


CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		March 21, 2023 
TO: Land Development Services Department of Building & Safety		FROM: Peter Jackson, CFM Flood Control, Sr. Engr. Associate Department of Public Works
SUBJECT: Drainage Study for: Kyle Canyon Gateway East		COPIES TO: Westwood Professional Services
Cross Streets:	Oso Blanca Rd. & Kyle Canyon Rd.	KB Homes
File Number:	F:\Depot\DSMemos\DS05479F.doc	Bart Anderson, P.E., DevCo
Parcel Number:	126-01-701-006, 126-01-601-014, 126-01-601-007	CCRFCD NDOT CCPW
Zoning Action:	21-0163-SDR1; 21-0163-TMP1	
FEMA Flood Zone	YES NO X	
Proposed Storm Drain	YES X NO	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	7/26/2021 (Paid 8/23/21)	8/19/2021	See Comments Below	\$400.00	4421978: \$400
2 nd Submittal	9/13/2021	10/14/2021		\$400.00	4448783: \$400
3 rd Submittal	10/25/2021	11/10/2021 & 11/15/2021	Conditionally Approved	N/C	N/A
4 th Submittal Update #1	3/2/2022	3/31/2022 & Rev 4/6/2022	See Comments Below	\$100.00	4674759: \$100
5 th Submittal	6/2/2022	7/28/2022	N/A - Added Info needed	\$400.00	4816948: \$400
6 th Submittal	11/3/2022 & 11/10/2022	12/8/2022 &	Supplemental Required	\$400.00	5033084: \$400
7 th Submittal	3/1/2023	3/21/2023	Conditionally Approved	N/C	N/A
TOTAL FEES (LDDRS):				\$800.00	----

REMARKS: 7th Submittal – Addendum #3 to Update, Supplemental Information Provided to address overall flow rate impacts along Oso Blanca and US-95.

6th Submittal DRAFT COMMENTS to Update overall flow rates impacting the site and to address flow impacts along Oso Blanca and US-95.

The Kyle Canyon Gateway East Drainage Study includes separate Improvement Plan submittals for the On-Site Subdivision (L21-02433) and the Off-Site Frontage Road (Oso Blanca) Improvement Plans (L21-02436).

The Drainage Study for the subject project has been reviewed and:

	is approved subject to conformance to all City standards and the following conditions:
	must be resubmitted or supplemented including the following:
	is conditionally approved subject to Clark County Regional Flood Control District concurrence.
X	is conditionally approved subject to Nevada Department of Transportation – Hydraulics concurrence.

The City of Las Vegas Flood Control Staff concurs with the Overall Drainage concepts and flow splits presented based upon Scenario #3. Additionally, the Drainage Study Comments relate to both the Frontage Road (Oso Blanca) Improvement Plans and to the Kyle Canyon Gateway East On-Site Improvement Plans.

1. Based upon the revised plans and improvements within the Oso Blanca (Frontage Road) an updated NDOT Hydraulic Division Concurrence is required. NDOT noted that the permit process review may generate additional plan comments.
2. The City of Las Vegas will maintain the Public Storm Drain facilities within Oso Blanca and NDOT will maintain the open channel improvements within NDOT R/W. The Plans must clearly show who is responsible for the maintenance.
3. The project proposes to construct facilities and/or increase flows within *Nevada Department of Transportation* (NDOT) right-of-way. The engineer must contact NDOT for encroachment permit for the proposed project. NDOT Permit is required for all work within NDOT Right-of-Way.
4. *Clark County Regional Flood Control District (CCRFCD)* has issued a letter of concurrence dated January 5, 2022. Any changes to the design that requires CCRFCD approval will require that a new concurrence be provided.
5. The site is also adjacent to Clark County jurisdiction. CCPW concurrence has been provided with Conditions. The engineer must continue to coordinate with Clark County Public Works Department (CCPW) and incorporate any comments and concerns and provide the CCPW Permit prior to final approval of the Improvement Plans.
6. Review the roadway ditch that conveys the overtopping flow from CP2 (115 cfs) to the twin 42-inch culverts. Provide a revised flow cross section at the maintenance access to show that the flow is conveyed to the twin culverts.

Frontage Road (Oso Blanca) Improvements:

7. Revise the concrete drop/chute structure shown on PP-15 to include a minimum of 7-inches of reinforced concrete with concrete cross section extended to contain the flow with freeboard. Provide concrete access ramp for maintenance to the existing RCB. Extend the maintenance access along the top of rip-rap channel to the top of the slope drop. Provide cross sections and details.
8. Review the roadway ditch that conveys the overtopping flow from CP2 (115 cfs) to the twin 42-inch culverts. The provided grading does not clearly show how the flow gets to the culverts.
9. With the Storm Drain system design change, Revise all of the Storm Drain Manholes within Oso Blanca to Standard Drawing # 405.2 with 30-inch frame & covers. The following SDMH #'s shall be 60-inch with 30-inch frame & covers; SDMH #1, SDMH #3, SDMH #4, SDMH OB1, SDMH OB2, SDMH OB4, SDMH OB5, and SDMH OB6. Revise the SD Notes accordingly.
10. The concept shown for the Junction and Transition Structures meets the intent necessary for construction. Junction Structure #2 is labeled as SDMH #6 and needs to be changed to reflect the required Junction Structure. Provide the complete Structural Details for the Junction Structures (#1, #2 and #2B) and the Transition Structure. Provide 30-inch frame & cover at manhole access. Update the Plan call-outs accordingly.
11. Per previous plan comments, provide an access ramp to the storm drain outfall structures. Ramp slopes are limited to 10% maximum. Include a minimum 10-foot concrete apron at the outlet for maintenance. Maintenance access to the three outlet structures needs to connect the concrete apron to the access ramp. Concrete apron to be a minimum of 6-inches of reinforced concrete. Access using the rip-rap sections is not approved and requires the extension of concrete pavement. Provide concrete sections and details including cut-off walls. Update Storm Drain Outlet

- #1 and #2 on PP-9. Update Storm Drain Outlet #3 on PP-6. Update all other affected plan and detail sheets accordingly.
12. Update the Outlet Structure Profiles to include the footing elevation. Revise Detail Sheet D-3 that shows the typical NDOT Headwalls. Sheet D-3 needs a Note added that *the "Y dimension shown shall be revised to match the footing elevations shown on the profiles"*.
 13. The roadway plans have two sets of Stationing for the Frontage Road. The Storm Drain shows different Stationing on the Plan view and the Profile view. Provide a Note on each Sheet to cover the different Stationing with a Station Equation or revise to a single Stationing system.
 14. PP-6: Revise the NDOT Control of Access fencing location to jog around the Headwall Structure instead of crossing through the channel section (This has been reviewed with NDOT).
 15. The Frontage Road plans now reflect the grading from the Kyle Canyon Gateway East Improvement Plans (L21-02433).
 16. The Improvement Plan storm drain profiles label the facilities to be maintained by the City of Las Vegas and what is the maintenance responsibility of NDOT.
 17. Update Quantities to reflect the improvement plan changes.

Kyle Canyon Gateway East Improvements:

18. Revise all of the Storm Drain Manholes within the Kyle Canyon Gateway Plans (L21-02436) to Standard Drawing # 405.2 with 30-inch frame & covers. The following SDMH #'s shall be 60-inch with 30-inch frame & covers; SDMH #7, SDMH #8, SDMH #11, and SDMH #19. Revise the SD Notes accordingly.
19. The temporary drainage facilities at McKinster Road and the drainage sump at Rocky Avenue shall be included in the required Maintenance and Liability Agreement. The project proposes to build a temporary drainage facilities along the western boundary of the site, and sump within Rocky Avenue. Prior to final plan approval the developer must complete a maintenance and liability agreement for the interim drainage improvements (off-site berms or channels) and post a minimum maintenance bond of \$50,000 or 50-percent of the construction cost for the improvements, whichever is greater. The engineer must submit an estimate of the quantities for constructing the facility and an exhibit that adequately shows the location and limits of the drainage facility to City of Las Vegas Flood Control for approval. Once the drainage study is conditionally approved, the engineer should contact the Department of Community Development – Building and Safety Division to begin the agreement process.

In order for the maintenance bond to be released in the future, a Drainage Study Update / letter will be required to justify that the offsite berms, channels, and temporary drainage facilities are no longer necessary and can be removed.

20. SDMH # 9 and SDMH # 10 are Junction Structures. Revise the Plan labels to reflect a Junction Structure, not a manhole.
21. The Drainage Cross Sections on the Detail Sheets shall show the 6-inch minimum concrete thickness. Review and revise all sections accordingly.
22. The Structural Details need to call out the size of the Typical Reinforcement. Minimum slab thickness is 6-inches. Revise Detail Sheets and Plan Sheets accordingly.
23. Revise the Structural Details on Sheets S-2 to show the minimum cross slope. The 13-foot wide Channel on Section A/S-2 needs a 2% minimum cross slope toward the Flowline.
24. Sheet S-4: Revise the Manhole Type call out to Standard Drawing # 405.2 with 30-inch frame & cover.

25. Add a Note to the Detail Sheets "*The Wrought Iron Fencing shall meet the minimum requirements of Std. Dwg. 425.S1.*"
26. Update Quantities to reflect the improvement plan changes. Include the 2 – Junction Structures and the McKinster Drainage Structure as separate line items.

REMAINING COMMENTS:

27. The grading plan indicates offsite grading. Secure a notarized letter of permission from the property owner allowing the grading and construction. This letter is required prior to final acceptance of the drainage study.
28. In lieu of providing a public drainage easement for the interim channel, provide language in the permission to grade letter that "The Developer (KB Home) will maintain the interim channel until development of Kyle Canyon Gateway Unit 1 by Tri Pointe Homes".
29. Provide Updated Structural Plans to the Department of Community Development – Building and Safety Division. Structural plans for the special storm drain structures (e.g. junction structures, headwall/culvert) must be submitted for review. The engineer must provide a copy of Department of Community Development – Building and Safety Division approval of the structures to Flood Control prior to final acceptance of the drainage study.

NOTE: Please be advised that all land surface area disturbances over 1 acre or any area adjacent to a water way must submit to the *Nevada Division of Environmental Protection* a "Notice of Intent" to discharge that certifies a stormwater pollution prevention plan has been developed and is maintained on site; for inclusion in the Stormwater General Permit No. NVR100000. A phased construction unit in a contiguous subdivision is considered under construction until all stripped or disturbed surface areas have been covered by paving, building construction or planting. For more information, including forms and applications see <http://ndep.nv.gov/bwpc/storm01.htm> or call (775) 687-9429.

END OF REMARKS
HDR/JKS/PBJ

T/R/S: T19S/R59E/S1
AREA F-01