

**PROJECT NEON PLANS  
P3 DESIGN  
MASTER COMMENT FORM**

**DISCIPLINE: Flood Control Comments**

**REVIEWER: Oh-Sang Kwon (CLV)**

**PROJECT LEVEL: 30%**

**COMMENTS RECEIVED ON: December 18, 2013**

<i>NO.</i>	<i>VOL. NO.</i>	<i>SHEET/PAGE NO.</i>	<i>REVIEW COMMENTS</i>	<i>*TYPE</i>	<i>INITIALS</i>	<i>DESIGNER RESPONSE</i>
1			There have been significant changes to the Project Neon P3 Design Plans since the earlier Phase 1 submittals. As requested in our April 27, 2011 letter, the City identified many drainage related items that necessitate the submittal of an updated Drainage Design Report. With the complex nature of this project, complete review of the project plans cannot be accomplished without the supporting Drainage Design Report.		JG Drainage (CH2)	The Preliminary Drainage Design Report for Project NEON for the P3 Improvements addresses the 30% Design of Project NEON P3 Phase and reflects the updates and changes that have been made to the project since the Phase 1 design.
2			The major drainage facility project limits have been extended to include drainage improvements that are not currently addressed in a drainage report. The drainage system impacts to Charleston Boulevard west of 1-15 must be identified, including the UNLV Campus facility at Desert Lane. The drainage system impacts to Sahara A venue west of 1-15 must be identified. The drainage system impacts to Pinto Lane west of 1-15 must be identified. The drainage system impacts to Alta/Bonneville west of 1-15 must be identified.		JG Drainage (CH2)	The Preliminary Drainage Design Report for Project NEON for the P3 Improvements addresses the 30% Design of Project NEON P3 Phase and reflects the updates and changes that have been made to the project since the Phase 1 design.

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3			<p>The Updated Drainage Design Report needs to clearly identify the Project NEON impacts and timing of necessary Clark County Regional Flood Control District (CCRFCFD) facilities. The previous assumption that the Sahara Avenue CCRFCFD system is in-place is no longer valid following the 40% reduction of the 2010 CCRFCFD 10-year CIP. As a result, the Sahara Avenue system can only be constructed to Eastern Avenue in the next 10 years. An agreement with NDOT may be necessary to advance this project or to provide construction of a detention basin at the southwest corner of Oakey Boulevard and 1-15. The City would then reimburse NDOT for the construction of such a facility when CCRFCFD funds become available in the future.</p>		<b>JG Drainage (CH2)</b>	<p>The Preliminary Drainage Design Report for Project NEON for the P3 Improvements addresses the 30% Design of Project NEON P3 Phase and reflects the updates and changes that have been made to the project since the Phase 1 design. P3 Developer will be preparing a final design, constructing and maintaining portions of the project. Existing flow conditions maintained with current design. The design and construction of a detention basin would need to be coordinated further between NDOT and CLV.</p>
4			<p>Based upon the P3 Design Plans and the previous Project NEON - 30% Plans, the Drainage Design Report needs to be updated to incorporate the proposed roadway modifications and to address the adjacent off-site drainage flow impacts of the proposed roadway modifications adjacent to 1-15. The Updated Drainage Design Report needs to discuss the drainage impacts of Sahara Avenue, Oakey Boulevard, Charleston Boulevard, Neon Gateway (the direct connect roadway to the Managed Lane Ramps), Martin Luther King, Pinto Lane, the Alta / Bonneville Intersection area, and the Western Avenue / Grand Central Parkway connection for the 100-year events during both the existing interim and fully developed conditions.</p>		<b>JG Drainage (CH2)</b>	<p>The Preliminary Drainage Design Report for Project NEON for the P3 Improvements addresses the 30% Design of Project NEON P3 Phase and reflects the updates and changes that have been made to the project since the Phase 1 design.</p>

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5			The P3 Design Improvement Plans need to review and address the previous City of Las Vegas review comments to the Project NEON - 30% Report for Phase I Drainage Design, dated March 2, 2011, and the Project NEON - 30% Plans, dated April 27, 2011 with the next design submittal.		<b>JG Drainage (CH2)</b>	Previous CLV comments have been incorporated into the current design. The Review/Comment Matrices are included in the Preliminary Drainage Design Report for Project NEON for the P3 Improvements in Appendix D-2.
6			Complete facility hydraulic calculations need to be provided as a part of the Updated Drainage Design Report to verify system capacities. Provide the Q100 and HGL information on all (DP Sheets) of the storm drain profiles. Provide lateral system profiles and show the utility crossings of the storm drains. Identify those facilities requiring relocation to accommodate the storm drain construction.		<b>JG Drainage (CH2)</b>	The Preliminary Drainage Design Report for Project NEON for the P3 Improvements addresses the 30% Design of Project NEON P3 Phase and reflects the updates and changes that have been made to the project since the Phase 1 design. Updated flow information and HGLs have been provided on DP sheets. Utility relocations have been identified on the Utility Sheets.
7			The adjacent roadway drainage plans (Sheets D25 through D35) need to have the proposed storm drain facilities identified and discussed as a part of the Updated Drainage Design Report to verify system capacities. Verify the sag point location from the Roadway Profile Sheets (Sheets 69 through 108) and compare the inlet locations with the D Sheets. The affected roadways with sag points include: 1) Martin Luther King; 2) Neon Gateway; 3) Pinto Lane; 4) Western Avenue; and various Freeway Ramps. Size the proposed inlets to convey the 100-year flow and convey the 100-year flows from the roadway sag points into the existing CCRFCD facilities.		<b>JG Drainage (CH2)</b>	The Preliminary Drainage Design Report for Project NEON for the P3 Improvements addresses the 30% Design of Project NEON P3 Phase and reflects the updates and changes that have been made to the project since the Phase 1 design. Local Road facilities are discussed in the report and updated calculations have been included in Appendix B-3.

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8			The interim flows along the Western Avenue corridor will impact the Managed Lane Ramp access at the sag point of Neon Gateway. Provide an updated HEC-RAS analysis that identifies the depth of flow impacting the Neon Gateway & Western avenue access. Provide an expanded drainage design to address how the 100-year flow will be conveyed, and discuss how the 1-15 Managed Lane Ramps will function with these higher flows until such a time as the upstream CCRFCD MPU facilities are constructed. Identify the needed upstream MPU facilities necessary to protect the Managed Lane Ramps and include this updated information with the next submittal of the Drainage Design Report.		<b>JG Drainage (CH2)</b>	The updated Western Avenue Corridor Analysis has been included with the Preliminary Drainage Design Report for Project NEON for the P3 Improvements in Appendix B-4.
9		Sheet: DP2 & DP3	The HGL of the main line RCB system is shown above the finish grade. It is recommended that the facility size be increased to keep the HGL below grade. Provide an expanded discussion of the HGL impacts in the Updated Drainage Design Report and discuss the necessary mitigation.		<b>JG Drainage (CH2)</b>	A discussion of the HGL of the mainline RCB has been included with the Preliminary Drainage Design Report for Project NEON for the P3 Improvements and WSPG calculations are included in Appendix B-2.
10		Sheet: D12 & D13	The proposed channel along the west side of I-15, north of Alta / Bonneville, needs to be sized to convey additional 100-year surface flows reaching this location from the existing low point within Martin Luther King Boulevard. Provide an update to the Phase I Drainage Design Report that addresses the revised 100-year flow impacts to this proposed channel facility.		<b>JG Drainage (CH2)</b>	The proposed channel along the west side of I-15, north of Alta / Bonneville has been sized to convey the 100-year flows from the upstream subbasin on the west side of Martin Luther King Boulevard. Ditch calculations have been included in Appendix B-3.3.
11		DP Sheets	Provide the Q, HGL and Design flow rate for the proposed storm drain systems. Provide additional profile sheets to include the entire storm drain system including all laterals. Show the utilities on the storm drain profiles. Reference the corresponding D Sheet numbers.		<b>JG Drainage (CH2)</b>	The Q, HGL and design flow rates have been shown on the plan sheets. For this 30% level of design per NDOT criteria, minor storm drain systems have not been profiled, but will be included in the next level of design.

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<b>12</b>		D & DD Sheets	The plans reference details that were not yet provided. Provide the referenced details and include the complete the Detail Sheets with the next submittal.		<b>JG</b> <b>Drainage</b> <b>(CH2)</b>	<b>DD sheets are detail sheets that have been included in the 30% plan set.</b>

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