# Storm Drainage Impact Fee Study 2024

## For 2025 IFP Update

## Estrella, Laveen, and Paradise Ridge Impact Fee Areas



**Prepared for:**

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**Planning and Development Department**

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**Preparation Date:**

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# Section 1: Introduction

## 1.1 General

The City of Phoenix retained Kimley-Horn and Associates, Inc. (KH) to complete a storm drainage impact fee study update in conjunction with the City's 2025 Infrastructure Financing Plan Update. KH was tasked with performing cost analysis of existing and proposed drainage facilities identified by the City of Phoenix within the Laveen, Estrella, and Paradise Ridge Impact Fee Service Areas (IFSA). This report details calculations and assumptions made to evaluate current project costs for existing and proposed storm drainage infrastructure, and for proposed storm drainage impact fees for each IFSA.

## 1.2 Study Scope

The scope of services provided for this study consisted of eight tasks. The project began with coordination between KH and the City of Phoenix to reach consensus regarding study assumptions and to consolidate and review relevant data (Task 1). Utilizing the data provided by the City, KH then catalogued and characterized existing and proposed drainage facilities within each of the three IFSAs (Task 2), documented the Equivalent Development Units (EDU) anticipated in the City's projected growth data (Task 3), and updated previously compiled project cost estimates of proposed drainage facilities to reach baseline market conditions in 2024 (Task 4). Task 4 also included escalation of previously built storm drainage infrastructure costs to current dollars and the calculations of the proposed impact fees for each IFSA. Data generated through the completion of Tasks 1 through 3 assisted KH in the development of storm drainage facility maps (Task 5) which were included in the draft and final letter reports prepared for The City (Tasks 6 & 7). KH assisted the City with the roll out of the proposed storm drainage impact fees to stakeholders and City officials. (Task 8).

## 1.3 Report Format

Sections 2 through 6 of this report are structured to present the results from the tasks outlined in the study's scope.

# Section 2: Data Collection

## 2.1 General

To achieve the purposes of this project, data regarding the cost of existing and proposed drainage infrastructure, as well as the projected growth of development within each IFSA was required. KH obtained these data from the City of Phoenix. Data acquired included current cost information for projects in design, overall cost of completed projects, previously compiled cost estimates and updates, and City commissioned growth projection data.

## 2.2 Data Collection Results

In coordination with the City of Phoenix, KH conducted a comprehensive review of the following digital files:

- Existing Area Drainage Master Plans
- GIS shapefiles of IFSA Boundaries
- Relevant Final Drainage Reports

- City of Phoenix cost shares from previously completed drainage improvement projects
- Recent ADOT bid tabulations
- Projected EDU growth in each IFSA provided by City
- Past Infrastructure Financing Plans and supporting documentation
- Unit costs of recently completed and proposed projects in the conceptual or design phase
- Construction cost escalation rates from the Engineering News-Record (ENR) Construction Cost Index

# Section 3: IFSA Locations and Characteristics

## 3.1 Estrella

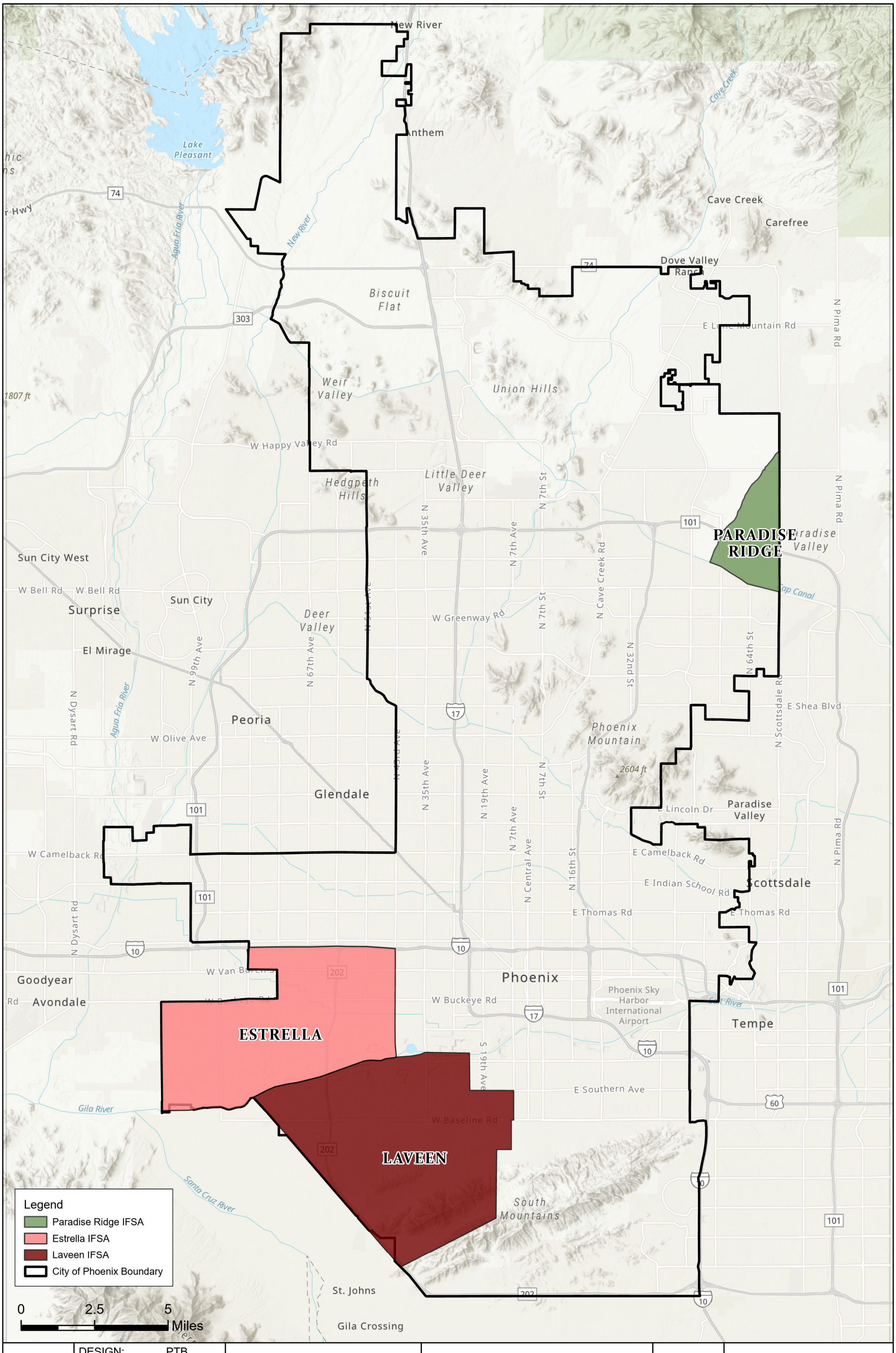
The Estrella IFSA consists of two Impact Fee Service Area Building Blocks (IFSABB), Estrella North and Estrella South. Estrella is bounded on the north by Interstate 10, on the east by 43rd Avenue, on the west by 107th Avenue, and on the south by the Salt River. The terrain is characterized by a mostly flat landscape that slopes towards the Salt River in a southwest direction. The general absence of steep slopes results in drainage patterns being primarily dictated by the existing road network and irrigation delivery systems. The Union Pacific Railroad runs from east to west between Van Buren Street and Buckeye Road, creating a barrier that concentrates and collects runoff from the north. Along this railroad, there is mainly light to heavy industrial development. South of Buckeye Road, many new housing developments are under construction, representing the largest area of developmental growth in Estrella.

## 3.2 Laveen

The Laveen IFSA is comprised of two IFSABBs, Laveen North and Laveen South. Laveen is similarly located in South Phoenix, just southeast of the Estrella IFSA. It is bounded on the north by the Salt River, on the east by 27th Avenue, on the west by the Gila River Indian Community, and on the south by South Mountain Park. The local watershed is predominantly flat and drains toward the Salt River in the northwestern direction. The area has numerous irrigation delivery and tailwater ditches, as well as roadways laid out in a standard grid pattern that significantly impact the region's drainage patterns. At the center of Laveen lies the Laveen Area Conveyance Channel that follows a westerly path and merges with the Salt River near the 83rd Avenue alignment. The Laveen area is experiencing rapid residential and commercial development, with single family homes representing the largest area of developmental growth.

## 3.3 Paradise Ridge

The Paradise Ridge IFSA consists of a single IFSABB and is characterized by primarily undeveloped, natural desert land. It is bounded on the north by Pinnacle Peak Road, on the south by the Central Arizona Project (CAP) Canal, on the east by Scottsdale Road, and on the west by the 64th Street alignment. The Rawhide Wash alluvial fan dictates the regional flood patterns of Paradise Ridge. The watershed drains in a southwesterly direction from the northeast corner of the area. State Route 101 (SR 101) runs through the southern portion of the area in an east-west direction, currently separating developed land from non-developed land. South of SR 101, a combination of commercial and residential land uses are present, and development is rapidly occurring.




| | | | | | |
|---|---|---|---|---|---|
| FIGURE 1 | DESIGN: | PTB | City of Phoenix Maricopa County, AZ | IFSA Locations | Kimley»Horn Expect More. Experience Better. |
| | DRAWN: | PTB | | | |
| | CHECKED: | GSB | | | |
| | | | | | |
| | DATE: | JULY 2024 | | | |

# Section 4: Regional Drainage Facilities

## 4.1 General

Prior to determining potential storm drainage impact fees, existing and proposed drainage facilities and their respective costs needed to be identified in each IFSA. Drainage facilities considered in the impact fee calculations are limited to those presented in the Flood Control District of Maricopa County (FCDMC) ADMPs and similar feasibility studies developed by the City. Additionally, drainage projects must have some or all components that provide a level of service (LOS) equal to 100-Year protection to be included in the storm drainage impact fee calculations.

## 4.2 Existing Regional Drainage Facilities

### 4.2.1 Estrella

The existing regional drainage facilities in the Estrella IFSA with 100-Year LOS are principally outlined in the Durango ADMP (Dibble & Associates, 2002). The Durango Regional Conveyance Channel (DRCC) was initially presented in the Durango ADMP, although its original design was altered and subsequently constructed in two blocks. In 2009, DRCC drainage facilities including detention basins, channel, culverts, and trunk lines east of 75th Avenue were constructed. Then in 2019, DRCC drainage facilities from 75th Avenue to 107th Avenue were completed. A breakdown of these projects is listed below.

- 75th Ave Storm Drain & Durango Regional Conveyance Channel (DRCC)
- DRCC 75th Ave to 107th Ave – Phases 1 & 2 Land Acquisition
- DRCC 75th Ave to 107th Ave – Phases 1 & 2 Design
- DRCC 75th Ave to 107th Ave – Phases 1 & 2 Construction

### 4.2.2 Laveen

The original Laveen ADMP Final Report (HDR, 2001) identified flood control infrastructure that has been constructed by the City of Phoenix and the FCDMC beginning in 1998. Currently, the Laveen Area Conveyance Channel is the largest existing drainage facility in Laveen and serves as a major outlet to the Salt River. The Laveen ADMSPU (JE Fuller, 2017) proposed additional infrastructure based on improved modeling software and included five Areas of Mitigation Interest (AoMI). The infrastructure proposed in the fourth AoMI, a storm drain along 27th Avenue and Olney Avenue, has been constructed. The remaining infrastructure proposed by the update has not been constructed and is included as proposed facilities in this study. A breakdown of existing drainage facilities in Laveen is listed below.

- Laveen Area Conveyance Channel
- 43rd Ave and Southern Ave Detention Basin
- 43rd Ave and Baseline Rd Detention Basin
- 43rd Ave Storm Drain
- 35th Ave and Dobbins Rd Basin and Storm Drain
- 27th Ave and South Mountain Basin
- 23rd Ave and Roeser Detention Basin / 27th Ave and Roeser Storm Drain
- Baseline Rd Storm Drain

- 27th Ave and Olney Ave (AoMI #4)

### 4.2.3 Paradise Ridge

The Paradise Ridge IFSA currently has no existing regional drainage infrastructure with a 100-Year storm LOS.

### 4.2.4 Summary of Existing Regional Drainage Facility Costs

**Table 1** includes the costs allocated to build the existing ADMP drainage facilities listed in this section. Project costs from the date of construction to 2019 were escalated based on the analysis presented in the Estrella and Laveen Drainage Structure Cost Analysis (JE Fuller, 2018). Project costs from 2019 to 2024 were escalated based on data from the ENR Construction Cost Index. Cost share information was derived from Intergovernmental Agreements (IGA) provided by the City.

Table 1: Existing drainage facility costs

| IFSA | Project | Original Total Project Cost | Year Built | Agency Cost Share | | | Cost Index From Buildout Year to 2019[1] | 2019 Inflation Adjusted COP Cost Share | Cost Index from 2019 to 2024[2] | 2024 Inflation Adjusted COP Cost Share |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | FCDMC | COP | Other | | | | |
| Estrella | 75th Ave Storm Drain & Durango Regional Conveyance Channel | 32,000,000 | 2006-2009 | 20,650,000 | 11,350,000 | 0 | 1.35 | 15,322,500 | 1.20 | 18,387,000 |
| Estrella | DRCC 75th Ave to 107th Ave - Phases 1 & 2 Land Acquisition | 4,250,000 | 2017 | 2,125,000 | 2,125,000 | 0 | 1.01 | 2,146,250 | 1.20 | 2,575,500 |
| Estrella | DRCC 75th Ave to 107th Ave -Phases 1 & 2 Design | 1,100,000 | 2016 | 550,000 | 550,000 | 0 | 1.02 | 561,000 | 1.20 | 673,200 |
| Estrella | DRCC 75th Ave to 107th Ave - Phases 1 & 2 Construction | 14,200,000 | 2018-2019 | 8,700,000 | 5,500,000 | 0 | 1.00 | 5,500,000 | 1.20 | 6,600,000 |
| Laveen | 23rd & Roeser Basin and Storm Drain | 9,000,000 | 2010 | 4,500,000 | 4,500,000 | 0 | 1.16 | 5,220,000 | 1.20 | 6,264,00 |
| Laveen | 35th & Dobbins Basin & Storm Drain | 8,263,750 | 1998 | 1,763,750 | 6,500,000 | 0 | 1.82 | 11,830,000 | 1.20 | 14,196,000 |
| Laveen | 43rd Ave Storm Drain - Baseline Rd to Salt River | 11,266,000 | 2000 | 7,436,000 | 0 | 3,830,000 | 1.74 | 0 | 1.20 | 0 |
| Laveen | 43rd Ave & Baseline & 27th & South Mtn. Basins | 7,000,000 | 2014-2015 | 4,900,000 | 2,100,000 | 0 | 1.03 | 2,163,000 | 1.20 | 2,595,600 |
| Laveen | Laveen Area Conveyance Channel and 43rd Ave and Southern Ave Detention Basin | 21,000,000 | 2005 | 7,000,000 | 13,000,000 | 1,000,000 | 1.45 | 18,850,000 | 1.20 | 22,620,000 |
| Laveen | Baseline Storm Drain | 7,215,000 | 2000 | 4,762,000 | 0 | 2,453,000 | 1.74 | 0 | 1.20 | 0 |
| Laveen | 27th Ave and Olney Ave (AoMI#4) | 14,406,676 | 2024 | *** | 4,619,333 | *** | n/a | n/a | 1.00 | 4,619,333 |

[1]Cost index source from RS Means per Estrella and Laveen Drainage Cost Structure Analysis.
[2]Cost index sourced from ENR Construction Cost Index.
***Multiple cost share and DRCC credit totaling $13,802,818 in contributions.

## 4.3 Proposed Regional Drainage Facilities

### 4.3.1 Estrella

In the Estrella IFSA, the proposed regional facilities are the 47th Avenue Basin and Channel and the Sunland Channel identified in the original Durango ADMP (Dibble & Associates, 2002). The 47th Avenue Channel runs along the 47th Avenue alignment from the Salt River to approximately one-half mile north of Buckeye Rd. The project includes 10,200 ft of channel, five culverts, and a detention basin directly north of Buckeye Rd. The Sunland Channel is located both within the Estrella IFSA in the City of Phoenix and the City of Avondale, spanning from 99th Avenue to 120th Avenue, parallel to and a quarter mile north of Southern Avenue. The channel begins in the City of Phoenix at 99th Avenue and crosses into Avondale at 107th Avenue, where it converges with the DRCC at 120th Avenue. The project includes approximately 13,000 ft of channel and four culverts. The original Durango ADMP assumed all system costs for the Sunland Channel would be allocated to the FCDMC and the City of Phoenix. Maps in Appendix A show the location of the proposed regional flood control facilities within the Estrella IFSA.

### 4.3.2 Laveen

In the Laveen IFSA, the proposed 100-Year drainage facilities were identified in the Laveen ADMSPU (JE Fuller, 2017). The Laveen ADMSPU proposed drainage facilities based on five AoMIs. The first AoMI, Hidden Valley, consists of two large basins, storm drains, and an open channel. The City of Phoenix is not participating in the funding of this project, and therefore it was excluded from this study. The second AoMI, 51st Avenue and Sunrise Drive, was conceptually designed to mitigate storm runoff originating from the north facing side of Carver Mountain. This project utilizes a basin, channel, and storm drain to alleviate local flooding. AoMI #3, 35th Avenue and Dobbins Road, consists of a single culvert that crosses underneath the intersection of 35th Avenue and Dobbins Road. The fourth AoMI, 27th Avenue and Olney Avenue is currently under construction, and construction is anticipated to be completed in August of 2024. For this reason, this project was categorized as an existing drainage facility. The fifth AoMI presented in the Laveen ADMSPU is 19th Avenue and Dobbins Road. This project includes a new detention basin, culverts, and storm drain to mitigate the flooding issues in the area. The second, third, and fifth AoMI projects shown in the Laveen ADMSPU qualified as proposed projects in this study. Appendix A shows the location of the proposed ADMSPU and Feasibility Study facilities within the Laveen IFSA.

### 4.3.3 Paradise Ridge

In the Paradise Ridge IFSA, the proposed flood control facilities are currently being designed as part of the Paradise Ridge Drainage Improvement Project (Wood Patel, Ongoing). The project includes a channel, culverts, and a series of basins to convey the 100-Year storm runoff from Rawhide Wash as it discharges under Scottsdale Road approximately 2.5 miles north of SR 101L. The construction of these flood control facilities would revise the existing alluvial fan flood hazard area to be contained within the proposed improvements, benefitting future commercial and residential development north of SR 101L. Appendix A contains maps showing the location of the proposed drainage facilities in the Paradise Ridge IFSA.

### 4.3.4 Summary of Costs

The proposed flood control facility costs for the Estrella, Laveen, and Paradise Ridge IFSA's are summarized in **Table 2**. More comprehensive and itemized costs for each proposed drainage facility are included in Appendix B. Overall costs incorporate land acquisition, construction, and contingency costs obtained from the original reports associated with each project. Unit costs were updated to account for current construction and material market prices. Updates to unit costs were determined by comparing recent construction costs, engineer's estimates for City of Phoenix projects (27th Avenue & Olney Avenue and 19th Avenue & Dobbins Road), and ADOT bid tabs. To account for future unit cost increases, a 3 percent price increase per year was applied to the 2024 market price. The City of Phoenix cost share was assumed to be 35 percent with the FCDMC covering the remaining cost.

Table 2: Proposed drainage facility costs

| IFSA | Proposed Project | Year of Project Proposal | Original Project Cost | 2024 Total Project Cost | COP Cost Share[1] 2024 | Cost Index Increase Per Year | Inflation Adjusted Cost July 2025 | COP Cost Share[1] July 2025 | Inflation Adjusted Midpoint Cost for FY 2028.5 | COP Cost Share[1] FY 2028.5 |
|---|---|---|---|---|---|---|---|---|---|---|
| Estrella | 47th Ave Basin and Inlet | 2001 | 9,904,133 | 48,382,748 | 16,933,962 | 3% | 49,834,230 | 17,441,981 | 54,455,209 | 19,059,323 |
| Estrella | 47th Ave Channel | 2001 | 9,174,515 | 38,244,027 | 13,385,409 | 3% | 39,391,348 | 13,786,972 | 43,043,989 | 15,065,396 |
| Estrella | Sunland Channel | 2001 | 8,148,276 | 35,604,103 | 12,461,436 | 3% | 36,672,226 | 12,835,279 | 40,072,732 | 14,025,456 |
| Laveen | 51st Ave & Sunrise Dr (AoMI #2) | 2017 | 5,568,000 | 26,363,268 | 9,227,144 | 3% | 27,154,166 | 9,503,958 | 29,672,091 | 10,385,232 |
| Laveen | 35th Ave & Dobbins Rd (AoMI #3) | 2017 | 1,013,000 | 5,454,705 | 1,909,147 | 3% | 5,618,346 | 1,966,421 | 6,139,319 | 2,148,762 |
| Laveen | 19th Ave and Dobbins Rd (AoMI #5) | 2017 | 7,242,000 | 30,965,578 | 10,837,952 | 3% | 31,894,545 | 11,163,091 | 34,852,031 | 12,198,211 |
| Paradise Ridge | Paradise Ridge Drainage Improvements | 2024 | 96,656,383 | 96,656,383 | 33,829,734 | 3% | 99,556,075 | 34,844,626 | 108,787,611 | 38,075,664 |

[1]Assumes 65/35 split

# Section 5: Development Characterization

## 5.1 General

The storm drainage impact fee is used to fund 100-Year LOS drainage infrastructure within IFSAs in the City of Phoenix's jurisdiction. The impact fee is applied to all new development and varies based on the IFSA. According to State law, developers are only required to contribute towards drainage infrastructure based on their proportionate share of new capacity. Therefore, the City developed methods of determining this fee based on the Equivalent Demand Units (EDUs) that a new development creates, and the current and future values of drainage infrastructure.

EDUs are categorized as either single family residential units or non single family residential units and are based on acreage. The non single family unit category consists of a variety of types of land use including multifamily residential, retail, office, industrial, public, and other development units. Single Family EDUs were estimated based on projected growth data as defined by total single family dwelling unit growth. Non single family EDUs were estimated by projected non single family growth in acres with four non single family EDUs per acre. These data were provided by the City for each IFSA.

The methodology used to calculate the impact fees in the Estrella and Laveen IFSAs was the "buy-in plus ten-year plan." The "buy in plus ten-year plan" method considers the total current value of existing drainage facilities, as well as the estimated cost of proposed facilities to be built within the next decade escalated to reflect Q1 2028 US Dollars (halfway through the five year planning horizon). The overall cost was then divided by the projected number of EDUs over the next decade. The "buildout cost per EDU" method was used as a check to ensure the "buy-in plus ten-year method" costs were not over estimating fees. This methodology similarly combines the value of past constructed drainage infrastructure and the value of all proposed facilities, and divides that by the projected build-out quantity of EDUs. This method is necessary as a check to ensure that the development occurring between 2025 and 2034 is not paying for a disproportionate share of drainage infrastructure costs. The lower of the two calculated fees was assumed to be the proposed storm drainage impact fee per IFSA.

The entirety of the Paradise Ridge IFSA is in the Federal Emergency Management Agency (FEMA) Zone AO floodplain of Rawhide Wash. The calculation of the Paradise Ridge proposed storm drainage impact fee uses a plan-based method in which costs are allocated equally on a per acre basis over all land that would be removed from the Zone AO FEMA Special Flood Hazard Area as a result of the proposed drainage infrastructure.

## 5.2 Estrella

### 5.2.1 Existing and Future Development

**Table 3** contains the number of EDUs in 2024 as well as 10-Year and buildout EDU projections for the Estrella IFSA. Based on these estimates, the number of current EDUs will grow 129 percent until buildout. **Table 4** shows the total City of Phoenix cost share for the current value of existing facilities and the value of proposed drainage infrastructure in 2028. Proposed project costs were escalated to Q1 2028 as the mid point in the five year planning horizon (FY 2025-FY 2030).

Table 3: Existing and Projected EDUs in Estrella

| | 2024 | 2034 | Buildout |
|---|---|---|---|
| Single Family Units | 19,012 | 23,081 | 25,756 |
| Non-Residential and Multifamily Acres | 7,545 | 8,577 | 9,379 |
| SF EDU Conversion Factor | 1 | 1 | 1 |
| Non-Residential and MF EDU Conversion Factor | 4 | 4 | 4 |
| SF EDU Total | 19,012 | 23,081 | 25,756 |
| Non-Residential and MF EDU Total | 30,180 | 34,308 | 37,516 |
| **Total EDUs** | **49,192** | **57,389** | **63,272** |

Table 4: Estrella Total Existing and Proposed Drainage Facility Costs

| Project Name | Existing/Proposed Facility | Inflation Adjusted COP Cost Share FY 2028.5 |
|---|---|---|
| 75th Ave Storm Drain and Durango Regional Conveyance Channel | Existing Facility | $ 18,387,000 |
| DRCC 75th Ave to 107th Ave -Phases 1 & 2 Land Acquisition | Existing Facility | $ 2,575,500 |
| DRCC 75th Ave to 107th Ave -Phases 1 & 2 Design | Existing Facility | $ 673,200 |
| DRCC 75th Ave to 107th Ave -Phases 1 & 2 Construction | Existing Facility | $ 6,600,000 |
| 47th Avenue Basin and Inlet | Proposed Facility | $ 19,059,323 |
| 47th Avenue Channel | Proposed Facility | $ 15,065,396 |
| Sunland Avenue Channel | Proposed Facility | $ 14,025,456 |
| **Total Existing and Proposed Facility Costs** | | **$ 76,385,876** |

### 5.2.2 Impact Fees

The Estrella proposed storm drainage impact fee was calculated using both the "buy in plus 10 year" and "buildout per EDU" methods. **Table 5** contains the results of these calculations. The lower of these two numbers is proposed as the storm drainage impact fee for Estrella. Applying the impact fee to the development that is projected to occur over the next decade, the estimated revenue obtained through the fee is $9,895,926, as shown in **Table 6**. Combining the existing IFSA fund balance, as of June 30th, 2024, and the revenue received from the impact fee, the estimated additional borrowing requirement that would be necessary to fund proposed projects is $27,478,455. This is shown in **Table 7**.

Table 5: Estrella Buy-In + 10 Year Plan Method / Buildout Cost Method

| | |
|---|---|
| Total Existing and Projected Facility Costs | $ 76,385,876 |
| 2034 Projected EDUs | 57,389 |
| Buy-In + 10 Year Method Cost per EDU | $ 1,331 |
| Projected Buildout EDUs | 63,272 |
| Buildout Cost Method Cost per EDU | $ 1,207 |
| **Lower Impact Fee of Both Methods** | **$ 1,207** |

Table 6: Estrella Estimated Revenue

| | |
|---|---|
| 10 Year EDU Growth (2024-2034) | 8,197 |
| Gross Impact Fee Per EDU | $ 1,207 |
| **Estimated Revenue** | **$ 9,895,926** |

Table 7: Estrella Estimated Expenditures

| Project Name | COP Cost Share |
|---|---|
| 47th Avenue Basin and Inlet | $ 19,059,323 |
| 47th Avenue Channel | $ 15,065,396 |
| Sunland Channel | $ 14,025,456 |
| **Total Proposed Facility Costs** | **$ 48,150,176** |
| **Total Estimated Revenue** | **$ 9,895,926** |
| **IFSA Fund Balance as of June 30, 2024** | **$ 10,775,795** |
| **Borrowing Requirement** | **$ 27,478,455** |

## 5.3 Laveen

### 5.3.1 Existing and Future Development

**Table 8** shows the number of EDUs in 2024 as well as 10-Year and buildout EDU projections in the Laveen IFSA. Based on these estimates, the number of current EDUs will grow 142 percent until buildout. **Table 9** shows the total City of Phoenix cost share for the current value of existing facilities and the value of proposed drainage infrastructure in Q1 2028.

Table 8: Existing and Projected EDUs in Laveen

| | 2024 | 2034 | Buildout |
|---|---|---|---|
| Single Family Units | 28,207 | 33,476 | 34,211 |
| Non-Residential and Multifamily Acres | 2,899 | 3,505 | 4,838 |
| SF EDU Conversion Factor | 1 | 1 | 1 |
| Non-Residential and MF EDU Conversion Factor | 4 | 4 | 4 |
| SF EDU Total | 28,207 | 33,476 | 34,211 |
| Non-Residential and MF EDU Total | 11,596 | 14,020 | 19,352 |
| **Total EDUs** | **37,600** | **47,496** | **53,563** |

Table 9: Laveen Total Existing and Proposed Drainage Facility Costs

| Project Name | Existing/Proposed Facility | Inflation Adjusted COP Cost Share FY 2028.5 |
|---|---|---|
| 23rd and Roeser Basin and Storm Drain | Existing Facility | $ 6,264,000 |
| 35th and Dobbins Basin and Storm Drain | Existing Facility | $ 14,196,000 |
| 43rd Ave Storm Drain - Baseline Rd to Salt River | Existing Facility | $ 0 |
| 43rd Ave and Baseline & 27th and South Mtn. Basins | Existing Facility | $ 2,595,600 |
| Laveen Area Conveyance Channel and 43rd Ave and Southern Ave Detention Basin | Existing Facility | $ 22,620,000 |
| Baseline Storm Drain | Existing Facility | $ 0 |
| 51st Ave & Sunrise Dr (AoMI#2) | Proposed Facility | $ 10,385,232 |
| 35th Ave & Dobbins Rd (AoMI#3) | Proposed Facility | $ 2,148,762 |
| 27th Ave & Olney Ave (AoMI#4) | Existing Facility | $ 4,619,333 |
| 19th Ave & Dobbins Rd (AoMI#5) | Proposed Facility | $ 12,198,211 |
| **Total Existing and Proposed Facility Costs** | | **$ 75,027,137** |

### 5.3.2 Impact Fees

The Laveen proposed storm drainage impact fee was calculated using both the “buy in plus 10 year” and “buildout per EDU” methods. **Table 10** contains the results of these calculations. The lower of these two numbers is proposed as the storm drainage impact fee for Laveen. Applying the impact fee to the development that is projected to occur over the next decade, the estimated revenue obtained through the fee is $10,775,794 as shown in **Table 11**. Combining the existing IFSA fund balance, as of June 30th, 2024, and the revenue received from the impact fee, the estimated additional borrowing requirement that would be necessary to fund proposed projects is $8,348,522. This is shown in **Table 12.**

Table 10: Laveen Buy-In + 10 Year Plan Method / Buildout Cost Method

| | |
|---|---|
| Total Existing and Projected Facility Costs | $ 75,027,137 |
| 2034 Projected EDUs | 47,496 |
| Buy-In + 10 Year Method Cost per EDU | $ 1,580 |
| Projected Buildout EDUs | 53,563 |
| Buildout Cost Method Cost per EDU | $ 1,401 |
| **Lower Impact Fee of Both Methods** | **$ 1,401** |

Table 11: Laveen Estimated Revenue

| | |
|---|---|
| 10 Year EDU Growth (2024-2034) | 7,693 |
| Gross Impact Fee Per EDU | $ 1,401 |
| **Estimated Revenue** | **$ 10,775,794** |

Table 12: Laveen Estimated Expenditures

| Project Name | COP Cost Share |
|---|---|
| 51st Ave & Sunrise Dr (AoMI#2) | $ 10,385,232 |
| 35th Ave & Dobbins Rd (AoMI #3) | $ 2,148,762 |
| 19th Ave & Dobbins Rd (AoMI #4) | $ 12,198,211 |
| **Total Proposed Facility Costs** | **$ 24,732,204** |
| **Total Estimated Revenue** | **$ 10,775,794** |
| **IFSA Fund Balance as of June 30, 2024** | **$ 5,607,888** |
| **Borrowing Requirement** | **$ 8,348,522** |

## 5.4 Paradise Ridge

### 5.4.1 Existing and Future Development

**Table 13** shows the number of EDUs in 2024 as well as 10-Year and buildout EDU projections for the Paradise Ridge IFSA. Based on these estimates, the number of current EDUs will grow 448 percent until buildout. Single family unit developments are projected to increase the greatest from 2024 to buildout compared to other types of development in Paradise Ridge.

Table 13: Existing and Projected EDUs in Paradise Ridge

| | 2024 | 2034 | Buildout |
|---|---|---|---|
| Single Family Units | 262 | 3,150 | 5,355 |
| Non-Residential and Multifamily Acres | 685 | 895 | 1,802 |
| SF EDU Conversion Factor | 1 | 1 | 1 |
| Non-Residential and MF EDU Conversion Factor | 4 | 4 | 4 |
| SF EDU Total | 262 | 3,150 | 5,355 |
| Non-Residential and MF EDU Total | 2,740 | 3,580 | 7,208 |
| **Total EDUs** | **2,804** | **6,730** | **12,563** |

### 5.4.2 Impact Fees

**Table 14** shows the total City of Phoenix cost share of proposed drainage infrastructure in Paradise Ridge, the total acres of FEMA Zone AO floodplain that can be removed, and the cost per acre of Zone AO floodplain removed. Single family development will pay on a per-unit basis, whereas all other developments will pay impact fees based on acreage. Therefore, the gross impact fee per EDU for each single family unit is $3,077, while the gross impact fee for every acre of non single family development is $12,375. **Table 15** shows the gross impact fee charged for each category of development. The revenue that would result from impact fees charged over ten years is $20,204,307 as outlined in **Table 16**. Because Paradise Ridge has not significantly begun developing, the existing fund balance for the IFSA is zero and cannot contribute to the estimated cost of drainage infrastructure. Therefore, the borrowing requirement was estimated to be $17,871,356. This information is shown in **Table 17**.

Table 14: Paradise Ridge Gross Drainage Fee Calculation

| Description | Amount |
|---|---|
| Paradise Ridge Drainage Improvements | $ 38,075,664 |
| Total Acres (Zone AO Floodplain of Rawhide Wash) | 3,077 |
| Cost Per Acre | $ 12,375 |
| **Cost Per EDU** | **$ 3,094** |

Table 15: Paradise Ridge Gross Impact Fee Per EDU

| Unit Type | Service Unit | EDU Factor | Gross Fee / Unit |
|---|---|---|---|
| Single-Family | Dwelling | 1 | **$ 3,094** |
| All Other Uses | 1 Acre | 4 | **$ 12,375** |

Table 16: Paradise Ridge Estimated Revenue

| Land Use | Acres in 10 Year Plan | Cost Per Acre | Fee Revenue |
|---|---|---|---|
| Single-Family | 788 | $ 12,375 | $ 9,751,568 |
| Multifamily | 265 | $ 12,375 | $ 3,276,180 |
| Retail | 191 | $ 12,375 | $ 2,363,641 |
| Office | 150 | $ 12,375 | $ 1,856,263 |
| Industrial | 0 | $ 12,375 | $ 0 |
| Public | 0 | $ 12,375 | $ 0 |
| Other | 239 | $ 12,375 | $ 2,956,655 |
| | | **Total Revenue** | **$ 20,204,307** |

Table 17: Paradise Ridge Estimated Expenditures

| Project Name | COP Cost Share |
|---|---|
| Paradise Ridge Drainage Improvements | $ 38,075,664 |
| **Total Proposed Facility Costs** | **$ 38,075,664** |
| **Total Estimated Revenue** | **$ 20,204,307** |
| **IFSA Fund Balance as of June 30, 2024** | **$ 0** |
| **Borrowing Requirement** | **$ 17,871,356** |

## Section 6: Conclusion

A summary of the estimated revenue based on the proposed impact fees, COP's cost share for proposed storm drainage facilities, and the potential borrowing requirement for each IFSA is shown in **Table 18**.

Table 18: Summary of Impact Fees, Revenues, and Expenditures

| IFSA | Impact Fee | Revenues | IFSA Fund Balance as of June 30, 2024 | COP Cost Share for Proposed Facilities | Borrowing Requirement |
|---|---|---|---|---|---|
| Estrella | $ 1,207 | $ 9,895,926 | $ 10,775,795 | $ 48,150,176 | $ 27,478,455 |
| Laveen | $ 1,401 | $ 10,775,794 | $ 5,607,888 | $ 24,732,204 | $ 8,348,522 |
| Paradise Ridge | $ 3,094 | $ 20,204,307 | $ 0 | $ 38,075,664 | $ 17,871,356 |

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# Appendix

# Appendix A Proposed Drainage Facilities Maps

SR 101
I 10
McDowell
Van Buren
MC 85
Buckeye
Lower Buckeye
Broadway
Baseline
Elwood
Avondale
El Mirage
Indian
Springs
107th
99th
91st
83rd
75th
67th
59th
51st
43rd
87th
47th Ave Basin
and Inlet
47th Ave Channel
Sunland Channel
Southern

Legend
- Proposed Channel
- Proposed Culvert
- Proposed Basin
- Estrella Boundary

0 2,500 5,000 US Feet

| NO. | REVISION | BY | DATE | APPR. |
|---|---|---|---|---|
| | | | | |

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Environmental Consultants

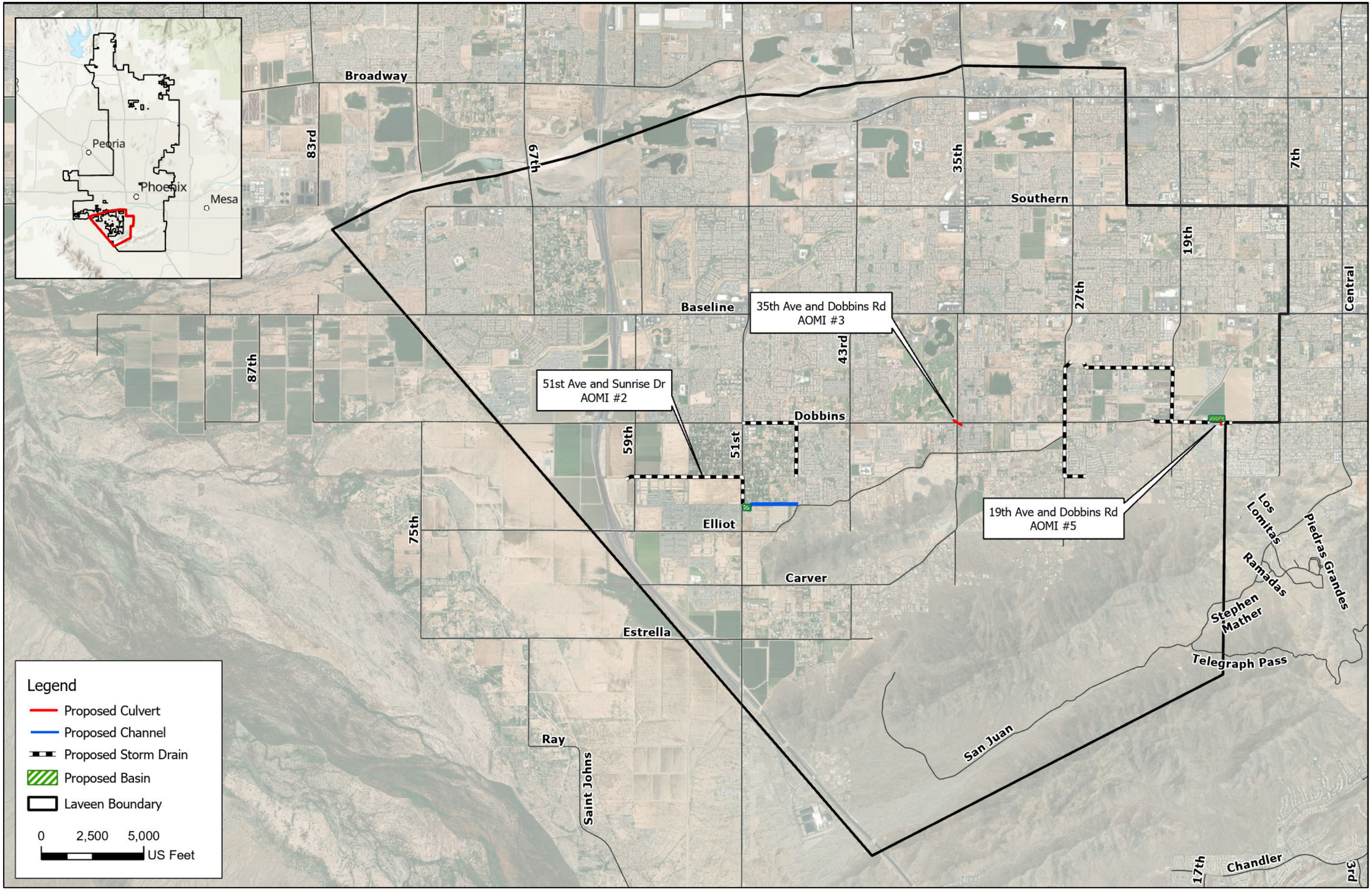
SCALE(H):1"=
SCALE(V):
DESIGNED BY: GSB
DRAWN BY: PTB
CHECKED BY: VAK
DATE: 5/17/2024

# Estrella IFSA
# Proposed Drainage Infrastructure

N
W E
S

PROJECT NO.
091468504

DRAWING NAME
DESIGN CONCEPT

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SCALE(H): 1" = 4,500'
DESIGNED BY: PTB
DRAWN BY: PTB
CHECKED BY: GSB
DATE: 6/17/2024

# Laveen IFSA
## Proposed Drainage Infrastructure

PROJECT NO.
091469504

DRAWING NAME
DESIGN CONCEPT

Pinnacle Peak

Deer Valley

SR 51

SR 101

Beardsley

Union Hills

Bell

Tatum

32nd

40th

44th

56th

64th

Scottsdale

Hayden

Thompson Peak

Frank Lloyd Wright

Legend

- Paradise Ridge Boundary
- Proposed Culvert Headwall
- Existing Culvert
- Proposed Weir
- Proposed Basin
- Proposed Channel

| NO. | REVISION | BY | DATE | APPR. |
|---|---|---|---|---|

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DRAWN BY: PTB
CHECKED BY: GSB
DATE: 5/17/2024

# Paradise Ridge IFSA
## Proposed Drainage Infrastructure

N
W E
S

PROJECT NO.
091469504

DRAWING NAME
DESIGN CONCEPT

# Appendix B Detailed Project Cost Estimates

47th Avenue Basin and Inlet

| Project Items<br>Item No. | Description | Unit | Quantity | Unit Price | Cost |
|---|---|---|---|---|---|
| | Basin Costs | | | | |
| 1 | Basin Excavation | CY | 260,633 | $18.00 | $4,691,394.00 |
| 2 | Inflow Spillway | SF | 19,153 | $200.00 | $3,830,600.00 |
| 3 | Landscaping | SF | 1,911,195 | $5.00 | $9,555,975.00 |
| | Channel/Culvert Costs - 47CH04, CH-C4, CH-C5 | | | | |
| 4 | Channel Excavation | CY | 21,850 | $16.00 | $349,600.00 |
| 5 | 6'' ABC Access Road | SF | 37,610 | $5.00 | $188,050.00 |
| 6 | Landscaping | SF | 200,376 | $5.00 | $1,001,880.00 |
| 7 | Utility Relocation | LS | 1 | $386,971.22 | $386,971.22 |
| 8 | Reinfored Concrete Box Culvert (4 Barrels) | LF | 427 | $6,887.00 | $2,940,749.00 |
| 9 | Inlet Headwall | EA | 1 | $40,500.00 | $40,500.00 |
| 10 | Outlet Headwall | EA | 1 | $40,500.00 | $40,500.00 |
| 11 | Reinfored Concrete Box Culvert (5 Barrels) | LF | 275 | $8,552.00 | $2,351,800.00 |
| 12 | Inlet Headwall | EA | 1 | $40,500.00 | $40,500.00 |
| 13 | Outlet Headwall | EA | 1 | $40,500.00 | $40,500.00 |

| | |
|---|---|
| Construction Cost Subtotal | $25,459,019.22 |
| Contingency (25%) | $6,364,754.81 |
| Design (5%) | $1,272,950.96 |
| Construction Administration (15%) | $3,818,852.88 |
| Total Construction Cost | $36,915,577.87 |

| Estimated Right-of-Way Acquisition Costs<br>Item No. | Location | Purpose | Area (ac) | Cost Per SF | Cost |
|---|---|---|---|---|---|
| 14 | Northwest corner of Buckeye Rd and 47th Ave | Basin | 43.875 | $6.00 | $11,467,170 |
| | | | | Aquisition Total | $11,467,170 |

| | |
|---|---|
| Project Total | $48,382,747.87 |

| Project Items<br>Item No. | Description | Unit | Quantity | Unit Price | Cost |
|---|---|---|---|---|---|
| | Channel/Culvert Costs - 47CH01a, 47CH-C1 | | | | |
| 1 | Channel Excavation | CY | 40,941 | $16.00 | $655,056.00 |
| 2 | 6'' ABC Access Road | SF | 41,664 | $5.00 | $208,320.00 |
| 3 | Landscaping | SF | 313,632 | $5.00 | $1,568,160.00 |
| 4 | Reinfored Concrete Box Culvert (7 Barrels) | LF | 111 | $11,310.00 | $1,255,410.00 |
| 5 | Inlet Headwall | EA | 1 | $40,500.00 | $40,500.00 |
| 6 | Outlet Headwall | EA | 1 | $40,500.00 | $40,500.00 |
| | Channel/Culvert Costs - 47CH01b, 47CH-C2 | | | | |
| 7 | Channel Excavation | CY | 79,473 | $16.00 | $1,271,568.00 |
| 8 | 6'' ABC Access Road | SF | 80,890 | $5.00 | $404,450.00 |
| 9 | Landscaping | SF | 605,484 | $5.00 | $3,027,420.00 |
| 10 | Reinfored Concrete Box Culvert (5 Barrels) | LF | 110 | $8,552.00 | $940,720.00 |
| 11 | Inlet Headwall | EA | 1 | $40,500.00 | $40,500.00 |
| 12 | Outlet Headwall | EA | 1 | $40,500.00 | $40,500.00 |
| | Channel/Culvert Costs - 47CH02, 47CH-C3 | | | | |
| 13 | Channel Excavation | CY | 66,919 | $16.00 | $1,070,704.00 |
| 14 | 6'' ABC Access Road | SF | 79,238 | $5.00 | $396,190.00 |
| 15 | Landscaping | SF | 518,364 | $5.00 | $2,591,820.00 |
| 16 | Reinfored Concrete Box Culvert (3 Barrels) | LF | 323 | $3,996.00 | $1,290,708.00 |
| 17 | Inlet Headwall | EA | 1 | $40,500.00 | $40,500.00 |
| 18 | Outlet Headwall | | 1 | $40,500.00 | $40,500.00 |
| | Channel Costs - 47CH03 | | | | |
| 19 | Channel Excavation | CY | 32,163 | $16.00 | $514,608.00 |
| 20 | Channel Concrete | CY | 3,610 | $125.00 | $451,250.00 |
| 21 | 6'' ABC Access Road | SF | 85,696 | $5.00 | $428,480.00 |
| 22 | Landscaping | SF | 265,716 | $5.00 | $1,328,580.00 |

| | |
|---|---|
| Construction Cost Subtotal | $17,646,444.00 |
| Contingency (25%) | $4,411,611.00 |
| Design (12%) | $2,117,573.28 |
| Construction Administration (15%) | $2,646,966.60 |
| Total Construction Cost | $26,822,594.88 |

| Estimated Right-of-Way Acquisition Costs<br>Item No. | Location | Purpose | Area (ac) | Cost Per SF | Cost |
|---|---|---|---|---|---|
| 23 | Parallel to and Inbetween 51st Ave and 43rd Ave | Channel | 43.7 | $6.00 | $11,421,432.00 |
| | | | | Aquisition Total | $11,421,432.00 |

| | |
|---|---|
| Project Total | $38,244,026.88 |

Sunland Channel

| Project Items<br>Item No. | Description | Unit | Quantity | Unit Price | Cost |
|---|---|---|---|---|---|
| | | Channel/Culvert Costs - SUN01, SUN-C1 | | | |
| 1 | Channel Excavation | CY | 63,115 | $16.00 | $1,009,840.00 |
| 2 | 6'' ABC Access Road | SF | 96,877 | $5.00 | $484,385.00 |
| 3 | Landscaping | SF | 544,500 | $5.00 | $2,722,500.00 |
| 4 | Reinforced Concrete Box Culvert (3 Barrels) | LF | 110 | $5,366.00 | $590,260.00 |
| 5 | Inlet Headwall | EA | 1 | $40,500.00 | $40,500.00 |
| 6 | Outlet Headwall | EA | 1 | $40,500.00 | $40,500.00 |
| | | Channel/Culvert Costs - SUN02a, SUN02b, SUN02c, SUN-C2 | | | |
| 7 | Channel Excavation | CY | 59,598 | $16.00 | $953,568.00 |
| 8 | Channel Concrete | CY | 993 | $125.00 | $124,125.00 |
| 9 | 6'' ABC Access Road | SF | 163,286 | $5.00 | $816,430.00 |
| 10 | Landscaping | SF | 635,976 | $5.00 | $3,179,880.00 |
| 11 | Reinforced Concrete Box Culvert (3 Barrels) | LF | 110 | $3,996.00 | $439,560.00 |
| 12 | Inlet Headwall | EA | 1 | $40,500.00 | $40,500.00 |
| 13 | Outlet Headwall | EA | 1 | $40,500.00 | $40,500.00 |
| | | Channel/Culvert Costs - SUN03a, SUN03b, SUN03c, SUN-C3, SUN-C4 | | | |
| 14 | Channel Excavation | CY | 58,926 | $16.00 | $942,816.00 |
| 15 | 6'' ABC Access Road | SF | 158,410 | $5.00 | $792,050.00 |
| 16 | Landscaping | SF | 692,604 | $5.00 | $3,463,020.00 |
| 17 | Reinforced Concrete Box Culvert (2 Barrels) | LF | 110 | $3,747.00 | $412,170.00 |
| 18 | Reinforced Concrete Box Culvert (2 Barrels) | LF | 110 | $2,915.00 | $320,650.00 |
| 19 | Inlet Headwall | EA | 2 | $40,500.00 | $81,000.00 |
| 20 | Outlet Headwall | EA | 2 | $40,500.00 | $81,000.00 |

| | |
|---|---|
| Construction Cost Subtotal | $16,575,254.00 |
| Contingency (20%) | $3,315,050.80 |
| Design (12%) | $1,989,030.48 |
| Construction Administration (15%) | $2,486,288.10 |
| Total Construction Cost | $24,365,623.38 |

| Estimated Right-of-Way Acquisition Costs<br>Item No. | Location | Purpose | Area (ac) | Cost Per SF | Cost |
|---|---|---|---|---|---|
| 21 | On Sourthern Ave, From 120th to 99th Ave | Channel | 43 | $6.00 | $11,238,480.00 |
| | | | | Aquisition Total | $11,238,480.00 |

| | |
|---|---|
| Project Total | $35,604,103.38 |

| Project Items | | | | | |
|---|---|---|---|---|---|
| Item No. | Description | Unit | Quantity | Unit Price | Cost |
| | | Sunrise Basin Costs | | | |
| 1 | Basin Excavation | CY | 28,000 | $18.00 | $504,000.00 |
| 2 | Channel Excavation | CY | 9,000 | $16.00 | $144,000.00 |
| 3 | 1 - 1/4" Minus DG Basin Sides | SY | 9,700 | $7.00 | $67,900.00 |
| 4 | Plain Dumped Riprap Channel Lining D50 = 4" | CY | 2,120 | $184.00 | $390,080.00 |
| 5 | Basin Outlet | EA | 1 | $40,500.00 | $40,500.00 |
| 6 | 6' Chain Link Fencing Around Basin (Incl Gates) | LF | 2,100 | $45.00 | $94,500.00 |
| 7 | Conc Maint Access Ramp (Basin) | SF | 2,100 | $30.00 | $63,000.00 |
| 8 | Stabilized DG Maint Access Road (10' Wide) | SY | 2,350 | $12.00 | $28,200.00 |
| 9 | Basin Spillway Erosion Protection | SY | 1,625 | $35.00 | $56,875.00 |
| | | Storm Drain Costs | | | |
| 10 | 24" SD Lateral | LF | 394 | $525.00 | $206,850.00 |
| 11 | 36" SD Olney to SR202 Basin | LF | 7,288 | $825.00 | $6,012,600.00 |
| 12 | 48" SD Dobbins 74th Ave - 51st Ave | LF | 2,642 | $1,283.00 | $3,389,686.00 |
| 13 | 36" SD 47th Ave McNeil - Dobbins | LF | 2,630 | $825.00 | $2,169,750.00 |
| 14 | Storm Drain Manhole | EA | 63 | $19,500.00 | $1,228,500.00 |
| 15 | Concrete Catch Basin | EA | 9 | $14,000.00 | $126,000.00 |
| 16 | Landscaping and Aesthetic Treatment | LS | 1 | $1,698,840.00 | $1,698,840.00 |

| | |
|---|---|
| Construction Cost Subtotal | $16,221,281.00 |
| Construction Contingency (25%) | $4,055,320.25 |
| Design (12%) | $1,946,553.72 |
| Construction Administration (15%) | $2,433,192.15 |
| Total Construction Cost | $24,656,347.12 |

| Estimated Right-of-Way Acquisition Costs | | | | | |
|---|---|---|---|---|---|
| Item No. | Location | Purpose | Area (ac) | Cost Per SF | Cost |
| 17 | Southwest Corner 51st Ave / Sunrise | Basin / Channel | 9.6 | $2.21 | $922,841.00 |
| 18 | Olney Ave Between 59th Ave and 55th Ave | Storm Drain | 3 | $6.00 | $784,080.00 |
| | | | | Aquisition Total | $1,706,921.00 |

| | |
|---|---|
| Project Total | $26,363,268.12 |

# 19th Avenue and Dobbins Road
# Storm Drain Project
## Engineer's Opinion of Probable Construction Cost 100%

FCDMC PCN 117.02.32
Contract No. 2021C001

DIBBLE

| LINE NO | ITEM NO | DESCRIPTION | QTY | UNIT | UNIT PRICE | AMOUNT |
|---|---|---|---|---|---|---|
| | | **GENERAL** | | | | |
| 1 | 105-1 | Partnering (Allowance) | 1 | LS | $3,000.00 | $3,000 |
| 2 | 107-1 | AZPDES/SWPPP Permits | 1 | LS | $25,000.00 | $25,000 |
| 3 | 107-2 | Public Information and Notification (Allowance)PUBLIC INFORMATION AND NOTIFICATION (ALLOV | 1 | LS | $20,000.00 | $20,000 |
| 4 | 107-3 | Project Signs (Allowance) | 1 | LS | $8,000.00 | $8,000 |
| 5 | 107-4 | Vandalism Repair (Allowance) | 1 | LS | $30,000.00 | $30,000 |
| 6 | 109-1 | Fuel Price Adjustment (Allowance) | 1 | LS | $50,000.00 | $50,000 |
| | | | | | *SUBTOTAL* | *$136,000* |
| 7 | 201-1 | Clearing and Grubbing | 1 | LS | $5,000.00 | $5,000 |
| 8 | 201-2 | Removal of Trees, 12" Diameter or Greater | 5 | EA | $1,000.00 | $5,000 |
| 9 | 202-1 | Mobilization | 1 | LS | $200,000.00 | $200,000 |
| 10 | 202-2 | Type 1 Engineer's Field Office | 1 | LS | $25,000.00 | $25,000 |
| 11 | 215-1 | Drainage Swale Excavation | 1,971 | LF | $12.00 | $23,652 |
| 12 | 215-2 | Earthwork for Retention Basins | 140,070 | CY | $16.00 | $2,241,120 |
| 13 | 220-1 | Dumped Riprap with Filter Fabric, D50 = 6-in, T=12-in | 0 | SY | $45.00 | $0 |
| 14 | 220-2 | Grouted Riprap, D50= 6-in, T=12-in | 1,497 | SY | $90.00 | $134,730 |
| 15 | 220-3 | Riprap Spillway, Detail 5, Sheet 13 | 465 | LF | $200.00 | $93,000 |
| 16 | 310-1 | Aggregate Base Course, 6 inch | 4,334 | SY | $45.00 | $195,030 |
| 17 | 310-2 | Aggreage Base Course, 4 inch, Untreated | 1,393 | SY | $30.00 | $41,790 |
| 18 | 324-1 | Portland Cement Concrete Pavement, Access Ramp, 9-in Thick | 618 | SY | $450.00 | $278,100 |
| 19 | 336-1 | Asphalt Pavement Replacement, Structural Section No. 1 | 3,225 | SY | $177.00 | $570,825 |
| 20 | 336-2 | Asphalt Pavement Replacement, Structural Section No. 2 | 2,737 | SY | $162.00 | $443,394 |
| 21 | 336-3 | Asphalt Pavement Replacement, Structural Section No. 3 | 0 | SY | $154.00 | $0 |
| 22 | 336-4 | Asphalt Pavement Replacement, Structural Section No. 5 | 93 | SY | $100.00 | $9,300 |
| 23 | 340-1 | Vertical Curb & Gutter, Type A, H=6", MAG DET 220 | 78 | LF | $65.00 | $5,070 |
| 24 | 340-2 | Mountable Curb & Gutter, Type E, MAG DET 220 | 25 | LF | $75.00 | $1,875 |
| 25 | 340-3 | Concrete Sidewalk, MAG DET 230 | 481 | SF | $17.00 | $8,177 |
| 26 | 340-4 | Concrete Driveway, 6-in Thick, Class A Concrete | 691 | SF | $19.50 | $13,475 |
| 27 | 340-5 | Concrete Pad, 6-in Thick, Detail 7, Sheet 13 | 1,959 | SF | $18.50 | $36,242 |
| 28 | 340-6 | Curb Transition | 2 | EA | $350.00 | $700 |
| 29 | 340-7 | Concrete Curb Opening, Detail 6, Sheet 13 | 1 | EA | $250.00 | $250 |
| 30 | 345-1 | Adjust Water Meter Box and Cover | 3 | EA | $350.00 | $1,050 |
| 31 | 345-2 | Adjust Water Valve Box and Cover (P1270 & P1391) | 2 | EA | $650.00 | $1,300 |
| 32 | 350-1 | Sawcut and Remove Existing Asphalt Pavement | 5,399 | SY | $20.00 | $107,980 |
| 33 | 350-2 | Remove Existing Concrete Curb & Gutter | 159 | LF | $14.00 | $2,226 |
| 34 | 350-3 | Remove Existing Concrete Sidewalk, Ramps, Driveways | 1,172 | SF | $5.00 | $5,860 |
| 35 | 350-4 | Remove Chainlink Fence | 1,114 | LF | $16.00 | $17,824 |
| 36 | 350-5 | Remove and Salvage Gate | 1 | EA | $750.00 | $750 |
| 37 | 350-6 | Remove 8-in VCP Sanitary Sewer Pipe | 23 | LF | $125.00 | $2,875 |
| 38 | 350-7 | Remove 12-in VCP Sanitary Sewer Pipe | 178 | LF | $175.00 | $31,150 |
| 39 | 350-8 | Remove & Dispose of Existing 8-in ACP Water Main | 6 | LF | $120.00 | $720 |
| 40 | 350-9 | Remove & Dispose of Existing 12-in ACP Water Main | 288 | LF | $125.00 | $36,000 |
| 41 | 350-10 | Remove Existing Irrigation Pipe | 14 | LF | $250.00 | $3,500 |
| 42 | 350-11 | Remove Existing Sewer Manhole | 2 | EA | $3,000.00 | $6,000 |
| 43 | 350-12 | Remove Concrete Channel | 29 | SY | $95.00 | $2,755 |
| 44 | 350-13 | Remove, Salvage, and Reinstall Existing Sign | 1 | EA | $1,200.00 | $1,200 |
| 45 | 350-14 | Relocate Electrical Box | 2 | EA | $1,000.00 | $2,000 |

# 19th Avenue and Dobbins Road
# Storm Drain Project
## Engineer's Opinion of Probable Construction Cost 100%

FCDMC PCN 117.02.32
Contract No. 2021C001

DIBBLE

| LINE NO | ITEM NO | DESCRIPTION | QTY | UNIT | UNIT PRICE | AMOUNT |
|---|---|---|---|---|---|---|
| 46 | 350-15 | Remove Riprap | 1,127 | SY | $20.00 | $22,540 |
| 47 | 350-16 | Remove Grouted Riprap | 78 | SY | $35.00 | $2,730 |
| 48 | 350-17 | Remove and Replace Decompsed Granite | 389 | SY | $150.00 | $58,350 |
| 49 | 350-18 | Remove and Relocate Existing Mailbox, Pad, and Pedestal | 1 | EA | $1,500.00 | $1,500 |
| 50 | 350-19 | Salvage and Replace Riprap | 612 | SY | $35.00 | $21,420 |
| 51 | 350-20 | Remove Survey Marker | 3 | EA | $75.00 | $225 |
| 52 | 401-1 | Traffic Control | 1 | LS | $350,000.00 | $350,000 |
| 53 | 401-2 | Uniformed Off-Duty Law Enforcement Officer (Allowance) | 600 | HRS | $80.00 | $48,000 |
| 54 | 401-3 | TCB Placement (Allowance) | 1 | LS | $100,000.00 | $100,000 |
| 55 | 405-1 | Survey Marker, Type B, MAG DET 120 | 3 | EA | $1,750.00 | $5,250 |
| 56 | 420-1 | Chainlink Fence, 6 ft High, MAG DET 160 | 1,097 | LF | $45.00 | $49,365 |
| 57 | 420-2 | Install Salvaged Gate | 1 | EA | $1,200.00 | $1,200 |
| 58 | 420-3 | Chainlink Fencing - 54" High | 932 | LF | $35.00 | $32,620 |
| 59 | 420-4 | Ornamental Fencing - 54" High | 1,230 | LF | $150.00 | $184,500 |
| 60 | 420-5 | 12' Wide (Two 6-ft Leafs) Ornamental Gates | 2 | EA | $2,000.00 | $4,000 |
| 61 | 430-1 | Weed Control | 1 | AL | $2,500.00 | $2,500 |
| 62 | 430-2 | Tall Pot Trees | 143 | EA | $325.00 | $46,475 |
| 63 | 430-3 | Seed Mix Type A - Restoration Mix | 4 | AC | $4,500.00 | $19,215 |
| 64 | 430-4 | Seed Mix Type B - LID Feature Mix | 1 | AC | $4,000.00 | $4,000 |
| 65 | 430-5 | Irrigation | 23,455 | SF | $0.50 | $11,728 |
| 66 | 430-6 | Wattles - 9-in | 8,226 | LF | $4.00 | $32,904 |
| 67 | 430-7 | Tree - 24" Box Replacement for Trees Impacted by Drainage Pipe Install | 1 | LS | $1,500.00 | $1,500 |
| 68 | 430-8 | Tree - 24" Box | 64 | EA | $350.00 | $22,400 |
| 69 | 430-9 | Plant Replacement for Shrubs Impacted by Drainage Pipe Install | 1 | LS | $1,000.00 | $1,000 |
| 70 | 430-10 | Shrub - 5 Gallon | 340 | EA | $50.00 | $17,000 |
| 71 | 430-11 | Boulders - TBD | 0 | EA | $300.00 | $0 |
| 72 | 432-1 | Decomposed Granite - City of Phoenix Areas - 2" Depth | 23,455 | SF | $0.75 | $17,591 |
| 73 | 432-2 | Trail Compacted Granite (1/4" Minus Decomposed Granite, 3" Thick) | 16,029 | SF | $1.50 | $24,044 |
| 74 | 432-3 | Decomposed Granite - Flood Control Areas - 1-3" rock, 6" depth | 171,729 | SF | $2.25 | $386,390 |
| 75 | 432-4 | Rock Mulch (3" Minus) | 613 | SY | $10.00 | $6,130 |
| 76 | 461-1 | 4” White Traffic Paint Stripe | 258 | LF | $2.00 | $516 |
| 77 | 461-2 | 4” Yellow Traffic Paint Stripe | 2,879 | LF | $2.00 | $5,758 |
| 78 | 461-3 | Relocate Traffic Sign | 10 | EA | $500.00 | $5,000 |
| 79 | 505-1 | Triple Barrel - 8'x6' RCBC, ADOT Std Det SD 6.03 (1 of 2) | 157 | LF | $4,800.00 | $753,600 |
| 80 | 505-2 | Channel Lining, Reinforced Concrete, 11 in thick | 2,433 | SY | $125.00 | $304,125 |
| 81 | 505-3 | Concrete Scupper, MAG Det 206, S/W=5 ft | 1 | EA | $5,000.00 | $5,000 |
| 82 | 505-4 | Catch Basin, MAG Det 535, Type F | 13 | EA | $4,500.00 | $58,500 |
| 83 | 505-5 | Catch Basin, Double, ADOT C-15.80 | 2 | EA | $6,000.00 | $12,000 |
| 84 | 505-6 | Concrete Catch Basin L=6' COP STD DET P11569-1 | 1 | EA | $7,500.00 | $7,500 |
| 85 | 505-7 | Concrete Apron, ADOT C-15.80 | 1 | EA | $1,500.00 | $1,500 |
| 86 | 505-8 | Concrete Junction Structure No. 1, Det 105, Sht 69 | 1 | EA | $95,000.00 | $95,000 |
| 87 | 505-9 | Concrete Junction Structure No. 2, Det 106, Sht 70 | 1 | EA | $86,000.00 | $86,000 |
| 88 | 505-10 | Concrete Junction Structure No. 3, Det 107, Sht 71 | 1 | EA | $90,000.00 | $90,000 |
| 89 | 505-11 | Box Culvert Inlet Headwall, ADOT Std Det SD 6.01, Modified | 1 | EA | $40,500.00 | $40,500 |
| 90 | 505-12 | Box Culvert Outlet Headwall, ADOT Std Det SD 6.01, Modified | 1 | EA | $40,500.00 | $40,500 |
| 91 | 505-13 | Drop Inlet, MAG STD DET 501-5, Modified | 1 | EA | $12,500.00 | $12,500 |
| 92 | 505-14 | Inlet Wingwalls, ADOT Std Det SD 6.08 (4 of 8) | 1 | EA | $34,000.00 | $34,000 |

# 19th Avenue and Dobbins Road
# Storm Drain Project
## Engineer's Opinion of Probable Construction Cost 100%

FCDMC PCN 117.02.32
Contract No. 2021C001

| LINE NO | ITEM NO | DESCRIPTION | QTY | UNIT | UNIT PRICE | AMOUNT |
|---|---|---|---|---|---|---|
| 93 | 505-15 | Outlet Wingwalls, ADOT Std Det SD 6.08 (2 of 8) | 1 | EA | $34,000.00 | $34,000 |
| 94 | 505-16 | Outlet Apron, ADOT Std Det SD 6.11 | 1 | EA | $6,500.00 | $6,500 |
| 95 | 505-17 | 66" Pipe Culvert Inlet Headwall, ADOT STD DTL SD 6.30-3 | 1 | EA | $63,500.00 | $63,500 |
| 96 | 505-18 | 78" Pipe Culvert Outlet Headwall, ADOT STD DTL SD 6.30-3&4 | 1 | EA | $75,000.00 | $75,000 |
| 97 | 505-19 | 96" Pipe Culvert Outlet Headwall, ADOT STD DTL SD 6.31-5 | 1 | EA | $82,000.00 | $82,000 |
| 98 | 505-20 | 96" Pipe Culvert Inlet Headwall, ADOT STD DTL SD 6.31-1 | 1 | EA | $82,000.00 | $82,000 |
| 99 | 510-1 | CMU Wall - 72" Height | 1,230 | LF | $250.00 | $307,500 |
| 100 | 515-1 | Access Barrier Per COP STD DTL P1562 & P1563 | 2 | EA | $2,500.00 | $5,000 |
| 101 | 515-2 | Trash Rack | 4 | EA | $4,500.00 | $18,000 |
| 102 | 515-3 | Raised Grate, FCF DTL 537-1 | 14 | EA | $550.00 | $7,700 |
| 103 | 520-1 | Safety Railing COP STD DET P1173 | 382 | LF | $115.00 | $43,930 |
| 104 | 525-1 | Shotcrete Inlet Apron, 6" Thick | 1,174 | SY | $240.00 | $281,760 |
| 105 | 610-1 | 8 in Ductile Iron Pipe Waterline with Fittings | 6 | LF | $300.00 | $1,800 |
| 106 | 610-2 | 12 in Ductile Iron Pipe Water Main with Fittings | 274 | LF | $425.00 | $116,450 |
| 107 | 610-3 | 3/4" Type K Copper Pipe | 136 | LF | $95.00 | $12,920 |
| 108 | 610-4 | Water Meter Service Connection, COP DTL P1342 | 1 | EA | $3,000.00 | $3,000 |
| 109 | 610-5 | Install Backflow Preventer COP DTL P1354 | 1 | EA | $2,700.00 | $2,700 |
| 110 | 610-6 | Concrete Encasement with Reinforcement, 12 in Pipe, MAG Det 404-3 | 520 | LF | $225.00 | $117,000 |
| 111 | 615-1 | 12" Sanitary Sewer Ductile Iron Pipe (CIPP Linded) COP SUP 741 | 178 | LF | $550.00 | $97,900 |
| 112 | 618-1 | Storm Drain Lateral Pipe Connection Per MAG Std Detail 524 | 9 | EA | $1,800.00 | $16,200 |
| 113 | 618-2 | Pipe Plug, MAG Detail 427, 36 in Pipe | 1 | EA | $1,200.00 | $1,200 |
| 114 | 618-3 | Pipe Plug, MAG Detail 427, 42 in Pipe | 1 | EA | $1,500.00 | $1,500 |
| 115 | 618-4 | Concrete Pipe Collar for 24 in Pipe, MAG Det 505 | 11 | EA | $9,500.00 | $104,500 |
| 116 | 618-5 | 24 in RGRCP Storm Drain, Class IV | 427 | LF | $525.00 | $224,175 |
| 117 | 618-6 | 36 in RGRCP Storm Drain, Class III | 489 | LF | $825.00 | $403,425 |
| 118 | 618-7 | 42 in RGRCP Storm Drain, Class IV | 715 | LF | $1,250.00 | $893,750 |
| 119 | 618-8 | 66 in RGRCP Storm Drain, Class IV | 1,154 | LF | $1,350.00 | $1,557,900 |
| 120 | 618-9 | 78 in RGRCP Storm Drain, Class IV | 6,834 | LF | $1,650.00 | $11,276,100 |
| 121 | 618-10 | 96 in RGRCP Storm Drain, Class V | 665 | LF | $2,400.00 | $1,596,000 |
| 122 | 625-1 | 48 in Sanitary Sewer Manhole, MAG Det 420 & 424 | 2 | EA | $12,000.00 | $24,000 |
| 123 | 625-2 | Storm Drain Manhole, MAG Det 520, 522 & 424-2 | 6 | EA | $19,500.00 | $117,000 |
| 124 | 625-3 | Storm Drain Manhole, MAG Det 521, 522 & 424-2 | 18 | EA | $21,500.00 | $387,000 |
| 125 | 738-1 | Pipe Culvert, 12 in Diameter, HDPE, Class II | 14 | LF | $125.00 | $1,750 |
| 126 | 927-1 | Allowance for Unforseen Utility Relocations | 50,000 | AL | $1.00 | $50,000 |
| | | | | | *SUBTOTAL* | *$25,594,655* |
| | | | | | *Total* | *$25,730,655* |
| | | | | | *15% Contingency* | *$3,859,598* |
| 60 | | Land Acquisition (Dobbins Basins) | 7.25 | Acre | $189,700.00 | $1,375,325 |
| | | | | | *Construction Total* | *$30,965,578* |

35th Avenue & Dobbins Road AoMI #3

Project Items

| Item No. | Description | Unit | Quantity | Unit Price | Cost |
|---|---|---|---|---|---|
| | Culvert Costs | | | | |
| 1 | Drop Inlet Headwall / Trash Rack / Safety Rail | EA | 1 | $229,900.00 | $229,900.00 |
| 2 | 4-48'' SD From Channel to Golf Course (615 LF) | LF | 2,460 | $1,283.00 | $3,156,180.00 |
| 3 | Manhole / Maint Access | EA | 1 | $51,500.00 | $51,500.00 |
| 4 | Pipe Outlet Headwall / Access Barrier/ Safety Rail | EA | 1 | $75,000.00 | $75,000.00 |
| 5 | Outlet Energy Diss / Riprap | EA | 1 | $43,125.00 | $43,125.00 |
| 6 | Golf Course Grading | LS | 1 | $36,300.00 | $36,300.00 |
| 7 | Landscaping | LS | 1 | $65,340.00 | $65,340.00 |

| | |
|---|---|
| Construction Cost Subtotal | $3,657,345.00 |
| Construction Contingency (25%) | $914,336.25 |
| Design (7%) | $256,014.15 |
| Construction Administration (15%) | $548,601.75 |
| Total Construction Cost | $5,376,297.15 |

Estimated Right-of-Way Acquisition Costs

| Item No. | Location | Purpose | Area (ac) | Cost Per SF | Cost |
|---|---|---|---|---|---|
| 8 | Southwest Corner Dobbins / 35th Avenue | Channel Inlet | 0.3 | $6.00 | $78,408.00 |
| | | | | Aquisition Total | $78,408.00 |

| | |
|---|---|
| Project Total | $5,454,705.15 |

SUNDT
A JOINT VENTURE

RUMCO
Rummel Construction, Inc.

# 60% COST MODEL

**Client Name:** Flood Control District of Maricopa County
**Project Name:** Paradise Ridge Drainage Improvements
**Project Location:** Rawhide Wash; Scottsdale Rd & SR101
**Project Type** *(CMAR, JOC, Negotiated)* **:** CMAR
**Client Project #:** FCD2022C029
**SRJV HCSS #:** 240032-01
**Date:** 7/3/24
**Revision:** 60% Cost Model

| | | | |
|---|---|---|---|
| **A. DIRECT COSTS** | | | |
| A.1 Self-perform *(labor, equipment & materials)* | | $ | 60,212,331.42 |
| A.2 Sub-consultant / sub-contractor | | $ | 6,730,888.08 |
| **A.3 Total Direct Costs** | | **$** | **66,943,219.50** |
| **B. ALLOWANCES & CONTINGENCIES** | | | |
| B.1 Allowances | | $ | 828,301.81 |
| **B.2 Total Allowances & Contingencies** | | **$** | **828,301.81** |
| **C. GENERAL CONDITIONS** | | | |
| C.1 Project-specific general conditions | | $ | 7,523,062.56 |
| **C.2 Total General Conditions** | | **$** | **7,523,062.56** |
| **Subtotal 1 (Cost of Work)** | | **$** | **75,294,583.87** |
| **D. CONSTRUCTION FEE** | | | |
| D.1 Overhead and off-site general administrative costs *(on subtotal 1)* | 7.98% | $ | 6,008,507.79 |
| D.2 Profit *(on subtotal 1)* | 7.02% | $ | 5,285,679.79 |
| **D.2 Total Construction Fee** | 15.00% | **$** | **11,294,187.58** |
| **Subtotal 2 (Construction Fee)** | | **$** | **11,294,187.58** |
| **E. INSURANCE & BONDS** | | | |
| E.1 Insurance | 0.66% | $ | 570,481.04 |
| E.2 Builder's risk policy | 0.35% | $ | 304,684.63 |
| E.3 Performance and payment bond | 0.59% | $ | 509,975.18 |
| **D.4 Total Bonds and Insurance** | | **$** | **1,385,140.85** |
| **F. TAX** | | | |
| F.1 Construction Transaction Privilege Tax *(65% of applicable rate)* | 5.59% | $ | 4,917,741.70 |
| **F.2 Total Tax:** | | **$** | **4,917,741.70** |
| **Subtotal 3 (Bonds, Insurance and Taxes)** | | **$** | **6,302,882.55** |
| **G. TOTAL PRICE WITHOUT OWNER CONTINGENCY (Subtotal 1, 2 &3)** | | **$** | **92,891,653.99** |
| Contingency * | 5.00% | $ | 3,764,729.19 |
| **Total Price With Owner Contingency** | | **$** | **96,656,383.19** |

** Contingency is based upon 5% of the Direct Cost to cover potential labor, equipment, and material escalations, including design scope growth from 60% to 90% design.*

Project: Paradise Ridge Drainage Improvements
Contract No: 2022C029
Cost Model: 60%
Date: 7/3/2024

SUNDT A JOINT VENTURE | RUMCO Rummel Construction, Inc.

| Biditem | Client # | Description | Bid Quantity | Unit | Direct Unit Cost | Direct Total Cost |
|---|---|---|---|---|---|---|
| 100000 | NEW | PROJECT STAFFING AND OFFICE | 24 | MN | $ 313,460.94 | $ 7,523,062.56 |
| 100100 | NEW | FURNISH CONSTRUCTION WATER | 1 | LS | $ 3,849,866.44 | $ 3,849,866.44 |
| 104000 | NEW | CONTRACTOR QCQ TESTING | 24 | MO | $ 62,500.00 | $ 1,500,000.00 |
| 104100 | 104-1 | QCQ TESTING (ALLOWANCE) | 1 | LS | $ 10,000.00 | $ 10,000.00 |
| 105100 | 105-1 | PARTNERING (ALLOWANCE) | 1 | LS | $ 10,000.00 | $ 10,000.00 |
| 105800 | NEW | CONSTRUCTION STAKING | 1 | LS | $ 1,283,732.16 | $ 1,283,732.16 |
| 107100 | 107-1 | PERMIT PREPARATION, ACQUISITION, FURNISHING & MAIN | 1 | LS | $ 10,000.00 | $ 10,000.00 |
| 107200 | 107-2 | PUBLIC INFORMATION (ALLOWANCE) | 1 | LS | $ 4,000.00 | $ 4,000.00 |
| 107300 | 107-3 | PROJECT SIGNS (ALLOWANCE) | 1 | LS | $ 4,000.00 | $ 4,000.00 |
| 107400 | 107-4 | RESTRICTED AREAS DELINEATION (DBL STRAND ROPE) | 12,102 | LF | $ 4.05 | $ 49,013.10 |
| 107410 | NEW | ARCHEOLOGICAL TRAINING (ALLOWANCE) | 1 | LS | $ 13,891.28 | $ 13,891.28 |
| 108100 | 108-1 | WORK PLAN (ALLOWANCE) | 1 | LS | $ 10,000.00 | $ 10,000.00 |
| 109100 | 109-1 | MOBILIZATION | 1 | LS | $ 284,008.62 | $ 284,008.62 |
| 201100 | 201-1 | CLEARING AND GRUBBING (PROJECT SITE) | 142 | AC | $ 2,449.51 | $ 347,830.42 |
| 201200 | 201-2 | CLEARING AND GRUBBING (SPOIL SITE) | 123 | AC | $ 2,538.64 | $ 312,252.72 |
| 201205 | NEW | CLEARING AND GRUBBING (LAYDOWN/NURSERY/ACCESS) | 90 | AC | $ 3,455.47 | $ 310,992.30 |
| 201207 | NEW | TRASH HAUL OFF & DISPOSAL (ALLOWANCE) | 15 | LD | $ 1,411.35 | $ 21,170.25 |
| 201210 | NEW | DUST CONTROL | 127 | WKS | $ 9,900.21 | $ 1,257,326.67 |
| 201215 | NEW | STREET SWEEPING (ALLOWANCE) | 3,200 | HR | $ 135.00 | $ 432,000.00 |
| 201220 | NEW | STORM WATER CLEAN-UP & RECOVERY (ALLOWANCE) | 1 | LS | $ 165,865.28 | $ 165,865.28 |
| 215100 | 215-1 | CHANNEL EXCAVATION | 1,641,791 | CY | $ 5.10 | $ 8,373,134.10 |
| 215200 | 215-2 | OVER EXCAVATION (ALLOWANCE) | 1 | LS | $ 100,000.00 | $ 100,000.00 |
| 220100 | 220-1 | PLAIN RIPRAP 6-INCH D50 | 407 | CY | $ 170.69 | $ 69,470.83 |
| 220200 | 220-2 | PLAIN RIPRAP 12-INCH D50 | 755 | CY | $ 140.85 | $ 106,341.75 |
| 220300 | 220-3 | PLAIN RIPRAP 18-INCH D50 | 464 | CY | $ 165.59 | $ 76,833.76 |
| 220400 | 220-4 | PLAIN RIPRAP 24-INCH D50 | 1,465 | CY | $ 139.75 | $ 204,733.75 |
| 221100 | 221-1 | SOIL CEMENT (750 PSI) | 270,490 | CY | $ 58.62 | $ 15,856,123.80 |
| 221200 | 221-2 | SOIL CEMENT (1000 PSI) | 13,500 | CY | $ 70.69 | $ 954,315.00 |
| 221300 | 221-3 | PORTLAND CEMENT FOR SOIL CEMENT | 43,590 | TN | $ 242.37 | $ 10,564,908.30 |
| 222100 | 221-1 | GABION CONSTRUCTION | 26,315 | CY | $ 434.25 | $ 11,427,288.75 |
| 310100 | 310-1 | AGGREGATE BASE COURSE (O&M ROAD) | 24,240 | SY | $ 19.78 | $ 479,467.20 |
| 336100 | 336-1 | AC PAVEMENT REPLACEMENT (SCOTTSDALE RD) | 700 | SY | $ 172.28 | $ 120,596.00 |
| 345100 | 345-1 | ADJUST SEWER MANHOLE | 5 | EA | $ 905.59 | $ 4,527.95 |
| 345200 | 345-2 | ADJUST VALVE BOX AND COVER | 2 | EA | $ 735.59 | $ 1,471.18 |
| 350100 | 350-1 | REMOVE EXISTING 16" PVC WATERLINE | 91 | LF | $ 62.81 | $ 5,715.71 |
| 350200 | 350-2 | REMOVE EXISTING 15" VCP SEWERLINE | 94 | LF | $ 60.81 | $ 5,716.14 |
| 350250 | NEW | ABANDON EXISTING 15" VCP IN PLACE | 380 | LF | $ 38.99 | $ 14,816.20 |
| 350300 | 350-3 | REMOVAL & DISPOSAL OF SOIL CEMENT | 9,761 | CY | $ 65.87 | $ 642,957.07 |
| 350400 | 350-4 | REMOVAL & DISPOSAL OF FENCING | 1,330 | LF | $ 10.00 | $ 13,300.00 |
| 350500 | 350-5 | REMOVAL & DISPOSAL OF INERT MATERIAL (ALLOWANCE) | 20 | TN | $ 90.00 | $ 1,800.00 |
| 350600 | 350-6 | REMOVAL & DISPOSAL OF NON-INERT MTL (ALLOWANCE) | 10 | TN | $ 120.00 | $ 1,200.00 |
| 401100 | 401-1 | TRAFFIC CONTROL | 1 | LS | $ 377,100.11 | $ 377,100.11 |
| 421100 | 421-1 | 4-STRAND SMOOTH TWISTED DBL-WIRE FENCE | 49,613 | LF | $ 6.00 | $ 297,678.00 |
| 421200 | 421-2 | 4-STRAND SMOOTH TWISTED DBL-WIRE GATE | 16 | EA | $ 7,500.00 | $ 120,000.00 |
| 421300 | 421-3 | 6' HIGH CHAIN LINK FENCE ADOT C-12.2 TYPE 1 | 2,700 | LF | $ 75.00 | $ 202,500.00 |
| 430100 | 430-1 | TALL POT TREE INSTALL ONLY DISTRICT FURNISHED | 939 | EA | $ 242.00 | $ 227,238.00 |
| 430200 | 430-2 | HYDROSEED (GENERAL SEED MIX) | 4,472,641 | SF | $ 0.10 | $ 447,264.10 |
| 430300 | 430-3 | HYDROSEED ( GENERAL SEED MIX STOCKPILES) | 5,314,320 | SF | $ 0.10 | $ 531,432.00 |
| 430400 | 430-4 | HYDROSEED (TERRACE BASINS) | 231,556 | SF | $ 0.10 | $ 23,155.60 |
| 430410 | NEW | HYDROSEED (STAGING AREAS) | 3,920,400 | AC | $ 0.10 | $ 392,040.00 |
| 430500 | 430-5 | BARREL/SMALL CACTUS PLANTINGS | 699 | EA | $ 218.92 | $ 153,025.08 |
| 430600 | 430-6 | SAGUARO PLANTING | 210 | EA | $ 3,290.58 | $ 691,021.80 |
| 430700 | 430-7 | SALVAGE SMALL CACTUS AND BARREL CACTUS | 1,200 | EA | $ 30.00 | $ 36,000.00 |
| 430800 | 430-8 | SALVAGE SAGUARO CACTUS PLANTING | 40 | EA | $ 130.00 | $ 5,200.00 |
| 430900 | 430-9 | SALVAGE NURSEY | 1 | EA | $ 33,970.60 | $ 33,970.60 |
| 505100 | 505-1 | 4-8X6' REINFORCED CONCRETE BOX CULVERT | 155 | LF | $ 6,176.65 | $ 957,380.75 |
| 505200 | 505-2 | STEPPED DROP STRUCTURE NO 1 | 1 | EA | $ 1,360,183.40 | $ 1,360,183.40 |
| 505300 | 505-3 | LATERAL WEIR STRUCTURE NO 1 | 1 | EA | $ 1,006,972.67 | $ 1,006,972.67 |
| 505400 | 505-4 | BOX CULVERT INLET WING WALL MODIFIED L=30' | 1 | EA | $ 65,743.17 | $ 65,743.17 |
| 505500 | 505-5 | BOX CULVERT OUTLET WING WALL MODIFIED L=30' | 1 | EA | $ 65,743.17 | $ 65,743.17 |
| 505600 | 505-6 | 24" INLET HEADWALL U-TYPE MOD STD DTL 501-1 | 1 | EA | $ 12,756.79 | $ 12,756.79 |
| 505700 | 505-7 | 24" OUTLET HEADWALL U-TYPE MOD STD DTL 501-1 | 1 | EA | $ 12,141.41 | $ 12,141.41 |
| 505800 | 505-8 | 36" INLET HEADWALL U-TYPE MOD STD DTL 501-1 | 1 | EA | $ 20,032.58 | $ 20,032.58 |
| 505900 | 505-9 | 36" OUTLET HEADWALL U-TYPE MOD STD DTL 501-1 | 1 | EA | $ 20,032.58 | $ 20,032.58 |
| 505950 | 505-10 | CONC CUTOFF WALL DETENTION BASIN EMERGENCY OUTFAL | 41 | CY | $ 634.10 | $ 25,998.10 |
| 515100 | 515-1 | 36" FLAP GATE (WATERMAN F-25 OR APPROVED EQUAL) | 1 | EA | $ 13,213.84 | $ 13,213.84 |
| 602100 | 602-1 | 30" STEEL CASING PIPE SLEEVE | 315 | LF | $ 400.08 | $ 126,025.20 |
| 602200 | 602-2 | 42" STEEL CASING PIPE SLEEVE | 309 | LF | $ 488.65 | $ 150,992.85 |
| 604100 | 604-1 | CLSM BACKFILL (ALLOWANCE) | 300 | CY | $ 181.25 | $ 54,375.00 |
| 610100 | 610-1 | 12" DUCTILE IRON PIPE CL 350 | 90 | LF | $ 821.27 | $ 73,914.30 |
| 610200 | 610-2 | 12" GATE VALVE COS STD DTL 2651 | 2 | EA | $ 4,171.46 | $ 8,342.92 |
| 610300 | 610-3 | AIR RELEASE VALVE COS STD DTL 2348 | 2 | EA | $ 6,627.99 | $ 13,255.98 |

Project: Paradise Ridge Drainage Improvements
Contract No: 2022C029
Cost Model: 60%
Date: 7/3/2024

SUNDT A JOINT VENTURE | RUMCO Rummel Construction, Inc.

| Biditem | Client # | Description | Bid Quantity | Unit | Direct Unit Cost | Direct Total Cost |
|---|---|---|---|---|---|---|
| 615100 | 615-1 | 15" PVC SEWER LINE | 532 | LF | $ 380.34 | $ 202,340.88 |
| 618100 | 618-1 | 24" RGRCP | 149 | LF | $ 237.22 | $ 35,345.78 |
| 618200 | 618-2 | 36" RGRCP | 74 | LF | $ 340.31 | $ 25,182.94 |
| 625100 | 625-1 | SEWER MH MAG STD DTL 420, 5' DIA | 5 | EA | $ 20,805.77 | $ 104,028.85 |
| 903100 | 903-1 | SEDIMENT LOGS | 40,000 | LF | $ 5.67 | $ 226,800.00 |
| 903110 | NEW | SILT FENCE | 40,000 | LF | $ 7.48 | $ 299,200.00 |
| 903120 | NEW | CONSTRUCTION ENTRANCE | 8 | EA | $ 13,176.97 | $ 105,415.76 |
| 903130 | NEW | WASHOUT PITS (ECO-PANS) | 1 | LS | $ 45,961.33 | $ 45,961.33 |
| 903140 | NEW | SWPPP MAINTENANCE | 1 | LS | $ 36,359.04 | $ 36,359.04 |
| 903150 | NEW | SWPPP PLAN | 1 | LS | $ 16,290.00 | $ 16,290.00 |
| 903160 | NEW | SWPPP BERMS | 40,000 | LF | $ 6.23 | $ 249,200.00 |
| | | | | | **TOTAL DIRECT COST:** | **$ 75,294,583.87** |