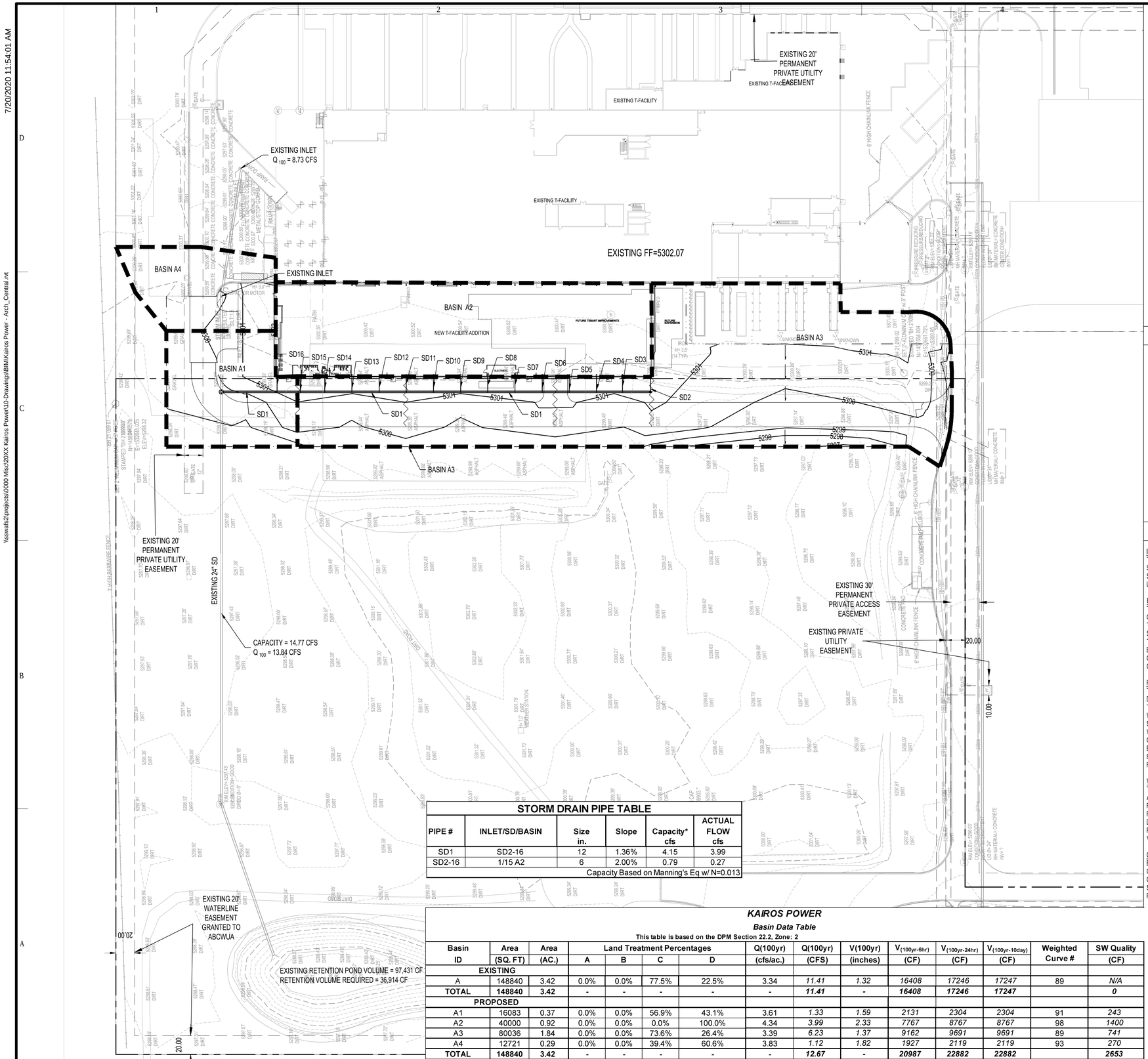


## STORM DRAIN PIPE TABLE

| PIPE # | INLET/SD/BASIN | Size in. | Slope | Capacity* cfs | ACTUAL FLOW cfs |
|---|---|---|---|---|---|
| SD1 | SD2-16 | 12 | 1.36% | 4.15 | 3.99 |
| SD2-16 | 1/15 A2 | 6 | 2.00% | 0.79 | 0.27 |
| Capacity Based on Manning's Eq w/ N=0.013 | | | | | |

***KAIROS POWER***

***Basin Data Table***

**This table is based on the DPM Section 22.2, Zone: 2**

| Basin ID | Area (SQ. FT) | Area (AC.) | Land Treatment Percentages A | B | C | D | Q(100yr) (cfs/ac.) | Q(100yr) (CFS) | V(100yr) (inches) | $V_{(100yr\text{-}6hr)}$ (CF) | $V_{(100yr\text{-}24hr)}$ (CF) | $V_{(100yr\text{-}10day)}$ (CF) | Weighted Curve # | SW Quality (CF) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **EXISTING** | | | | | | | | | | | | | | |
| A | 148840 | 3.42 | 0.0% | 0.0% | 77.5% | 22.5% | 3.34 | *11.41* | *1.32* | *16408* | *17246* | *17247* | 89 | *N/A* |
| **TOTAL** | **148840** | **3.42** | - | - | - | - | - | ***11.41*** | - | ***16408*** | ***17246*** | ***17247*** | | ***0*** |
| **PROPOSED** | | | | | | | | | | | | | | |
| A1 | 16083 | 0.37 | 0.0% | 0.0% | 56.9% | 43.1% | 3.61 | *1.33* | *1.59* | *2131* | *2304* | *2304* | 91 | *243* |
| A2 | 40000 | 0.92 | 0.0% | 0.0% | 0.0% | 100.0% | 4.34 | *3.99* | *2.33* | *7767* | *8767* | *8767* | 98 | *1400* |
| A3 | 80036 | 1.84 | 0.0% | 0.0% | 73.6% | 26.4% | 3.39 | *6.23* | *1.37* | *9162* | *9691* | *9691* | 89 | *741* |
| A4 | 12721 | 0.29 | 0.0% | 0.0% | 39.4% | 60.6% | 3.83 | *1.12* | *1.82* | *1927* | *2119* | *2119* | 93 | *270* |
| **TOTAL** | **148840** | **3.42** | - | - | - | - | - | ***12.67*** | - | ***20987*** | ***22882*** | ***22882*** | | ***2653*** |


## VICINITY/FEMA MAP #35001CO363G

## LEGEND

- PROPERTY LINE
- LIMITS OF GRADING
- 5025 EXISTING INDEX CONTOUR
- 5024 EXISTING INTERMEDIATE CONTOUR
- 5025 PROPOSED INDEX CONTOUR
- 5024 PROPOSED INTERMEDIATE CONTOUR
- MAJOR DRAINAGE BASIN
- SUB BASIN/ROOF BASIN

## DRAINAGE NARRATIVE

INTRODUCTION:
THE KAIROS BUILDING ADDITION IS LOCATED ALONG THE WEST SIDE OF THE EXISTING SCHOTT SOLAR BUILDING IN MESA DEL SOL. THE SITE IS CURRENTLY FULLY DEVELOPED EAST OF THE SCHOTT SOLAR FACILITY. THE WEST SIDE, WHERE THE BUILDING ADDITION IS LOCATED, IS UNDEVELOPED.

EXISTING CONDITIONS:
THE AREA IN QUESTION, WEST OF THE EXISTING FACILITY, IS CURRENTLY UNDEVELOPED. THE SITE GENERALLY SHEET FLOWS FROM EAST TO WEST TOWARDS AN EXISTING RETENTION POND ALONG THE WESTERN PROPERTY LINE. AN EXISTING 24" STORM DRAIN IS LOCATED NORTH OF THE SCHOTT SOLAR FACILITY. THIS STORM DRAIN DISCHARGES INTO THE EXISTING RETENTION POND WEST OF THE FACILITY. THE EXISTING RETENTION POND WAS SIZED FOR THE 100 YEAR 10 DAY STORM EVENT BASED ON THE APPROVED DRAINAGE MANAGEMENT PLAN AND GRADING PLAN AS CERTIFIED ON 5/6/2009 (HYDROLOGY FILE Q16-DA5000). THE EXISTING 24" STORM DRAIN PIPE HAS A CAPACITY OF 14.77 CFS.

PROPOSED CONDITIONS:
THE PROPOSED CONDITIONS WILL MIMIC EXISTING CONDITIONS. THE ROOF OF THE ADDITION WILL DISCHARGE INTO A NEW STORM DRAIN WEST OF THE FACILITY. THIS STORM DRAIN WILL CONNECT TO THE EXISTING STORM DRAIN RUNNING ALONG THE NORTH FACE OF THE BUILDING. RUNOFF WILL ULTIMATELY DISCHARGE INTO THE EXISTING RETENTION POND ON THE WEST SIDE OF THE SITE. RUNOFF THAT DOES NOT ENTER THIS PROPOSED STORM DRAIN WILL SHEET FLOW TO THE WEST, WHERE IT WILL ULTIMATELY DISCHARGE INTO THE SAME EXISTING RETENTION POND. BASED ON THE APPROVED DMP, APPROXIMATELY 8.73 CFS ENTERS THIS EXISTING DRAIN PIPE AT AN EXISTING INLET ON THE NORTHEAST CORNER OF THE EXISTING BUILDING. THE EXISTING 24" HAS 8.73 CFS IN THE EXISTING CONDITIONS. BASINS A2 AND A4 CONTRIBUTE 5.11 CFS. THE TOTAL RUNOFF IS 13.84 CFS, WHICH IS LESS THAN THE 14.77 CFS CAPACITY.

WATER HARVESTING:
THE EXISTING RETENTION POND WEST HAS AN EXCESS OF VOLUME THAT WILL RETAIN THE ADDITIONAL PROPOSED RUNOFF FROM THE BUILDING ADDITION. DUE TO THE NATURE OF RETENTION PONDS, ALL WATER HARVESTING WILL BE CONTAINED WITHIN THE EXISTING RETENTION POND. THE STORM WATER QUALITY VOLUME BASED ON THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS VOLUME IS 2653 CF (FROM TABLE), THE EXISTING POND HAS CAPACITY FOR THE ADDITIONAL 100 YEAR 10 DAY RUNOFF VOLUME AND THE STORM WATER QUALITY VOLUME.

CONCLUSION:
BASED ON THE THE INFORMATION PROVIDED ABOVE. THE EXISTING RETENTION POND HAS ENOUGH CAPACITY TO CONTAIN THE ADDITIONAL RUNOFF FROM THE ADDITION, THEREFORE WE ARE IN CONFORMATION WITH THE CITY OF ALBUQUERQUE HYDROLOGY REQUIREMENTS AND REQUEST SITE PLAN FOR BUILDING PERMIT APPROVAL, FOUNDATION PERMIT APPROVAL, AND GRADING PERMIT APPROVAL.

N

50 25 0 50

1"=50'

Bohannan Huston
www.bhinc.com 800.877.5332

STUDIO SW ARCHITECTS
2101 Mountain Road NW Suite B | Albuquerque NM 87104
505-843-9639 | www.studioswarch.com



CONSULTANTS

Architect Engineer

MATTHEW H. SANCHES NEW MEXICO 24572 REGISTERED PROFESSIONAL ENGINEER 07/20/2020

Kairos Power

# T-FACILITY MODIFICATIONS AND ADDITION

5201 HAWKING DRIVE SE
ALBUQUERQUE, NM 87105

Key Plan
NTS

| No | Date | Description |
|---|---|---|

Revision Schedule

| | |
|---|---|
| ISSUE: | DRB SUBMITTAL/FOUNDATION |
| PROJECT NUMBER: | 2018 |
| FILE: | |
| DRAWN BY: | BF |
| CHECKED BY: | MS |
| DATE: | 09/09/2020 |

SHEET TITLE

# DRAINAGE MANAGEMENT PLAN

C-001