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To: The City of Las Vegas
Department of Public Works
333 N. Rancho Drive
Las Vegas, NV. 89106

Attention:
Albert Sung, P.E., Flood Control Project Manager

Subject:
Addendum to Drainage Study - CLV # DS05683
Church of God (Seventh Day) English to be Located at
3523 North Jones Blvd.
Las Vegas, NV 89109
APN 138-11-704-009

Response to Comments in Interoffice Memo Dated July 13, 2023

Please see responses below and documents per the Appendix Exhibits

Sincerely,

Response is as follows:Comment 1.

Provide a copy of the zoning/planning conditions associated with this site (**22-0226-SDR1 & 22-0226-VAR1**) with the next submittal to verify compliance with conditions. *Flood Control* will not issue conditional approval of the drainage study without the associated zoning/planning conditions (issued by the *City Council*). Any associated conditions of approval that revise the site drainage parameters will require that the drainage study be revised and resubmitted.

Response to Comment 1.

A copy of “22-0226-SDR1 & 22-0226-VAR1” is attached herewith.

Comment 2.

Sites with a grade difference of 2 feet above or below existing are required to have approval from the *City Planning and Development Department*. The engineer must submit copies of the grading plans and detail sheet with a letter justifying the grade difference to the *City Planning Department* (229-6301). The engineer must provide Planning approval with the next submittal.

Response to Comment 2.

The Drainage Plan has been reconfigured and is now a Grading Plan. All exterior Finish Grades have been lowered such that there are no Finish Grades more than 2 feet above Existing Grades at the same location. The Finish Floor of the proposed building was also lowered. A copy of the revised Grading Plan is attached herewith; however, we will not be seeking City Planning and Development approval to exceed the 2 feet limitation because with the revised plan, it is not necessary.

Comment 3.

The site is adjacent to the jurisdiction of Clark County to the north, south and west. The engineer must coordinate with *Clark County Public Works Department* (CCPW) and incorporate any concerns for boundary conditions along the boundaries. CCPW concurrence is required prior to final approval of the study.

Response to Comment 3.

It is understood that after Conditional Approval is received from the City of Las Vegas Department of Public Works, a copy of the complete Drainage Study, Addendums and current Grading Plan will be submitted to Clark County Public Works (CCPW) for review and concurrence. A copy of the concurrence will be provided when it is received.

Comment 4.

Off-Site Drainage Basin Map: The map indicates a high point in *Jones Boulevard* a small distance north of the subject site. However, the high point cannot be verified by simply showing some flow arrows! Provide a full size basin map (24"x36") with sufficient top of curb (TC) elevations in *Jones Boulevard* to verify the high point in the next submittal.

Response to Comment 4.

The Off-Site Drainage Basin Map has been incorporated into the (24"x36") Grading Plan. Specific top of curb and other spot elevations have been added to the Plan requested. The previous Drainage Basin Map needs to be corrected slightly. It is found that although there is a high point at the offset crown of the street, about 46 feet north of "The Site", the gutter flows on the west side of Jones Boulevard, along the frontage of "The Site" and 100 feet north of "The Site", flow south to a storm drain inlet on the west side of the street and 80 feet south of the southern boundary of "The Site". Whereas the storm drain inlet is the destination of these flows, said flows do not turn to flow eastward in Morro Bay Avenue as was previously indicated. However, these corrections do not impact the drainage patterns of "The Site".

The 2 feet contours on the aerial photography correctly indicate that the general direction of flow in the vicinity is from west to east, not from north to south. Although the gutter flow in Jones Boulevard does have a southward direction, the slope of the gutter 100 feet north of "The Site" is an almost nonexistent 0.13 %. Also, there is an existing storm drain in Gowan Road, which will catch street flows coming from the west. Inlets have been placed up stream but near the intersection in order to prevent there being any flows crossing the 100 ft x 100 ft right-of-way intersection. This indicates that flows coming from the west along Gowan Road will not be making a flow split to flow onto Jones Boulevard. Hence there is no upstream basin, which contributes flows to the gutter fronting "The Site". As such there can be no flow calculations to determine the depth of flow in front of "The Site" because the flow is zero. Therefore, as stated previously, the flow in the gutter adjacent to "The Site" is considered to be the volume of flow produced by "The Site" itself. The conclusions previously stated are still applicable.

Comment 5.

Off-Site Drainage Basin Map: For the same reasoning, the flow arrows shown in the offsite parcels cannot be verified. Provide more grade elevations or contour lines with elevations labeled to prove the drainage away from the subject site.

Response to Comment 5.

The Off-Site Drainage Basin Map has been incorporated into the (24"x36") Grading Plan. Specific top of curb and other spot elevations and contours have been added to the Plan as requested. It is easily seen by this new information that lots adjacent to the north boundary of "The Site" and adjacent to the south boundary of "The Site" drain eastward in a direction parallel to the north and south boundaries of "The Site". Therefore, neither of the lots to the north nor to the south currently have any flows, which need to be conveyed through "The Site". These lots will be able to continue their drainage patterns as-is, after "The Site" is developed.

The only other adjacent lots to "The Site" are APN 138-11-704-006 and APN 138-11-704-008 directly west of "The Site". These two lots are the only adjacent lots which might have any potential for producing flows, which could possibly have use for a drainage easement through "The Site".

As stated previously, APN 138-11-704-006 is completely separated from "The Site" with an existing impenetrable wall. Under current conditions, there are no flows which pass through this wall. APN 138-11-704-006 has not been fully developed but is vacant land. Being that APN 138-11-704-006 has the ability to drain westward to Bronco Street, when it is fully developed, there is no reason to require any flows be conveyed onto "The Site". If there is any on-site retention on APN 138-11-704-006, it is an existing condition and appears to be easily remedied if desired without affecting the development of "The Site".

APN 138-11-704-008 is also separated from "The Site" by an existing impenetrable block wall except for the southern 86 lineal feet, where there exists a wire fence between the properties. The new contours and spot elevations indicate that the rear portion of APN 138-11-704-008 has been built up to be 1.2 feet higher than existing grade, with a berm on the east side of the property line along these 86 feet length of wire fence. Whereas APN 138-11-704-008 has been developed with a residential house, it would appear that the intent was to build up the back yard so it could drain to the west to Bronco Street, which it fronts on. The new spot elevations along the 86 feet length, with values of 2274.1 and 2274.2 are higher than the 2274 feet contour within that lot, indicating that that lot drains to the west toward Bronco Street. Therefore, if "The Site" constructs a new impenetrable wall along this 86 feet length to replace the wire fence, the drainage conditions of APN 138-11-704-008 will not change., the construction of the wall and the development

of “The Site” will not have any impact upon any neighboring lots. In conclusion there exists no reason for any drainage easement to carry any drainage across “The Site”.

Comment 6.

The study referenced the site location with the *Clark County Regional Flood Control District (CCRFCD) Master Plan Figure F-26* of 2013. The latest version of the master plan published by the CCRFCD however, is in the year of **2018**. Provide the latest and current reference map in the next submittal.

Response to Comment 6.

The Clark County Regional Flood Control District (CCRFCD) Master Plan Update Figure F-24a and F-24b of 2018 is attached herewith as requested.

Comment 7.

The proposed finished floor elevation appears to be unnecessarily high. It seems problematic for the accessibility from the handicap parking to the building. Review and address accordingly.

Response to Comment 7.

With the revised configuration of the Grading Plan, the Finish Floor of the proposed Building has been lowered and the handicap parking has been adjusted accordingly.

Comment 8.

The profile from the driveway entrance at *Jones* to the building shows the drive aisle is at a 10% cross slope. Review and revise in the next submittal.

Response to Comment 8.

With the revised grades and the lowering of the finish floor of the building, the drive aisle cross slope was able to be reduced to be a more comfortable 1.2% cross slope.

Comment 9.

There are no construction reference at all on the grading plan. Provide construction notes in the next submittal.

Response to Comment 9.

Construction notes have been added to the Plan as requested.

Comment 10.

Provide a *Detail Section Sheet* which shall include cross sections across all sides of the site showing the onsite and the adjacent lot features.

Response to Comment 10.

Section Details of all parts around the perimeter have been added to the plan showing onsite and adjacent lot features as requested.

Comment 11.

Show an existing storm drain in Jones Boulevard on the grading plan. Show the size of the pipe and any drop inlets and storm drain manholes accordingly. Label the storm drain with *City of Las Vegas* recorded construction drawing number.

Response to Comment 11.

The existing storm drain has been added to the Plan with applicable drop inlets and manholes. The storm drain has been labeled with the applicable City drawing number as requested.

Comment 12.

The overall parking lot improvement area is larger than 1 acre. Per **Section 1500** of the *Clark County Regional Flood Control District's Hydrologic Criteria and Drainage Design Manual*, the subject improvements must provide for Low Impact Development (LID) measures. Review and address the issue in the next submittal.

Response to Comment 12.

Section 1500 of the Clark County Regional Flood Control District's Hydrologic Criteria and Drainage Design Manual was reviewed and applicable calculations were made. The On-site was divided up into Best Management Practices (BMP) drainage areas and the flows were determined for each. The flows from these areas are directed to Low Impact Development (LID) Landscape Swale before onsite flows are permitted to enter the street right-of-way. 75% of the onsite flows are managed in this manner to comply with Manual requirements.

Comment 13.

Provide a *General Notes Sheet* that shall include a column of "Stormwater Management Notes" in the next submittal.

Response to Comment 13.

Stormwater Management Notes have been added to the Plan as requested.

Appendix Exhibits:

Master Plan F-24 Inventory (2018).....11x17 Sheet Attached

Master Plan F-24 Facilities (2018).....11x17 Sheet Attached

Grading Plan 24x36 Sheet Attached