

DS #: 5114

APN: 125.20.601-003

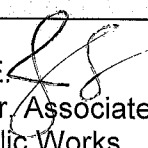
PROJECT: Montecito 1

SUBMITTAL: 2nd

SCANNED BY/DATE:

CHECKED BY/DATE:



CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		July 10, 2019
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: Montecito Unit 1	COPIES TO: Slater Hanifan Group
Cross Streets:	NEC of Grand Montecito & Deer Springs	KB Home
File Number:	F:\Depot\DSMemos\DS5114B.doc	Bart Anderson, P.E., DevCo
Parcel Number:	125-20-601-003	
Zoning Action:	SDR-74638	
FEMA Flood Zone	YES NO X	
Proposed Storm Drain	YES X NO	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	3/18/2019	4/22/2019	Not Approved	\$400.00	3055931:\$400
2 nd Submittal	6/28/2019	7/9/2019		\$400.00	
			TOTAL FEES (LDDRS):	\$800.00	----

REMARKS:

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

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

1. This site accepts offsite flows and conveys them through the site. Provide a "Public Drainage Easement to be Privately Maintained" and show the easement 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.
2. Structural plans for the deep drop inlet. Provide a soils report, structural calculations and specifications, two wet stamped structural sets, and a grading plan to the Building Department for processing. The engineer must provide a copy of the Building Department approval of the structures to Flood Control prior to final acceptance of the drainage study.
3. The rough graded onsite without any permanent cover such as paving, building construction or planting, is considered an ongoing project under construction whereas a *Stormwater Pollution Prevention Plan* must be kept active under the NDEP Permit. In order to close out the permit, the developer must install permanent cover to the site to stabilize and control stormwater pollution to the satisfaction of NDEP.
4. The grading plan shows a significant area of inundation for the 100-year storm. Provide a notarized letter from the property owner acknowledging the inundation and associated maintenance and liability prior to final plan approval.

NOTE: Any future changes to the proposed design (or design assumptions) as outlined in the approved drainage study and attached preliminary grading plan which affect drainage must be addressed in a Drainage Study Update and accepted by the *City of Las Vegas Flood Control Section*. Additionally, conditional acceptance of a drainage study is valid for a period of one (1) year. If the proposed construction has not been completed in that time period, the *City of Las Vegas* reserves the right to require additional conditions and/or submission and acceptance of a complete drainage study update prior to further construction of a project.

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/R60E/20 & 21
AREA G-20

**TECHNICAL DRAINAGE STUDY
ADDENDUM
Montecito Unit 1**
City of Las Vegas, Nevada

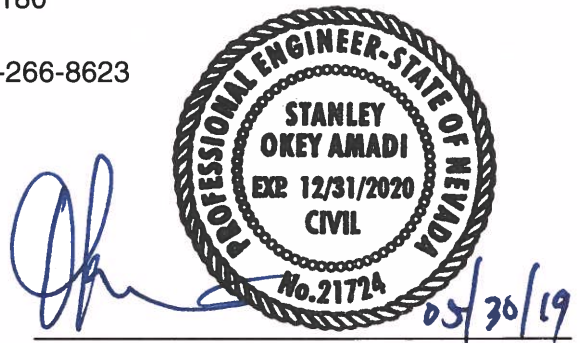
Job No.: KBH1805.001
Date: May 2019

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:

KB Home
5795 Badura Avenue, Ste 180
Las Vegas, NV 89118
Phone: 702-266-8400 • Fax: 702-266-8623



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

Assisted By: Jonathan S. Rocha, E.I.



KBH1805-001

May 30, 2019

Ms. Jennifer Shinn, P.E.
Senior Engineering Associate
City of Las Vegas Department of Public Works
333 N. Rancho Drive
Las Vegas, Nevada 89106

Subject: Technical Drainage Study Addendum for Montecito Unit-1

Ms. Shinn:

This letter certifies that all items provided on the *Technical Drainage Study Addendum for Montecito Unit-1* submittal CD match the paper version bound into the study.

Respectfully Submitted,
SLATER HANIFAN GROUP

A handwritten signature in blue ink, appearing to read 'Stanley Okey Amadi', is written over the text 'SLATER HANIFAN GROUP'.

Stanley Okey Amadi, P.E., CFM
Project Manager – Flood Control Division

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL
DRAINAGE STUDY INFORMATION FORM

Name of Development: Montecito Unit 1 - Addendum Date: May 2019
 Location of Development: a) Descriptive (Cross Streets): North/South: Grand Montecito Parkway
East/West: Deer Springs Way
 b) Section: 20 & 21 Township: 19 S Range: 60 E
 c) APN: 125-20-601-003, 125-20-601-006, 125-20-602-002, 125-20-602-005, 125-20-602-009, 125-20-602-010,
125-20-603-001, 125-20-603-002, 125-20-603-003, 125-20-603-004, 125-21-201-001

Name of Owner: KB Home Nevada Aquisition
 Telephone No.: (702) 266-8400 Fax No.: (702) 266-8623 E-mail Address: pchao@kbhome.com
 Address: 5795 Badura Ave Ste 180 Las Vegas NV 89118

Contact Person – Name: Stanley Okey Amadi, P.E., CFM Telephone No.: (702) 284-5300
 *E-mail Address: Samadi@shg-inc.com Fax No.: (702) 284-5399
 Firm: Slater Hanifan Group, A Westwood Team
 Address: 5740 S. Arville #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	☐

1. Total Owned Land Area: At Site: ± 52.4 acres Being Developed/Disturbed: ± 11.6 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.): Residential

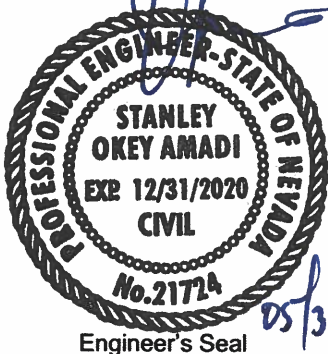
5. Approximate upstream land area which drains to the subject site: 58 +/- acres

6. Has the site drainage been evaluated in the past? ☐ Yes** ☒ No If yes, please identify documentation: _____

*Technical Drainage Study for Centennial Parkway Channel West – US95 CC215 to Durango Drive

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: To CCRFCD (CN95 000) facility along US95

8. Briefly describe your proposed schedule for the subject project: ASAP



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:

STANDARD FORM 1

Updated 05/01/2008



KBH1805.001

5/30/2019

Ms. Jennifer Shin, P.E.
Flood Control, Engineering Associate
City of Las Vegas Department of Public Works
333 N. Rancho Dr.
Las Vegas, NV 89106

Subject: Montecito Unit 1 (DS5114)

Dear Jennifer Shin:

This letter is submitted in response to the comments contained in the April 23, 2019 review memorandum, regarding the above referenced project. A copy of the City of Las Vegas Public Works (CLVPW) comment letter has been provided in Appendix A.

The comments in the review memorandum 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 master planned facility. Therefore, CCRFCD concurrence is required prior to final approval of the drainage study*

Please note that effective March 15, 2019, the CCRFCD adopted new requirements for drainage study concurrence submittal. Follow the link below for specific guidance:

<http://gustfront.ccrfcd.org/LandDev/LandDev.aspx> ;

Response: It is acknowledged that the overall Montecito site is adjacent to the existing CCRFCD facility along US95. However, the subject Unit-1 project site does not have any impact to the facility other than the proposed mass grading of the future Unit-2 area to direct flows to the lateral facility. We therefore respectfully request that the approval of the subject Unit-1 drainage study not be conditioned on concurrence from CCRFCD.

2. **Comment:** *The project proposes to construct facilities and/or increase flows within Nevada Department of Transportation (NDOT) right-of-way. The engineer must contact NDOT for encroachment permit for the proposed project.;*

Response: As discussed in our meeting of May 28, 2019, the subject Unit-1 project does not propose any facilities or discharge surface flows to NDOT right-of-way. Therefore, NDOT encroachment permit is not applicable.

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

Response: Please refer to Appendix D for the NOFAs associated with the site design.

4. **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: Please refer to Appendix C for the approval from City of Las Vegas Planning and Development Department.

5. **Comment:** *This site accepts offsite flows and conveys them through the site. Provide a "Public Drainage Easement to be Privately Maintained" and show the easement 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: It is acknowledged that the site accepts and conveys offsite flows thru the site. The infrastructure design to capture and convey the offsite flows is currently underway and the required drainage easement for the facility is currently in process and will be recorded prior to final acceptance of the improvement plans. Per our meeting of May 28, 2019, the City acknowledges that the design and improvements for the multiple units of the site will be going on concurrently and that recording interim drainage easements to be vacated shortly afterwards upon final mapping would not be ideal. Therefore, a notarized letter from the property owner acknowledging that in the interim, offsite flows conveys thru and inundates that site pending development will satisfy this comment. The notarized letter is currently being processed by the developer and will be provided prior to the drainage study approval.

6. **Comment:** *The engineer must provide a table on the grading plans that show a quantity estimate of all drainage improvements within Public Drainage Easements. All drainage improvements within Public Drainage Easements must be bonded and inspected;*

Response: Noted. Please refer to the revised grading plans for the table of quantity estimate of drainage improvements within public drainage easements.

7. **Comment:** *Provide a section detail of the drainage easement required for the storm drain facility within Common Element "P" to demonstrate adequate clearances and minimum easement width is provided by the Manual;*

Response: Acknowledged. Please note that due to conflict with an existing NV Energy conduit along Doe Brook Trail, the storm drain alignment and design has been revised. The storm drain will now align north between Lots 33 and 34 and continue east along Vulturo Avenue until it daylights within the future Unit-2 area. Detail section 14/D-2 has been provided for the drainage easement between Lots 33 and 34 and to demonstrate that the minimum easement width has been provided per the manual criteria. The storm drain hydraulics and outfall computations have been updated and provided in Appendix E.

8. **Comment:** *Provide section details of the drainage easement required for all areas where offsite flows are conveyed through the site;*

Response: Section details have been provided for all areas of conveyance for the offsite flows impacting the site.

9. **Comment:** *This drainage study assumes that the Unit 1 project will be constructed in one phase. If improvement plans are submitted to break the project into separate phases, a drainage study update will be required for each phase addressing the interim condition(s);*

Response: Noted.

10. **Comment:** *The rough graded onsite without any permanent cover such as paving, building construction or planting, is considered an ongoing project under construction whereas a Stormwater Pollution Prevention Plan must be kept active under the NDEP Permit. In order to close out the permit, the developer must install permanent cover to the site to stabilize and control stormwater pollution to the satisfaction of NDEP;*

Response: Acknowledged.

11. **Comment:** *The grading plan shows a significant area of inundation for the 100-year storm. Provide a notarized letter from the property owner acknowledging the inundation and associated maintenance and liability;*

Response: Acknowledged. The notarized letter is currently being processed by the developer and will be provided prior to the drainage study approval.

12. **Comment:** *The following finish floors do not meet the Regional Flood Control District minimum criteria of twice the Q100 depth of flow up to 18-inches above the water surface (CCRFCD Manual Section 304.4.E.1) or 6-inch minimum above the highest adjacent top of curb (CCRFCD Manual Section 1602 304.4.E.1). The following finish floors should be revised or alternate flood protection provided;*

Lot	FF Shown	Min FF
43	2526.50	2528.31
44	2526.80	2528.03
45	2527.10	2527.99
75	2522.70	2522.97
87	2520.50	2521.03
91	2519.00	2519.26

Response: Three course solid grouting of the pertinent perimeter walls for the above listed lots has been provided to satisfy the criteria. Please refer to detail sections 3/D-1, 6/D-1 and 9/D-1 for the solid grouting call outs. Please note that with the addition of a common element between Lots 33 and 34 to reroute the storm drain system onsite, the lot lines and TC elevations for the southern lots along Vulturo Avenue have been adjusted. Therefore, the finished floor analysis table for the lots have been revised accordingly. The revised finished floor table is provided in Appendix F for reference. All the finished floor elevation still satisfy the design criteria stipulated in the HCDDM.

13. **Comment:** *It appears there is a potential for offsite Q100 flows in Grand Montecito to overtop the curb and enter the site at the western end of Vulturo Avenue, between Lots 42 and 43. Provide a cross section detail to demonstrate the area is adequately flood protected;*

Response: Noted. A high point with additional detail (18/D-2) has been provided at the western end of Vulturo Avenue. The high point has been elevated to maintain a minimum freeboard of 6" above the flow depth in Grand Montecito Parkway.

14. **Comment:** *The flow in Deer Springs is above the back of sidewalk and is erosive. Provide erosion protection for the landscape area in the form of a stem wall, rip rap, or approved alternate as required in the Regional Flood Control District Manual in section 904.3. Revise the grading plan and sections accordingly;*

Response: The flow depth calculation (DS1) for Deer Springs Way is located upstream of the intersection with Grand Montecito Parkway prior to the flow split. After the flow split, the portion of the flows continuing east along Deer Springs Way adjacent to the site is approximately 117 cfs (also previously analyzed as Section DS1). The 117 cfs was incorrectly analyzed with a 74-ft right-of-way (ROW) width, whereas a total of 50-ft ROW is proposed for Deer Springs Way adjacent to the site. Note that the existing 40-ft wide ROW and half street improvements has a typical 2% crown at centerline. The subject project is only conditioned to dedicate additional 10-ft ROW that will include the northern curb & gutter, 3-ft landscape and 5-ft sidewalk. Therefore, the proposed Deer Springs Way will comprise of a one-way crown to the south with a spill L-curb along the northern half of the road adjacent to the site.

The street flow depth calculation has been revised and the summary table on the Ultimate Condition Drainage Map (Exhibit H) has been updated accordingly. Note that since the ROW is now reduced, the revised street calculation and flow depth has been used to evaluate the driveway hump of the existing Deer Springs and Durango subdivision located directly south of the site. The assessment shows that the driveway hump will contain the offsite flows within Deer Springs Way. Note also that the existing landscape along the southern half of the street consist of riprap designed and installed for erosion protection. Therefore, the proposed street improvements will not cause any negative impacts to the existing adjacent development. Copies of the drainage exhibit and grading plan for the adjacent development have been provided Appendix G for reference.

15. **Comment:** *Provide calculations to demonstrate the 10-year dry land criteria is satisfied for the adjacent streets;*

Response: The perimeter streets adjacent to the site are Grand Montecito Parkway and Deer Springs Way. Note that Grand Montecito Parkway is already fully improved, and the site does not discharge any flows to it. Thus, a dry lane analysis will not be necessary. Likewise, Deer Springs Way adjacent to the site is proposed to consist of a total of 50-ft ROW width which is less than 80-ft. Therefore, dry lane criteria will not be applicable.

We believe the above responses with the pertinent calculations and the revisions provided on the revised plans have adequately addressed your concerns in the review memorandum. The revised

plan & profiles, and detail sheets adopting the revisions addressed in in this letter have been included in Appendix H. 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



Stanley Okey Amadi, P.E., CFM
Project Manager - Flood Control Division
cc: Mark Failla, P.E., CFM – SHG

APPENDIX

Appendix A CLV Drainage Study Comment Letter

Appendix B Revised Exhibit

Appendix C CLV Planning Department Approval

Appendix D NOFA

Appendix E Revised Hydraulic Computations

Appendix F Updated Finished Floor Analysis

Appendix G Reference Exhibit and Grading Plan

Appendix H CD of Electronic Files & Revised Improvement Plans

APPENDIX A

CLV Drainage Study Comment Letter

CITY OF LAS VEGAS			DATE:
INTER-OFFICE MEMORANDUM			April 23, 2019
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: Montecito Unit 1		COPIES TO: Slater Hanifan Group
Cross Streets:	NEC of Grand Montecito & Deer Springs		KB Home
File Number:	F:\Depot\DSMemos\DS5114B.doc		Bart Anderson, P.E., DevCo
Parcel Number:	125-20-601-003		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 #
1 st Submittal	3/18/2019	4/22/2019	Not Approved	\$400.00	3055931:\$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.

Please note that effective March 15, 2019, the CCRFCD adopted new requirements for drainage study concurrence submittal. Follow the link below for specific guidance.

<http://gustfront.ccrfcd.org/LandDev/LandDev.aspx>

2. The project proposes to construct facilities and/or increase flows within Nevada Department of Transportation (NDOT) right-of-way. The engineer must contact NDOT for encroachment permit for the proposed project.
3. Provide a copy of the zoning/planning conditions associated with this site with the next submittal to verify compliance with conditions. *Flood Control* will not issue conditional approval of the drainage study without the associated zoning/planning conditions (issued by the *City Council*). Any associated conditions of approval that revise the site drainage parameters will require that the drainage study be revised and resubmitted.
4. 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.

5. This site accepts offsite flows and conveys them through the site. Provide a "Public Drainage Easement to be Privately Maintained" and show the easement 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.
6. The engineer must provide a table on the grading plans that shows a quantity estimate of all drainage improvements within Public Drainage Easements. All drainage improvements within Public Drainage Easements must be bonded and inspected.
7. Provide a section detail of the drainage easement required for the storm drain facility within Common Element "P" to demonstrate adequate clearances and minimum easement width is provided by the Manual.
8. Provide section details of the drainage easement required for all areas where offsite flows are conveyed through the site.
9. This drainage study assumes that the Unit 1 project will be constructed in one phase. If improvement plans are submitted to break the project into separate phases, a drainage study update will be required for each phase addressing the interim condition(s).
10. The rough graded onsite without any permanent cover such as paving, building construction or planting, is considered an ongoing project under construction whereas a *Stormwater Pollution Prevention Plan* must be kept active under the NDEP Permit. In order to close out the permit, the developer must install permanent cover to the site to stabilize and control stormwater pollution to the satisfaction of NDEP.
11. The grading plan shows a significant area of inundation for the 100-year storm. Provide a notarized letter from the property owner acknowledging the inundation and associated maintenance and liability.
12. The following finish floors do not meet the Regional Flood Control District minimum criteria of twice the Q100 depth of flow up to 18-inches above the water surface (CCRFCD Manual Section 304.4.E.1) or 6-inch minimum above the highest adjacent top of curb (CCRFCD Manual Section 1602 304.4.E.1). The following finish floors should be revised or alternate flood protection provided.

LOT	FF shown	Min FF
43	2526.50	2528.31
44	2526.80	2528.03
45	2527.10	2527.99
75	2522.70	2522.97
87	2520.50	2521.03
91	2519.00	2519.26

13. It appears there is a potential for offsite Q100 flows in Grand Montecito to overtop the curb and enter the site at the western end of Vulturo Avenue, between Lots 42 and 43. Provide a cross section detail to demonstrate the area is adequately flood protected.
14. The flow in Deer Springs is above the back of sidewalk and is erosive. Provide erosion protection for the landscape area in the form of a stem wall, rip rap, or approved alternate as required in the

Regional Flood Control District Manual in section 904.3. Revise the grading plan and sections accordingly.

15. Provide calculations to demonstrate the 10-year dry lane criteria is satisfied for the adjacent streets.

In an effort to increase administrative efficiency, for all original and re-submittal packages including updates and the addenda, the City of Las Vegas Public Works Department requires both a hardcopy and a digital copy (PDF) on CD for the drainage study.

A letter sealed and signed by a Nevada registered civil engineer must be included in every submittal certifying documents on the electronic CD matches 100% of the hardcopy submittal. The new submittal requirement is effective on May 1, 2019. If there are any questions regarding these new requirements, please contact Albert Sung in the City Flood Control Section at (702) 229-6541.

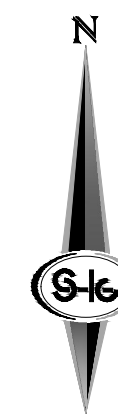
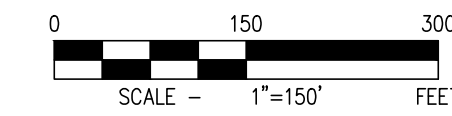
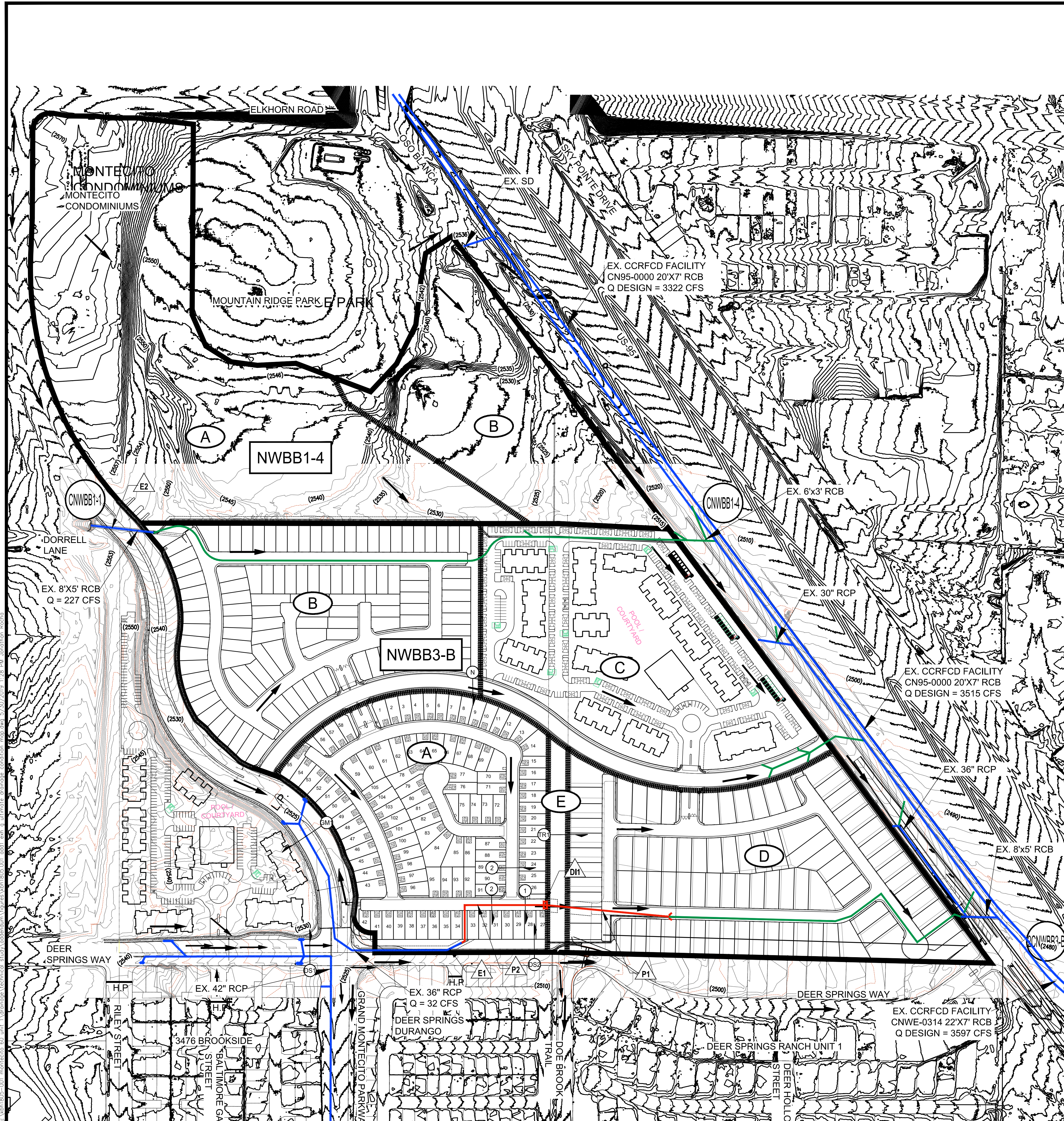
NOTE: Please be advised that all land surface area disturbances over 1 acre or any area adjacent to a water way must submit to the *Nevada Division of Environmental Protection* a "Notice of Intent" to discharge that certifies a stormwater pollution prevention plan has been developed and is maintained 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/R60E/20 & 21
AREA G-20

APPENDIX B

Drainage Exhibits



LEGEND

	BASIN BOUNDARY
	PRO-RATED SUBBASIN BOUNDARY
	EXISTING DRAINAGE FACILITIES
	PROPOSED DRAINAGE FACILITIES
	FUTURE DRAINAGE FACILITIES
	BASIN ID
	PRO-RATED SUBBASIN ID
	CONCENTRATION POINT ID
	FLOW DIRECTION
	FLOWMASTER SECTION
	FACILITY ID

Ultimate Condition Flow Rate Summary			
Basin/Concentration Point ID	Area (ac)	Q ₁₀₀ (cfs)	Q ₁ (cfs)
NWBB3-B*	53.0	135	(74)
NWBB1-4*	33.0	30	(17)
CNWBBI-1 Q = REF*	N/A	227	(125)
CNBB1-4 Q = REF*	N/A	3334	(1834)
2CNWBBI-3-B* Q = REF*	N/A	3579	(1968)

(Q10) VALUES DENOTED IN PARENTHESIS HAVE BEEN ALGEBRAICALLY PRODUCED FROM 0.55 PRECIPITATION RATIO.
* DENOTES REFERENCED FROM CENTENNIAL CHANNEL STUDY

Ultimate Prorated Flow Summary			
Basin ID	Q ₁₀₀ (cfs)	Area (acres)	100-yr Unit Flow (cfs/acre)
NWBB1-4	30	33.0	0.9
NWBB3-B	137	53.0	2.6
Subbasin ID	Q ₁₀₀ (cfs)	Area (acres)	100-yr Unit Flow (cfs/acre)
NWBB1(A)	22	24.5	0.9
NWBB1(B)	8	8.6	0.9
TOTAL	30	33.0	
NWBB3(B/A)	30	11.6	2.6
NWBB3(B/B)	34	13.0	2.6
NWBB3(B/C)	36	13.9	2.6
NWBB3-B(D)	35	13.7	2.6
NWBB3-B(E)	2	0.8	2.6
TOTAL	137	53.0	

100-Year Street Flow Summary					
Section ID	Q ₁₀₀ (cfs)	Slope (%)	Depth (ft)	Velocity (fps)	DxV
DS1 Q = CNWB3-A - SD COLLECTION	155	2.82	0.87	7.39	6.4
1 Q = NWB3-B(A)	30	1.63	0.51	4.17	2.1
2 Q = NWB3-B(A)	30	0.60 1.75	0.57 0.51	2.97 4.10	1.7 2.1
N1 Q = NWB3-B(B)	34	1.00	0.60	3.04	1.8
DS2 Q = DS1 Flowsplit	117	0.48 3.00	1.18 0.88	5.02 8.75	5.9 7.7
GM1 Q = RCP1	32	1.16	0.58	3.73	2.2

Recommended Flood Control Facility Summary					
Facility ID	Facility Description	Total/Approaching Flow (cfs) Q ₁₀₀ /Q ₁₀	Facility Flow (cfs) Q ₁₀₀ /Q ₁₀	Surface/Bypass Flow (cfs) Q ₁₀₀ /Q ₁₀	Notes
E1	Ex. 36" RCP	-	32	-	
P2	Proposed 36" RCP	-	32	-	
D1	Proposed 12.5' Type CM2 D.I.	30	30	0	In Sump. 4 Gate
P1	Proposed 36" RCP	-	62	-	
E2	Ex. 8X5' RCB	-	227	-	

APPENDIX C

CLV Planning Department Approval



SLATER
HANIFAN
GROUP

a Westwood team

THE BENCHMARK OF OUR PROFESSION

KBH1805-001

May 29, 2019

City of Las Vegas
Linda Hartman-Maynard
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 Montecito – Unit 1 (APN: 125-20-602-009, 125-20-603-003, 125-21-201-004, 125-20-601-006, & 125-20-601-003)

Ms. Hartman-Maynard,

Westwood Professional Services, Inc., dba Slater Hanifan Group (SHG), on behalf of the applicant, KB Homes, respectfully submits this justification letter in support of the proposed grade difference greater than 2-feet above and below existing ground on the subject site. The site is located northeast of the intersection of Grand Montecito Parkway and Deer Springs Way. The project site is approximately 12.32 gross acres.

The project site consists of existing artificial fill that is higher than the adjacent streets. In order to flatten the area and tie into the existing streets, there will be areas of cut that will exceed 2-feet of grade difference. To make the site grading work, we are seeking 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,
**Westwood Professional Services, Inc.,
dba Slater Hanifan Group**

Timothy Mulrooney, PE
Director of Land Development

PLANS APPROVED
PLANNING
Dept. of Planning
City of Las Vegas, Nevada
2' GRADE DIFFERENCE
LHM MAY 29 2019

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.

APPENDIX D

NOFA



**LAS VEGAS
CITY COUNCIL**

CAROLYN G. GOODMAN
Mayor

LOIS TARKANIAN
Mayor Pro Tem

STAVROS S. ANTHONY
BOB COFFIN
STEVEN G. SEROKA
MICHELE FIORE
CEDRIC CREAR

SCOTT D. ADAMS
City Manager

DEPARTMENT OF PLANNING
ROBERT SUMMERFIELD
DIRECTOR

**DEVELOPMENT
SERVICES CENTER**
DEPARTMENT OF PLANNING
333 N. RANCHO DRIVE
3RD FLOOR
LAS VEGAS, NV 89106
702.229.6301 | VOICE
702.474.7463 | FAX
711 | TTY



cityoflasvegas
lasvegasnevada.gov

MONTECITO

January 17, 2019

Mr. Frank Pankratz
MS Northwest Land, LLC
1215 S. Fort Apache Road, Ste. 120
Las Vegas, Nevada 89117

**RE: GPA-74633 [PRJ-74608] - GENERAL PLAN AMENDMENT
RELATED TO VAR-75154, SUP-74637, SDR-74638 AND TMP-
74639
CITY COUNCIL MEETING OF JANUARY 16, 2019**

Dear Applicant:

The City Council at a regular meeting held on January 16, 2019 voted to **APPROVE** a request for a General Plan Amendment to amend the Trails Element of the Las Vegas 2020 Master Plan and all related maps on 60.39 acres at the northwest and northeast corners of Deer Springs Way and Grand Montecito Parkway (APNs 125-21-201-001; 125-20-601-003, 005 and 006; 125-20-602-002, 005, 006, 009, 010 and 011; and 125-20-603-001 through 004), T-C (Town Center) Zone [MC-TC (Montecito - Town Center) and UC-TC (Urban Center - Town Center) Special Land Use Designations], Ward 6 (Fiore) [PRJ-74608].

The Notice of Final Action was filed with the Las Vegas City Clerk on January 17, 2019.

Sincerely,

Robert Summerfield, AICP
Director
Department of Planning

RTS:nl

cc:

Christa Bilbrey
KB Home
5795 W. Badura Ave., Ste. 180
Las Vegas, Nevada 89118

Ms. Roxanne Leigh
Slater Hanifan Group
5740 S. Arville St., Ste. 216
Las Vegas, Nevada 89118



**LAS VEGAS
CITY COUNCIL**

CAROLYN G. GOODMAN
Mayor

LOIS TARKANIAN
Mayor Pro Tem

STAVROS S. ANTHONY
BOB COFFIN
STEVEN G. SEROKA
MICHELE FIORE
CEDRIC CREAR

SCOTT D. ADAMS
City Manager

DEPARTMENT OF PLANNING
ROBERT SUMMERFIELD
DIRECTOR

**DEVELOPMENT
SERVICES CENTER**

DEPARTMENT OF PLANNING
333 N. RANCHO DRIVE
3RD FLOOR
LAS VEGAS, NV 89106
702.229.6301 | VOICE
702.474.7463 | FAX
711 | TTY



cityoflasvegas
lasvegasnevada.gov

MONTECITO

January 17, 2019

Mr. Frank Pankratz
MS Northwest Land, LLC
1215 S. Fort Apache Road, Ste. 120
Las Vegas, Nevada 89117

**RE: SDR-74638 [PRJ-74608] - SITE DEVELOPMENT PLAN REVIEW
RELATED TO GPA-74633, VAR-75154, SUP-74637 AND TMP-
74639
CITY COUNCIL MEETING OF JANUARY 16, 2019**

Dear Applicant:

The City Council at a regular meeting held on January 16, 2019 voted to **APPROVE** a request for a Site Development Plan Review FOR A PROPOSED 303-LOT SINGLE FAMILY DETACHED RESIDENTIAL SUBDIVISION AND TWO, MULTI-FAMILY RESIDENTIAL DEVELOPMENTS, CONSISTING OF THREE-STORY BUILDINGS WITH A TOTAL UNIT COUNT OF 491 APARTMENTS on 60.39 acres at the northwest and northeast corners of Deer Springs Way and Grand Montecito Parkway (APNs 125-21-201-001; 125-20-601-003, 005 and 006; 125-20-602-002, 005, 006, 009, 010 and 011; and 125-20-603-001 through 004), T-C (Town Center) Zone [MC-TC (Montecito - Town Center) and UC-TC (Urban Center - Town Center) Special Land Use Designations], Ward 6 (Fiore) [PRJ-74608].

This approval is subject to the following amended conditions:

Planning

1. The applicant shall work with staff to provide preventative measures to mitigate the potential for errant balls from the existing park to the north from impacting the proposed residents along the northern property line of the development.
2. The setbacks for Units 1, 2 and 3 within the development shall be a minimum of 10 feet to the front of the house, 18 feet to the front of the garage as measured from back of sidewalk or from back of curb if no sidewalk is provided, 5 feet on the side, 10 feet on the corner side, 10 feet in the rear to the house, and 5 feet in the rear to a patio.

3. The Site Development Plan Review is approved for a total of 306 multi-family units for Multi-Family Unit 4 only. Multi-Family Unit 5 shall not be part of this approval.
4. Approval of General Plan Amendment (GPA-74633) and conformance to the Conditions of Approval for Variance (VAR-75154), Special Use Permit (SUP-74637) and Tentative Map (TMP-74639) shall be required.
5. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
6. Trash enclosures shall be provided in sufficient size and numbers to meet the needs of each multi-family development.
7. Trash and refuse collection areas, and mechanical equipment located within each multi-family development shall be designed and screened in accordance with Title 19.08.
8. All perimeter walls, fences, screen and retaining walls shall be designed and constructed in conformance with Town Center Development Standards Manual, except as amended herein.
9. All necessary building permits shall be obtained and final inspections shall be completed in compliance with Title 19 and all codes as required by the Department of Building and Safety.
10. These Conditions of Approval shall be affixed to the cover sheet of any plan set submitted for building permit.
11. The applicant shall coordinate with the City Surveyor and other city staff to determine the most appropriate mapping action necessary to consolidate the existing lots. The mapping action shall be completed and recorded prior to the issuance of any building permits.
12. A technical landscape plan, signed and/or sealed by a Registered Architect, Landscape Architect, Residential Designer or Civil Engineer, must be submitted prior to or at the same time as Final Map submittal. A permanent underground sprinkler system is required, and shall be permanently maintained in a satisfactory manner; the landscape plan shall include irrigation specifications. Installed landscaping shall not impede visibility of any traffic control device.

13. No turf shall be permitted in the non-recreational common areas, such as medians and amenity zones in this development.
14. A fully operational fire protection system, including fire apparatus roads, fire hydrants and water supply, shall be installed and shall be functioning prior to construction of any combustible structures.
15. A Comprehensive Construction Staging Plan shall be submitted to the Department of Planning for review and approval prior to the issuance of any building permits. The Construction Staging Plan shall include the following information: Design and location of construction trailer(s); design and location of construction fencing; all proposed temporary construction signage; location of materials staging area; and the location and design of parking for all construction workers.
16. All City Code requirements and design standards of all City Departments must be satisfied, except as modified herein.

Public Works

17. Dedicate additional right-of-way up to a total width of 80 feet for Oso Blanca Road as a Town Center Arterial prior to issuance of permits for adjacent development. No dedication is required if an 80-foot dedication for Oso Blanca Road already exists. Additionally, grant 9-foot wide easements adjacent to the western edge of Oso Blanca Road for roadway, public sewer, and public drainage prior to issuance of permits for adjacent development. This 9-foot easement includes the required 6-foot perimeter landscape buffer and may be reduced or eliminated if it is determined by the City Engineer that it is not required.
18. Unless otherwise allowed by the City Engineer, submit all required documentation and support materials to the Right of way Section of the Department of Public Works to modify the City's Bureau of Land Management (BLM) Plan of development to include the construction of storm drain facilities on the south side of Assessor's Parcel (APN) #125-20-501-007 to obtain legal right to construct the proposed off-site storm drain prior to constructing improvements on APN #125-20-501-007. If legal right cannot be obtained, Unit 2 of this Site Plan shall be revised to addresses accommodation for existing storm drain facilities on this site. No permits for areas dependent on the proposed storm drain facility shall be issued until such legal right is obtained.

19. Street "A" between Grand Montecito and Oso Blanca shall be constructed as shown on the approved Site Plan to include traffic signal underground infrastructure at both the intersection with Grand Montecito Parkway and Oso Blanca Road. A Public Access Easement for vehicular, bicycle and pedestrian traffic shall be granted across the entire length of Street "A". Street "A" shall be privately maintained and shall not be gated. Any public easements needed to accommodate future traffic signals at both ends of this street shall be granted concurrent with the development of this site. This street may be dedicated to the City at the request of the applicant if the Director of Public Works determines it is necessary for regional street network connectivity.
20. Construct full-width street improvements per Title 19.04.120.B including appropriate transition paving on Oso Blanca Road as a Town Center Arterial and as modified by the City Engineer to match Nevada Department of Transportation's (NDOT's) construction on Oso Blanca Road with a 12-foot trail on the west side of Oso Blanca Road along the entire frontage. Provide written documentation that this project has been coordinated with NDOT and the City Engineer. Additionally, construct all incomplete half street improvements on Deer Springs Road adjacent to this site and modify the Deer Springs Way/Grand Montecito Parkway intersection and the Deer Springs Way/Doe Brook Trail intersection to meet the approval of the City Traffic Engineer concurrent with the development of this site. Deer Springs Way modifications associated with Unit 5 shall be finalized through the required Traffic Impact Analysis. All existing paving damaged or removed by this development shall be restored at its original location and to its original width concurrent with development of this site.
21. All landscaping and private improvements installed with this project shall be situated and maintained so as to not create sight visibility obstructions for vehicular traffic at all development access drives and abutting street intersections.
22. Provide public sewer easements for all public sewers not located within existing public street right-of-way prior to the issuance of any permits. Improvement Drawings submitted to the City for review shall not be approved for construction until all required Public Sewer Easements necessary to connect this site to the existing public sewer system have been granted to the City.
23. Construct off-site sewer in Oso Blanca Road to the intersection of Centennial Center Boulevard at a depth and location acceptable to the Sanitary Sewer Section of the Department of Public Works concurrent with development of any portion of this site that cannot be serviced by gravity to the existing public sewer system. Alternatively, the City Engineer may approve an alternate public sewer route that can be serviced by gravity.

24. No structures (covered parking) and no trees or vegetation taller than three feet shall be allowed within any Public Sewer Easements or Public Drainage Easements. Permanent structures shall be set back sufficient distance from public infrastructure to meet required excavation limits.
25. Modify the existing downstream public sewer at the intersection of Deer Springs Way and Doe Brook Trail to send flow southward to existing manhole LT-62.
26. The applicant shall maintain the approved landscaping in Deer Springs Way and Grand Montecito Parkway, including the median, adjacent to this site, per the existing recorded Encroachment Agreement. The applicant shall either amend the existing agreement, or submit a new License Agreement for landscaping and private improvements in the Deer Springs Road public right-of-way, if any, prior to the issuance of permits for these improvements. The applicant must carry an insurance policy for the term of the License Agreement and add the City of Las Vegas as an additionally insured entity on this insurance policy. If requested by the City, the applicant shall remove property encroaching in the public right-of-way at the applicant's expense pursuant to the terms of the City's License Agreement. The installation and maintenance of all private improvements in the public right of way shall be the responsibility of the applicant and any successors in interest to the property and assigns pursuant to the terms of the License Agreement. Coordinate all requirements for the License Agreement with the Land Development Section of the Department of Building and Safety (229-4836).
27. A Traffic Impact Analysis must be submitted to and approved by the Department of Public Works prior to the issuance of any building or grading permits, submittal of any construction drawings or the recordation of a Map subdividing this site, whichever may occur first. Comply with the recommendations of the approved Traffic Impact Analysis prior to occupancy of the site. The Traffic Impact Analysis shall also include a section addressing Standard Drawings #234.1 #234.2 and #234.3 to determine additional right-of-way requirements for bus turnouts adjacent to this site, if any; dedicate all areas recommended by the approved Traffic Impact Analysis. All additional rights of way required by Standard Drawing #201.1 for exclusive right turn lanes and dual left turn lanes shall be dedicated prior to or concurrent with the commencement of on site development activities unless specifically noted as not required in the approved Traffic Impact Analysis. Phased compliance will be allowed if recommended by the approved Traffic Impact Analysis. No recommendation of the approved Traffic Impact Analysis, nor compliance therewith, shall be deemed to modify or eliminate any condition of approval imposed by the Planning Commission or the City Council on the development of this site. Private Street "A" shall not be gated.

28. A Drainage Plan and Technical Drainage Study must be submitted to and approved by the Department of Public Works prior to the issuance of any building or grading permits or submittal of any construction drawings, whichever may occur first. Provide and improve all drainageways recommended in the approved drainage plan/study. The developer of this site shall be responsible to construct such neighborhood or local drainage facility improvements as are recommended by the City of Las Vegas Neighborhood Drainage Studies and approved Drainage Plan/Study concurrent with development of this site.
29. Site Development to comply with all applicable conditions of approval for TMP-74639.

The Notice of Final Action was filed with the Las Vegas City Clerk on January 17, 2019.

Sincerely,



Robert Summerfield, AICP
Director
Department of Planning

 RTS:nl

cc:

Christa Bilbrey
KB Home
5795 W. Badura Ave., Ste. 180
Las Vegas, Nevada 89118

Ms. Roxanne Leigh
Slater Hanifan Group
5740 S. Arville St., Ste. 216
Las Vegas, Nevada 89118



**LAS VEGAS
CITY COUNCIL**

CAROLYN G. GOODMAN
Mayor

LOIS TARKANIAN
Mayor Pro Tem

STAVROS S. ANTHONY
BOB COFFIN
STEVEN G. SEROKA
MICHELE FIORE
CEDRIC CREAR

SCOTT D. ADAMS
City Manager

DEPARTMENT OF PLANNING
ROBERT SUMMERFIELD
DIRECTOR

**DEVELOPMENT
SERVICES CENTER**

DEPARTMENT OF PLANNING

333 N. RANCHO DRIVE
3RD FLOOR
LAS VEGAS, NV 89106
702.229.6301 | VOICE
702.474.7463 | FAX
711 | TTY



cityoflasvegas
lasvegasnevada.gov

MONTECITO

January 17, 2019

Mr. Frank Pankratz
MS Northwest Land, LLC
1215 S. Fort Apache Road, Ste. 120
Las Vegas, Nevada 89117

**RE: SUP-74637 [PRJ-74608] - SPECIAL USE PERMIT RELATED TO
GPA-74633, VAR-75154, SDR-74638 AND TMP-74639
CITY COUNCIL MEETING OF JANUARY 16, 2019**

Dear Applicant:

The City Council at a regular meeting held on January 16, 2019 voted to **APPROVE** a request for a Special Use Permit FOR A PROPOSED PRIVATE STREET WITHOUT A GATE AND MULTIPLE GATED COMMUNITIES WITH PRIVATE STREETS WITHIN TOWN CENTER at the northwest and northeast corners of Deer Springs Way and Grand Montecito Parkway (APNs 125-21-201-001; 125-20-601-003, 005 and 006; 125-20-602-002, 005, 006, 009, 010 and 011; and 125-20-603-001 through 004), T-C (Town Center) Zone [MC-TC (Montecito - Town Center) and UC-TC (Urban Center - Town Center) Special Land Use Designations], Ward 6 (Fiore) [PRJ-74608].

This approval is subject to the following conditions:

Planning

1. Conformance to all requirements under the Town Center Development Standards Manual for a Gated Community with Private Street use.
2. Approval of General Plan Amendment (GPA-74633) and conformance to the Conditions of Approval for Variance (VAR-75154), Site Development Plan Review (SDR-74638) and Tentative Map (TMP-74639) shall be required.
3. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
4. All necessary building permits shall be obtained and final inspections shall be completed in compliance with Title 19 and all codes as required by the Department of Building and Safety.

5. These Conditions of Approval shall be affixed to the cover sheet of any plan set submitted for building permit, as well as submitted as part of any business license application.
6. All City Code requirements and design standards of all City departments must be satisfied, except as modified herein.

The Notice of Final Action was filed with the Las Vegas City Clerk on January 17, 2019.

Sincerely,



Robert Summerfield, AICP
Director
Department of Planning

RTS:nl

cc:

Christa Bilbrey
KB Home
5795 W. Badura Ave., Ste. 180
Las Vegas, Nevada 89118

Ms. Roxanne Leigh
Slater Hanifan Group
5740 S. Arville St., Ste. 216
Las Vegas, Nevada 89118



**LAS VEGAS
CITY COUNCIL**

CAROLYN G. GOODMAN
Mayor

LOIS TARKANIAN
Mayor Pro Tem

STAVROS S. ANTHONY
BOB COFFIN
STEVEN G. SEROKA
MICHELE FIORE
CEDRIC CREAR

SCOTT D. ADAMS
City Manager

DEPARTMENT OF PLANNING
ROBERT SUMMERFIELD
DIRECTOR

**DEVELOPMENT
SERVICES CENTER**
DEPARTMENT OF PLANNING
333 N. RANCHO DRIVE
3RD FLOOR
LAS VEGAS, NV 89106
702.229.6301 | VOICE
702.474.7463 | FAX
711 | TTY



cityoflasvegas
lasvegasnevada.gov

MONTECITO

January 17, 2019

Mr. Frank Pankratz
MS Northwest Land, LLC
1215 S. Fort Apache Road, Ste. 120
Las Vegas, Nevada 89117

**RE: TMP-74639 [PRJ-74608] - TENTATIVE MAP RELATED TO GPA-74633, VAR-75154, SUP-74637 AND SDR-74638
CITY COUNCIL MEETING OF JANUARY 16, 2019**

Dear Applicant:

The City Council at a regular meeting held on January 16, 2019 voted to **APPROVE** a request for a Tentative Map FOR A PROPOSED 303-LOT SINGLE FAMILY RESIDENTIAL SUBDIVISION AND TWO, 491-UNIT MULTI-FAMILY RESIDENTIAL DEVELOPMENTS WITH A WAIVER TO ALLOW PRIVATE STREETS TO TERMINATE IN DEAD-END STUBS AND MODIFIED HAMMERHEADS WHERE CULS-DE-SAC OR HAMMERHEADS ARE REQUIRED on 60.39 acres at the northwest and northeast corners of Deer Springs Way and Grand Montecito Parkway (APNs 125-21-201-001; 125-20-601-003, 005 and 006; 125-20-602-002, 005, 006, 009, 010 and 011; and 125-20-603-001 through 004), T-C (Town Center) Zone [MC-TC (Montecito - Town Center) and UC-TC (Urban Center - Town Center) Special Land Use Designations], Ward 6 (Fiore) [PRJ-74608].

This approval is subject to the following amended conditions:

Planning

1. Multi-Family Unit 5 shall not be part of the Tentative Map approval.
2. Approval of the Tentative Map shall be for no more than four (4) years. If a Final Map is not recorded on all or a portion of the area embraced by the Tentative Map within four (4) years of the approval of the Tentative Map, this action is void.
3. Approval of General Plan Amendment (GPA-74633) and conformance to the Conditions of Approval for Variance (VAR-75154), Special Use Permit (SUP-74637) and Site Development Plan Review (SDR-74638) shall be required.

4. Prior to the submittal of any Final Map, the applicant shall coordinate with the City Surveyor and other city staff to determine the most appropriate mapping action necessary to create a separate parcel from APNs 125-20-603-002 and 004. Subsequent to that new parcel's creation the applicant shall modify the existing land use district as depicted on Map 4 Town Center Land Use to that of the district found on APN 125-21-201-001 for the newly created parcel. The applicant shall file a Major Modification with the Department in accordance with the procedures and standards applicable to a rezoning application as set forth in LVMC 19.16.090.
5. Street names must be provided in accordance with the City's Street Naming Regulations.
6. A fully operational fire protection system, including fire apparatus roads, fire hydrants and water supply, shall be installed and shall be functioning prior to construction of any combustible structures.
7. In conjunction with creation, declaration and recordation of the subject common-interest community, and prior to recordation of the Covenants, Codes and Restrictions ("CC&R"), or conveyance of any unit within the community, the Developer is required to record a Declaration of Private Maintenance Requirements ("DPMR") as a covenant on all associated properties, and on behalf of all current and future property owners. The DPMR is to include a listing of all privately owned and/or maintained infrastructure improvements, along with assignment of maintenance responsibility for each to the common interest community or the respective individual property owners, and is to provide a brief description of the required level of maintenance for privately maintained components. The DPMR must be reviewed and approved by the City of Las Vegas Department of Field Operations prior to recordation, and must include a statement that all properties within the community are subject to assessment for all associated costs should private maintenance obligations not be met, and the City of Las Vegas be required to provide for said maintenance. Also, the CC&R are to include a statement of obligation of compliance with the DPMR. Following recordation, the Developer is to submit copies of the recorded DPMR and CC&R documents to the City of Las Vegas Department of Field Operations.
8. All development is subject to the conditions of City Departments and State Subdivision Statutes.

Public Works

9. Prior to the recordation of a Final Map for this site, a Petition of Vacation for any public right-of-way or City easements in conflict with the recordation of such a Final Map must be recorded. The Order of Vacation for such conflicts must record immediately prior to and concurrent with the recordation of the appropriate Final Map.

10. Prior to the recordation of a Final Map for individual lots along the southern property line east of the Doe Brook Trail alignment, the applicant shall determine the final disposition of the existing private improvements on Assessor's Parcel Number 125-21-201-001 that are not maintained by the applicant. Any solution that involves the areas in question becoming public right-of-way shall meet the approval of the City Engineer.
11. Dedicate additional right-of-way up to a total width of 80 feet for Oso Blanca Road as a Town Center Arterial on the Final Map for this site. Additionally, dedicate 10 feet on Deer Springs Road to accommodate the cross section provided on the approved site plan. No dedication on Oso Blanca Road is required if an 80-foot dedication for Oso Blanca Road already exists. Grant a 9-foot wide easement adjacent to the western edge of Oso Blanca Road for roadway, public sewer, and public drainage on the Final Map for this site. This 9-foot easement includes the required 6-foot perimeter landscape buffer and may be reduced or eliminated if it is determined by the City Engineer that it is not required.
12. Unless otherwise allowed by the City Engineer, submit all required documentation and support materials to the Right of way Section of the Department of Public Works to modify the City's Bureau of Land Management (BLM) Plan of development to include the construction of storm drain facilities on the south side of Assessor's Parcel (APN) #125 20 501-007 to obtain legal right to construct the proposed off-site storm drain prior to constructing improvements on APN #125-20-501-007. If legal right cannot be obtained, Unit 2 of this Tentative Map shall be revised to addresses accommodation for existing storm drain facilities on this site. No permits for areas dependent on the proposed storm drain facility shall be issued until such legal right is obtained.
13. Street "A" between Grand Montecito and Oso Blanca shall be constructed as shown on the approved Site Plan to include traffic signal underground infrastructure at both the intersection with Grand Montecito Parkway and Oso Blanca Road. A Public Access Easement for vehicular, bicycle and pedestrian traffic shall be granted across the entire length of Street "A". Street "A" shall be privately maintained and shall not be gated. Any public easements needed to accommodate future traffic signals at both ends of this street shall be granted concurrent with the development of this site. This street may be dedicated to the City at the request of the applicant if the Director of Public Works determines it is necessary for regional street network connectivity.
14. Internal private streets must be granted and labeled on the Final Map for this site as Public Utility Easements (P.U.E.), Public Sewer Easements, and Public Drainage Easements to be privately maintained by the Homeowner's Association.

15. Construct full-width street improvements per Title 19.04.120.B including appropriate transition paving on Oso Blanca Road as a Town Center Arterial and as modified by the City Engineer to match Nevada Department of Transportation's (NDOT's) construction on Oso Blanca Road with a 12-foot trail on the west side of Oso Blanca Road along the entire frontage. Provide written documentation that this project has been coordinated with NDOT and the City Engineer. Additionally, construct all incomplete half street improvements on Deer Springs Road adjacent to this site and modify the Deer Springs Way/Grand Montecito Parkway intersection and the Deer Springs Way/Doe Brook Trail intersection to meet the approval of the City Traffic Engineer concurrent with the development of this site. All existing paving damaged or removed by this development shall be restored at its original location and to its original width concurrent with development of this site.
16. All landscaping and private improvements installed with this project shall be situated and maintained so as to not create sight visibility obstructions for vehicular traffic at all development access drives and abutting street intersections.
17. Provide public sewer easements for all public sewers not located within existing public street right-of-way prior to the issuance of any permits. Improvement Drawings submitted to the City for review shall not be approved for construction until all required off-site Public Sewer Easements necessary to connect this site to the existing public sewer system have been granted to the City.
18. Construct off-site sewer in Oso Blanca Road to the intersection of Centennial Center Boulevard at a depth and location acceptable to the Sanitary Sewer Section of the Department of Public Works concurrent with development of any portion of this site that cannot be serviced by gravity to the existing public sewer system. Alternatively, the City Engineer may approve an alternate public sewer route that can be serviced by gravity.
19. The onsite public sewers within public easements must comply with current City standards. Meet with the Sanitary Sewer Section of the Department of Public Works to discuss sewer setbacks from property lines and parking spaces.
20. Modify the existing downstream public sewer at the intersection of Deer Springs Way and Doe Brook Trail to send flow southward to existing manhole LT-62.
21. Grant a 30-foot wide "Public Sewer Easement and Public Utility Easement, Surface to be Privately Maintained over the Common Element "Y".
22. Construct a minimum 5-foot wide paved surface over the proposed public sewer in Common Element "DD". The width of Common Element "DD" may need to be increased during civil plan review.

23. Construct a minimum 12-foot wide paved surface over the proposed public sewer in Common Element "Y" to provide maintenance vehicle access to all public sewer manholes. Construct vehicular access gates at the north and south ends of Common Element "Y" for city maintenance vehicles.
24. Grant a "Public Sewer Easement, Surface to be Privately Maintained" over the entirety of Common Element "Y". No trees and no landscaping over 3-feet tall shall be allowed within any of the proposed sewer easements.
25. A working sanitary sewer connection shall be in place prior to final inspection of any units within this development. Full permanent improvements on all major access streets, including all required landscaped areas between the perimeter wall and adjacent public street, shall be constructed and accepted by the City prior to issuance of any building permits beyond 50% of all units within this development. All off-site improvements adjacent to this site, including all required landscaped areas between the perimeter walls and adjacent public streets, shall be constructed and accepted prior to issuance of building permits beyond 75%. The above thresholds notwithstanding, all required Improvements shall be constructed in accordance with Title 19.02.130.D.
26. The applicant shall maintain the approved landscaping in Grand Montecito Parkway, including the median, adjacent to this site, per the existing recorded Encroachment Agreement. The applicant shall either amend the existing agreement, or submit a new License Agreement for landscaping and private improvements in the Deer Springs Road public right-of-way, if any, prior to the issuance of permits for these improvements. The applicant must carry an insurance policy for the term of the License Agreement and add the City of Las Vegas as an additionally insured entity on this insurance policy. If requested by the City, the applicant shall remove property encroaching in the public right-of-way at the applicant's expense pursuant to the terms of the City's License Agreement. The installation and maintenance of all private improvements in the public right of way shall be the responsibility of the applicant and any successors in interest to the property and assigns pursuant to the terms of the License Agreement. Coordinate all requirements for the License Agreement with the Land Development Section of the Department of Building and Safety (229-4836).
27. A Traffic Impact Analysis must be submitted to and approved by the Department of Public Works prior to the issuance of any building or grading permits, submittal of any construction drawings or the recordation of a Map subdividing this site, whichever may occur first. Comply with the recommendations of the approved Traffic Impact Analysis prior to occupancy of the site. The Traffic Impact Analysis shall also include a section addressing Standard Drawings #234.1 #234.2 and #234.3 to determine additional right-of-way requirements for bus turnouts adjacent

to this site, if any; dedicate all areas recommended by the approved Traffic Impact Analysis. All additional rights of way required by Standard Drawing #201.1 for exclusive right turn lanes and dual left turn lanes shall be dedicated prior to or concurrent with the commencement of on site development activities unless specifically noted as not required in the approved Traffic Impact Analysis. Phased compliance will be allowed if recommended by the approved Traffic Impact Analysis. No recommendation of the approved Traffic Impact Analysis, nor compliance therewith, shall be deemed to modify or eliminate any condition of approval imposed by the Planning Commission or the City Council on the development of this site. Private Street "A" shall not be gated.

28. A Drainage Plan and Technical Drainage Study must be submitted to and approved by the Department of Public Works prior to the issuance of any building or grading permits or submittal of any construction drawings, whichever may occur first. Provide and improve all drainageways recommended in the approved drainage plan/study. The developer of this site shall be responsible to construct such neighborhood or local drainage facility improvements as are recommended by the City of Las Vegas Neighborhood Drainage Studies and approved Drainage Plan/Study concurrent with development of this site.
29. The approval of all Public Works related improvements shown on this Tentative Map is in concept only. Specific design and construction details relating to size, type and/or alignment of improvements, including but not limited to street, sewer and drainage improvements, shall be resolved prior to approval of the construction plans by the City. No deviations from adopted City Standards shall be allowed unless specific written approval for such is received from the City Engineer prior to the recordation of a Final Map or the approval of subdivision-related construction plans, whichever may occur first. Approval of this Tentative Map does not constitute approval of any deviations. If such approval cannot be obtained, a revised Tentative Map must be submitted showing elimination of such deviations.

The Notice of Final Action was filed with the Las Vegas City Clerk on January 17, 2019.

Sincerely,



Robert Summerfield, AICP
Director
Department of Planning

PTS:nl

TMP-74639 [PRJ-74608] - Page Seven
January 17, 2019

cc:

Christa Bilbrey
KB Home
5795 W. Badura Ave., Ste. 180
Las Vegas, Nevada 89118

Ms. Roxanne Leigh
Slater Hanifan Group
5740 S. Arville St., Ste. 216
Las Vegas, Nevada 89118



**LAS VEGAS
CITY COUNCIL**

CAROLYN G. GOODMAN
Mayor

LOIS TARKANIAN
Mayor Pro Tem

STAVROS S. ANTHONY

BOB COFFIN

STEVEN G. SEROKA

MICHELE FIORE

CEDRIC CREAR

SCOTT D. ADAMS
City Manager

DEPARTMENT OF PLANNING

ROBERT SUMMERFIELD
DIRECTOR

**DEVELOPMENT
SERVICES CENTER**

DEPARTMENT OF PLANNING

333 N. RANCHO DRIVE
3RD FLOOR
LAS VEGAS, NV 89106
702.229.6301 | VOICE
702.474.7463 | FAX
711 | TTY



cityoflasvegas
lasvegasnevada.gov

M O N T E C I T O

January 17, 2019

Mr. Frank Pankratz
MS Northwest Land, LLC
1215 S. Fort Apache Road, Ste. 120
Las Vegas, Nevada 89117

**RE: VAR-75154 [PRJ-74608] - VARIANCE RELATED TO GPA-74633,
SUP-74637, SDR-74638 AND TMP-74639
CITY COUNCIL MEETING OF JANUARY 16, 2019**

Dear Applicant:

The City Council at a regular meeting held on January 16, 2019 voted to **APPROVE** a request for a Variance TO ALLOW 641 PARKING SPACES WHERE 811 IS THE MINIMUM REQUIRED FOR TWO MULTI-FAMILY DEVELOPMENTS on 60.39 acres at the northwest and northeast corners of Deer Springs Way and Grand Montecito Parkway (APNs 125-21-201-001; 125-20-601-003, 005 and 006; 125-20-602-002, 005, 006, 009, 010 and 011; and 125-20-603-001 through 004), T-C (Town Center) Zone [MC-TC (Montecito - Town Center) and UC-TC (Urban Center - Town Center) Special Land Use Designations], Ward 6 (Fiore) [PRJ-74608].

This approval is subject to the following conditions:

Planning

1. The Variance is approved for a total of 460 parking spaces where 501 parking spaces are required for the Multi-Family Unit 4 development only. The Multi-Family Unit 5 requested parking variance is not a part of this approval.
2. Approval of General Plan Amendment (GPA-74633) and conformance to the Conditions of Approval for Special Use Permit (SUP-74637), Site Development Plan Review (SDR-74638) and Tentative Map (TMP-74639) shall be required, if approved.
3. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
4. All necessary building permits shall be obtained and final inspections shall be completed in compliance with Title 19 and all codes as required by the Department of Building and Safety.

5. These Conditions of Approval shall be affixed to the cover sheet of any plan set submitted for building permit.
6. All City Code requirements and design standards of all City departments must be satisfied, except as modified herein.

The Notice of Final Action was filed with the Las Vegas City Clerk on January 17, 2019.

Sincerely,



Robert Summerfield, AICP
Director
Department of Planning

 RTS:nl

cc:

Christa Bilbrey
KB Home
5795 W. Badura Ave., Ste. 180
Las Vegas, Nevada 89118

Ms. Roxanne Leigh
Slater Hanifan Group
5740 S. Arville St., Ste. 216
Las Vegas, Nevada 89118

APPENDIX E

Revised Hydraulic Computations

T1	KBH1805.001	MONTECITO 60 - UNIT 1	TDS	ADD
T2	PROPOSED STORM DRAIN SYSTEM TO CONNECTION TO EX. SD			
T3	STARTING WSE PER EX. SD/WH			
S0	1000.000	2491.900	36	2494.900
R	1375.380	2493.780	36	.013
R	1379.380	2493.880	36	.013
JX	1379.380	2493.980	36	.013 30.0
R	1625.820	2509.040	36	.013
R	1735.460	2511.090	36	.013
R	1790.530	2511.060	36	.013
SH	1790.530	2511.060	36	.013
CD	24	4	0	0.000 2.000 0.000 0.000 0.000
CD	36	4	0	0.000 3.000 0.000 0.000 0.000
CD	48	4	0	0.000 4.000 0.000 0.000 0.000
Q				32.000

WATER SURFACE PROFILE LISTING
KBH1805.001 MONTECITO 60 - UNIT 1 TDS ADD
PROPOSED STORM DRAIN SYSTEM TO CONNECTION TO EX. SD
STARTING WSE PER EX. SDMH

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 or I.D.	Base Wt	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1000.000	2491.900	3.000	2494.900	62.00	8.77	1.19	2496.09	.00	2.54	.00	3.000	.000	.00	0 .0
375.380	.0050	- -	- -	- -	- -	.0086	3.24	3.00	.00	3.00	.013	.00	.00	PIPE
1375.380	2493.780	4.423	2498.203	62.00	8.77	1.19	2499.40	.00	2.54	.00	3.000	.000	.00	0 .0
4.000	.0250	- -	- -	- -	- -	.0086	.03	4.42	.00	1.65	.013	.00	.00	PIPE
1379.380	2493.880	4.437	2498.317	62.00	8.77	1.19	2499.51	.00	2.54	.00	3.000	.000	.00	0 .0
JUNCT STR	.0000	- -	- -	- -	- -	.0055	.00	4.44	.00		.013	.00	.00	PIPE
1379.380	2493.980	6.090	2500.070	32.00	4.53	.32	2500.39	.00	1.83	.00	3.000	.000	.00	0 .0
45.879	.0611	- -	- -	- -	- -	.0023	.11	6.09	.00	.90	.013	.00	.00	PIPE
1425.259	2496.784	3.473	2500.257	32.00	4.53	.32	2500.57	.00	1.83	.00	3.000	.000	.00	0 .0
HYDRAULIC JUMP		- -	- -	- -	- -									
1425.259	2496.784	.899	2497.683	32.00	17.97	5.01	2502.70	.00	1.83	2.75	3.000	.000	.00	0 .0
90.211	.0611	- -	- -	- -	- -	.0572	5.16	.90	3.93	.90	.013	.00	.00	PIPE
1515.470	2502.297	.925	2503.221	32.00	17.29	4.64	2507.86	.00	1.83	2.77	3.000	.000	.00	0 .0
37.545	.0611	- -	- -	- -	- -	.0507	1.90	.92	3.73	.90	.013	.00	.00	PIPE
1553.015	2504.591	.957	2505.548	32.00	16.48	4.22	2509.77	.00	1.83	2.80	3.000	.000	.00	0 .0
20.974	.0611	- -	- -	- -	- -	.0444	.93	.96	3.49	.90	.013	.00	.00	PIPE
1573.989	2505.873	.991	2506.864	32.00	15.71	3.83	2510.70	.00	1.83	2.82	3.000	.000	.00	0 .0
14.140	.0611	- -	- -	- -	- -	.0389	.55	.99	3.26	.90	.013	.00	.00	PIPE

Program Package Serial Number: 7189

WATER SURFACE PROFILE LISTING

Date: 5-30-2019 Time:10:25:31

KBH1805.001 MONTECITO 60 - UNIT 1 TDS ADD

PROPOSED STORM DRAIN SYSTEM TO CONNECTION TO EX. SD

STARTING WSE PER EX. SDMH

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 or I.D.	Base Wt	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
1588.129	2506.737	1.026	2507.762	32.00	14.98	3.49	2511.25	.00	1.83	2.85	3.000	.000	.00	0 .0
10.388	.0611					.0341	.35	1.03	3.05	.90	.013	.00	.00	PIPE
1598.517	2507.372	1.062	2508.434	32.00	14.29	3.17	2511.60	.00	1.83	2.87	3.000	.000	.00	0 .0
8.015	.0611					.0299	.24	1.06	2.85	.90	.013	.00	.00	PIPE
1606.532	2507.861	1.100	2508.961	32.00	13.62	2.88	2511.84	.00	1.83	2.89	3.000	.000	.00	0 .0
6.375	.0611					.0262	.17	1.10	2.66	.90	.013	.00	.00	PIPE
1612.907	2508.251	1.140	2509.391	32.00	12.99	2.62	2512.01	.00	1.83	2.91	3.000	.000	.00	0 .0
5.170	.0611					.0230	.12	1.14	2.49	.90	.013	.00	.00	PIPE
1618.077	2508.567	1.181	2509.748	32.00	12.38	2.38	2512.13	.00	1.83	2.93	3.000	.000	.00	0 .0
4.241	.0611					.0202	.09	1.18	2.32	.90	.013	.00	.00	PIPE
1622.318	2508.826	1.224	2510.050	32.00	11.81	2.16	2512.21	.00	1.83	2.95	3.000	.000	.00	0 .0
3.502	.0611					.0177	.06	1.22	2.17	.90	.013	.00	.00	PIPE
1625.820	2509.041	1.269	2510.309	32.00	11.26	1.97	2512.28	.00	1.83	2.96	3.000	.000	.00	0 .0
36.134	.0187					.0158	.57	1.27	2.03	1.23	.013	.00	.00	PIPE
1661.954	2509.716	1.304	2511.020	32.00	10.85	1.83	2512.85	.00	1.83	2.97	3.000	.000	.00	0 .0
25.634	.0187					.0141	.36	1.30	1.92	1.23	.013	.00	.00	PIPE
1687.588	2510.195	1.352	2511.548	32.00	10.35	1.66	2513.21	.00	1.83	2.99	3.000	.000	.00	0 .0
15.962	.0187					.0124	.20	1.35	1.79	1.23	.013	.00	.00	PIPE

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Head	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Width	Height/Dia.-FT	Base Wt 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
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
1703.549	2510.494	1.403	2511.896	32.00	9.87	1.51	0.089	2513.41	.00	1.83	2.99	3.000	.000	.00	.0
10.851	.0187							.12	1.40	1.67	1.23	.013	.00	.00	PIPE
1714.401	2510.697	1.456	2512.152	32.00	9.41	1.37	.0096	2513.53	.00	1.83	3.00	3.000	.000	.00	.0
7.638	.0187							.07	1.46	1.56	1.23	.013	.00	.00	PIPE
1722.038	2510.839	1.511	2512.350	32.00	8.97	1.25	.0084	2513.60	.00	1.83	3.00	3.000	.000	.00	.0
5.424	.0187							.05	1.51	1.45	1.23	.013	.00	.00	PIPE
1727.462	2510.941	1.569	2512.510	32.00	8.55	1.14	.0074	2513.65	.00	1.83	3.00	3.000	.000	.00	.0
3.757	.0187							.03	1.57	1.35	1.23	.013	.00	.00	PIPE
1731.219	2511.011	1.630	2512.641	32.00	8.15	1.03	.0066	2513.67	.00	1.83	2.99	3.000	.000	.00	.0
2.447	.0187							.02	1.63	1.25	1.23	.013	.00	.00	PIPE
1733.666	2511.057	1.694	2512.751	32.00	7.78	.94	.0058	2513.69	.00	1.83	2.97	3.000	.000	.00	.0
1.360	.0187							.01	1.69	1.16	1.23	.013	.00	.00	PIPE
1735.026	2511.082	1.762	2512.844	32.00	7.41	.85	.0051	2513.70	.00	1.83	2.95	3.000	.000	.00	.0
.434	.0187							.00	1.76	1.08	1.23	.013	.00	.00	PIPE
1735.460	2511.090	1.835	2512.925	32.00	7.06	.77	.0045	2513.70	.00	1.83	2.92	3.000	.000	.00	.0
1.614	-.0005							.01	1.83	1.00	.00	.013	.00	.00	PIPE
1737.074	2511.089	1.936	2513.016	32.00	6.67	.69	.0039	2513.71	.00	1.83	2.88	3.000	.000	.00	.0
5.314	-.0005							.02	1.93	.91	.00	.013	.00	.00	PIPE

Program Package Serial Number: 7189

WATER SURFACE PROFILE LISTING

Date: 5-30-2019 Time:10:25:31

KBH1805.001 MONTECITO 60 - UNIT 1 TDS ADD

PROPOSED STORM DRAIN SYSTEM TO CONNECTION TO EX. SD

STARTING WSE PER EX. SDMH

*****																	*****														
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.	Base Wt 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	*****	*****	*****														
1742.388	2511.086	2.023	2513.109	32.00	6.31	.62	2513.73	.00	1.83	2.81	3.000	.000	.00	0 .0			*****														
9.615	-.0005					.0034	.03	2.02	.83	.00	.013	.00	.00	PIPE			*****														
1752.004	2511.081	2.124	2513.205	32.00	5.98	.56	2513.76	.00	1.83	2.73	3.000	.000	.00	0 .0			*****														
14.518	-.0005					.0030	.04	2.12	.75	.00	.013	.00	.00	PIPE			*****														
1766.522	2511.073	2.230	2513.303	32.00	5.68	.50	2513.80	.00	1.83	2.62	3.000	.000	.00	0 .0			*****														
19.991	-.0005					.0027	.05	2.23	.68	.00	.013	.00	.00	PIPE			*****														
1786.513	2511.062	2.342	2513.404	32.00	5.41	.45	2513.86	.00	1.83	2.48	3.000	.000	.00	0 .0			*****														
4.017	-.0005					.0025	.01	2.34	.62	.00	.013	.00	.00	PIPE			*****														
1790.530	2511.060	2.361	2513.421	32.00	5.36	.45	2513.87	.00	1.83	2.46	3.000	.000	.00	0 .0			*****														

Pipe Culvert Outlet Protection Computation

Project Name: **Montecito Unit 1**

Project Number: **KBH1805.001**

Date: **5/30/2019**

By: **J. Rocha**

Facility ID **FAC P1**

Equations:

$$(d_{50}/D) * (Y_t/D)^{1.2} / (Q/D^{2.5}) = 0.023$$

Equation 760*

$$D_a = 1/2(D + Y_n) \text{ (used in place of } D \text{ if } Fr > 1)$$

Equation 762*

$$L = (1/(2 \tan \theta)) (A_f Y_t - W)$$

Equation 764*

$$A_t = Q/V$$

Equation 765*

Known Information:

Q = 62	Flow (cfs)
D = 3.0	Diameter of Pipe (ft)
1/(2 tan θ) = 3.3	Expansion factor for circular conduits (Figure 714)
V = 5	Allowable downstream velocity (typ=5 ft/s)
Fr = 0.0	Froude Number (0 if full)
Y _n = 3.0	Normal Depth of flow in Pipe Culvert (ft)*
	* Not necessary if Fr<1 (Enter 0 if unknown)
Y _t = 1.20	Tailwater Depth (Enter 0.4D if unknown)

Riprap Erosion Protection Check (Figure 712):

Applicable only if $Q/D^{2.5} \leq 6$

$$Q/D^{2.5} = 3.98$$

← See Figure 712 for Recommended Riprap Type

$$Q/D^{1.5} = 11.93$$

$$Y_t/D = 0.40$$

Solve For:

D₅₀ = 0.82	Average Size Riprap (ft)
D₅₀ = 10	Average Size Riprap (in)
A _t = 12.4	Req'd Area of flow at allowable velocity (ft ²)
Y _t = 1.20	Tailwater Depth (ft)
D _a = 3.0	only used if Fr>=1
L = 24.2	Length of Protection (ft)
*L = 24.2	*For: D<3.5-ft, L_{min}=3D. For: D>=3.5-ft, L_{min}>= 4D. L_{max(required)}=10D
**L(max) = See *L	** For Q/D^{2.5} > 6.0:
	L_{max} = 10D+D/4, for every whole number Q/D^{2.5} > 6

Notes:

Provide D₅₀ = 12-inch riprap for a length of 25-ft

* Equations taken from the Clark County Regional Flood Control District - Hydrologic Criteria and Drainage Design Manual

Worksheet for Trapezoidal Channel - T4

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.025
Channel Slope	0.64 %
Left Side Slope	5.00 ft/ft (H:V)
Right Side Slope	5.00 ft/ft (H:V)
Bottom Width	60.00 ft
Discharge	74.00 ft ³ /s

Results

Normal Depth	0.44 ft
Flow Area	27.50 ft ²
Wetted Perimeter	64.51 ft
Hydraulic Radius	0.43 ft
Top Width	64.42 ft
Critical Depth	0.36 ft
Critical Slope	0.01297 ft/ft
Velocity	2.69 ft/s
Velocity Head	0.11 ft
Specific Energy	0.55 ft
Froude Number	0.73
Flow Type	Subcritical

GVF Input Data

Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data

Upstream Depth	0.00 ft
Profile Description	
Profile Headloss	0.00 ft
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	0.44 ft
Critical Depth	0.36 ft
Channel Slope	0.64 %

Worksheet for Trapezoidal Channel - T4

GVF Output Data

Critical Slope 0.01297 ft/ft

Cross Section for Trapezoidal Channel - T4

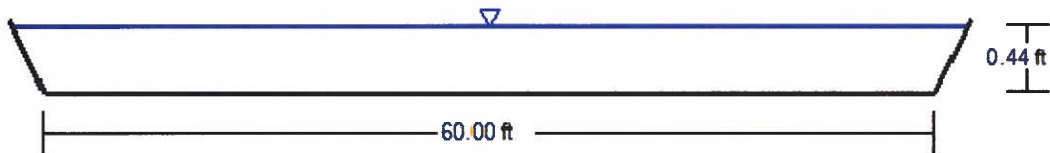
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.025
Channel Slope	0.64 %
Normal Depth	0.44 ft
Left Side Slope	5.00 ft/ft (H:V)
Right Side Slope	5.00 ft/ft (H:V)
Bottom Width	60.00 ft
Discharge	74.00 ft ³ /s

Cross Section Image



V: 10
H: 1

Worksheet for Section DS2 - Perimeter 40' ROW (Min%)

Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Channel Slope 0.48 %
Discharge 117.00 ft³/s
Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.50
0+00.50	0.48
0+00.50	0.00
0+02.00	0.13
0+02.00	0.17
0+32.00	0.81
0+32.00	0.81
0+33.50	0.81
0+33.50	1.29
0+34.00	1.31

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.50)	(0+02.00, 0.13)	0.013
(0+02.00, 0.13)	(0+32.00, 0.81)	0.016
(0+32.00, 0.81)	(0+34.00, 1.31)	0.013

Options

Current Roughness Weighted Method Pavlovskii's Method
Open Channel Weighting Method Pavlovskii's Method
Closed Channel Weighting Method Pavlovskii's Method

Results

Normal Depth 1.18 ft

Worksheet for Section DS2 - Perimeter 40' ROW (Min%)

Results

Elevation Range	0.00 to 1.31 ft	
Flow Area	23.30	ft²
Wetted Perimeter	35.08	ft
Hydraulic Radius	0.66	ft
Top Width	33.50	ft
Normal Depth	1.18	ft
Critical Depth	1.21	ft
Critical Slope	0.00421	ft/ft
Velocity	5.02	ft/s
Velocity Head	0.39	ft
Specific Energy	1.57	ft
Froude Number	1.06	
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	1.18	ft
Critical Depth	1.21	ft
Channel Slope	0.48	%
Critical Slope	0.00421	ft/ft

Cross Section for Section DS2 - Perimeter 40' ROW (Min%)

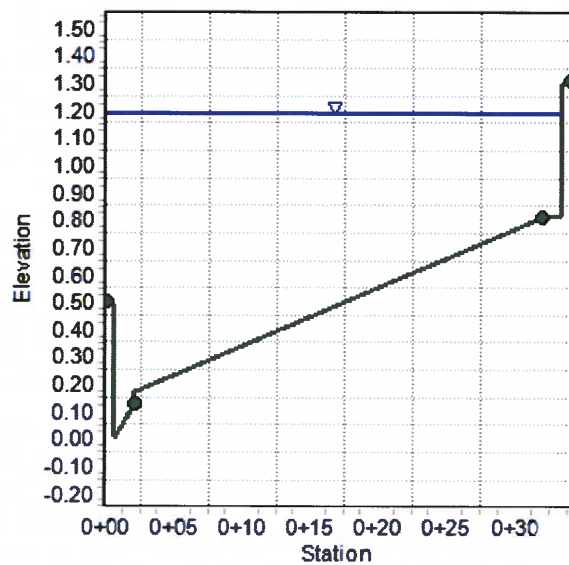
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.48	%
Normal Depth	1.18	ft
Discharge	117.00	ft ³ /s

Cross Section Image



Worksheet for Section DS2 - Perimeter 40' ROW (Max%)

Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Channel Slope 3.00 %
Discharge 117.00 ft³/s
Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.50
0+00.50	0.48
0+00.50	0.00
0+02.00	0.13
0+02.00	0.17
0+32.00	0.81
0+32.00	0.81
0+33.50	0.81
0+33.50	1.29
0+34.00	1.31

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.50)	(0+02.00, 0.13)	0.013
(0+02.00, 0.13)	(0+32.00, 0.81)	0.016
(0+32.00, 0.81)	(0+34.00, 1.31)	0.013

Options

Current Roughness Weighted Method Pavlovskii's Method
Open Channel Weighting Method Pavlovskii's Method
Closed Channel Weighting Method Pavlovskii's Method

Results

Normal Depth 0.88 ft

Worksheet for Section DS2 - Perimeter 40' ROW (Max%)

Results

Elevation Range	0.00 to 1.31 ft	
Flow Area	13.38	ft ²
Wetted Perimeter	34.49	ft
Hydraulic Radius	0.39	ft
Top Width	33.50	ft
Normal Depth	0.88	ft
Critical Depth	1.21	ft
Critical Slope	0.00423	ft/ft
Velocity	8.75	ft/s
Velocity Head	1.19	ft
Specific Energy	2.07	ft
Froude Number	2.44	
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.88	ft
Critical Depth	1.21	ft
Channel Slope	3.00	%
Critical Slope	0.00423	ft/ft

Cross Section for Section DS2 - Perimeter 40' ROW (Max%)

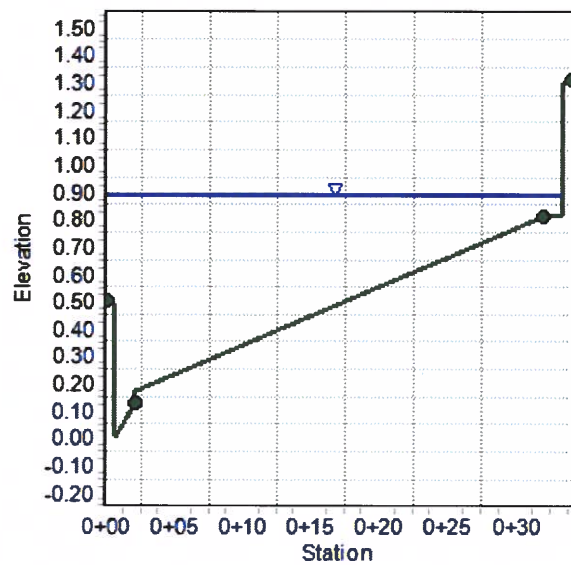
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	3.00	%
Normal Depth	0.88	ft
Discharge	117.00	ft ³ /s

Cross Section Image



APPENDIX F

Updated Finished Floor analysis

KBH1805.001 MONTECITO UNIT 1 - TDS ADDENDUM FINISH 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. ³ (ft)	T/C + 6" F.F. ⁴ (ft)	F.F. ⁵ Design (ft)	Flowline Check	T/C + 6" Check	See References on Last Sheet		
1	2	2524.82	2524.44	0.57	2525.58	2525.32	2526.5	OK	OK			
2	2	2524.55	2524.17	0.57	2525.31	2525.05	2526.3	OK	OK			
3	2	2524.29	2523.91	0.57	2525.05	2524.79	2526.0	OK	OK			
4	2	2524.03	2523.65	0.57	2524.79	2524.53	2525.7	OK	OK			
5	2	2523.77	2523.39	0.57	2524.53	2524.27	2525.5	OK	OK			
6	2	2523.52	2523.14	0.57	2524.28	2524.02	2525.2	OK	OK			
7	2	2523.26	2522.88	0.57	2524.02	2523.76	2525.0	OK	OK			
8	2	2523.00	2522.62	0.57	2523.76	2523.50	2524.7	OK	OK			
9	2	2522.74	2522.36	0.57	2523.50	2523.24	2524.4	OK	OK			
10	2	2522.48	2522.10	0.57	2523.24	2522.98	2524.2	OK	OK			
11	2	2522.23	2521.85	0.57	2522.99	2522.73	2523.9	OK	OK			
12	2	2521.97	2521.59	0.57	2522.73	2522.47	2523.7	OK	OK			
13	2	2521.45	2521.07	0.57	2522.21	2521.95	2523.3	OK	OK			
14	2	2521.26	2520.88	0.57	2522.02	2521.76	2523.1	OK	OK			
15	2	2521.07	2520.69	0.57	2521.83	2521.57	2522.9	OK	OK			
16	2	2520.86	2520.48	0.57	2521.62	2521.36	2522.6	OK	OK			
17	2	2520.87	2520.49	0.57	2521.63	2521.37	2522.6	OK	OK			
18	2	2520.53	2520.15	0.57	2521.29	2521.03	2522.2	OK	OK			
19	2	2520.13	2519.75	0.57	2520.89	2520.63	2521.8	OK	OK			
20	2	2519.74	2519.36	0.57	2520.50	2520.24	2521.4	OK	OK			
21	2	2519.35	2518.97	0.57	2520.11	2519.85	2521.1	OK	OK			
22	2	2518.96	2518.58	0.57	2519.72	2519.46	2520.7	OK	OK			
23	2	2518.56	2518.18	0.57	2519.32	2519.06	2520.3	OK	OK			
24	2	2518.17	2517.79	0.57	2518.93	2518.67	2519.9	OK	OK			
25	2	2517.78	2517.40	0.57	2518.54	2518.28	2519.5	OK	OK			
26	2	2517.24	2516.86	0.57	2518.00	2517.74	2518.9	OK	OK			
27	1	2515.71	2515.33	0.51	2516.35	2516.21	2517.3	OK	OK			
28	1	2516.06	2515.68	0.51	2516.70	2516.56	2517.7	OK	OK			
29	1	2516.61	2516.23	0.51	2517.25	2517.11	2518.2	OK	OK			
30	2	2517.19	2516.81	0.57	2517.95	2517.69	2518.8	OK	OK			
31	2	2517.76	2517.38	0.57	2518.52	2518.26	2519.4	OK	OK			
32	2	2518.33	2517.95	0.57	2519.09	2518.83	2519.9	OK	OK			
33	2	2518.90	2518.52	0.57	2519.66	2519.40	2520.8	OK	OK			

KBH1805.001 MONTECITO UNIT 1 - TDS ADDENDUM FINISH 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	
34	2	2519.72	2519.34	0.57	2520.48	2520.22	2521.3	OK	OK		
35	2	2520.30	2519.92	0.57	2521.06	2520.80	2521.9	OK	OK		
36	2	2520.98	2520.60	0.57	2521.74	2521.48	2522.6	OK	OK		
37	2	2521.80	2521.42	0.57	2522.56	2522.30	2523.4	OK	OK		
38	2	2522.76	2522.38	0.57	2523.52	2523.26	2524.4	OK	OK		
39	2	2523.73	2523.35	0.57	2524.49	2524.23	2525.3	OK	OK		
40	2	2524.70	2524.32	0.57	2525.46	2525.20	2526.3	OK	OK		
41	2	2525.89	2525.51	0.57	2526.65	2526.39	2527.5	OK	OK		
42	2	2527.13	2526.75	0.57	2527.89	2527.63	2528.7	OK	OK		
43	2	2524.82	2524.44	0.57	2525.58	2525.32	2526.5	OK	OK		
44	2	2525.10	2524.72	0.57	2525.86	2525.60	2526.8	OK	OK		
45	2	2525.35	2524.97	0.57	2526.11	2525.85	2527.1	OK	OK		
46	2	2525.60	2525.22	0.57	2526.36	2526.10	2527.4	OK	OK		
47	2	2525.85	2525.47	0.57	2526.61	2526.35	2527.6	OK	OK		
48	2	2526.11	2525.73	0.57	2526.87	2526.61	2527.9	OK	OK		
49	2	2526.36	2525.98	0.57	2527.12	2526.86	2528.1	OK	OK		
50	2	2526.61	2526.23	0.57	2527.37	2527.11	2528.4	OK	OK		
51	2	2526.87	2526.49	0.57	2527.63	2527.37	2528.6	OK	OK		
52	2	2527.12	2526.74	0.57	2527.88	2527.62	2528.9	OK	OK		
53	2	2527.37	2526.99	0.57	2528.13	2527.87	2529.1	OK	OK		
54	2	2527.63	2527.25	0.57	2528.39	2528.13	2529.4	OK	OK		
55	2	2527.71	2527.33	0.57	2528.47	2528.21	2529.6	OK	OK		
56	2	2526.93	2526.55	0.57	2527.69	2527.43	2528.6	OK	OK		
57	2	2526.60	2526.22	0.57	2527.36	2527.10	2528.3	OK	OK		
58	2	2526.27	2525.89	0.57	2527.03	2526.77	2528.0	OK	OK		
59	2	2526.76	2526.38	0.57	2527.52	2527.26	2528.4	OK	OK		
60	2	2526.24	2525.86	0.57	2527.00	2526.74	2527.9	OK	OK		
61	2	2525.49	2525.11	0.57	2526.25	2525.99	2527.2	OK	OK		
62	2	2524.72	2524.34	0.57	2525.48	2525.22	2526.4	OK	OK		
63	2	2524.36	2523.98	0.57	2525.12	2524.86	2526.1	OK	OK		
64	2	2523.99	2523.61	0.57	2524.75	2524.49	2525.7	OK	OK		
65	2	2523.63	2523.25	0.57	2524.39	2524.13	2525.3	OK	OK		
66	2	2523.26	2522.88	0.57	2524.02	2523.76	2525.0	OK	OK		

**KBH1805.001 MONTECITO UNIT 1 - TDS ADDENDUM
FINISH 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. ³ -min (ft)	T/C + 6" F.F. ⁴ -min (ft)	F.F. ⁵ -design (ft)	Flowline Check	T/C + 6" Check	See References on Last Sheet
67	2	2522.90	2522.52	0.57	2523.66	2523.40	2524.5	OK	OK	
68	2	2522.54	2522.16	0.57	2523.30	2523.04	2524.1	OK	OK	
69	2	2522.22	2521.84	0.57	2522.98	2522.72	2523.8	OK	OK	
70	2	2521.05	2520.67	0.57	2521.81	2521.55	2522.7	OK	OK	
71	2	2520.77	2520.39	0.57	2521.53	2521.27	2522.4	OK	OK	
72	2	2519.76	2519.38	0.57	2520.52	2520.26	2521.5	OK	OK	
73	2	2520.08	2519.70	0.57	2520.84	2520.58	2521.8	OK	OK	
74	2	2520.46	2520.08	0.57	2521.22	2520.96	2522.2	OK	OK	
75	2	2521.00	2520.62	0.57	2521.76	2521.50	2522.7	OK	OK	
76	2	2522.78	2522.40	0.57	2523.54	2523.28	2524.4	OK	OK	
77	2	2523.42	2523.04	0.57	2524.18	2523.92	2524.9	OK	OK	
78	2	2523.42	2523.04	0.57	2524.18	2523.92	2525.2	OK	OK	
79	2	2523.06	2522.68	0.57	2523.82	2523.56	2524.7	OK	OK	
80	2	2522.69	2522.31	0.57	2523.45	2523.19	2524.3	OK	OK	
81	2	2522.30	2521.92	0.57	2523.06	2522.80	2523.9	OK	OK	
82	2	2521.86	2521.48	0.57	2522.62	2522.36	2523.5	OK	OK	
83	2	2521.42	2521.04	0.57	2522.18	2521.92	2523.0	OK	OK	
84	2	2521.16	2520.78	0.57	2521.92	2521.66	2522.8	OK	OK	
85	2	2520.93	2520.55	0.57	2521.69	2521.43	2522.5	OK	OK	
86	2	2520.66	2520.28	0.57	2521.42	2521.16	2522.3	OK	OK	
87	2	2519.28	2518.90	0.57	2520.04	2519.78	2520.5	OK	OK	
88	2	2518.50	2518.12	0.57	2519.26	2519.00	2520.1	OK	OK	
89	2	2518.10	2517.72	0.57	2518.86	2518.60	2519.7	OK	OK	
90	2	2517.73	2517.35	0.57	2518.49	2518.23	2519.3	OK	OK	
91	2	2517.41	2517.03	0.57	2518.17	2517.91	2519.0	OK	OK	
92	2	2519.07	2518.69	0.57	2519.83	2519.57	2520.8	OK	OK	
93	2	2519.64	2519.26	0.57	2520.40	2520.14	2521.3	OK	OK	
94	2	2520.22	2519.84	0.57	2520.98	2520.72	2521.9	OK	OK	
95	2	2520.90	2520.52	0.57	2521.66	2521.40	2522.6	OK	OK	
96	2	2524.11	2523.73	0.57	2524.87	2524.61	2525.8	OK	OK	
97	2	2524.68	2524.30	0.57	2525.44	2525.18	2526.4	OK	OK	
98	2	2525.05	2524.67	0.57	2525.81	2525.55	2526.8	OK	OK	
99	2	2525.25	2524.87	0.57	2526.01	2525.75	2527.1	OK	OK	

KBH1805.001 MONTECITO UNIT 1 - TDS ADDENDUM FINISH 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
100	2	2525.45	2525.07	0.57	2526.21	2525.95	2527.3	OK	OK	
101	2	2525.64	2525.26	0.57	2526.40	2526.14	2527.5	OK	OK	
102	2	2525.84	2525.46	0.57	2526.60	2526.34	2527.6	OK	OK	
103	2	2526.04	2525.66	0.57	2526.80	2526.54	2527.8	OK	OK	
104	2	2526.24	2525.86	0.57	2527.00	2526.74	2528.0	OK	OK	
105	2	2526.45	2526.07	0.57	2527.21	2526.95	2528.2	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.										

APPENDIX G

Referenced Exhibit & Grading Plan

CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		July 15, 2005 <i>MS</i>
TO: Land Development Services Department of Public Works		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Technical Drainage Study for: Deer Spring / Durango - Update	
Cross Streets:	Durango Drive & Deer Springs Way	COPIES TO: <i>Thomason</i> Southwest Engineering
File Number:	F:\Depot\DSMEMOS\DS3598D.doc	Richmond American Homes
Parcel Number:	125-20-702-001	Bart Anderson, P.E., DevCo
Zoning Action:	MOD-3735, SDR-3505, SUP-3503	Leni Skaar, Ward 6
FEMA Flood Zone	YES	NO X
Proposed Storm Drain	YES	NO X

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Trm. No.
1 st Submittal	6/18/2004	7/1/2004	Not Approved	\$400.00	6439: \$400
2 nd Submittal	7/29 & 8/19/2004	8/25/2004	Approved	\$400.00	\$400
3 rd Submittal	9/2/2004	9/17/2004	Approved	\$400.00	9036: \$400
4 th Submittal	7/1/2005	7/15/2005	See Comments Below	\$400.00	24955: \$400
TOTAL FEES (LDDRS):				\$1,600.00	----

REMARKS:

4th Submittal: Update to lower finish floor elevation for all lots

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

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

The update to lower the finish floor elevation for all lots as proposed is acceptable. However, all revisions after a previous approval must be highlighted in the grading plan in "cloud" and provided with a description note in the Revision Block of the grading plan. All revisions must be finalized in mylar. Coordinate with Land Development Division for the revision.

The following comments are repeated until they are complete:

- To date, the Special Improvement District (SID) for Grand Montecito Parkway has been terminated. City of Las Vegas will not construct the full street improvements including all utilities of Grand Montecito Parkway. All developers who have frontage on the Parkway are required to bond for all improvements within their corresponding half of the right-of-way. This subject development (Deer Springs / Durango) must bond for the half-street improvements of Grand Montecito Parkway in addition to Deer Springs Way and Doe Brook Trail with CLV Land Development Division. The construction bond must be posted prior to the final approval of improvement plans.*

2. *Previous Comment #7: "On the grading plan, label the easement as a "Public Drainage Easement to be Privately Maintained by HOA" had not been done. Also, the previous required 3'-concrete flume should begin from the wrought iron fence to the sidewalk only. Eliminate the concrete flume within the drainage easement as shown on the grading plan.*
3. *Detail H/3: Specify 8"-CMU and solid-grout the first two courses of both side walls within the public drainage easement.*
4. *All drainage easements must be "Common Lots" and "Public Drainage Easement to be privately maintained by the Homeowners Association" to be labeled in the grading plan and recorded as such on the final map.*

NOTE: Any future changes to the proposed design (or design assumptions) as outlined in the approved drainage study and attached preliminary grading plan which affect drainage must be addressed in a Drainage Study Amendment and accepted by the City of Las Vegas Flood Control Section. Additionally, conditional acceptance of a drainage study is valid for a period of one (1) year. If the proposed construction has not been completed in that time period, the City of Las Vegas reserves the right to require additional conditions and/or submission and acceptance of a complete drainage study update prior to further construction of a project.

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
B&H/ajj/ays

T/R/S: T19S/R60E/20
AREA G-20

FOR

CITY OF LAS VEGAS, STATE OF NEVADA

APN: 125-20-702-001

NORTH 89°56'24" EAST, BEING THE BEARING OF THE NORTH LINE OF THE NORTH-EST QUARTER (NE 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 20, TOWNSHIP 19 SOUTH, RANGE 80 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA AS SHOWN ON FILE IN THE COUNTY RECORDERS' OFFICE, CLARK COUNTY, NEVADA, IN FILE 107 OF SURVEYS, AT PAGE 31.

CITY OF LAS VEGAS VERTICAL CONTROL
RILEY AND PLATE IN CONCRETE CYLINDER
CORNER OF DEER SPRINGS AND RILEY
STATION BLV90
2065
ELEVATION= 775.1977 METERS (NAV88)
2543.29 FEET

A PORTION OF THE NORTHEAST QUARTER (NE 1/4) OF THE SOUTHEAST QUARTER (SE 1/4), OF SECTION 20, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M. CITY OF LAS VEGAS, CLARK COUNTY, NEVADA.

OWNER, JAMES R. TUCKER FAMILY TRUST 439
POLARIS AVE LAS VEGAS, NV, 89103
DEVELOPER
RICHMOND AMERICAN HOMES
7250 W. PEAK DR.
SUITE 212
LAS VEGAS, NV
(702) 240-5600

EXISTING 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 OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

AVOID CUTTING UNDERGROUND
UTILITIES. IT'S COSTLY.

CALL
before you
Dig

1-800-227-2600
UNDERGROUND SERVICE (USA)



CALL BEFORE
YOU DO
UNDERGROUND



Coil

Underground
1-702-455-7511
1-702-229-6611

Call today for more information



SITE ACREAGE: 10.05 AC
APN: 125-20-702-001

PROJECT NAME: DESA SERRAS + DELMAR

This project would plan compete with Las Vegas Valley Water District's technical recommendations. However, this waterbody

5/16/16

NOT APPROVED FOR CONSTRUCTION

at this time and the saguaro does not provide or imply a water commitment.

5/24/16

DATE

DESIGNED BY: WJW

DATE: 12.15.14

SCALE: 1:20

PROJECT NO: 120421

The official spokesman said it was far from
most cases he had seen recently. It is
likely that the man was suffering
from a heart attack while walking
of his own accord.



1. COVER SHEET
2. GENERAL NOTES
3. GRADING PLAN
4. GRADING NOTES AND DETAILS

1. COMMON AREA LANDSCAPE PLAN
2. COMMON AREA LANDSCAPE PLAN
3. COMMON AREA LANDSCAPE PLAN
4. COMMON AREA LANDSCAPE PLAN
5. COMMON AREA LANDSCAPE PLAN
6. COMMON AREA LANDSCAPE PLAN
7. STREET PLAN & PROFILE - MORENO VALLEY STREET
8. STREET PLAN & PROFILE - MORENO VALLEY STREET
9. STREET PLAN & PROFILE - PETALUMA CANYON STREET
10. STREET PLAN & PROFILE - VANDERBILT AVENUE
11. STREET PLAN & PROFILE - OAKBRIDGE AVENUE
12. STREET PLAN & PROFILE - GARDNER AVENUE
13. STREET PLAN & PROFILE - CARVER AVENUE
14. STREET PLAN & PROFILE - DOG BROOK TRAIL
15. UTILITY PLAN & PROFILE - DOG BROOK TRAIL
16. UTILITY PLAN & PROFILE - MORENO VALLEY STREET
17. UTILITY PLAN & PROFILE - PETALUMA CANYON STREET
18. UTILITY PLAN & PROFILE - VANDERBILT AVENUE
19. UTILITY PLAN & PROFILE - OAKBRIDGE AVENUE
20. UTILITY PLAN & PROFILE - GARDNER AVENUE
21. UTILITY PLAN & PROFILE - DOG BROOK TRAIL
22. STREETLIGHT & TRAFFIC CONTROL PLAN

CHARLES KAJKOWSKI, JR.: PE #4784 DATE 5/23/2005

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

M. MARGO WHEELER, AICP, DIRECTOR OF PLANNING AND DEVELOPMENT DATE
THIS PLAN MEETS THE APPLICABLE STANDARDS OF THE PLANNING AND
DEVELOPMENT DEPARTMENT

laxsd

DATE _____

SUBLOS _____

DATE _____

PROJ #H03501

CITY OF THE MARSHALL
SHEETS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 82

[illegible]

DEER SPRINGS & DURANGO

RICHMOND AMERICAN HOMES

RICHMOND AMERICAN HOMES

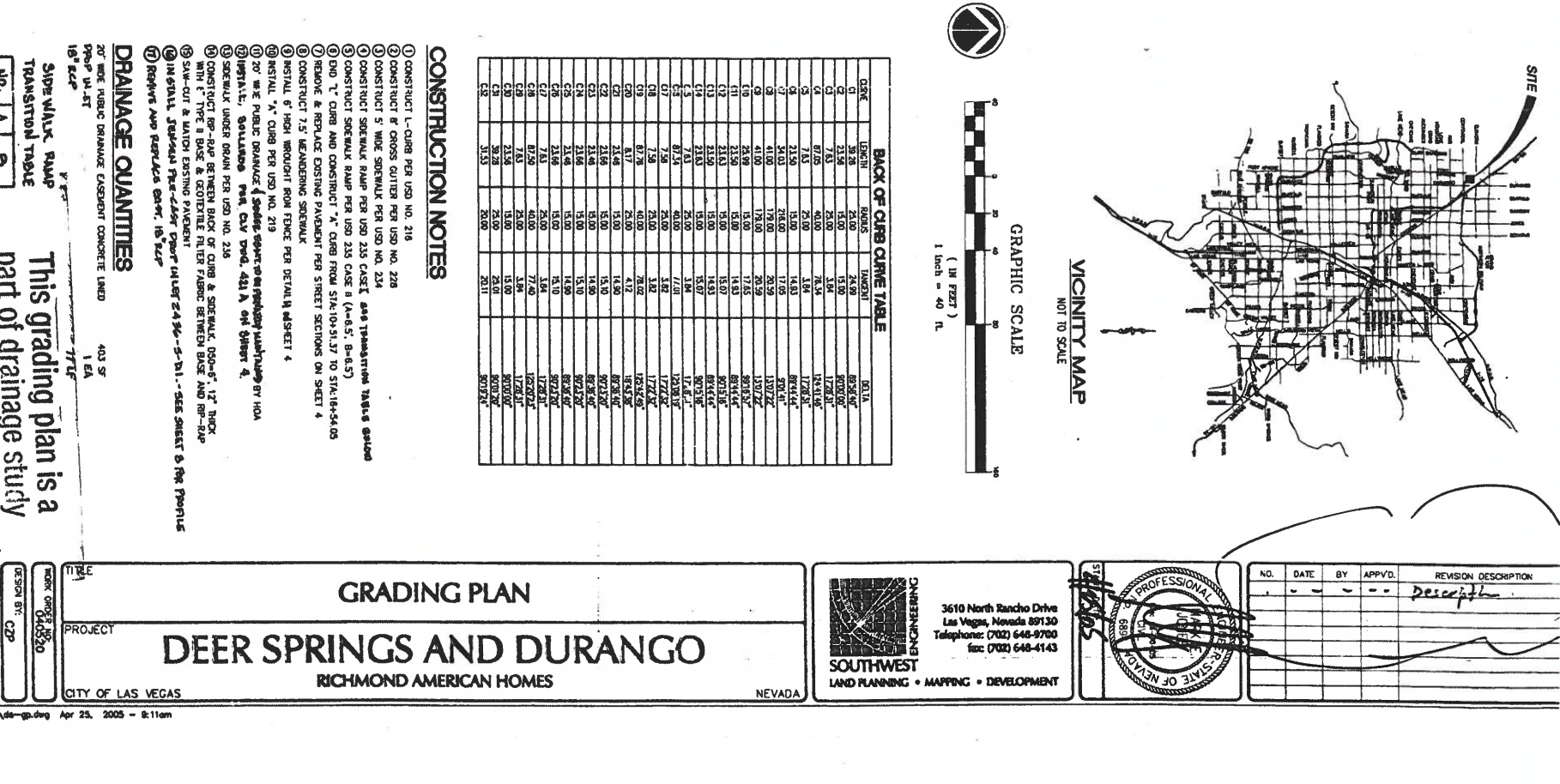
NEVADA



**3610 North Rancho Drive
Las Vegas, Nevada 89130
Telephone: (702) 648-9700
fax: (702) 648-4143**

[illegible]

Figure 1. The effect of the concentration of the polymer on the gelation time of the polymer solution. The concentration of the polymer was 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 2.0, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 3.0, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 4.0, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 5.0, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 6.0, 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 7.0, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 8.0, 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, 8.8, 8.9, 9.0, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 9.8, 9.9, 10.0, 10.1, 10.2, 10.3, 10.4, 10.5, 10.6, 10.7, 10.8, 10.9, 11.0, 11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7, 11.8, 11.9, 12.0, 12.1, 12.2, 12.3, 12.4, 12.5, 12.6, 12.7, 12.8, 12.9, 13.0, 13.1, 13.2, 13.3, 13.4, 13.5, 13.6, 13.7, 13.8, 13.9, 14.0, 14.1, 14.2, 14.3, 14.4, 14.5, 14.6, 14.7, 14.8, 14.9, 15.0, 15.1, 15.2, 15.3, 15.4, 15.5, 15.6, 15.7, 15.8, 15.9, 16.0, 16.1, 16.2, 16.3, 16.4, 16.5, 16.6, 16.7, 16.8, 16.9, 17.0, 17.1, 17.2, 17.3, 17.4, 17.5, 17.6, 17.7, 17.8, 17.9, 18.0, 18.1, 18.2, 18.3, 18.4, 18.5, 18.6, 18.7, 18.8, 18.9, 19.0, 19.1, 19.2, 19.3, 19.4, 19.5, 19.6, 19.7, 19.8, 19.9, 20.0, 20.1, 20.2, 20.3, 20.4, 20.5, 20.6, 20.7, 20.8, 20.9, 21.0, 21.1, 21.2, 21.3, 21.4, 21.5, 21.6, 21.7, 21.8, 21.9, 22.0, 22.1, 22.2, 22.3, 22.4, 22.5, 22.6, 22.7, 22.8, 22.9, 23.0, 23.1, 23.2, 23.3, 23.4, 23.5, 23.6, 23.7, 23.8, 23.9, 24.0, 24.1, 24.2, 24.3, 24.4, 24.5, 24.6, 24.7, 24.8, 24.9, 25.0, 25.1, 25.2, 25.3, 25.4, 25.5, 25.6, 25.7, 25.8, 25.9, 26.0, 26.1, 26.2, 26.3, 26.4, 26.5, 26.6, 26.7, 26.8, 26.9, 27.0, 27.1, 27.2, 27.3, 27.4, 27.5, 27.6, 27.7, 27.8, 27.9, 28.0, 28.1, 28.2, 28.3, 28.4, 28.5, 28.6, 28.7, 28.8, 28.9, 29.0, 29.1, 29.2, 29.3, 29.4, 29.5, 29.6, 29.7, 29.8, 29.9, 30.0, 30.1, 30.2, 30.3, 30.4, 30.5, 30.6, 30.7, 30.8, 30.9, 31.0, 31.1, 31.2, 31.3, 31.4, 31.5, 31.6, 31.7, 31.8, 31.9, 32.0, 32.1, 32.2, 32.3, 32.4, 32.5, 32.6, 32.7, 32.8, 32.9, 33.0, 33.1, 33.2, 33.3, 33.4, 33.5, 33.6, 33.7, 33.8, 33.9, 34.0, 34.1, 34.2, 34.3, 34.4, 34.5, 34.6, 34.7, 34.8, 34.9, 35.0, 35.1, 35.2, 35.3, 35.4, 35.5, 35.6, 35.7, 35.8, 35.9, 36.0, 36.1, 36.2, 36.3, 36.4, 36.5, 36.6, 36.7, 36.8, 36.9, 37.0, 37.1, 37.2, 37.3, 37.4, 37.5, 37.6, 37.7, 37.8, 37.9, 38.0, 38.1, 38.2, 38.3, 38.4, 38.5, 38.6, 38.7, 38.8, 38.9, 39.0, 39.1, 39.2, 39.3, 39.4, 39.5, 39.6, 39.7, 39.8, 39.9, 40.0, 40.1, 40.2, 40.3, 40.4, 40.5, 40.6, 40.7, 40.8, 40.9, 41.0, 41.1, 41.2, 41.3, 41.4, 41.5, 41.6, 41.7, 41.8, 41.9, 42.0, 42.1, 42.2, 42.3, 42.4, 42.5, 42.6, 42.7, 42.8, 42.9, 43.0, 43.1, 43.2, 43.3, 43.4, 43.5, 43.6, 43.7, 43.8, 43.9, 44.0, 44.1, 44.2, 44.3, 44.4, 44.5, 44.6, 44.7, 44.8, 44.9, 45.0, 45.1, 45.2, 45.3, 45.4, 45.5, 45.6, 45.7, 45.8, 45.9, 46.0, 46.1, 46.2, 46.3, 46.4, 46.5, 46.6, 46.7, 46.8, 46.9, 47.0, 47.1, 47.2, 47.3, 47.4, 47.5, 47.6, 47.7, 47.8, 47.9, 48.0, 48.1, 48.2, 48.3, 48.4, 48.5, 48.6, 48.7, 48.8, 48.9, 49.0, 49.1, 49.2, 49.3, 49.4, 49.5, 49.6, 49.7, 49.8, 49.9, 50.0, 50.1, 50.2, 50.3, 50.4, 50.5, 50.6, 50.7, 50.8, 50.9, 51.0, 51.1, 51.2, 51.3, 51.4, 51.5, 51.6, 51.7, 51.8, 51.9, 52.0, 52.1, 52.2, 52.3, 52.4, 52.5, 52.6, 52.7, 52.8, 52.9, 53.0, 53.1, 53.2, 53.3, 53.4, 53.5, 53.6, 53.7, 53.8, 53.9, 54.0, 54.1, 54.2, 54.3, 54.4, 54.5, 54.6, 54.7, 54.8, 54.9, 55.0, 55.1, 55.2, 55.3, 55.4, 55.5, 55.6, 55.7, 55.8, 55.9, 56.0, 56.1, 56.2, 56.3, 56.4, 56.5, 56.6, 56.7, 56.8, 56.9, 57.0, 57.1, 57.2, 57.3, 57.4, 57.5, 57.6, 57.7, 57.8, 57.9, 58.0, 58.1, 58.2, 58.3, 58.4, 58.5, 58.6, 58.7, 58.8, 58.9, 59.0, 59.1, 59.2, 59.3, 59.4, 59.5, 59.6, 59.7, 59.8, 59.9, 60.0, 60.1, 60.2, 60.3, 60.4, 60.5, 60.6, 60.7, 60.8, 60.9, 61.0, 61.1, 61.2, 61.3, 61.4, 61.5, 61.6, 61.7, 61.8, 61.9, 62.0, 62.1, 62.2, 62.3, 62.4, 62.5, 62.6, 62.7, 62.8, 62.9, 63.0, 63.1, 63.2, 63.3, 63.4, 63.5, 63.6, 63.7, 63.8, 63.9, 64.0, 64.1, 64.2, 64.3, 64.4, 64.5, 64.6, 64.7, 64.8, 64.9, 65.0, 65.1, 65.2, 65.3, 65.4, 65.5, 65.6, 65.7, 65.8, 65.9, 66.0, 66.1, 66.2, 66.3, 66.4, 66.5, 66.6, 66.7, 66.8, 66.9, 67.0, 67.1, 67.2, 67.3, 67.4, 67.5, 67.6, 67.7, 67.8, 67.9, 68.0, 68.1, 68.2, 68.3, 68.4, 68.5, 68.6, 68.7, 68.8, 68.9, 69.0, 69.1, 69.2, 69.3, 69.4,



SITE 1113

[illegible]

GENERAL GRADING AND DRAINAGE NOTES

1. ALL PAID ELEVATIONS ARE TO THE ROUGH GRADE ELEVATION, AND ARE 0.30' LOW TO ALLOW FOR LANDSCAPING, WHERE APPLICABLE.
2. ALL FINAL GRADE ELEVATIONS ON THE OUTSIDE OF BUILDINGS SHALL BE A MINIMUM OF 6" LOWER THAN THE ESTABLISHED FINISH FLOOR ELEVATION, EXCEPT AT THE ENTRANCE OF THE BUILDING.
3. THE CONTRACTOR SHALL VERIFY ALL ASPECTS OF THESE PLANS AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCEMENT OF ANY WORK.
4. ANY QUANTITIES SHOWN HEREON ARE FOR ESTIMATING ONLY AND ARE NOT TO BE USED FOR BIDDING.
5. THE CONTRACTOR SHALL FURNISH TO THE ENGINEER AS-BUILT DRAINAGES FOR UTILITY SERVICES FOR WORK SHOWN.
6. REFER TO THE IMPROVEMENT PLANS FOR STREET SECTIONS, DETAILS AND NEW UTILITY LOCATIONS.
7. ALL GRADING SHALL CONFORM TO THE SOILS REPORT.
8. ALL FINISH FLOOR ELEVATIONS TO BE 12" (1.0') ABOVE PAID ELEVATIONS. (SEE TYPICAL LOT DRAINAGE DETAIL, SHEETS 01000-1000.)
9. ALL WORK PERFORMED WITHIN THE PUBLIC RIGHT-OF-WAY AND OUTSIDE THE PROJECT BOUNDARY AUTHORITY SHALL BE PERFORMED UNDER A SEPARATE EMPLOYMENT PERMIT ISSUED BY THE CONTROLLING AGENCY.
10. ALL WORK PERFORMED OUTSIDE THE PROJECT BOUNDARY AND ON PRIVATE PROPERTY SHALL BE PERFORMED UNDER A SEPARATE EMPLOYMENT PERMIT ISSUED BY THE PROPERTY OWNER.
11. ALL WORK AND MATERIALS NOT IN ACCORDANCE WITH THE LATEST "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS" SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
12. A GRADING PERMIT IS REQUIRED.
13. A SEPARATE PERMIT IS REQUIRED FOR ANY OFF-SITE CONSTRUCTION.
14. A GRADING AND DRAINAGE PLAN SHALL BE ON THE JOB SITE AT ALL TIMES. DEVIATIONS FROM THE PLAN MUST BE PRECEDED BY AN APPROVED PLAN REVISION.
15. AS-BUILT FINISH FLOOR ELEVATIONS SHALL BE CAPTURED BY:
ENGINEER: [Signature]
DATE: 01/15/2004
TELEPHONE NUMBER: 702.684.9700
FAX: 702.684.9701

QUANTITY ESTIMATE		EARTHWORK VOLUMES	
DESCRIPTION	ESTIMATE	CUT (CY)	FILL (CY)
2" ASPHALTIC CONCRETE	10,871 SY	1,931 CY	9,800 CY
4" ASPHALTIC CONCRETE	19,877 SY		
TYPE I AGGREGATE BASE	403 CY		
TYPE II AGGREGATE BASE	1,181 CY		
24" TYPE I CONCRETE CURB	2,017 CY		
6" CONCRETE VALLEY GUTTER	1,181 CY		
8" CONCRETE VALLEY GUTTER	6,100 SY		
CONCRETE SIDEWALK	1,350 SY		
CONCRETE SIDEWALK	8,616 SY		
CONCRETE SIDEWALK	1 EA		
CONCRETE SIDEWALK	8 EA		

CU/C COURSES	HEIGHT	STD. RETAIN	RET. NEXT TO SW
1	0'-8"	0.4'-0.7'	N/A
2	1'-4"	0.7'-1.03'	N/A
3	2'-0"	0.84'-1.50'	7.7-11.7
4	2'-8"	1.51'-2.17'	11.8-18.3
5	3'-4"	2.18'-2.83'	18.4-23
6	4'-0"	2.84'-3.50'	23.1-31.7
7	4'-8"	3.51'-4.17'	31.8-40.3
8	5'-4"	4.18'-4.83'	39.4-45
9	6'-0"	4.84'-5.50'	45.1-51.7

GEOTECHNICAL SOILS REPORT

SUB-GRADE PREPARATION PER GEOTECHNICAL REPORT - BY
FEBRUARY 12, 2004

SEE SOILS REPORT FOR OVER EXCAVATION REQUIREMENTS

WALL NOTES

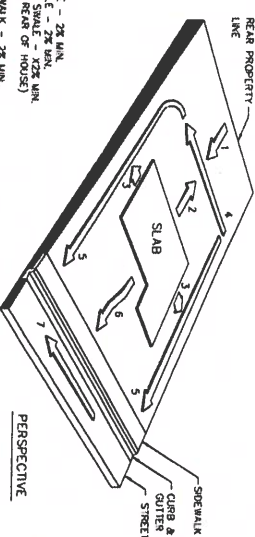
1. ALL TOP OF FOOTINGS SHALL BE A MINIMUM OF 12" BELOW PAID ELEVATION.
2. ALL RETAINING/LOAD WALL SHALL BE 8-INCH CMU BLOCKS.
3. NO TONGUE AND GROOVE.
4. BLOCK OR RETAINING WALL (INCLUDING FOOTING) TO BE DESIGNED BY OTHERS.

REFER TO SOILS REPORT AND
STRUCTURAL PLANS FOR WALL
AND FOOTING DESIGN

THE OFF-SITE PAVEMENT SECTIONS SHOWN ON THE
PLANS ARE FOR INFORMATION ONLY. THE EXISTING
STANDARD SPECIFICATION SECTION 401 USAS, THE
ON THE ESTABLISHED INDIAN COUNTS.

1. SLOPE FROM ROAD TO SWALE - 2% MIN.
2. SLOPE FROM ROAD TO SIDEWALK - 2% MIN.
3. SLOPE FROM HOUSE TO SIDE SWALE - 2% MIN.
4. REAR SWALE (10' MIN FROM REAR OF HOUSE)
5. SLOPE FROM SIDEWALK TO SIDE SWALE - 2% MIN.
6. SLOPE FROM SIDEWALK TO SIDE SWALE - 2% MIN.
7. SLOPE OF STREET

TYPICAL GRADING - TYPE 'A' DRAINAGE



PERSPECTIVE



WALL SECTION
NOT TO SCALE

TYPICAL GRADING SECTION

NOT TO SCALE

RETAINING WALL DATA TABLE

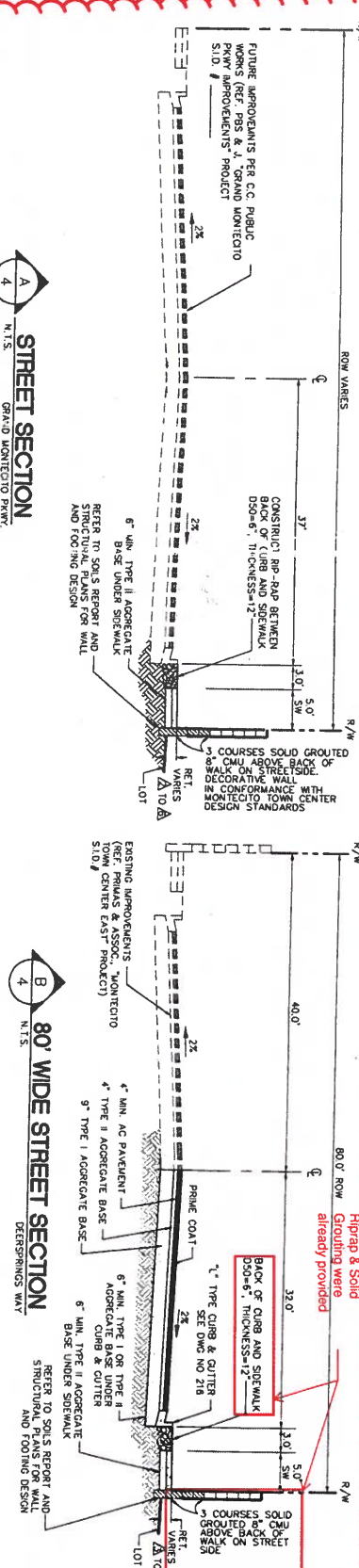
CU/C COURSES	HEIGHT	STD. RETAIN	RET. NEXT TO SW
1	0'-8"	0.4'-0.7'	N/A
2	1'-4"	0.7'-1.03'	N/A
3	2'-0"	0.84'-1.50'	7.7-11.7
4	2'-8"	1.51'-2.17'	11.8-18.3
5	3'-4"	2.18'-2.83'	18.4-23
6	4'-0"	2.84'-3.50'	23.1-31.7
7	4'-8"	3.51'-4.17'	31.8-40.3
8	5'-4"	4.18'-4.83'	39.4-45
9	6'-0"	4.84'-5.50'	45.1-51.7

STREET SECTION

NOT TO SCALE

42" WIDE ENTRANCE STREET SECTION

NOT TO SCALE



37" WIDE STREET SECTION

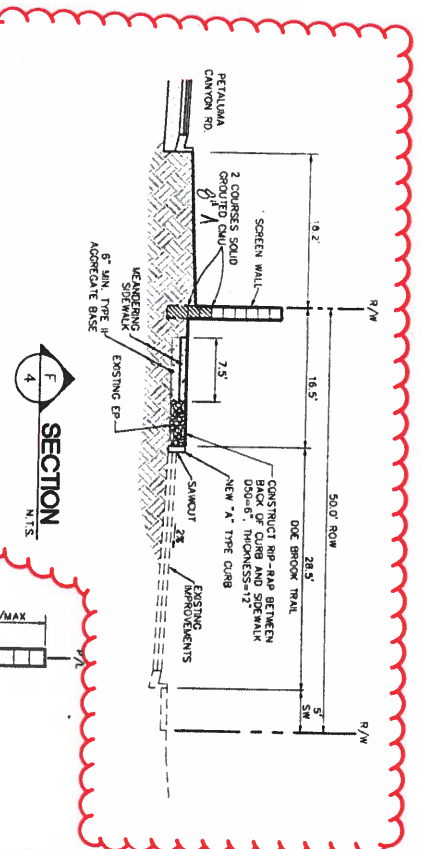
NOT TO SCALE

3" DRAINAGE U-CHANNEL SECTION

NOT TO SCALE

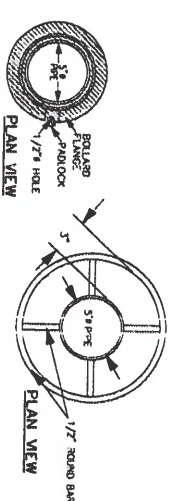
WALL SECTION

NOT TO SCALE



SECTION

NOT TO SCALE



PLAN VIEW

PLAN VIEW

ELEVATION VIEW

ELEVATION VIEW

DETAIL 1

DETAIL 2

DETAIL 3

DETAIL 4

DETAIL 5

DETAIL 6

DETAIL 7

DETAIL 8

DETAIL 9

DETAIL 10

DETAIL 11

DETAIL 12

DETAIL 13

DETAIL 14

DETAIL 15

DETAIL 16

DETAIL 17

DETAIL 18

DETAIL 19

DETAIL 20

DETAIL 21

DETAIL 22

DETAIL 23

DETAIL 24

DETAIL 25

DETAIL 26

DETAIL 27

DETAIL 28

DETAIL 29

DETAIL 30

DETAIL 31

DETAIL 32

DETAIL 33

DETAIL 34

DETAIL 35

DETAIL 36

DETAIL 37

DETAIL 38

DETAIL 39

DETAIL 40

DETAIL 41

DETAIL 42

DETAIL 43

DETAIL 44

DETAIL 45

DETAIL 46

DETAIL 47

DETAIL 48

DETAIL 49

DETAIL 50

DETAIL 51

DETAIL 52

DETAIL 53

DETAIL 54

DETAIL 55

DETAIL 56

DETAIL 57

DETAIL 58

DETAIL 59

DETAIL 60

DETAIL 61

DETAIL 62

DETAIL 63

DETAIL 64

DETAIL 65

DETAIL 66

DETAIL 67

DETAIL 68

DETAIL 69

DETAIL 70

DETAIL 71

DETAIL 72

DETAIL 73

DETAIL 74

DETAIL 75

DETAIL 76

DETAIL 77

DETAIL 78

DETAIL 79

DETAIL 80

DETAIL 81

DETAIL 82

DETAIL 83

DETAIL 84

DETAIL 85

DETAIL 86

DETAIL 87

DETAIL 88

DETAIL 89

DETAIL 90

DETAIL 91

DETAIL 92

DETAIL 93

DETAIL 94

DETAIL 95

DETAIL 96

DETAIL 97

DETAIL 98

DETAIL 99

DETAIL 100

DETAIL 101

DETAIL 102

DETAIL 103

DETAIL 104

DETAIL 105

DETAIL 106

DETAIL 107

DETAIL 108

DETAIL 109

DETAIL 110

DETAIL 111

DETAIL 112

DETAIL 113

DETAIL 114

DETAIL 115

DETAIL 116

DETAIL 117

DETAIL 118

DETAIL 119

DETAIL 120

DETAIL 121

DETAIL 122

DETAIL 123

DETAIL 124

DETAIL 125

DETAIL 126

DETAIL 127

DETAIL 128

DETAIL 129

DETAIL 130

DETAIL 131

DETAIL 132

DETAIL 133

DETAIL 134

DETAIL 135

DETAIL 136

DETAIL 137

DETAIL 138

DETAIL 139

DETAIL 140

DETAIL 141

DETAIL 142

DETAIL 143

DETAIL 144

DETAIL 145

DETAIL 146

DETAIL 147

DETAIL 148

DETAIL 149

DETAIL 150

DETAIL 151

DETAIL 152

DETAIL 153

DETAIL 154

DETAIL 155

DETAIL 156

DETAIL 157

DETAIL 158

DETAIL 159

DETAIL 160

DETAIL 161

DETAIL 162

DETAIL 163

DETAIL 164

DETAIL 165

DETAIL 166

DETAIL 167

DETAIL 168

DETAIL 169

DETAIL 170

DETAIL 171

DETAIL 172

DETAIL 173

DETAIL 174

DETAIL 175

DETAIL 176

DETAIL 177

DETAIL 178

DETAIL 179

DETAIL 180

DETAIL 181

DETAIL 182

DETAIL 183

DETAIL 184

DETAIL 185

DETAIL 186

DETAIL 187

DETAIL 188

DETAIL 189

DETAIL 190

DETAIL 191

DETAIL 192

DETAIL 193

DETAIL 194

DETAIL 195

DETAIL 196

DETAIL 197

DETAIL 198

DETAIL 199

DETAIL 200

DETAIL 201

DETAIL 202

DETAIL 203

DETAIL 204

DETAIL 205

DETAIL 206

DETAIL 207

DETAIL 208

DETAIL 209

DETAIL 210

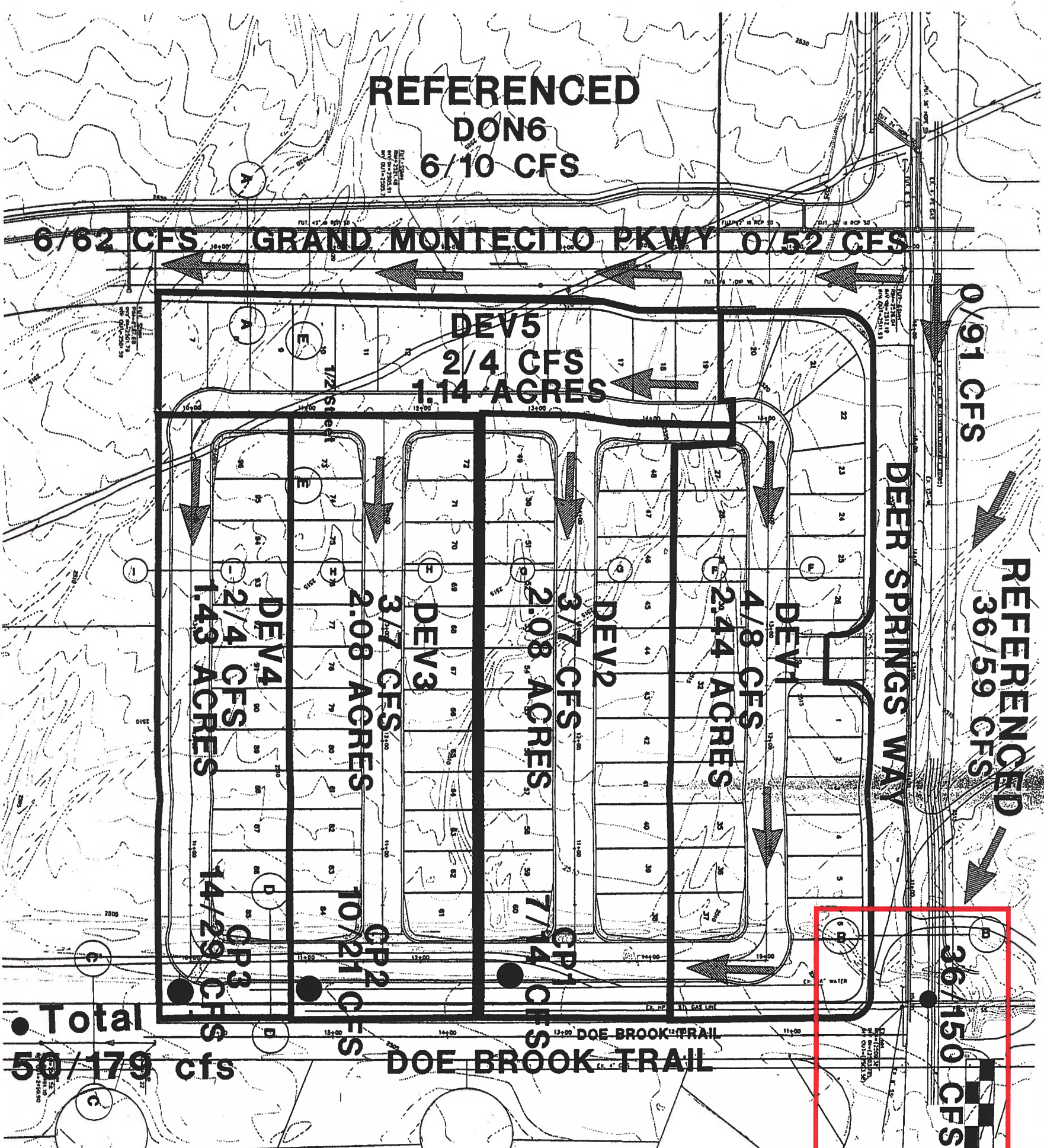
DETAIL 211

DETAIL 212

DETAIL 213

DETAIL 214

DETAIL 215



GRAPHIC SCALE

1, inch = 100 ft.

LEGEND

DON1	BASIN NAME
3.04 A.C.	AREA IN ACRES

(3/7) a(10) / a(100) IN CFS

C1 HEC-1 CONCENTRATION POINT

17/42 Q(10) / Q(100) IN CFS

FLOWMASTER SECTION



FLOW DIRECTION

BASIN BOUNDARY

DEER SPRINGS/DURANGO.

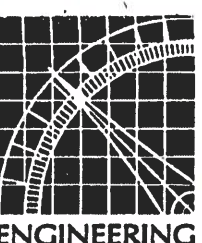
SWE # 040520

STREET CAPACITY CALCULATIONS

	Slope%	Q100(cts)	Velocity	Depth(ft)	Vx/D
DevelopedCondition	3.01	150	7.07	0.76	5.37
Deer Springs	1	179	7.50	1.17	8.77
Doe Brook Trail	1	62	3.75	0.72	2.70
Grand Montecito	1.54	29	3.92	0.53	2.08
PetalumaCan(D-D)	2.15	4	3.54	0.35	1.24
MoroValley(E-E)	0.58	8	2.07	0.42	0.87
Quintessol(F-F)	2.43	7	3.68	0.34	1.25
Lucero Ave(G-G)	2.55	7	3.76	0.33	1.24
Quarentin(H-H)	2.08	4	2.93	0.3	0.88
VonsdLomoc(I-I)					

FIGURE 5

DEVELOPED CONDITIONS ON-SITE BASIN MAP

$$1^{\circ}=100'$$


SOUTHWEST
LAND PLANNING • MAPPING • DEVELOPMENT

3610 North Rancho Drive

Las Vegas, Nevada 89130

Telephone: (702) 648-9700

fax: (702) 648-4143

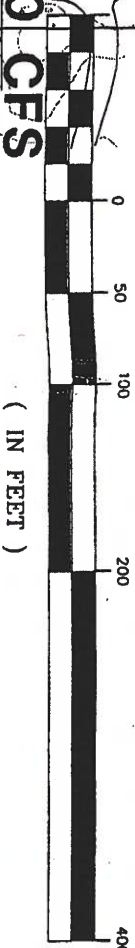
PROJECT SITE (HATCHED)

0.91 CFS

REFERENCED
36/59 CFS

36/150 CFS

GRAPHIC SCALE



LEGEND

DON1 BASIN NAME
3.04 A.C. AREA IN ACRES
(3/7) Q(10) / Q(100) IN CFS
C1 HEC-1 CONCENTRATION POINT
17/42 Q(10) / Q(100) IN CFS

FLOWMASTER SECTION

FLOW DIRECTION

BASIN BOUNDARY

DEER SPRINGS/DURANGO
SWE # 040520

STREET CAPACITY CALCULATIONS

DevelopedCondition	Slope%	Q100(cfs)	Velocity	Depth(ft)	VAD
Deer Springs	3.01	150	7.07	0.76	5.37
Deer Springs	1	179	7.50	1.17	8.77
Grand Montecito	1	62	3.75	0.72	2.70
PetroleumCan(D-D)	1.54	29	3.92	0.53	2.08
Morovale(E-E)	2.15	4	3.54	0.35	1.24
Quintessol(F-F)	0.58	8	2.07	0.42	0.87
Lucero Ave(G-G)	2.43	7	3.68	0.34	1.25
Quarentino(H-H)	2.55	7	3.76	0.33	1.24
Viansolomo(I-I)	2.08	4	2.93	0.3	0.88

FIGURE 5



DEVELOPED CONDITIONS
ON-SITE BASIN MAP

1"=100'



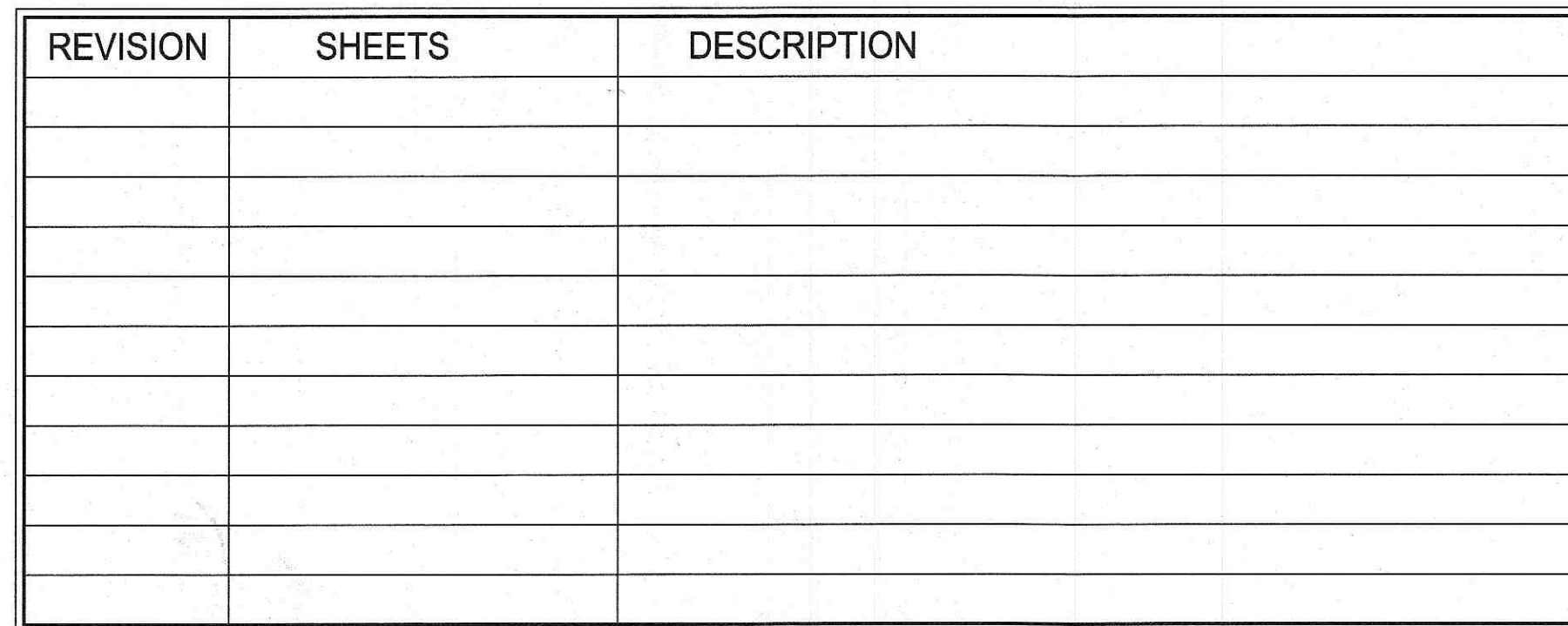
3610 North Rancho Drive
Las Vegas, Nevada 89130
Telephone: (702) 648-9700
fax: (702) 648-4143

LAND-PLANNING • MAPPING • DEVELOPMENT

DS 3598 - REFERENCED FOR STREET SECTION VERIFICATION OF
EROSIVE VELOCITIES

APPENDIX H

CD of Electronic Files & Revised Improvement Plans



SITE MAP
NOT TO SCALE

SHEET INDEX		
NO	SHEET	TITLE
1	C-1	COVER SHEET
2	C-2	GENERAL NOTES
3	C-3	LEGEND, ABBREVIATIONS, & 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
14	G-11	GRADING PLAN XI
15	D-1	STREET SECTIONS AND GRADING DETAILS I
16	D-2	GRADING DETAILS II
17	SD-1	PLAN AND PROFILE - STORM DRAIN LATERALS
18	SD-2	PLAN AND PROFILE - STORM DRAIN

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 - 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 STATUTES AND / OR PUBLIC UTILITY COMMISSION RULES AND REGULATIONS.	
APPROVED FOR CONSTRUCTION	
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES PROJECT NO. ##### FIRST APPROVED DATE: L/VWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL MAXIMUM AVAILABLE FIRE SPRINKLER FLOW N/A GPM 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
KB HOME 5750 BADURA AVE. SUITE 180 LAS VEGAS, NV 89118 PH: 702-266-8400 FX: 702-266-8623 CONTACT: PAUL CHAO	SLATER HANIFF GROUP, INC. 5740 S. ARVILLE STREET, SUITE 216 LAS VEGAS, NV 89118 PH: (702) 284-5300 FX: (702) 284-5399 CONTACT: TIMOTHY MUROONEY

LEGAL DESCRIPTION

A PORTION OF THE SOUTHEAST QUARTER (SE 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 20, TOGETHER WITH A PORTION OF THE SOUTHWEST QUARTER (SW 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 21, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK SLV90 20E6
RIVET & PLATE IN TOP OF CURB AT SW CORNER OF RILEY ST. & DEER SPRINGS.
ELEVATION=774.781 METERS (NAVD'88)
ELEVATION=2541.93 US SURVEY FEET (NAVD'88)

BASIS OF BEARINGS

NORTH 89°56'20" EAST, BEING THE BEARING OF THE SOUTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 20, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE IN FILE 118, PAGE 89 OF SURVEYS.

FEMA FLOOD ZONE INFORMATION

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE 'X' (AREA OUTSIDE THE 500 YEAR FLOODPLAIN), PER THE FEMA FIRM PANELS 32003C1745E DATED NOVEMBER 16, 2011

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 PERMANENTLY STABILIZED OR PLANTED SURFACES. STORMWATER DISCHARGE PERMIT APPLICATION AND ASSOCIATED INFORMATION MAY BE DOWNLOADED FROM THE WEB SITE: <http://WWW.STATE.NV.US/BWPC/STORM/01.NTP> PROJECTS THAT DISTURB MORE THAN ONE ACRE OF LAND MUST SUBMIT TO HDEM A "NOTICE OF INTENT" FOR INCLUSION UNDER STORMWATER PERMIT NO. NVR100000 ALONG WITH THE APPROPRIATE FILING FEE.

PROJECT INFORMATION

ACREAGE (GROSS):	= 12.32± AC
ACREAGE (NET):	= 12.32± AC
DENSITY (LOTS/NET ACRE):	= 8.52 DU/NET ACRE
PROPOSED ZONING:	= MC-TC
TOTAL NO. OF RESIDENTIAL LOTS	= 105
TOTAL NO. OF COMMON ELEMENTS *	= 16
MINIMUM LOT SIZE	= ??? SF±
MAXIMUM LOT SIZE	= ??? SF±
PROVIDED OPEN SPACE	= ????? SF±

EARTHWORK SUMMARY (UNADJUSTED)

CUT	###.###	CY.
FILL	###.###	CY.
NET	###.###	CY.

GEOTECHNICAL ENGINEER

PREPARED BY: SOUTHWEST GEOTECHNICAL
ADDRESS: 5275 ARVILLE ST. SUITE 108, LAS VEGAS, NV, 89118
PHONE: 702-323-6000
PROJECT No. 182358
DATED: 10/17/18



Call before you Dig
AVOID CUTTING UNDERGROUND
UTILITY LINES. IT'S COSTLY.

Call
811
OR
1-800-227-2600

S-I-G
SLATER
HANIFAN
GROUP
a Westwood team

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

[illegible]

KB HOME
MONTECITO 60 - UNIT 1
COVER SHEET

S20
T19S
R60E

DATE: 5/30/19

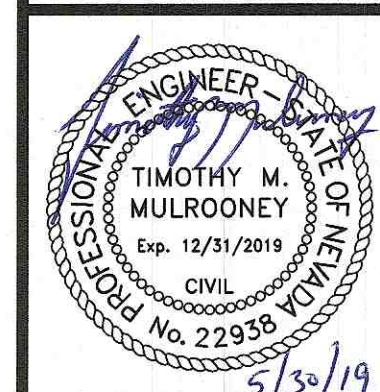
DRAFTER: BCS

DESIGNER: HN

CHECKED: MAK

PROJECT NO.

KBH1805-001



C-1

SHEET 1 OF 18

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 IF 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 NVRI00000, 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 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 NVRI00000, 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.

LEGAL DESCRIPTION

A PORTION OF THE SOUTHEAST QUARTER (SE 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 20, TOGETHER WITH A PORTION OF THE SOUTHWEST QUARTER (SW 1/4) OF THE NORTHEAST QUARTER (NW 1/4) OF SECTION 21, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK 5LVS0 2066
RIVET & PLATE IN TOP OF CURB AT SW CORNER OF RILEY ST. & DEER SPRINGS.
ELEVATION=774.781 METERS (NAV83)
ELEVATION=2541.93 US SURVEY FEET (NAV83)

BASIS OF BEARINGS

NORTH 89°56'20" EAST, BEING THE BEARING OF THE SOUTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 20, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE IN FILE 118, PAGE 89 OF SURVEYS.

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

SOUTHWEST GAS APPROVAL

SOUTHWEST GAS CORPORATION

DATE

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. POLYNYL (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" IS 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 (258-7771) 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 OFF-SITE 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 258-3902, TWO (2) WORKING DAYS PRIOR TO METER PICKUP.
11. ANY INTERRUPTION OF SERVICE MUST BE PERFORMED IN ACCORDANCE WITH UDACS SECTION 314.01, AND APPROVED BY THE LVVWD IN WRITING PRIOR TO SHUTDOW. 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 ADJUTING 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 SOUTHWEST GEOTECHNICAL, PROJECT NO. 182358, DATED 10/17/18.
6. EARTHWORK QUANTITIES (RAW):
- CUT = #### CUBIC YARDS
- FILL = #### 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 # 6331, FOR HYDRANT SPECIFICATIONS, AND HYDRANT INSTALLATION SPECIFICATIONS.
2. ONLY FIRE HYDRANTS THAT ARE IN 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 THE 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 [FC 105.7.12]
4. ON ANY 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. [FC 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. [FC 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. [FC 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. [FC 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. [FC 507]
9. PRIVATE HYDRANTS SHALL BE PAINTED RED. [FC 507.5.7.1]
10. PRIOR TO THE FINAL OCCUPANCY, A FIRE FLOW TEST WILL BE WITNESSED BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW. [FC 507]

11. FIRE HYDRANT SPACING SHALL BE AS FOLLOWS: [FC 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 COUNTRY OF MORE THAN 30,000 PER DAY, HYDRANTS ARE REQUIRED ON EACH SIDE OF THE STREET SPACED AT 500 FT ON AN ALTERNATING BASIS. [FC 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. [FC 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. [FC 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. [FC C102.7]
17. THE MAXIMUM DISTANCE FROM A HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. [FC 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. [FC 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. [FC 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 8% FOR 25 FEET PRIOR TO OR AFTER THE GRADE CHANGE. ADJACENT TO THE STRUCTURES GRADIENT SHALL NOT EXCEED 6%. [FC 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 RADII. [FC 503.2.4]
22. VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL NOT BE LESS THAN 13 FT 6 INS. [FC 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 LINES THROUGH PARKING LOTS SHALL BE NOT LESS THAN 24 FT. [FC 503.2.1.1]
24. A FIRE APPARATUS ACCESS ROAD 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. [FC 503.1.1]
25. APPROVED SECONDARY FIRE APPARATUS ACCESS SHALL BE PROVIDED FOR 100 OR MORE DWELLING UNITS, ROAD(S) WITH DEAD-ENDS OR 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. [FC 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. [FC 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 LANE. 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. [FC 503.3]
28. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAI 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 INTERFERENCES 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 SATISFACTORILY 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 (1/2") ABOVE UP OF ALL CUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS AND CROSS GUTTERS.
9. CURB AND CUTTER FLOW 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 SOUTHWEST GEOTECHNICAL, REPORT NUMBER 182358, DATED 10/17/18, APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.
13. EXACT LOCATION OF ALL SAWCUT LINES MAY BE ADJUSTED OR DETERMINED IN THE FIELD BY A CITY OF LAS VEGAS ENGINEER IF LOCATION ON PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES RELOCATIONS.
14. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEY MONUMENTS. ANY MONUMENTS DISTURBED SHALL BE REPLACED AND ADJUSTED PER AVAILABLE RECORDS IN ACCORDANCE WITH N.E.S. STATUTE NO. 625.380 & CITY OF LAS VEGAS TITLE 18, APPENDIX D.
15. UTILITY COMPANY METER BOXES, MANHOLE LIDS, VALVE COVERS, ETC. SHALL BE LOCATED OUT OF DRIVEWAYS, DRIVEWAY APPROXS, FLOWLINES, AND CROSS GUTTERS UNLESS WRITTEN APPROVAL IS GRANTED BY THE UTILITY COMPANY AND THE CITY ENGINEER.

WALL NOTES:

1. ALL WALLS, NEW OR EXISTING, ARE ONLY SHOWN ON CIVIL PLANS FOR THE PURPOSE OF REVIEWING GRADING RELATIONSHIPS, FLOOD CONTROL AND SIGHT DISTANCE AT INTERSECTIONS. NEW WALLS REQUIRE A SEPARATE PERMIT AND INSPECTION BY THE BUILDING DEPARTMENT.
2. ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT OF WAY.
3. CONTRACTOR SHALL ADJUST ALL NEW EXISTING INLETS, VALVE BOXES, MANHOLE RIMS, AND SEWER CLEAN OUTS, ETC. TO FINISH GRADE AS APPLICABLE WHETHER OR NOT THEY ARE SHOWN ON THE PLANS.
4. MATERIALS, HANDLING AND PLACEMENT OF PORTLAND CEMENT CONCRETE SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF NDOT OR THE CLARK COUNTY AREA SPECIFICATIONS (AS APPLICABLE) AND THE PLANS AND DETAILS SHOWN HEREON.
5. WHEN INSTALLING UNDERGROUND FACILITIES THAT REQUIRE UNDERGROUND LOCATING DEVICES SUCH AS MARKER BALLS, LOCATING RIBBON, ETC., THE CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION TO OFFSITE INSPECTION AND TESTING CERTIFYING THAT ALL DEVICES HAVE BEEN PLACED AND VERIFIED TO BE IN GOOD WORKING CONDITION PRIOR TO THE CONSTRUCTION OF ANY ROAD BASE.
6. SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S) SHALL BE PROVIDED TO THE CITY AND APPROVED PRIOR TO ACCEPTANCE OF FACILITY VIDEO INSPECTION. THE MAP(S) SHALL INCLUDE THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF THE PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES AND TRANSITION STRUCTURES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND THE CONNECTION TO A DROP INLET, THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS EXIT THE PUBLIC RIGHT-OF-WAY, SEWER AND STORM DRAIN MAIN ALIGNMENT, INCLUDING DEFLECTION POINTS. THE LOCATION SHALL BE DESCRIBED BY COORDINATES WHICH SHALL BE BASED ON THE OFFICIAL HORIZONTAL AND VERTICAL CONTROL NETWORKS OF THE CITY OF LAS VEGAS. FINAL LOCATION MAP(S) MUST BE SEALED AND CERTIFIED BY A NEVADA PROFESSIONAL LAND SURVEYOR TO HAVE POSITIONAL CERTANTIES OF ± 0.09 METERS (± 0.3 FEET) HORIZONTALLY AND VERTICALLY. A SEPARATION ELECTRONIC COMMA DELIMITED FILE FOR THE SANITARY SEWER AND STORM DRAIN COORDINATES SHALL ALSO ACCOMPANY THE SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S).
7. CCTV VIDEO INSPECTION IS REQUIRED FOR ALL SEWER AND STORM DRAINS. THE CCTV VIDEO INSPECTIONS NEED TO BE PERFORMED PER THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS LATEST ADDITION.
8. A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.

2.3 CITY OF LAS VEGAS TRAFFIC NOTES

1. ALL CONSTRUCTION SIGNING, BARRICADING, AND TRAFFIC DELINEATION SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.
2. THE STREET SIGN CONTRACTOR SHALL OBTAIN STREET NAMES AND BLOCK NUMBERING FROM THE PLANNING DEPARTMENT PRIOR TO CONSTRUCTION.
3. BEFORE ANY WORK IS STARTED IN THE RIGHT-OF-WAY, THE CONTRACTOR SHALL INSTALL ALL ADVANCE WARNING SIGNS FOR THE CONSTRUCTION ZONE. THE CONTRACTOR SHALL INSTALL TEMPORARY STOP SIGNS AT ALL NEW STREET ENCROACHMENTS INTO EXISTING CITY STREETS WHERE WARRANTED IMMEDIATELY AFTER FIRST GRADING WORK IS ACCOMPLISHED, AND SHALL MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED.
4. WHEN A DESIGNATED "SAFE ROUTE TO SCHOOL" IS ENCROACHED UPON BY A CONSTRUCTION WORK ZONE AND PUBLIC WORKS STAFF IDENTIFIES A NEED FOR STUDENTS TO BE ASSISTED IN THE SAFE CROSSING THROUGH THAT WORK ZONE, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE A QUALIFIED "CROSSING GUARD". THE GUARD SHALL BE PRESENT FOR THE FULL DURATION OF TIME THAT CHILDREN ARE LIKELY TO BE PRESENT.
5. IF THE IMPROVEMENTS NECESSITATE THE OBLITERATION, TEMPORARY OBSTRUCTION, TEMPORARY REMOVAL, OR RELOCATION OF ANY EXISTING TRAFFIC PAVEMENT MARKING, SUCH PAVEMENT MARKING SHALL BE RESTORED OR REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE CITY TRAFFIC ENGINEER.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL PERMANENT SIGNS SHOWN ON THE PLANS. ALL NEW TRAFFIC SIGNS SHALL BE FABRICATED WITH DAMKO GRAB-UP CLASS 6 REFLECTIVE SHEETING OR APPROVED EQUAL. ALL NEW TRAFFIC SIGNS, EXCEPT STREET NAME AND SCHOOL SPEED LIMIT SIGNS, SHALL HAVE 3M SERIES 1160 OR APPROVED EQUIVALENT ANTI-GRAFFITI PROTECTIVE OVERLAY FILM. SCHOOL ZONE SIGNS SHALL HAVE 3M SERIES 1150 ANTI-GRAFFITI PROTECTIVE OVERLAY FILM. STREET NAME SIGNS SHALL CONFORM IN THEIR ENTIRETY TO CURRENT CITY STANDARDS. ALL OTHER SIGNS SHALL BE STANDARD SIZE UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL SIGN POSTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT CITY STANDARDS.
7. WHEN A PROPOSED STREET LIGHT STANDARD IS LOCATED WITHIN FIVE (5') FEET OF ANY PROPOSED SIGN SHOWN ON THE PLANS TO BE MOUNTED ON A SIGNPOST, THE SIGN SHALL BE MOUNTED ON THE STREET LIGHT STANDARD AND THE SIGNPOST SHALL BE ELIMINATED.
8. ALL PERMANENT TRAFFIC CONTROL DEVICES CALLED FOR HEREON SHALL BE IN PLACE AND IN FINAL POSITION PRIOR TO ALLOWING ANY PUBLIC TRAFFIC ONTO THE PORTIONS OF THE ROAD(S) BEING IMPROVED HERE PRIOR, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.
9. STREET SIGNS AND STOP SIGNS SHALL BE INSTALLED PER CITY STANDARD SPECIFICATIONS FOR PLACEMENT OF STREET NAME SIGNS.
10. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL DEVICES AND FLAGGERS TO INSURE THE SAFETY OF THE PUBLIC IN OR AROUND THE WORK AREA. THE CONTRACTOR SHALL HAVE A CERTIFIED ATSSA TRAFFIC CONTROL TECHNICIAN OR INSA WORK ZONE SPECIALIST SET UP, MAINTAIN AND/OR REMOVE ALL TRAFFIC CONTROL DEVICES IN THE CITY OF LAS VEGAS RIGHT OF WAY.
11. WORK IN PUBLIC STREETS, OPEN REGUN, SHALL BE EXPEDITED TO COMPLETION SO AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING CITIZENS AREA TRANSIT (C.A.T.) IF THE CONSTRUCTION INTERRUPTS OR RELOCATES A BUS STOP OR HAS AN ADVERSE EFFECT ON BUS SERVICE ON THAT STREET TO ARRANGE FOR TEMPORARY RELOCATION OF STOP.
13. GUARDS SHALL BE OBTAINED BY CONTACTING THE METROPOLITAN POLICE DEPARTMENT SPECIAL ENFORCEMENT DIVISION # 828-4442 WHO WILL PROVIDE OFFICERS PROPERLY TRAINED IN TRAFFIC CONTROL. FEES FOR THE USE OF THESE OFFICERS SHALL BE SET BY METRO AND WILL BE PAID BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR ALL ARRANGEMENTS WITH METRO.
14. ANY WORK WITHIN 300' OF A SIGNALIZED INTERSECTION WILL BE NIGHT WORK, UNLESS OTHERWISE DIRECTED BY THE CITY OF LAS VEGAS TRAFFIC ENGINEER.
15. THE CONTRACTOR SHALL CONTACT THE TRAFFIC ENGINEERING DIVISION (TRANSPORTATION SECTION) THROUGH THE PROJECT'S OFFSITE INSPECTOR PRIOR TO INITIATING PAVING TO RECEIVE DIRECTION FOR ANY PERMANENT OR TEMPORARY MODIFICATIONS TO THE APPROVED DRAWINGS REGARDING FINAL PAVEMENT TRANSITIONS, MARKINGS AND SIGNING THAT ARE REQUIRED TO MATCH ADJACENT ROADWAY SEGMENTS. THE CONTRACTOR SHALL PROVIDE A DRAWING FOR APPROVAL BY THE TRAFFIC ENGINEERING DIVISION DETECTING ANY ADJUSTMENTS TO THE FINAL PAVEMENT MARKINGS AND SIGNAGE, WHICH MAY INCLUDE OMITTING, ADDING OR MODIFYING PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS SUCH THAT ADEQUATE TRANSITIONS AND LANE TERMINATIONS BETWEEN ADJACENT ROADWAY SEGMENTS ARE CONSTRUCTED.

2.4 CITY OF LAS VEGAS STREETLIGHT NOTES

1. ALL STREET LIGHTING INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE STREET LIGHTING PLANS, THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST REVISION (USS), AND THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA" (USD), LATEST REVISION.
2. DESIGN PROFESSIONAL AND CONTRACTOR SHALL VERIFY CITY'S LATEST LED FIXTURE SPECIFICATIONS AND APPROVED FIXTURES PER CLV WEBSITE, UNDER BUILDING AND SAFETY FORMS, PRIOR TO ORDERING MATERIALS.
3. NO DEVIATION OF STREET LIGHT, PULL BOX, CONDUITS ETC., LOCATIONS SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF TRAFFIC AND CITY ENGINEER. ANY DEVIATION FROM THE PLAN LOCATION WILL REQUIRE COMPLIANCE WITH SECTION 623 OF THE USS.
4. ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION IN ACCORDANCE WITH SECTION 623 G.03.01 OF THE USS.
5. ALL EMPTY CONDUIT SHALL HAVE AT LEAST ONE GREEN NO. #8 AWG WIRE INSTALLED AS TRACER WIRE IN ACCORDANCE WITH SECTION 623 G.02.01 OF THE USS PRIOR TO BACKFILLING AND FINAL INSPECTION.
6. ANY STRUCTURE SUCH AS BLOCK WALLS, CHAIN LINK FENCES, RETAINING WALLS, ETC. SHALL LEAVE A MINIMUM CLEARANCE IN ACCORDANCE WITH THE USD NO. 330A. WHEN POLE IS INSTALLED BEHIND SIDEWALK, AND SHALL AT NO TIME COMPLETELY ENCLOSE THE STREET LIGHTING POLE.
7. AS-BUILT DRAWINGS SHALL BE SUPPLIED TO THE TRAFFIC ENGINEERING DIVISION. PRIOR TO ANY PRE-FINAL INSPECTION, THE ASBUILT DRAWING NEEDS TO BE STAMPED AS-BUILT AND SIGNED BY THE PREPARER.
8. SERVICE POINT SHALL BE COORDINATED WITH HV ENERGY, AND WHEREVER POSSIBLE, BE LOCATED NEAR THE CENTER OF THE CIRCUIT. SERVICE POINTS SHALL BE SHOWN ON THE PLANS.
9. WHEREVER THERE IS AN OVERHEAD UTILITY THAT MAY CONFLICT WITH THE INSTALLATION OF STREET LIGHTING CIRCUITS AND/OR POLES, THESE CONFLICTS MUST BE RESOLVED BETWEEN THE DEVELOPER AND THE UTILITIES INVOLVED BEFORE STREETLIGHT BASES ARE INSTALLED. AT NO EXPENSE TO THE CITY OF LAS VEGAS.
10. THE CONTRACTOR SHALL FURNISH COMPLETE CONDUIT, WIRE, ETC. FROM SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON THE PLANS.

DEVIATIONS FROM STANDARDS

NONE

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. #####

FIRST APPROVED DATE:



ABBREVIATIONS

AC	ASPHALTIC CONCRETE OR ACRE	FL	FLOWLINE	PW	POINT OF VERTICAL INTERSECTION
AGG	AGGREGATE BASE	FT	FEET OR FOOT	QTY	QUANTITY
APN	ASSESSOR'S PARCEL NUMBER	FUT	FUTURE	R	RADIUS
APPROX OR ~	APPROXIMATE	GRO	GRADE OR GROUND	RCA	REINFORCED CONCRETE ARCH
AVE	AVENUE	GR	GRADE BREAK OR GRADE CHANGE	RCP	REINFORCED CONCRETE CUP
Ø	AT	GV	GATE VALVE	RCR	REINFORCED CONCRETE PIPE
BC	BEGIN CURVE OR BACK OF CURB	HDP	HIGH DENSITY POLYETHYLENE	ROWY ESMI	ROADWAY EASEMENT
BCR	BEGINNING OF CURB RETURN	HOA	HOME OWNERS ASSOCIATION	REQUIRED	REQUIRED
BWH	BOTTOM OF HEADWALL	HGRZ	HIGH POINT	REV	REVISION
BLOG	BUILDING	HP	HIGH POINT	RG	ROUGH GRADE
BLVD	BOULEVARD	HWL	HIGH WATER LEVEL	RT OR R	
BMO	BENCHMARK	HDWL OR HW	HEADWALL	R/W, ROW	
BT	BEHIND THE CURVE	HYD	HYDRAULIC OR HYDRANT	S	SLOPE
BWV	BACK WATER VALVE	ID	INSIDE DIAMETER	SCH	SCHEDULE
CC	CLARK COUNTY	IN	INCH	SD	STORM DRAIN
CCAUSD	CLARK COUNTY AREA UNIFORM STANDARD DRAWINGS	INT	INTERSECTION	SDH	STORM DRAIN DROP INLET
CCPH	CLARK COUNTY PUBLIC WORKS	INV	INVERT ELEVATION	SDMH	STORM DRAIN MANHOLE
CORFCD	CLARK COUNTY REGIONAL FLOOD DISTRICT	IRN	IRON PIPE	SEC	SECTION
CCWRD	CLARK COUNTY WATER RECLAMATION DISTRICT	IRRG	IRRIGATION	SF	SQUARE FEET
CE	COMMON ELEMENT	IR	LINEAR FEET	SH	SHEET
CL/C/LC	CONVERTED	L	LANDSCAPE MAINTENANCE CORPORATION	SLT	STREET LIGHT & TRAFFIC CONTROL ESMI
CLR	CLEAR OR CLEARANCE	LP	LOW POINT	SNLC	SOUTHERN NEVADA WATER AUTHORITY
CLSM	CONTROLLED LOW STRENGTH MATERIAL	LT OR L	LEFT	SPCS	SPECIFICATIONS
CLV	CITY OF LAS VEGAS	LWMD	LAS VEGAS VALLEY WATER DISTRICT	ST	STREET
CMLC	CITY OF LAS VEGAS CITY AND COATED	LWMD	LOW WATER LEVEL	SSMS	SANITARY SEWER MANHOLE
CNU	CONCRETE MASONRY UNIT	MAX	MAXIMUM	STA	STATION
CNVLY	CITY OF NORTHERN LAS VEGAS	MECH	MECHANICAL	STD	STANDARD
COH	CITY OF HENDERSON	MH	MANHOLE	STL	STEEL
CONC	CONCRETE	MN	MINIMUM	STL	STEEL LIGHT
COURT	COURT	MISC	MISCELLANEOUS	SW	SIDEWALK
CY OR CU YD	CUBIC YARD	MUE	MUNICIPAL UTILITY EASEMENT	SWG	SOUTHWEST GAS
DCWCS	DESIGN AND CONSTRUCTION FOR WASTEWATER	NDOT	NEVADA DEPARTMENT OF TRANSPORTATION	SWR OR SS	SANITARY SEWER
	DETAIL	NS	NOT SCALE	SWY	SQUARE YARD
DET	DETAIL	NU	NONEXCLUSIVE UTILITY EASEMENT	TN	TANGENT
DI	DUCTILE IRON OR DRAIN INLET	NV	NV ENERGY	TC	TOP OF CURB
DI Ø	DIAMETER	ON	ON CENTER	TD	TOP OF FLOOR OR TOP OF FOOTING
DIP	DUCTILE IRON PIPE	OD	OUTSIDE DIAMETER OR OVERALL DIMENSION	TE	TOP OF GRADE
DR	DRIVE	OFF	OFFSET	THU	THROUGH
DWG(S)	DRAWING	ORIG	ORIGINAL	TOP	TOP OF HEADWALL
DWR	DRIVEWAY	PAC	PUBLIC OR PEDESTRIAN ACCESS EASEMENT	TP	TOP OF PIPE
E	EACH	PB	PULL BOX	TW	TOP OF WALL
END	END CURB RETURN	PC	POINT OF COMPOUND CURVE	TRW	TOP OF RETAINING WALL
EG	EXISTING GROUND	PCC	PUBLIC DRAINAGE EASEMENT	TS	TOP OF SCREEN WALL
ELEV	ELEVATION	PDE	PROPERTY LINE	TY	TYPICAL
ESMT	EASEMENT	P	POINT OF BEGINNING	UDACS	UNIFORM DESIGN AND CONSTRUCTION
ERU	EDGE OF PAVEMENT	POB	POINT OF BEGINNING	STANDARDS	
EQU	EQUIVALENT RESIDENTIAL UNIT	POC	POINT OF CURVATURE	VERTICAL	VERTICAL CURVE
EVC	END VERTICAL CURVE	POE	POINT OF ENDING	VERT	VERTICAL
EX OR EXIST	EXIST	PRC	POINT OF REVERSE CURVATURE	VG	VALLEY GUTTER
FC	FACE OF CURB	PRELIM	PRELIMINARY	W	WROUGHT IRON
FF	FINISHED FLOOR	PROP	PROPOSED	WAL	WATER LINE
FG	FINISHED GRADE	PRV	PRESSURE REDUCING VALVE	WPZ	WATER PRESSURE ZONE
FGL	FINISHED GRADE, HIGH SIDE	PUE	PUBLIC UTILITY EASEMENT	WT	WEIGHT
FQ	FINISHED GRADE, LOW SIDE	PVC	POINT OF TANGENT OR POINT	WTR	WATER LINE
FL	FIRE HYDRANT	PT	POLYVINYL CHLORIDE		

SPECIAL NOTE

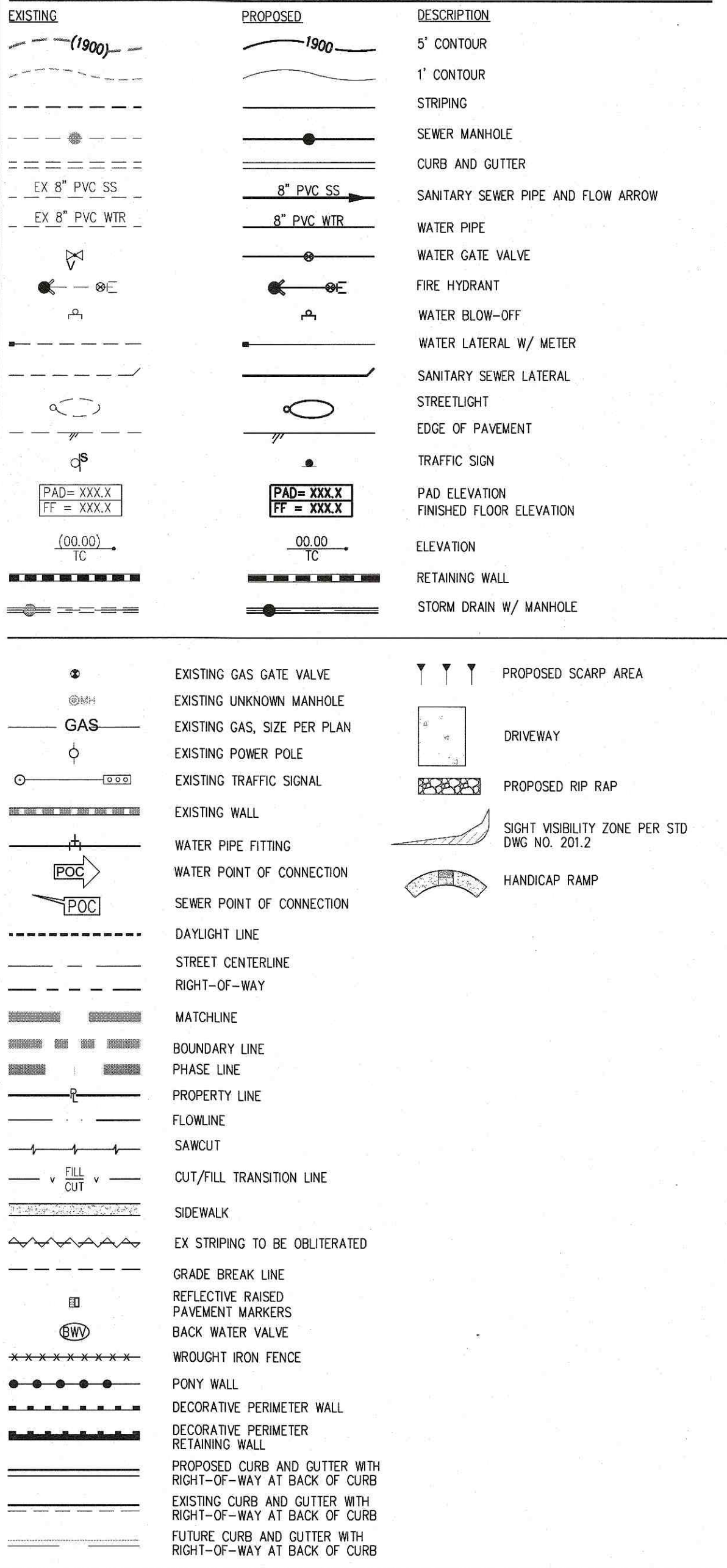
IN THE EVENT THAT ANY TEMPORARY CONSTRUCTION ITEM IS REQUIRED WHICH IS NOT SHOWN ON THESE DRAWINGS, THE OWNER AGREES TO PROVIDE AND INSTALL SUCH ITEM AT HIS OWN EXPENSE AND AT THE DIRECTION OF THE CITY OF LAS VEGAS DEPT. OF PUBLIC WORKS. TEMPORARY CONSTRUCTION ITEMS INCLUDE: PAVEMENT TRANSITIONS, PROTECTIVE 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



QUANTITIES

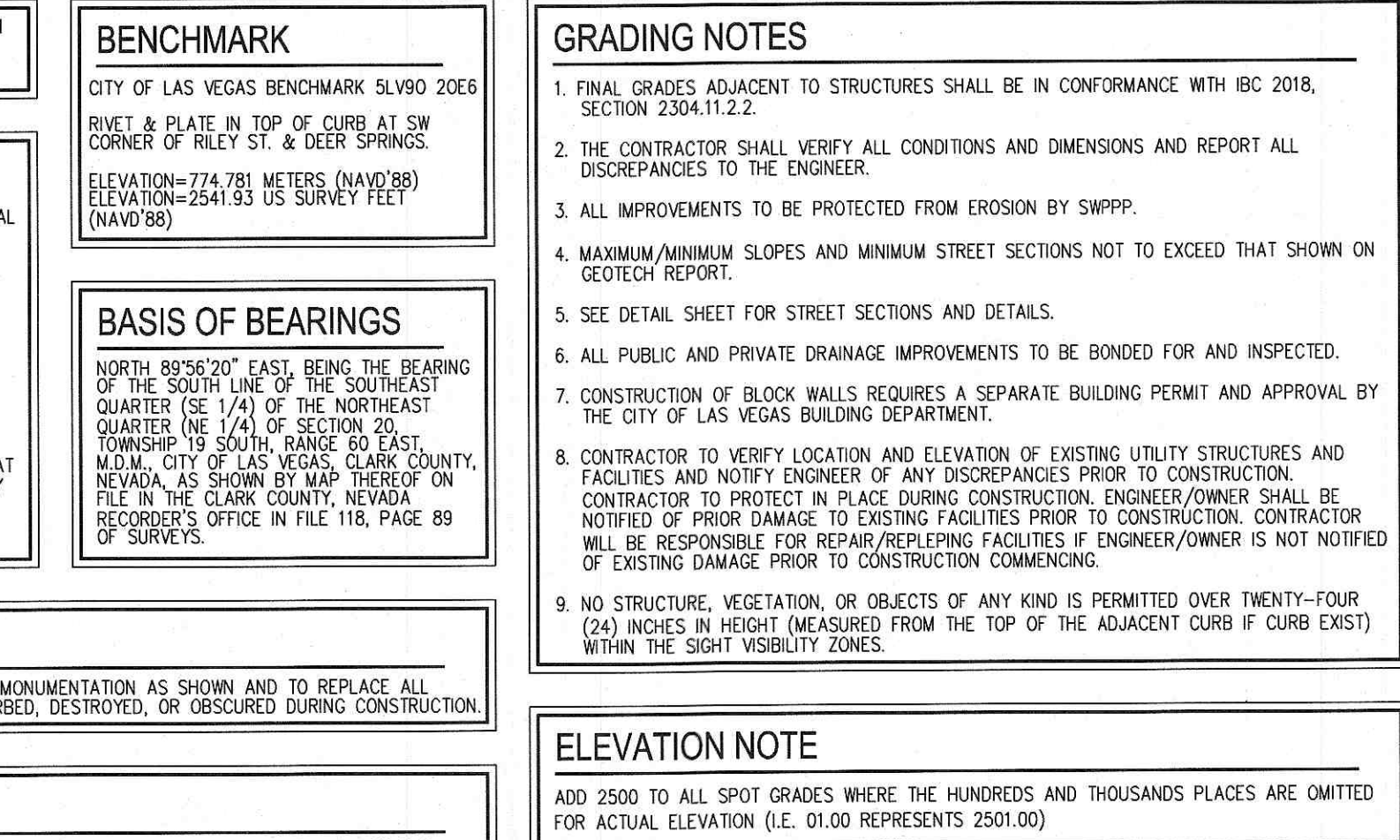
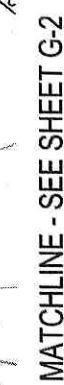
DRAINAGE				
1.	48" TYPE III STORM DRAIN MANHOLE	EA	-	2
2.	5.0" TYPE "CM2" DROP INLET	EA	-	-
3.	10.0" TYPE "CM2" DROP INLET	EA	-	-
4.	12.5" TYPE "CM2" DROP INLET	EA	-	1
5.	20.0" TYPE "CM2" DROP INLET	EA	-	-
6.	18" RCP CLASS IV STORM DRAIN	LF	-	-
7.	24" RCP CLASS IV STORM DRAIN	LF	-	-
8.	30" RCP CLASS IV STORM DRAIN	LF	-	-
9.	36" RCP CLASS IV STORM DRAIN	LF	-	737
10.	RIPRAP D50=12", THK=24"	SF	1,500	-
11.	8" WIDE CONCRETE VALLEY GUTTER W/10" TYPE I AGGREGATE BASE	SF	6,415	-
12.	SIDEWALK UNDER DRAIN	SF	-	-
13.	36" FLARED END SECTION PER NDOT R-2.3.1	SF	-	1
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	EA	-	-
6.	8" C-900 WATER QUALITY SEWER PIPE (PUBLIC)	EA	-	-
7.				
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" 5 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.	8" 90 DEGREE BEND PER UDACS PLATE NO. 31	EA	-	-
13.	CAP AND 2" BLOW-OFF ASSEMBLY W/CAP PER UDACS PLATE NO. 36	EA	-	-
14.	1" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 2	EA	-	-
15.	1" COPPER SERVICE W/ 1" METER PER UDACS PLATE NO. 4	EA	-	-
16.	1" COPPER SERVICE W/ 3/4" METER & 1" RPPA PER UDACS PLATE NO. 4 & 8	EA	-	-
17.	8" x 6" REDUCER PER UDACS PLATE NO. 30	EA	-	-
18.	8" 22.5 DEGREE BEND PER UDACS PLATE NO. 31	EA	-	-
19.	8" 45 DEGREE BEND PER UDACS PLATE NO. 31	EA	-	-
STREET IMPROVEMENTS				
1.	2" A.C. PAVEMENT	SY	9,426	-
2.	3" A.C. PAVEMENT	SY	8,097	-
3.	TYPE II AGGREGATE BASE	CY	1,947	-
4.	STANDARD 24" TYPE 1" CURB & GUTTER W/6" TYPE I AGGREGATE BASE	LF	3,547	-
5.	STANDARD 8" TYPE "A" ISLAND CURB W/6" TYPE I AGGREGATE BASE	LF	115	-
6.	STANDARD 24" TYPE "B" CURB & GUTTER W/6" TYPE I AGGREGATE BASE	LF	4,668	-
7.	5" WIDE CONCRETE SIDEWALK W/4" TYPE II AGGREGATE BASE	SF	26,348	2,039
8.	RESIDENTIAL DRIVEWAY	SF	35,288	-
9.				-
TRAFFIC SIGNALS				
1.	30" STOP SIGN WITH POST (R1-1)	EA	-	-
2.	9" STREET NAME SIGN (0-3, BROWN W/ WHITE LETTERS)(6 POLES x 2 PER POLE=12)	EA	-	-
3.	BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKER	EA	-	-
4.	CROSSWALK MARKINGS	LF	-	-
5.				
6.				
7.				
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 (RRR)	EA	-	-
5.	200 AMP SERVICE PEDESTAL (STL1)	EA	-	-
6.				

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. ##### FIRST APPROVED DATE





NORTH 89°56'20" EAST, BEING THE BEARING OF THE SOUTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 20, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE IN FILE 118, PAGE 89 OF SURVEYS.

1. FINAL GRASSES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH BIC 2018, SECTION 2304.411.2.2.
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 FOR EROSION CONTROL.
8. THE CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES. THE CITY WILL 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/REPLACEMENT OF EXISTING FACILITIES. 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 EXISTS) WITHIN THE SIGHT VISIBILITY ZONES.

ADD 2500 TO ALL SPOT GRADES WHERE THE HUNDREDS AND THOUSANDS PLACES ARE OMITTED
FOR ACTUAL ELEVATION (I.E. 01.00 REPRESENTS 2501.00)

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

(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 ALONG 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 BY THE OWNER AND HIS OR HER AGENTS IN ORDER TO PREVENT EROSION PROBLEMS OR IF THE SUBMITTER 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 NVR1000000, SECTION II.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 REPORT TO THE OWNER OR MODIFY THE CONSTRUCTION STABILIZATION 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 NVR1000000, SECTION II.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 THE EARLIEST. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

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.

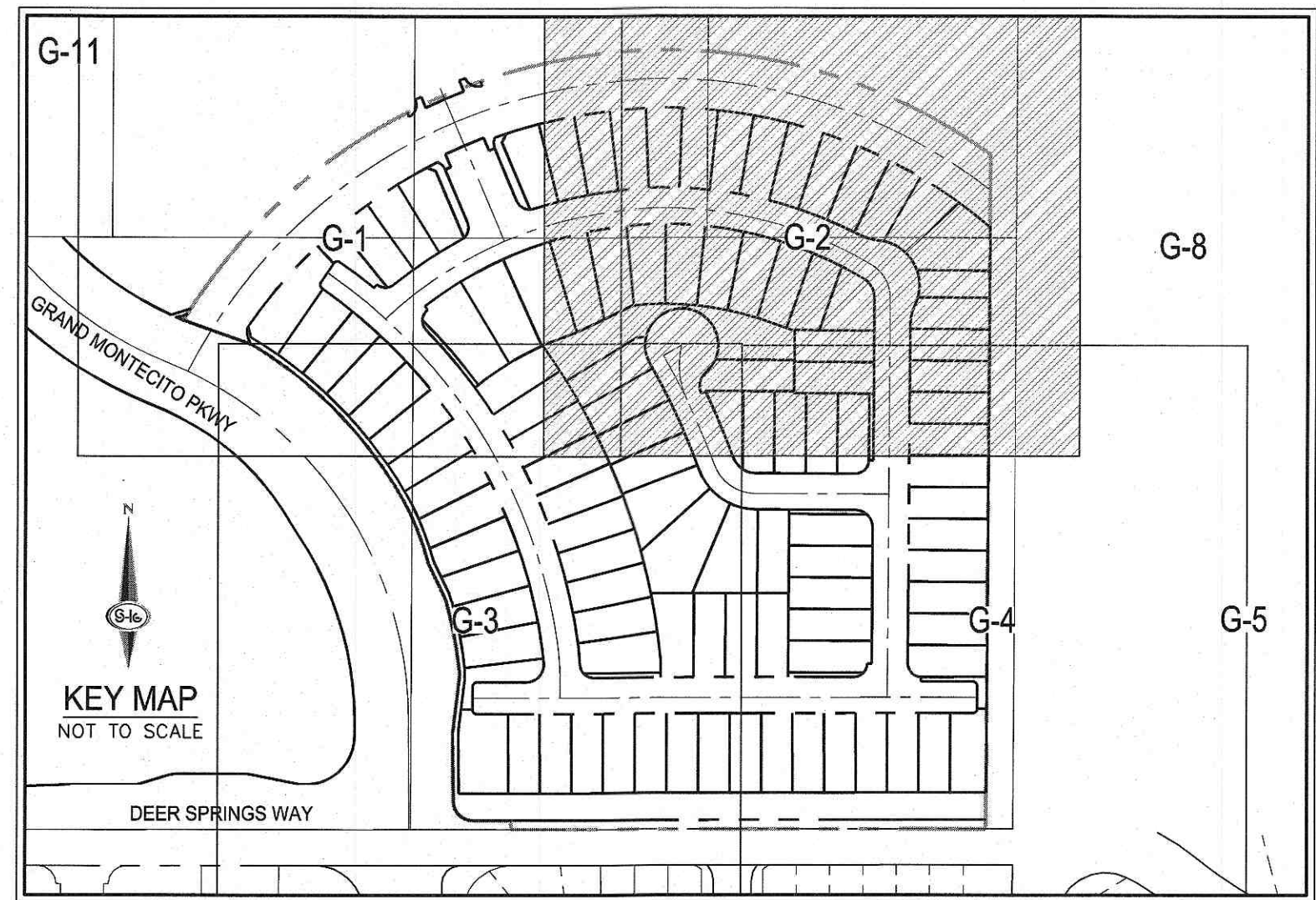
I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY DS-5114 ON FILE AT CITY OF LAS VEGAS FOR THE SUBJECT PROJECT.

TIMOTHY M. MULROONEY, P.E. 22938

5/30/19
DATE

FOR CONTINUATION - SEE SHEET G-10

FOR CONTINUATION - SEE SHEET G-9



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

SOILS REPORT
SOILS REPORT BY SOUTHWEST GEOTECHNICAL PROJECT NO. 182358 DATED 10/17/18

EARTHWORKS
EARTHWORK QUANTITIES (RAW):
CUT=#### CU YDS
FILL=#### 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.

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

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 3" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
- 3) INSTALL L TYPE CURB PER CCAUSD NO. 216
- 4) INSTALL R-TYPE CURB & GUTTER PER CCAUSD NO. 217.3.1
- 5) INSTALL A TYPE CURB PER CCAUSD NO. 219
- 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 SIDEWALK RAMP PER CCAUSD NO. 235, CASE II AND CCAUSD NO. 235.1
- 9) EXISTING IMPROVEMENTS TO BE REMOVED
- 10) EXISTING VALLEY GUTTER TO BE REMOVED
- 11) REMOVE EXISTING 36" SD FROM PROPOSED MANHOLE
- 12) INSTALL 12.5" DROP INLET PER STRUCTURAL PLANS BY OTHERS
- 13) INSTALL 48" TYPE III STORM DRAIN MANHOLE PER CCAUSD NO. 406
- 14) INSTALL 36" FLARED END SECTION
- 15) INSTALL 60"x25" RIPRAP PAD, D50=12", THICKNESS=24"
- 16) INSTALL SPILL CURB PER DETAIL ON SHEET D-2
- 17) INSTALL 5"x25" BUS SHELTER PAD PER CCAUSD NO. 234.1, 234.2, & 234.5
- 18) INSTALL 8" VALLEY GUTTER PER CCAUSD NO. 228
- 19) INSTALL WROUGHT IRON FENCE & 12" WIDE MAINTENANCE ACCESS GATE
- 20) INSTALL 5" CURB TRANSITION PER DETAIL ON SHEET D-2

DRAINAGE QUANTITIES

	PRIV.	PUBLIC
1. 48" TYPE III STORM DRAIN MANHOLE	EA	2
2. 12.5" STRUCTURAL DROP INLET	EA	1
3. 36" RCP CLASS IV STORM DRAIN	LF	737
4. RIPRAP D50=12", THK=24"	SF	1500
5. 36" FLARED END SECTION PER NDOT R-2.3.1	LF	1
6. 8" WIDE CONCRETE VALLEY GUTTER W/10" TYPE I AGGREGATE BASE	SF	6,415
7.		



BENCHMARK

CITY OF LAS VEGAS BENCHMARK 5190 2066
RIVET & PLATE IN TOP OF CURB AT SW CORNER OF RILEY ST. & DEER SPRINGS.
ELEVATION=774.781 METERS (NAVD83)
ELEVATION=2541.93 US SURVEY FEET (NAVD83)

BASIS OF BEARINGS

NORTH 89°56'20" EAST, BEING THE BEARING OF THE SOUTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF THE NORTHEAST TOWNSHIP 19 SOUTH, RANGE 30 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREON, ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE IN FILE 118, PAGE 89 OF SURVEYS.

GRADING NOTES

1. FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2018, 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/REPLETING 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.

ELEVATION NOTE

ADD 2500 TO ALL SPOT GRADES WHERE THE HUNDREDS AND THOUSANDS PLACES ARE OMITTED FOR ACTUAL ELEVATION (I.E. 01.00 REPRESENTS 2501.00)

DRAINAGE EASEMENT NOTE

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

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 NVRI00000, 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 NVRI00000, 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 3200301750E, DATED SEPTEMBER 27, 2002. A ZONE X (UNSHADED) IS DESCRIBED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.

FLOOD CERTIFICATION

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY DS-5114 ON FILE AT CITY OF LAS VEGAS FOR THE SUBJECT PROJECT.

TIMOTHY M. MULROONEY, P.E. 22938

DATE

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

DATE	BY	APP.

DESCRIPTION	NO.

CITY OF LAS VEGAS, NV

KB HOME
MONTECITO 60 - UNIT 1
GRADING PLAN II

DATE: 5/30/19

DRAFTER: BCS

DESIGNER: HN

CHECKED: MAK

PROJECT NO.

KBH1805-001

ENGINEER

TIMOTHY M. MULROONEY

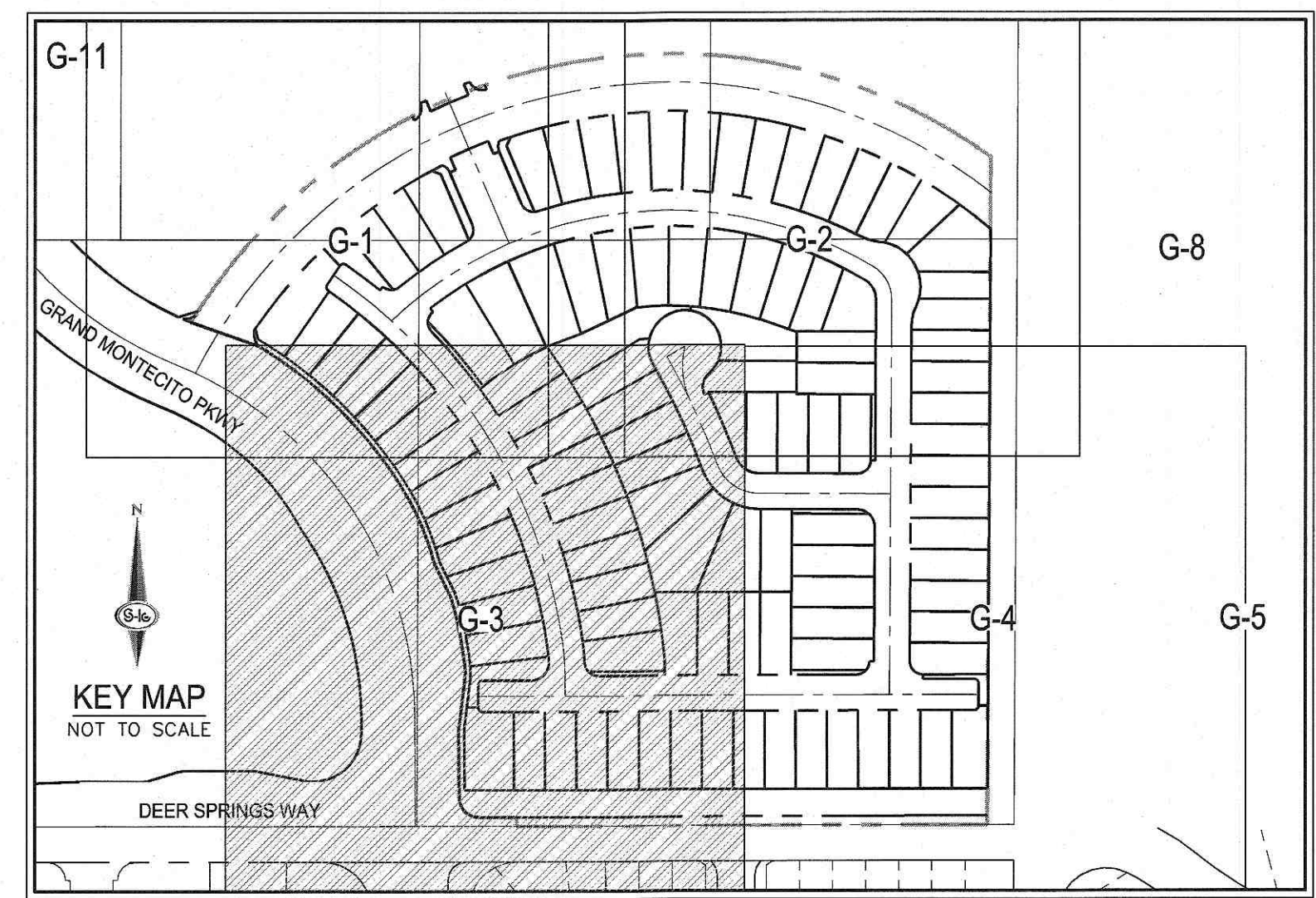
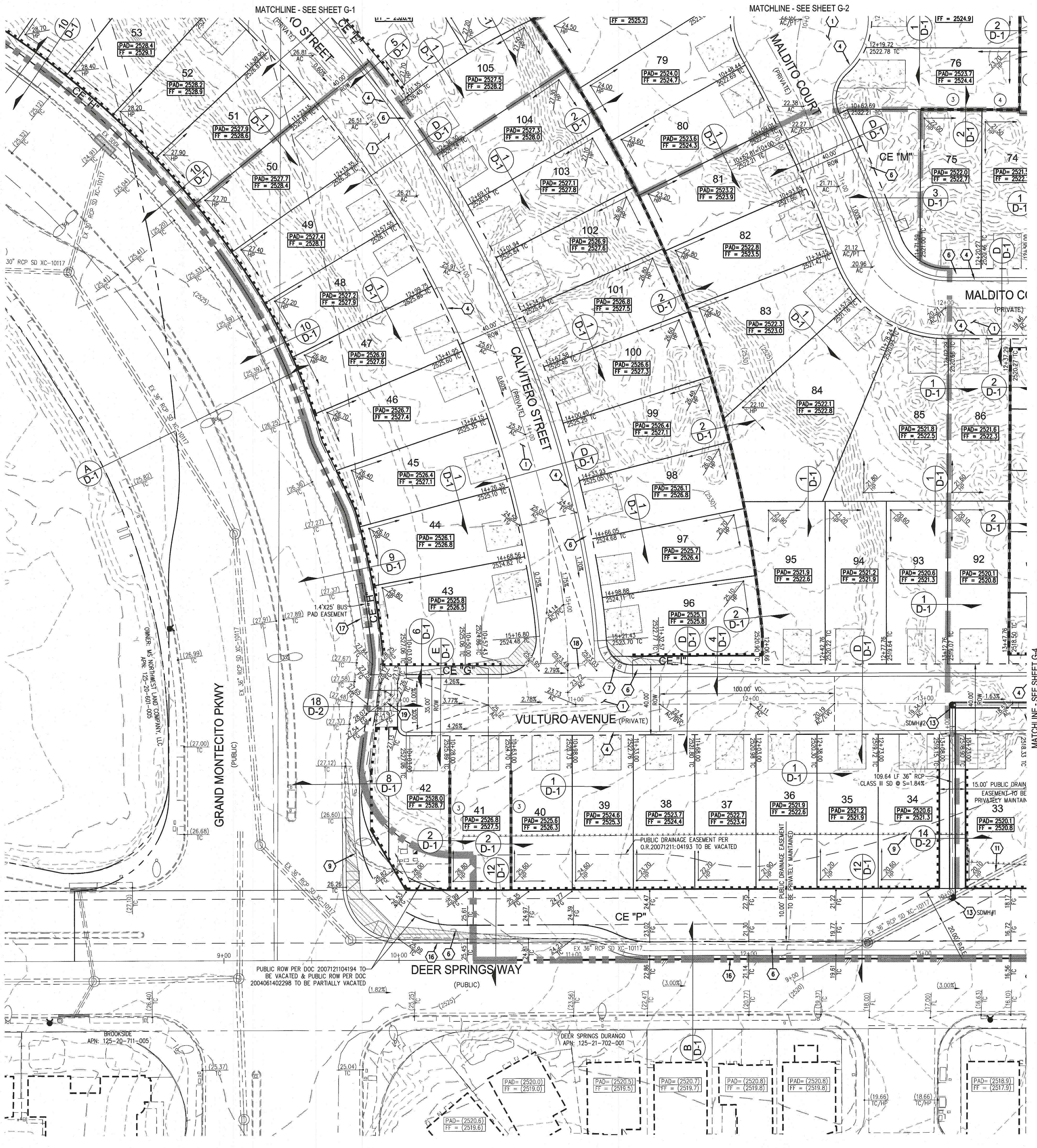
Exp. 12/31/2019

CIVIL

6/30/19

G-2

SHEET 5 OF 18



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

SOILS REPORT
SOILS REPORT BY SOUTHWEST GEOTECHNICAL PROJECT NO. 182358 DATED 10/17/18

EARTHWORKS
EARTHWORK QUANTITIES (RAW): CUT=#### CY VDS FILL=#### CY VDS
EXPORTED MATERIAL TO BE DISPOSED OF AT AN APPROVED LICENSED DISPOSAL FACILITY OR AT A SITE WITH AN APPROVED AND ACTIVE GRADING PERMIT.

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

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 3" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
3) INSTALL L TYPE CURB PER CCAUSD NO. 216
4) INSTALL R-TYPE CURB & GUTTER PER CCAUSD NO. 217.3.51
5) INSTALL A TYPE CURB PER CCAUSD NO. 219
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 SIDEWALK RAMP PER CCAUSD NO. 235, CASE II AND CCAUSD NO. 235.1
9) EXISTING IMPROVEMENTS TO BE REMOVED
10) EXISTING VALLEY GUTTER TO BE REMOVED
11) REMOVE EXISTING 36" SD FROM PROPOSED MANHOLE
12) INSTALL 12.5" DROP INLET PER STRUCTURAL PLANS BY OTHERS
13) INSTALL 48" TYPE III STORM DRAIN MANHOLE PER CCAUSD NO. 406
14) INSTALL 36" FLARED END SECTION
15) INSTALL 60"x25" RIPRAP PAD, D50=12", THICKNESS=24"
16) INSTALL SPILL CURB PER DETAIL ON SHEET D-2
17) INSTALL 5'x25" BUS SHELTER PAD PER CCAUSD NO. 234.1, 234.2, & 234.5
18) INSTALL 8" VALLEY GUTTER PER CCAUSD NO. 228
19) INSTALL WROUGHT IRON FENCE & 12" WIDE MAINTENANCE ACCESS GATE
20) INSTALL 5" CURB TRANSITION PER DETAIL ON SHEET D-2

GRADING NOTES
1. FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2018, 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/REPLENISHING 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.

ELEVATION NOTE
ADD 2500 TO ALL SPOT GRADES WHERE THE HUNDREDS AND THOUSANDS PLACES ARE OMITTED FOR ACTUAL ELEVATION (I.E. 01.00 REPRESENTS 2501.00)

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

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.

FLOOD CERTIFICATION
I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY DS-5114 ON FILE AT CITY OF LAS VEGAS FOR THE SUBJECT PROJECT.
TIMOTHY M. MULROONEY, P.E. 22938 DATE

DRAINAGE QUANTITIES

	PRIV.	PUBLIC
1. 48" TYPE III STORM DRAIN MANHOLE	EA	2
2. 12.5" STRUCTURAL DROP INLET	EA	1
3. 36" RCP CLASS IV STORM DRAIN	LF	737
4. RIPRAP D50=12", THK=24"	SF	1500
5. 36" FLARED END SECTION PER NDOT R-2.3.1	LF	1
6. 8" WIDE CONCRETE VALLEY GUTTER W/10" TYPE I AGGREGATE BASE	SF	6,415
7.		

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

FAST
Call before you dig
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
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

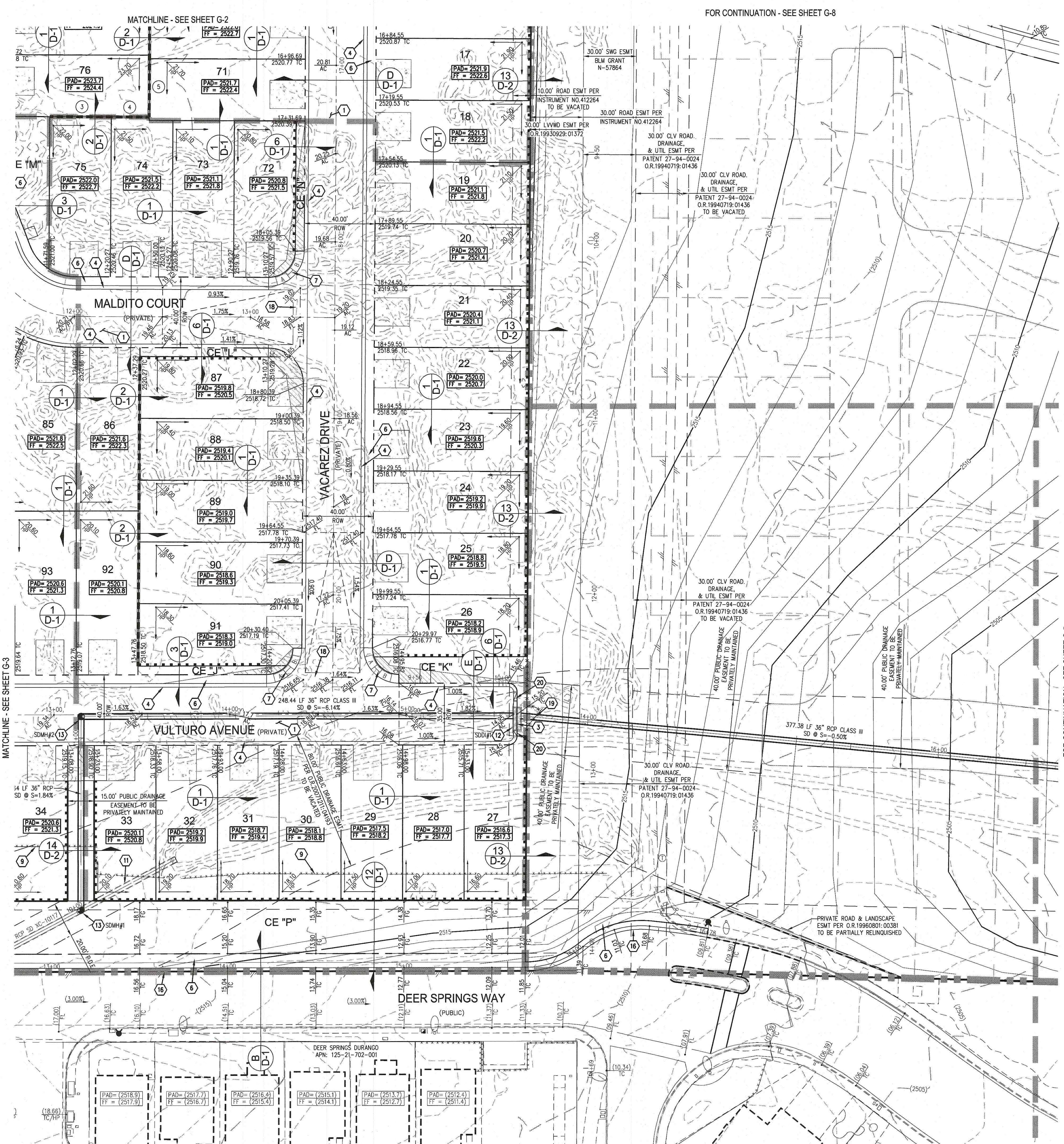
KB HOME
MONTECITO 60 - UNIT 1
GRADING PLAN III

PROFESSIONAL ENGINEER
TIMOTHY M. MULROONEY
Exp. 12/31/2019
No. 22938
5/30/19

G-3
SHEET 6 OF 18

DATE: 5/30/19
DRAFTER: BCS
DESIGNER: HN
CHECKED: MAK
PROJECT NO. KBH1805-001

\\nbs1805-001_montecito60_unit1.dgn 5/30/2019 11:10:11 AM Brian Samuels

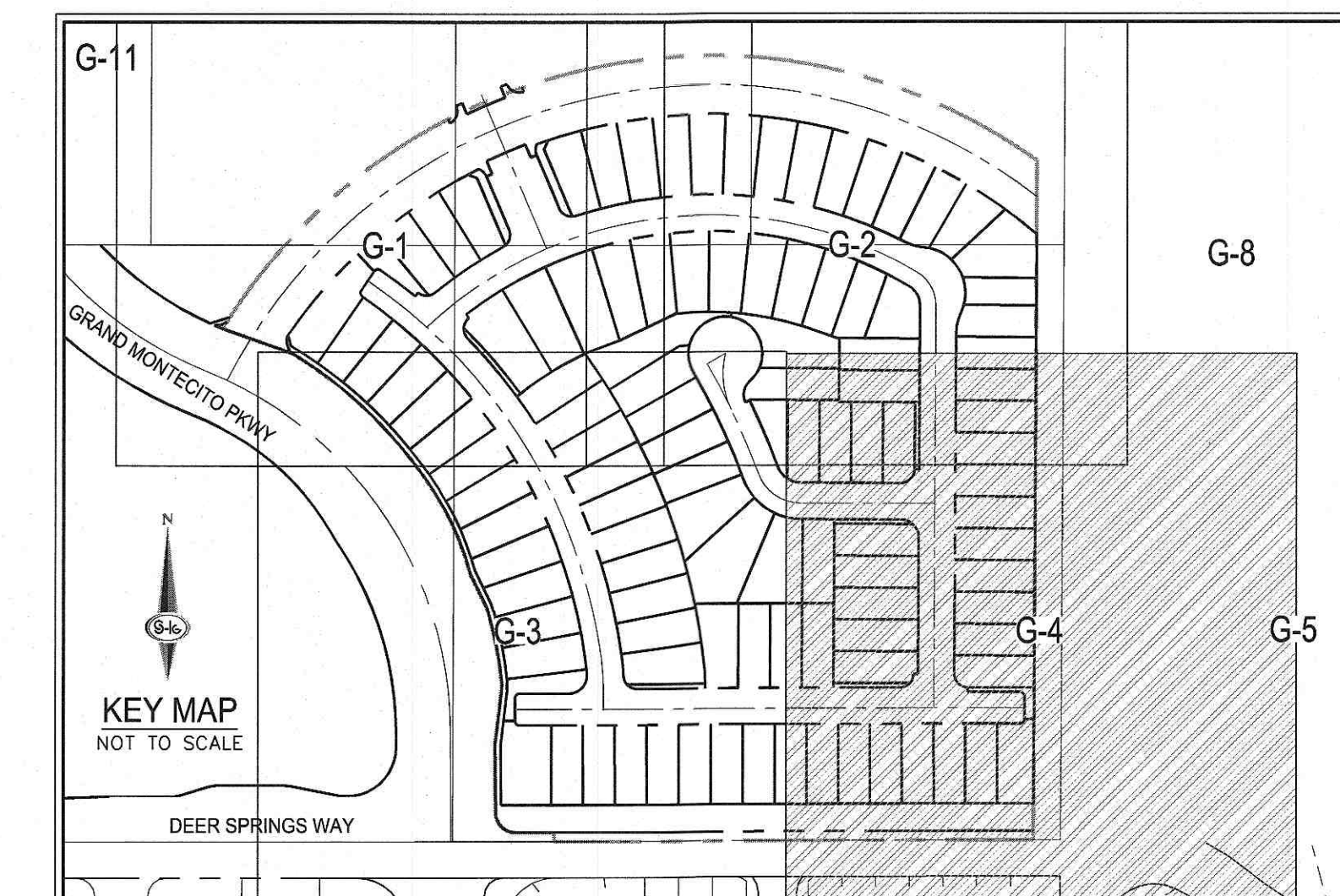


MATCHLINE - SEE SHEET G-3

MATCHLINE - SEE SHEET G-2

FOR CONTINUATION - SEE SHEET G-8

FOR CONTINUATION - SEE SHEET G-5



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

SOILS REPORT
SOILS REPORT BY SOUTHWEST GEOTECHNICAL PROJECT NO. 182358 DATED 10/17/18

EARTHWORKS
EARTHWORK QUANTITIES (RAW): CUT=#### CU YDS FILL=#### 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
CITY OF LAS VEGAS BENCHMARK SLV90 2066 RIVET & PLATE IN TOP OF CURB AT SW CORNER OF RILEY ST. & DEER SPRINGS. ELEVATION=774.781 METERS (NAVD88) ELEVATION=2541.93 US SURVEY FEET (NAVD88)

BASIS OF BEARINGS
NORTH 89°56'20" EAST, BEING THE BEARING OF THE SOUTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 20, TOWNSHIP 10 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE IN FILE 118, PAGE 89 OF SURVEY.

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

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 3" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
 - 3) INSTALL L TYPE CURB PER CCAUSD NO. 216
 - 4) INSTALL R-TYPE CURB & GUTTER PER CCAUSD NO. 217.3.1
 - 5) INSTALL A TYPE CURB PER CCAUSD NO. 219
 - 6) INSTALL 5" SIDEWALK PER CCAUSD NO. 234
 - 7) INSTALL SIDEWALK RAMP PER CCAUSD NO. 235, CASE I AND CCAUSD NO. 235.1
 - 8) INSTALL SIDEWALK RAMP PER CCAUSD NO. 235, CASE II AND CCAUSD NO. 235.1
 - 9) EXISTING IMPROVEMENTS TO BE REMOVED
 - 10) EXISTING VALLEY GUTTER TO BE REMOVED
 - 11) REMOVE EXISTING 36" SD FROM PROPOSED MANHOLE
 - 12) INSTALL 12.5" DROP INLET PER STRUCTURAL PLANS BY OTHERS
 - 13) INSTALL 48" TYPE III STORM DRAIN MANHOLE PER CCAUSD NO. 406
 - 14) INSTALL 36" FLARED END SECTION
 - 15) INSTALL 60"x25" RIPRAP PAD, D50=12", THICKNESS=24"
 - 16) INSTALL SPILL CURB PER DETAIL ON SHEET D-2
 - 17) INSTALL 5'x25" BUS SHELTER PAD PER CCAUSD NO. 234.1, 234.2, & 234.5
 - 18) INSTALL 8" VALLEY GUTTER PER CCAUSD NO. 228
 - 19) INSTALL WROUGHT IRON FENCE & 12" WIDE MAINTENANCE ACCESS GATE
 - 20) INSTALL 5' CURB TRANSITION PER DETAIL ON SHEET D-2

DRAINAGE QUANTITIES		PRIV.	PUBLIC
1. 48" TYPE III STORM DRAIN MANHOLE	EA	-	2
2. 12.5" STRUCTURAL DROP INLET	EA	-	1
3. 36" RCP CLASS IV STORM DRAIN	LF	-	737
4. RIPRAP D50=12", THK=24"	SF	1500	-
5. 36" FLARED END SECTION PER NDOT R-2.3.1	LF	-	1
6. 8' WIDE CONCRETE VALLEY GUTTER W/10" TYPE I AGGREGATE BASE	SF	6,415	-
7.			

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.

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

1-702-227-2929

Call before you Dig
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.

811
Call
1-800-227-2600

- GRADING NOTES**
1. FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2018, 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/REPLENISHING 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.

ELEVATION NOTE
ADD 2500 TO ALL SPOT GRADES WHERE THE HUNDREDS AND THOUSANDS PLACES ARE OMITTED FOR ACTUAL ELEVATION (I.E. 01.00 REPRESENTS 2501.00)

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

- 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 NVRI00000, 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 NVRI00000, 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 52003C1750C, DATED SEPTEMBER 27, 2002. A ZONE X (UNSHADED) IS DESCRIBED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.

FLOOD CERTIFICATION
I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY DS-5114 ON FILE AT CITY OF LAS VEGAS FOR THE SUBJECT PROJECT.

TIMOTHY M. MULROONEY, P.E. 22938 DATE

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

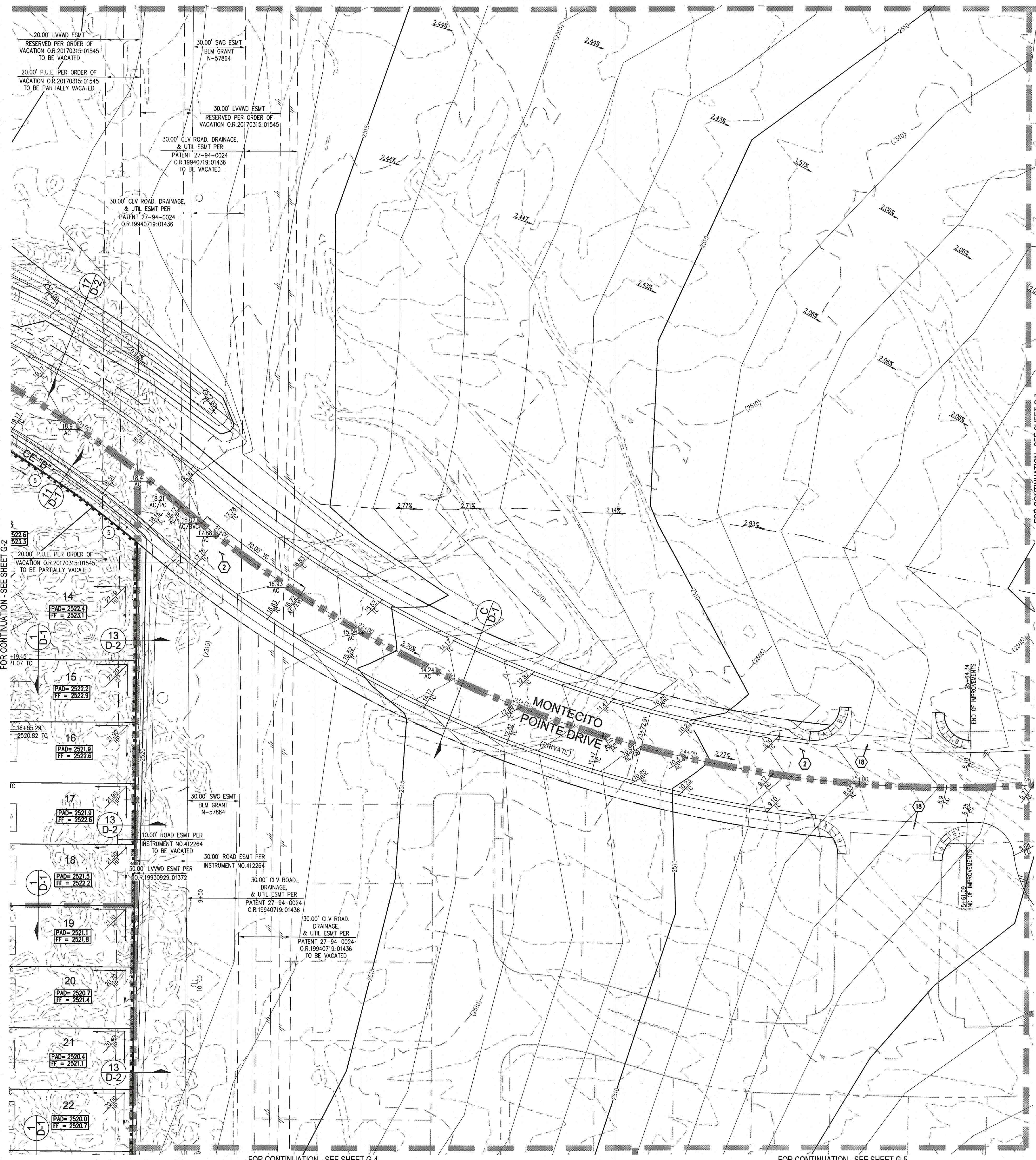
KB HOME
MONTECITO 60 - UNIT 1
GRADING PLAN IV

DATE: 5/30/19
DRAFTER: BCS
DESIGNER: HN
CHECKED: MAK
PROJECT NO. KBH1805-001

ENGINEER
TIMOTHY M. MULROONEY
Exp. 12/31/2019
CIVIL
No. 22938
5/30/19

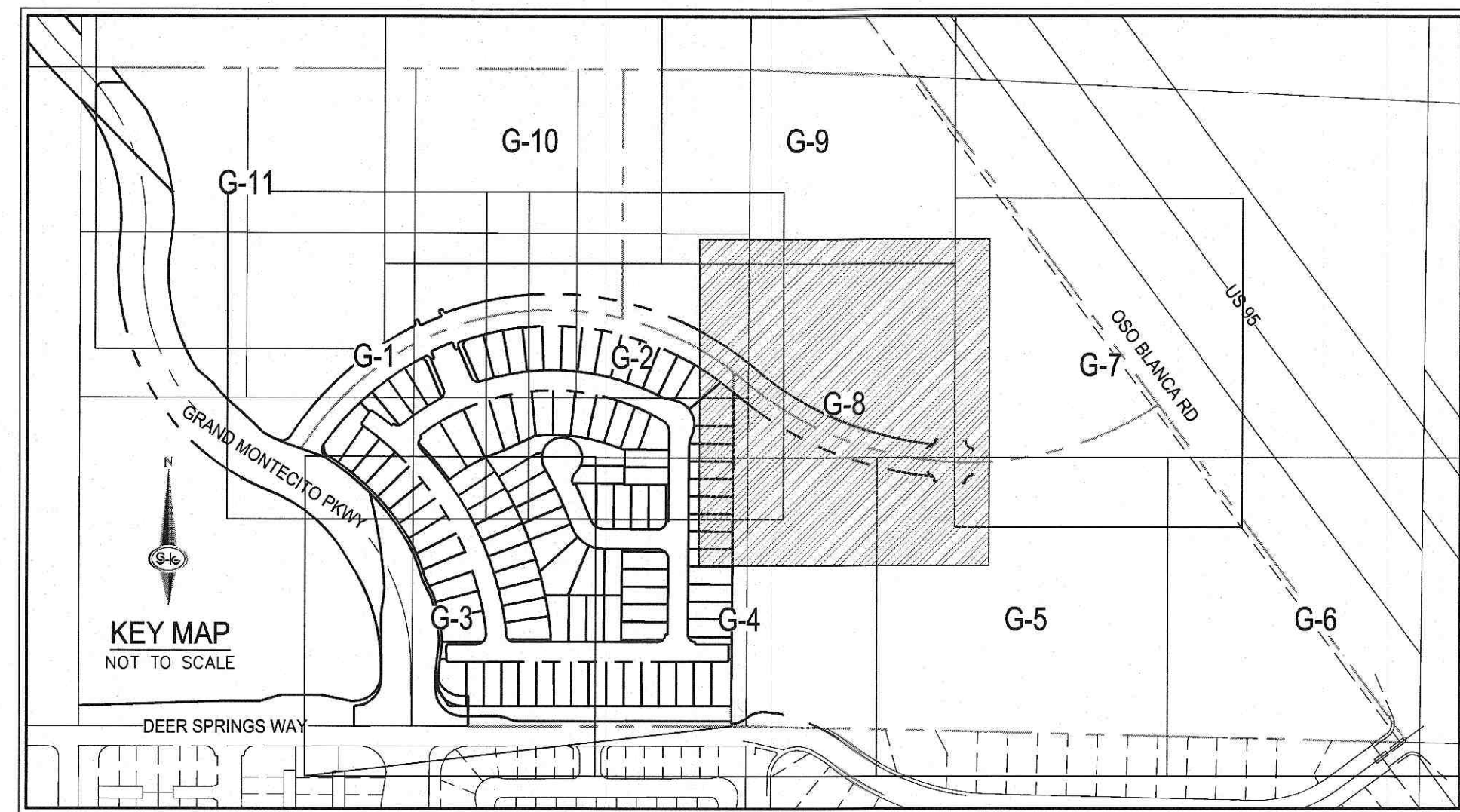
G-4
SHEET 7 OF 18

FOR CONTINUATION - SEE SHEET G-9



FOR CONTINUATION - SEE SHEET G-4

FOR CONTINUATION - SEE SHEET G-5



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

SOILS REPORT
SOILS REPORT BY SOUTHWEST GEOTECHNICAL PROJECT NO. 182358 DATED 10/17/18

EARTHWORKS
EARTHWORK QUANTITIES (RAW): CUT=#### CU YDS FILL=#### 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.

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

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 PAYMENT 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 3" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
- 3) INSTALL L TYPE CURB PER CCAUSD NO. 216
- 4) INSTALL R-TYPE CURB & GUTTER PER CCAUSD NO. 217.3.51
- 5) INSTALL A TYPE CURB PER CCAUSD NO. 219
- 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 SIDEWALK RAMP PER CCAUSD NO. 235, CASE II AND CCAUSD NO. 235.1
- 9) EXISTING IMPROVEMENTS TO BE REMOVED
- 10) EXISTING VALLEY GUTTER TO BE REMOVED
- 11) REMOVE EXISTING 36" SD FROM PROPOSED MANHOLE
- 12) INSTALL 12.5" DROP INLET PER STRUCTURAL PLANS BY OTHERS
- 13) INSTALL 48" TYPE III STORM DRAIN MANHOLE PER CCAUSD NO. 406
- 14) INSTALL 36" FLARED END SECTION
- 15) INSTALL 60"x25" RIPRAP PAD, D50=12", THICKNESS=24"
- 16) INSTALL SPILL CURB PER DETAIL ON SHEET D-2
- 17) INSTALL 5'x25" BUS SHELTER PAD PER CCAUSD NO. 234.1, 234.2, & 234.5
- 18) INSTALL 8" VALLEY GUTTER PER CCAUSD NO. 228
- 19) INSTALL WROUGHT IRON FENCE & 12" WIDE MAINTENANCE ACCESS GATE
- 20) INSTALL 5" CURB TRANSITION PER DETAIL ON SHEET D-2

DRAINAGE QUANTITIES

	PRIV.	PUBLIC
1. 48" TYPE III STORM DRAIN MANHOLE	EA	- 2
2. 12.5" STRUCTURAL DROP INLET	EA	- 1
3. 36" RCP CLASS IV STORM DRAIN	LF	- 737
4. RIPRAP D50=12", THK=24"	SF	1500 -
5. 36" FLARED END SECTION PER NDOT R-2.3.1	LF	- 1
6. 8" WIDE CONCRETE VALLEY GUTTER W/10" TYPE I AGGREGATE BASE	SF	6,415 -
7.		

BENCHMARK
CITY OF LAS VEGAS BENCHMARK SLV90 2066
RIVET & PLATE IN TOP OF CURB AT SW CORNER OF RILEY ST. & DEER SPRINGS.
ELEVATION=774.781 METERS (NAVD88)
ELEVATION=2541.93 US SURVEY FEET (NAVD88)

BASIS OF BEARINGS
NORTH 89°56'20" EAST, BEING THE BEARING OF THE SOUTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 20, TOWNSHIP 36 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY NEVADA RECORDER'S OFFICE IN FILE 118, PAGE 89 OF SURVEYS.

GRADING NOTES

1. FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2018, 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/ANNUAL 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/REPLENISHING 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.

ELEVATION NOTE

ADD 2500 TO ALL SPOT GRADES WHERE THE HUNDREDS AND THOUSANDS PLACES ARE OMITTED FOR ACTUAL ELEVATION (I.E. 01.00 REPRESENTS 2501.00)

DRAINAGE EASEMENT NOTE

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

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 NVRI00000, 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 NVRI00000, 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 32003C1750C, DATED SEPTEMBER 27, 2002. A ZONE X (UNSHADED) IS DESCRIBED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.

FLOOD CERTIFICATION

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY 02-5114 ON FILE AT CITY OF LAS VEGAS FOR THE SUBJECT PROJECT.

TIMOTHY M. MULROONEY, P.E. 22938

DATE

5/30/19

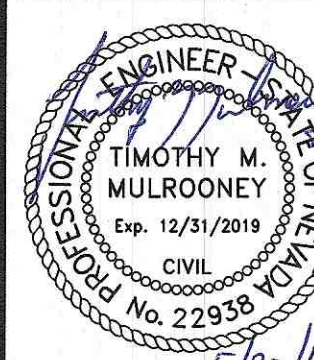
DRAFTER: BCS

DESIGNER: HN

CHECKED: MAK

PROJECT NO.

KBH1805-001



G-8

SHEET 11 OF 18

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

DATE	BY	APP.	DATE

NO.	DESCRIPTION

CITY OF LAS VEGAS, NV

KB HOME
MONTECITO 60 - UNIT 1
GRADING PLAN VIII

5/30/19

R606

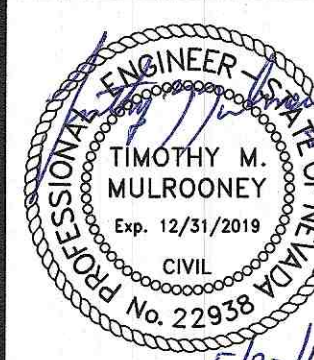
DRAFTER: BCS

DESIGNER: HN

CHECKED: MAK

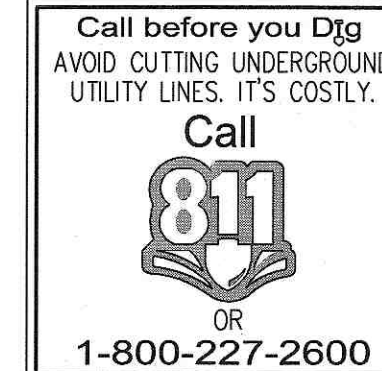
PROJECT NO.

KBH1805-001



G-8

SHEET 11 OF 18





FOR CONTINUATION - SEE SHEET G-8



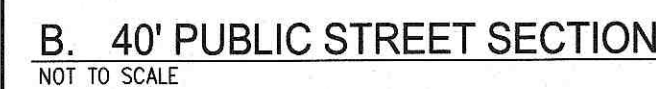
Call before you Dig
AVOID CUTTING UNDERGROUND
UTILITY LINES. IT'S COSTLY.
Call
811
OR
1-800-227-2600

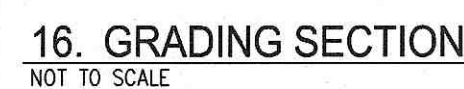
FLOOD CERTIFICATION

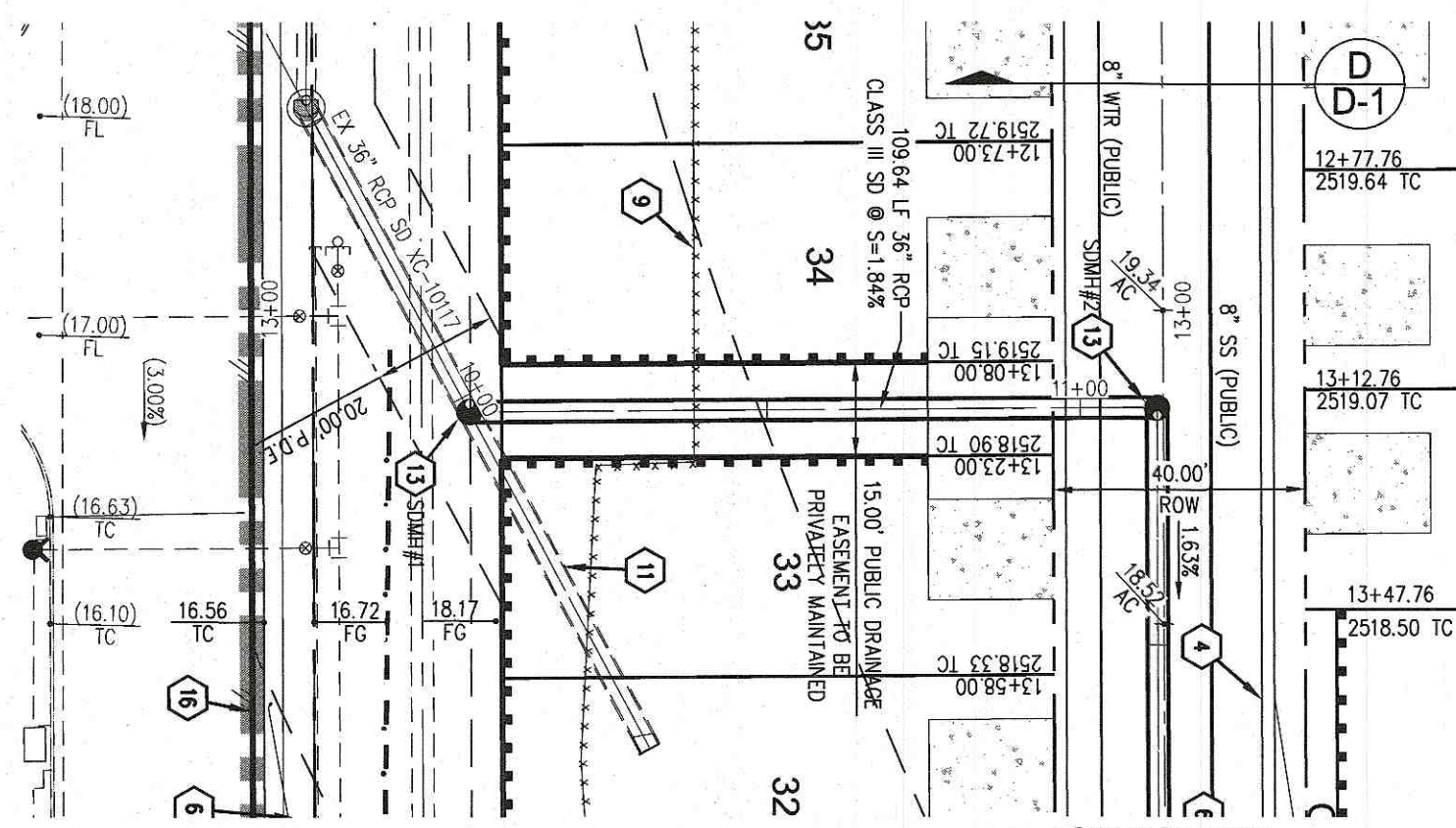
I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY DS-5114 ON FILE AT CITY OF LAS VEGAS FOR THE SUBJECT PROJECT.

TIMOTHY M. MULROONEY, P.E. 22938 DATE

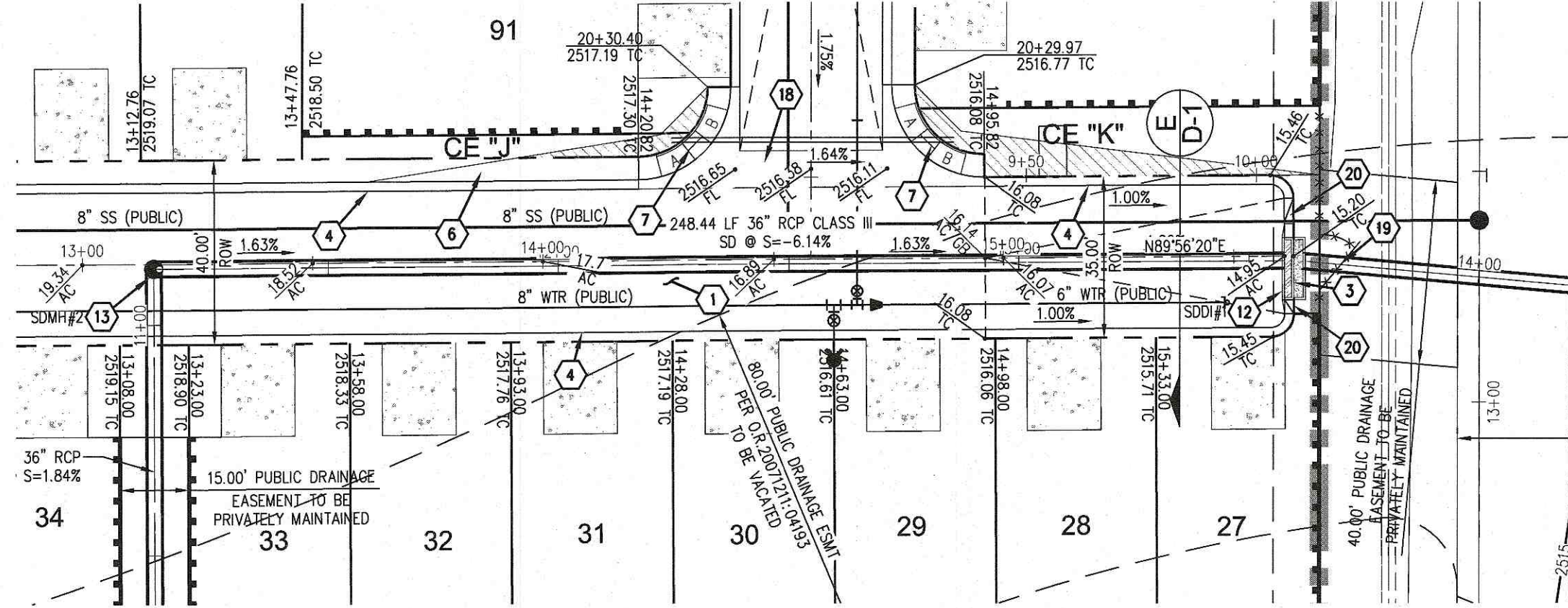
G-9
SHEET 12 OF 18



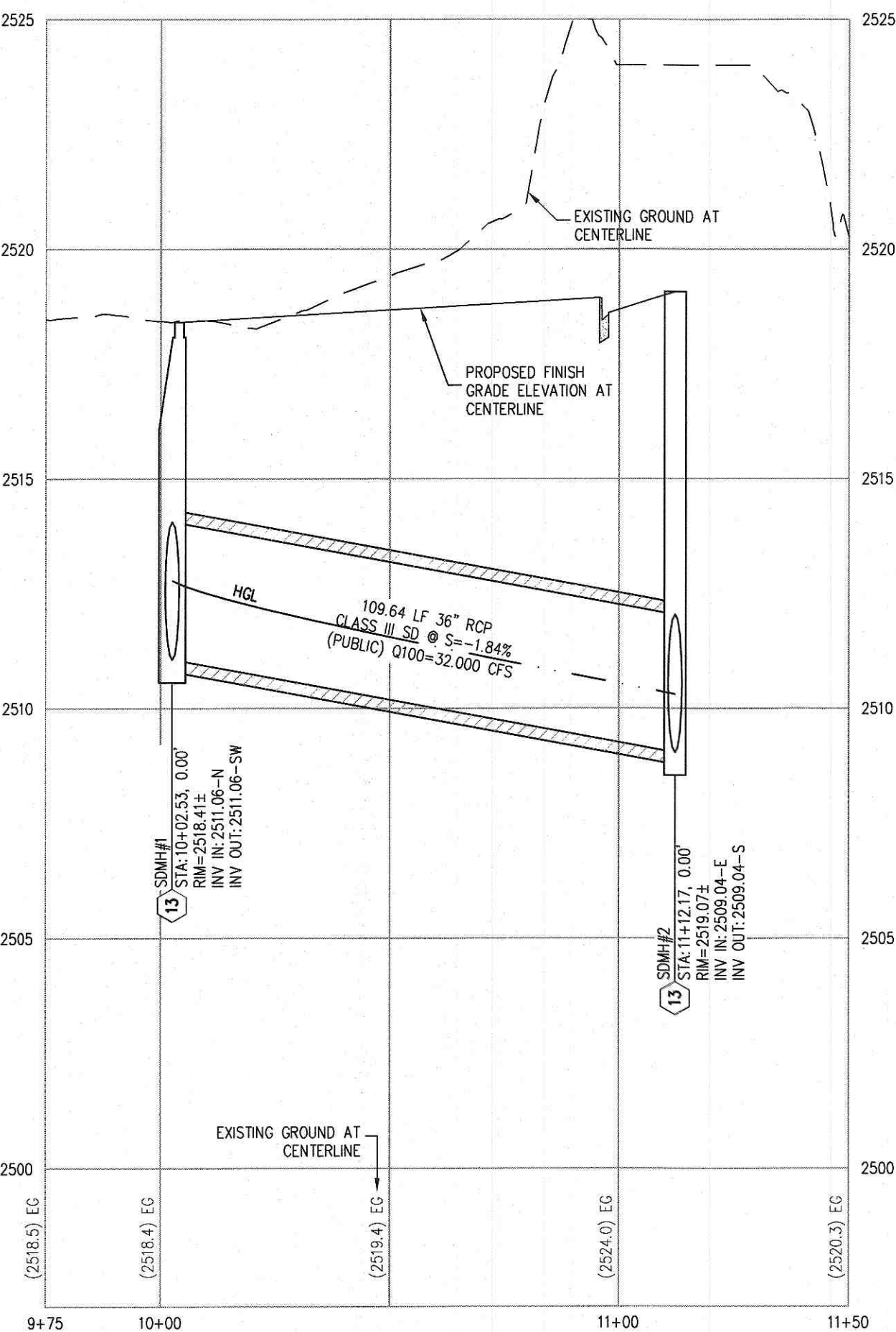




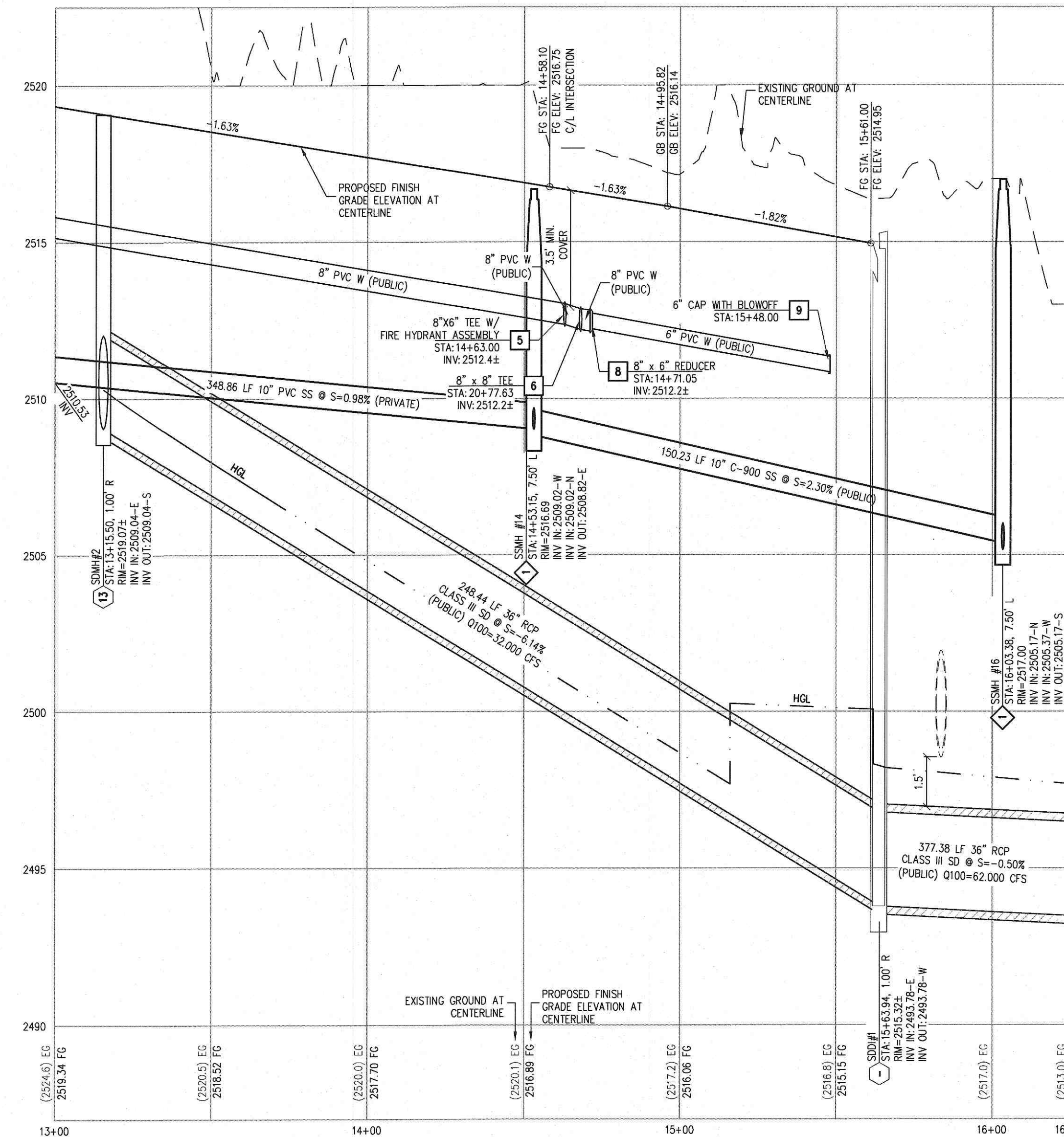
STORM DRAIN - PLAN VIEW



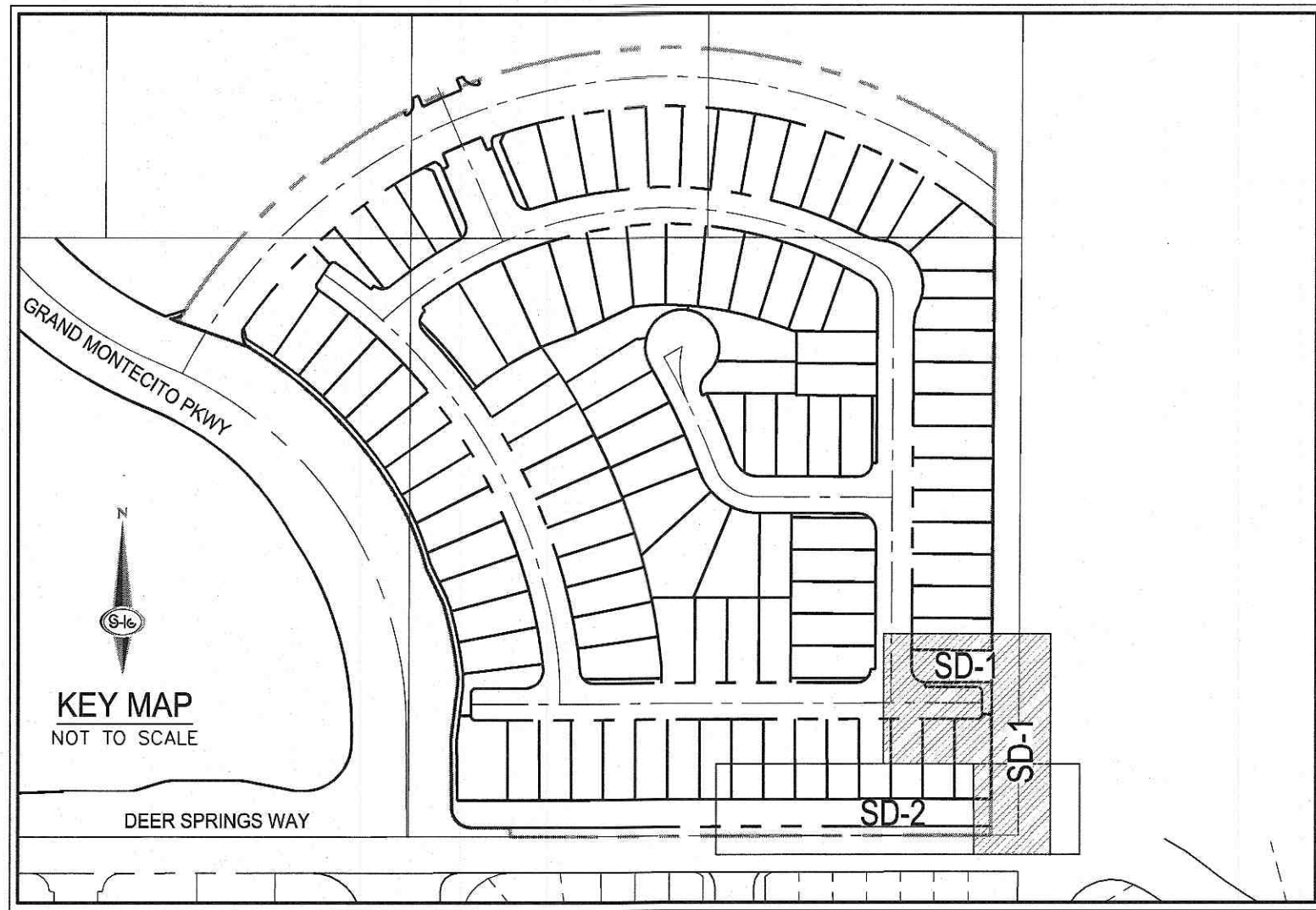
STORM DRAIN - PLAN VIEW



STORM DRAIN - PROFILE VIEW



STORM DRAIN - PROFILE VIEW



BENCHMARK

CITY OF LAS VEGAS BENCHMARK 5LV90 2066
RIVET & PLATE IN TOP OF CURB AT SW
CORNER OF RILEY ST. & DEER SPRINGS.
ELEVATION=774.781 METERS (NAVD83)
ELEVATION=2541.93 US SURVEY FEET
(NAVD83)

BASIS OF BEARINGS

NORTH 88°56'20" EAST, BEING THE BEARING
OF THE SOUTH LINE OF THE SOUTHEAST
QUARTER (SE 1/4) OF THE NORTHEAST
QUARTER (NE 1/4) OF SECTION 20,
TOWNSHIP 19 SOUTH, RANGE 60 EAST,
M.D.M., CITY OF LAS VEGAS, CLARK COUNTY,
NEVADA, AS SHOWN BY MAP THEREON ON
FILE IN THE CLARK COUNTY, NEVADA
RECORDS' OFFICE IN FILE 118, PAGE 89
OF SURVEY.

SOILS REPORT

SOILS REPORT BY SOUTHWEST GEOTECHNICAL
PROJECT NO. 182358
DATED 10/17/18

EARTHWORKS

EARTHWORK QUANTITIES (RAW):
CUT=#### CU YDS
FILL=#### 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.

SURVEY NOTE

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

DISCLAIMER NOTE

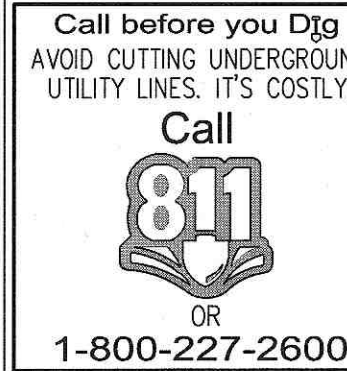
- EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE
CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL
LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE
ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER
LOCATION.
- FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY
CROSS SLOPES FROM EXISTING PAVEMENT SAWCUT LINE TO PROPOSED ELEVATION 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

- INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
- INSTALL 3" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
- INSTALL L TYPE CURB PER CCAUSD NO. 216
- INSTALL R-TYPE CURB & GUTTER PER CCAUSD NO. 217.3.1
- INSTALL A TYPE CURB PER CCAUSD NO. 219
- INSTALL 5' WIDE SIDEWALK PER CCAUSD NO. 234
- INSTALL SIDEWALK RAMP PER CCAUSD NO. 235, CASE I AND CCAUSD NO. 235.1
- INSTALL SIDEWALK RAMP PER CCAUSD NO. 235, CASE II AND CCAUSD NO. 235.1
- EXISTING IMPROVEMENTS TO BE REMOVED
- EXISTING VALLEY GUTTER TO BE REMOVED
- REMOVE EXISTING 36" SD FROM PROPOSED MANHOLE
- INSTALL 12.5" DROP INLET PER STRUCTURAL PLANS BY OTHERS
- INSTALL 48" TYPE III STORM DRAIN MANHOLE PER CCAUSD NO. 406
- INSTALL 36" FLARED END SECTION
- INSTALL 60"x25" RIPRAP PAD, D50=12", THICKNESS=24"
- INSTALL SPILL CURB PER DETAIL ON SHEET D-2
- INSTALL 5"x25" BUS SHELTER PAD PER CCAUSD NO. 234.1, 234.2, & 234.5
- INSTALL 8' VALLEY GUTTER PER CCAUSD NO. 228
- INSTALL WROUGHT IRON FENCE & 12' WIDE MAINTENANCE ACCESS GATE
- INSTALL 5' CURB TRANSITION PER DETAIL ON SHEET D-2

DRAINAGE QUANTITIES

	EA	PRIV.	PUBLIC
1. 48" TYPE III STORM DRAIN MANHOLE	-	-	2
2. 12.5" STRUCTURAL DROP INLET	-	-	1
3. 36" RCP CLASS IV STORM DRAIN	-	-	737
4. RIPRAP D50=12", THK=24"	-	-	1500
5. 36" FLARED END SECTION PER NDOT R-2.3.1	-	-	1
6. 8' WIDE CONCRETE VALLEY GUTTER W/10" TYPE I AGGREGATE BASE	-	-	6,415
7.	-	-	-



GRADING NOTES

- FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2018,
SECTION 2304.11.2.2.
- THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL
DISCREPANCIES TO THE ENGINEER.
- ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
- MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON
GEOTECH REPORT.
- SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.
- ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
- CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY
THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
- 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/REPLENISHING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED
OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
- 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 EXISTS)
WITHIN THE SIGHT VISIBILITY ZONES.

ELEVATION NOTE

ADD 2500 TO ALL SPOT GRADES WHERE THE HUNDREDS AND THOUSANDS PLACES ARE OMITTED
FOR ACTUAL ELEVATION (I.E. 01.00 REPRESENTS 2501.00)

DRAINAGE EASEMENT NOTE

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

LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDELINES

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

- 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.
- 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.
- 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.
- 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.
- 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.

FLOOD CERTIFICATION

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL
DRAINAGE STUDY DS-5114 ON FILE AT CITY OF LAS VEGAS FOR THE SUBJECT PROJECT.

TIMOTHY M. MULROONEY, P.E. 22938

DATE: 5/30/19

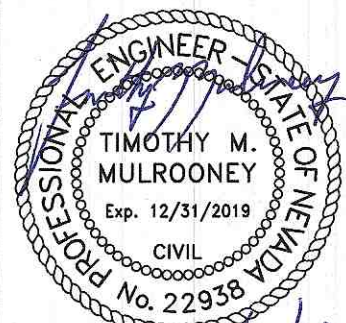
DRAFTER: BCS

DESIGNER: HN

CHECKED: MAK

PROJECT NO.

KBH1805-001



SD-1

SHEET 17 OF 18

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

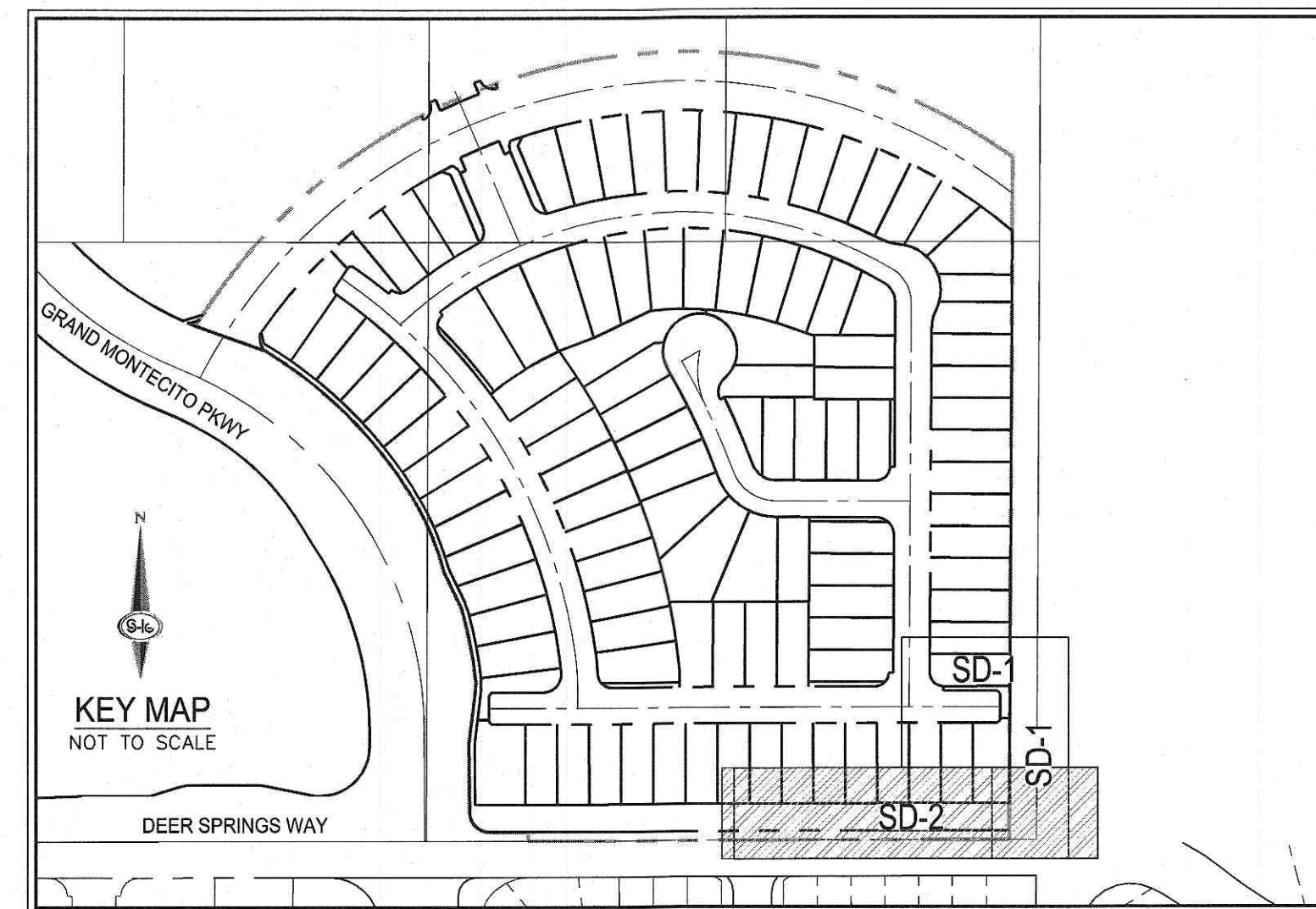
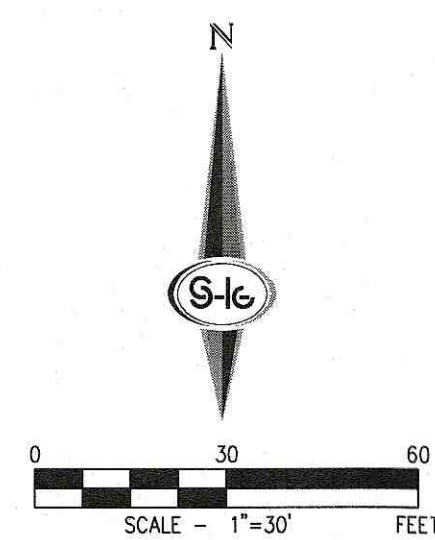
DATE	BY	APP.	DATE

NO.	DESCRIPTION

CITY OF LAS VEGAS, NV

KBHOME
MONTECITO 60 - UNIT 1

PLAN AND PROFILE - STORM DRAIN LATERALS



HORIZ: $1'' = 30'$
VERT: $1'' = 3'$

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