

CITY OF ALBUQUERQUE

Hydrology Section Planning Department
David S. Campbell, Director



Timothy M. Keller, Mayor

February 22, 2019

Savana Garcia
Wilson & Company Inc.
4401 Masthead St NE, Suite 150
Albuquerque, NM, 87109

**RE: 4600 Edith Blvd NE – SWMD Admin. Office and Vehicle Maintenance
Conceptual G&D Plan (Engineer's Stamp Missing)
Hydrology File: G15D202**

Based upon the information provided in your submittal received 1/31/2019, the Conceptual Grading and Drainage Plan cannot be approved until the following comments are addressed.

Prior to Site Plan approval:

1. An Engineers stamp and date are required along with a bold label “NOT FOR CONSTRUCTION”
2. Please add a brief discussion of how the allowable discharge of 47.6 cfs was determined in compliance with § 14-5-2-12-E.
3. Please add a note describing how the SWPPP for the Multi-Sector General Permit, Sector P, will be updated.
4. Please add a note describing how the Stormwater Quality Volume will be provided as onsite retention for the 80th percentile event in compliance with § 14-5-2-6(H).

Prior to Building Permit, Grading Permit, and/or Work Order

5. Provide pond design calculations, hydrology, outlet structure hydraulics, and volume calculations using the conic method.
6. Provide hydraulic calculations for surface drainage in parking lots, inlets, and HGL calculations for the on-site storm drains. Please include profiles of storm drains and pond outlet pipes.

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

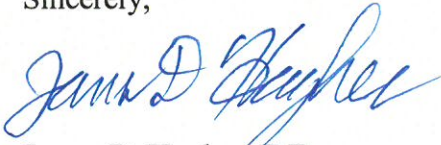
7. Typical sections should be shown at numerous locations around the perimeter of the site. Each section should show the property line, both the existing and proposed grades, slopes and walls with dimensions, both horizontal and vertical, as necessary to demonstrate compliance with DPM 22.5.B
8. A Phasing Plan should identify which portions of the site work are to be completed with each building.

Prior to Certificate of Occupancy

9. An engineer's Certification will be required for each building.

If you have any questions, please contact me at 924-3986 or e-mail jhughes@cabq.gov.

Sincerely,

A handwritten signature in blue ink, reading "James D. Hughes". The signature is fluid and cursive, with the first name "James" and last name "Hughes" clearly legible.

James D. Hughes, P.E.
Principal Engineer, Planning Dept.
Development and Review Services



DRAINAGE REPORT

INTRODUCTION

THE PROJECT SITE IS LOCATED IN NORTHEAST ALBUQUERQUE AT 4600 EDITH BOULEVARD. THE SITE IS BOUNDED BY THE ALAMEDA DRAIN/EDITH BLVD. TO THE WEST, COMANCHE RD TO THE NORTH, RANKIN RD TO THE SOUTH, AND COMMERCIAL BUSINESSES TO THE EAST OF THE SITE. THE SITE IS NOT LOCATED WITHIN A DESIGNATED FEMA FLOOD PLAIN MAP. SEE FIRM MAPS 35001C0119G AND 35001C0332G. THE DRAINAGE REPORT HAS BEEN PREPARED IN ACCORDANCE WITH THE LATEST REVISION TO VOLUME 2 SECTION 22.2 OF THE CITY OF ALBUQUERQUE PROCESS MANUAL.

EXISTING CONDITIONS

THE EXISTING SITE TOPOGRAPHY GENERALLY SLOPES FROM EAST TO WEST. THE EXISTING DRAINAGE INFRASTRUCTURE DIVERTS ALL THE SITES FLOWS THROUGH A SERIES OF WATER/OIL SEPARATORS AND INLETS INTO TWO PONDS LOCATED ON THE NORTH AND SOUTH OF THE SITE. THE LARGER DETENTION POND TO THE NORTH HAS AN OUTLET STRUCTURE THAT DISCHARGES THROUGH A 30" CORRUGATED METAL PIPE (CMP) INTO A DRAINAGE SYSTEM IN COMANCHE RD. THE POND DISCHARGE INFRASTRUCTURE HAS MAXIMUM DISCHARGE CAPACITY OF 47.6 CUBIC FEET PER SECOND (CFS). THE NORTHERN THREE QUARTERS OF THE SITE DRAINS INTO THIS POND. THE REMAINDER OF THE SITE DRAINS INTO THE SMALLER RETENTION POND TO THE SOUTHWEST CORNER OF THE SITE.

THE COMMERCIAL BUSINESSES TO THE EAST OF THE SITE ALSO DRAIN FROM THE EAST TO WEST. THE BUILDINGS ON THESE COMMERCIAL SITES ARE APPROXIMATELY 10'-15' HIGHER THAN THE SITES EXISTING GRADE. THE OFFSITE FLOWS WILL FLOW DIRECTLY TO THE EAST AND THE NORTHERN HALF WILL EVENTUALLY DRAIN INTO THE NORTH POND AND THE SOUTH HALF FLOWS INTO THE SOUTH RETENTION POND. THE AREA TO THE NORTH OF THE SITE IS COMANCHE RD WHICH HAS DRAINAGE INFRASTRUCTURE IN PLACE TO PREVENT FLOWS FROM BEING DISCHARGED TO THE PROJECT SITE. RANKIN RD TO THE SOUTH DRAINS EAST TO WEST AND THE FLOWS DO NOT ENTER THE PROPERTY. THE AREA TO THE WEST DRAINS EAST TO WEST AND THOSE FLOWS WILL ENTER THE ALAMEDA DRAIN.

PROPOSED CONDITIONS

THE PROPOSED SITE WILL MAINTAIN THE GENERAL FLOW DIRECTION OF EAST TO WEST AND SOUTH TO NORTH. ALL THE BASINS EXCEPT BASIN 206 WILL EVENTUALLY DRAIN INTO THE NEW POND LOCATED IN BASIN 220. BASINS 201-204 WILL CAPTURE THE DRAINAGE FROM THE MAINTENANCE AREA AND COMMERCIAL VEHICLE PARKING LOT AND BE ROUTED THROUGH A NEW POND IN BASIN 204. THIS POND WILL BE LINED AND WILL HAVE A WATER QUALITY OUTLET TO REMOVE THE OIL CAPTURED FROM THE SITE RUNOFF. THE NEW POND IN BASIN 220 WILL BE CONNECTED TO THE EXISTING POND DRAINAGE INFRASTRUCTURE THAT DISCHARGES TO THE STORM DRAIN SYSTEM IN COMANCHE RD. THIS POND WILL RETAIN THE FIRST FLUSH REQUIREMENTS AS WELL AS HAVE A WATER QUALITY OUTLET TO REMOVE OIL FROM THE RUNOFF. THE POND DISCHARGE WILL RETAIN THE EXISTING SYSTEM DISCHARGE CAPACITY OF 47.6 CFS. THE EXISTING RETENTION POND LOCATED ON THE SOUTHWEST CORNER WILL BE REMOVED AND RELOCATED FOR BASIN 201.

CALCULATIONS

THE CALCULATIONS SHOWN BELOW REPRESENT THE FLOWS FOR A 100-YEAR 6-HOUR DESIGN EVENT. THE HYDROLOGY IS PER THE "SECTION 22.2 OF THE DEVELOPMENT PROCESS MANUAL FOR THE CITY OF ALBUQUERQUE, NEW MEXICO, LATEST REVISION.

LEGEND

- XX EXISTING CONTOURS
- XX PROPOSED CONTOURS
- FF FINISHED FLOOR
- X% SLOPE ARROW

PROPOSED RETAINING WALL

CONCEPTUAL GRADING & DRAINAGE PLAN



JR MILLER & ASSOCIATES
2700 SATURN STREET
BREA, CA 92821
714-524-1870



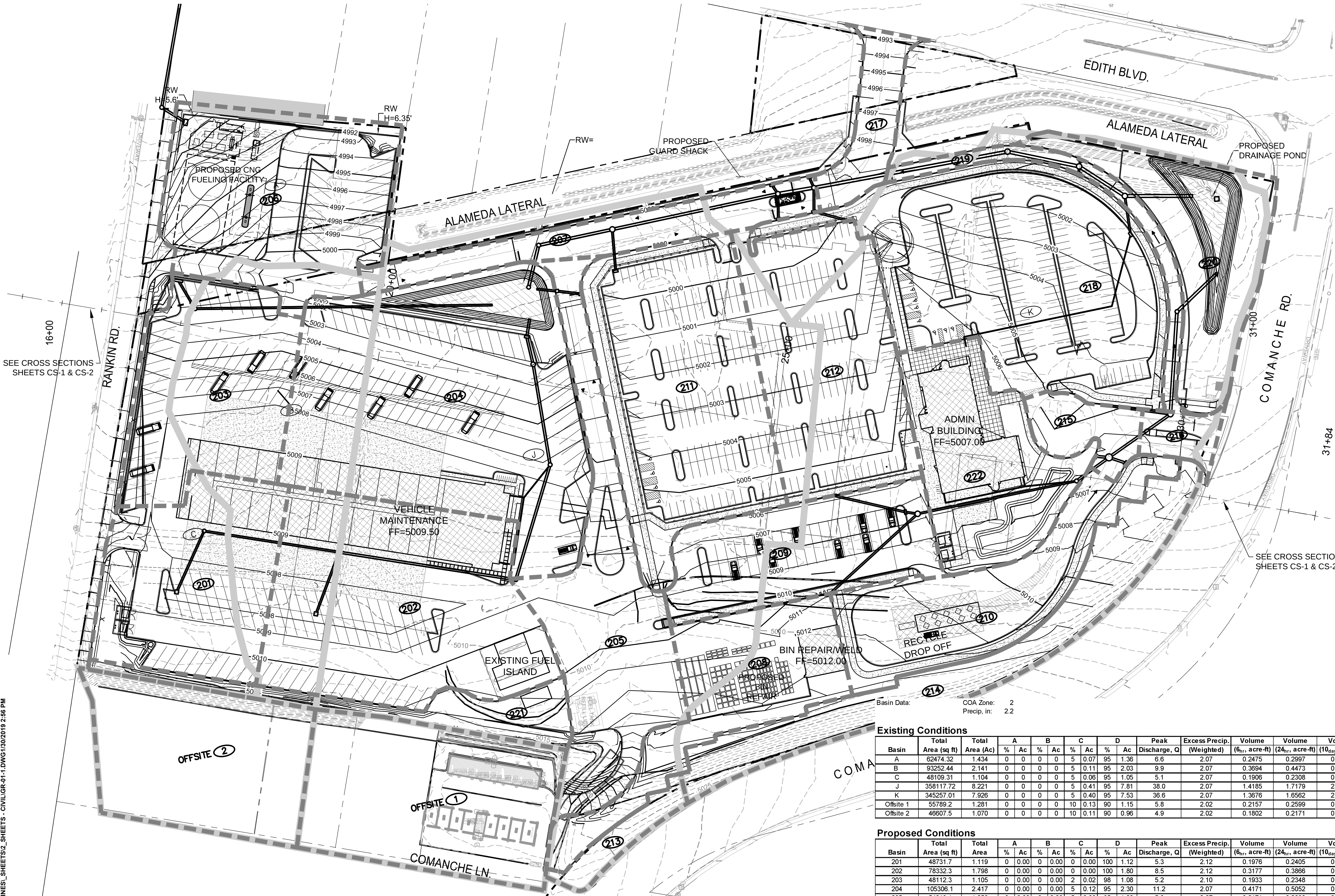
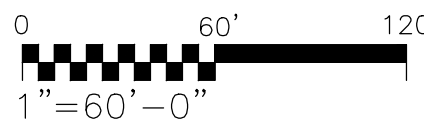
WILSON & COMPANY, INC.
4401 MASTHEAD ST NE
ALBUQUERQUE, NM 87109
505-348-4000

February 01, 2019

SHEET No. GR-1

COA PROJECT No. 7006.92 JRMA No. 4907

CONCEPTUAL GRADING & DRAINAGE PLAN



Pond Basin 220					
Elevation (ft)	Depth (ft)	Area (sq ft)	(ac)	ΔVolume (ac-ft)	Total Volume (ac-ft)
4989	0	2836.7	0.065	0	0.000
4990	1	3466	0.080	0.072	0.072
4991	2	4210	0.097	0.088	0.160
4992	3	5112	0.117	0.107	0.267
4993	4	6112	0.140	0.129	0.396
4994	5	7149.47	0.164	0.152	0.548
4995	6	8214	0.189	0.176	0.725
4996	7	9301.91	0.214	0.201	0.926
4997	8	10418	0.239	0.226	1.152

Pond Basin 204					
Elevation (ft)	Depth (ft)	Area (sq ft)	(ac)	ΔVolume (ac-ft)	Total Volume (ac-ft)
4995	0	4615.65	0.106	0	0.000
4996	1	5395	0.124	0.115	0.115
4997	2	6231	0.143	0.133	0.248
4998	3	7122	0.164	0.153	0.402
4999	4	8178	0.188	0.176	0.577

Existing Conditions

Basin	Total Area (sq ft)	Total Area (Ac)	A		B		C		D		Peak Discharge, Q	Excess Precip. (Weighted)	Volume (6hr, acre-ft)	Volume (24hr, acre-ft)	Volume (10day, acre-ft)
A	62474.32	1.434	0	0	0	0	5	0.07	95	1.36	6.6	2.07	0.2475	0.2997	0.4144
B	93252.44	2.141	0	0	0	0	5	0.11	95	2.03	9.9	2.07	0.3694	0.4473	0.6185
C	48109.31	1.104	0	0	0	0	5	0.06	95	1.05	5.1	2.07	0.1906	0.2308	0.3191
J	358117.72	8.221	0	0	0	0	5	0.41	95	7.81	38.0	2.07	1.4185	1.7179	2.3753
K	345257.01	7.926	0	0	0	0	5	0.40	95	7.53	36.6	2.07	1.3676	1.6562	2.2900
Offsite 1	55789.2	1.281	0	0	0	0	10	0.13	90	1.15	5.8	2.02	0.2157	0.2599	0.3569
Offsite 2	46607.5	1.070	0	0	0	0	10	0.11	90	0.96	4.9	2.02	0.1802	0.2171	0.2982

Proposed Conditions

Basin	Total Area (sq ft)	Total Area	% A	% B	% C	% D	Peak Discharge, Q	Excess Precip. (Weighted)	Volume (6hr, acre-ft)	Volume (24hr, acre-ft)	Volume (10day, acre-ft)		
201	48731.7	1.119	0	0.00	0	0.00	100	1.12	5.3	2.12	0.1976	0.2405	0.3347
202	78332.3	1.798	0	0.00	0	0.00	100	1.80	8.5	2.12	0.3177	0.3866	0.5380
203	48112.3	1.105	0	0.00	0	2.02	98	1.08	5.2	2.10	0.1933	0.2348	0.3259
204	105306.1	2.417	0	0.00	0	5.02	95	2.30	11.2	2.07	0.5052	0.6985	
205	54819.1	1.258	0	0.00	0	5.06	95	1.20	5.8	2.07	0.2171	0.2630	0.3636
206	60689.6	1.393	0	0.00	0	5.07	95	1.32	6.4	2.07	0.2404	0.2911	0.4025
207	23212.9	0.533	0	0.00	0	5.03	95	0.51	2.5	2.07	0.0919	0.1114	0.1540
208	38435.9	0.882	0	0.00	0	5.04	95	0.84	4.1	2.07	0.1522	0.1844	0.2549
209	39485.3	0.906	0	0.00	0	0.00	100	0.91	4.3	2.12	0.1601	0.1949	0.2712
210	40798.4	0.937	0	0.00	0	0.00	100	0.94	4.4	2.12	0.1655	0.2014	0.2802
211	71720.6	1.646	0	0.00	0	5.08	95	1.56	7.6	2.07	0.2841	0.3440	0.4757
212	56735.8	1.302	0	0.00	0	5.07	95	1.24	6.0	2.07	0.2247	0.2722	0.3763
213	6289	0.144	0	0.00	0	5.01	95	0.14	0.7	2.07	0.0249	0.0302	0.0417
214	38158.4	0.876	0	0.00	0	2.02	98	0.86	4.1	2.10	0.1533	0.1862	0.2585
215	10070.4	0.231	0	0.00	0	10.02	90	0.21	1.1	2.02	0.0389	0.0469	0.0644
216	5757.7	0.132	0	0.00	0	5.01	95	0.13	0.6	2.07	0.0228	0.0276	0.0382
217	12735.2	0.292	0	0.00	0	20.06	80	0.23	1.3	1.92	0.0468	0.0558	0.0755
218	91702.4	2.105	0	0.00	0	10.21	90	1.89	9.6	2.02	0.3546	0.4272	0.5866
219	10749.7	0.247	0	0.00	0	5.01	95	0.23	1.1	2.07	0.0426	0.0516	0.0713
220	37404.1	0.859	0	0.00	0	15.13	85	0.73	3.8	1.97	0.1411	0.1691	0.2305
221	16720.6	0.384	0	0.00	0	0.00	100	0.38	1.8	2.12	0.0678	0.0825	0.1148
222	41098	0.943	0	0.00	0	0.00	100	0.94	4.4	2.12	0.1667	0.2028	0.2823
Offsite 1	55490.4	1.274	0	0.00	0	10.13	90	1.15	5.8	2.02	0.2145	0.2585	0.3550
Offsite 2	46467.9	1.067	0	0.00	0	10.11	90	0.96	4.8	2.02	0.1797	0.2165	0.2973