DS #: 5041

APN: 126.12.414

PROJECT: Sky Canyon Parcel 2.20

SUBMITTAL: 2nd

SCANNED BY/DATE:

CHECKED BY/DATE:

CITY OF LAS VEGAS NEVADA

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM				DATE: November 7, 2018
TO: **Land Development Services** Department of Building & Safety				FROM: Jennifer Shinn, P.E. Flood Control Engr. Associate Department of Public Works
SUBJECT:	Drainage Study for: **Skye Canyon Parcel 2.20**			**COPIES TO:** Slater Hanifan Group
Cross Streets:	NWC of Shaumber and Grand Teton			KAG Development/Ninety-Five Management
File Number:	F:\Depot\DSMemos\DS5041B.doc			Bart Anderson, P.E., DevCo
Parcel Number:	126-12-414-001			CCRFCD
Zoning Action:	TMP-73852			
FEMA Flood Zone	YES	NO **X**		
Proposed Storm Drain	YES **X**	NO		

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1st Submittal	9/27/2018	10/16/2018	See Comments Below	$400.00	499484: $400
2nd Submittal	10/25/2018	11/7/2018		$400.00	500490: $400
			TOTAL FEES (LDDRS):	**$800.00**	----

REMARKS:

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:
X	is conditionally approved subject to Clark County Regional Flood Control District concurrence.
	is conditionally approved subject to Clark County Public Works Department concurrence.

1. **This drainage study is acceptable in concept**; however, *City of Las Vegas* will not formally accept the study until the *Clark County Regional Flood Control District* (CCRFCD) has issued a letter of concurrence. The engineer should contact the CCRFCD to confirm that they have begun their review.

   When it is applicable, structural calculations of facilities must be approved by the City prior to submittal to the *Clark County Regional Flood Control District* for their review and concurrence.

2. All roadway and flood control facilities as proposed and approved in Skye Canyon Phase 2 Infrastructures must be substantially constructed prior to the issuance of occupancy permits.

3. The grading plan indicates offsite grading. Secure a notarized letter of permission from the property owner allowing the grading on APN 126-12-414-002. This letter is required prior to final acceptance of the drainage study.

4. The depth of SDDI #5 exceeds the maximum depth of 10 feet. Provide structural calculations for the depth drop inlet.

5. Revise the call out for SDDI #5 in plan view on Sheet SD-2 to match the call out shown in profile view.

6. Revise Construction Note 15 on Sheets SD-1 and SD-2 to reference the 4' x 4' drop inlet.

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
jks

T/R/S: T19S/R59E/12
AREA F-12

TECHNICAL DRAINAGE STUDY
ADDENDUM
Skye Canyon Parcel 2.20
City of Las Vegas, Nevada

Job No.: OLY1722.000
Date: October 2018

Prepared By:
Slater Hanifan Group, Inc.
5740 S. Arville Street, Suite 216
Las Vegas, Nevada 89118
Phone: 702-284-5300 ▪ Fax: 702-284-5399

Prepared For:
Ninety-Five Management, LLC
11411 Southern Highlands Parkway, Suite 300
Las Vegas, NV 89141
Phone: 702-220-6565 ▪ Fax: 702-220-6566



10/25/18

Stanley Okey Amadi, P.E.
NV Professional Engineer No. 21724

Assisted by: Cameron Bencini, P.E.

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE STUDY INFORMATION FORM

Name of Development: Skye Canyon II Parcel 2.20 - ADDENDUM Date: October 2018

Location of Development:
a) Descriptive (Cross Streets): North/South: Shaumber Road
East/West: Grand Teton Drive
b) Section: 12 Township: 19 South Range: 59 East
c) APN: 126-12-414-001

Name of Owner/Developer: KAG Development West / LLC, Ninety-Five Management
Telephone No.: 702-220-6565 Fax No.: 702-220-6566 E-mail Address: mbolduc@olympiacompanies.com
Address: 11411 Southern Highlands Parkway, Suite 300; Las Vegas, NV 89141

Contact Person – Name: Stanley Okey Amadi, P.E. Telephone No.: 702-284-5300
*E-mail Address: samadi@shg-inc.com Fax No.: 702-284-5399
Firm: Slater Hanifan Group
Address: 5740 S. Arville Street, Suite 216; Las Vegas, NV 89118

Type of Land Development/Land Disturbance Process:

☐	Rezoning	☐	Subdivision Map	☐	Clearing and grading Only
☐	Parcel Map	☒	Planned Unit Development	☐	Other (Please specify below)
☐	Large Parcel Map	☐	Building Permit	☐	Roadway & Storm Drain Infrastructure

1. Total Owned Land Area: At Site: 28.29 Acres Being Developed/Disturbed: 28.29 Acres +/-

2. Is a portion or all of the subject property located in a FEMA Flood Hazard Area? ☐ Yes** ☒ No

3. Is the property bordered or crossed by an existing or proposed Clark County Regional Flood Control District Master Planned Facility? ☒ Yes** ☐ No

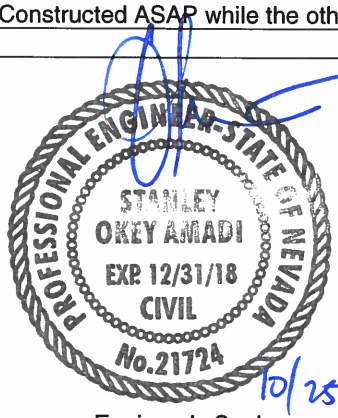
4. Proposed type of development (Residential, Commercial, Etc.): Single-Family Residential

5. Approximate upstream land area which drains to the subject site: 0 acre +/-

6. Has the site drainage been evaluated in the past? ☒ Yes** ☐ No If yes, please identify documentation:
Master Drainage Study for Skye Canyon (SHG, DS4420) & TDS for Skye Canyon Phase 2 Infrastructure (SHG, DS4739) *& Updates 1 thru 4*

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: Onsite runoff drains into onsite storm drain. Two systems discharge into the mainline system within Shaumber Road. One system drains into the CCRFCD Facility in Grand Teton Drive.

8. Briefly describe your proposed schedule for the subject project: The project will be constructed in two phases. Phase 1 will be Constructed ASAP while the other is TBD.



10/25/13

Engineer's Seal

Submit this form as part of the required drainage study to the local entity which has jurisdiction over The subject property. This form may provide sufficient information to serve as the Conceptual Drainage Study.

*Newly Required Field

**Review and concurrence of the Clark County Regional Flood Control District is required

Revision	Date

Local Entity File No.

REFERENCE: ***SHG Job No. OLY1722.000***

STANDARD FORM 1

Updated 05/01/2008

OLY1722.000

October 25, 2018

Jennifer Shinn, P.E.
Flood Control Associate Engineer
City of Las Vegas Department of Public Works
333 N. Rancho Drive
Las Vegas, Nevada 89106

Subject: Addendum to the Technical Drainage Study for Skye Canyon Parcel 2.20 (CLV DS5041)

Dear Ms. Shinn:
This letter is submitted in response to comments contained in the October 16, 2018 review memorandum, regarding the above referenced project. A copy of the City of Las Vegas (CLV) Department of Public Works comment letter has been provided in Appendix A.

The comments have been individually addressed as follows:

1. **Comment:** *The site is adjacent to or crosses an existing or proposed Clark County Regional Flood Control District (CCRFCD) master planned facility. Therefore, CCRFC concurrence is required prior to final approval of the drainage study.*

   When it is applicable, structural calculations of facilities must be approved by the City prior to submittal to the Clark County Regional Flood Control District for their review and concurrence.

   Response: Noted.

2. **Comment:** *Sites with a grade difference of 2 feet above or below existing grades are required to have approval from the City of Las Vegas 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 City Planning approval with the next submittal.*

   Response: The plans have been approved by the City of Las Vegas Planning Department regarding the 2-foot grade difference between the proposed and existing grades. The approval letter is provided in Appendix E.

3. **Comment:** *All roadway and flood control facilities as proposed and approved in Skye Canyon Phase 2 Infrastructures must be substantially constructed prior to the issuance of occupancy permits.*

   Response: Noted.

4. **Comment**: *The subject Skye Canyon Parcel 2.20 Drainage Study will not be approved prior to the final approval of the Skye Canyon Phases 3B & 3C Infrastructure Technical Drainage Study.*

Response: Per our 10/23/2018 phone conversation with Ms. Jennifer Shin of CLV, a conditional letter of approval for Skye Canyon Phases 3B & 3C drainage study will satisfy this requirement. See Appendix B for a copy of the approval letter.

5. **Comment:** *The grading plan indicates offsite grading. Secure a notarized letter of permission from the property owner allowing the grading on APN 126-12-414-002. This letter is required prior to final acceptance of the drainage study.*

   Response: Noted. A permission to grade letter will be obtained prior to the improvement plans approval.

6. **Comment:** *The depth of SDDI #5 exceeds the maximum depth of 10 feet. Provide structural calculations for the depth drop inlet.*

   Response: Acknowledged. A separate structural submittal (calculations & details) will be provided with the improvement plans.

7. **Comment:** *Provide "Public Drainage Easement to be Privately Maintained" for the private storm drains through common lots and show the easements on the grading plan. Public drainage easements must be recorded by separate document prior to the final acceptance of the improvement plans unless they are to be recorded by parcel or final map.*

   Response: A Drainage Easement Note was provided on the grading plans stating, "All private streets, drainage easements and common lots are public drainage easements to be privately maintained by the HOA".

8. **Comment:** *It appears lots 113-163 are missing in the Finish Floor Check Table. In addition, revise the table to match the finish floor elevations shown on the plans for lots 70-112.*

   Response: The Finished Floor Check Table has been revised to include lots 113 thru 163. All the Finished Floor Elevations have been checked to ensure that the summary tables match the improvement plans. The revised finished floor computations are provided within Appendix B.

9. **Comment:** *SDDI #6 is called out as a 4'x2' NDOT Type II inlet but the inlet calculations provided uses an inlet size of 4'x4'. Revise the plans and/or provide revised calculations.*

   Response: The plans have been revised to show a 4'x4' NDOT Type II inlet. See the revised improvement plans provided in Appendix E for more detail.

10. **Comment:** *Revise the call out for SDDI #5 in profile view on Sheet SD-2 to match the drop inlet call out shown in plan view.*

    Response: The call out for SDDI #5 on the profile view has been revised to match the plan view. See the revised improvement plans provided in Appendix C for more detail.

11. **Comment:** *Label the pipe sizes in the profiles on Sheets SD-1 and SD-2.*

    Response: All pipe sizes are now labeled on all sheets. See revised improvement plans provided in Appendix E for more detail.

12. **Comment:** *The Regional Flood Control District Manual requires 1% minimum slope around the bulb of a cul-de-sac where storm water is drained through per Section 1602. Provide the required slope in Crestview Pointe Avenue cul-de-sac. In addition, show slopes at all cul-de-sacs.*

    Response: All the cul-de-sac designs comprise of vertical curves with slopes greater than the 1% minimum. Note that the slopes around the vertical curves are varying. Consequently, the slopes have not been shown along the cul-de-sacs.

13. **Comment:** *Provide a note on the grading plans: "Curb flow lines less than 0.60% grade shall be water tested. Any curb that does not flow shall be removed and replaced at no cost to the City.*

    Response: There are no curb lines with less than 1.0% grade; however, the note has been provided on the improvement plans.

14. **Comment:** *Label the existing storm drain in Grand Teton Drive with the CLV drawing number and revise the CLV drawing number for the existing storm drain in Shaumber Road to reference 107V6750.*

    Response: The CLV drawing number for the Grand Teton Storm Drain has been added to the improvement plans. See revised improvement plans provided in Appendix E for more detail.

15. **Comment:** *Provide a note on the grading plans "Note: All private streets are P.U.E., Public Sewer Easements, and Public Drainage Easements to be privately maintained by HOA."*

    Response: Acknowledged. See response to Comment 7.

16. **Comment:** *Provide details of the wrought iron fence and utility maintenance gate at drainage easements.*

    Response: A wrought iron fence detail has been added to the plan set. See revised improvement plans provided in Appendix E for more detail.

Additional Material

Due to conflicts with sanitary sewer, the storm drain system located at the sites entryway was lowered. Consequently, the WSPGW model "SHA-L" and it's lateral, were reanalyzed. The revised model shows that the proposed layout meets minimal manual criteria. See Appendix D for the revised WSPGW model and lateral loss spreadsheet.

We believe that the above responses and revisions provided on the plans have adequately satisfied your concerns in the review memorandum. The revised improvement plans adopting the revisions addressed in this letter have been included in Appendix E. If you have any questions or require additional information, please do not hesitate to contact us at 702-284-5300.

Respectfully Submitted,

SLATER HANIFAN GROUP

Cameron Bencini, P.E.
Flood Control Division

cc: Stanley Okey Amadi, P.E. – SHG
Mark Failla, P.E., CFM – SHG
Tim Mulrooney, P.E. – SHG

APPENDIX

Appendix A CLV Comment Letter

Appendix B Conditional Letter of Approval for the Technical Drianage Study for Skye Canyon - Phases 3B & 3C Infrastructure

Appendix C Revised Finished Floor Summary Tables

Appendix D Revised WSPG Model and Lateral Loss Spreadsheet

Appendix E City of Las Vegas Planning and Development Department Justification Letter

Appendix F CD of Electronic Files & Revised Improvement Plans

APPENDIX A

CLV Comment Letter

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM				DATE: October 16, 2018
TO: **Land Development Services** Department of Building & Safety				FROM: Jennifer Shinn, P.E. Flood Control Engr. Associate Department of Public Works
SUBJECT:	Drainage Study for: **Skye Canyon Parcel 2.20**			**COPIES TO:** Slater Hanifan Group
Cross Streets:	NEC of Town Center Drive & Hualapai Way			KAG Development/Ninety-Five Management
File Number:	F:\Depot\DSMemos\DS5041A.doc			Bart Anderson, P.E., DevCo
Parcel Number:	126-12-414-001			CCRFCD
Zoning Action:	TMP-73852			
FEMA Flood Zone	YES	NO X		
Proposed Storm Drain	YES X	NO		

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1st Submittal	9/27/2018	10/16/2018	See Comments Below	$400.00	499484: $400
			TOTAL FEES (LDDRS):	**$400.00**	----

REMARKS:

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

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

1. The site is adjacent to or crosses an existing or proposed *Clark County Regional Flood Control District* (CCRFCD) master planned facility. Therefore, CCRFCD concurrence is required prior to final approval of the drainage study.

   When it is applicable, structural calculations of facilities must be approved by the City prior to submittal to the *Clark County Regional Flood Control District* for their review and concurrence.

2. Sites with a grade difference of 2 feet above or below existing grades are required to have approval from the *City of Las Vegas 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 *City Planning* approval with the next submittal.

3. All roadway and flood control facilities as proposed and approved in Skye Canyon Phase 2 Infrastructures must be substantially constructed prior to the issuance of occupancy permits.

4. The subject Skye Canyon Parcel 2.20 Drainage Study will not be approved prior to the final approval of the Skye Canyon Phases 3B & 3C Infrastructure Technical Drainage Study.

5. The grading plan indicates offsite grading. Secure a notarized letter of permission from the property owner allowing the grading on APN 126-12-414-002. This letter is required prior to final acceptance of the drainage study.

6. The depth of SDDI #5 exceeds the maximum depth of 10 feet. Provide structural calculations for the depth drop inlet.

7. Provide "Public Drainage Easement to be Privately Maintained" for the private storm drains through common lots and show the easements on the grading plan. Public drainage easements must be recorded by separate document prior to the final acceptance of the improvement plans unless they are to be recorded by parcel or final map.

8. It appears lots 113-163 are missing in the Finish Floor Check Table. In addition, revise the table to match the finish floor elevations shown on the plans for lots 70-112.

9. SDDI #6 is called out as a 4'x2' NDOT Type II inlet but the inlet calculations provided uses an inlet size of 4'x4'. Revise the plans and/or provide revised calculations.

10. Revise the call out for SDDI #5 in profile view on Sheet SD-2 to match the drop inlet call out shown in plan view.

11. Label the pipe sizes in the profiles on Sheets SD-1 and SD-2.

12. The Regional Flood Control District Manual requires 1% minimum slope around the bulb of a cul-de-sac where storm water is drained through per Section 1602. Provide the required slope in Crestview Pointe Avenue cul-de-sac. In addition, show slopes at all cul-de-sacs.

13. Provide a note on the grading plans: "Curb flow lines less than 0.60% grade shall be water tested. Any curb that does not flow shall be removed and replaced at no cost to the City.

14. Label the existing storm drain in Grand Teton Drive with the CLV drawing number and revise the CLV drawing number for the existing storm drain in Shaumber Road to reference 107V6750.

15. Provide a note on the grading plans "Note: All private streets are P.U.E., Public Sewer Easements, and Public Drainage Easements to be privately maintained by HOA."

16. Provide details of the wrought iron fence and utility maintenance gate at drainage easements.

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
jks

T/R/S: T19S/R59E/12
AREA F-12

APPENDIX B

Conditional Letter of Approval for the Technical Drainage Study for *Skye Canyon Phase 3B & 3C Infrastructure*
(DS4953)

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM			DATE: October 10, 2018
TO: **Land Development Services** Department of Building & Safety			FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for: **Skye Canyon – Phases 3B & 3C Infrastructure**		**COPIES TO:** Slater Hanifan Group
Cross Streets:	NWC of Skye Village Road & Skye Canyon Park Drive		M F Land LLC / Ninety-Five Management LLC
File Number:	F:\Depot\DSMemos\DS4953B.doc		Bart Anderson, P.E., DevCo
Parcel Number:	126-12-101-002		CCRFCD
Zoning Action:			
FEMA Flood Zone	YES	NO X	
Proposed Storm Drain	YES X	NO	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1st Submittal	2/8/2017	3/9/2018 & 5/15/2018	Not Approved	$400.00	493315: $400
2nd Submittal	9/11/2018	10/10/2018	See Comments Below	$400.00	498970: $400
			TOTAL FEES (LDDRS):	**$800.00**	----

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:
X	is conditionally approved subject to Clark County Regional Flood Control District concurrence.
	is conditionally approved subject to Clark County Public Works Department concurrence.

1. The site is adjacent to or crosses an existing or proposed *Clark County Regional Flood Control District* (CCRFCD) master planned facility. Therefore, CCRFCD concurrence is required prior to final approval of the drainage study. CCRFCD requires receipt of structural approval from the Building Department prior to concurrence.

2. *Skye Canyon Phases 3B & 3C* onsite developments are to be flood protected by *Detention Basin 2* and the *Skye Canyon Phase 3A Infrastructure*. No occupancy permits within onsite *Phases 3B & 3C* will be issued prior to the substantial completion of *Detention Basin 2 with the outfall facility (from Detention Basin 2 in Iron Mountain Road to Skye Village Road)* and the substantial completion of the *Skye Canyon Phase 3A Infrastructure*.

3. The future MPU facility within Skye Village Road north of the Skye Village/Grand Canyon/Iron Mountain intersection to the proposed MPU facility at the Kyle Canyon interchange area shall be substantially complete before occupancy of residential Units beyond Phases 3A, 3B and 3C. This includes residential development within Phases 4 & 6 and the development of Phase 5 as shown on the *Development Phasing Exhibit* dated 12/4/2017.

4. The implementation of the CCRFCD Master Plan for the Skye Canyon Master Development is being progressed with the recent 90% design submittal of the *Moccasin Rd. CCRFCD Flood Control Facility – US95/Kyle Canyon Rd Interchange to Moccasin Rd. (Skye Canyon Developer Funded)* and

the *Moccasin Rd. CCRFCD Flood Control Facility – Moccasin Rd to CCRFCD Facility LVUP 1076/1077(CCRFCD Funded)*. Once building permits are released for 75% of the Skye Canyon Development west of US-95 these critical facilities shall be substantially complete in accordance with the provisions of Title 19.02.130 D.

5. The implementation of the CCRFCD Master Plan is being progressed with the recent bid opening of the NDOT US-95 facilities from the CC-215 interchange north to the Kyle Canyon interchange. Construction of the associated CCRFCD MPU facilities allows for the utilization of the existing MPU facilities constructed with the Horse Interchange. The development of Phases 3A, 3B and 3C west of US-95 shall maximize the flow collection into this facility prior to allowing flows to cross US-95 using the existing culvert system.

6. *Flood Control* acknowledges that the new *Skye Canyon Master Plan Amendment* (MPA) is being included as a part of the 2018 MPU process. Any changes not incorporated in the 2018 MPU must be approved by *City of Las Vegas* and *Clark County Regional Flood Control District* (CCRFCD) and shall be adopted by the *City of Las Vegas City Council* prior to the final approval of the subject improvement plans.

7. The subject *Phases 3B and 3C Infrastructure Drainage Study* addresses the included street improvements of *Iron Mountain Road, Skye Canyon Park Drive, Shaumber Road*, culvert crossings and storm drain systems with the streets. Technical drainage studies will be required for the future onsite parcels as they develop.

8. Since the streets network and the associated storm drain facilities will eventually be accepted by the ***City of Las Vegas***, the engineer/developer must coordinate with *City of Las Vegas Streets & Sanitation Department* for their review and approval prior to the final approval of the improvement plans.

9. Structural plans for the storm drain improvements must be submitted for review by *Flood Control* and the *Building Department*. Provide a soil report, structural calculations and specifications, wet stamped structural sets and a grading plan to the *City of Las Vegas Building Department* for processing (call *Building Department* to confirm their submittal requirements). The engineer must provide a copy of *Building Department* approval of the structures to *City Flood Control Section* prior to the final acceptance of the improvement plans.

10. Phase 3A, 3B, and 3C include storm drain improvements that will be abandoned in the future. These abandoned facilities will impact the adjoining Phase 3B and 3C development parcels. The individual parcel development shall address the impact and removal of these improvements as well as include the removal of these items in the associated improvements and Bond.

11. The project proposed to build temporary drainage facilities including drainage berms/swales over the *Phases 3B, 3C* site and along the west side of *Shaumber Road*. Prior to the final plans approval the developer must complete a ***Maintenance and Liability Agreement*** for the interim drainage improvements 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 construction the facility and an exhibit that adequately shows the location and limits of the drainage facilities to *City Flood Control* for approval. Once the drainage study is conditionally approved, the engineer/developer should contact the *City's Land Development Section* (702-229-6371) to begin the agreement process.

    In order for the maintenance bond to be released in the future, a drainage update/letter will be required to justify that the berms/swales are no longer necessary and can be removed.

12. Revise the typical access road sections on Sheet DTL-01 of each plan set to clearly show 1% minimum cross slope.

13. Provide nominal inlets along the arterial streets that do not exceed 660' maximum spacing.

14. Provide off-site grading permission for areas outside of the Skye Canyon Development impacted by these infrastructure improvements. Provide the notarized letter of off-site grading permission prior to final approval of the improvement plans.

15. Provide drop inlets upstream of the roadway cross fall transitions to collect flow before it spills across the intersections.

16. The interim channels adjacent to the infrastructure roadways are the Maintenance responsibility of the Master Developer.

17. **Iron Mountain Road Improvement Plans:**

    Provide ½ street roadway improvements in Iron Mountain between the Sheep Mountain Parkway and Shaumber Road. Revise the plans and sections accordingly.

    Sheet PP-04 to Sheet PP-07: Offsite grading is proposed in the adjacent parcels to the north of *Iron Mountain Road*. The land parcels are owned by various private owners and the BLM. Obtain notarized letter of permission for grading from all the impacted owners and BLM prior to the final acceptance of the improvement plans.

    Sheet PP-04: Explain why the drop inlet is in a "sump" condition.

    Sheet PP-05: Label the length of the proposed drop inlet at Sta. 94+36.89 (**second request**).

18. **Skye Canyon Park Drive Improvement Plans:**

    Sheet PP-02 and Sheet PP-03: The City requires nominal drop inlet at a maximum spacing of 600' in public right of ways. The distance between a proposed drop inlet in *Skye Canyon Park Drive* (see Sheet PP-03) and the *Shaumber Road* intersection is more than 1,200 feet. Extend the proposed 18" storm drain to approximately Sta. 46+00 with a nominal inlet on the north side and a stub to the south (**second request**).

19. **Shaumber Road Improvement Plans:**

    Sheet PP-03 and Sheet PP-04: Extend the storm drain at SDMH #20 to the south with an 18" pipe to approximately Sta. 36+00. Provide two stubs at the end of the 18"-storm drain (**second request**).

    Sheets PP-06 to PP-08: Extend the storm drain at SDMH #65 (in Sheet PP-08) to the south with an 18" pipe to approximately Sta. 56+00. Provide two stubs at the end of the 18" storm drain (Sheet PP-06) and another two stubs at approximately Sta. 62+00 (Sheet PP-07) (**second request**).

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
Ays/pbj

T/R/S: T19S/R59E/12
AREA: F-12

APPENDIX C

Revised Finished Floor Summary Table

SKYE CANYON PARCEL 2.20 ADDENDUM FINISHED FLOOR - CITY OF LAS VEGAS JURISDICTION										
INPUT INFORMATION					FINISHED FLOORS					NOTES
Lot Number	Hydraulic Section Utilized	T/C[1] (ft)	F/L[2] (ft)	D_{100} (ft)	Flowline $F.F._{-min}$[3] (ft)	T/C + 6" $F.F._{-min}$[4] (ft)	$F.F._{-Design}$ (ft)	Flowline Check	T/C + 6" Check	See References on Last Sheet
1	1A	3017.18	3016.70	0.62	3017.94	3017.68	3018.9	OK	OK	
2	1A	3018.88	3018.40	0.62	3019.64	3019.38	3020.6	OK	OK	
3	1A	3020.85	3020.37	0.62	3021.61	3021.35	3022.6	OK	OK	
4	1A	3020.85	3020.37	0.62	3021.61	3021.35	3024.4	OK	OK	
5	1A	3019.47	3018.99	0.62	3020.23	3019.97	3021.1	OK	OK	
6	1A	3021.63	3021.15	0.62	3022.39	3022.13	3023.2	OK	OK	
7	1A	3023.87	3023.39	0.62	3024.63	3024.37	3025.5	OK	OK	
8	1A	3026.12	3025.64	0.62	3026.88	3026.62	3027.7	OK	OK	
9	1A	3028.34	3027.86	0.62	3029.10	3028.84	3029.9	OK	OK	
10	1A	3028.34	3027.86	0.62	3029.10	3028.84	3031.6	OK	OK	
11	1A	3032.42	3031.94	0.62	3033.18	3032.92	3034.1	OK	OK	
12	1A	3031.24	3030.76	0.62	3032.00	3031.74	3032.9	OK	OK	
13	1A	3029.90	3029.42	0.62	3030.66	3030.40	3031.6	OK	OK	
14	1A	3029.63	3029.15	0.62	3030.39	3030.13	3031.5	OK	OK	
15	1A	3030.03	3029.55	0.62	3030.79	3030.53	3031.9	OK	OK	
16	1A	3030.30	3029.82	0.62	3031.06	3030.80	3032.2	OK	OK	
17	1A	3030.54	3030.06	0.62	3031.30	3031.04	3032.5	OK	OK	
18	1A	3030.78	3030.30	0.62	3031.54	3031.28	3032.7	OK	OK	
19	1A	3031.02	3030.54	0.62	3031.78	3031.52	3033.0	OK	OK	
20	1A	3031.26	3030.78	0.62	3032.02	3031.76	3033.2	OK	OK	
21	1A	3031.50	3031.02	0.62	3032.26	3032.00	3033.5	OK	OK	
22	1A	3031.74	3031.26	0.62	3032.50	3032.24	3033.7	OK	OK	
23	1A	3031.98	3031.50	0.62	3032.74	3032.48	3033.9	OK	OK	
24	1A	3032.22	3031.74	0.62	3032.98	3032.72	3034.2	OK	OK	
25	1A	3032.46	3031.98	0.62	3033.22	3032.96	3034.4	OK	OK	
26	1A	3032.70	3032.22	0.62	3033.46	3033.20	3034.7	OK	OK	
27	1A	3032.94	3032.46	0.62	3033.70	3033.44	3034.9	OK	OK	
28	1A	3033.18	3032.70	0.62	3033.94	3033.68	3035.1	OK	OK	
29	1A	3033.18	3032.70	0.62	3033.94	3033.68	3035.4	OK	OK	
30	1A	3027.33	3026.85	0.62	3028.09	3027.83	3029.2	OK	OK	
31	1A	3027.99	3027.51	0.62	3028.75	3028.49	3029.8	OK	OK	
32	1A	3028.60	3028.12	0.62	3029.36	3029.10	3030.4	OK	OK	
33	1A	3028.60	3028.12	0.62	3029.36	3029.10	3030.9	OK	OK	
34	1A	3028.20	3027.72	0.62	3028.96	3028.70	3030.9	OK	OK	
35	1A	3028.20	3027.72	0.62	3028.96	3028.70	3030.0	OK	OK	
36	1A	3027.68	3027.20	0.62	3028.44	3028.18	3029.5	OK	OK	
37	1A	3027.31	3026.83	0.62	3028.07	3027.81	3029.4	OK	OK	
38	1A	3027.07	3026.59	0.62	3027.83	3027.57	3029.1	OK	OK	
39	1A	3026.83	3026.35	0.62	3027.59	3027.33	3028.9	OK	OK	
40	1A	3026.69	3026.21	0.62	3027.45	3027.19	3028.7	OK	OK	
41	1A	3028.82	3028.34	0.62	3029.58	3029.32	3030.4	OK	OK	
42	1A	3030.84	3030.36	0.62	3031.60	3031.34	3032.4	OK	OK	
43	1A	3033.02	3032.54	0.62	3033.78	3033.52	3034.6	OK	OK	
44	1A	3034.33	3033.85	0.62	3035.09	3034.83	3035.9	OK	OK	
45	1A	3034.33	3033.85	0.62	3035.09	3034.83	3036.4	OK	OK	
46	1A	3034.28	3033.80	0.62	3035.04	3034.78	3035.9	OK	OK	
47	1A	3034.97	3034.49	0.62	3035.73	3035.47	3036.6	OK	OK	
48	1A	3036.91	3036.43	0.62	3037.67	3037.41	3038.5	OK	OK	
49	1A	3039.11	3038.63	0.62	3039.87	3039.61	3040.7	OK	OK	
50	1A	3040.67	3040.19	0.62	3041.43	3041.17	3042.3	OK	OK	
51	1A	3047.47	3046.99	0.62	3048.23	3047.97	3049.1	OK	OK	
52	1A	3049.17	3048.69	0.62	3049.93	3049.67	3050.8	OK	OK	
53	1A	3050.87	3050.39	0.62	3051.63	3051.37	3052.5	OK	OK	
54	1A	3052.57	3052.09	0.62	3053.33	3053.07	3054.2	OK	OK	
55	1A	3054.24	3053.76	0.62	3055.00	3054.74	3055.8	OK	OK	
56	1A	3055.84	3055.36	0.62	3056.60	3056.34	3057.4	OK	OK	
57	1A	3057.42	3056.94	0.62	3058.18	3057.92	3059.0	OK	OK	
58	1A	3059.26	3058.78	0.62	3060.02	3059.76	3060.9	OK	OK	
59	1A	3060.70	3060.22	0.62	3061.46	3061.20	3062.3	OK	OK	
60	1A	3062.02	3061.54	0.62	3062.78	3062.52	3063.6	OK	OK	
61	1A	3062.02	3061.54	0.62	3062.78	3062.52	3066.0	OK	OK	
62	1A	3063.33	3062.85	0.62	3064.09	3063.83	3066.7	OK	OK	

SKYE CANYON PARCEL 2.20 ADDENDUM FINISHED FLOOR - CITY OF LAS VEGAS JURISDICTION										
INPUT INFORMATION					FINISHED FLOORS					NOTES
Lot Number	Hydraulic Section Utilized	T/C[1] (ft)	F/L[2] (ft)	D_{100} (ft)	Flowline F.F.$_{min}$[3] (ft)	T/C + 6" F.F.$_{min}$[4] (ft)	F.F.$_{Design}$ (ft)	Flowline Check	T/C + 6" Check	See References on Last Sheet
63	1A	3059.51	3059.03	0.62	3060.27	3060.01	3061.3	OK	OK	
64	1A	3057.31	3056.83	0.62	3058.07	3057.81	3058.9	OK	OK	
65	1A	3055.70	3055.22	0.62	3056.46	3056.20	3057.3	OK	OK	
66	1A	3054.10	3053.62	0.62	3054.86	3054.60	3055.7	OK	OK	
67	1A	3052.43	3051.95	0.62	3053.19	3052.93	3054.0	OK	OK	
68	1A	3050.73	3050.25	0.62	3051.49	3051.23	3052.3	OK	OK	
69	1A	3049.03	3048.55	0.62	3049.79	3049.53	3050.6	OK	OK	
70	1A	3047.33	3046.85	0.62	3048.09	3047.83	3048.9	OK	OK	
71	1A	3041.38	3040.90	0.62	3042.14	3041.88	3043.0	OK	OK	
72	1A	3039.31	3038.83	0.62	3040.07	3039.81	3040.9	OK	OK	
73	1A	3037.11	3036.63	0.62	3037.87	3037.61	3038.7	OK	OK	
74	1A	3034.30	3033.82	0.62	3035.06	3034.80	3035.9	OK	OK	
75	1A	3036.24	3035.76	0.62	3037.00	3036.74	3037.8	OK	OK	
76	1A	3038.43	3037.95	0.62	3039.19	3038.93	3040.0	OK	OK	
77	1A	3040.63	3040.15	0.62	3041.39	3041.13	3042.2	OK	OK	
78	1A	3042.83	3042.35	0.62	3043.59	3043.33	3044.4	OK	OK	
79	1A	3045.03	3044.55	0.62	3045.79	3045.53	3046.6	OK	OK	
80	1A	3047.23	3046.75	0.62	3047.99	3047.73	3048.8	OK	OK	
81	1A	3049.43	3048.95	0.62	3050.19	3049.93	3051.0	OK	OK	
82	1A	3051.63	3051.15	0.62	3052.39	3052.13	3053.2	OK	OK	
83	1A	3053.83	3053.35	0.62	3054.59	3054.33	3055.4	OK	OK	
84	1A	3055.48	3055.00	0.62	3056.24	3055.98	3057.1	OK	OK	
85	1A	3056.93	3056.45	0.62	3057.69	3057.43	3058.5	OK	OK	
86	1A	3057.81	3057.33	0.62	3058.57	3058.31	3060.3	OK	OK	
87	1A	3057.81	3057.33	0.62	3058.57	3058.31	3059.8	OK	OK	
88	1A	3053.85	3053.37	0.62	3054.61	3054.35	3055.5	OK	OK	
89	1A	3051.03	3050.55	0.62	3051.79	3051.53	3052.6	OK	OK	
90	1A	3048.83	3048.35	0.62	3049.59	3049.33	3050.4	OK	OK	
91	1A	3046.63	3046.15	0.62	3047.39	3047.13	3048.2	OK	OK	
92	1A	3044.43	3043.95	0.62	3045.19	3044.93	3046.0	OK	OK	
93	1A	3042.23	3041.75	0.62	3042.99	3042.73	3043.8	OK	OK	
94	1A	3040.03	3039.55	0.62	3040.79	3040.53	3041.6	OK	OK	
95	1A	3037.83	3037.35	0.62	3038.59	3038.33	3039.4	OK	OK	
96	1A	3035.67	3035.19	0.62	3036.43	3036.17	3037.3	OK	OK	
97	1A	3033.84	3033.36	0.62	3034.60	3034.34	3035.4	OK	OK	
98	1A	3032.89	3032.41	0.62	3033.65	3033.39	3034.5	OK	OK	
99	1A	3034.95	3034.47	0.62	3035.71	3035.45	3036.6	OK	OK	
100	1A	3037.15	3036.67	0.62	3037.91	3037.65	3038.8	OK	OK	
101	1A	3039.35	3038.87	0.62	3040.11	3039.85	3041.0	OK	OK	
102	1A	3041.55	3041.07	0.62	3042.31	3042.05	3043.2	OK	OK	
103	1A	3043.75	3043.27	0.62	3044.51	3044.25	3045.4	OK	OK	
104	1A	3045.94	3045.46	0.62	3046.70	3046.44	3047.6	OK	OK	
105	1A	3047.69	3047.21	0.62	3048.45	3048.19	3049.3	OK	OK	
106	1A	3049.23	3048.75	0.62	3049.99	3049.73	3050.9	OK	OK	
107	1A	3050.15	3049.67	0.62	3050.91	3050.65	3052.6	OK	OK	
108	1A	3050.15	3049.67	0.62	3050.91	3050.65	3052.3	OK	OK	
109	1A	3045.90	3045.42	0.62	3046.66	3046.40	3047.7	OK	OK	
110	1A	3043.15	3042.67	0.62	3043.91	3043.65	3044.7	OK	OK	
111	1A	3040.95	3040.47	0.62	3041.71	3041.45	3042.5	OK	OK	
112	1A	3038.75	3038.27	0.62	3039.51	3039.25	3040.3	OK	OK	
113	1A	3036.55	3036.07	0.62	3037.31	3037.05	3038.1	OK	OK	
114	1A	3034.35	3033.87	0.62	3035.11	3034.85	3036.0	OK	OK	
115	1A	3032.39	3031.91	0.62	3033.15	3032.89	3034.1	OK	OK	
116	1A	3031.37	3030.89	0.62	3032.13	3031.87	3033.0	OK	OK	
117	1A	3033.81	3033.33	0.62	3034.57	3034.31	3035.5	OK	OK	
118	1A	3036.29	3035.81	0.62	3037.05	3036.79	3038.0	OK	OK	
119	1A	3038.63	3038.15	0.62	3039.39	3039.13	3040.3	OK	OK	
120	1A	3040.88	3040.40	0.62	3041.64	3041.38	3042.4	OK	OK	
121	1A	3042.13	3041.65	0.62	3042.89	3042.63	3044.4	OK	OK	
122	1A	3042.13	3041.65	0.62	3042.89	3042.63	3044.8	OK	OK	
123	1A	3038.59	3038.11	0.62	3039.35	3039.09	3040.2	OK	OK	
124	1A	3035.92	3035.44	0.62	3036.68	3036.42	3037.5	OK	OK	
125	1A	3033.45	3032.97	0.62	3034.21	3033.95	3035.1	OK	OK	

SKYE CANYON PARCEL 2.20 ADDENDUM FINISHED FLOOR - CITY OF LAS VEGAS JURISDICTION										
INPUT INFORMATION					FINISHED FLOORS					NOTES
Lot Number	Hydraulic Section Utilized	T/C[1] (ft)	F/L[2] (ft)	D_{100} (ft)	Flowline $F.F._{-min}$[3] (ft)	T/C + 6" $F.F._{-min}$[4] (ft)	$F.F._{-Design}$ (ft)	Flowline Check	T/C + 6" Check	See References on Last Sheet
126	1A	3031.04	3030.56	0.62	3031.80	3031.54	3032.6	OK	OK	
127	1A	3035.73	3035.25	0.62	3036.49	3036.23	3037.4	OK	OK	
128	1A	3037.98	3037.50	0.62	3038.74	3038.48	3039.7	OK	OK	
129	1A	3040.22	3039.74	0.62	3040.98	3040.72	3041.8	OK	OK	
130	1A	3040.22	3039.74	0.62	3040.98	3040.72	3043.1	OK	OK	
131	1A	3037.56	3037.08	0.62	3038.32	3038.06	3039.3	OK	OK	
132	1A	3035.27	3034.79	0.62	3036.03	3035.77	3037.0	OK	OK	
133	1A	3032.63	3032.15	0.62	3033.39	3033.13	3034.3	OK	OK	
134	1A	3029.92	3029.44	0.62	3030.68	3030.42	3031.6	OK	OK	
135	1A	3027.15	3026.67	0.62	3027.91	3027.65	3028.9	OK	OK	
136	1A	3024.91	3024.43	0.62	3025.67	3025.41	3026.6	OK	OK	
137	1A	3022.67	3022.19	0.62	3023.43	3023.17	3024.4	OK	OK	
138	1A	3020.43	3019.95	0.62	3021.19	3020.93	3022.1	OK	OK	
139	1A	3018.80	3018.32	0.62	3019.56	3019.30	3020.4	OK	OK	
140	1A	3020.77	3020.29	0.62	3021.53	3021.27	3022.4	OK	OK	
141	1A	3023.01	3022.53	0.62	3023.77	3023.51	3024.6	OK	OK	
142	1A	3025.17	3024.69	0.62	3025.93	3025.67	3026.8	OK	OK	
143	1A	3027.01	3026.53	0.62	3027.77	3027.51	3028.6	OK	OK	
144	1A	3028.23	3027.75	0.62	3028.99	3028.73	3029.9	OK	OK	
145	1A	3028.61	3028.13	0.62	3029.37	3029.11	3032.5	OK	OK	
146	1A	3028.61	3028.13	0.62	3029.37	3029.11	3032.0	OK	OK	
147	1A	3025.31	3024.83	0.62	3026.07	3025.81	3027.0	OK	OK	
148	1A	3022.57	3022.09	0.62	3023.33	3023.07	3024.3	OK	OK	
149	1A	3020.33	3019.85	0.62	3021.09	3020.83	3022.0	OK	OK	
150	1A	3018.61	3018.13	0.62	3019.37	3019.11	3020.3	OK	OK	
151	1A	3019.62	3019.14	0.62	3020.38	3020.12	3021.3	OK	OK	
152	1A	3020.92	3020.44	0.62	3021.68	3021.42	3022.6	OK	OK	
153	1A	3022.86	3022.38	0.62	3023.62	3023.36	3024.9	OK	OK	
154	1A	3023.92	3023.44	0.62	3024.68	3024.42	3025.7	OK	OK	
155	1A	3024.21	3023.73	0.62	3024.97	3024.71	3025.7	OK	OK	
156	1A	3023.65	3023.17	0.62	3024.41	3024.15	3025.4	OK	OK	
157	1A	3022.66	3022.18	0.62	3023.42	3023.16	3024.4	OK	OK	
158	1A	3021.46	3020.98	0.62	3022.22	3021.96	3023.2	OK	OK	
159	1A	3019.97	3019.49	0.62	3020.73	3020.47	3021.7	OK	OK	
160	1A	3017.74	3017.26	0.62	3018.50	3018.24	3019.4	OK	OK	
161	1A	3017.09	3016.61	0.62	3017.85	3017.59	3018.8	OK	OK	
162	1A	3016.64	3016.16	0.62	3017.40	3017.14	3018.3	OK	OK	
163	1A	3016.19	3015.71	0.62	3016.95	3016.69	3017.9	OK	OK	

Where:

1: Top of Curb at High Side of Lot

2: TC-0.38 (For Roll Curb), TC-0.5 (For L Curb)

3: Minimum Allowable Finished Floor Elevation above flowline elevation @ high side of lot = (2 x D_{100}) + F/L

4: City of Las Vegas minimum allowable finished floor elevation = T.C. @ high side of lot + 6-inches

5: These lots have an adjacent solid grouted wall that protects the FF.

City of Las Vegas Finished Floor Criteria:

-The finished floor shall be set a vertical distance above the gutter flowline of at least twice the depth of flow in the gutter flowline up to a maximum of 18 inches above the WSEL in the street.

-The finished floor shall be set a vertical distance of at least 6-inches above the highest adjacent top of curb.

Drainage Easements Check								
Lot Number	High TC/FL[1]	Section	Flow Depth[2]	Min FF[3]	Design FF	Check	Solid Grout	Notes
40	3026.39	P3 (Weir)	0.32	3028.21	3028.70	OK	No	Note that 0.5' of HW is provided from the Flowline to TC. The remaining flow will overtop the curb and into the U-Channel
41	3026.39	P3 (Weir)	0.32	3028.21	3030.40	OK	No	
40	3025.36	P3	0.00	3026.86	3028.70	OK	No	
61	3025.36	E2	0.03	3026.89	3066.00	OK	No	
62	3025.36	E2	0.03	3026.89	3066.70	OK	No	

1: High TC/FL is at the high side of the drainage easement flowline or the highest TC adjacent to the easement if flow is weiring over the curb.

2: Flow depth is either normal depth or weir depth (whichever is higher).

3: Min FF is the High TC/FL plus the Flow Depth plus 18 inches.

Specific Energy Check							
Lot Number	High TC[1]	High FL[2]	Section	Specific Energy[3]	Min FF[4]	Design FF	Check
1	3017.18	3016.80	1A	1.11	3017.91	3018.90	OK
2	3018.88	3018.50	1A	1.11	3019.61	3020.60	OK
12	3031.24	3030.86	1A	1.11	3031.97	3032.90	OK
13	3029.9	3029.52	1A	1.11	3030.63	3031.60	OK
18	3030.78	3030.40	1A	1.11	3031.51	3032.70	OK
19	3031.02	3030.64	1A	1.11	3031.75	3033.00	OK
24	3032.22	3031.84	1A	1.11	3032.95	3034.20	OK
25	3032.46	3032.08	1A	1.11	3033.19	3034.40	OK
132	3035.27	3034.89	1A	1.11	3036.00	3037.00	OK
133	3032.63	3032.25	1A	1.11	3033.36	3034.30	OK
161	3017.09	3016.71	1A	1.11	3017.82	3018.80	OK
162	3016.64	3016.26	1A	1.11	3017.37	3018.30	OK

1: High TC is the elevation at the high side of the adjacent perimeter street

2: 0.48-ft is subtracted from the High TC to obain the High FL elevation

2: Specific energy depth is taken from FlowMaster calculation for street directing flow toward lot.

3: Min FF is the High FL plus the specific energy depth.

Finished Floor Check - Emergency Overflow - Weir Comps							
Lot Number	Overtopping Elevation	High FL	Section	Headwater Depth	Min FF	Design FF	Check
13	3029.42	3029.42	E1(W)	0.77	3030.19	3031.60	OK
14	3029.42	3029.42	E1(W)	0.77	3030.19	3031.50	OK

Finished Floor Check - Emergency Overflow - Normal Depth Comps							
Lot Number	Overtopping Elevation	High FL	Section	Normal Depth	Min FF	Design FF	Check
13	3029.42	3029.42	E1	0.32	3029.74	3031.60	OK
14	3029.42	3029.42	E1	0.32	3029.74	3031.50	OK

APPENDIX D

Revised WSPG Model and Lateral Loss Spreadsheet

STORM SEWER LATERALS - HYDRAUILIC CALCULATIONS

CONDUIT DATA						FLOW DATA								HGL		COMMENTS	
STATION		SIZE / TYPE	INVERTS		LENGTH	A	R	Φ	Q	V	H_V = $V^2/2g$	S_f	AVE. S_f	PIPE		PRESS. FLOW?	OTHER
FROM	TO		D / S ELEV.	U / S ELEV.		(FT^2)	(FT)		(CFS)	(FPS)	(FT)	(FT/FT)	(FT/FT)	D/S HGL ELEV.	U/S HGL ELEV.		
SHA-L LATERAL																	
2013.13	2023.63	Round 18" RCP	3001.82	3004.41	27.41	1.767146	0.375	0.004925	13	7.356495	0.840342	0.015253685		3006.71	3007.128	Yes	STARTING WSEL FROM MODEL SHA-L STATION 2013.13 18" LATERAL FROM DI #3 (RIM = 3011.06)

$Sf = \Phi Hv / R^{1.33}$

$\Phi = 2g (n^2) / 2.21$

1 - Where pipes are not under pressure, assume U/S HGL is at top of pipe

```
T1 SKYE CANYON PARCEL 2.20
T2 SHAUMBER MAINLINE LATERAL - CONNECTS TO SITE ENTERANCE SD
T3 STARTING WSE PER USHA MODEL STA 1733.25
SO   1733.2502993.480 30      .013                3003.80
R    1779.7102993.820 30      .013                                  .000  15.000 1
R    1780.7102993.820 30      .013                                  .000  15.000
R    1781.7102993.820 30      .013                                  .000  15.000
JX   1781.7102993.820 30 18   .013    3.0           2993.820         90.0
R    1782.7102993.820 30      .013                                  .000  15.000
R    1783.7102993.820 30      .013                                  .000  15.000
R    1784.7102993.820 30      .013                                  .000  15.000
R    2010.6303001.320 30      .013
WE   2010.6303001.320  1
R    2011.6303001.400  1      .013                                  .000  15.000
R    2012.6303001.490  1      .013                                  .000  15.000
R    2013.6303001.570  1      .013                                  .000  15.000
JX   2014.6303001.570  1 18 24.013    3.0     13.0  3001.3203001.820 90.0 90.0
R    2014.6303001.650  1      .013                                  .000  15.000
R    2015.6303001.730  1      .013                                  .000  15.000
R    2015.6303001.820  1      .013                                       15.000
WX   2015.6303001.820 24
R    2070.2703003.020 24      .013
WE   2070.2703003.020  1

R    2070.2703003.020  1      .013                                  .000  15.000
R    2071.2703003.020  1      .013                                  .000  15.000
R    2072.2703003.020  1      .013                                  .000  15.000
JX   2072.2703003.020  1 18   .013    3.0           3003.020         90.0
R    2073.2703003.020  1      .013                                  .000  15.000
R    2074.2703003.020  1      .013                                  .000  15.000
R    2075.2703003.020  1      .013                                  .000  15.000
WX   2075.2703003.020 18
R    2103.8303004.870 18      .013
SH   2103.8303004.870 18      .013
CD   1  3   0   0.000   5.000    7.500 0.000 0.000  0.000
CD  18  4   1    .000   1.500     .000  .000  .000   .00
CD  24  4   1    .000   2.000     .000  .000  .000   .00
CD  30  4   1    .000   2.500     .000  .000  .000   .00
CD  36  4   1    .000   3.000     .000  .000  .000   .00
Q           11.000   .0
```

CARD CODE	SECT NO	CHN TYPE	NO OF PIER/PIP	AVE PIER WIDTH	HEIGHT 1 DIAMETER	BASE WIDTH	ZL	ZR	INV DROP	Y(1)	Y(2)	Y(3)	Y(4)	Y(5)	Y(6)	Y(7)	Y(8)	Y(9)	Y(10)
CD	1	3	0	.000	5.000	7.500	.000	.000	.00										
CD	18	4	1		1.500														
CD	24	4	1		2.000														
CD	30	4	1		2.500														
CD	36	4	1		3.000														

WATER SURFACE PROFILE - TITLE CARD LISTING

HEADING LINE NO 1 IS -
SKYE CANYON PARCEL 2.20

HEADING LINE NO 2 IS -
SHAUMBER MAINLINE LATERAL - CONNECTS TO SITE ENTERANCE SD

HEADING LINE NO 3 IS -
STARTING WSE PER USHA MODEL STA 1733.25

WATER SURFACE PROFILE - ELEMENT CARD LISTING

ELEMENT NO 1 IS A SYSTEM OUTLET * * *

U/S DATA	STATION	INVERT	SECT	W S ELEV
	1733.250	2993.480	30	3003.800

ELEMENT NO 2 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1779.710	2993.820	30	.013	.000	.000	15.000	1

ELEMENT NO 3 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1780.710	2993.820	30	.013	.000	.000	15.000	0

ELEMENT NO 4 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1781.710	2993.820	30	.013	.000	.000	15.000	0

ELEMENT NO 5 IS A JUNCTION * * * * * *

U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4
	1781.710	2993.820	30	18	0	.013	3.000	.000	2993.820	.000	90.000	.000

RADIUS	ANGLE
.000	.000

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

ELEMENT NO 6 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1782.710	2993.820	30	.013	.000	.000	15.000	0

ELEMENT NO 7 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1783.710	2993.820	30	.013	.000	.000	15.000	0

ELEMENT NO 8 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1784.710	2993.820	30	.013	.000	.000	15.000	0

ELEMENT NO 9 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	2010.630	3001.320	30	.013	.000	.000	.000	0

ELEMENT NO 10 IS A WALL ENTRANCE *

U/S DATA	STATION	INVERT	SECT	FP
	2010.630	3001.320	1	.500

ELEMENT NO 11 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	2011.630	3001.400	1	.013	.000	.000	15.000	0

WATER SURFACE PROFILE - ELEMENT CARD LISTING

ELEMENT NO 12 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	2012.630	3001.490	1	.013	.000	.000	15.000	0

ELEMENT NO 13 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	2013.630	3001.570	1	.013	.000	.000	15.000	0

ELEMENT NO 14 IS A JUNCTION * * * * * *

U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4
	2014.630	3001.570	1	18	24	.013	3.000	13.000	3001.320	3001.820	90.000	90.000

RADIUS	ANGLE
.000	.000

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

ELEMENT NO 15 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	2014.630	3001.650	1	.013	.000	.000	15.000	0

ELEMENT NO 16 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	2015.630	3001.730	1	.013	.000	.000	15.000	0

ELEMENT NO 17 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	2015.630	3001.820	1	.013	.000	.000	15.000	0

ELEMENT NO 18 IS A WALL EXIT *

U/S DATA	STATION	INVERT	SECT
	2015.630	3001.820	24

ELEMENT NO 19 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	2070.270	3003.020	24	.013	.000	.000	.000	0

ELEMENT NO 20 IS A WALL ENTRANCE *

U/S DATA	STATION	INVERT	SECT	FP

```
                        2070.270 3003.020    1              .500
 ELEMENT NO  21 IS A REACH             *         *     *
                 U/S DATA   STATION    INVERT  SECT              N                          RADIUS    ANGLE     ANG PT  MAN H
                        2070.270 3003.020    1              .013                           .000     .000    15.000     0
 ELEMENT NO  22 IS A REACH             *         *     *
                 U/S DATA   STATION    INVERT  SECT              N                          RADIUS    ANGLE     ANG PT  MAN H
                        2071.270 3003.020    1              .013                           .000     .000    15.000     0
                                                W S P G W                                                    PAGE NO   4
                          WATER SURFACE PROFILE - ELEMENT CARD LISTING
 ELEMENT NO  23 IS A REACH             *         *     *
                 U/S DATA   STATION    INVERT  SECT              N                          RADIUS    ANGLE     ANG PT  MAN H
                        2072.270 3003.020    1              .013                           .000     .000    15.000     0
 ELEMENT NO  24 IS A JUNCTION          *         *     *     *               *               *              *
                 U/S DATA   STATION    INVERT  SECT LAT-1 LAT-2   N      Q3        Q4     INVERT-3 INVERT-4  PHI 3  PHI 4
                        2072.270 3003.020    1    18     0   .013     3.000      .000  3003.020      .000  90.000     .000
                                                                                        RADIUS    ANGLE
                                                                                         .000     .000
THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
 ELEMENT NO  25 IS A REACH             *         *     *
                 U/S DATA   STATION    INVERT  SECT              N                          RADIUS    ANGLE     ANG PT  MAN H
                        2073.270 3003.020    1              .013                           .000     .000    15.000     0
 ELEMENT NO  26 IS A REACH             *         *     *
                 U/S DATA   STATION    INVERT  SECT              N                          RADIUS    ANGLE     ANG PT  MAN H
                        2074.270 3003.020    1              .013                           .000     .000    15.000     0
 ELEMENT NO  27 IS A REACH             *         *     *
                 U/S DATA   STATION    INVERT  SECT              N                          RADIUS    ANGLE     ANG PT  MAN H
                        2075.270 3003.020    1              .013                           .000     .000    15.000     0
 ELEMENT NO  28 IS A  WALL  EXIT                       *
                 U/S DATA   STATION    INVERT  SECT
                        2075.270 3003.020   18
 ELEMENT NO  29 IS A REACH             *         *     *
                 U/S DATA   STATION    INVERT  SECT              N                          RADIUS    ANGLE     ANG PT  MAN H
                        2103.830 3004.870   18              .013                           .000     .000      .000     0
 ELEMENT NO  30 IS A SYSTEM HEADWORKS                  *                     *
                 U/S DATA   STATION    INVERT  SECT                                  W S ELEV
                        2103.830 3004.870   18                                        .000
```

SKYE CANYON PARCEL 2.20
SHAUMBER MAINLINE LATERAL - CONNECTS TO SITE ENTERANCE SD
STARTING WSE PER USHA MODEL STA 1733.25

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
1733.250	2993.480	10.320	3003.800	33.00	6.72	.70	3004.50	.00	1.95	.00	2.500	.000	.00	1 .0
46.460	.0073					.0065	.30	10.32	.00	1.93	.013	.00	.00	PIPE
1779.710	2993.820	10.351	3004.171	33.00	6.72	.70	3004.87	.00	1.95	.00	2.500	.000	.00	1 .0
1.000	.0000					.0065	.01	10.35	.00	.00	.013	.00	.00	PIPE
1780.710	2993.820	10.392	3004.212	33.00	6.72	.70	3004.91	.00	1.95	.00	2.500	.000	.00	1 .0
1.000	.0000					.0065	.01	10.39	.00	.00	.013	.00	.00	PIPE
1781.710	2993.820	10.433	3004.253	33.00	6.72	.70	3004.95	.00	1.95	.00	2.500	.000	.00	1 .0
JUNCT STR	.0000					.0059	.00	10.43	.00		.013	.00	.00	PIPE
1781.710	2993.820	10.677	3004.497	30.00	6.11	.58	3005.08	.00	1.87	.00	2.500	.000	.00	1 .0
1.000	.0000					.0053	.01	10.68	.00	.00	.013	.00	.00	PIPE
1782.710	2993.820	10.711	3004.531	30.00	6.11	.58	3005.11	.00	1.87	.00	2.500	.000	.00	1 .0
1.000	.0000					.0053	.01	10.71	.00	.00	.013	.00	.00	PIPE
1783.710	2993.820	10.745	3004.565	30.00	6.11	.58	3005.15	.00	1.87	.00	2.500	.000	.00	1 .0
1.000	.0000					.0053	.01	10.74	.00	.00	.013	.00	.00	PIPE
1784.710	2993.820	10.779	3004.599	30.00	6.11	.58	3005.18	.00	1.87	.00	2.500	.000	.00	1 .0
225.920	.0332					.0053	1.21	10.78	.00	1.10	.013	.00	.00	PIPE
2010.630	3001.320	4.488	3005.808	30.00	6.11	.58	3006.39	.00	1.87	.00	2.500	.000	.00	1 .0
WALL	ENTRANCE													

SKYE CANYON PARCEL 2.20
SHAUMBER MAINLINE LATERAL - CONNECTS TO SITE ENTERANCE SD
STARTING WSE PER USHA MODEL STA 1733.25

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
2010.630	3001.320	5.343	3006.663	30.00	.80	.01	3006.67	.00	.79	7.50	5.000	7.500	.00	0 .0
1.000	.0798					.0000	.00	5.34	.06	.29	.013	.00	.00	BOX
2011.630	3001.400	5.264	3006.664	30.00	.80	.01	3006.67	.00	.79	7.50	5.000	7.500	.00	0 .0
1.000	.0901					.0000	.00	5.26	.06	.28	.013	.00	.00	BOX
2012.630	3001.490	5.174	3006.664	30.00	.80	.01	3006.67	.00	.79	7.50	5.000	7.500	.00	0 .0
1.000	.0801					.0000	.00	5.17	.06	.29	.013	.00	.00	BOX
2013.630	3001.570	5.095	3006.665	30.00	.80	.01	3006.67	.00	.79	7.50	5.000	7.500	.00	0 .0
JUNCT STR	.0000					.0000	.00	5.09	.06		.013	.00	.00	BOX
2014.630	3001.570	5.110	3006.680	14.00	.37	.00	3006.68	.00	.48	7.50	5.000	7.500	.00	0 .0
2014.630	3001.650	5.030	3006.680	14.00	.37	.00	3006.68	.00	.48	7.50	5.000	7.500	.00	0 .0
.381	.0801					.0000	.00	5.03	.03	.18	.013	.00	.00	BOX
2015.011	3001.680	5.000	3006.680	14.00	.37	.00	3006.68	.00	.48	7.50	5.000	7.500	.00	0 .0
.619	.0801					.0000	.00	5.00	.03	.18	.013	.00	.00	BOX
2015.630	3001.820	4.950	3006.770	14.00	.38	.00	3006.77	.00	.48	7.50	5.000	7.500	.00	0 .0

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  WALL  EXIT
                    -------------------- WARNING - Flow depth near top of box conduit --------------------
  2015.630  3001.820    4.951  3006.771     14.00    4.46     .31  3007.08     .00    1.35     .00    2.000     .000   .00   1   .0
    54.640    .0220                                    .0038      .21     4.95     .00     .90    .013       .00   .00  PIPE
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Program Package Serial Number: 7189

WATER SURFACE PROFILE LISTING Date:10-30-2018 Time: 1:42:33

SKYE CANYON PARCEL 2.20

SHAUMBER MAINLINE LATERAL - CONNECTS TO SITE ENTERANCE SD

STARTING WSE PER USHA MODEL STA 1733.25

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
2070.270	3003.020	3.960	3006.980	14.00	4.46	.31	3007.29	.00	1.35	.00	2.000	.000	.00	1 .0
WALL	ENTRANCE													
2070.270	3003.020	4.420	3007.440	14.00	.42	.00	3007.44	.00	.48	7.50	5.000	7.500	.00	0 .0
1.000	.0000					.0000	.00	4.42	.04	.00	.013	.00	.00	BOX
2071.270	3003.020	4.420	3007.440	14.00	.42	.00	3007.44	.00	.48	7.50	5.000	7.500	.00	0 .0
1.000	.0000					.0000	.00	4.42	.04	.00	.013	.00	.00	BOX
JUNCT STR	.0000					.0000	.00	4.42	.04		.013	.00	.00	BOX
2072.270	3003.020	4.423	3007.443	11.00	.33	.00	3007.44	.00	.41	7.50	5.000	7.500	.00	0 .0
1.000	.0000					.0000	.00	4.42	.03	.00	.013	.00	.00	BOX
2073.270	3003.020	4.423	3007.443	11.00	.33	.00	3007.44	.00	.41	7.50	5.000	7.500	.00	0 .0
1.000	.0000					.0000	.00	4.42	.03	.00	.013	.00	.00	BOX
2074.270	3003.020	4.424	3007.444	11.00	.33	.00	3007.45	.00	.41	7.50	5.000	7.500	.00	0 .0
1.000	.0000					.0000	.00	4.42	.03	.00	.013	.00	.00	BOX
2075.270	3003.020	4.424	3007.444	11.00	.33	.00	3007.45	.00	.41	7.50	5.000	7.500	.00	0 .0
WALL	EXIT													
2075.270	3003.020	4.425	3007.445	11.00	6.22	.60	3008.05	.00	1.27	.00	1.500	.000	.00	1 .0
28.560	.0648					.0110	.31	4.43	.00	.67	.013	.00	.00	PIPE

Program Package Serial Number: 7189

WATER SURFACE PROFILE LISTING Date:10-30-2018 Time: 1:42:33

SKYE CANYON PARCEL 2.20

SHAUMBER MAINLINE LATERAL - CONNECTS TO SITE ENTERANCE SD

STARTING WSE PER USHA MODEL STA 1733.25

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
2103.830	3004.870	2.888	3007.758	11.00	6.22	.60	3008.36	.00	1.27	.00	1.500	.000	.00	1 .0

SKYE CANYON PARCEL 2.20

SHAUMBER MAINLINE LATERAL - CONNECTS TO SITE ENTERANCE SD

STARTING WSE PER USHA MODEL STA 1733.25

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  1733.25    .I          C H                                    W   E                .   R

  1740.24    .                                                                       .

  1747.23    .                                                                       .
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1754.23   .                                                                .
1761.22   .                                                                .
1768.21   .                                                                .
1775.20   .                                                                .
1782.19   . I          C  H                          W   E                 .  R
1789.19   . I          C  H                           W  E                 .  R
1796.18   . I          C  H                          W   E                 .  JX
1803.17   . I         C   H                            W E                 .  R
1810.16   . I         C   H                            W  E                .  R
1817.15   . I         C   H                            W  E                .  R
1824.15   . I         C   H                            W  E                .  R
1831.14   .                                                                .
1838.13   .                                                                .
1845.12   .                                                                .
1852.12   .                                                                .
1859.11   .                                                                .
1866.10   .                                                                .
1873.09   .                                                                .
1880.08   .                                                                .
1887.08   .                                                                .
1894.07   .                                                                .
1901.06   .                                                                .
1908.05   .                                                                .
1915.04   .                                                                .
1922.04   .                                                                .
1929.03   .                                                                .
1936.02   .                                                                .
1943.01   .                                                                .
1950.00   .                                                                .
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1957.00   .                                                                .
1963.99   .                                                                .
1970.98   .                                                                .
1977.97   .                                                                .
1984.96   .                                                                .
1991.96   .                                                                .
1998.95   .                                                                .
2005.94   .                                                                .
2012.93   .                                  IYYYYYYYYYYYCYYYH      W  E      .   WE
2019.93   .                                  I    C                   H W      .   R
2026.92   .                                   I   C                   H W      .   R
2033.91   .                                   I    C                   HW      .   R
2040.90   .                                    I   C                   HW      .   JX
2047.89   .                                   I C                      HW      .   R
2054.89   .                                   I  C                      H      .   R
2061.88   .                                    I C                      H      .   R
2068.87   .                                      IYYCYYYYYYYYYYYYYYYYYYYYYYYYYH      .   WX
2075.86   .                                      I       C  H               W E      .   R
2082.85   .                                              IYYYYYYYYCYYYH      W E      .   WE
2089.85   .                                              I  C                   W  H  .   R
2096.84   .                                              I  C                   W  H  .   R
2103.83   .                                              I C                    W  H  .   R

          2993.480  2994.968  2996.456  2997.944  2999.432  3000.920  3002.408  3003.896  3005.384  3006.872  3008.360
```

N O T E S
1. GLOSSARY
   I = INVERT ELEVATION
   C = CRITICAL DEPTH
   W = WATER SURFACE ELEVATION
   S = SUPER-ELEVATION
   H = HEIGHT OF CHANNEL
   E = ENERGY GRADE LINE
   X = CURVES CROSSING OVER
   B = BRIDGE ENTRANCE OR EXIT
   Y = WALL ENTRANCE OR EXIT
2. STATIONS FOR POINTS AT A JUMP MAY NOT BE PLOTTED EXACTLY

APPENDIX E

City of Las Vegas Planning and
Development Department Justification Letter

OLY1722.000

October 22, 2018

Linda Hartman-Maynard
City of Las Vegas
Department of Building and Safety
333 S. Rancho Drive
Las Vegas, NV 89101

SUBJECT: **Justification Letter for Proposed 2-foot Grade Difference from Existing Ground for Skye Canyon II Parcel 2.20 (APN 126-12-414-001)**

Ms. Hartman-Maynard,

Slater Hanifan Group, respectfully submits this justification letter in support of proposed grades greater than 2-feet above and below existing ground on the subject site. The site is located just northwest of the intersection of Grand Teton and Shaumber. The Assessor's Parcel Number is 126-12-414-001. The project site is approximately 28.28 gross acres.

The project site is constraint by Sheep Mountain Parkway to the West being a lot higher than existing grades and the school site on the East being low. This makes the site steep from West to East. To make the site grading work, we are asking approval for the grade difference of more than 2 feet above or below existing grades.

Thank you for considering this justification letter. Please contact me at (702) 284-5300 if you have any questions.

Sincerely,

Slater Hanifan Group, Inc.

Timothy Mulrooney, PE
Director of Land Development

PLANS APPROVED
PLANNING
Dept. of Planning
City of Las Vegas, Nevada
2' GRADE DIFFERENCE ONLY
LHM OCT 30 2018

Conforms to the minimum requirement of LVMC Title 19; applicable Master Plan Development standards and/or Conditions of Approval. Make No Change Without Approval. Plan is Not a Permit to Violate Any Ordinance.

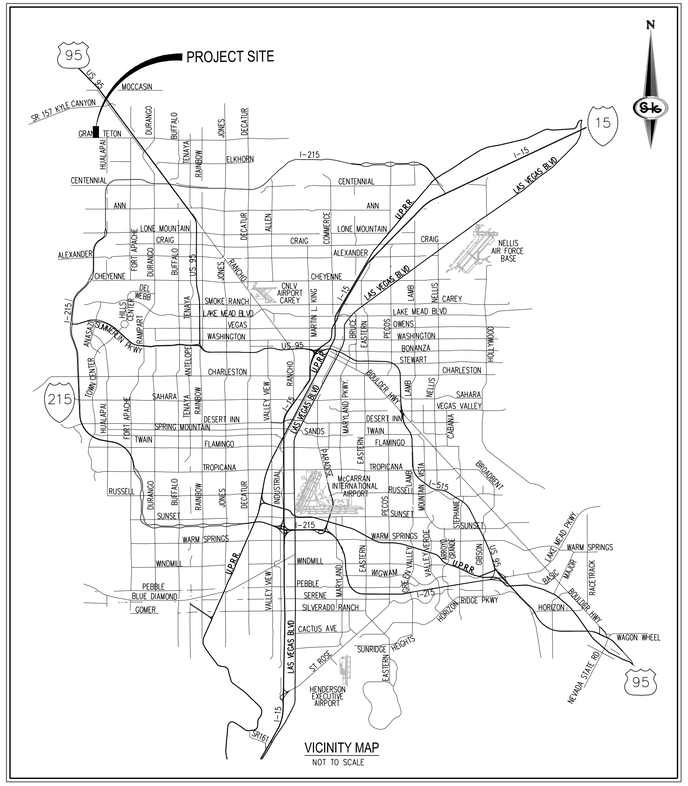
RECORDED MAP NAME:
SKYE CANYON II
PARCEL 2.17 AND 2.20
FMP-73165

PRJ-73769

WVR-73850
FOR WALL HT

APPENDIX F

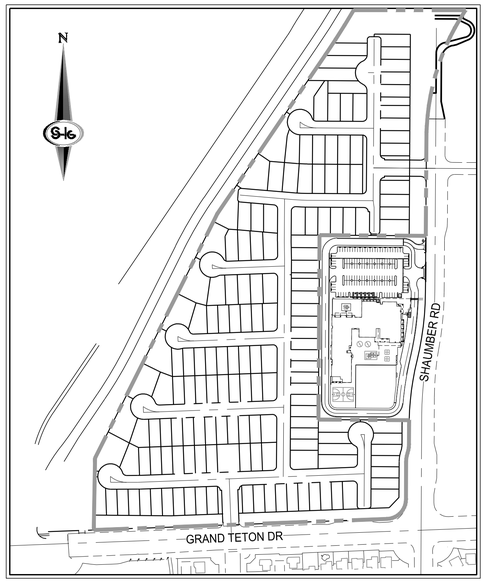
CD of Electronic Files & Revised Improvement Plans



CENTURY COMMUNITIES

IMPROVEMENT PLANS FOR SKYE CANYON II PARCEL 2.20

CITY OF LAS VEGAS, NEVADA
RESIDENTIAL SUBDIVISION
APN: 126-12-414-001



SITE MAP
NOT TO SCALE

SHEET INDEX		
NO.	SHEET	DESCRIPTION
1	C-1	COVER SHEET
2	C-2	GENERAL NOTES
3	C-3	LEGEND, ABBREVIATIONS, AND QUANTITIES
4	G-1	GRADING PLAN I
5	G-2	GRADING PLAN II
6	G-3	GRADING PLAN III
7	G-4	GRADING PLAN IV
8	G-5	GRADING PLAN V
9	G-6	GRADING PLAN VI
10	G-7	GRADING PLAN VII
11	G-8	GRADING PLAN VIII
12	G-9	GRADING PLAN IX
13	G-10	GRADING PLAN X – INTERIM
14	G-11	GRADING PLAN XI – INTERIM
15	D-1	STREET SECTIONS AND GRADING DETAILS I
16	D-2	GRADING DETAILS II
17	D-3	GRADING DETAILS III
18	SD-1	PLAN AND PROFILE – STORM DRAIN I
19	SD-2	PLAN AND PROFILE – STORM DRAIN II

APPROVALS

CITY ENGINEER–ALLEN PAVELKA PE, #9029 DATE

APPROVAL OF THESE PLANS BY THE CITY ENGINEER IS LIMITED TO THOSE IMPROVEMENTS CONSTRUCTED IN THE DEDICATED OF RIGHT-OF-WAY, AND/OR DEDICATED EASEMENTS. THIS APPROVAL DOES NOT AUTHORIZE CONSTRUCTION OF ANY IMPROVEMENTS THAT DEVIATE FROM ADOPTED STANDARDS AND/OR SPECIFICATIONS EXCEPT THOSE SPECIALLY LISTED UNDER DEVIATIONS FORM STANDARDS. THE ENGINEER SHALL RESOLVE ANY DEVIATION OTHER THAN THOSE LISTED IN DEVIATIONS FROM STANDARDS IN FAVOR OF THE UNIFORM STANDARD DRAWINGS AND SPECIFICATIONS, CLARK COUNTY AREA, NEVADA.

LAS VEGAS FIRE AND RESCUE DATE

CITY OF LAS VEGAS – DATE
PLANNING DEPARTMENT

THIS PLAN MEETS THE APPLICABLE STANDARDS OF THE PLANNING DEPARTMENT.

CENTRAL TELEPHONE CO. DBA CENTURYLINK DATE

THE AFFIXED CENTURYLINK APPROVAL DOES NOT ASSUME OR GUARANTEE LIABILITY FOR KNOWN OR UNKNOWN CONFLICTS WITH EXISTING OR PROPOSED IMPROVEMENTS. RESOLUTION OF ANY CONFLICT WILL BE ACCOMPLISHED PURSUANT TO LOCAL ORDINANCES, NEVADA REVISED STATUES AND / OR PUBLIC UTILITY COMMISSION RULES AND REGULATIONS.

SHEETS: _____

APPROVAL BY THE FIRE DEPARTMENT HAVING JURISDICTION IS REQUIRED PRIOR TO OBTAINING FINAL APPROVAL FROM LAS VEGAS VALLEY WATER DISTRICT.

NV ENERGY DATE

NV ENERGY ACKNOWLEDGES THAT WE HAVE RECEIVED YOUR PLANS AND WILL PROVIDE SERVICE TO ALL ELECTRICAL NEEDS ASSOCIATED WITH THIS PROJECT. NV ENERGY RESERVES THE RIGHT TO ADDRESS ANY EXISTING OR FUTURE CONFLICTS ONCE THE FINAL DESIGN IS COMPLETED. THE NEW SERVICE AND THE RESOLUTION OF ANY CONFLICTS WILL BE ACCOMPLISHED PURSUANT TO THE NEVADA PUBLIC UTILITY COMMISSION'S RULES AND REGULATIONS.

SOUTHWEST GAS CORPORATION DATE

COX COMMUNICATIONS LAS VEGAS, INC. DATE

OWNER	DEVELOPER	ENGINEER
CENTURY COMMUNITIES OF NEVADA, LLC 6345 SOUTH JONES BOULEVARD SUITE 400 LAS VEGAS, NV 89118 PH: 702-873-5582	CENTURY COMMUNITIES OF NEVADA, LLC 6345 SOUTH JONES BOULEVARD SUITE 400 LAS VEGAS, NV 89118 PH: 702-873-5582	SLATER HANIFAN GROUP, INC. 5740 S. ARVILLE STREET, SUITE 216 LAS VEGAS, NV 89118 PH: (702) 284-5300 Fx: (702) 284-5399 CONTACT: TIMOTHY MULROONEY

LEGAL DESCRIPTION

ALL OF PARCEL 2.20 OF "SKYE CANYON II PARCEL 2.17 AND 2.20" AS SHOWN BY MAP THEREOF IN BOOK 156, PAGE 29 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA, LYING WITHIN THE SOUTHWEST QUARTER (SW1/4) OF SECTION 12, TOWNSHIP 19 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA.

CONTAINING 28.29 ACRES, MORE OR LESS.

BENCHMARK

BM 7LV90 7NWS CITY OF LAS VEGAS RIVET AND ROUND PLATE IN CONCRETE CYLINDER, SOUTHEAST CORNER OF HUALAPAI WAY AND IRON MOUNTAIN ROAD.

ELEV: 2840.13 FEET (865.67 METERS) (NAVD 1988)

BASIS OF BEARINGS

SOUTH 87°50'19" WEST, BEING THE BEARING OF THE SOUTH LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 12, TOWNSHIP 19 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN BOOK 156, PAGE 29 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

FEMA FLOOD ZONE INFORMATION

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE X (UNSHADED) AS DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANEL 32003C1750E, DATED SEPTEMBER 27, 2002. A ZONE X (UNSHADED) IS DESCRIBED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.

PROJECT INFORMATION

ACREAGE (GROSS):	= 28.28 AC
ACREAGE (NET):	= 28.28 AC
DENSITY (LOTS/NET ACRE):	= 5.76 DU/NET AC
ZONING:	= T-O
TOTAL NO. OF RESIDENTIAL LOTS	= 163
TOTAL NO. OF COMMON ELEMENTS *	= 16
MINIMUM LOT SIZE	= 3,796 SF± (LOT 96)
MAXIMUM LOT SIZE	= 13,316 SF± (LOT 94)
OPEN SPACE PROVIDED	= 58,265 SF

EARTHWORK SUMMARY (UNADJUSTED)

CUT	163,407 CY.
FILL	71,171 CY.
NET	92,236 CY. (FILL)

DEVIATIONS FROM STANDARDS

NONE

SWPPP NOTE

NOTE: ALL LAND SURFACE AREA DISTURBANCES OVER 1 ACRE REQUIRE A STORMWATER DISCHARGE PERMIT ISSUED BY THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION (NDEP). A PHASED CONSTRUCTION UNIT IN A CONTIGUOUS SUBDIVISION IS CONSIDERED UNDER CONSTRUCTION UNTIL ALL STRIPPED SURFACE AREAS HAVE BEEN COVERED BY PAVING, BUILDING CONSTRUCTION OR PLANTING. A STORMWATER DISCHARGE PERMIT APPLICATION AND ASSOCIATED INFORMATION MAY BE DOWNLOADED FROM THE WEB SITE: HTTP://WWW.STATE.NV.US/SWPC/STORM01.HTM PROJECTS THAT DISTURB MORE THAN ONE ACRE OF LAND MUST SUBMIT TO NDEP A "NOTICE OF INTENT" FOR INCLUSION UNDER STORMWATER PERMIT NO. NVR100000 ALONG WITH THE APPROPRIATE FILLING FEE.

GEOTECHNICAL ENGINEER

PREPARED BY: GEOTEK RESIDENTIAL, LLC
ADDRESS: 6835 S. ESCONDIDO ST. SUITE B, LAS VEGAS, NV 89119
PHONE: 702-897-1424
PROJECT No: 12208-LVR
DATED: MARCH 30, 2016

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DO OVERHEAD
1-702-227-2929

FAST
Call before you UnderGround
1-702-432-5300
FREEWAY & ARTERIAL SYSTEM OF TRANSPORTATION (F.A.S.T.)

Call before you Dig
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call 811
OR
1-800-227-2600

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

CITY OF LAS VEGAS, NEVADA

CENTURY COMMUNITIES

SKYE CANYON II PARCEL 2.20

COVER SHEET

S12 T19 R59

DATE: 10/25/2018
DRAFTER: BCS
DESIGNER: HN
CHECKED: MAK

PROJECT NO.
OLY1722-000

PROFESSIONAL ENGINEER
TIMOTHY M. MULROONEY
Exp. 12/31/2019
CIVIL
No. 22938
STATE OF NEVADA
10/25/18

C-1
SHEET 1 OF 19

J:\Oly\1722-000 skye canyon parcel 2.20 phase 1\Data\Improv\Oly1722-000 cvr.dwg 10/25/2018 9:26 AM Hung Nguyen

STORMWATER RUNOFF MANAGEMENT

(REQUIRED FOR ALL SITES GREATER THAN 1 ACRE (43,560 SQ.FT.))

1. THE OWNER, SITE DEVELOPER, CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT ,MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATE IN, THE PUBLIC RIGHTS OF WAYS OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.
2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN TITLE 24.40 AND THE LAS VEGAS VALLEY CONSTRUCTION SITE BEST MANAGEMENT PRACTICES MANUAL.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.5.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS AND ALL BMPS WEEKLY, AND WITHIN 24 HOURS OF ANY ACTUAL RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12.
5. ACCUMULATED SEDIMENT IN BMPS SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

SOUTHERN NEVADA - SOUTHWEST GAS CORPORATION GENERAL NOTES

1. IN THE EVENT OF NATURAL GAS EMERGENCIES CALL 911 AND 1-877-860-6020
2. THERE SHALL BE A MINIMUM HORIZONTAL AND VERTICAL CLEARANCE OF 12-INCHES BETWEEN NATURAL GAS FACILITIES AND ANY UNDERGROUND FACILITIES AND/OR STRUCTURES, INCLUDING BUT NOT LIMITED TO WATER, SEWER, STORM DRAIN, COMMUNICATIONS, AND ELECTRIC
3. FOR VALVE ADJUSTMENT CONTACT 702-668-6107 48 HOURS PRIOR TO CONSTRUCTION.
4. IN THE EVENT OF NATURAL GAS CONFLICT WITH PROPOSED UTILITIES AND/OR STRUCTURES CONTACT 702-365-2099

CAUTION: HIGH PRESSURE GAS

CALL SOUTHWEST GAS AT 702-400-1789 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES 48 HOURS PRIOR TO CONSTRUCTION

LEGAL DESCRIPTION

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CONTAINING 28.29 ACRES, MORE OR LESS.

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BM 7LV90 7NWS CITY OF LAS VEGAS RIVET AND ROUND PLATE IN CONCRETE CYLINDER, SOUTHEAST CORNER OF HUALAPAI WAY AND IRON MOUNTAIN ROAD.

ELEV: 2840.13 FEET (865.67 METERS) (NAVD 1988)

BASIS OF BEARINGS

SOUTH 87°50'19" WEST, BEING THE BEARING OF THE SOUTH LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 12, TOWNSHIP 19 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN BOOK 156, PAGE 29 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

2.2 CITY OF LAS VEGAS SEWER NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS AND THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS' CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA, AS AMENDED. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE SPECIFICATIONS.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM CONSTRUCTION AS PER PLANS. ANY ADDITIONS, DELETIONS, OR CHANGES SHALL FIRST MEET WITH THE APPROVAL OF THE CITY ENGINEER.
3. CHISEL "S" OR "G" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
4. POLYVINYL (PVC) SEWER PIPE SHALL MEET ASTM D-3034 SDR 35 SPECIFICATIONS, INSTALLED WITH SAND BEDDING AND BACKFILL OF TYPE II AGGREGATE BASE.
5. ALL MANHOLES PAVED IN STREETS EIGHTY (80') FOOT R/W AND LARGER SHALL HAVE CONCRETE COLLARS. STREETS LESS THAN EIGHTY (80') FOOT R/W WILL REQUIRE RETROFIT IF PAVING DOES NOT CONFORM TO CITY STANDARDS AT THE MANHOLE.
6. TEE SADDLES SHALL BE USED TO CONNECT SEWER LATERALS TO EXISTING MAIN LINES UP TO TWELVE INCH (12") DIAMETER. CONNECTIONS TO FIFTEEN INCH (15") OR LARGER MAINS SHALL REQUIRE SPECIAL PROCEDURES. IN LINE "Y" 'S SHALL BE USED ON LINES TWELVE INCHES (12") OR ABOVE.
7. WATER MAINS SHALL BE PROTECTED IN ACCORDANCE WITH LVVWD STANDARDS WHENEVER A SEWER MAIN CROSSES OVER A WATER MAIN OR THE SEWER IS LESS THAN EIGHTEEN INCH (18") UNDER A WATER MAIN.
8. ALL CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CITY OF LAS VEGAS MUST BE STATE OF NEVADA CLASS "A" CONTRACTORS.
9. THE CITY OF LAS VEGAS WILL NOT ACCEPT ANY SEWER MAINS WHICH HAVE A VERTICAL DEFLECTION OF MORE THAN ONE TENTH (0.1) OF A FOOT FROM THE APPROVED CONSTRUCTION PLANS AT ANY LOCATION. SEWER MAINS FOUND TO EXCEED THIS TOLERANCE WILL HAVE TO BE REPAIRED OR REMOVED OR REPLACED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO ACCEPTANCE BY THE CITY OF LAS VEGAS.
10. INSTALLATION OF CURVED SEWER REQUIRES THE USE OF C-900 PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.

LAS VEGAS VALLEY WATER DISTRICT (LVVWD) STANDARD NOTES

LVVWD PROJECT #_____ (REVISED 08/01/2017)

1. NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN APPROVED FOR CONSTRUCTION BY THE LVVWD. FOLLOWING WATER PLAN APPROVAL, NOTICE SHALL BE GIVEN TO THE LVVWD COMMUNICATION SUPPORT CENTER (258-7171) TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. FOR FUTURE INSPECTIONS, NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO THE REQUESTED LVVWD INSPECTION. WHEN REQUESTING INSPECTIONS, PLEASE REFER TO THE PROJECT # IDENTIFIED ABOVE.
2. ALL WORK SHALL CONFORM TO LVVWD STANDARD PLATES, DRAWINGS, AND SPECIFICATIONS, AND TO THE 2010 EDITION OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS). THE LATEST EDITION OF UDACS SHALL SUPERSEDE ANY CONFLICTS CONTAINED IN THE APPROVED DRAWINGS AND/OR SPECIFICATIONS.
3. ALL WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2 ABOVE, SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT DRAFT OR EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENT, CLARK COUNTY AREA.
4. A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVVWD.
5. ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING WITH LVVWD APPROVED SERVICE SADDLES.
6. ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
7. ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS, VALLEY AND CURB GUTTERS.
8. ALL WATER AND STORM DRAIN OR SANITARY SEWER CROSSINGS SHALL CONFORM TO SECTION 2.22 OF THE 2010 EDITION OF THE UDACS.
9. ALL WATER FACILITIES AND APPURTENANCES SHALL BE DISINFECTED, PRESSURE TESTED, AND HAVE AN ACCEPTABLE PASSING HEALTH WATER SAMPLE OBTAINED, PRIOR TO OPERATION AND USE.
10. THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 OR 258-3802, TWO (2) WORKING DAYS PRIOR TO METER PICKUP.
11. ANY INTERRUPTION OF SERVICE MUST BE PERFORMED IN ACCORDANCE WITH UDACS SECTION 3.14.01, AND APPROVED BY THE LVVWD INSPECTION DIVISION PRIOR TO SHUTDOWN. PROPER WRITTEN NOTIFICATION MUST BE GIVEN TO ALL AFFECTED CUSTOMERS.
12. ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE AS LISTED ON THE LVVWD APPROVED PRODUCT'S LIST FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS BY SUBMITTING SHOP DRAWINGS.
13. TELEPHONE "CALL BEFORE YOU DIG" AT "811" OR 1-800-227-2600.
14. THE INSTALLATION OF LVVWD MUNICIPAL WATER FACILITIES WITHIN ALL STREETS IS ASSUMED TO BE IN COMPLIANCE WITH THE UNIFORM STANDARDS, INCLUDING THE PLACEMENT OF ASPHALT PAVING STREET SURFACES. ANY REPAIR WORK DONE BY THE LVVWD TO THE MUNICIPAL WATER FACILITIES WILL INCLUDE THE PLACEMENT OF AN APPROPRIATELY SIZED ASPHALT REPAIR PATCH ON THE STREET SURFACE.

    ANY DECORATIVE PAVING SURFACE WITHIN THE STREET IS THE RESPONSIBILITY OF THE OWNER'S ASSOCIATION, OR THE INDIVIDUAL PROPERTY OWNERS IF NO OWNER'S ASSOCIATION IS IN EXISTENCE, OR THE AGENCY HAVING JURISDICTION. DECORATIVE SURFACE MATERIALS PLACED WITHIN THE TEN FOOT EASEMENT ABUTTING A PUBLIC OR PRIVATE STREET, IF DISTURBED BY THE LVVWD DURING THE REPAIR OR OPERATION OF ITS FACILITIES, WILL BE REPLACED BY LVVWD WITH AN APPROPRIATELY SIZED PLAIN FINISH CONCRETE PATCH. THE LVVWD WILL NOT RESTORE, AND WILL NOT BE RESPONSIBLE FOR THE RESTORATION OF, ANY DECORATIVE PAVING SURFACE WITHIN THE STREET. THE LVVWD WILL NOT ATTEMPT TO MATCH COLOR OR FINISH OF ANY ADJACENT MATERIALS.

15. NO LEAD COMPLIANCE NOTE:
TO COMPLY WITH THE FEDERAL SAFE DRINKING WATER ACT, ALL WATER WORKS BRASS PRODUCTS PROPOSED TO BE RELOCATED, OR INSTALLED AS NEW MUST BE INSTALLED WITH THE LEAD FREE APPROVED PRODUCT. THE OLD LEADED PRODUCT MAY NOT BE REUSED.

GRADING NOTES

1. INDICATED GRADES OTHER THAN T.C., F.G. & GUTTER F.L. ARE ROUGH GRADES.
2. THE ROUGH GRADING PLANS SHALL BE ON THE JOB SITE AT ALL TIMES. THE ROUGH GRADING SHALL BE FINISHED IN CONFORMANCE WITH THE LINES AND GRADES SHOWN ON THE PLANS. THE GRADING QUANTITIES ARE BASED ON THE ELEVATION AND DETAILS SHOWN ON THE PLANS. ANY DEVIATIONS FROM THE PLANS WILL RESULT IN QUANTITY CHANGES.
3. CARE SHALL BE EXERCISED IN GRADING CORNER LOTS.
4. ROUGH PAD ELEVATIONS SHALL BE GRADED TO WITHIN 0.1' OF THE PAD ELEVATIONS SHOWN ON THE PLANS. WHEN GRADING IS COMPLETE PER THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE LOTS CAN BE INSPECTED. AT THAT TIME THE ENGINEER SHALL ALSO DECIDE IF ANY ADDITIONAL DITCHES OR BERMS ARE REQUIRED. THE CONTRACTOR IS REQUESTED NOT TO REMOVE ANY OF HIS ROUGH GRADING EQUIPMENT UNTIL HE RECEIVES GRADING APPROVAL FROM THE ENGINEER.
5. SOILS REPORT PREPARED BY GEOTEK RESIDENTIAL, LLC, PROJECT NO. 12208-LVR, DATED MARCH 30, 2016.
6. EARTHWORK QUANTITIES (RAW):
   -CUT = 163,407 CUBIC YARDS.
   -FILL = 71,171 CUBIC YARDS

   A) THE ABOVE QUANTITIES DO NOT REFLECT LOSSES DUE TO SUBSIDENCE OR SHRINKAGE.
   B) THE ABOVE QUANTITIES DO REFLECT USING NATIVE MATERIAL IN LIEU OF TYPE I GRAVEL BASE MATERIAL FOR STREET SECTIONS.
   C) THE ABOVE QUANTITIES DO NOT REFLECT ANY EARTHWORK WHICH MAY BE REQUIRED BY THE ENGINEER TO CONSTRUCT ADDITIONAL PROTECTIVE DITCHES OR BERMS NOT SHOWN ON THESE DRAWINGS.

CITY OF LAS VEGAS FIRE AND RESCUE GENERAL NOTES

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LAS VEGAS FIRE AND RESCUE ADOPTED FIRE CODE ORDINANCE # 6325, FOR HYDRANT SPECIFICATIONS, AND HYDRANT INSTALLATION SPECIFICATIONS.
2. ONLY FIRE HYDRANTS THAT ARE ON THE LAS VEGAS VALLEY WATER DISTRICT'S – **APPROVED PRODUCTS LIST** ARE ALLOWED TO BE INSTALLED.
3. A PERMIT IS REQUIRED FROM LAS VEGAS FIRE AND RESCUE FOR ALL INSTALLATION OF ON-SITE WATER LINES AND FIRE HYDRANTS. THE PERMIT AND CONTRACTORS MATERIAL TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER BEFORE COMMENCEMENT OF WORK [IFC 105.7.12]
4. ON ANT RESIDENTIAL OR COMMERCIAL INSTALLATIONS, FIRE HYDRANTS SHALL BE INSTALLED AND FIRE APPARATUS ACCESS ROADS SHALL BE MAINTAINED BEFORE COMMENCEMENT OF ANY COMBUSTIBLE CONSTRUCTION. ALL FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER AND SHALL BE CAPABLE OF DELIVERING THE REQUIRED FIRE FLOW. [IFC 3310, 3312]
5. TO IDENTIFY THE FIRE HYDRANT LOCATIONS, THE CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT THE CENTER LINE OF THE STREET ADJACENT TO THE FIRE HYDRANTS. [IFC 507.5.7.3]
6. ALL UNDERGROUND INSPECTIONS, PRESSURE AND FLUSH VERIFICATIONS OF ALL FIRE HYDRANTS AND FIRE LINES, SHALL BE CONDUCTED BEFORE COVERING THE LINES. CENTER LOADING IS ACCEPTABLE FOR THE HYDRO TESTS WITH PRIOR FIRE PREVENTION APPROVAL. [IFC 106.3]
7. ALL ON-SITE UNDERGROUND WATER MAINS AND MATERIALS SHALL BE U.L. LISTED, A.W.W.A APPROVED AND SHALL BE RATED FOR THE APPROPRIATE WORKING PRESSURE. [IFC 507.2.1, NFPA 24]
8. PAINTING OF CURBS, FIRE HYDRANTS, PADS, PROTECTION OF FIRE HYDRANTS FROM PHYSICAL DAMAGE, AND ALL OTHER WORK NECESSARY PER PLANS SHALL BE COMPLETED BEFORE APPROVAL BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION. [IFC 507]
9. PRIVATE HYDRANTS SHALL BE PAINTED RED. [IFC 507.5.7.1]
10. PRIOR TO THE FINAL OCCUPANCY, A FIRE FLOW TEST SHALL BE WITNESSED BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW. [IFC 507]
11. FIRE HYDRANT SPACING SHALL BE AS FOLLOWS: [IFC C102]
    - RESIDENTIAL- 500 FT UNSPRINKLERED; 600 FT SPRINKLERED.
    - COMMERCIAL- 300 FT UNSPRINKLERED; 400 FT SPRINKLERED.
12. WHERE NEW WATER MAINS ARE EXTENDED ALONG STREETS OR NEW STREETS ARE INSTALLED WHERE FIRE HYDRANTS ARE NOT NEEDED FOR PROTECTION OF THE STRUCTURES, FIRE HYDRANTS SHALL BE INSTALLED AT A MAXIMUM OF 1,000 FT SPACING, TO PROVIDE FOR TRANSPORTATION HAZARDS. WHERE STREETS ARE PROVIDED WITH MEDIAN DIVIDERS OR HAVE FOUR (4) OR MORE TRAFFIC LANES AND HAVE A TRAFFIC COUNT OF MORE THAN 30,000 PER DAY, HYDRANTS ARE REQUIRED ON EACH SIDE OF THE STREET SPACED AT 500 FT ON AN ALTERNATING BASIS. [IFC C102.8]
13. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE RADIUS OF A CUL-DE-SAC OR WITHIN 20 FEET OF THE PERIMETER OF THE RADIUS OF THE CUL-DE-SAC.
14. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN 6 FT OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREETLIGHT OR ANY OTHER OBSTRUCTION. [IFC C102.12]
15. A MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A ONE-TWO FAMILY DWELLING SHALL NOT EXCEED 300 FT, AS MEASURED BY AN APPROVED ROUTE. [IFC C102.4]
16. THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A FIRE DEPARTMENT CONNECTION (FDC) SHALL NOT EXCEED 100 FT, AS MEASURED BY AN APPROVED ROUTE. [IFC C102.7]
17. THE MAXIMUM DISTANCE FROM A HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. [IFC C102.6]
18. TWO (2) SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE ARE 4 OR MORE FIRE HYDRANTS/SPRINKLER LEAD-INS ARE INSTALLED ON A SINGLE SYSTEM. SECTIONAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 2 FIRE HYDRANTS CAN BE OUT OF SERVICE DUE TO A BREAK IN A WATER MAIN. [IFC C104]
19. ALL FIRE APPARATUS ACCESS ROADS SHALL BE PAVED TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES, AND SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF THE FIRE APPARATUS. [IFC 503.2.3]
20. THE GRADIENT FOR THE FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 12% ANGLES OF APPROACH AND ANGLES OF DEPARTURE SHALL NOT EXCEED 6% FOR 25 FEET PRIOR TO OR AFTER THE GRADE CHANGE. ADJACENT TO THE STRUCTURES GRADIENT SHALL NOT EXCEED 6%. [IFC 503.2.7, 503.2.8]
21. THE TURNING RADIUS OF THE FIRE APPARATUS ACCESS ROADS SHALL BE NO LESS THAN 52 FEET OUTSIDE AND 28 FEET INSIDE TURNING RADIUS. [IFC 503.2.4]
22. VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL NOT BE LESS THAN 13 FT 6 INS. [IFC 503.2.1]
23. FIRE DEPARTMENT ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF NOT LESS THAN 40 FT. FLOW LINE TO FLOW LINE WITH PARALLEL PARKING PERMITTED ON BOTH SIDES. NOT LESS THAN 32 FT WIDE, FLOW LINE TO FLOW LINE, WHERE PARKING IS PERMITTED ONLY ON ONE SIDE OF THE FIRE APPARATUS ACCESS ROAD. NOT LESS THAN 24 FT WIDE, FLOW LINE TO FLOW LINE, WHERE NO PARKING IS PERMITTED ON EITHER SIDE. FIRE LANES THROUGH PARKING LOTS SHALL BE NOT LESS THAN 24 FT. [IFC 503.2.1.1]
24. A FIRE APPARATUS ACCESS ROADS SHALL BE REQUIRED WHEN ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY IS LOCATED MORE THAN 150 FT FROM A FIRE DEPARTMENT VEHICLE ACCESS. THE DISTANCE COULD BE INCREASED TO 250 FT IF THE BUILDING IS SPRINKLERED. [IFC 503.1.1]
25. APPROVED SECONDARY FIRE APPARATUS ACCESS SHALL BE PROVIDED FOR 100 OR MORE DWELLING UNITS, ROAD(S) WITH DEAD-ENDS OF WITH A SINGLE POINT OF ACCESS IN EXCESS OF 600 FT. COMMERCIAL AND INDUSTRIAL DEVELOPMENTS WHERE BUILDINGS EXCEED 2 STORIES OR 30 FEET IN HEIGHT, OR EXCEEDING 62,000 SQUARE FEET IN AREA. [IFC 503.1.2]
26. ALL DEAD-END FIRE APPARATUS ROADS AND/OR FIRE LANES, PUBLIC OR PRIVATE, IN EXCESS OF 150 FT IN LENGTH SHALL BE PROVIDED WITH AN APPROVED TURN AROUND HAVING A MINIMUM DIAMETER OF 81 FT. [IFC 503.2.5]
27. ALL FIRE APPARATUS ACCESS ROADS SHALL BE MARKED BY PLACING APPROVED SIGNS AT THE START OF THE DESIGNATED FIRE LANE, ONE SIGN AT THE END OF THE FIRE LANE AND WITH SIGNS AT INTERVALS OF 100 FEET ALONG THE DESIGNATED FIRE LANES. SIGNS TO BE PLACED ON BOTH SIDES OF AN ACCESS ROADWAY IF NEEDED TO PREVENT PARKING ON EITHER SIDE. SIGNS TO BE INSTALLED NO HIGHER THAN 10 FT OR LESS THAN 6 FT FROM THE ROADWAY LEVEL. THE CURB ALONG OR ON THE PAVEMENT OR CEMENT (IF NO CURB IS PROVIDED) SHALL BE PAINTED WITH A RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS. [IFC 503.3]
28. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE IFC 503.6 AND IFC APPENDIX M.

2.5 CITY OF LAS VEGAS GRADING NOTES

1. IN THE EVENT THAT ANY UNFORESEEN CONDITIONS NOT COVERED BY THESE NOTES ARE ENCOUNTERED DURING GRADING OPERATIONS, THE OWNER/ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTION.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL NECESSARY CUTS AND FILLS WITHIN THE LIMITS OF THIS PROJECT AND THE RELATED OFF-SITE WORK, SO AS TO GENERATE THE DESIRED SUBGRADE, FINISH GRADES AND SLOPES SHOWN.
3. CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ALL EXCAVATION. ADEQUATE SHORING SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR TO PREVENT UNDERMINING OF ANY ADJACENT FEATURES OR FACILITIES AND/OR CAVING OF THE EXCAVATION.
4. THE CONTRACTOR IS WARNED THAT AN EARTHWORK BALANCE WAS NOT NECESSARILY THE INTENT OF THIS PROJECT. ANY ADDITIONAL MATERIAL REQUIRED OR LEFTOVER MATERIAL FOLLOWING EARTHWORK OPERATIONS BECOMES THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE GRADING CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE OWNER TO PROVIDE FOR THE REQUIREMENTS OF THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND ASSOCIATED PERMIT.
6. CONTRACTOR SHALL GRADE TO THE LINES AND ELEVATIONS SHOWN ON THE PLANS WITHIN THE FOLLOWING HORIZONTAL AND VERTICAL TOLERANCES AND DEGREES OF COMPACTION, IN THE AREAS INDICATED:

	HORIZONTAL	VERTICAL COMPACTION	
A. PAVEMENT AREA SUBGRADE	0.1'+	+0.0' TO -0.1'	SEE SOILS REPORT
B. ENGINEERED FILL	0.5'+	+0.1' TO -0.1'	SEE SOILS REPORT

COMPACTION TESTING WILL BE PERFORMED BY THE OWNER OR HIS REPRESENTATIVE.

7. ALL CUT AND FILL SLOPES SHALL BE PROTECTED UNTIL EFFECTIVE EROSION CONTROL HAS BEEN ESTABLISHED.
8. THE USE OF POTABLE WATER WITHOUT A SPECIAL PERMIT FOR BUILDING OR CONSTRUCTION PURPOSES INCLUDING CONSOLIDATION OF BACKFILL OR DUST CONTROL IS PROHIBITED. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION WATER.
9. THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWALKS AND ALL OTHER PUBLIC RIGHT-OF-WAY IN A CLEAN, SAFE AND USABLE CONDITION. ALL SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE PUBLICLY OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC SHALL BE MAINTAINED IN A CLEAN, SAFE AND USABLE CONDITION.
10. IN THE EVENT THAT ANY TEMPORARY CONSTRUCTION ITEM IS REQUIRED THAT IS NOT SHOWN ON THESE DRAWINGS, THE OWNER AGREES TO PROVIDE AND INSTALL SUCH ITEM AT HIS OWN EXPENSE AND AT THE DIRECTION OF THE CITY ENGINEER. TEMPORARY CONSTRUCTION INCLUDES DITCHES, BERMS, ROAD SIGNS AND BARRICADES, ETC.

UTILITY LOCATION NOTE TO CONTRACTOR

EXISTING UTILITY LOCATIONS SHOWN HEREIN ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATIONS. CALL BEFORE YOU DIG: 1 (800) 227-2600; SOUTHWEST GAS CORPORATION: 702-400-1789 (STANDBY CONTACT NUMBER)

2.1 CITY OF LAS VEGAS GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA NEVADA", LATEST ISSUE; THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY AREA NEVADA", LATEST REVISED EDITION; THE "SUMMERLIN IMPROVEMENT STANDARDS" FOR WORK IN THE SUMMERLIN AREA; AND OTHER APPLICABLE APPROVED STANDARDS ISSUED BY THE CONTROLLING AGENCY; THE UNIFORM BUILDING CODE; AND ALL LOCAL CITY CODES AND ORDINANCES APPLICABLE, EXCEPT AS NOTED ON THIS SHEET AS "DEVIATIONS FROM STANDARDS".
2. THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. EXISTING UTILITIES AS SHOWN FROM CLV PLANS LIBRARY ARE APPROXIMATE AND FOR RECORD PURPOSES. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. EXISTING UTILITY SERVICE LATERALS MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND AND OVERHEAD INTERFERENCE'S WHICH MAY AFFECT HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH.
3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING UTILITY LINES, STRUCTURES AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED SATISFACTORY TO THE CITY ENGINEER AND OWNING UTILITY COMPANY AT THE EXPENSE OF THE CONTRACTOR.
4. ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE PLANS, ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.
5. TYPE V CEMENT SHALL BE USED IN ALL OFF-SITE CONCRETE WORK. CONCRETE TO BE 3000 P.S.I. MINIMUM @ 28 DAYS. MIX DESIGNS TO BE APPROVED BY THE CITY, PRIOR TO THE USE ON THE PROJECT.
6. PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.
7. EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300'IN EXTRUDED-TYPE CURB.
8. AC PAVEMENT TO BE ONE-HALF INCH (½") ABOVE LIP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS AND CROSS GUTTERS.
9. CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED PER STANDARD DRAWING 216.
10. SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.
11. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF THE TRANSITIONS TO BE AS SHOWN ON PLANS.
12. ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY GEOTEK RESIDENTIAL, LLC, REPORT #12208-LVR, MARC

ABBREVIATIONS

AC	ASPHALTIC CONCRETE OR ACRE	FH	FIRE HYDRANT	PVC	POLYVINYL CHLORIDE
AGG	AGGREGATE BASE	FL	FLOWLINE	PVI	POINT OF VERTICAL INTERSECTION
APN	ASSESSORS PARCEL NUMBER	FT	FEET OR FOOT	QTY	QUANTITY
APPROX OR ~	APPROXIMATE	FUT	FUTURE	R	RADIUS
AVE	AVENUE	GRD	GRADE OR GROUND	RCA	REINFORCED CONCRETE ARCH
@	AT	GB	GRADE BREAK OR GRADE CHANGE	RCB	REINFORCED CONCRETE BOX
BC	BEGIN CURVE OR BACK OF CURB	GV	GATE VALVE	RCP	REINFORCED CONCRETE PIPE
BCR	BEGINNING OF CURB RETURN	HDPE	HIGH DENSITY POLYETHYLENE	RD	ROAD
BHW	BOTTOM OF HEADWALL	HOA	HOME OWNERS ASSOCIATION	RDWY ESMT	ROADWAY EASEMENT
BLDG	BUILDING	HORZ	HORIZONTAL	REQD	REQUIRED
BLVD	BOULEVARD	HP	HIGH POINT	REV	REVISION
BM	BENCHMARK	HWL	HIGH WATER LEVEL	RG	ROUGH GRADE
BVC	BEGIN VERTICAL CURVE	HDWL OR HW	HEADWALL	RT OR R	RIGHT
BWV	BACK WATER VALVE	HYD	HYDRAULIC OR HYDRANT	R/W, ROW	RIGHT OF WAY
CC	CLARK COUNTY	ID	INSIDE DIAMETER	S	SLOPE
CCAUSD	CLARK COUNTY AREA UNIFORM STANDARD DRAWINGS	IN	INCH	SCH	SCHEDULE
CCPW	CLARK COUNTY PUBLIC WORKS	INT	INTERSECTION	SD	STORM DRAIN
CCRFCD	CLARK COUNTY REGIONAL FLOOD DISTRICT	INV	INVERT ELEVATION	SDDI	STORM DRAIN DROP INLET
CCWRD	CLARK COUNTY WATER RECLAMATION DISTRICT	IP	IRON PIPE	SDMH	STORM DRAIN MANHOLE
CE	COMMON ELEMENT	IRRG	IRRIGATION	SEC	SECTION
CL,C/L,C	CENTERLINE	LF	LINEAR FEET	SF	SQUARE FEET
CLR	CLEAR OR CLEARANCE	LP	LOW POINT	SHT	SHEET
CLSM	CONTROLLED LOW STRENGTH MATERIAL	LT OR L	LEFT	SNWA	SOUTHERN NEVADA WATER AUTHORITY
CLV	CITY OF LAS VEGAS	LVVWD	LAS VEGAS VALLEY WATER DISTRICT	SPECS	SPECIFICATIONS
CML&C	CEMENT MORTAR LINED AND COATED	LWL	LOW WATER LEVEL	ST	STREET
CMU	CONCRETE MASONRY UNIT	MAX	MAXIMUM	SSMH	SANITARY SEWER MANHOLE
CNLV	CITY OF NORTH LAS VEGAS	MECH	MECHANICAL	STA	STATION
COH	CITY OF HENDERSON	MH	MANHOLE	STD	STANDARD
CONC	CONCRETE	MIN	MINIMUM	STL	STEEL OR STREET LIGHT
CT	COURT	MISC	MISCELLANEOUS	SW	SIDEWALK
CY OR CU YD	CUBIC YARD	MUE	MUNICIPAL UTILITY EASEMENT	SWG	SOUTHWEST GAS
DCWCS	DESIGN AND CONSTRUCTION FOR WASTEWATER COLLECTION SYSTEMS	NDOT	NEVADA DEPARTMENT OF TRANSPORTATION	SWR OR SS	SANITARY SEWER
		NPC	NEVADA POWER COMPANY	SY	SQUARE YARD
DET	DETAIL	NTS	NOT TO SCALE	TAN	TANGENT
DI	DUCTILE IRON OR DRAIN INLET	NUE	NONEXCLUSIVE UTILITY EASEMENT	TC	TOP OF CURB
DIA, ø	DIAMETER	OC	ON CENTER	TF	TOP OF FLOOR OR TOP OF FOOTING
DIP	DUCTILE IRON PIPE	OD	OUTSIDE DIAMETER OR OVERALL DIMENSION	TG	TOP OF GRATE
DR	DRIVE	OFF	OFFSET	THRU	THROUGH
DWG(S)	DRAWING	ORIG	ORIGINAL	THW	TOP OF HEADWALL
DWY	DRIVEWAY	PAE	PUBLIC OR PEDESTRIAN ACCESS EASEMENT	TP	TOP OF PIPE
EA	EACH	PB	PULL BOX	TW	TOP OF WALL
ECR	END CURB RETURN	PC	POINT OF CURVE	TRW	TOP OF RETAINING WALL
EG	EXISTING GROUND	PCC	POINT OF COMPOUND CURVE	TSW	TOP OF SCREEN WALL
EL	ELEVATION	PDE	PUBLIC DRAINAGE EASEMENT	TYP	TYPICAL
ESMT	EASEMENT	℄ OR PL	PROPERTY LINE	UDACS	UNIFORM DESIGN AND CONSTRUCTION STANDARDS
EP	EDGE OF PAVEMENT	POB	POINT OF BEGINNING		
ERU	EQUIVALENT RESIDENTIAL UNIT	POC	POINT OF CURVATURE	VC	VERTICAL CURVE
EVC	END VERTICAL CURVE	POE	POINT OF ENDING	VERT	VERTICAL
EX OR EXIST	EXISTING	PRC	POINT OF REVERSE CURVATURE	VG	VALLEY GUTTER
FC	FACE OF CURB	PRELIM	PRELIMINARY	WI	WROUGHT IRON
FF	FINISHED FLOOR	PROP	PROPOSED	WL	WATER LINE
FG	FINISHED GRADE	PRV	PRESSURE REDUCING VALVE	WPZ	WATER PRESSURE ZONE
FGH	FINISHED GRADE, HIGH SIDE	PUE	PUBLIC UTILITY EASEMENT	WT	WEIGHT
FGL	FINISHED GRADE, LOW SIDE	PT	POINT OF TANGENT OR POINT	WTR	WATER LINE

SPECIAL NOTE

IN THE EVENT THAT ANY TEMPORARY CONSTRUCTION ITEM IS REQUIRED WHICH IS NOT SHOWN ON THESE DRAWINGS, THE OWNER AGREES TO PROVIDE AND INSTALL SUCH ITEM AT HIS OWN EXPENSE AND AT THE DIRECTION OF THE CLARK COUNTY DEPT. OF PUBLIC WORKS. TEMPORARY CONSTRUCTION ITEMS INCLUDE: PAVEMENT TRANSITIONS, PROTECTIVE DITCHES AND BERMS, ROAD SIGNS AND BARRICADES, ETC.

NOTICE TO CONTRACTOR

-QUANTITIES SHOWN ARE ESTIMATES ONLY AND ARE INTENDED TO ILLUSTRATE SCOPE OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXACT QUANTITIES INVOLVED.

-EXISTING UTILITY LOCATIONS SHOWN HEREIN ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATIONS. CALL BEFORE YOU DIG: (800) 227-2600

LEGEND

EXISTING	PROPOSED	DESCRIPTION
(1900)	1900	5' CONTOUR
		1' CONTOUR
		STRIPING
		SEWER MANHOLE
		CURB AND GUTTER
EX 8" PVC SS	8" PVC SS	SANITARY SEWER PIPE AND FLOW ARROW
EX 8" PVC WTR	8" PVC WTR	WATER PIPE
		WATER GATE VALVE
		FIRE HYDRANT
		WATER BLOW-OFF
		WATER LATERAL W/ METER
		SANITARY SEWER LATERAL
		STREETLIGHT
		EDGE OF PAVEMENT
		TRAFFIC SIGN
PAD= XXX.X FF = XXX.X	PAD= XXX.X FF = XXX.X	PAD ELEVATION FINISHED FLOOR ELEVATION
(00.00) TC	00.00 TC	ELEVATION
		RETAINING WALL
		STORM DRAIN W/ MANHOLE

	EXISTING GAS GATE VALVE		PROPOSED SCARP AREA
@MH	EXISTING UNKNOWN MANHOLE		
GAS	EXISTING GAS, SIZE PER PLAN		DRIVEWAY
	EXISTING POWER POLE		
	EXISTING TRAFFIC SIGNAL		PROPOSED RIP RAP
	EXISTING WALL		SIGHT VISIBILITY ZONE PER STD DWG NO. 201.2
	WATER PIPE FITTING		
POC	WATER POINT OF CONNECTION		HANDICAP RAMP
POC	SEWER POINT OF CONNECTION		MODEL HOME WATER PHASE LINE
	DAYLIGHT LINE	M	MODEL HOME
	STREET CENTERLINE		
	RIGHT-OF-WAY		
	MATCHLINE		
	BOUNDARY LINE		
	PHASE LINE		
℄	PROPERTY LINE		
	FLOWLINE		
	SAWCUT		
FILL / CUT	CUT/FILL TRANSITION LINE		
	SIDEWALK		
	EX STRIPING TO BE OBLITERATED		
	GRADE BREAK LINE		
	REFLECTIVE RAISED PAVEMENT MARKERS		
BWV	BACK WATER VALVE		
	WROUGHT IRON FENCE		
	PONY WALL		
	DECORATIVE PERIMETER WALL		
	DECORATIVE PERIMETER RETAINING WALL		
	PROPOSED CURB AND GUTTER WITH RIGHT-OF-WAY AT BACK OF CURB		
	EXISTING CURB AND GUTTER WITH RIGHT-OF-WAY AT BACK OF CURB		
	FUTURE CURB AND GUTTER WITH RIGHT-OF-WAY AT BACK OF CURB		

QUANTITIES

			PRIVATE	PUBLIC
DRAINAGE				
1.	48" TYPE III STORM DRAIN MANHOLE	EA	–	–
2.	10.0' TYPE "CM2" DROP INLET	EA	2	–
3.	17.5' TYPE "CM2" DROP INLET	EA	–	–
4.	20.0' TYPE "CM2" DROP INLET	EA	3	–
5.	18" RCP CLASS IV STORM DRAIN	LF	21	–
6.	24" RCP CLASS IV STORM DRAIN	LF	119	–
7.	30" RCP CLASS IV STORM DRAIN	LF	231	–
8.	36" RCP CLASS IV STORM DRAIN	LF	78	–
9.	4' X 4' NDOT TYPE II DROP INLET	EA	1	–
10.	3.0' X 2' NDOT TYPE II DROP INLET	EA	1	–
11.	RIPRAP D50=6", THK=12"	SF	–	–
12.	8' WIDE CONCRETE VALLEY GUTTER W/10" TYPE I AGGREGATE BASE	SF	6,568	–
13.	SIDEWALK UNDER DRAIN	EA	3	–
13.	3' CONCRETE U-CHANNEL	LF	136	–
SEWER SYSTEM				
1.	4" PVC SEWER LATERAL (PRIVATE)	LF	–	–
2.	8" PVC SEWER PIPE (PUBLIC)	LF	–	–
3.	STANDARD 48" SEWER MANHOLE (PUBLIC)	EA	–	–
4.	8" SEWER PIPE CAP	EA	–	–
5.	BACK WATER VALVE (PRIVATE)	EA	–	–
6.	8" C-900 WATER QUALITY SEWER PIPE (PUBLIC)	EA	–	–
WATER SYSTEM				
1.	FIRE HYDRANT ASSEMBLY W/6" GATE VALVE PER UDACS PLATE NO. 40	EA	–	–
2.	6" PVC WATER PIPE (CLASS 150)	LF	–	–
3.	8" PVC WATER PIPE (CLASS 150)	LF	–	–
4.	8" DIP WATER PIPE (CLASS 53)	LF	–	–
5.	8" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39	EA	–	–
6.	8" X 6" TEE PER UDACS PLATE NO. 31	EA	–	–
7.	8" X 8" TEE PER UDACS PLATE NO. 31	EA	–	–
8.	8" S DEGREE BEND WITH RESTRAINED JOINTS	EA	–	–
9.	8" 11.25 DEGREE BEND PER UDACS PLATE NO. 31	EA	–	–
10.	8" 22.5 DEGREE BEND PER UDACS PLATE NO. 31	EA	–	–
11.	8" 45 DEGREE BEND PER UDACS PLATE NO. 31	EA	–	–
12.	6" 11.25 DEGREE BEND PER UDACS PLATE NO. 31	EA	–	–
13.	6" 90 DEGREE BEND PER UDACS PLATE NO. 31	EA	–	–
14.	CAP AND 2" BLOW-OFF ASSEMBLY W/CAP PER UDACS PLATE NO. 36	EA	–	–
15.	1" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 1	EA	–	–
16.	1" COPPER SERVICE W/ 3/4" IRRIGATION METER & 1" RPPA PER UDACS PLATE NO. 4 & 8	EA	–	–
17.	8" X 6" REDUCER PER UDACS PLATE NO. 30	EA	–	–
18.	PIPELINE MARKER BALLS PER UDACS PLATE NO. 15	EA	–	–
STREET IMPROVEMENTS				
1.	2" A.C. PAVEMENT W/ 4" TYPE II OVER 6" TYPE I AGGREGATE BASE	SY	–	–
2.	STANDARD 18" TYPE "L" ISLAND CURB & GUTTER W/6" TYPE I AGGREGATE BASE	LF	–	–
3.	STANDARD 8" TYPE "A" ISLAND CURB W/6" TYPE I AGGREGATE BASE	LF	–	–
4.	STANDARD 30" TYPE "ROLL" CURB & GUTTER W/6" TYPE I AGGREGATE BASE	LF	–	–
5.	5' WIDE CONCRETE SIDEWALK W/4" TYPE II AGGREGATE BASE	SF	–	–
6.				
7.				
TRAFFIC SIGNALS				
1.	30" STOP SIGN WITH POST (R1-1)	EA	–	–
2.	36" STOP SIGN WITH POST (R1-1)	EA	–	–
3.	9" STREET NAME SIGN (D-3, BROWN W/ WHITE LETTERS)(6 POLES x 2 PER POLE=12)	EA	–	–
4.	12" STREET NAME SIGN (D-3, BROWN W/ WHITE LETTERS)(6 POLES x 2 PER POLE=12)	EA	–	–
5.	BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKER	EA	–	–
6.	CROSSWALK MARKINGS	LF	–	–
7.	TRAFFIC SIGNS	EA	–	–
8.				
DRY UTILITIES				
1.	100W H.P.S. LUMINAIRE STREET LIGHT W/DECORATIVE POLE	EA	–	–
2.	1-1/4" PVC STREET LIGHT CONDUIT WITH (2) #4 AND (1) #8 CONDUCTORS	LF	–	–
3.	NO. 3-1/2 PULL BOX W/METAL COVER	EA	–	–
4.	150 AMP SERVICE PEDESTAL (IRR)	EA	–	–
5.	200 AMP SERVICE PEDESTAL (STLT)	EA	–	–
6.				

APPROVED FOR CONSTRUCTION







SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

CENTURY COMMUNITIES

CITY OF LAS VEGAS, NEVADA

SKYE CANYON II PARCEL 2.20
LEGEND, ABBREVIATIONS, AND QUANTITIES

S12
T19
R59

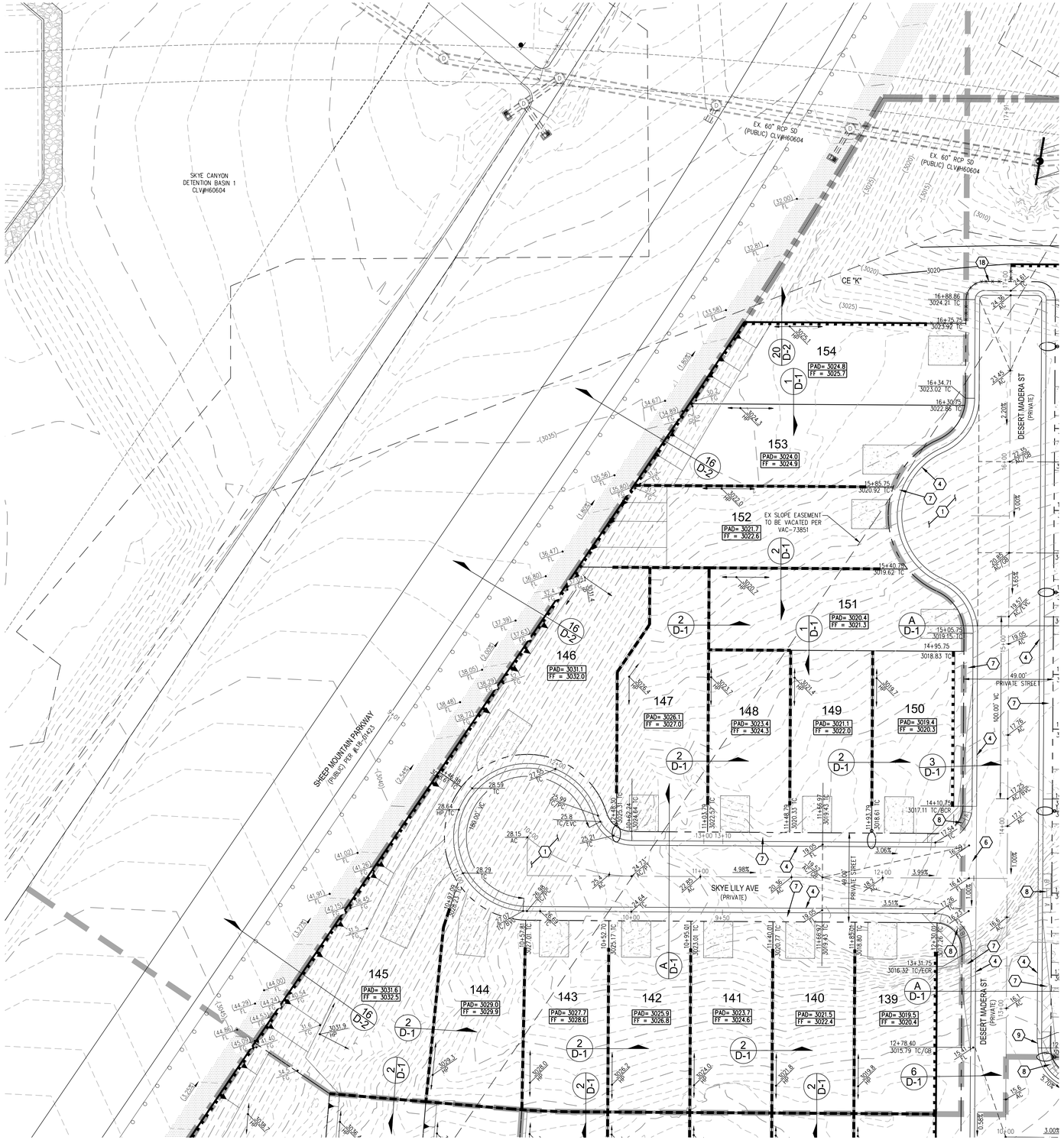
DATE: 10/25/2018
DRAFTER:
DESIGNER: HN
CHECKED: MAK

PROJECT NO.
OLY1722-000

PROFESSIONAL ENGINEER STATE OF NEVADA
TIMOTHY M. MULROONEY
Exp. 12/31/2019
CIVIL
No. 22938
10/25/18

C-3
SHEET 3 OF 19

I:\Oly1722-000_skye_canyon_parcel_2.20_phase_1\dwg\landpro\Oly1722-000_cvr.dwg 10/25/2018 9:19 AM Hung Nguyen



SCALE - 1"=30' (0, 30, 60 FEET)

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SOILS REPORT BY GEOTEK RESIDENTIAL, LLC.

PROJECT NO. 12208-LVR DATED MARCH 30, 2016

EARTHWORKS

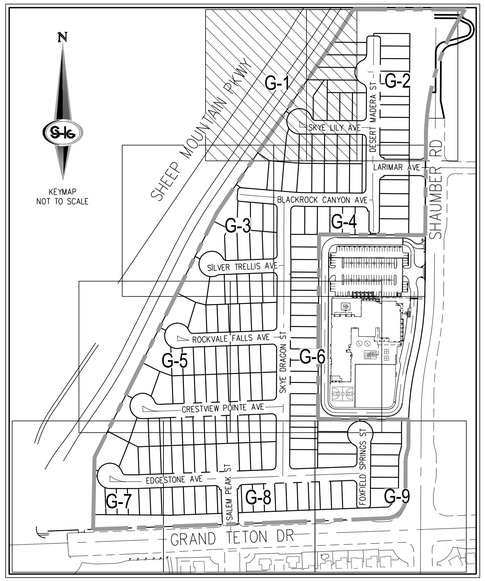
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BENCHMARK

BM 7LV90 7NWS CITY OF LAS VEGAS RIVET AND ROUND PLATE IN CONCRETE CYLINDER, SOUTHEAST CORNER OF HUALAPAI WAY AND IRON MOUNTAIN ROAD.

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BASIS OF BEARINGS

SOUTH 87°50'19" WEST, BEING THE BEARING OF THE SOUTH LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 12, TOWNSHIP 19 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN BOOK 156, PAGE 29 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

GRADING NOTES

1. FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2012, SECTION 2304.11.2.2.
2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
3. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
4. MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
5. SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.
6. ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
7. CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
8. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER SHALL BE NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLEPING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
9. NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXIST) WITHIN THE SIGHT VISIBILITY ZONES.

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(REQUIRED FOR ALL SITES GREATER THAN 1 ACRE (43,560 SQ.FT.))

1. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATED IN, THE PUBLIC RIGHTS OF WAY OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.
2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN CLARK COUNTY TITLE 24.40 AND IN THE LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.5.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS, AND ALL BMPS WEEKLY, AND WITHIN 24 HOURS AFTER A RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12.
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CALL BEFORE YOU DO OVERHEAD
1-702-227-2929

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AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call 811
OR
1-800-227-2600

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TIMOTHY M. MULROONEY, P.E. 22938 DATE

PROFESSIONAL ENGINEER STATE OF NEVADA
TIMOTHY M. MULROONEY
Exp. 12/31/2019
CIVIL
No. 22938
10/25/18

SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300
FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

CITY OF LAS VEGAS, NEVADA

CENTURY COMMUNITIES

SKYE CANYON II PARCEL 2.20
GRADING PLAN I

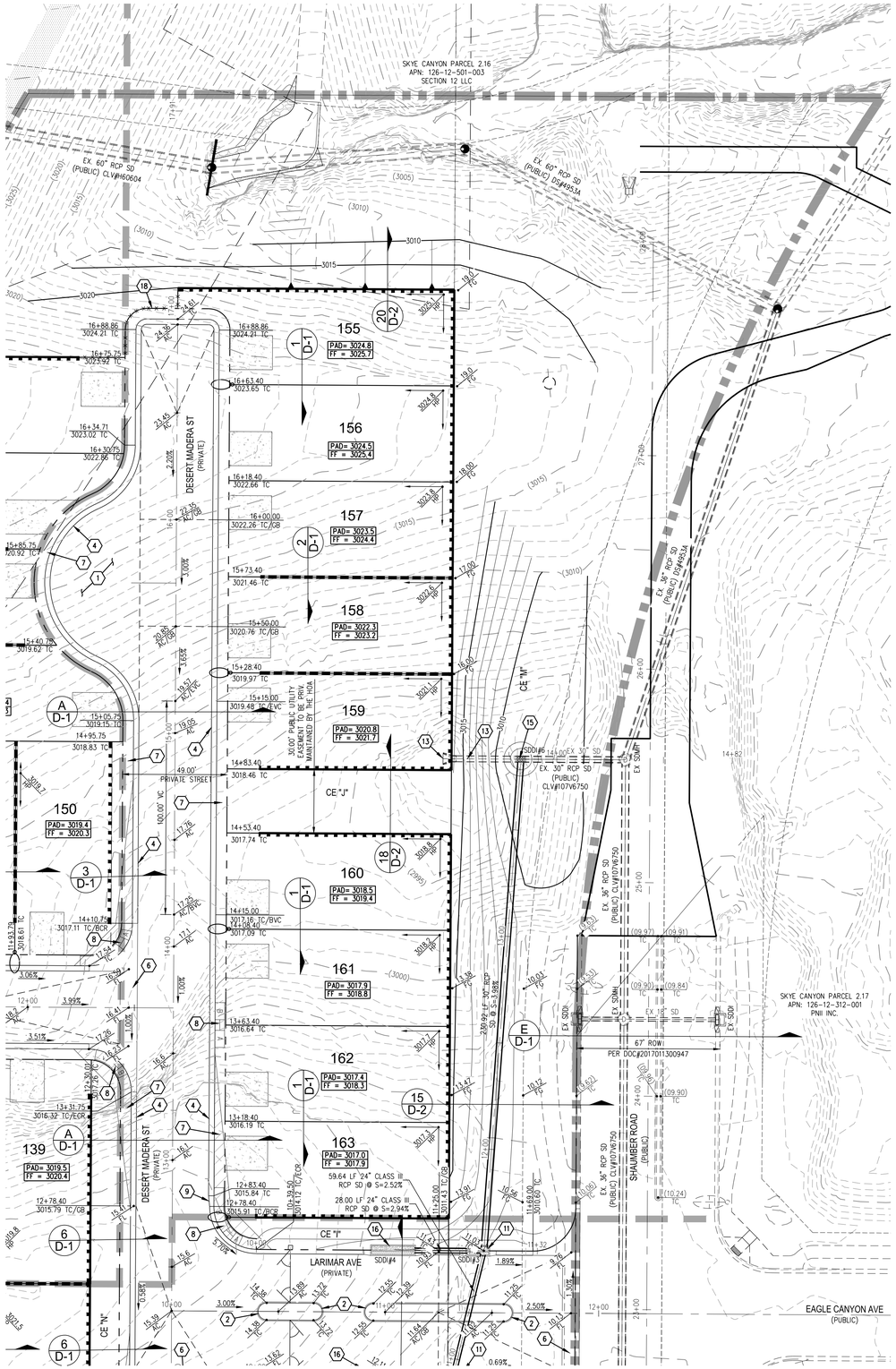
S12
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DATE: 10/25/2018
DRAFTER: BCS
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PROJECT NO.
OLY1722-000

G-1
SHEET 4 OF 19

J:\OLY1722-000 skye canyon parcel 2.20 phase 1\data\Vmtpro\OLY1722-000_grd.dwg 10/25/2018 9:20 AM Hung Nguyen



N

SCALE - 1"=30' 0 30 60 FEET

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PROJECT NO. 12208-LVR DATED MARCH 30, 2016

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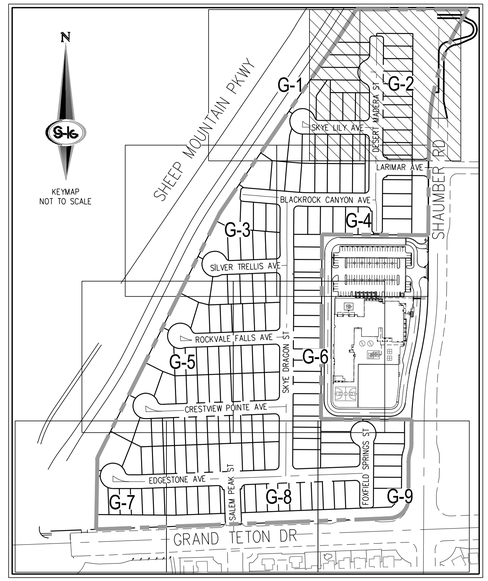
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TIMOTHY M. MULROONEY, P.E. 22938 DATE

DRAINAGE QUANTITIES		PRIV.	
1.			
2.	10.0' TYPE "CM2" DROP INLET	EA	2
3.	20.0' TYPE "CM2" DROP INLET	EA	3
4.	18" RCP CLASS III STORM DRAIN	LF	21
5.	24" RCP CLASS III STORM DRAIN	LF	119
6.	30" RCP CLASS IV STORM DRAIN	LF	231
7.	36" RCP CLASS IV STORM DRAIN	LF	78
8.	4' X 4' NDOT TYPE II DROP INLET	EA	1
9.	3.0' X 2' NDOT TYPE II DROP INLET	EA	1
10.	8' WIDE CONCRETE VALLEY GUTTER W/10" TYPE I AGGREGATE BASE	SF	6,568
11.	RIPRAP D50=8", THK=16"	SF	575
12.	SIDEWALK UNDER DRAIN	EA	3
13.	3' CONCRETE U-CHANNEL	LF	136

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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

CITY OF LAS VEGAS, NEVADA

CENTURY COMMUNITIES

SKYE CANYON II PARCEL 2.20
GRADING PLAN II

S12
R59

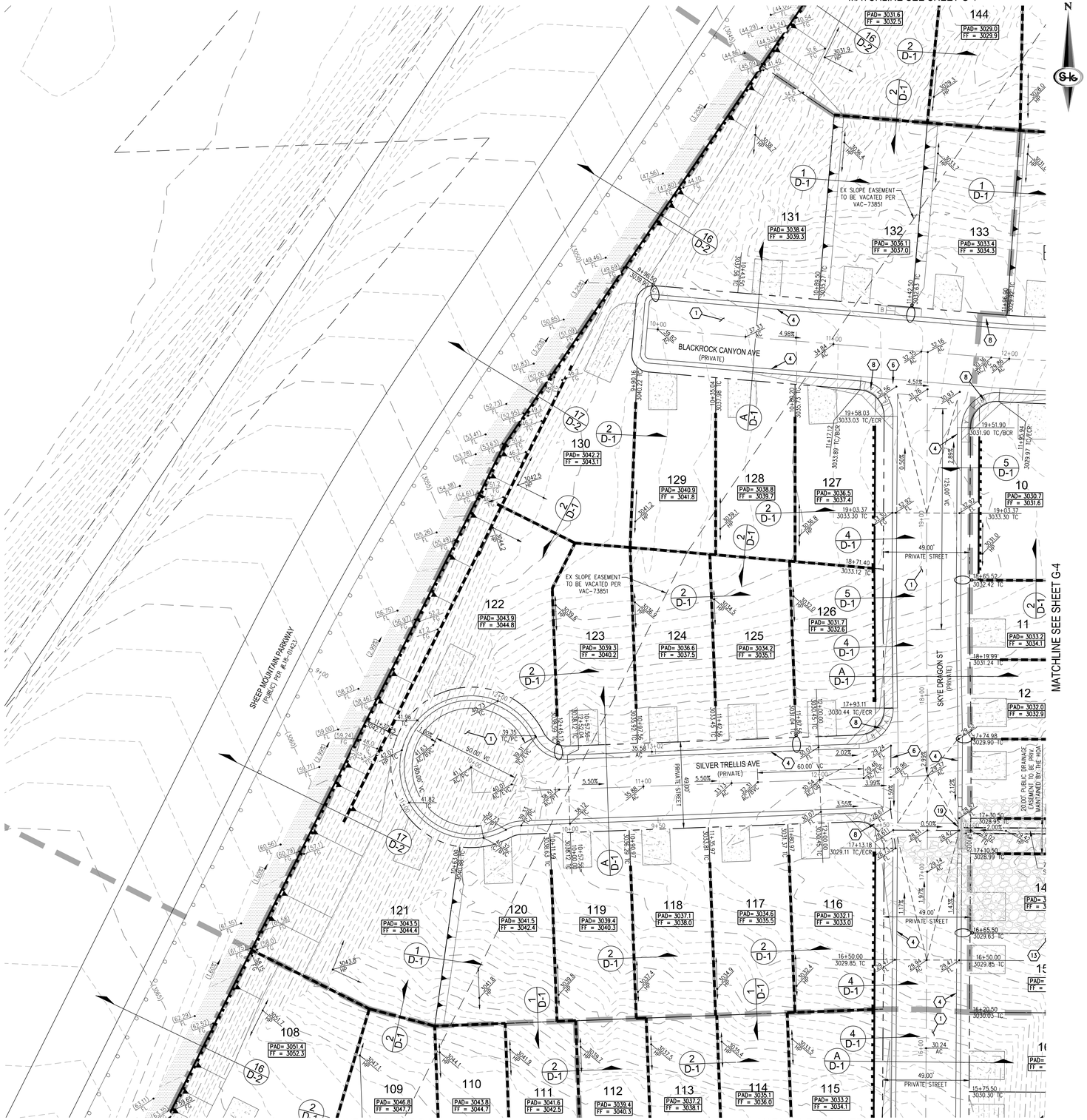
DATE: 10/25/2018
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CHECKED: MAK

PROJECT NO.
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PROFESSIONAL ENGINEER STATE OF NEVADA TIMOTHY M. MULROONEY Exp. 12/31/2019 CIVIL No. 22938
10/25/18

G-2
SHEET 5 OF 19

J:\Oly1722-000 skye canyon parcel 2.20 phase 1\data\Vantrix\civil1722-000 grd.dwg 10/25/2018 9:20 AM Hung Nguyen



0 30 60
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BM 7LV90 7NWS CITY OF LAS VEGAS RIVET AND ROUND PLATE IN CONCRETE CYLINDER, SOUTHEAST CORNER OF HUALAPAI WAY AND IRON MOUNTAIN ROAD.

ELEV: 2840.13 FEET (865.67 METERS) (NAVD 1988)

BASIS OF BEARINGS

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LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDELINES

(REQUIRED FOR ALL SITES GREATER THAN 1 ACRE (43,560 SQ.FT.))

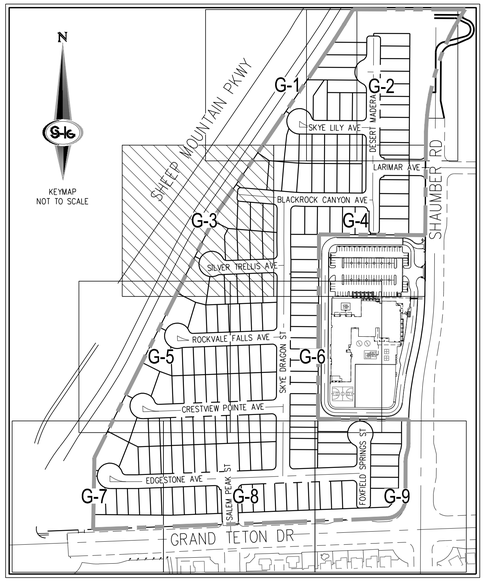
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2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN CLARK COUNTY TITLE 24.40 AND IN THE LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.5.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS, AND ALL BMPS WEEKLY, AND WITHIN 24 HOURS AFTER A RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12.
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12. EXISTING IMPROVEMENTS TO BE REMOVED
13. INSTALL 3' CONCRETE FLUME PER DETAIL ON SHEET D-1
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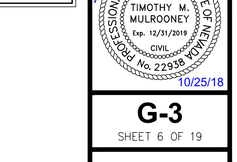
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TIMOTHY M. MULROONEY, P.E. 22938 DATE







SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

CITY OF LAS VEGAS, NEVADA

CENTURY COMMUNITIES

SKYE CANYON II PARCEL 2.20
GRADING PLAN III

S12
R59

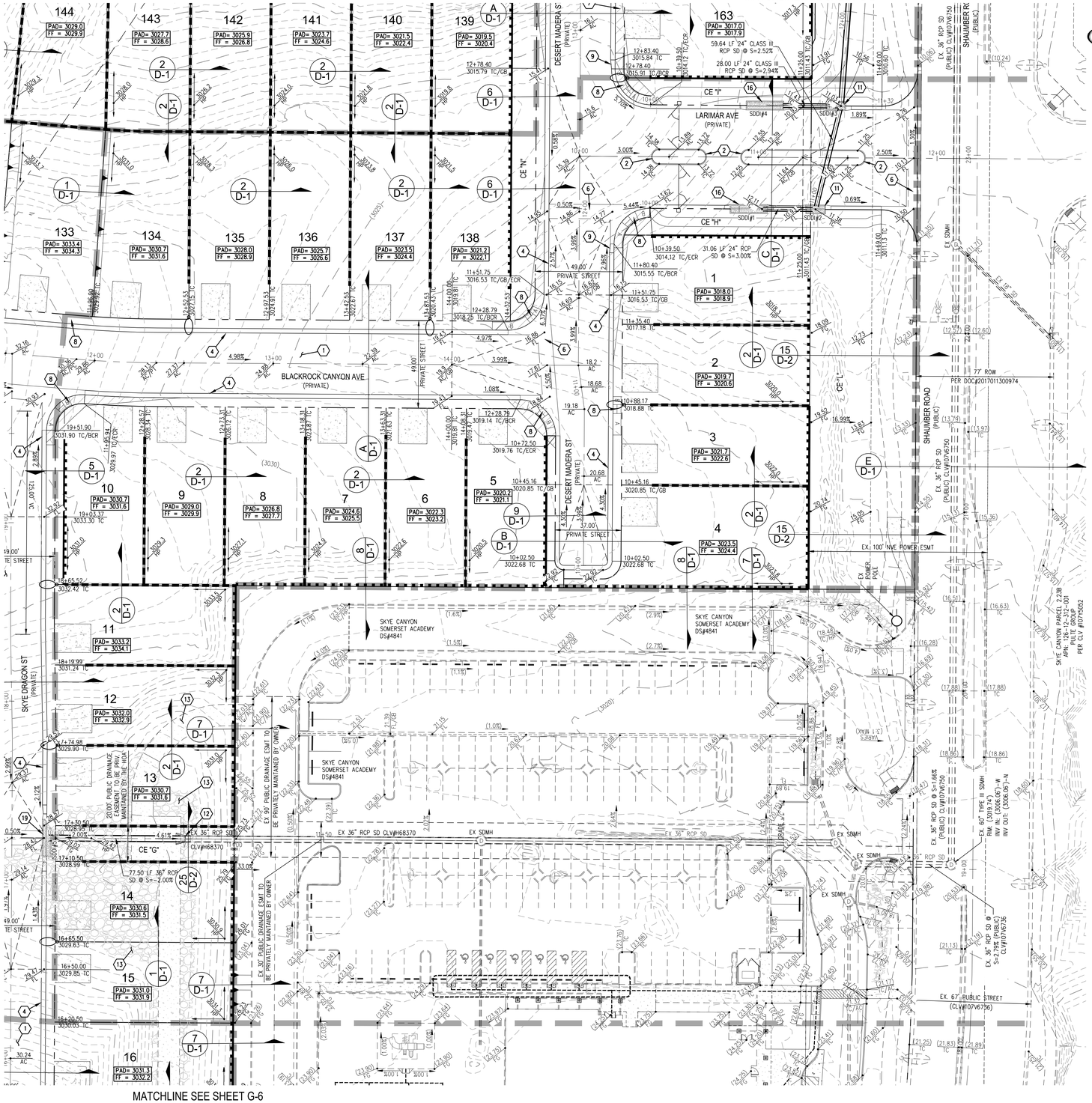
DATE: 10/25/2018
DRAFTER: BCS
DESIGNER: HN
CHECKED: MAK

PROJECT NO.
OLY1722-000

PROFESSIONAL ENGINEER — STATE OF NEVADA — TIMOTHY M. MULROONEY — Exp. 12/31/2019 — CIVIL — No. 22938
10/25/18

G-3
SHEET 6 OF 19

\\Civil\1722-000_skye_canyon_parcel 2.20_phase 1\Data\Vmpro\Vcen1722-000_grd.dwg, 10/25/2018 9:20 AM, Hung Nguyen



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SOILS REPORT

SOILS REPORT BY GEOTEK RESIDENTIAL, LLC.

PROJECT NO. 12208-LVR DATED MARCH 30, 2016

EARTHWORKS

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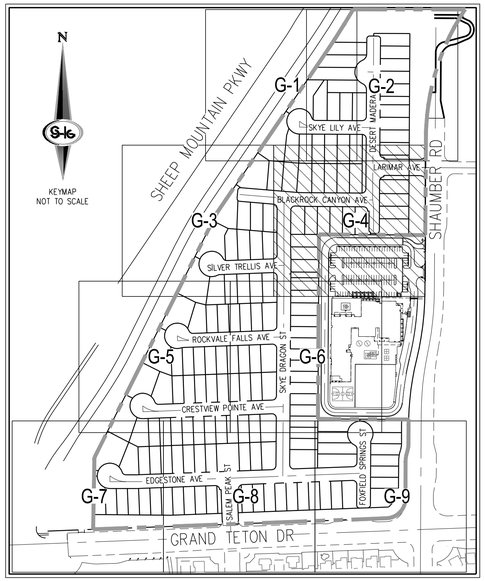
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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

CITY OF LAS VEGAS, NEVADA

CENTURY COMMUNITIES

SKYE CANYON II PARCEL 2.20
GRADING PLAN IV

S12 T19 R59

DATE: 10/25/2018
DRAFTER: BCS
DESIGNER: HN
CHECKED: MAK

PROJECT NO.
OLY1722-000

PROFESSIONAL ENGINEER — STATE OF NEVADA — TIMOTHY M. MULROONEY — Exp. 12/31/2019 — CIVIL — 22938 — 10/25/18

G-4
SHEET 7 OF 19

\\oly1722-000_skye canyon parcel 2.20 phase 1\dwg\improv\can1722-000 grd.dwg 10/25/2018 9:20 AM Hung Nguyen



N

0 30 60
SCALE - 1"=30' FEET

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PROJECT NO. 12208-LVR DATED MARCH 30, 2016

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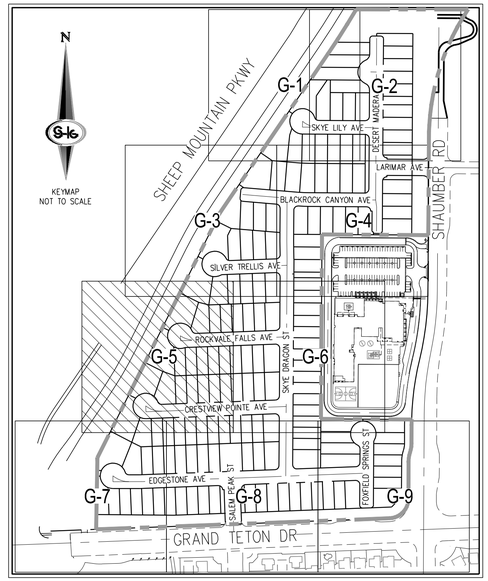
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TIMOTHY M. MULROONEY, P.E. 22938 DATE

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OR
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CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

CITY OF LAS VEGAS, NEVADA

CENTURY COMMUNITIES

SKYE CANYON II PARCEL 2.20
GRADING PLAN V

S12
R59

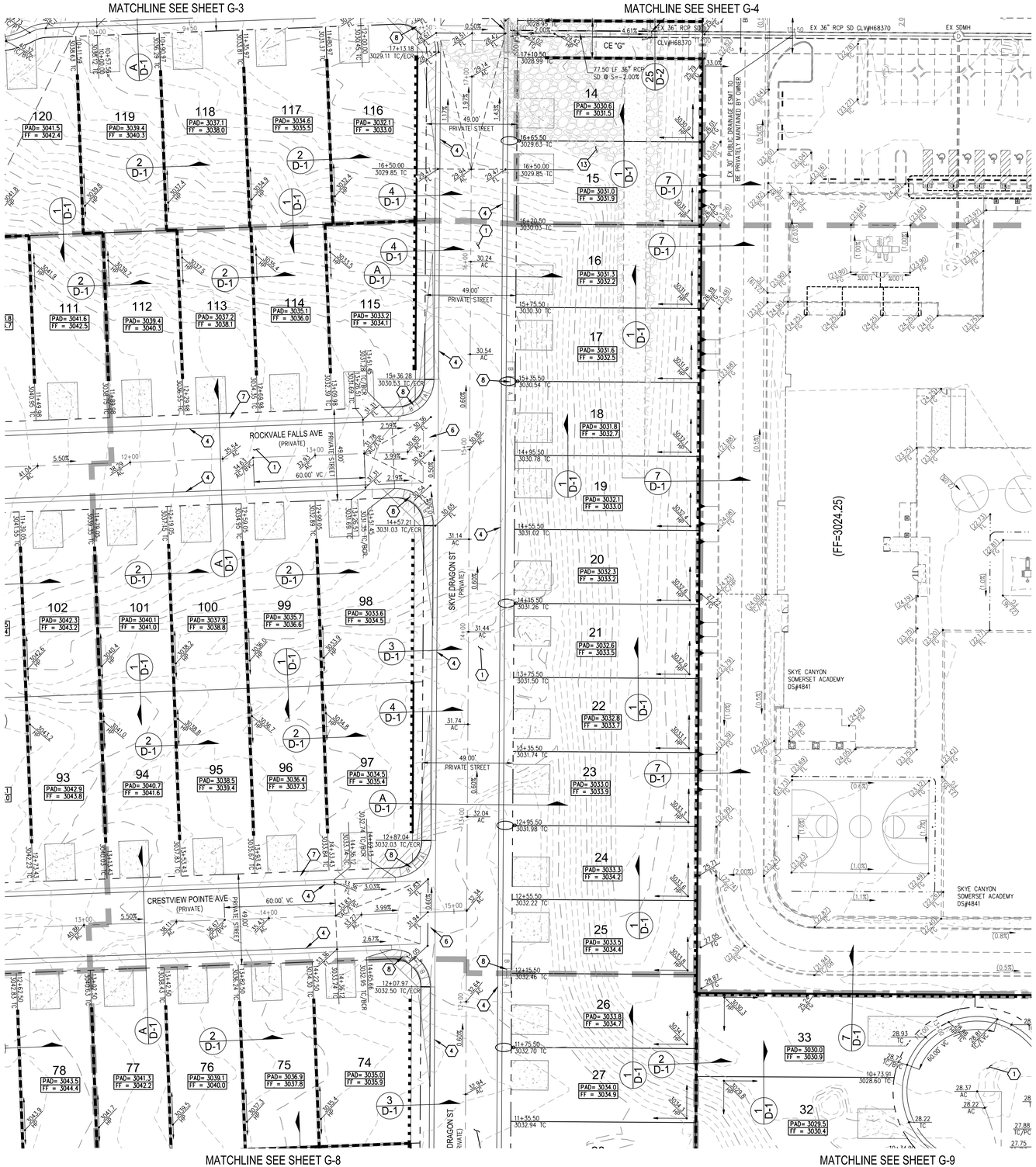
DATE: 10/25/2018
DRAFTER: BCS
DESIGNER: HN
CHECKED: MAK
PROJECT NO.
OLY1722-000

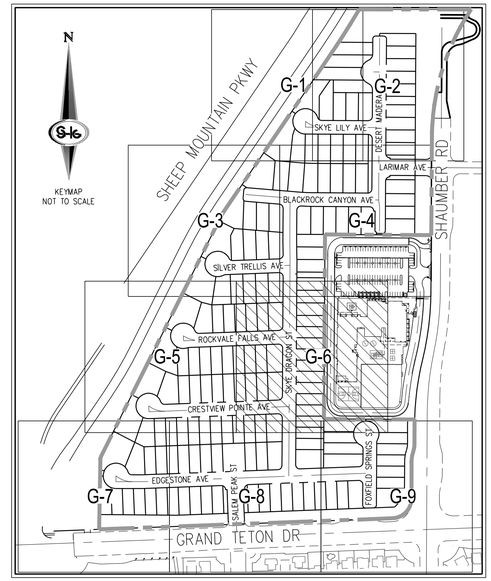


10/25/18

G-5
SHEET 8 OF 19

\\oly1722-000_skye_canyon_parcel_2.20_phase_1\dwg\mpricx\cen1722-000_grd.dwg 10/25/2018 9:21 AM Hung Nguyen





0 30 60
SCALE - 1"=30' FEET

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ADD 3000 TO ALL SPOT GRADES WHERE THE HUNDREDS AND THOUSANDS PLACES ARE OMITTED FOR ACTUAL ELEVATION (I.E. 01.00 REPRESENTS 3001.00)

SOILS REPORT

SOILS REPORT BY GEOTEK RESIDENTIAL, LLC.

PROJECT NO. 12208-LVR DATED MARCH 30, 2016

EARTHWORKS

EARTHWORK QUANTITIES (RAW):
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FILL= 71,171 CU YDS

EXPORTED MATERIAL TO BE DISPOSED OF AT AN APPROVED LICENSED DISPOSAL FACILITY OR AT A SITE WITH AN APPROVED AND ACTIVE GRADING PERMIT.

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BM 7LV90 7NWS CITY OF LAS VEGAS RIVET AND ROUND PLATE IN CONCRETE CYLINDER, SOUTHEAST CORNER OF HUALAPAI WAY AND IRON MOUNTAIN ROAD.

ELEV: 2840.13 FEET (865.67 METERS) (NAVD 1988)

BASIS OF BEARINGS

SOUTH 87°50'19" WEST, BEING THE BEARING OF THE SOUTH LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 12, TOWNSHIP 19 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN BOOK 156, PAGE 29 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

GRADING NOTES

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CONSULTING ENGINEERS & PLANNERS
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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

CITY OF LAS VEGAS, NEVADA

CENTURY COMMUNITIES

SKYE CANYON II PARCEL 2.20
GRADING PLAN VI

S12
R59

DATE: 10/25/2018
DRAFTER: BCS
DESIGNER: HN
CHECKED: MAK

PROJECT NO.
OLY1722-000

PROFESSIONAL ENGINEER STATE OF NEVADA TIMOTHY M. MULROONEY Exp. 12/31/2019 CIVIL No. 22938
10/25/18

G-6
SHEET 9 OF 19

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SCALE - 1"=30' (0, 30, 60 FEET)

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PROJECT NO. 12208-LVR DATED MARCH 30, 2016

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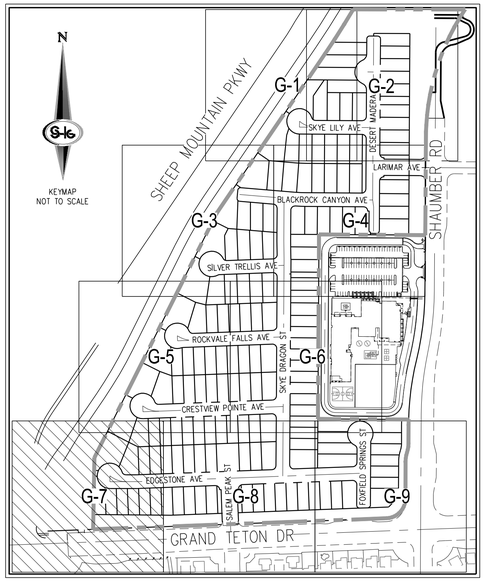
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Call 811
OR
1-800-227-2600

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

CITY OF LAS VEGAS, NEVADA

CENTURY COMMUNITIES

SKYE CANYON II PARCEL 2.20
GRADING PLAN VII

S12 T19 R59

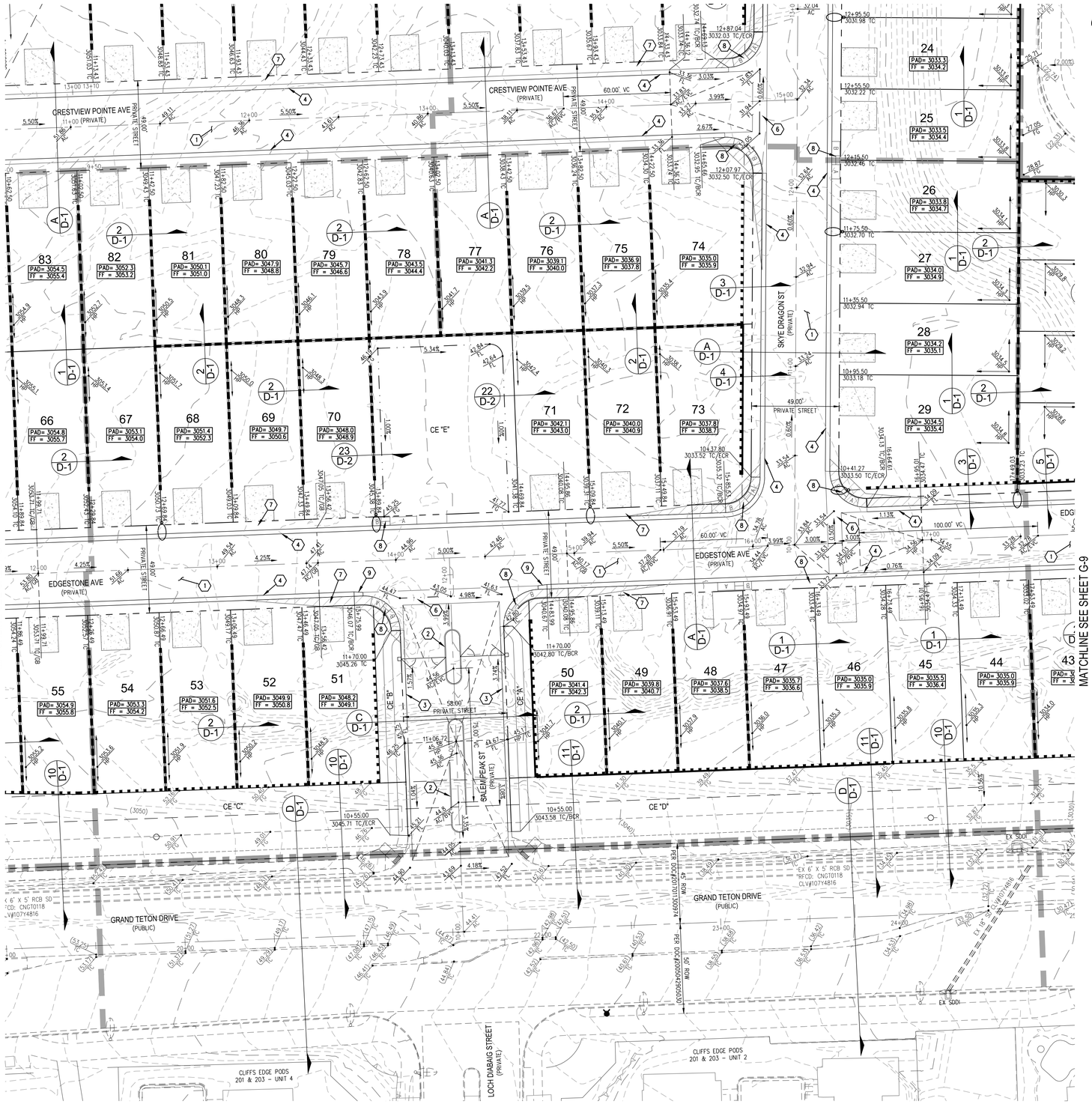
DATE: 10/25/2018
DRAFTER: BCS
DESIGNER: HN
CHECKED: MAK

PROJECT NO.
OLY1722-000

PROFESSIONAL ENGINEER STATE OF NEVADA
TIMOTHY M. MULROONEY
Exp. 12/31/2019
CIVIL
No. 22938
10/25/18

G-7
SHEET 10 OF 19

\\Oly1722-000 skye canyon parcel 2.20 phase 1\dwg\vsp\ncv\ver1722-000 grd dwg 10/25/2018 9:21 AM Hung Nguyen



N

SCALE - 1"=30' (0 30 60 FEET)

CALL SOUTHWEST GAS AT 702-651-2111 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES

SURVEY NOTE

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ELEVATION NOTE

ADD 3000 TO ALL SPOT GRADES WHERE THE HUNDREDS AND THOUSANDS PLACES ARE OMITTED FOR ACTUAL ELEVATION (I.E. 01.00 REPRESENTS 3001.00)

SOILS REPORT

SOILS REPORT BY GEOTEK RESIDENTIAL, LLC.

PROJECT NO. 12208-LVR DATED MARCH 30, 2016

EARTHWORKS

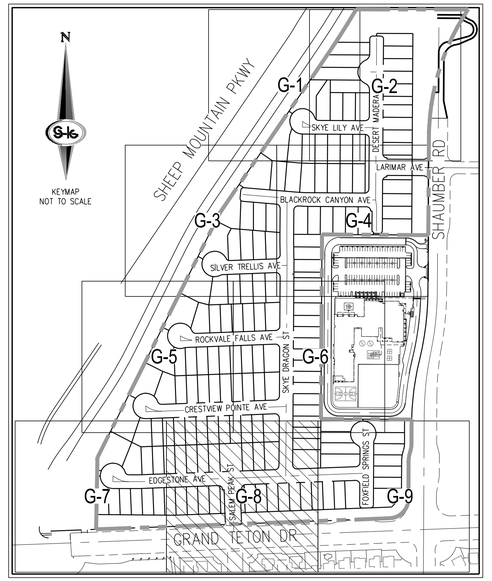
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CUT= 163,407 CU YDS
FILL= 71,171 CU YDS

EXPORTED MATERIAL TO BE DISPOSED OF AT AN APPROVED LICENSED DISPOSAL FACILITY OR AT A SITE WITH AN APPROVED AND ACTIVE GRADING PERMIT.

BENCHMARK

BM 7LV90 2NWS CITY OF LAS VEGAS RIVET AND ROUND PLATE IN CONCRETE CYLINDER, SOUTHEAST CORNER OF HUALAPAI WAY AND IRON MOUNTAIN ROAD.

ELEV: 2840.13 FEET (865.67 METERS) (NAVD 1988)



BASIS OF BEARINGS

SOUTH 87°50'19" WEST, BEING THE BEARING OF THE SOUTH LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 12, TOWNSHIP 19 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN BOOK 156, PAGE 29 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

GRADING NOTES

1. FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2012, SECTION 2304.11.2.2.
2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
3. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
4. MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
5. SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.
6. ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
7. CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
8. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER SHALL BE NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLEPING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
9. NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXIST) WITHIN THE SIGHT VISIBILITY ZONES.

LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDELINES

(REQUIRED FOR ALL SITES GREATER THAN 1 ACRE (43,560 SQ.FT.))

1. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATED IN, THE PUBLIC RIGHTS OF WAY OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.
2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN CLARK COUNTY TITLE 24.40 AND IN THE LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.5.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS, AND ALL BMPS WEEKLY, AND WITHIN 24 HOURS AFTER A RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12.
5. ACCUMULATED SEDIMENT IN BMPS SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

FLOOD ZONE

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE X (UNSHADED) AS DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANEL 3200SC1750E, DATED SEPTEMBER 27, 2002. A ZONE X (UNSHADED) IS DESCRIBED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.

DISCLAIMER NOTE

1) EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.
2) FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWCUT LINE TO PROPOSED EDGE OF PAVEMENT OR PROJECTED LIP OF CURB PRIOR TO SUBGRADE PREPARATION AND CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

CONSTRUCTION NOTES

1. INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
2. INSTALL A TYPE CURB PER CCAUSD NO. 219
3. INSTALL L TYPE CURB PER CCAUSD NO. 216
4. INSTALL ROLL TYPE CURB PER CCAUSD NO. 217.S1
5. INSTALL 8' VALLEY GUTTER PER CCAUSD NO. 228
6. INSTALL 5' WIDE SIDEWALK PER CCAUSD NO. 234
7. INSTALL SIDEWALK RAMP PER CCAUSD NO. 235, CASE I AND CCAUSD NO. 235.1
8. INSTALL 5' CURB TRANSITION PER DETAIL ON SHEET D-2
9. INSTALL SIDEWALK UNDERDRAIN PER CCAUSD NO. 236
10. INSTALL 10.0' DROP INLET TYPE "CM2" PER CCAUSD NO. 412.1 AND 421
11. REMOVE EX FLARED END SECTION AND INSTALL CONCRETE COLLAR PER DETAIL ON SHEET D-3
12. EXISTING IMPROVEMENTS TO BE REMOVED
13. INSTALL 3' CONCRETE FLUME PER DETAIL ON SHEET D-1
14. INSTALL 4'W X 4'L NDOT TYPE II DROP INLET AND NDOT CONCRETE APRON PER NDOT STD DWG#R-4.2.1 & R-4.2.7 PER DETAIL ON SHEET D-3 AND CCAUSD #421
15. INSTALL 20.0' DROP INLET TYPE "CM2" PER CCAUSD NO. 412.1 AND 421
16. INSTALL 3.0'WX2'L NDOT TYPE II DROP INLET AND NDOT CONCRETE APRON PER NDOT STD DWG#R-4.2.1 & R-4.2.7 PER DETAIL ON SHEET D-3 AND CCAUSD #421
17. INSTALL WROUGHT IRON FENCE PER DETAIL ON SHEET D-3
18. INSTALL 20.0' STRUCTURAL DROP INLET PER STRUCTURAL DESIGN BY OTHERS

DRAINAGE EASEMENT NOTE

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FLOOD CERTIFICATION

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY _____ ON FILE AT CITY OF LAS VEGAS FOR THE SUBJECT PROJECT.

TIMOTHY M. MULROONEY, P.E. 22938 DATE

CURB NOTE

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FAST
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FREEWAY & ARTERIAL SYSTEM OF TRANSPORTATION (F.A.S.T.)

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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

CITY OF LAS VEGAS, NEVADA

CENTURY COMMUNITIES

SKYE CANYON II PARCEL 2.20
GRADING PLAN VIII

S12 R59

DATE: 10/25/2018
DRAFTER: BCS
DESIGNER: HN
CHECKED: MAK

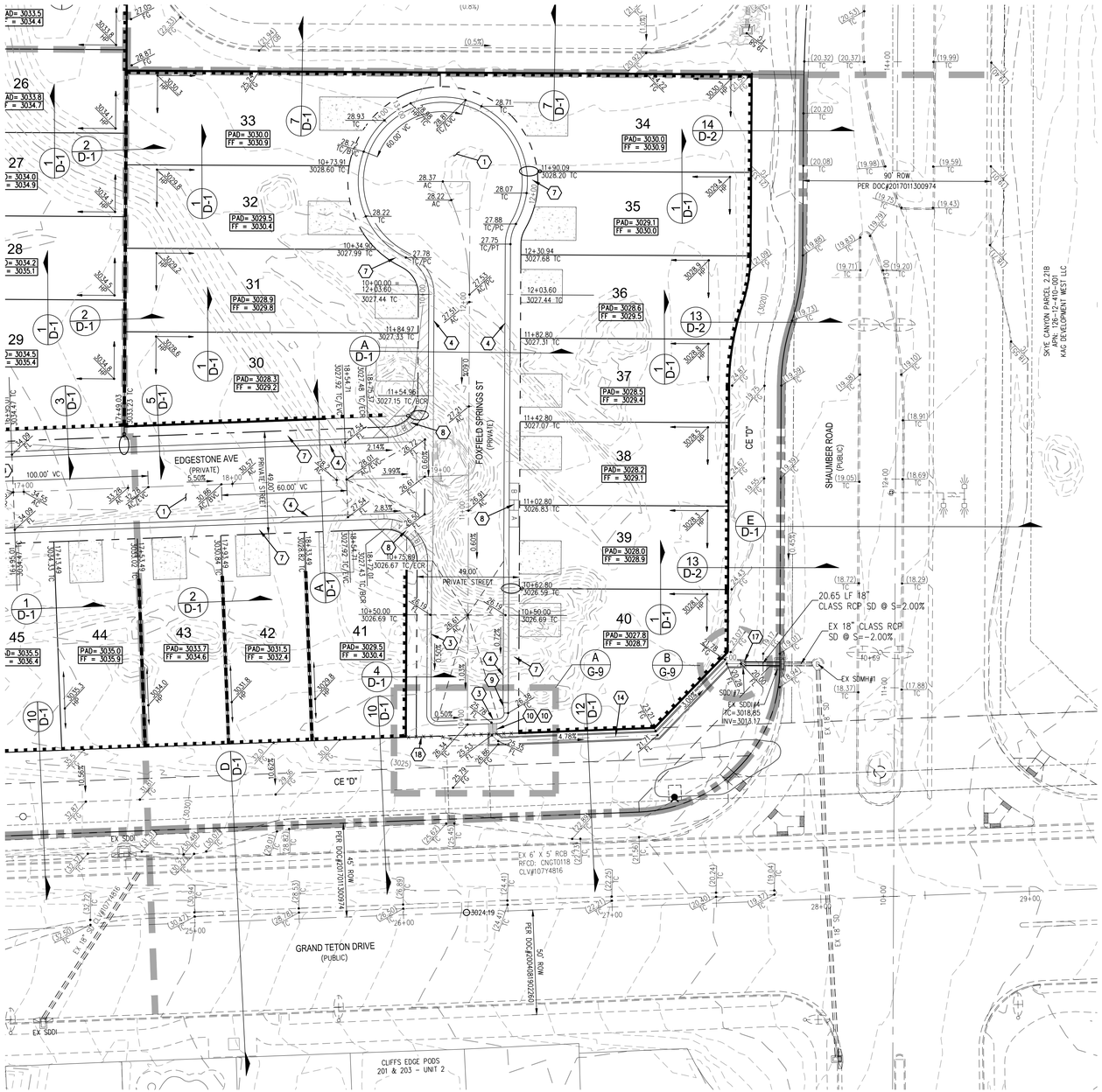
PROJECT NO.
OLY1722-000

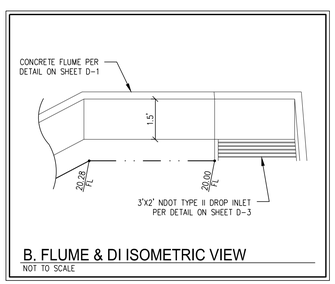


10/25/18

G-8
SHEET 11 OF 19

\\oly1722-000_skye_canyon_parcel_2.20_phase_1\dwg\Vmprox\cen1722-000_grd.dwg, 10/25/2018 9:21 AM, Hung Nguyen







0 30 60
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SOILS REPORT BY GEOTEK RESIDENTIAL, LLC.

PROJECT NO. 12208-LVR DATED MARCH 30, 2016

EARTHWORKS

EARTHWORK QUANTITIES (RAW):
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FILL= 71,171 CU YDS

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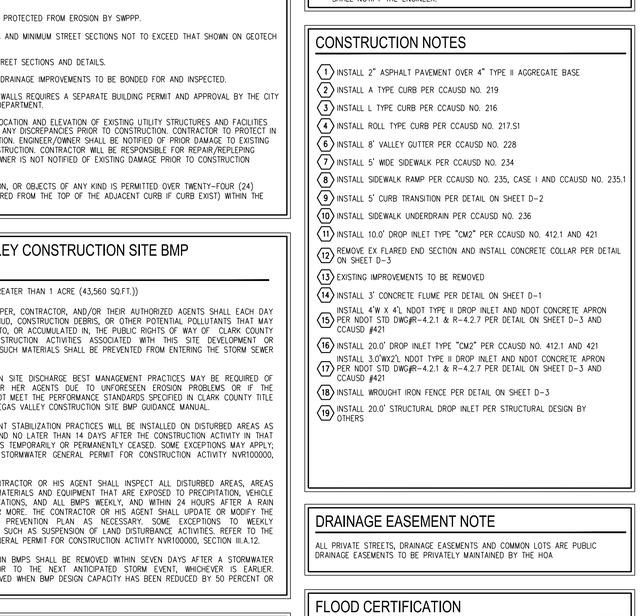
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TIMOTHY M. MULROONEY, P.E. 22938 DATE

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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

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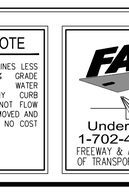
CENTURY COMMUNITIES

SKYE CANYON II PARCEL 2.20
GRADING PLAN IX

S:12 T:19 R:59

DATE: 10/25/2018
DRAFTER: BCS
DESIGNER: HN
CHECKED: MAK

PROJECT NO.
OLY1722-000



G-9
SHEET 12 OF 19

__-_____

J:\oly1722.000 skye canyon parcel 2.20 phase 1\dwg\improv\cen1722-000 grd.dwg 10/25/2018 9:21 AM Hung Nguyen

MATCHLINE SEE SHEET G-3



0 30 60
SCALE - 1"=30' FEET

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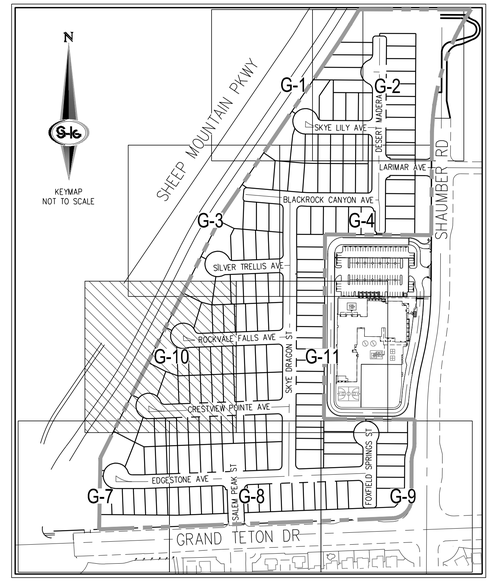
PROJECT NO. 12208-LVR DATED MARCH 30, 2016

UPDATED AUGUST 20, 2018

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7. CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
8. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER SHALL BE NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLEPING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
9. NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXIST) WITHIN THE SIGHT VISIBILITY ZONES.

LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDELINES

(REQUIRED FOR ALL SITES GREATER THAN 1 ACRE (43,560 SQ.FT.))

1. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATED IN, THE PUBLIC RIGHTS OF WAY OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.
2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN CLARK COUNTY TITLE 24.40 AND IN THE LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.5.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS, AND ALL BMPS WEEKLY, AND WITHIN 24 HOURS AFTER A RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12.
5. ACCUMULATED SEDIMENT IN BMPS SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

FLOOD ZONE

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE X (UNSHADED) AS DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANEL 32003C1750E, DATED SEPTEMBER 27, 2002. A ZONE X (UNSHADED) IS DESCRIBED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.

DISCLAIMER NOTE

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2) FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWCUT LINE TO PROPOSED EDGE OF PAVEMENT OR PROJECTED LIP OF CURB PRIOR TO SUBGRADE PREPARATION AND CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

CONSTRUCTION NOTES

1. INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
2. INSTALL A TYPE CURB PER CCAUSD NO. 219
3. INSTALL L TYPE CURB PER CCAUSD NO. 216
4. INSTALL ROLL TYPE CURB PER CCAUSD NO. 217.S1
5. INSTALL 8' VALLEY GUTTER PER CCAUSD NO. 228
6. INSTALL 5' WIDE SIDEWALK PER CCAUSD NO. 234
7. INSTALL SIDEWALK RAMP PER CCAUSD NO. 235, CASE I AND CCAUSD NO. 235.1
8. INSTALL 5' CURB TRANSITION PER DETAIL ON SHEET D-2
9. INSTALL SIDEWALK UNDERDRAIN PER CCAUSD NO. 236
10. INSTALL 10.0' DROP INLET TYPE "CM2" PER CCAUSD NO. 412.1 AND 421
11. REMOVE EX END SECTION FLARE AND INSTALL CONCRETE COLLAR PER DETAIL ON SHEET D-3
12. EXISTING IMPROVEMENTS TO BE REMOVED
13. INSTALL 3' CONCRETE FLUME PER DETAIL ON SHEET D-1
14. INSTALL 4.0'WX2'L NDOT TYPE II DROP INLET AND NDOT CONCRETE APRON PER NDOT STD DWG#R-4.2.1 & R-4.2.7 PER DETAIL ON SHEET D-3 AND CCAUSD #421
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18. INSTALL 20.0' STRUCTURAL DROP INLET PER STRUCTURAL PLANS BY OTHERS
19. INSTALL RIP RAP D50=6", THICKNESS=12" TO 5' BEYOND THE UNIT BOUNDARY (WHERE SHOWN)
20.

DRAINAGE EASEMENT NOTE

ALL PRIVATE STREETS, DRAINAGE EASEMENTS AND COMMON LOTS ARE PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY THE HOA

FLOOD CERTIFICATION

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY _____ ON FILE AT CITY OF LAS VEGAS FOR THE SUBJECT PROJECT.

TIMOTHY M. MULROONEY, P.E. 22938 DATE

FAST
Call before you UnderGround
1-702-432-5300
FREEWAY & ARTERIAL SYSTEM OF TRANSPORTATION (F.A.S.T.)

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DO OVERHEAD
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OR
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SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

CITY OF LAS VEGAS, NEVADA

CENTURY COMMUNITIES

SKYE CANYON II PARCEL 2.20
GRADING PLAN X - INTERIM

S12
T19
R59

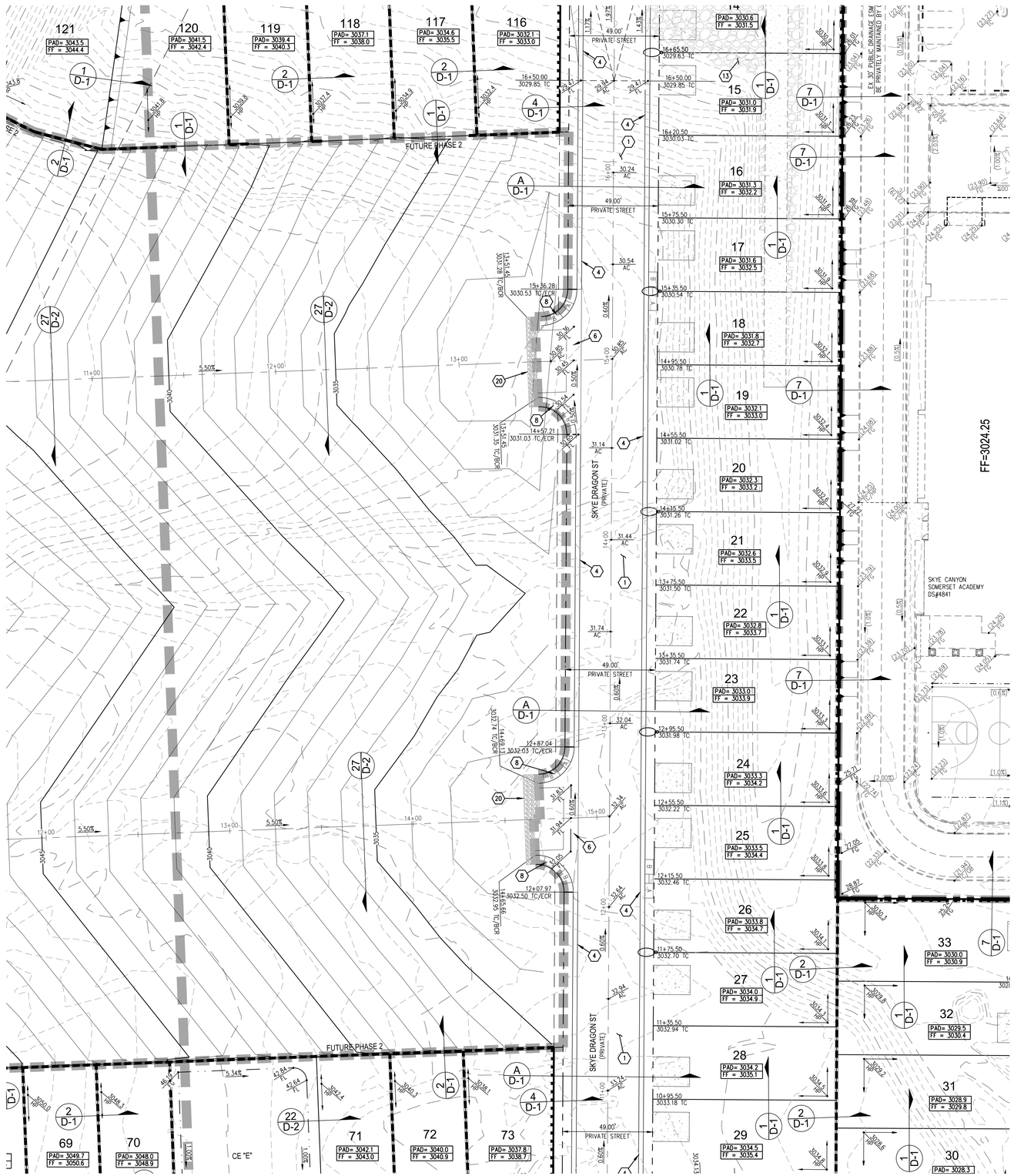
DATE: 10/25/2018
DRAFTER: BCS
DESIGNER: HN
CHECKED: MAK

PROJECT NO.
OLY1722-000

PROFESSIONAL ENGINEER STATE OF NEVADA
TIMOTHY M. MULROONEY
Exp. 12/31/2019
CIVIL
No. 22938
10/25/18

G-10
SHEET 13 OF 19

J:\Oly1722-000 skye canyon parcel 2.20 phase 1\dwg\mstr\x\cen1722-000 grd int.dwg 10/25/2018 9:22 AM Hung Nguyen



0 30 60
SCALE - 1"=30' FEET

CALL SOUTHWEST GAS AT 702-651-2111 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES

SURVEY NOTE

OWNER RESPONSIBLE TO PROVIDE SURVEY MONUMENTATION AS SHOWN AND TO REPLACE ALL SURVEY MONUMENTATION DAMAGED, DISTURBED, DESTROYED, OR OBSCURED DURING CONSTRUCTION.

ELEVATION NOTE

ADD 3000 TO ALL SPOT GRADES WHERE THE HUNDREDS AND THOUSANDS PLACES ARE OMITTED FOR ACTUAL ELEVATION (I.E. 01.00 REPRESENTS 3001.00)

SOILS REPORT

SOILS REPORT BY GEOTEK RESIDENTIAL, LLC

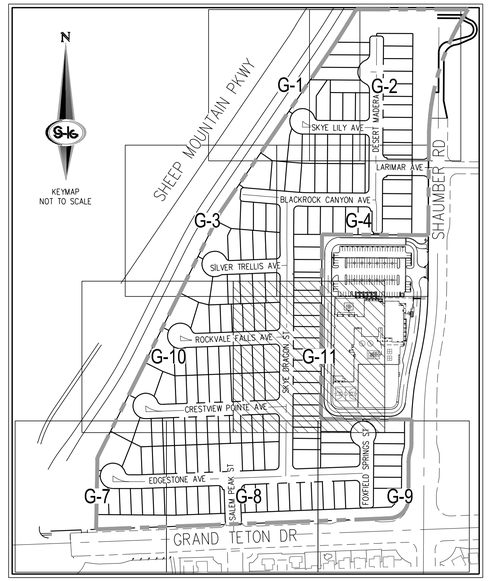
PROJECT NO. 12208-LVR DATED MARCH 30, 2016

UPDATED AUGUST 20, 2018

EARTHWORKS

EARTHWORK QUANTITIES (RAW):
CUT= 163,407 CU YDS
FILL= 71,171 CU YDS

EXPORTED MATERIAL TO BE DISPOSED OF AT AN APPROVED LICENSED DISPOSAL FACILITY OR AT A SITE WITH AN APPROVED AND ACTIVE GRADING PERMIT.



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GRADING NOTES

1. FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2012, SECTION 2304.11.2.2.
2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
3. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
4. MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
5. SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.
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TIMOTHY M. MULROONEY, P.E. 22938 DATE

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SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

CITY OF LAS VEGAS, NEVADA

CENTURY COMMUNITIES

SKYE CANYON II PARCEL 2.20
GRADING PLAN XI - INTERIM

S12
R59

DATE: 10/25/2018
DRAFTER: BCS
DESIGNER: HN
CHECKED: MAK

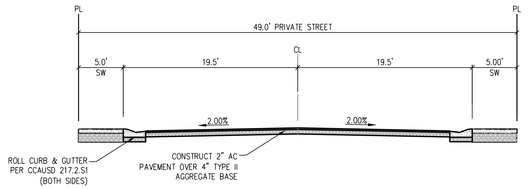
PROJECT NO.
OLY1722-000



10/25/18

G-11
SHEET 14 OF 19

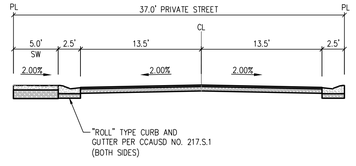
J:\Civil\1722-000 skye canyon parcel 2.20 phase 1\data\xrefs\cen1722-000_grd_int.dwg 10/25/2018 9:22 AM Hung Nguyen



A. 49' PRIVATE STREET SECTION

NOT TO SCALE

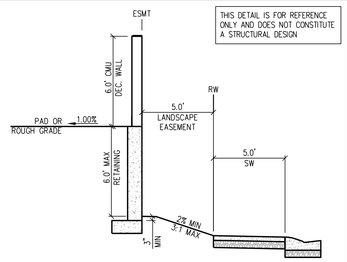
ONSITE PRIVATE STREET



B. STUB STREET

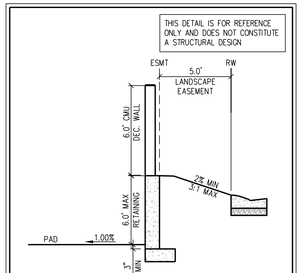
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ONSITE PRIVATE STREET



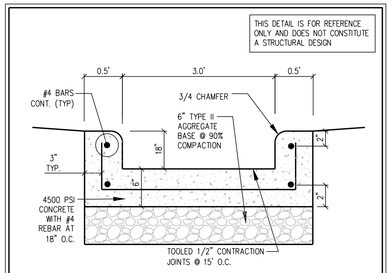
4. CORNER LOT SECTION

NOT TO SCALE



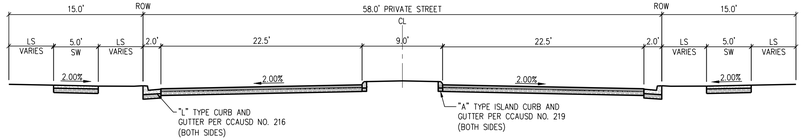
9. CORNER LOT SECTION

NOT TO SCALE



3' CONCRETE FLUME DETAIL

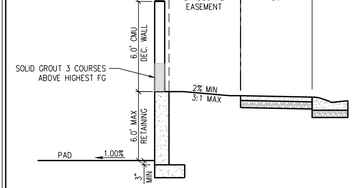
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C. TYPICAL NEIGHBORHOOD ENTRY STREET

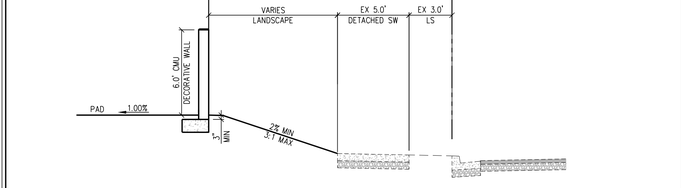
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ONSITE PRIVATE STREET



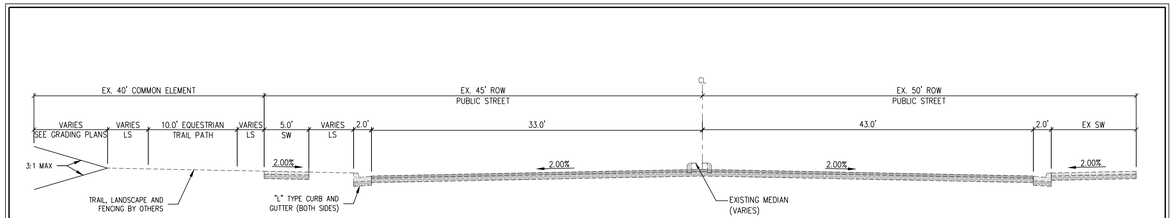
5. CORNER LOT SECTION

NOT TO SCALE



10. PERIMETER SECTION

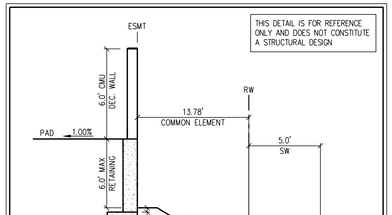
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D. EX PUBLIC STREET SECTION

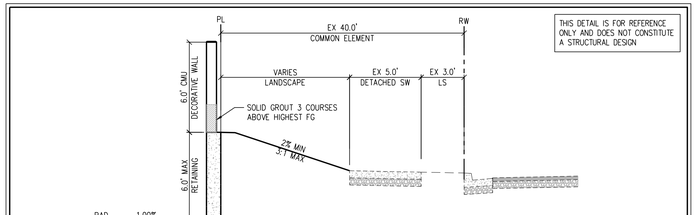
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GRAND TETON DRIVE



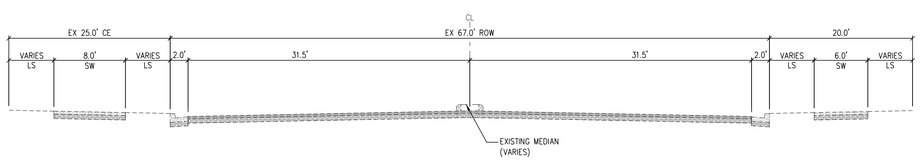
6. CORNER LOT SECTION

NOT TO SCALE



11. PERIMETER SECTION

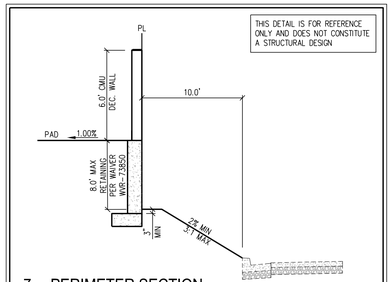
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E. EX PUBLIC STREET SECTION

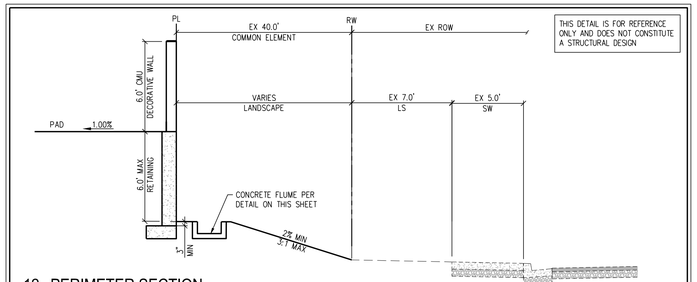
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SHAUMBER ROAD



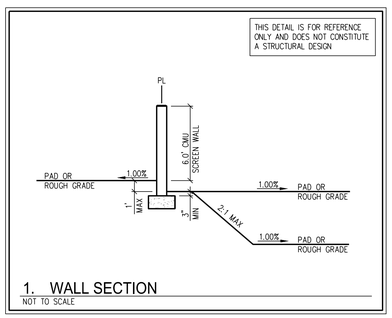
7. PERIMETER SECTION

NOT TO SCALE



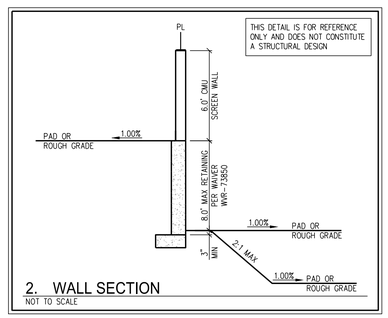
12. PERIMETER SECTION

NOT TO SCALE



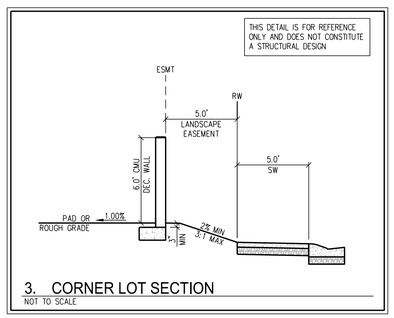
1. WALL SECTION

NOT TO SCALE



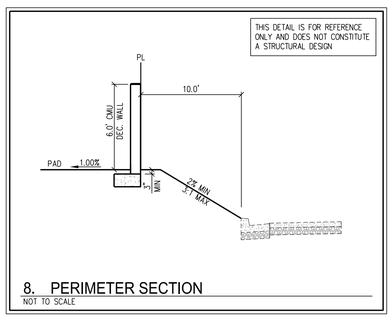
2. WALL SECTION

NOT TO SCALE



3. CORNER LOT SECTION

NOT TO SCALE



8. PERIMETER SECTION

NOT TO SCALE

FAST
Call before you UnderGround
1-702-432-5300
FREEWAY & ARTERIAL SYSTEM OF TRANSPORTATION (F.A.S.T.)

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DO OVERHEAD
1-702-227-2929

Call before you Dig
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call 811
OR
1-800-227-2600

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300
FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE

CENTURY COMMUNITIES

CITY OF LAS VEGAS, NEVADA

SKYE CANYON II PARCEL 2.20

STREET SECTIONS AND GRADING DETAILS I

S12
R59

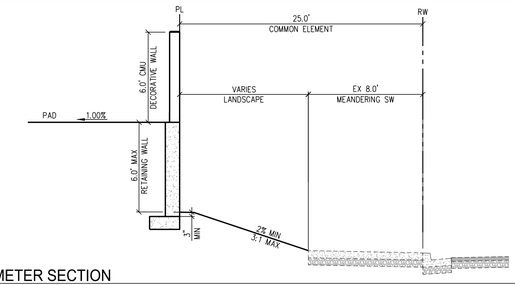
DATE: 10/25/2018
DRAFTER: BCS
DESIGNER: HN
CHECKED: MAK

PROJECT NO.
OLY1722-000



D-1
SHEET 15 OF 19

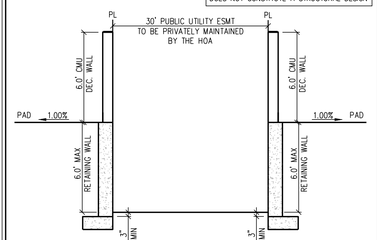
J:\Oly1722-000 skye canyon parcel 2.20 phase 1\data\Vmpro\x\cen1722-000 dtl dwg 10/25/2018 9:23 AM Hung Nguyen



THIS DETAIL IS FOR REFERENCE ONLY AND DOES NOT CONSTITUTE A STRUCTURAL DESIGN

13. PERIMETER SECTION

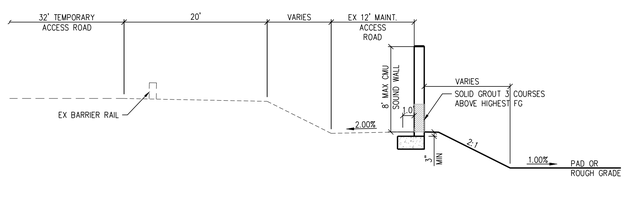
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THIS DETAIL IS FOR REFERENCE ONLY AND DOES NOT CONSTITUTE A STRUCTURAL DESIGN

18. PUBLIC UTILITY SECTION

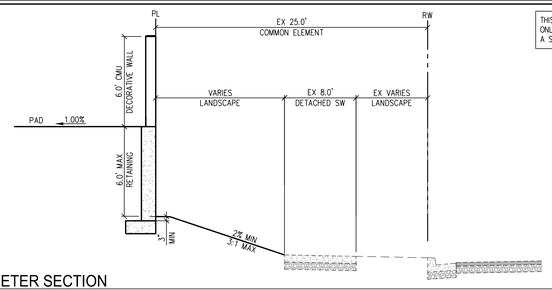
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THIS DETAIL IS FOR REFERENCE ONLY AND DOES NOT CONSTITUTE A STRUCTURAL DESIGN

24. PERIMETER SECTION

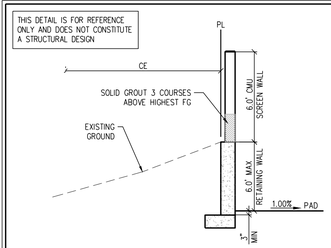
NOT TO SCALE



THIS DETAIL IS FOR REFERENCE ONLY AND DOES NOT CONSTITUTE A STRUCTURAL DESIGN

14. PERIMETER SECTION

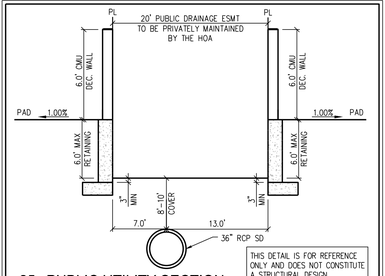
NOT TO SCALE



THIS DETAIL IS FOR REFERENCE ONLY AND DOES NOT CONSTITUTE A STRUCTURAL DESIGN

20. WALL SECTION

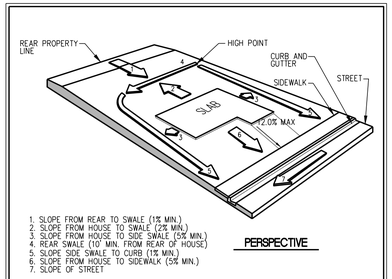
NOT TO SCALE



THIS DETAIL IS FOR REFERENCE ONLY AND DOES NOT CONSTITUTE A STRUCTURAL DESIGN

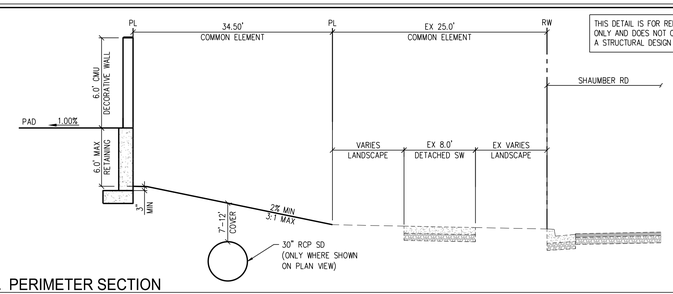
25. PUBLIC UTILITY SECTION

NOT TO SCALE



TYPE "A" LOT GRADING

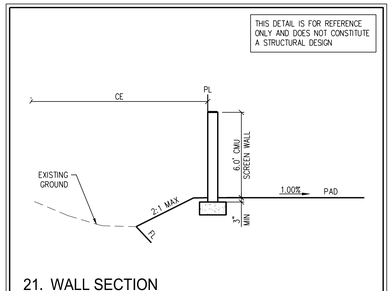
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15. PERIMETER SECTION

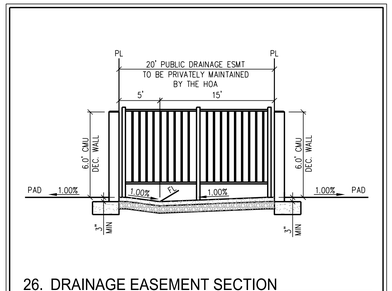
NOT TO SCALE



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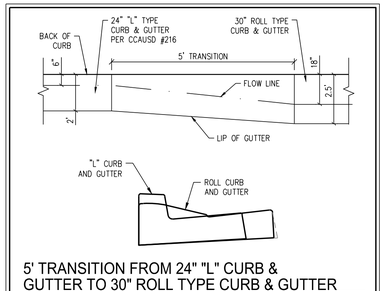
21. WALL SECTION

NOT TO SCALE



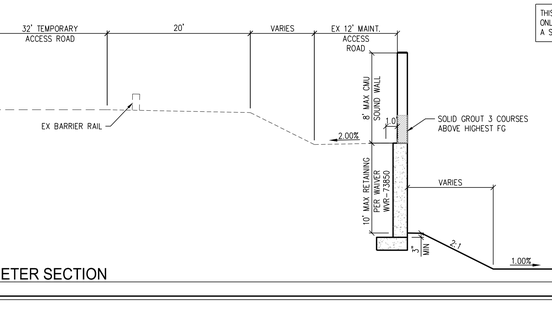
26. DRAINAGE EASEMENT SECTION

NOT TO SCALE



5' TRANSITION FROM 24" "L" CURB & GUTTER TO 30" ROLL TYPE CURB & GUTTER

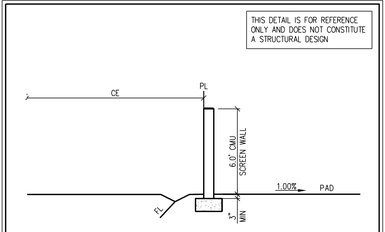
NOT TO SCALE



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16. PERIMETER SECTION

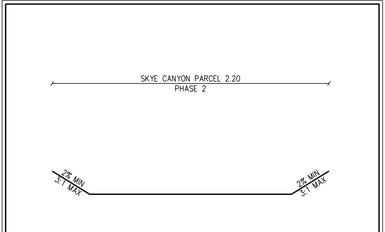
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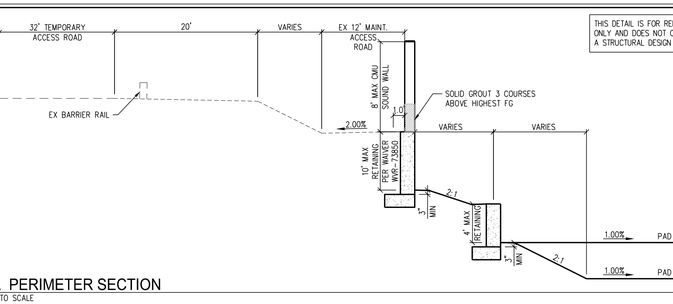
22. WALL SECTION

NOT TO SCALE



27. INTERIM GRADING SECTION

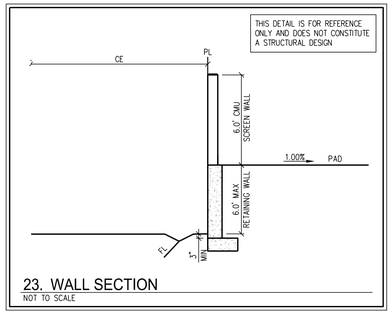
NOT TO SCALE



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17. PERIMETER SECTION

NOT TO SCALE



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23. WALL SECTION

NOT TO SCALE

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT No. _____ FIRST APPROVED DATE _____

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5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP.	APP. DATE

CITY OF LAS VEGAS, NEVADA

CENTURY COMMUNITIES

SKYE CANYON II PARCEL 2.20
GRADING DETAILS II

S12
T19
R59

DATE: 10/25/2018
DRAFTER: BCS
DESIGNER: HN
CHECKED: MAK

PROJECT NO.
OLY1722-000

PROFESSIONAL ENGINEER STATE OF NEVADA
TIMOTHY M. MULROONEY
Exp. 12/31/2019
CIVIL
No. 22936
10/25/18

D-2
SHEET 16 OF 19

__-_____

J:\Oly1722-000 skye canyon parcel 2.20 phase 1\dwg\mstr\x\cer1722-000 dtl.dwg 10/25/2018 9:23 AM Hung Nguyen

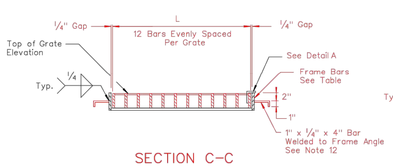
BILL OF MATERIALS (RCP HDPE CMP)

PIPE SIZE (INCH)	SINGLE (ONE GRATE)					DOUBLE (TWO GRATES)					TRIPLE (THREE GRATES)				
	* CONCRETE (CY)		* REINF. (LB.)			* CONCRETE (CY)		* REINF. (LB.)			* CONCRETE (CY)		* REINF. (LB.)		
	BASE QUAN. (H MIN.)	ADD RATE (CY/FT)	BASE QUAN. (H MIN.)	ADD RATE (CY/FT)	STR STEEL (LB)	BASE QUAN. (H MIN.)	ADD RATE (CY/FT)	BASE QUAN. (H MIN.)	ADD RATE (CY/FT)	STR STEEL (LB)	BASE QUAN. (H MIN.)	ADD RATE (CY/FT)	BASE QUAN. (H MIN.)	ADD RATE (CY/FT)	STR STEEL (LB)
≤15	0.71	0.19	36	10	211	1.06	0.26	50	13	397	1.41	0.33	70	17	583
18	0.89	0.20	40	10	306	1.31	0.28	56	13	574	1.72	0.35	77	18	842
24	1.08	0.22	58	12	349	1.56	0.30	80	15	652	2.04	0.37	105	20	956
30	1.28	0.24	63	12	390	1.83	0.31	86	16	729	2.38	0.39	113	20	1068
36	1.50	0.26	67	13	524	2.11	0.33	92	16	980	2.72	0.41	120	21	1435
42	1.71	0.28	90	15	575	2.39	0.35	120	18	1073	3.07	0.43	154	22	1571
48	1.94	0.30	95	15	707	2.68	0.37	127	18	1329	3.42	0.44	163	23	1951

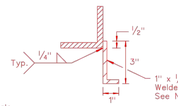
*The Concrete And Reinforcing Quantities Are Based On The H Min. Shown. Increase The Concrete And Reinforcing Base Quantity By The Corresponding Add Rate (Per Foot Of Increased H) If The H Specified Is Larger Than H Min.

TABLE OF DIMENSIONS (RCP HDPE CMP)

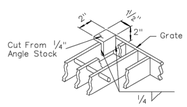
PIPE SIZE (INCH)	A	H Min. (FT)	MAIN BARS (INCH)	FRAME ANGLES (INCH)	FRAME BARS (INCH)	L (FT) SINGLE GRATE	L (FT) DOUBLE GRATE	L (FT) TRIPLE GRATE
≤ 15	2'	2.50	3½ X ⅜	4 X 3 X ⅜	4 X ⅜	2	4	6
18	2' 6"	3.00	4½ X ⅜	5 X 3 X ⅜	5 X ⅜	2	4	6
24	3'	3.50	4½ X ⅜	5 X 3 X ⅜	5 X ⅜	2	4	6
30	4'	4.00	4½ X ⅜	5 X 3 X ⅜	5 X ⅜	2	4	6
36	4'	4.50	5½ X ⅜	6 X 3½ X ⅜	6 X ⅜	2	4	6
42	5'	5.00	5½ X ⅜	6 X 3½ X ⅜	6 X ⅜	2	4	6
48	5'	5.50	5½ X 7/16	6 X 3½ X ⅜	6 X ⅜	2	4	6



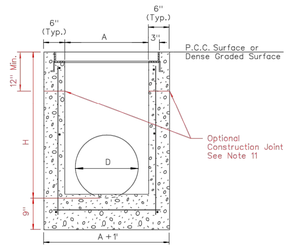
SECTION C-C



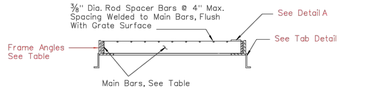
TAB DETAIL



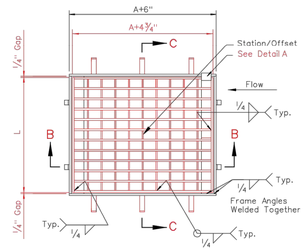
DETAIL A



SECTION A-A



SECTION B-B



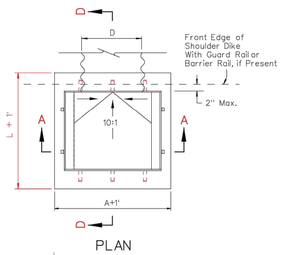
GRATE AND FRAME

NOTES:

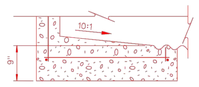
1. ALL CONCRETE SHALL BE CLASS A OR AA.
2. REINFORCING STEEL SHALL BE NO.4 BARS WITH MAXIMUM SPACING AT 18" CENTERS, WIRED TIGHTLY AT ALL INTERSECTIONS AND EMBEDDED 2" CLEAR OF ALL CONCRETE SURFACES.
3. EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1".
4. DIMENSIONS MAY BE VARIED TO FIT LOCAL CONDITIONS IF ORDERED BY THE ENGINEER.
5. COMMERCIAL PREFABRICATED GRATINGS APPROVED BY THE BRIDGE DIVISION MAY BE USED IN LIEU OF THE FIELD-WELDED GRATING SHOWN ABOVE.
6. EXTREME LOW COVER SITUATIONS TO BE REVIEWED BY HYDRAULICS ENGINEER.
7. SLOPE CATCH BASIN FLOORS 10:1 FROM ALL DIRECTIONS TOWARD OUTLET PIPE. IF BASIN IS USED AS A JUNCTION, SHAPE FLOW LINE(S) TO OUTLET PIPE AND PROVIDE A 10:1 SLPOE TO FLOW LINE(S).
8. SEE SHEET R-2.9.1 FOR DETAILS IF CONNECTING HDPE PIPE.
9. A SINGLE TYPE 2 DROP INLET SHALL BE CONSTRUCTED UNLESS A DOUBLE OR TRIPLE IS SPECIFIED.
10. SINGLE GRATE CONFIGURATION SHOWN FOR CLARITY. OUTSIDE DIMENSIONS OF EACH GRATE SHALL MEASURE 2'BY A+4¾".
11. RUN REBAR CONTINUOUS THRU CONSTRUCTION JOINT. JOINT MUST BE A MINIMUM OF 3" FROM HORIZONTAL BARS.
12. WELD ONE TAB ON ℄ OF GRATE AND REMAINING TWO TABS 6" FROM EDGE OF FRAME. SIX TABS PER INLET, THREE TABS ON EACH SIDE
13. WELD TABS 6" FROM EDGE OF FRAME. FOUR TABS PER GRATE, TWO ON EACH SIDE.

DESIGN NOTES:

D1. ADDITIONAL PIPE PENETRATIONS MAY BE PLACED IN ANY WALL.



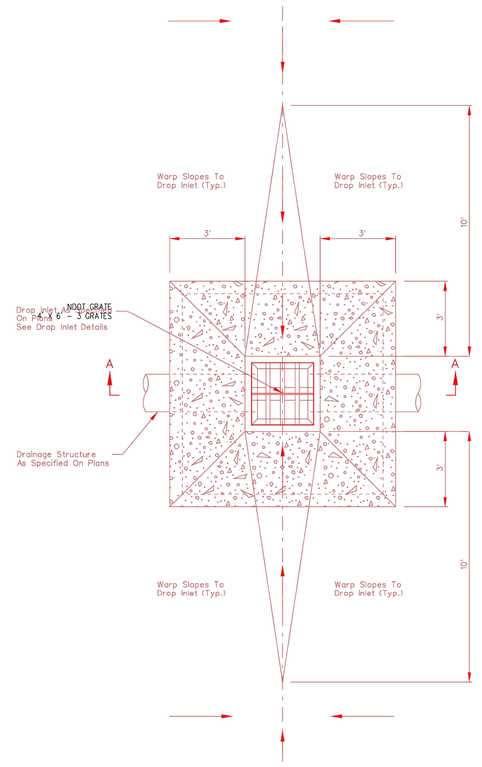
PLAN



SECTION D-D

TYPE II DROP INLET

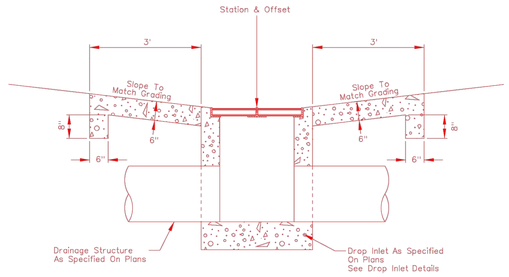
NOT TO SCALE — PER NDOT R-4.2.1



DROP INLET CONCRETE APRON

GENERAL NOTES:

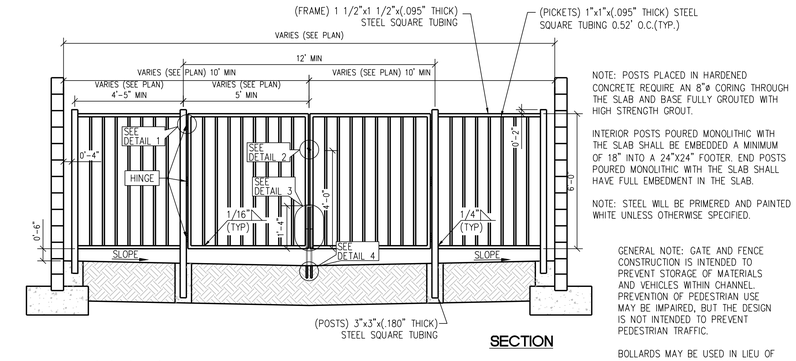
1. CONCRETE SHALL BE CLASS A OR AA.



SECTION A-A

DROP INLET & CONCRETE APRON

NOT TO SCALE — PER NDOT R-4.2.7



SECTION

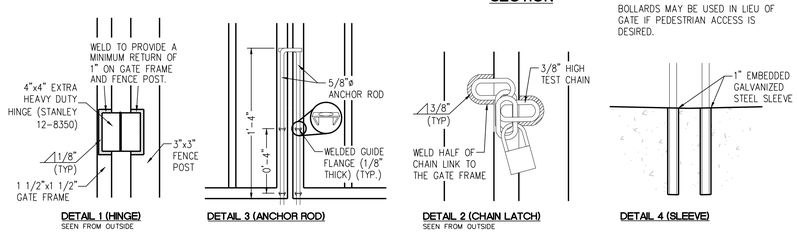
NOTE: POSTS PLACED IN HARDENED CONCRETE REQUIRE AN 8"ø CORING THROUGH THE SLAB AND BASE FULLY GROUTED WITH HIGH STRENGTH GROUT.

INTERIOR POSTS POURED MONOLITHIC WITH THE SLAB SHALL BE EMBEDDED A MINIMUM OF 18" INTO A 24"X24" FOOTER. END POSTS POURED MONOLITHIC WITH THE SLAB SHALL HAVE FULL EMBEDMENT IN THE SLAB.

NOTE: STEEL WILL BE PRIMERED AND PAINTED WHITE UNLESS OTHERWISE SPECIFIED.

GENERAL NOTE: GATE AND FENCE CONSTRUCTION IS INTENDED TO PREVENT STORAGE OF MATERIALS AND VEHICLES WITHIN CHANNEL. PREVENTION OF PEDESTRIAN USE MAY BE IMPAIRED, BUT THE DESIGN IS NOT INTENDED TO PREVENT PEDESTRIAN TRAFFIC.

BOLLARDS MAY BE USED IN LIEU OF GATE IF PEDESTRIAN ACCESS IS DESIRED.



DETAIL 1 (HINGE) SEEN FROM OUTSIDE

DETAIL 3 (ANCHOR ROD)

DETAIL 2 (CHAIN LATCH) SEEN FROM OUTSIDE

DETAIL 4 (SLEEVE)

WROUGHT IRON FENCE WITH GATE DETAIL

NOT TO SCALE

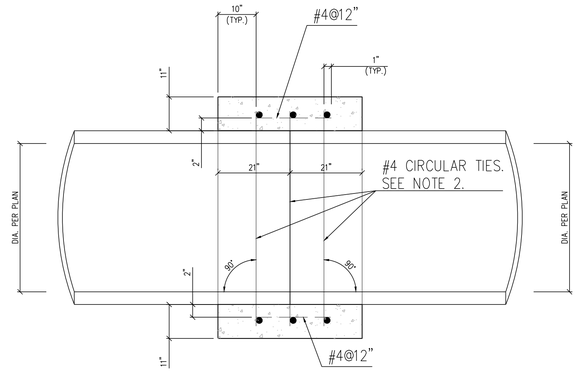
CIRCULAR TIES:

PIPE DIAMETER	SPACE BETWEEN PIPE EXTREMITIES	NO. OF CIRCULAR TIES
21" or less	2 1/2"	3
24" to 30"	2 1/2" or less	3
33" to 57"	2 1/2" or less	4
60" to 66"	2 1/2" or less	5

NOTES:

1) WHERE THE SLOPE OF THE UPSTREAM PIPE IS GREATER THAN THE SLOPE OF THE DOWNSTREAM PIPE, JOIN SOFFITS. WHERE THE SLOPE OF THE UPSTREAM PIPE IS LESS THAN THE SLOPE OF THE DOWNSTREAM PIPE, JOIN INVERTS.

2) WHERE THE SPACE BETWEEN THE PIPE EXTREMITIES EXCEEDS 2 1/2 INCHES, THE NUMBER OF CIRCULAR TIES SHALL BE INCREASED TO MAINTAIN A MAXIMUM SPACING OF 6 INCHES CENTER TO CENTER. CIRCULAR TIES SHALL HAVE A DIAMETER 5 INCHES GREATER THAN THE OUTSIDE DIAMETER OF THE LARGER PIPE.



PLAN

CONCRETE COLLAR

NOT TO SCALE — PER DCSWCS SD-4







SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP.	APP. DATE

CITY OF LAS VEGAS, NEVADA

CENTURY COMMUNITIES

SKYE CANYON II PARCEL 2.20
GRADING DETAILS

S12 T19 R59

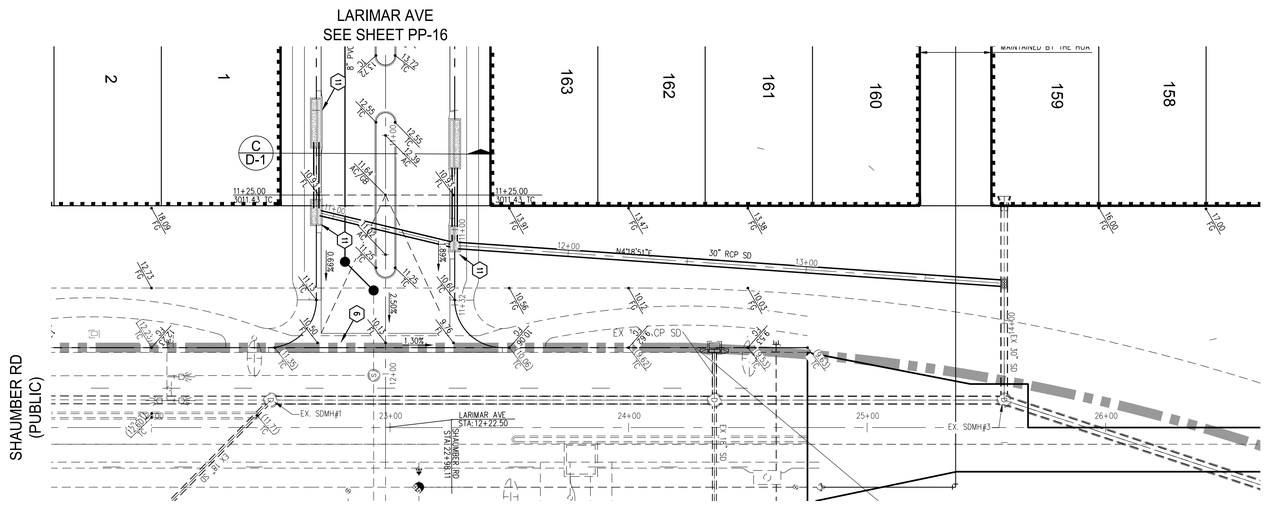
DATE: 10/25/2018
DRAFTER: BCS
DESIGNER: HN
CHECKED: MAK

PROJECT NO.
OLY1722-000

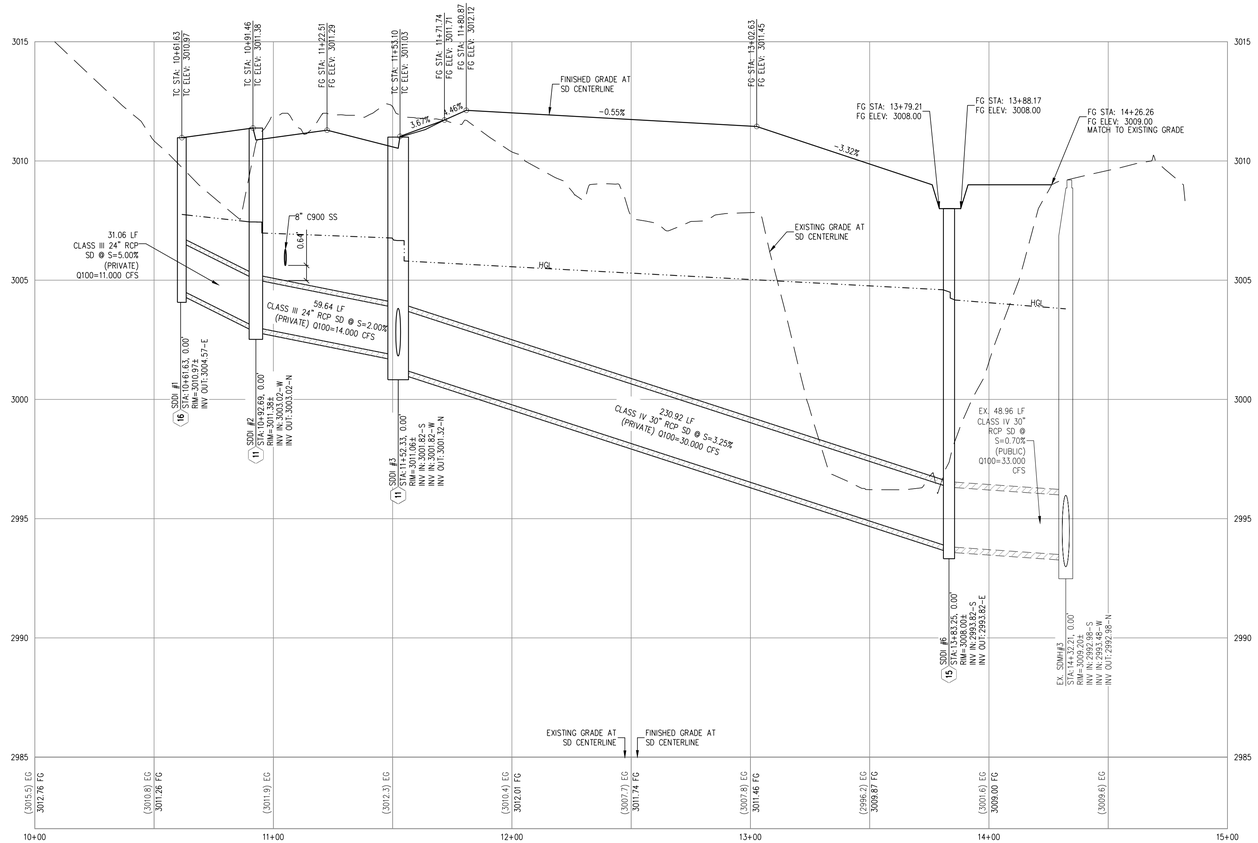
PROFESSIONAL ENGINEER — STATE OF NEVADA — TIMOTHY M. MULROONEY — Exp. 12/31/2019 — CIVIL — No. 22938
10/25/18

D-3
SHEET 17 OF 19

\\Oly1722-000 skye canyon parcel 2.20 phase 1\dwg\mstrovk\civil1722-000 dtl.dwg 10/25/2018 9:23 AM Hung Nguyen



STORM DRAIN- PLAN VIEW
(PUBLIC)



STORM DRAIN- PROFILE VIEW
HORIZ: 1" = 30'
VERT: 1" = 3'

0 30 60
SCALE - 1"=30' FEET

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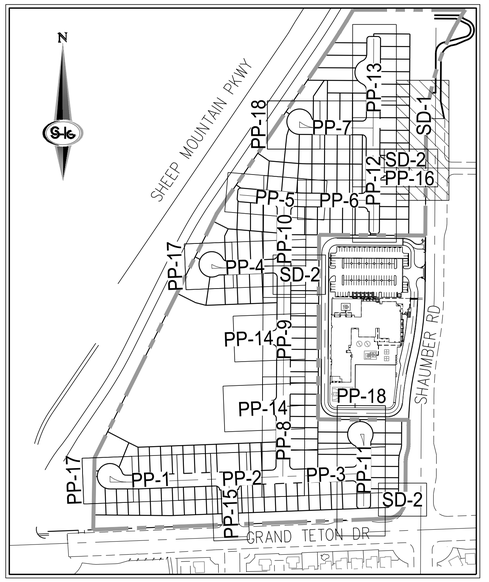
SOILS REPORT
SOILS REPORT BY GEOTEK RESIDENTIAL, LLC

PROJECT NO. 12208-LVR DATED MARCH 30, 2016

UPDATED AUGUST 20, 2018

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FILL= 71,171 CU YDS

EXPORTED MATERIAL TO BE DISPOSED OF AT AN APPROVED LICENSED DISPOSAL FACILITY OR AT A SITE WITH AN APPROVED AND ACTIVE GRADING PERMIT.



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5. SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.
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9. NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXIST) WITHIN THE SIGHT VISIBILITY ZONES.

LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDELINES
(REQUIRED FOR ALL SITES GREATER THAN 1 ACRE (43,560 SQ.FT.))

1. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATED IN, THE PUBLIC RIGHTS OF WAY OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.
2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN CLARK COUNTY TITLE 24.40 AND IN THE LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.5.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS, AND ALL BMPS WEEKLY, AND WITHIN 24 HOURS AFTER A RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12.
5. ACCUMULATED SEDIMENT IN BMPS SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

FLOOD ZONE
THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE X (UNSHADED) AS DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANEL 32003C1750E, DATED SEPTEMBER 27, 2002. A ZONE X (UNSHADED) IS DESCRIBED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.

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2) FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWCUT LINE TO PROPOSED EDGE OF PAVEMENT OR PROJECTED LIP OF CURB PRIOR TO SUBGRADE PREPARATION AND CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

CONSTRUCTION NOTES
1. INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
2. INSTALL A TYPE CURB PER CCAUSD NO. 219
3. INSTALL L TYPE CURB PER CCAUSD NO. 216
4. INSTALL ROLL TYPE CURB PER CCAUSD NO. 217.S1
5. INSTALL 8' VALLEY GUTTER PER CCAUSD NO. 228
6. INSTALL 5' WIDE SIDEWALK PER CCAUSD NO. 234
7. INSTALL SIDEWALK RAMP PER CCAUSD NO. 235, CASE I AND CCAUSD NO. 235.1
8. INSTALL 5' CURB TRANSITION PER DETAIL ON SHEET D-2
9. INSTALL SIDEWALK UNDERDRAIN PER CCAUSD NO. 236
10. INSTALL 10.0' DROP INLET TYPE "CM2" PER CCAUSD NO. 412.1 AND 421
11. REMOVE EX END SECTION FLARE AND INSTALL CONCRETE COLLAR PER DETAIL ON SHEET D-3
12. EXISTING IMPROVEMENTS TO BE REMOVED
13. INSTALL 3' CONCRETE FLUME PER DETAIL ON SHEET D-1
14. INSTALL 4.0'WX2'L NDOT TYPE II DROP INLET AND NDOT CONCRETE APRON PER NDOT STD DWG#R-4.2.1 & R-4.2.7 PER DETAIL ON SHEET D-3 AND CCAUSD #421
15. INSTALL 20.0' DROP INLET TYPE "CM2" PER CCAUSD NO. 412.1 AND 421
16. INSTALL 3.0'WX2'L NDOT TYPE II DROP INLET AND NDOT CONCRETE APRON PER NDOT STD DWG#R-4.2.1 & R-4.2.7 PER DETAIL ON SHEET D-3 AND CCAUSD #421
17. INSTALL WROUGHT IRON FENCE
18. INSTALL 20.0' STRUCTURAL DROP INLET PER STRUCTURAL PLANS BY OTHERS
19. INSTALL RIP RAP D50=6", THICKNESS=12" TO 5' BEYOND THE UNIT BOUNDARY (WHERE SHOWN)

DRAINAGE EASEMENT NOTE
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I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY _____ ON FILE AT CITY OF LAS VEGAS FOR THE SUBJECT PROJECT.

TIMOTHY M. MULROONEY, P.E. 22938 DATE

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FREEWAY & ARTERIAL SYSTEM OF TRANSPORTATION (F.A.S.T.)

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DO OVERHEAD
1-702-227-2929

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Call 811
OR
1-800-227-2600

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SKYE CANYON II PARCEL 2.20
PLAN AND PROFILE - STORM DRAIN I

S12
T19
R59

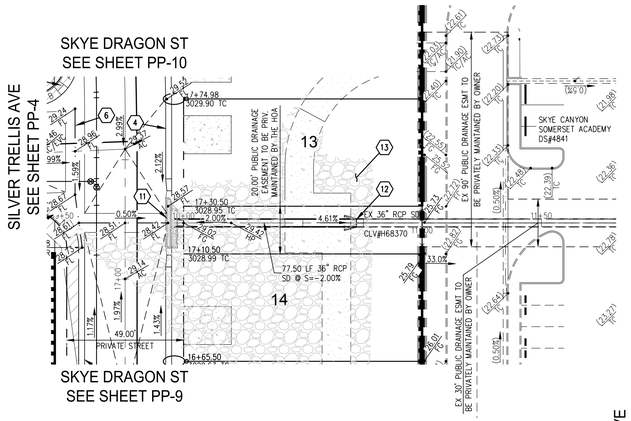
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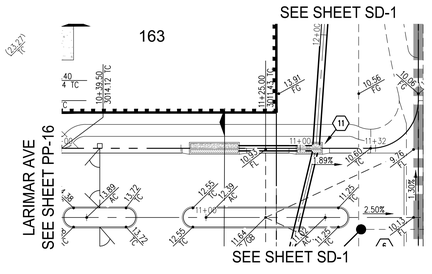
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SD-1
SHEET 18 OF 19

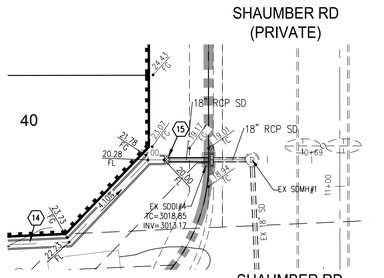
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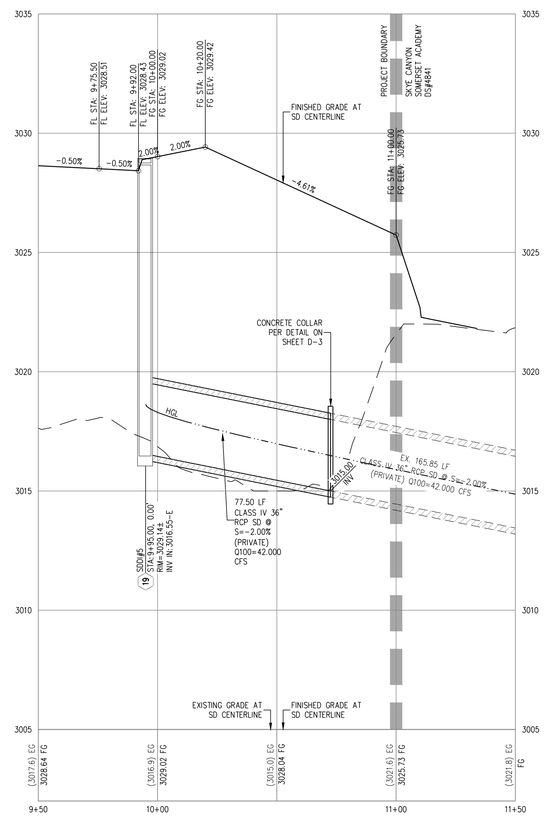
CE "G" STORM DRAIN - PLAN VIEW



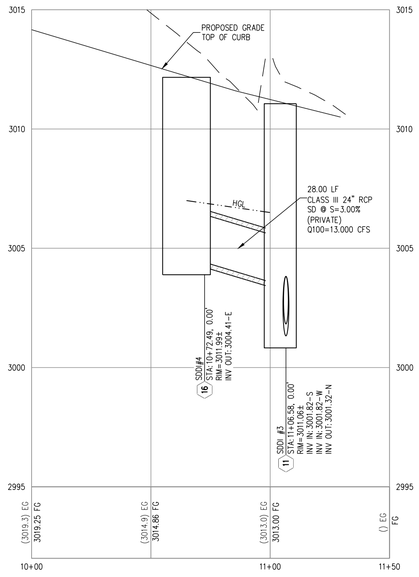
NORTH ENTRANCE STORM DRAIN- PLAN VIEW



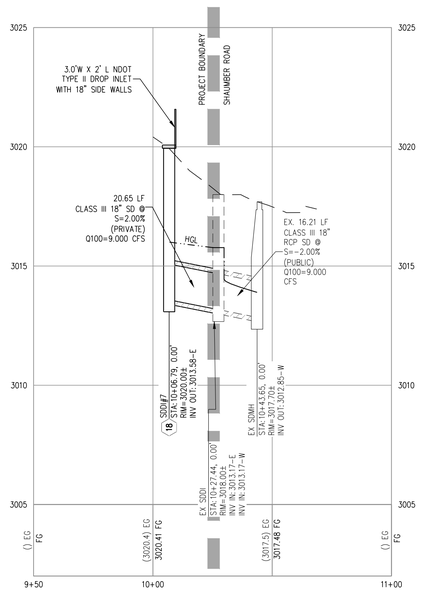
STORM DRAIN- PLAN VIEW
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CE "G" STORM DRAIN - PROFILE VIEW
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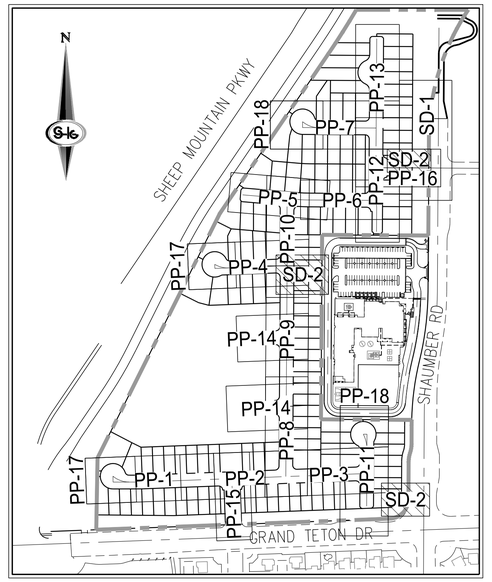
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TIMOTHY M. MULROONEY, P.E. 22938 DATE

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PLAN AND PROFILE - STORM DRAIN II

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SD-2
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