

Steven C. Parrish, P.E. General Manager/Chief Engineer

July 13, 2023

#### **BOARD OF DIRECTORS**

Commissioner **Justin Jones** Chair Clark County

Councilman Isaac Barron Vice-Chair City of North Las Vegas

Mayor Carolyn Goodman City of Las Vegas

> Mayor Joe Hardy City of Boulder City

Mayor Pro Tem Brian Knudsen City of Las Vegas

Commissioner Tick Segerblom Clark County

Councilman Dan Shaw City of Henderson

Councilman **Paul Wanlass** City of Mesquite Ms. Nancy Amundsen, Director Clark County Comprehensive Planning 500 South Grand Central Parkway Las Vegas, NV 89155

Dear Ms. Amundsen:

On July 13, 2023, the Regional Flood Control District Board of Directors held a public hearing and unanimously adopted a Master Plan Change to the Jim McGaughey Detention Basin, Collection and Outfall. The Master Plan Change was performed in accordance with NRS 543.597.

NRS 543.597, subsection 4, requires the District to file a copy of any adopted amendment or change with the governing body of each local government whose jurisdiction includes a hydrographic area affected by the adopted amendment or change. A copy of the District agenda item and the related backup material is included with this letter for your information. Additional copies of the Master Plan Change are available in the District office.

If I can be of further assistance in this matter, please contact me at 702-685-0000.

Sincerely,

Steven C. Parrish, P.E.

General Manager/ Chief Engineer

SCP:dmh

Enclosure

Denis Cederburg, Public Works Director Cc:

Lynn Goya, Clark County Clerk

Jewel Gooden, Clark County Clerks Office Patsy Schrader, Clark County Public Works Glenda Sargent, Clark County Public Works Garrett TerBerg, Comprehensive Planning

P:\Master Plan Letters\071323 MPC Jim McGaughey DB & Outfall.doc

Website: https://www.regionalflood.org

# CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT

# **AGENDA ITEM**

SUBJECT:

MASTER PLAN CHANGE FOR JIM MCGAUGHEY DETENTION BASIN AND OUTFALL

# THIS IS A PUBLIC HEARING

# RECOMMENDATION SUMMARY

STAFF:

Approve and recommend that the Board find the Master Plan Change:

- 1. Is consistent with the general principles set forth in subsection 3 of NRS 543.590;
- 2. Is hydraulically similar to the facility proposed in the Master Plan;
- 3. Is the most cost-effective structural or regulatory means of controlling flood waters; and
- 4. Does not adversely affect the continued implementation of the Master Plan.

TECHNICAL ADVISORY:

Follow staff recommendation.

CITIZENS ADVISORY

Follow staff recommendation.

RFCD AGENDA ITEM #16 DATE: 07/13/2023

# CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT

# **AGENDA ITEM**

#### **SUBJECT:**

MASTER PLAN CHANGE FOR JIM McGAUGHEY DETENTION BASIN, COLLECTION AND OUTFALL PROJECT

### PETITIONER:

DENIS CEDERBURG, DIRECTOR OF PUBLIC WORKS

### **RECOMMENDATION OF PETITIONER:**

THAT THE CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT APPROVE THE MASTER PLAN CHANGE FOR THE JIM MCGAUGHEY DETENTION BASIN, COLLECTION AND OUTFALL PROJECT (FOR POSSIBLE ACTION)

FISCAL IMPACT: None by this Acton

#### **BACKGROUND:**

This Master Plan Change affects proposed 2018 MPU facilities SLOW 0000 & 0005, SLWA 0130, 0150, 0151, 0152, 0153 & 0175. SLOW 0000 is a proposed 806 foot long 6-ft x 6-ft RCB that collects stormwater from an existing wash at the northeast corner of Owens Avenue and Los Feliz Street. The change includes the reduction of the overall facility length and SLOW 0005 is combined with SLOW 0000.

2018 MPU facility SLWA 0175 is requested to be split into two ID miles due to different types of facilities. New ID mile SLWA 0180 is a 748 foot long 12-ft x 6-ft RCB that collects stormwater from an existing wash on the east side of Los Feliz Street, approximately 500 feet south of the detention basin site. This conveys flow north, within Los Feliz Street and continues to SLWA 0175, a 138 foot long 12-ft x 6-ft rectangular channel discharging runoff to the proposed detention basin.

SLWA 0153 is changed to show the footprint of the 71 ac-ft Jim McGaughey Detention Basin. The changes to the outfall facilities (SLWA 0152, 0150 and 0130) are for size, type, alignment, and length. SLWA 0130 is also split to ID miles SLWA 0130 and 0140. SLWA 0152 is a proposed 616 foot, 36-in RCP outlet that is requested to be aligned from the west side of the detention basin to a driveway located within the Mike O'Callaghan Middle School.

SLWA 0150 is a proposed 2,246 foot long 42-in RCP that continues the detention basin outfall to the west, from the school driveway to Hollywood Blvd within the Radwick Drive alignment. SLWA 0140 continues the outfall to the west within an existing drainage easement.

| TAC AGENDA     | RFCD AGENDA    |
|----------------|----------------|
| ITEM #15       | ITEM #16       |
| Date: 06.29.23 | Date: 07.13.23 |
| CAC ACENIDA    |                |

CAC AGENDA ITEM #15 Date: 07.03.23 SLWA 0140 is a proposed 195 foot long 60-in x 38-in HERCP. SLWA 0130 is a proposed 79 foot long 5-ft x 4-ft RCB that provides the final connection between the 60-in x 38-in HERCP and the existing Washington Channel.

The total cost estimate of the 2023 MPC facilities is \$7,328,256. The result is an increase of \$789,004. The table below summarizes the 2018 MPU and 2023 MPC facility costs estimate.

|              |        | 2018 MPU COST ESTIN                    | ATE             |             |              | 2023 MPC COST ESTIMATE                 |  |                 |             |              |  |  |  |
|--------------|--------|--|-----------------|-------------|--------------|--|--|-----------------|-------------|--------------|--|--|--|
| ID /<br>MILE | Status | Facility Description                   | Length<br>(ft.) | Total Cost  | ID /<br>MILE | Status                                 | Facility Description                               | Length<br>(ft.) | Total Cost  | Cost         |  |  |  |
| slow         | OWE    | NS CONVEYANCE TO W                     | ASHINGTO        | N SYSTEM    | SLOW         | OW                                     | STEM   |                 |             |              |  |  |  |
| 0000         | Р      | 8'X6' RCB                              | 270             | \$459,853   | 0000         | Р                                      | 6' X 6' RCB  | 806             | \$1,231,266 | (\$-493,033) |  |  |  |
| 0005         | P      | 6'X6' RCB                              | 830             | \$1,264,445 | 0000         | P                                      |  | 800             | 51,251,200  | (\$-455,055) |  |  |  |
| SLWA         | WASI   | HINGTON AVENUE CON                     | VEYANCE/D       | ETENTION    | SLWA         | WASHINGTON AVENUE CONVEYANCE/DETENTION |  |                 |             |              |  |  |  |
|              |        |  |                 |             | 0130         | Р                                      | 5' X 4' RCB  | 79              | \$94,131    |              |  |  |  |
| 0130         | Р      | 36" RCP                                | 1050            | \$804,213   | 0140         | Р                                      | 60" X 38" HERCP<br>(NEW ID MILE,<br>SPLIT OF 0130) | 195             | \$148,744   | \$561,338    |  |  |  |
| 0150         | p      | 36" RCP                                | 1270            | \$965,161   | 0150         | Þ                                      | 42" RCP  | 2246            | \$1,832,329 | \$867,168    |  |  |  |
| 0152         | Р      | 24" RCP OUTLET                         | 150             | \$51,039    | 0152         | р                                      | 36" RCP OUTLET                                     | 616             | \$476,412   | \$425,372    |  |  |  |
| 0151         | р      | 11,710 CFS<br>PMF SPILLWAY             |                 | \$1,464,178 | 0151         | Р                                      | 9,229 CFS<br>PMF SPILLWAY                          |                 | \$1,207,364 | (\$256,815)  |  |  |  |
| 0153         | P      | 88 AC-FT JIM MCGAUGHEY DETENTION BASIN |                 | \$669,034   | 0153         | Р                                      | 71 AC-FT<br>JIM MCGAUGHEY<br>DETENTION BASIN       |                 | \$539,789   | (\$129,245)  |  |  |  |
|              |        | CONC CHNL 12'W                         |                 |             | 0175         | P                                      | CONC CHNL 12' W<br>3.5'D 0:1 SS                    | 138             | \$239,698   |              |  |  |  |
| 0175         | P      | 3.5'D 2:1 5S                           | 1500            | \$861,328   | 0180         | Р                                      | 12' X 6' RCB<br>(NEW ID MILE,<br>SPLIT OF 0175)    | 748             | \$1,558,524 | \$936,894    |  |  |  |
|              |        |  | Total Cost:     | \$6,539,252 |              |  |  | Total Cost:     | \$7,328,256 | \$789,004    |  |  |  |

Representatives from Jacobs will be available to respond to any questions following the brief presentation.

Respectfully submitted.

TAC AGENDA
ITEM # 15
Date: 06.29.23

RFCD AGENDA
ITEM # 16
Date: 07.13.23

CAC AGENDA ITEM # 15 Date: 07.03.23

DENIS CEDERBURG Director of Public Works

# Regional Flood Control District AGENDA ITEM DEVELOPMENT

Staff Discussion: Date: 06/20/2023

MASTER PLAN CHANGE JIM MCGAUGHEYT DETENTION BASIN, COLLECTION AND OUTFALL

This Master Plan Change affects proposed 2018 MPU facilities SLOW 0000 & 0005, SLWA 0130, 0150, 0151, 0152, 0153 & 0175. SLOW 0000 is a proposed 806 foot long 6-ft x 6-ft RCB that collects stormwater from an existing wash at the northeast comer of Owens Avenue and Los Feliz Street. The change includes the reduction of the overall facility length and SLOW 0005 is combined with SLOW 0000.

2018 MPU facility SLWA 0175 is requested to be split into two ID miles due to different types of facilities. New ID mile SLWA 0180 is a 748 foot long 12-ft x 6-ft RCB that collects stormwater from an existing wash on the east side of Los Feliz Street, approximately 500 feet south of the detention basin site. This conveys flow north, within Los Feliz Street and continues to SLWA 0175, a 138 foot long 12-ft x 6-ft rectangular channel discharging runoff to the proposed detention basin.

SLWA 0153 is changed to show the footprint of the 71 ac-ft Jim McGaughey Detention Basin. The changes to the outfall facilities (SLWA 0152, 0150 and 0130) are for size, type, alignment, and length. SLWA 0130 is also split to ID miles SLWA 0130 and 0140. SLWA 0152 is a proposed 616 foot, 36-in RCP outlet that is requested to be aligned from the west side of the detention basin to a driveway located within the Mike O'Callaghan Middle School.

SLWA 0150 is a proposed 2,246 foot long 42-in RCP that continues the detention basin outfall to the west, from the school driveway to Hollywood Blvd within the Radwick Drive alignment. SLWA 0140 continues the outfall to the west within an existing drainage easement.

SLWA 0140 is a proposed 195 foot long 60-in x 38-in H ERCP. SLWA 0130 is a proposed 79 foot long 5-ft x 4-ft RCB that provides the final connection between the 60-in x 38-in HERCP and the existing Washington Channel.

The total cost estimate of the 2023 MPC facilities is \$7,328,256. The result is an increase of \$789,004.

The table below summarizes the 2018 MPU and 2023 MPC facility costs estimate.

|              |        | 2018 MPU COST ESTIM                    | IATE            |             | 2023 MPC COST ESTIMATE |  |  |      |             |             |  |  |
|--------------|--------|--|-----------------|-------------|------------------------|--|--|------|-------------|-------------|--|--|
| ID /<br>MILE | Status | Facility Description                   | Length<br>(ft.) | Total Cost  | ID / Status Facilit    |  | tatus Facility Description                         |      | Total Cost  | Cost        |  |  |
| slow         | OWE    | NS CONVEYANCE TO W                     | ASHINGTO        | N SYSTEM    | SLOW                   | OWENS CONVEYANCE TO WASHINGTON SYSTEM  |  |      |             |             |  |  |
| 0000         | Р      | 8'X6' RCB                              | 270             | \$459,853   | 0000                   | P                                      | 6' X 6' RCB  | 806  | \$1,231,266 | (\$-493,033 |  |  |
| 0005         | Р      | 6'X6' RCB                              | 830             | \$1,264,445 | 0000                   |  | 6 X 0 NCB  | 800  | \$1,251,200 | (\$ 430,033 |  |  |
| SLWA         | WASH   | HINGTON AVENUE CON                     | /EYANCE/D       | ETENTION    | SLWA                   | WASHINGTON AVENUE CONVEYANCE/DETENTION |  |      |             |             |  |  |
|              |        |  |                 |             | 0130                   | P                                      | 5′ X 4′ RCB  | 79   | \$94,131    |             |  |  |
| 0130         | Р      | 36" RCP                                | 1050            | \$804,213   | 0140                   | Р                                      | 60" X 38" HERCP<br>(NEW ID MILE,<br>SPLIT OF 0130) | 195  | \$148,744   | \$561,338   |  |  |
| 0150         | Р      | 36" RCP                                | 1270            | \$965,161   | 0150                   | Р                                      | 42" RCP  | 2246 | \$1,832,329 | \$867,168   |  |  |
| 0152         | Р      | 24" RCP OUTLET                         | 150             | \$51,039    | 0152                   | Р                                      | 36" RCP OUTLET                                     | 616  | \$476,412   | \$425,372   |  |  |
| 0151         | Р      | 11,710 CFS<br>PMF SPILLWAY             |                 | \$1,464,178 | 0151                   | Р                                      | 9,229 CFS<br>PMF SPILLWAY                          |      | \$1,207,364 | (\$256,815  |  |  |
| 0153         | Р      | 88 AC-FT JIM MCGAUGHEY DETENTION BASIN |                 | \$669,034   | 0153                   | Р                                      | 71 AC-FT<br>JIM MCGAUGHEY<br>DETENTION BASIN       |      | \$539,789   | (\$129,245  |  |  |
|              |        | CONC CHAIL 12/14/                      |                 |             | 0175                   | Р                                      | CONC CHNL 12' W<br>3.5'D 0:1 SS                    | 138  | \$239,698   |             |  |  |
| 0175         | P      | CONC CHNL 12'W<br>3.5'D 2:1 SS         | 1500            | \$861,328   | 0180                   | Р                                      | 12' X 6' RCB<br>(NEW ID MILE,<br>SPLIT OF 0175)    | 748  | \$1,558,524 | \$936,894   |  |  |

This Master Plan Change is consistent with the general principles set forth in NRS 543.597 and subsection 3 of NRS 543.590 and represents the most effective structural and regulatory means to control existing flooding within the area and dealing with possible effects of future development. Hydrologic and hydraulic analyses prepared for this MPC are in conformance with Clark County Regional Flood Control District Hydrologic Criteria and Drainage Design Manual, and the criteria outlined in the 2018 MPU. This master plan change does not adversely affect the continued implementation of the Master Plan.

Representatives from Jacobs will be available to respond to any questions following the brief presentation.

# **Staff Recommendation:**

Approve and recommend that the Board find the Master Plan Change:

- 1. Is consistent with the general principles set forth in subsection 3 of NRS 543.590;
- 2. Is hydraulically similar to the facility proposed in the Master Plan;
- 3. Is the most cost-effective structural or regulatory means of controlling flood waters; and
- 4. Does not adversely affect the continued implementation of the Master Plan.

# Discussion by Technical Advisory Committee:

AGENDA

#15 Date: 06/29/2023

| Recommendation:                            |                      |
|--|----------------------|
| Follow Staff recommendation.               |                      |
|  | 1                    |
| Discussion by Citizens Advisory Committee: | AGENDA               |
|  | #15 Date: 07/03/2023 |
|  |                      |
|  |                      |
|  |                      |
|  |                      |
| Recommendation:                            |                      |
| Follow Staff recommendation.               |                      |
| Tollow Start recommendation.               |                      |
|  |                      |
|  |                      |

071323 MPC Jim McGaughey Detention Basin-aid



# **Department of Public Works**

500 S Grand Central Pky • Box 554000 • Las Vegas NV 89155-4000 (702) 455-6000 • Fax (702) 455-6040

Denis Cederburg, P.E., Director · E-Mail: dlc@ClarkCountyNV.gov

\* 4 > W | @ \$ 1 > W |

June 15, 2023

Steven C. Parrish, P.E., General Manager/Chief Engineer Clark County Regional Flood Control District 600 South Grand Central Parkway, Suite 300 Las Vegas Nevada 89106

MASTER PLAN CHANGE TO THE 2018 MASTER PLAN UPDATE FOR JIM MCGAUGHEY DETENTION BASIN, COLLECTION AND OUTFALL

Dear Mr. Parrish:

This Master Plan Change (MPC) to the 2018 Las Vegas Valley Flood Control Master Plan Update (2018 MPU) was prepared by Jacobs for Clark County Public Works, with proposed improvements based on the 90% design of the Jim McGaughey Detention Basin and Outfall. The design effort resulting in this proposed MPC includes refined hydrologic analysis to determine upstream stormwater collection points and inflows, design of the detention basin configuration, PMF emergency spillway, and realignment of the outfall system. Exhibit A depicts the 2018 MPU facilities. Exhibit B shows the 2018 MPU facilities and proposed 2023 MPC facilities. Exhibit C depicts the 2023 MPC facilities, as described in more detail below.

## **Proposed MPC facilities**

SLOW 0000 is a proposed 806 foot long 6-ft x 6-ft RCB that collects stormwater from an existing wash at the northeast corner of Owens Avenue and Los Feliz Street. This collects and discharges runoff to the proposed detention basin. This follows approximately the same alignment as the 2018 MPU. The change includes the reduction of the overall facility length and SLOW 0005 is combined with SLOW 0000.

2018 MPU facility SLWA 0175 is requested to be split into two ID miles due to different types of facilities. New ID mile SLWA 0180 is a 748 foot long 12-ft x 6-ft RCB that collects stormwater from an existing wash on the east side of Los Feliz Street, approximately 500 feet south of the detention basin site. This conveys flow north, within Los Feliz Street and continues to SLWA 0175, a 138 foot long 12-ft x 6-ft rectangular channel discharging runoff to the proposed detention basin.

SLWA 0153 is changed to show the footprint of the 71 ac-ft Jim McGaughey Detention Basin. Sizing of SLWA 0153 is based on hydrologic and hydraulic design refinements performed for the Jim McGaughey Detention Basin and Outfall, including detailed stage-storage parameters developed from the basin's design. The basin was renamed in January 2019 from the "Owens Detention Basin" to the "Jim McGaughey Detention Basin" in honor of the former Nevada State Assemblyman who played an essential role in the establishment of the Clark County Regional Flood Control District.

Four outfall alignment alternatives were assessed at an early stage in the design of the Jim McGaughey Detention Basin and Outfall, with the preferred alternative chosen for the current design and shown with this MPC. Sizing of the outfall facilities is based on detailed hydrologic and hydraulic analysis, in addition to collection of localized runoff between detention basin and the outfall's discharge point into the Washington Avenue Channel. The changes to the outfall facilities (SLWA 0152, 0150 and 0130) are for size, type, alignment, and length. SLWA 0130 is also split to ID miles SLWA 0130 and 0140.

SLWA 0152 is a proposed 616 foot, 36-in RCP outlet that is requested to be aligned from the west side of the detention basin to a driveway located within the Mike O'Callaghan Middle School.

SLWA 0150 is a proposed 2,246 foot long 42-in RCP that continues the detention basin outfall to the west, from the school driveway to Radwick Drive. This system continues south in Radwick Drive to Monroe Avenue, then west in Monroe Avenue to Hollywood Boulevard. At Hollywood Boulevard, it continues south to an existing drainage easement. SLWA 0140 continues the outfall to the west, within the drainage easement. This is a proposed 195 foot

long 60-in x 38-in HERCP. SLWA 0130 is a proposed 79 foot long 5-ft x 4-ft RCB that provides the final connection between the 60-in x 38-in HERCP and the existing Washington Channel.

The 2018 MPU cost tool was used to estimate the planning cost of proposed facilities. The total cost estimate, including Design & Administration, Right-of-Way, and Construction of the 2018 MPU facilities is \$6,539,252. The total cost estimate of the 2023 MPC facilities is \$7,328,256. The result is an increase of \$789,004. The below table summarizes the 2018 MPU and 2023 MPC facility costs estimate. A detailed cost estimate based on the MPU cost tool is provided as Attachment D.

| = 00°                | 4.1.           |  |                     | Cost Comp   | arison of I  | loo                        | d Control Facilities                               |               |             |              |
|----------------------|----------------|--|---------------------|-------------|--------------|----------------------------|--|---------------|-------------|--------------|
| A CLASSIC<br>Rest Su | . 2            | 018 MPU COST E                         | STIMATE             |             |              |                            | 2023 MPC COST ES                                   | TIMATE        |             | DIFFERENCE   |
| ID /<br>MILE         | St<br>at<br>us | Facility<br>Description                | Leng<br>th<br>(ft.) | Total Cost  | ID /<br>MILE | S<br>t<br>a<br>t<br>u<br>s | Facility Description                               | Leng th (ft.) |             | Cost         |
| SLOW                 | OW             | ENS CONVEYAN                           | CE TO W             | ASHINGTON   | SLOW         |                            | OWENS CONVEYANCE SYST                              |               | SHINGTON    |              |
| 0000                 | Р              | 8'X6' RCB                              | 270                 | \$459,853   | 0000         |                            | ALV CLDOD  | 806           | \$1,231,266 | (\$-493,033) |
| 0005                 | P              | 6'X6' RCB                              | 830                 | \$1,264,445 | 0000         | P                          | 6' X 6' RCB  | \$1,231,200   | (4-480,000) |              |
| SLWA                 |                | WASHINGT<br>CONVEYANC                  |                     |             | SLWA         |                            | WASHINGTO<br>CONVEYANCE                            |               |             |              |
|                      |                |  |                     |             | 0130         | Р                          | 5' X 4' RCB  | 79            | \$94,131    |              |
| 0130                 | P              | 36" RCP                                | 1050                | \$804,213   | 0140         | Р                          | 60" X 38" HERCP<br>(NEW ID MILE,<br>SPLIT OF 0130) | 195           | \$148,744   | \$561,338    |
| 0150                 | Р              | 36" RCP                                | 1270                | \$965,161   | 0150         | Р                          | 42" RCP  | 2246          | \$1,832,329 | \$867,168    |
| 0152                 | Р              | 24" RCP<br>OUTLET                      | 150                 | \$51,039    | 0152         | Р                          | 36" RCP OUTLET                                     | 616           | \$476,412   | \$425,372    |
| 0151                 | P              | 11,710 CFS<br>PMF<br>SPILLWAY          |                     | \$1,464,178 | 0151         | P                          | 9,229 CFS<br>PMF SPILLWAY                          |               | \$1,207,364 | (\$256,815)  |
| 0153                 | Р              | 88 AC-FT JIM MCGAUGHEY DETENTION BASIN |                     | \$669,034   | 0153         | Р                          | 71 AC-FT<br>JIM MCGAUGHEY<br>DETENTION BASIN       |               | \$539,789   | (\$129,245)  |
|                      |                | CONC CHNL                              |                     |             | 0175         | Р                          | CONC CHNL 12' W<br>3.5'D 0:1 SS                    | 138           | \$239,698   |              |
| 0175                 | P              | 12'W 3.5'D 2:1<br>SS                   | 1500                | \$861,328   | 0180         | Р                          | 12' X 6' RCB<br>(NEW ID MILE,<br>SPLIT OF 0175)    | 748           | \$1,558,524 | \$936,894    |
|                      |                | То                                     | tal Cost:           | \$6,539,252 |              |                            | To   | tal Cost:     | \$7,328,256 | \$789,004    |

|         |                  | Summ    | ary Table       |            |         |  |
|---------|------------------|---------|-----------------|------------|---------|--|
| 2018 MF | PU Cost Estimate | 2023 MF | C Cost Estimate | Difference |         |  |
| •       | 6.539,252        | •       | 7,328,256       | œ          | 789,004 |  |

Mr. Steve Parrish Jim McGaughey Detention Basin, Collection and Outfall June 15, 2023

This Master Plan Change is consistent with the general principles set forth in NRS 543.597 and subsection 3 of NRS 543.590 and represents the most effective structural and regulatory means to control existing flooding within the area and dealing with possible effects of future development. Hydrologic and hydraulic analyses prepared for this MPC are in conformance with Clark County Regional Flood Control District Hydrologic Criteria and Drainage Design Manual, and the criteria outlined in the 2018 MPU. This master plan change does not adversely affect the continued implementation of the Master Plan.

If you have any questions, or require any additional information, please call the undersigned at (702) 455-6921.

Sincerely,

Richard Robinson, P.E. Senior Civil Engineer

RRR:cm

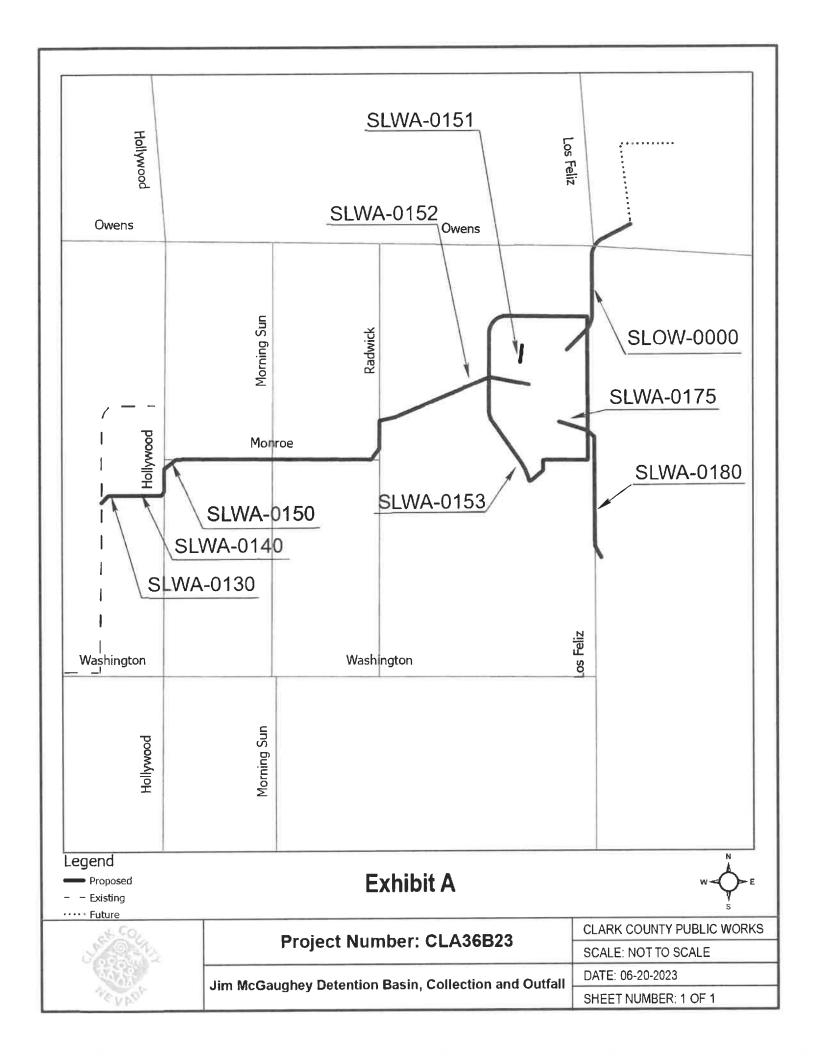
**Enclosures:** 

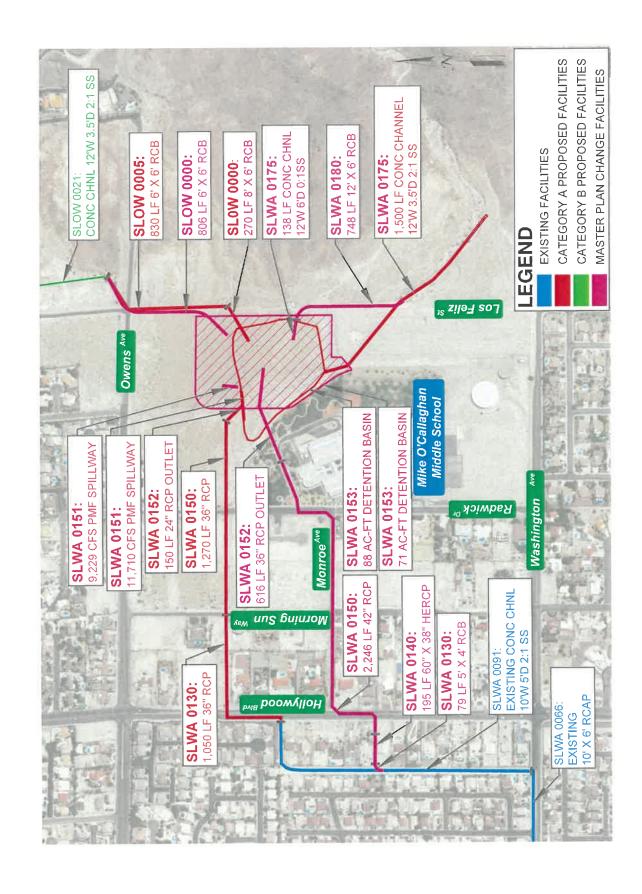
2018 MPU Facilities - Exhibit "A"

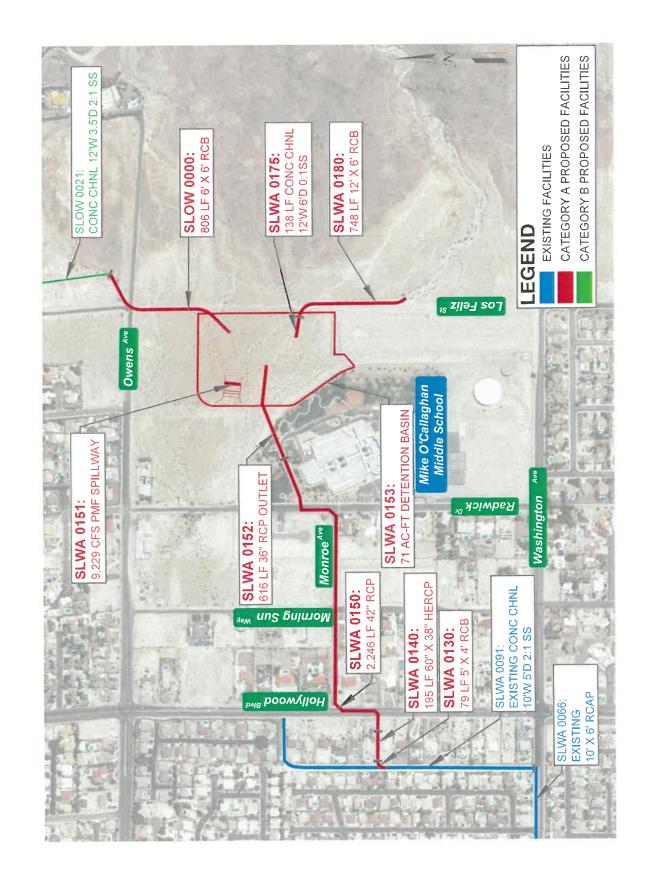
2018 MPU & 2023 MPC Facilities - Exhibit "B"

2023 MPC Facilities - Exhibit "C"

2018 MPU & 2023 MPC Cost Estimate - Exhibit "D"







# **EXHIBIT D**

# Jim McGaughey Detention Basin and Outfall 2018 MPU & 2023 MPC Cost Estimate Based on the CCRFCD 2018 MPU Cost Tool

#### 2018 MPU FACILITIES COST

| ID Mile  | Facility Description                   | Facility<br>Length<br>(ft) |    | Design &<br>Admin | Ri | ght of Way<br>Cost | Co | Construction<br>Cost |    | Total     |
|----------|--|----------------------------|----|-------------------|----|--------------------|----|----------------------|----|-----------|
| SLOW0000 | 8' X 6' RCB                            | 270                        | \$ | 67,625            | \$ | 54,100             | \$ | 338,127              | \$ | 459,853   |
| SLOW0005 | 6' X 6' RCB                            | 830                        | \$ | 185,948           | \$ | 148,758            | \$ | 929,739              | \$ | 1,264,445 |
| SLWA0130 | 36" RCP                                | 1050                       | \$ | 118,267           | \$ | 94,613             | \$ | 591,333              | \$ | 804,213   |
| SLWA0150 | 36" RCP                                | 1270                       | \$ | 141,935           | \$ | 113,548            | \$ | 709,677              | \$ | 965,161   |
| SLWA0151 | 11,710 CFS PMF SPILLWAY                |                            | \$ | 215,320           | \$ | 172,256            | \$ | 1,076,602            | \$ | 1,464,178 |
| SLWA0152 | 24" RCP OUTLET                         | 150                        | \$ | 7,506             | \$ | 6,005              | \$ | 37,529               | \$ | 51,039    |
| SLWA0153 | 88 AC-FT JIM MCGAUGHEY DETENTION BASIN |                            | \$ | 98,387            | \$ | 78,710             | \$ | 491,937              | \$ | 669,034   |
| SLWA0175 | CONC CHNL 12'W 3.5'D 2:1 SS            | 1500                       | \$ | 126,666           | \$ | 101,333            | \$ | 633,330              | \$ | 861,328   |
|          | <del></del>                            |                            | -  |                   |    |                    | -  | 4 000 074            | -  | C F20 2F2 |

\$ 961,655 \$ 769,324 \$ 4,808,274 \$ 6,539,252 TOTAL

#### 2023 MPC FACILITIES COST

| ID Mile  | Facility Description                   | Facility<br>Length<br>(ft) | Design &<br>Admin | Right of Way<br>Cost |         | Co | onstruction<br>Cost | Total           |
|----------|--|----------------------------|-------------------|----------------------|---------|----|---------------------|-----------------|
| SLOW0000 | 6' X 6' RCB                            | 806                        | \$<br>181,068     | \$                   | 144,855 | \$ | 905,342             | \$<br>1,231,266 |
| SLWA0130 | 5' X 4' RCB                            | 79                         | \$<br>13,843      | \$                   | 11,074  | \$ | 69,214              | \$<br>94,131    |
| SLWA0140 | 60" X 38" HERCP                        | 195                        | \$<br>21,874      | \$                   | 17,499  | \$ | 109,371             | \$<br>148,744   |
| SLWA0150 | 42" RCP                                | 2246                       | \$<br>269,460     | \$                   | 215,568 | \$ | 1,347,301           | \$<br>1,832,329 |
| SLWA0151 | 9,229 CFS PMF SPILLWAY                 |                            | \$<br>177,554     | \$                   | 142,043 | \$ | 887,768             | \$<br>1,207,364 |
| SLWA0152 | 36" RCP OUTLET                         | 616                        | \$<br>70,061      | \$                   | 56,048  | \$ | 350,303             | \$<br>476,412   |
| SLWA0153 | 71 AC-FT JIM MCGUAGHEY DETENTION BASIN |                            | \$<br>79,381      | \$                   | 63,505  | \$ | 396,903             | \$<br>539,789   |
| SLWA0175 | 12' X 6' CONC CHNL 12' W               | 138                        | \$<br>35,250      | \$                   | 28,200  | \$ | 176,249             | \$<br>239,698   |
| SLWA0180 | 12' X 6' RCB                           | 748                        | \$<br>229,195     | \$                   | 183,356 | \$ | 1,145,974           | \$<br>1,558,524 |
|          | TOTAL                                  |                            | \$<br>1,077,685   | \$                   | 862,148 | \$ | 5,388,424           | \$<br>7,328,256 |

# **SUMMARY TABLE**

| Cost Estimate       | Total Cost      |
|---------------------|-----------------|
| 2018 MPU FACILITIES | \$<br>6,539,252 |
| 2023 MPC FACILITIES | \$<br>7,328,256 |
| DIFFERENCE          | \$<br>789,004   |