

THE CITY OF SURPRISE CONSERVATION GARDENS SITE WILL HARVEST STORM WATER TO SUPPLEMENT THE PROJECT SITE IRRIGATION REQUIREMENTS. THE STORM WATER TANK IS ONE (1) 10,000 GALLON UNDERGROUND FIBERGLASS TANKS THAT WILL ACT AS A SURGE TANK DURING RAIN EVENTS. THE STORM WATER TANK SHALL BE EQUIPPED WITH A 200 GPM PUMP TO TRANSFER WATER TO THE PRIMARY IRRIGATION STORAGE TANKS DURING A STORM AND AFTERWARDS AS PRIMARY STORAGE VOLUME IS DEPLETED. ADDITIONALLY, A SINGLE 10,000 GALLON CORRUGATED STEEL TANK WILL COLLECT RAIN WATER DIRECTLY FROM THE EXISTING BUILDING EAST OF THE GARDEN SITE. THE EXISTING RAIN SCUPPER WILL BE EXTENDED TO FILL THE TANK FROM THE TOP. A SMALL 10 GPM PUMP WILL TRANSFER WATER FROM THE RAIN WATER STORAGE TANK TO THE PRIMARY STORAGE TANKS, OR THE PUMP MAY BE USED TO IRRIGATE A SMALL EXAMPLE COMMERCIAL GARDEN ON THE SITE.

THE PRIMARY IRRIGATION STORAGE TANKS SHALL CONSIST OF TWO (2) 18,000 GALLON ABOVE GRADE CORGAL CORRUGATED STEEL TANKS SITUATED AT THE SOUTH END OF THE SITE. A 15 GPM BOOSTER PUMP WILL DISCHARGE IRRIGATION WATER INTO THE IRRIGATION SYSTEM TO THE LIMITS OF LANDSCAPED AREA AS SHOWN. DURING PERIODS WHEN PRECIPITATION AND STORM WATER COLLECTION DO NOT MEET IRRIGATION DEMANDS, LEVEL SENSING INSIDE THE TANKS WILL ACTIVATE A CONTROL VALVE CONNECTED TO THE EXISTING RECLAIMED WATER SOURCE ON SITE TO PARTIALLY REFILL THE PRIMARY TANK TO MEET DAILY IRRIGATION DEMANDS.

THE RESIDENTIAL EXHIBIT AREA WILL UTILIZE TWO (2) 400 GALLON POLYETHYLENE TANKS TO COLLECT RAIN WATER FROM THE RESIDENTIAL ROOF DURING STORM EVENTS. IRRIGATION WATER WILL BE DISCHARGED PASSIVELY INTO ADJACENT SHRUB BEDS USING A SMALL RESIDENTIAL IRRIGATION CONTROLLER AND CONTROL VALVE. A BACKUP IRRIGATION SYSTEM WILL BE INSTALLED TO MEET IRRIGATION DEMANDS BETWEEN RAIN EVENTS.

THE CITY HAS RECENTLY REQUESTED THAT A LARGE CORRUGATED STEEL TANK BE USED TO HOUSE THE WATER HARVESTING EXHIBITS. A LOCKABLE STEEL DOOR WOULD ALLOW THE GENERAL PUBLIC TO ENTER THE EXHIBIT DURING BUSINESS HOURS. WATER HARVESTING EXHIBITS AND THE ON SITE SYSTEM WOULD SHOWN ALL IT WATER USE AND COLLECTION DATA ON BEAUTIFUL GRAPHIC LED SCREEN.

RECLAIMED WATER REFILL

- SIZE: 1-INCH, 25 GPM
- EQUIPPED WITH BACKFLOW AND METER;
- FIELD LOCATE & EXTEND TO TANKS AS SHOWN
- RECLAIMED WATER SHALL BE USED TO PARTIALLY FILL PRIMARY TANKS FOR DAILY IRRIGATION WATER USE BETWEEN RAIN EVENTS

IRRIGATION MAINLINE

EQUALIZATION PIPE

SITE IRRIGATION PUMP STATION

- 15 GPM AT 90 FT-HEAD VERTICAL CENTRIFUGAL PUMP
- ENCLOSURE: 4'X 5' X 5'H
- EQUIPPED WITH FLOW METER

PROPOSED EXHIBIT TANK

- (1) 18,000 GALLON CORRUGATED STEEL TANK
- SIZE : 21'D X 13'4" H
- WITH WALK IN DOOR
- TO SHELTER LED SCREEN AND EXHIBIT MATERIALS

PRIMARY SITE IRRIGATION WATER STORAGE TANKS

- (2) 18,000 GALLON CORGAL TANKS
- TOTAL VOLUME- 54,000 GALLONS
- SIZE (EA): 21'D X 13'4" H

STORM WATER COLLECTION

- 10,000 GALLON FIBERGLASS STORM WATER STORAGE TANK
- 8' DIAMETER X 31' LONG

STORM WATER TRANSFER PUMP

- 200 GPM AT 50 FT-HEAD SUBMERSIBLE PUMP
- POWER: 120-240V/1PHASE/60Hz
- EQUIPPED WITH FLOW METER
- PUMP WILL TRANSFER STORM WATER DURING STORM EVENTS TO FILL PRIMARY IRRIGATION WATER STORAGE TANKS AND WILL REFILL PRIMARY TANKS AS THEY BECOME EMPTY

RESIDENTIAL RAIN WATER COLLECTION

- TWO (2) 400 GALLON POLYETHYLENE STORAGE TANKS
- SIZE: 3' DIAMETER X 8' HIGH
- TO COLLECT RAIN FROM RESIDENTIAL ROOF AND GRAVITY FEED TO PLANTS AROUND HOUSE VIA GRAVITY SYSTEM
- HOUSE WILL REQUIRE RECLAIMED WATER BACKUP TAP TO SERVE STANDARD IRRIGATION SYSTEM FOR DRY PERIODS

RAIN WATER DISCHARGE PUMP

- 10 GPM AT 30 FT-HEAD END SUCTION PUMP IN ENCLOSURE
- 120-240V/1 PHASE/60Hz
- EQUIPPED WITH FLOWMETER
- PUMP WILL TRANSFER RAIN WATER TO PRIMARY STORAGE TANKS AS PRIMARY TANKS ARE EMPTIED

RAIN WATER STORAGE TANK

- (1) 10,000 GALLON CORGAL TANK
- TOTAL VOLUME: 54,000 GALLONS
- SIZE: 10'D X 13'4" H
- TO RECEIVE RAIN WATER FROM EXISTING BUILDING

TRANSFER PIPES

IRRIGATION MAINLINE



PROJECT #: XXX
 KIVA # XXX
 SDEV # XXX
 CCPR or SCPR # XXX
 ENVR # XXX
 H# XXX
 City Quarter Section # XXX
 Current Zoning: XXX

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SURPRISE WATER CONSERVATION GARDEN

CITY HALL
 SURPRISE, ARIZONA

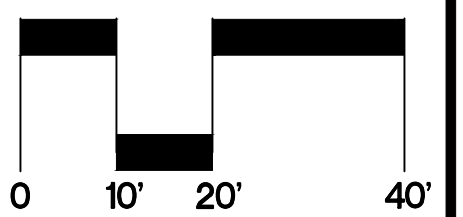
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PRELIMINARY
 NOT FOR CONSTRUCTION

THESE DOCUMENTS ARE NOT FOR CONSTRUCTION



NORTH



SCALE: 1" = 20'

○	2ND CITY SUBMITTAL
○	1ST CITY SUBMITTAL
●	DESIGN DEVELOPMENT WATER HARVESTING
●	CONCEPT DRAWINGS
	2020.03.02
EWP	
ECW	
#	19015