LEE'S SUMMIT
MISSOURI

DEVELOPMENT SERVICES

Commercial Final Development Plan
Applicant's Letter

Date: Tuesday, October 13, 2020

To:

Property Owner: SCHOOL DISTRICT 7 REORGANIZED	Email:
Applicant: DLR GROUP	Email:
Engineer: OLSSON ASSOCIATES	Email:
Other: MCCOWN GORDON CONSTRUCTION LLC	Email: MDUNLAP@MCCOWNGORDON.COM

From: Hector Soto Jr., Planning Division Manager

Re:

Application Number:	PL2020259
Application Type:	Commercial Final Development Plan
Application Name:	Middle School #4 - Bailey Rd
Location:	1001 SE BAILEY RD, LEES SUMMIT, MO 64081

Electronic Plans for Resubmittal

All Planning application and development engineering plan resubmittals shall include an electronic copy of the documents as well as the required number of paper copies.

Electronic copies shall be provided in the following formats:

- Plats – All plats shall be provided in mulit-page Portable Document Format (PDF).
- Engineered Civil Plans – All engineered civil plans shall be provided in multipage Portable Document Format (PDF).
- Architectural and other plan drawings – Architectural and other plan drawings, such as site electrical and landscaping, shall be provided in multi-page Portable Document Format (PDF).
- Studies – Studies, such as stormwater and traffic, shall be provided in Portable Document Format (PDF).

Please contact Staff with any questions or concerns.

Excise Tax

On April 1, 1998, an excise tax on new development for road construction went into effect. This tax is levied based on the type of development and trips generated. If you require additional information about this development cost, as well as other permit costs and related fees, please contact the Development Services Department at (816) 969-1200.

Review Status:

Revisions Required: One or more departments have unresolved issues regarding this development application. See comments below to determine the required revisions and resubmit to the Development Services Department. Resubmit
one (1) digital copy following the electronic plan submittal guides as stated above. Revised plans will be reviewed within five (5) business days of the date received.

Required Corrections:

Planning Review	Hector Soto Jr. (816) 969-1238	Planning Division Manager Hector.Soto@cityofls.net	Corrections

1. PARKING AISLES. The north and south entrances to each row of parking spaces that is flanked by landscape islands shall have a minimum driveable pavement width of 24' (28' from back-of-curb to back-of-curb). Sheets C1005 and C1007 show a driveable pavement width between the landscape islands as 20'. The noses of the islands shall be pulled back to gain the additional 4' pavement width at the entrances.

2. ADA ACCESSIBLE ROUTES. Provide plan sheets that identify the accessible routes between the ADA parking spaces and the building entrances. The plan shall include the accessible route slopes and cross-slopes to review for ADA compliance.

Engineering Review	Gene Williams, P.E. (816) 969-1223	Senior Staff Engineer Gene.Williams@cityofls.net	Corrections

1. Notes are still being shown on the Utility Plan which call-out the connection to the 16 inch public water main on the west side of the project. It appears the water lines were removed, but the notes still are shown on the plan view. As discussed in the previous applicant letter, no additional water tap or cut-in tee is allowed on the 16 inch public water main other than as shown on the east side of the project.

2. Utility Plan: The public line should call-out a cut-in tee at the 16 inch line on the north side of Bailey Rd. At present, it does not appear the plans mention how this will be done, and to avoid any misconception that a tap might be allowed, please call-out a cut-in tee. Add sufficient notes to the plans which direct the contractor to specific City requirements concerning water line shutdown, public notification requirements, and working at night to ensure the shutdown does not have a negative impact on customers.

3. Utility Plan: A 16 inch butterfly valve may be required on the 16 inch public water line near the new cut-in tee, unless there is already a valve within 500 feet. If no valve is present within 500 feet, please show the location of the new butterfly valve.

4. Utility Plan: The plan must specify that boring be used to construct any of the utility crossings across Bailey Rd. For purposes of boring the water main across Bailey Rd., steel casing carrier pipe should be omitted from the design. This is no longer a requirement for water mains installed beneath City streets.

5. The locations of the new water meters should be shown on the east side of the new drive entrance, rather than a new segment running east/west as shown, and two (2) water meters at the end of this public extension. The length of the public water line extensions should be minimized, and therefore the water meters should be placed on the east side of the new drive entrance.

6. The plans call for the installation of 4 inch ductile iron pipe from the "tap". Taps of this size are not allowed. Please specify a cut-in tee. Finally, please consider 4 inch C900 rather than ductile iron. If using ductile iron pipe, it must be zinc coated.

7. There are numerous references to HDPE pipe throughout the plans for the fire line. The City does not allow this material for the fire line. It is recommended that C900 be used, although ductile iron may be considered if zinc-coated.

8. Is there enough space to construct the backflow vault in relation to the vertical bends shown on the profile view on Sheet C1028A?

9. Sheet C1028A: What is the "null structure" called-out as FP1DD? Why is it also shown on the plan view?

10. Utility Plan View Sheet: There is a line shown from near the gate valve denoted as FP1FF extended to the southeast, and labeled as "W-1a". Is this a mistake? Please correct, because it is very confusing. Is this the small storm line connected to the inlet for the backflow vault drainage? If so, then please make this clear in terms of notation.

11. Sheet C1027: Note W-1f is still not correct. The 10 foot minimum length is from the meter to the building, and refers to copper line. A minimum of 10 feet of copper line is required past the meter. However, it is our understanding that copper line of 3 inch size may not be available, and therefore other alternatives such as C900 or zinc coated ductile iron pipe may be used for this minimum length of pipe past the water meter.

12. Sheet C1027: Note W-1c specifies a 4x4x3 inch tee. This should be a 4x4x4 inch tee, with the appropriate reducer at the water meter. These are two (2) inch water meters, correct?

13. Please add notes specifying that all fittings be zinc coated ductile iron pipe for the fire line and the line feeding the fire line from the north across Bailey Rd.

14. Notes for All Profile Views: Where fill is being placed in proximity to sanitary sewer lines, water lines, and storm lines, please show in graphic format that backfill be placed to a plane that is a minimum of 18 inches above the top of the future utility line, properly compacted, and then trenched and the utility line installed after this has taken place.

15. Please refer to the previous applicant letter. Comment #12 was not addressed. The discharge from the southwest detention basin is going to lead to serious erosion issues due to the fact that no grading is provided at the end of the rip rap.

16. Sheet C1028: Note W-2b discusses a tap, which is not allowed for this size of line. In addition, 4 inch ductile iron pipe is called-out, and if used, must be zinc coated ductile iron pipe. Alternatively, 4 inch C900 may be used if available.

17. Sheet C1028: Notes specifying "WM1B" and "WM1C" are called-out on the south side of Cape Dr. What do these represent? Finally, BD-1 is shown, but does not point to any line or other known feature. BD-1 is supposed to be a drain line for the backflow vault, but does not appear to be pointing at anything.

18. Please see comment #21. Although the public fire hydrant on the south side of Cape Dr. will be part of the public infrastructure plans, it is shown on the FDP on the wrong side. It should be shown on the south side of Cape Dr. and should be shown as an in-line temporary fire hydrant, with all connections for the fire line crossing Cape Dr. to be made prior to the temporary fire hydrant assembly. In other words, the temporary fire hydrant should be placed at the very end of the line on the south side of Cape Dr., after the fire line connection.

19. Sanitary Sewer Plans: HDPE pipe is called-out. This is not allowed. This should be PVC pipe, not HDPE.

20. Sheet C1028C appears to be missing a portion of the line in the profile view.

21. Sheet C1028C: Was the intent to make the private sanitary sewer service 8 inch? 8"x4" tees are specified, so this would imply 8 inch pipe is being proposed.

22. Sheet C1028C: Tees are not allowed for sanitary sewer service connections. These should be wyes, not tees.

23. Storm Line Profile Views: There are many instances where the 100 year design storm is shown in a surcharge condition. The design storm event must be contained below the crown of the pipe. If using a different design event, it should be shown, and the overflow route established for the 100 year event. This overflow route must not be a hazard to any building, and the overflow route for the 100 year event must be a minimum of 2.0 feet below any building opening.

24. Rip rap was not sufficiently detailed as requested in the previous applicant letter. Dimensions of the rip rap, depth of the rip rap, geotextile, type of rip rap, and any other pertinent information must be provided.

25. The previous applicant letter discussed the note on Sheet C1050. The note in question concerns a geotechnical report not in possession by the City, nor would it be in the possession of the contractor or inspector on the project. The typical details shown on this sheet must reflect what is being proposed, without any "additional requirements". Finally, the typical section view for the light duty asphalt is still not sufficient to meet the City requirements in terms of asphaltic concrete base course. The City requires a minimum of 4 inches base course, and a 1.5 inch surface course of asphaltic concrete. If the applicant would like the City to consider this substitution for the light duty asphaltic concrete, then the report should be provided. This geotechnical report must adhere to the City design life standards and other design parameters.

26. The Final Stormwater Report dated August 2020 (hereinafter referred to as the stormwater report) contains language within the body of the report which still states this is a preliminary report. This iincludes the following sections: 1) Summary.

27. The stormater report discusses under "Study Purpose" that the 1 year event is being analyzed. Do you mean the 2 year event?

28. Section 3.2 of the report discusses Stream Protection and Buffer Zones. There is no discussion, however, of the waiver to the stream buffer requirement in certain areas.

29. In regard to the comment concerning the stream buffer waiver in certain areas, the City received this request on Oct. 9, 2020. Final approval of the Final Development Plan is contingent upon this waiver being granted. A review of this document is currently underway.

30. EDD-1, EDD-2, and EDD-3 pond setup tables were not provided in the appendix of the stormwater report. Only the summary results were shown.

31. An existing condition drainage map with their respective points of interest were not provided, although it was noted in the Appendix cover page under Appendix A. Without the existing condition drainage map along with their respective points of interest, how were allowable peak flow rates to the respective points of interest determined?

32. The stormwater report still discusses four (4) detention basins, although only three (3) are planned?

33. The "Conclusions and Recommendations" section of the stormwater report are vague in terms of specifying whether or not all aspects of Section 5600 of the Design and Construction Manual are being followed. No waivers are discussed for the stream buffer, nor are any waivers discussed for the peripheral areas near the property boundary which typically require waivers due to their proximity to existing developments, and the need to limit the number of detention basins. Again, without the inclusion of an existing condition drainage area map, allowable release rates to respective points of interest are impossible to determine.

34. The post-developed drainage area diagram should be noted appropriately (i.e., post-developed drainage area map or equivalent language).

35. Where are the emergency spillways for the three (3) detention basins, and why were they not discussed within the text of the report? Please see Section 5600 of the Design and Construction Manual for specific information related to the emergency spillway system(s). The emergency spillway must be sized to accommodate the 100 year event assuming 100% clogging of the primary outlet structure, and zero available storage in the basin, with 1.0 feet of freeboard between the clogged condition 100 year water surface elevation, and top of the dam. The emergency spillway must be a minimum of 0.5 feet above the nominal 100 year water surface elevation.

36. It appears the from the drawings that the outlet structures are being utilized for the emergency spillway system. As proposed, this is not allowed since there is only one point of entry into the system from the inlet pipe. Although the emergency spillway may be combined with the primary outlet works, it cannot be based on a single point of entry, where a clog may occur. It is for this reason that most detention basins employ a earthen emergency spillway.

37. Sheet C1057: There appears to be a discrepancy in the orifice plate dimensioning on structure EDD-2. 2 ft. 5" is called-out, yet it does not appear to extend to the top of the plate. Please reconcile.

38. Sheet C1057: Using the dimensions of the perforated riser orifices on structure EDD-2, it would appear this does not make sense when taking into consideration the 9 inch orifice at 996.50. Using the dimensions noted, this would place the uppermost 1 inch water quality orfices higher than the flowline of the 9 inch orifice?

39. Sheet C1058: The elevation of the 15 inch orifice at 994.50 does not appear to make sense. The floor is shown at 995.03. Please reconcile. In addition, dimensions of the plate do not make sense. It is shown only half way up the plate, not the entire length.

40. Sheet C1058: How many openings are being proposed for EDD-3 near the top? How will this be constructed? It appears the openings are covered in some sort of metal screen, with no instructions on what is to occur. Finally, how will manhole steps be constructed across these openings?

41. Based on the inconsistencies in the design of the outlet structures, and based on the lack of information contained within the stormwater report showing the pond setup tables showing the locations in terms of elevation, and sizing of the orifice and weir combinations, no further review is being performed on the outlet structures or detention basins at this time.

42. Just so there are no misunderstandings on the requirements of an adequate detention basin outlet structure, the primary outlet works must be able to manage the 100 year nominal condition flows without the reliance on an emergency spillway. The emergency spillway is only intended to function in the event of: 1) exceedance of the 100 year event, or 2) clogging and zero available storage within the detention basin. The emergency spillway must be a mminimum of 0.5 feet from the 100 year nominal condition hydraulic grade line. The depth of flow within the emergency spillway based on the calculated 100 year flow assuming 100% clogging of the primary outlet works and zero available storage must be a minimum of one (1) foot below the top of the dam. Finally, the 100 year water surface elevation for the clogged condition must be a minimum of 20 feet from the property line or any building.

43. In plan view (i.e., not profile view), the location of the 100 year water surface elevation for the clogged condition and the nominal condition discussed above must be shown in graphic format. It must be a minimum of 20 feet from any property line or any building. It is impossible to determine whether this requirement was met using a profile view.

44. No provisions appear to have been shown to prevent clogging of the primary outlet works for any of the detention basins.

Fire Review	Jim Eden (816) 969-1303	Assistant Chief Jim.Eden@cityofls.net	Approved with Conditions

2. IFC 503.1.1 - Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet (45 720 mm) of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility. Exception: The fire code official is authorized to increase the dimension of 150 feet (45 720 mm) where: 1. The building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3. 2. Fire apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades or other similar conditions, and an approved alternative means of fire protection is provided.

Action required: The gate to the athletic building shall be the full width of the fire lane. The dimension varies on different drawings.
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3. IFC 503.3 - Where required by the fire code official, approved signs or other approved notices or markings that include the words NO PARKING—FIRE LANE shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. The means by which fire lanes are designated shall be maintained in a clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility.

Action required: The fire lane to the atletic building shall be posted.

Traffic Review	Michael Park (816) 969-1820	City Traffic Engineer Michael.Park@cityofls.net	No Comments

Building Codes Review	Joe Frogge (816) 969-1241	Plans Examiner Joe.Frogge@cityofls.net	Approved with Conditions

1. 2018 IPC 708.1.3 Building drain and building sewer junction. The junction of the building drain and the building sewer shall be served by a cleanout that is located at the junction or within 10 feet of the developed length of piping upstream of the junction. For the requirements of this section, the removal of a water closet shall not be required to provide cleanout access.

Action required: Cleanouts required near locations where sewers leave buildings. May be field verified.
10/7/20 - acknowledged in letter. To be field verified.

3. A-series & E-series drawings not included in this review.
10/7/20 - acknowledged in letter