

CITY OF ALBUQUERQUE

Planning Department
David Campbell, Director



Mayor Timothy M. Keller

November 16, 2018

David Soule, P.E.
Rio Grande Engineering
P.O. Box 93924
Albuquerque, NM, 87199

RE: 13420 Osage Orange Rd NE
Grading and Drainage Plan
Engineer's Stamp Date: 11/02/18
Engineer's Certification Date: 11/15/18
Hydrology File: E23D031

Dear Mr. Soule:

PO Box 1293

Based upon the information provided in your Certification and site photos received 11/16/18, the above referenced Certification is acceptable for Building Pad Certification for 13420 Osage Orange Rd NE.

Albuquerque

Prior to approval in support of Permanent Release of Occupancy by Hydrology, Engineer Certification per the DPM checklist will be required and a formal Elevation Certificate needs to be submitted to Hydrology.

NM 87103

If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

www.cabq.gov

Sincerely,

Renée C. Brissette, P.E. CFM
Senior Engineer, Hydrology
Planning Department



City of Albuquerque

Planning Department
Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: 13420 OSAGE ORANGE **Building Permit #:** _____ **Hydrology File #:** E31-D031

DRB#: _____ **EPC#:** _____ **Work Order#:** _____

Legal Description: LOT 53 UNIT 2 OVERLOOK

City Address: 13420 OSAGE ORANGE

Applicant: _____ **Contact:** _____

Address: _____

Phone#: _____ **Fax#:** _____ **E-mail:** _____

Other Contact: RIO GRANDE ENGINEERING

Contact: DAVID SOULE

Address: PO BOX 93924 ALB NM 87199

Phone#: 505.321.9099 **Fax#:** 505.872.0999 **E-mail:** david@riograndeengineering.com

TYPE OF DEVELOPMENT: _____ PLAT ☒ RESIDENCE _____ DRB SITE _____ ADMIN SITE

Check all that Apply:

DEPARTMENT:

☒ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION

TYPE OF SUBMITTAL:

☐ ENGINEER/ARCHITECT CERTIFICATION
☒ PAD CERTIFICATION
☐ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☐ DRAINAGE REPORT
☐ DRAINAGE MASTER PLAN
☐ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
☐ ELEVATION CERTIFICATE
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ STREET LIGHT LAYOUT
☐ OTHER (SPECIFY) _____
☐ PRE-DESIGN MEETING?

IS THIS A RESUBMITTAL?: ☒ Yes ☐ No

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

☒ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY

☐ PRELIMINARY PLAT APPROVAL
☐ SITE PLAN FOR SUB'D APPROVAL
☐ SITE PLAN FOR BLDG. PERMIT APPROVAL
☐ FINAL PLAT APPROVAL

☐ SIA/ RELEASE OF FINANCIAL GUARANTEE
☐ FOUNDATION PERMIT APPROVAL
☐ GRADING PERMIT APPROVAL
☐ SO-19 APPROVAL
☐ PAVING PERMIT APPROVAL
☐ GRADING/ PAD CERTIFICATION
☐ WORK ORDER APPROVAL
☐ CLOMR/LOMR
☐ FLOODPLAIN DEVELOPMENT PERMIT
☐ OTHER (SPECIFY) _____

DATE SUBMITTED: _____ **By:** _____

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

SITE HYDROLOGY

Weighted E Method

per city of Albuquerque Development Process Manual- chapter 22

Existing Developed Basins														
Basin	Area (sf)	Area (acres)	Treatment				100-Year, 6-hr		10-day					
			A (acres)	B (acres)	C (acres)	D (acres)	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Volume (ac-ft)				
BASIN A(proposed)	4303.00	0.099	28%	0.02765932	30%	0.030	23%	0.02272	19%	0.019	1.385	0.011	0.33	0.014
BASIN B(proposed)	5942.00	0.136	10%	0.01364096	26.0%	0.035	24.0%	0.03274	40%	0.055	1.767	0.020	0.54	0.027
BASIN C(proposed)	6878.00	0.158	66%	0.10421212	26.0%	0.041	0.0%	0	8%	0.013	1.020	0.013	0.42	0.015
NATIVE	17123.00	0.393	75%	0.29451749	26.0%	0.098	0.0%	0	0%	0.000	0.870	0.028	0.94	0.028

Equations:

Weighted E = Ea**A*a + Eb**A*b + Ec**A*c + Ed**A*d / (Total Area)

Volume = Weighted D * Total Area

Flow = Qa * *A*a + Qb * *A*b + Qc * *A*c + Qd * *A*d

Where for 100-year, 6-hour storm

Ea= 0.8

Eb= 1.08

Ec= 1.46

Ed= 2.64

Qa= 2.2

Qb= 2.92

Qc= 3.73

Qd= 5.25

FIRST FLUSH

REQUIRED 23.16 CF

PROVIDED 121 CF

15.99 CF

220 CF

FLOOD CONTROL

REQUIRED 0 CF

PROVIDED 121 CF

601.13 CF

756 CF

DRAINAGE NARRATIVE

THIS SITE IS GOVERNED BY THE HIGH DESERT MASTER DRAINAGE PLAN. THE DOWN STREAM IMPROVEMENTS ARE IN PLACE DUE TO THIS SITE BEING GOVERNED BY THE GUIDELINES FOR SUSTAINABILITY. THE SITE MUST MATCH THE HISTORICAL 100-YEAR, 6-HOUR PEAK DISCHARGE RATE THE SITE CURRENTLY DISCHARGES 94 CFS. THE DEVELOPED SITE WILL CONTAIN THREE DRAINAGE BASINS.

BASIN A CONTAINS THE FRONT OF HOUSE AND LOT. THIS BASIN DISCHARGES 23 CFS THAT PASSES THROUGH A WATER QUALITY POND.

BASIN B CONTAINS THE MAJORITY OF THE HOUSE AND A PORTION AROUND THE HOUSE. THIS BASIN GENERATES 54 CFS THAT IS CAPTURED BY A WATER QUALITY DETENTION POND THE PEAK DISCHARGE IS REDUCED TO 19 CFS LEAVING THE POND AND A WATER QUALITY VOLUME OF 220 CF IS CAPTURED

BASIN C IS THE REMAINING PORTION OF THE LOT AND WILL DISCHARGE 42 CFS AS SHEET FLOW.

THE COMBINED PROPOSED DISCHARGE WILL BE 94 CFS WHICH MATCHES NATIVE CONDITIONS. THE PONDS CAPTURE 341 CF FOR WATER QUALITY

I, DAVID SOULE HAVE PERSONALLY INPECTED THE SITE. I HEREBY CERTIFY THE PAD HAS BEEN CONSTRUCTED SUCH THAT IT IS IN SUBSTANTIAL CONFORMANCE TO THE APPROVED GRADING PLAN DATED 11/2/18 BASED UPON APPROVAL FROM DESIGN ENGINEER THE PAD HAS BEEN CONSTRUCTED 4" LOWER. THE DRAINAGE CONCEPT HAS NOT CHANGED. I CERTIFY THE PAD IS AT A GRADE THAT CONFORMS TO THE APPROVED PLAN AND ACCEPTABLE FOR RELEASE OF BUILDING PERMIT

EMERGENCY OVERFLOW DETAIL
NTS

COBBLE SWALE DETAIL
NTS

ROOF DRAIN SPLASH PAD DETAIL
NTS

EROSION CONTROL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.

CAUTION:

EXISTING UTILITIES ARE NOT SHOWN. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION TO DETERMINE THE ACTUAL LOCATION OF UTILITIES & OTHER IMPROVEMENTS.

LEGAL DESCRIPTION:
Lot 53, Overlook at High Desert, Unit 2

NOTES:

1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.
2. ALL ROOF DRAINS SHALL HAVE A SLASH PAD AND 2' COBBLE SWALE THAT SHALL TIE TO MAIN COBBLES SWALES AROUND THE HOUSE PER DETAIL THIS SHEET..
3. ALL DISTURBED AREAS SHALL BE RESEEDDED WITH APPROVED HIGH DESERT MIX WITHIN 30 DAYS AFTER THE END OF DISTURBANCE.
4. ALL SLOPES SHALL BE 3:1 MAX. AND GRAVEL OR NATIVE SEEDING PRIOR TO CO.
5. SURVEY PROVIDED BY COMMUNITY SCIENCES CORPORATION, BASED UPON NAVD 1988 DATUM.

LEGEND

---	XXXX	EXISTING CONTOUR
---	XXXX	EXISTING INDEX CONTOUR
---	XXXX	PROPOSED CONTOUR
---	XXXX	PROPOSED INDEX CONTOUR
---	XXXX	SLOPE TIE
---	XXXX	EXISTING SPOT ELEVATION
---	XXXX	PROPOSED SPOT ELEVATION
---	XXXX	BOUNDARY
---	XXXX	CENTERLINE
---	XXXX	RIGHT-OF-WAY
---	XXXX	PROPOSED CURB AND GUTTER
---	XXXX	EXISTING EDGE OF ASPHALT
---	XXXX	PROPOSED 1'-2 LANDSCAPE WALL
---	XXXX	2' COBBLE SWALE-SEE DETAIL THIS SHEET
---	XXXX	BASIN LIMITS

ENGINEER'S SEAL	13420 OSAGE ORANGE	DRAWN BY WCWJ
DAVID SOULE NEW MEXICO 14522 REGISTERED PROFESSIONAL ENGINEER	GRADING AND DRAINAGE PLAN	DATE 10-23-18
11/2/18 10/23/18	Rio Grande Engineering 1606 CENTRAL AVENUE SE SUITE 201 ALBUQUERQUE, NM 87106 (505) 872-0589	218145-LAYOUT-10-02-18
DAVID SOULE P.E. #14522		SHEET #
		JOB # 21740

AHYMO.OUT

AHYMO PROGRAM (AHYMO-S4) - Version: S4.01a - Rel: 01a
RUN DATE (MON/DAY/YR) = 10/21/2018
START TIME (HR:MIN:SEC) = 16:29:50 USER NO.=
RioGrandeSingIeA41963517
INPUT FILE = ments and Settings\Owner\Desktop\2018 JOBS\18223-osage orange\pondrout100318.txt

*S AHYMO - DETENTION-ORANGE OSAGE BASIN B POND
*S POND ROUTING
START TIME=0.0 PUNCH CODE=0
RAINFALL TYPE=2
QUARTER=0.0 ONE= 2.23 IN
SIX=2.90 IN DAY= 3.65 IN DT = 0.05 HR

24-HOUR RAINFALL DIST. - BASED ON NOAA ATLAS 14 FOR CONVECTIVE
AREAS (NM & AZ) - D1
DT = 0.050000 HOURS END TIME = 24.000002 HOURS
0.0000 0.0045 0.0091 0.0140 0.0193 0.0248 0.0310
0.0398 0.0537 0.0687 0.0842 0.1010 0.1181 0.1356
0.1538 0.1722 0.1925 0.2138 0.2367 0.2658 0.2980
0.3412 0.3902 0.4507 0.5314 0.6221 0.7789 1.0225
1.4400 1.7335 1.9649 2.0812 2.1831 2.2564 2.3147
2.3654 2.4026 2.4368 2.4649 2.4887 2.5102 2.5296
2.5478 2.5640 2.5793 2.5942 2.6086 2.6205 2.6271
2.6337 2.6401 2.6461 2.6521 2.6579 2.6636 2.6693
2.6746 2.6799 2.6851 2.6902 2.6952 2.7000 2.7048
2.7095 2.7141 2.7186 2.7230 2.7273 2.7316 2.7358
2.7399 2.7440 2.7481 2.7521 2.7560 2.7599 2.7638
2.7676 2.7713 2.7751 2.7787 2.7824 2.7860 2.7895
2.7931 2.7965 2.8000 2.8034 2.8068 2.8101 2.8134
2.8167 2.8200 2.8232 2.8263 2.8295 2.8326 2.8357
2.8388 2.8418 2.8448 2.8478 2.8508 2.8537 2.8566
2.8595 2.8623 2.8652 2.8680 2.8708 2.8735 2.8763
2.8790 2.8817 2.8844 2.8870 2.8897 2.8923 2.8949
2.8974 2.9000 2.9026 2.9051 2.9077 2.9102 2.9128
2.9153 2.9179 2.9204 2.9229 2.9255 2.9280 2.9305
2.9331 2.9356 2.9381 2.9406 2.9432 2.9457 2.9482
2.9507 2.9532 2.9557 2.9582 2.9607 2.9632 2.9657
2.9682 2.9707 2.9732 2.9757 2.9781 2.9806 2.9831
2.9856 2.9880 2.9905 2.9930 2.9954 2.9979 3.0004
3.0028 3.0053 3.0077 3.0102 3.0126 3.0151 3.0175
3.0199 3.0224 3.0248 3.0272 3.0297 3.0321 3.0345
3.0369 3.0393 3.0418 3.0442 3.0466 3.0490 3.0514
3.0538 3.0562 3.0586 3.0610 3.0634 3.0657 3.0681
3.0705 3.0729 3.0753 3.0776 3.0800 3.0824 3.0847
3.0871 3.0895 3.0918 3.0942 3.0965 3.0989 3.1012
3.1036 3.1059 3.1083 3.1106 3.1129 3.1153 3.1176
3.1199 3.1222 3.1246 3.1269 3.1292 3.1315 3.1338
3.1361 3.1384 3.1407 3.1430 3.1453 3.1476 3.1499
3.1522 3.1545 3.1568 3.1591 3.1613 3.1636 3.1659
3.1682 3.1704 3.1727 3.1749 3.1772 3.1795 3.1817
3.1840 3.1862 3.1885 3.1907 3.1930 3.1952 3.1974
3.1997 3.2019 3.2041 3.2063 3.2086 3.2108 3.2130
3.2152 3.2174 3.2196 3.2218 3.2240 3.2263 3.2284
3.2306 3.2328 3.2350 3.2372 3.2394 3.2416 3.2438
3.2459 3.2481 3.2503 3.2525 3.2546 3.2568 3.2589
3.2611 3.2633 3.2654 3.2676 3.2697 3.2719 3.2740
3.2761 3.2783 3.2804 3.2825 3.2847 3.2868 3.2889

COMPUTE NM HYD ID=1 HYD NO=101 DA=-.000213 SQ MI
PER A=10 PER B=26 PER C=24 PER D=40
TP=-.160 MASSRAIN=-1
K = 0.087200HR TP = 0.160000HR K/TP RATIO = 0.545000 SHAPE
CONSTANT, N = 7.106428
UNIT PEAK = 0.28024 CFS UNIT VOLUME = 0.9569 B = 526.28
P60 = 2.2300
AREA = 0.000085 SQ MI IA = 0.10000 INCHES INF = 0.04000
INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000
K = 0.154781HR TP = 0.160000HR K/TP RATIO = 0.967379 SHAPE
CONSTANT, N = 3.651494
UNIT PEAK = 0.26457 CFS UNIT VOLUME = 0.9482 B = 331.23
P60 = 2.2300
AREA = 0.000128 SQ MI IA = 0.46500 INCHES INF = 1.15200
INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000
PRINT HYD ID=1 CODE=3
PARTIAL HYDROGRAPH 101.00
TIME TIME FLOW TIME TIME FLOW TIME FLOW
HRS HRS CFS HRS HRS CFS HRS CFS
14.850 0.000 0.0 19.800 4.950 0.0 9.900 0.0
15.000 0.150 0.0 19.950 5.100 0.0 10.050 0.0

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AHYMO.OUT

AHYMO.OUT

15.150 0.300 0.0 5.250 0.0 10.200 0.0
0.450 0.0 20.100 0.0 10.350 0.0
15.300 0.600 0.0 20.250 5.550 0.0 10.500 0.0
15.450 0.0 0.0 20.400 5.700 0.0 10.650 0.0
15.600 0.750 0.0 20.550 5.850 0.0 10.800 0.0
15.750 0.0 0.0 20.700 6.000 0.0 10.950 0.0
15.900 1.050 0.0 20.850 6.150 0.0 11.100 0.0
16.050 1.200 0.0 21.000 6.300 0.0 11.250 0.0
16.200 1.350 0.1 21.150 6.450 0.0 11.400 0.0
16.350 1.500 0.5 21.300 6.600 0.0 11.550 0.0
16.500 1.650 0.4 21.450 6.750 0.0 11.700 0.0
16.650 1.800 0.2 21.600 6.900 0.0 11.850 0.0
16.800 1.950 0.1 21.750 7.050 0.0 12.000 0.0
16.950 2.100 0.1 21.900 7.200 0.0 12.150 0.0
17.100 2.250 0.0 22.050 7.350 0.0 12.300 0.0
17.250 2.400 0.0 22.200 7.500 0.0 12.450 0.0
17.400 2.550 0.0 22.350 7.650 0.0 12.600 0.0
17.550 2.700 0.0 22.500 7.800 0.0 12.750 0.0
17.700 2.850 0.0 22.650 7.950 0.0 12.900 0.0
17.850 3.000 0.0 22.800 8.100 0.0 13.050 0.0
18.000 3.150 0.0 22.950 8.250 0.0 13.200 0.0
18.150 3.300 0.0 23.100 8.400 0.0 13.350 0.0
18.300 3.450 0.0 23.250 8.550 0.0 13.500 0.0
18.450 3.600 0.0 23.400 8.700 0.0 13.650 0.0
18.600 3.750 0.0 23.550 8.850 0.0 13.800 0.0
18.750 3.900 0.0 23.700 9.000 0.0 13.950 0.0
18.900 4.050 0.0 23.850 9.150 0.0 14.100 0.0
19.050 4.200 0.0 24.000 9.300 0.0 14.250 0.0
19.200 4.350 0.0 24.150 9.450 0.0 14.400 0.0
19.350 4.500 0.0 9.600 0.0 14.550 0.0
19.500 4.650 0.0 9.750 0.0 14.700 0.0
19.650 4.800 0.0
RUNOFF VOLUME = 2.09359 INCHES = 0.0238 ACRE-Feet
PEAK DISCHARGE RATE = 0.54 CFS AT 1.550 HOURS BASIN AREA = 0.0002 SQ. MI.

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AHYMO.OUT

AHYMO.OUT

* ROUTE THE TOTAL FLOW THROUGH THE PROPOSED RESERVOIR
ROUTE RESERVOIR ID=2 HYD NO=102 INFLOW=1 CODE=3
OUTFLOW(CFS) STORAGE(AC-FT) ELEV(FT)
0.00 0.004 89.50
0.12 0.008 89.50
0.24 0.017 90.75
TIME (HRS) INFLOW (CFS) ELEV (FEET) VOLUME (AC-FT) OUTFLOW (CFS)
0.00 0.00 89.50 0.004 0.00
0.15 0.00 89.50 0.004 0.00
0.30 0.00 89.50 0.004 0.00
0.45 0.00 89.50 0.004 0.00
0.60 0.00 89.50 0.004 0.00
0.75 0.01 89.51 0.004 0.00
0.90 0.02 89.52 0.004 0.01
1.05 0.02 89.54 0.004 0.01
1.20 0.05 89.57 0.005 0.02
1.35 0.14 89.66 0.005 0.04
1.50 0.54 90.03 0.008 0.12
1.65 0.41 90.38 0.013 0.18
1.80 0.19 90.49 0.014 0.20
1.95 0.10 90.43 0.013 0.19
2.10 0.05 90.32 0.012 0.17
2.25 0.04 90.20 0.010 0.15
2.40 0.02 90.08 0.009 0.13
2.55 0.01 89.95 0.008 0.11
2.70 0.01 89.82 0.007 0.08
2.85 0.00 89.73 0.006 0.05
3.00 0.00 89.66 0.005 0.04
3.15 0.00 89.62 0.005 0.03
3.30 0.00 89.58 0.005 0.02
3.45 0.00 89.56 0.004 0.01
3.60 0.00 89.55 0.004 0.01
3.75 0.00 89.54 0.004 0.01
3.90 0.00 89.53 0.004 0.01
4.05 0.00 89.52 0.004 0.01
4.20 0.00 89.52 0.004 0.00
PEAK DISCHARGE = 0.198 CFS - PEAK OCCURS AT HOUR 1.80
MAXIMUM WATER SURFACE ELEVATION = 90.487
MAXIMUM STORAGE = 0.0138 AC-FT INCREMENTAL TIME= 0.050000HRS
FINISH
NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 16:29:50

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MINIMUM SWALE CAPACITY

	Top Width	Bottom Width	Depth	Area	WP	R	Slope	Q Provided	Q Required	Velocity
	(ft)	(ft)	(ft)	(ft^2)	(ft)		(%)	(cfs)	(cfs)	(ft/s)
LS SWALE	2	0	0.5	0.50	2.24	0.2236068	2	1.11	0.54	1.08

Manning's Equation:
Q = 1.49/n * A * R^(2/3) * S^(1/2)
A = Area
R = D/4
S = Slope
n = 0.035

OVERFLOW

Weir Equation:
 $Q=CLH^{3/2}$
Q= .54 cfs REQUIRED
C = 2.95
H = 0.67 ft
L = Length of weir
 $Q = 2.95 * 5. * ((.5)^{(3/2)}) =$
Q PROVIDED=5.21 CFS

VOLUME CALCULATIONS

POND A

POND BOTTOM

ACTUAL ELEV.	DEPTH (FT)	AREA SF	VOLUME PER UNIT	VOLUME CUMULATIVE	VOLUME AC-FT	Q (CFS)
6191	0	5	5	0	0.000	
6192.25	1.25	189.00	121.25	121.25	0.003	

POND B

OUTLET

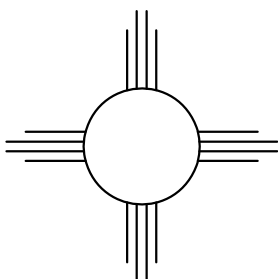
POND OVERFLOW

ACTUAL ELEV.	DEPTH (FT)	AREA SF	VOLUME PER UNIT	VOLUME CUMULATIVE	VOLUME AC-FT	Q (CFS)
6188.5	0	98	98	0	0.000	
6189.50	0.00	242.00	170	170	0.004	
6189.75	0.00	330.00	71.5000	241.5	0.006	0.00
6190.00	0.25	421.00	93.8750	335.375	0.008	0.12
6190.75	1.00	702.00	421.1250	756.5	0.017	0.24

Orifice Equation
Q = CA SQRT(2gH)
C = 0.6
Diameter (in) 3
Area (ft^2)= 0.049087385
g = 32.2
H (ft) = Depth of water above center of orifice
Q (CFS)= Flow

13420 OSAGE ORANGE

HYDRAULIC CALCULATION SHEET



Rio Grande
Engineering
1606 CENTRAL AVENUE SE
SUITE 201
ALBUQUERQUE, NM 87106
(505) 872-0689

ENGINEER'S SEAL
DAVID SOULE
P.E. #14522
10/22/18

DRAWN BY WCWJ
DATE 10-02-18
218145-LAYOUT-10-02-18
SHEET # 2 OF 2
JOB # 21740