

October 20, 2017

City of Manteca
Engineering Services Division
1001 W. Center Street
Manteca, CA 95337

RE: **ARCO AM/PM AT CRESTWOOD**
SPC-17-105, UPN-17-106, LLA-17-107
2020 CRESTWOOD AVENUE
MANTECA, CA 95336
PMDG JOB NO. SPA16002.0.0

Dear Mark,

This letter is in response to the Civil Engineering related comments within the City of Manteca project review letter dated October 5, 2017. Please refer to the letter from PMDG Architectural group for responses to the balance of the City of Manteca comments.

Engineering Division (page 3):

Comment #'s 1-3:

Response: Refer to Architectural letter

Comment #4: The area under the canopy shall drain to itself and storm drain inlets in this area must be outfitted with a SafeDrain or similar device. This will be included as a condition of approval for the project.

Response: Refer to Keynote#25, sheet C1 for note regarding incorporation of the SafeDrain device into the project to capture storm water runoff from the area under the fueling canopy.

Comment #s 5-7

Response: Refer to Architectural letter

Comment #8: 3" Water piping is not allowed on the upstream side of the water meter. Piping on this side of the meter must be C-900 which is available in 2" and 4".

Response: Keynote#4, sheet C1.02, size of pipe changed to 4".

Comment #9: The note on the bottom of sheet C1.01 is unclear. Please explain further.

Response: The Bioretention measures were initially sized to meet LID requirements only. The stormwater design volume determined from the drainage management area worksheets were listed on our table on sheet C1.01 as the "Treatment area required (C.F.)". These values were then used to compute the bottom surface area for the Bioretention facilities (using the stormwater treatment and baseline hydromodification control measure design worksheets). The bottom surface area was then listed in the "treatment area provided (S.F.) see notes below" column. In order to meet hydromodification requirements, the depth of these treatment measures was increased as described in the notes equivalent to 1.5 times the surface area provided based on our details sheet C1.03. The note has been removed, and the column has been change to reflect the total volume provided for each Bioretention facility. DMA "C" drains to BMP "C" which holds the 100 year storm.

Comment#10: How is hydromodification for the project being handled?

Response: Hydromodification is being handled in the Bioretention areas as additional storage capacity in the gravel layer as well as expansion of the surface area required for Bioretention facilities. The four Bioretention facilities, DMA's A, B, C and D were sized to hold the entire additional volume required for hydromodification. Additionally, overflow from BMP "G" has been connected to BMP "D" while the overflows of BMP "E" and "F" are both connected into underground storage chambers able to hold the 2-year, 24-hour storm for drainage areas E and F, respectively.

Comment#11: Dimension the Bioretention areas so the size can be verified.

Response: Refer to sheet C1 for dimensions on the Bioretention areas.

Comment #12: Where is the drain to bioretention areas B and C.

Response: We re-evaluated the project based on the Sandy loam soils and eliminated the inlets. Any overflow beyond the first flush which is addressed differently in various DMA (some through infiltration, others through Filterra Unity or Perk Filter) and the Hydromodification (as defined above), releases via overland flow as shown on the Overland Release Exhibit, sheet C1.04.

Comment #13: Stormwater Plan is incomplete....These documents are not required at this time:

Response: We will revise the Project Stormwater Plan per comments from agency and submit with the Building Permit Submittal.

Comment #14: The trash enclosure must drain to itself and have a drain connected to the sanitary sewer system.

Response: Drain inlet has been specified/shown on the plans with sewer drain line piped to sanitary sewer system.

Please contact me if you have any questions.

Thank you,

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