

HIGH MESA Consulting Group

July 16, 2014

Amy Niese
City of Albuquerque Planning Department
Hydrology Section
600 2nd Street NW
Albuquerque, NM 87102

Re: Additional Information – Del Norte HS Cafeteria (F18/D054)

Dear Amy:

Transmitted herewith is the following additional information and analysis to support your review of the subject submittal:

- 1) Copy of LEED Master Redevelopment Plan – This plan was prepared to support LEED calculations demonstrating water quality and quantity, and was not submitted to the City as these elements were not required to support City approvals. This Plan includes runoff calculations for a 0.5” rainfall event and demonstrates that the water quality retention/detention pond identified in the Master Drainage Plan has more than twice the retention volume than is required to retain a 0.5” event. Although not intended for this purpose, this Plan also demonstrates that a “first flush” rainfall event of 0.44” is therefore retained onsite. Also attached herewith is a copy of the as-constructed plan for the pond from the Engineer’s Certification for that phase.
- 2) This project is contained with Basin C-1A from our 2010 Master Drainage Plan. As shown on the attached markups, the storm drain reaches numbered 1-4 as proposed with this current phase do not exactly match those shown on the Master Drainage Plan, but still meet the intent and capacity as follows:
 - Reach 1 is now replaced with 3 interconnected reaches between inlets. The downstream reach is 15” at a slope of 1.3% which exceeds the MDP slope of 0.9% for a 15” pipe. The upstream reaches of 15” and 12” carry less flow and are not critical as the downstream reach would handle an overflow condition.
 - Reaches 2 and 3 are now combined as the trench drain serving the field is being eliminated and replaced with vented manhole inlets to accept runoff from the future soccer field. The MDP flow rates for reaches 2 and 3 total 10.24 cfs ($5.03 + 5.21 = 10.24$). The proposed 18” pipe at 1.08% has a maximum normal flow capacity of 11.7 cfs, exceeding the requirement.
 - Reach 4 is now proposed as a 24” pipe at a slope of 1.2%, exceeding the capacity of the MDP size of 21” and slope of 0.9%. (See attached Flowmaster sheet).

Principals: Jeffrey G. Mortensen, P.E. • Charles G. Cala, Jr., P.S. • Juan M. Cala
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- 3) As described above, the trench drain identified on the Master Drainage Plan to intercept runoff from the future soccer field is now proposed as a series of four (4) manholes with vented lids as per "old" City of Albuquerque Standard Drawing 2110 (attached). Although dimensions are not provided on the City Standard Drawing, it is qualitatively determined that the 48 openings provided in each lid should adequately allow runoff to enter the system. It is anticipated that the future field will be synthetic turf with an underdrain connected to the Reach 3 storm drain which will result in most of the runoff never reaching these manholes. In the interim condition, or in the event that the future field is natural turf with surface drainage or not constructed at all, these 4 vented lids will intercept runoff into the storm drain system at these low spots. In the event that the capacity of the vented lids is exceeded, or if they clog, then the overflow from these low spots will be to the north at elevation 5234 to the access road where the runoff will be introduced into the storm drain system at a downstream location.

Based on the preceding information, we believe that this submittal meets the intent and requirements of the Master Drainage Plan and also of the new City Ordinance requiring water quality provisions. Please review this information and let us know if you have any additional questions or comments.

Sincerely,

HIGH MESA CONSULTING GROUP



J. Graeme Means, P.E.
Principal

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Enclosures