive a combination of complete reconstructed and grind and overlay, while the south half of the existing pavement along Grand Avenue between Noble Street and El Monte Drive is proposed to receive a fog seal treatment. Based on preliminary alignments determined by District staff, it is likely that horizontal alignment for Pipeline 8 will be down the centerline of the street. Therefore, there may be some realized cost savings from a pavement repair or replacement activity.

District staff has completed a preliminary materials cost estimate. Table 2, below, sets forth a summary of the estimated costs for the materials of each pipeline, which includes a 20% contingency due to the volatility of material unit prices.

Table 2 - Pipeline Relocation Project Budget Summary

CIP Project	CIP Budget	Associated Material Cost (Plus 20% Contingency)	Approx. Remaining Budget
Pipeline 6A (P-3040-0019)	\$267,236.00	\$46,200.00	\$221,036.00
Pipeline 7 (P-3040-0027)	\$890,400.00	\$281,400.00	\$609,000.00
Pipeline 8	\$0.00	\$86,500.00	-\$86,500.00
Total	\$1,157,636.00	\$414,100.00	\$743,536.00



Fiscal Impact

District staff was recently made aware of an additional surcharge to all DIP materials which range from \$125-\$175/ton. The amounts requested herein include this recent surcharge.

The Fiscal Impact of the procurement of materials for Pipeline 6A (P-3040-0019) will be an amount not to exceed \$46,200.00 (rounded).

The Fiscal Impact of the procurement of materials for Pipeline 7 (P-3040-0027) will be an amount not to exceed \$281,400.00 (rounded).

The Fiscal Impact of the procurement of materials for Pipeline 8 will be an amount not to exceed \$86,500.00 (rounded).

Attachments:

 Attachment 1 – April 28, 2022, Staff Report Item 4 – Feasibility of the Construction of a Replacement Pipeline within Grand Avenue identified as P-3040-0027 in the 2016 Potable Water Master Plan

Staff Report prepared by Evan Ward, Civil Engineering Assistant



Beaumont-Cherry Valley Wate Dist ict Regular Board Meeting April 28, 2022

Item 4

STAFF REPORT

TO: Board of Directors

FROM: Dan Jaggers, General Manager

SUBJECT: Feasibility of the Construction of a Replacement Pipeline within Grand Avenue

identified as P-3040-0027 in the 2016 Potable Water Master Plan

Staff Recommendation

For discussion purposes only.

Background

At the April 14, 2021, Board meeting, the Board authorized the Beaumont Master Drainage Plan (MDP) Line 16 Pipeline Relocation Project which set forth the relocation of District facilities that were conflicting with the MDP Line 16 Storm Drain Project. The original Project consisted of five (5) pipelines, however as of April 7, 2022, an additional pipeline was added due to an unforeseen conflict for a total of six (6) pipelines. Two (2) of the pipelines identified in the MDP Line 16 Pipeline Replacement Project (Pipelines No. 2 and No. 3) were within the limits of the District pipeline replacement project identified as P-3040-0027, and were partially funded with Capital Replacement Reserves related to the P-3040-0027 project. The two (2) pipelines relocated in the MDP Line 16 Pipeline Relocation Project consisted of approximately 332 linear feet (If) of 12-inch diameter ductile iron pipeline within the limits of the P-3040-0027 project scope.

At the December 21, 2021, Board meeting, the Board approved the 2022-2026 Capital Improvement Budget (CIB). The 2016 Potable Water Master Plan and 2022-2026 CIB identify a pipeline replacement project shown as P-3040-0027 (see Attachments 1 and 2) which is along Grand Avenue from Jonathan Avenue to Bellflower Avenue. This project has been identified in the District's Potable Master Plan and in previous Capital Improvement Budgets prior to 2021. The complete Pipeline Capital Improvement Project (CIP) is currently described as follows:

• **P-3040-0027**: Replacement of approximately 3,245 If of 6" DIP with 12" DIP, along Grand Avenue from Jonathan Avenue to Bellflower Avenue

With construction moving forward on the MDP Line 16 Storm Drain project (see Attachment 3), the Board has inquired with staff to evaluate the feasibility of completing the remainder of P-3040-0027 so as to complete Grand Avenue's waterline improvements concurrently with the storm drain project and avoid potential pipeline leaks and breaks due to the proximity of the storm drain installation and also take advantage of any pavement repair activities along Grand Avenue which may be performed in conjunction with or subsequent to the MDP Line 16 Storm Drain project construction activities.

The total P-3040-0027 project spans approximately 2,650 If of 12-inch ductile iron pipe along Grand Avenue from Jonathan Avenue to Bellflower Avenue (Attachment 5). This differs from the estimated length within the CIB due to the currently projected limits of the project. The CIB estimated length assumed the project would connect into a pipeline within the Highland Springs Village Development with valves in place for connection to a future pipeline in Bellflower Avenue, however the connection into Highland Springs Village may not be needed at this time. District



staff identifies that should the Board desire to complete this project concurrently with the MDP Line 16 Storm Drain project in an effort to take advantage of possible paving activities, the District's construction schedule for adding certain pipelines along Grand Avenue may be a challenge due to CEQA requirement (possible line upsizing concerns) and the unknown schedule impacts from current economic factors on material procurement timelines.

The proposed alignment of the future 12" P-3040-0027 pipeline is approximately 2,650 If however 332 If was recently realigned to avoid catch basin conflicts, as previously stated. A preliminary analysis of the feasibility of replacing the remaining 2,218 If is identified and discussed hereafter. District staff has performed a preliminary budget review and analysis to understand which parts of the P-3040-0027 pipeline has been funded and constructed to understand the impacts and available programmed funding that is or can be programmed to accomplish the complete construction of the proposed facilities in Grand Avenue.

Summary

The MDP Line 16 Storm Drain project is currently under construction and is on schedule to be completed by December of 2022. To avoid interference of the schedule of the MDP Line 16 Storm Drain project, District staff has performed a preliminary review of the Contractors submitted storm drain project schedule to determine if there might be a construction window where the MDP Line 16 Project would not be impacted by construction of the additional 12" P-3040-0027 yet to be constructed. Based upon said review, Staff identifies that there appears to be an approximate 10-week window when the storm drain is proposed to be constructed through this area, with a time gap before repaving occurs. This window covers the time period of approximately August 15, 2022, to October 25, 2022. District staff believes this would be the best period to construct said additional pipeline concurrently with the storm drain project to take advantage of any paving benefits.

To complete this project, there are other factors that may impact the project schedule for any additional District facilities construction including California Environmental Quality Act compliance activities and materials acquisition which need to be considered. These items are set forth in preliminary replacement pipeline schedules set forth under Attachments 6 and 7. Said schedules identify two estimated schedules based upon CEQA compliance following two separate paths as follows; CEQA could flow through one of two paths. A Notice of Exemption, if applicable, would have a significantly shorter time frame (±60 days) than the alternative, Initial Study/ Negative Declaration (4-6 months). Additionally, material procurement continues to be a challenge and may impact the schedule. District staff has reached out to our suppliers and understand that in today's environment a lead time of at least 90-120 days is a current reasonable estimate.

As noted in the Background, a portion of the Capital Replacement Reserves collected for the P-3040-0027 project was utilized in the construction of the MDP Line 16 Replacement Pipeline project. Table 1 identifies an estimated breakdown of the Project Budget Summary.



Table 1 – District Improvements related to P-3040-0027 Budget Summary

CIP Project	CIP Budget	MDP Line 16 Pipeline Relocation Associated Cost	Approximate Budget Remaining
P-3040-0019	\$307,236.00	\$40,000.00	\$267,236.00
P-3040-0027	\$1,062,200.00	\$171,800.00	\$890,400.00
Total	\$1,369,436.00	\$211,800.00	\$1,157,636.00

^{*}Note: District staff intends to provide a more complete budget estimate to the Board at a later date, based upon the changes to the project since its original inception.

District staff has reviewed the MDP Line 16 Storm Drain plans to further understand the effects of the existing pavement within this portion of Grand Avenue and has determined that Grand Avenue, from Jonathan Avenue to Bellflower Avenue is proposed to receive a fog seal treatment in the location where the proposed 12" pipeline is planned. Therefore, there may not be any realized cost savings from a pavement repair or replacement activity. The District would most likely be required to pave the standard half-street pavement section as required by Riverside County Transportation for a pipeline replacement project activity. In the event the pavement was damaged significantly during the MDP Line 16 Storm Drain project, some additional paving work or project by the installation contractor or some other paving contractor subsequent to the project scope and completion schedule, as currently defined in the Contract Documents.



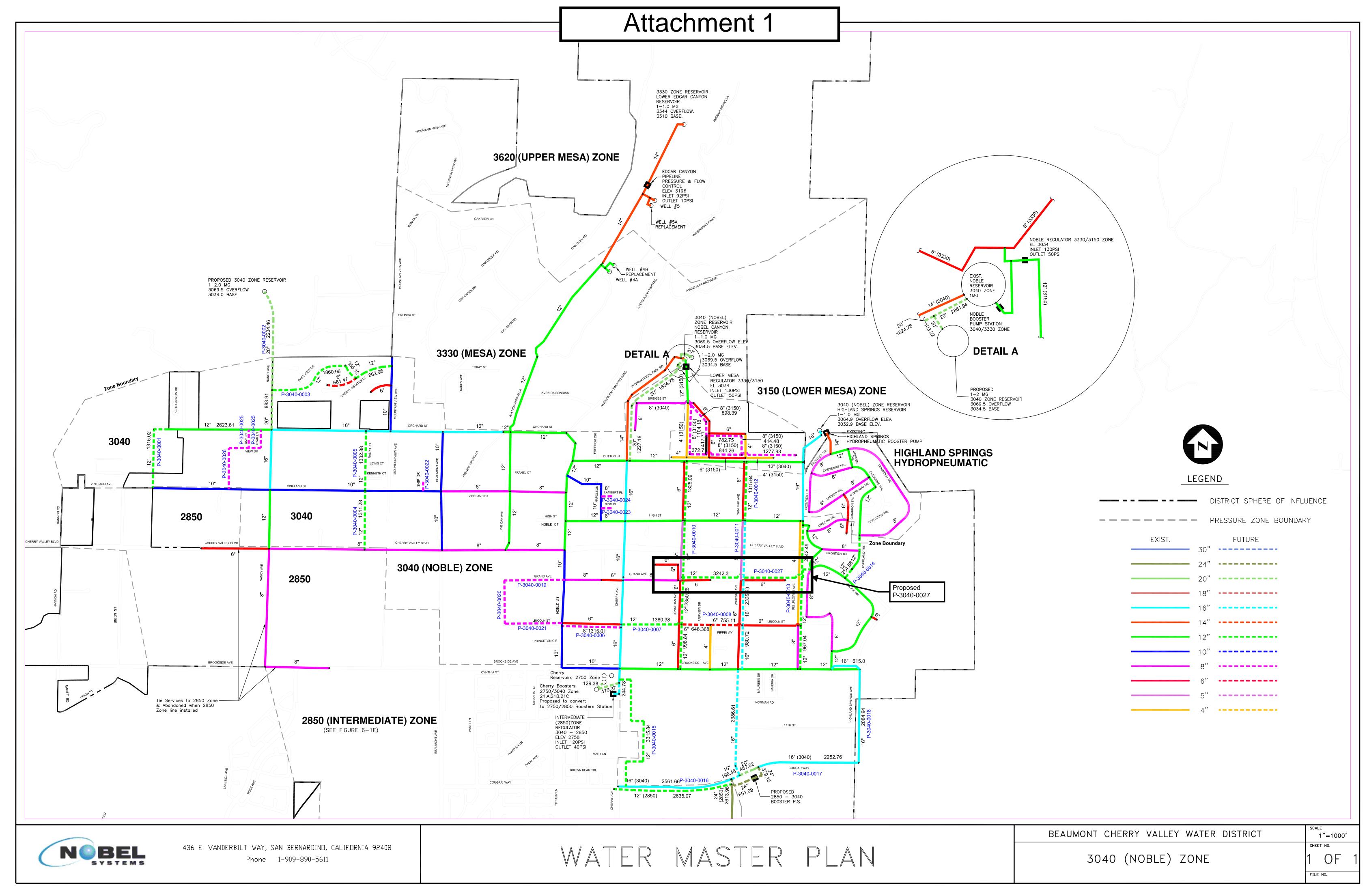
Fiscal Impact

The Fiscal Impact for this project is not yet fully determined, however staff identifies that there is approximately \$1,157,636.00 in Budget available as described in Table 1. Should the Board desire to move forward, staff will immediately work to determine material costs and procure said materials upon bringing forth an estimate of costs.

Attachments:

- 1. Attachment 1 2016 Master Plan PZ 3040 Proposed P-3040-0027
- 2. Attachment 2 2022-2026 CIB Appendix C
- 3. Attachment 3 MDP Line 16 Vicinity Map
- 4. Attachment 4 MDP Line 16 Pipeline Relocation Project Vicinity Map
- 5. Attachment 5 P-3040-0027 Project Vicinity Map
- 6. Attachment 6 P-3040-0027 Replacement Pipeline Option A Timeline
- 7. Attachment 7 P-3040-0027 Replacement Pipeline Option B Timeline

Staff Report prepared by Evan Ward, Civil Engineering Assistant



BCVWD FY 2022 Operating & 2022-2026 Capital Improvement Budget - Page 108 of 111

Attachment 2



Beaumont-Cherry Valley Water District 2022-2026 Capital Improvement Budget Appendix C 2022 - 2026 Capital Improvement Budget Detail

			Estimated						
			Carry Over	2022 Budget	2023 Budget	2024 Budget	2025 Budget	2026 Budget	5-Year Budget
Engineering Project #	Footnotes	Capital Improvement Program	2021 Budget	Request	Request	Request	Request	Request	Total
Engineering Project ii		Potable Pipeline Replacements	Local Budget	ricquest	nequest	Request	ricquest	nequest	Total
P-2750-0025		Maple Ave., 1st St to 3rd St	-	\$ -	64,500	268,200			332,700
P-2750-0035		Allegheny St., 6th to 8th	-	· -	-	-	50,300	209,400	259,700
P-2750-0036		Michigan St., 6th to 8th	-	_	96,600	401,900	,	,	498,500
P-2750-0045		7th St., California Ave. to Beaumont Ave.	-	-		-	107,300	446,400	553,700
P-2750-0049		10th St., Palm Ave. to Michigan Ave.		-			53,400	222,300	275,700
P-2750-0050		Orange Ave., 8th St to 10th st	-	-	_	-	129,800	540.000	669,800
P-2750-0056	(3)	11th Street, Beaumont Avenue to Elm Avenue	-	275,500	1,145,800	-	-	-	1,421,300
P-2750-0057		Magnolia Ave., 7th to 8th	-		· · ·	-	39,200	163,200	202,400
P-2750-0058		Wellwood Ave., B St north to end		-		-	10,700	44,700	55,400
P-2750-0064	(5)	Antonell Court, Pensylvania Ave. to Cherry Ave.	-	-	-	-	-		· -
P-2750-0066		Egan AveWellwood Ave. Alley, 5th to 8th St	-	-	85,800	356,700	-	-	442,500
P-2750-0067		Elm AveWellwood Ave. Alley, 7th St. to 5th St.	-	-	36,000	149,900	-	-	185,900
P-2750-0068		Elm Ave., 6th to 7th	-	-	22,700	94,300	-	-	117,000
P-2750-0069	(2)	Egan Ave-California Ave. Alley, 5th to 7th	151,000	-	-	-	-	-	151,000
P-2750-0092	(3)	Michigan Avenue, 5th Street to 6th Street	-	67,200	311,400	-	-	-	378,600
P-2750-0087		Beaumont 5th to 6th (Abandon pipeline)	-	-	-	-	44,500	-	44,500
P-3040-0007		Lincoln St. Cherry Ave to Jonathan Ave	-	-	-	-	95,100	395,500	490,600
P-3040-0010		Jonathan Ave., Brookside Ave. to Dutton St.	-	-	-	-	305,700	1,271,500	1,577,200
P-3040-0023,24,25,26									
P-3330-0003									
P-3620-0009	(6)	2020-2021 Replacement Pipelines	-	304,200	1,265,300	-	-	-	1,569,500
P-3040-0023	(6)	Bing Pl	20,700	(20,700)	-	-	-	-	-
P-3040-0024	(6)	Lambert PI	20,700	(20,700)	-	-	-	-	-
P-3040-0025	(6)	Star Ln, Sky Ln, and View Dr	-	-	-	-	-	-	=
P-3040-0026	(6)	Utica Way, Vineland St to View Dr.	36,700	(36,700)	-	-	-	-	-
P-3040-0027		Grand Ave., Jonathon Ave. to Bellflower; Cherry Valley Blvd. Bellflower to HS Village 12 in	197,900	-	864,300	-	-	-	1,062,200
P-3330-0003	(6)	Avenida Sonrisa	102,200	(102,200)	-	-	-	-	-
		"B" Line Upper Edgar to upper end of 20" DIP and from lower end 20" DIP to Balance line and Balance							
P-3620-0001		Line in Edgar Canyon	400,900	1,704,000	-	-	-	-	2,104,900
P-3620-0002		"A" Line Upper Edgar to split at Apple Tree Lane Tract	-	-	-	487,000	2,025,500	-	2,512,500
P-3620-0009	(6)	Ave. Miravilla,End of 12-in to Whispering Pines	30,400	(30,400)	-	-	-	-	-
P-3620-0012	(4)	Ave Altejo Bella, Ave Miravilla to end of cul-de-sac	221,700	=	-	-	=	=	221,700
P-3620-0015	(4)	Appletree Ln, B line to Oak Glen Rd	669,500	-	-	-	-	-	669,500
		Total Potable Pipeline Replacements	1,851,700	2,140,200	3,892,400	1,758,000	2,861,500	3,293,000	15,796,800



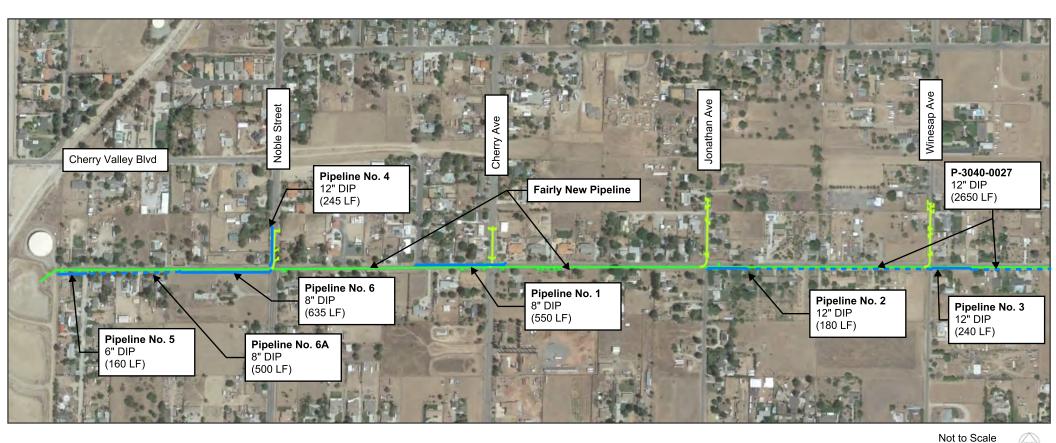
Attachment 3 - MDP Line 16 Vicinity Map







Attachment 4 - MDP Line 16 Pipeline Relocation **Project Vicinity Map**





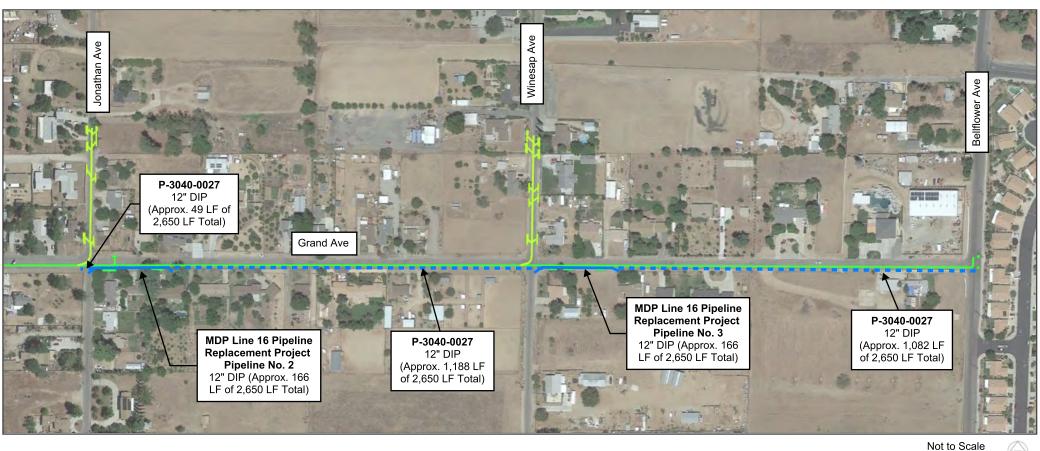
Existing Waterline Waterline (Various Dia.)

Proposed Storm Drain (Various Dia.)

Proposed Storm Drain Lateral and Catch Basin

Proposed Replacement Pipeline







Existing Domestic Waterline (Various Dia.)

Proposed P-3040-0027

Proposed Storm Drain (Various Dia.)

Proposed Storm Drain Lateral and Catch Basin

Attachment 6 - P-3040-0027 Replacement Pipeline Option A Timeline

0	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Successors	Free Slack 22	May '22 7 24 1 8 15 22	Jun '22	Jul '22	Aug '22	Sep '22	Oct '22	16 22 26
1	Mode	The state of the s	12 days	Mon 4/25/22	Tue 5/10/22		2FS-6	0 days	1 24 1 8 15 22	<u> 29 5 12 19</u>	9 26 3 10 17 2	(4 31 7 14	121 28 4 11	18 25 2 9	16 23 30
2		Design Material Order and Procurment	100 days	Mon 5/2/22	Mon 9/19/22	1ES-6 days	days,3,4 7,6FF	0 days	Attended					-	
3	-	CEQA - Notice of Exemption			Tue 7/12/22		5	0 days	-					30	
1	4	Construction Bid Documents			Tue 5/31/22		5	30 days	*						
5	*	Notice of Inviting Bids and			Tue 8/9/22		6	14 days			**				
		Solicitation	,,	, ==, ==							-				
6	*	Contract Award and Execution for Construction	15 days	Mon 8/29/22	Mon 9/19/22	2FF,5	7	0 days					1	===	
7	*	Construction	30 days	Mon 9/19/22	Mon 10/31/22	2,6		0 days						ř	
		Task		Project Summ	narý		Manual Task		Start-only	Е	Deadline	*			
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Attachment 7 - P-3040-0027 Replacement Pipeline Option B Timeline

