DS #: 4707

APN: 126-12-000-001

PROJECT: Skye Canyon Park - Phase 1

SUBMITTAL: 2nd

SCANNED BY/DATE:

CHECKED BY/DATE:

CITY OF LAS VEGAS
NEVADA

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM				DATE: Revised March 3, 2015
TO: **Land Development Services** Department of Building & Safety				FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for: **Skye Canyon Park – Phase 1**			**COPIES TO:** Slater Hanifan Group
Cross Streets:	SWC Skye Canyon Park Bl & Skye Village Dr			Section 12, LLC / Ninety-Five Mgmt.
File Number:	F:\Depot\DSMemos\DS4707B-Rev.doc			Bart Anderson, P.E., DevCo
Parcel Number:	126-12-000-001			CCRFCD
Zoning Action:	SDR-XXXXX			
FEMA Flood Zone	YES	NO	**X**	
Proposed Storm Drain	YES	NO	**X**	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1st Submittal	10/30/2014	12/10/2014	Not Approved	$400.00	375470: $400
2nd Submittal	2/3/2015	2/19/2015	Not Approved	$400.00	384502: $400
Revised Memo	3/3/2015	3/3/2015	See Comments Below	N/C	N/C
			TOTAL FEES (LDDRS):	**$800.00**	**----**

REMARKS:

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

	is approved subject to conformance to all City standards and the following conditions:
	must be resubmitted or supplemented including the following:
	is conditionally approved subject to Clark County Regional Flood Control District concurrence.
X	is conditionally approved until the *Skye Canyon Development Agreement* is approved by the *City of Las Vegas City Council*

Note to Land Development: The improvement plans of the subject project is allowed to be submitted for processing. However, no permits will be issued until the *Skye Canyon Development Agreement* is approved by the City Council

1. The ***Skye Canyon Development Agreement*** must be approved by the ***City of Las Vegas City Council*** prior to the final approval of the subject drainage study.

2. The premise of the subject drainage study is on the adjacent ***Phase 1 Infrastructure*** improvements being completed and functioning for flood protection. No building permit for the subject development will be issued prior to ***Phase 1 Infrastructure*** improvements in place and functioning.

3. The overall area of proposed parking of the subject development is over one acre. Provide parking lot low impact development (LID) measures per **Section 1500** (Structural Best Management Practices) of the ***Clark County Regional Flood Control District's Hydrologic Criteria and Drainage Design Manual*** prior to the final approval of the drainage study.

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

END OF REMARKS

ays

T/R/S: T19S/R59E/07

AREA F-12

Albert Sung

From: Lucien Paet
Sent: Tuesday, March 03, 2015 11:42 AM
To: Albert Sung; Michael Cunningham
Subject: FW: Skye Canyon - Skye Center Drainage Study
Attachments: doc00133820150303084453.pdf

FYI

From: David Bowers
Sent: Tuesday, March 03, 2015 9:38 AM
To: Oh-Sang Kwon
Cc: Bart Anderson; Lucien Paet
Subject: FW: Skye Canyon - Skye Center Drainage Study

Oh-Sang

I am willing to allow them to submit the improvement plans for processing. We will not issue the final permit until the land use approval is received.

Any concerns?

Thanks, Dave

From: Marc Bolduc [mailto:mbolduc@olympiacompanies.com]
Sent: Tuesday, March 03, 2015 9:10 AM
To: David Bowers
Subject: Skye Canyon - Skye Center Drainage Study

David,

Attached is the drainage study letter for our community center and park called Skye Center. The first condition is holding us from submittal of improvement plans for review and processing toward offsite permit issuance. If you remember our meeting with Councilman Ross, Jorge, and Chris Knight, we agreed to proceed with all reviews up to the point of permit issuance pending land use approval. The land use approval status is as follows: submitted, accepted, staff recommending approval, Planning Commission next week with final City Council on 4/15.

This is our feature project that we are trying to complete by the end of 2015. We need to advance our improvement plans so that we can get permits for the projects infrastructure as soon as possible after the 4/15 date.

Feel free to call me at 702-210-5840 if you have any questions.

Thanks

Marc Bolduc
Senior Vice President
Olympia Companies
11411 Southern Highlands Pkwy #300
Las Vegas, NV 89141
702-210-5840

****
*** TX REPORT ***
****

JOB NO.	0409
ST. TIME	03/03 13:31
PGS.	2
SEND DOCUMENT NAME	
TX IMCOMPLETE	-----
TRANSACTION OK	7022845399
ERROR	-----

CITY OF LAS VEGAS **INTER-OFFICE MEMORANDUM**				**DATE: Revised** **March 3, 2015**
TO: **Land Development Services** Department of Building & Safety				**FROM:** Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for: **Skye Canyon Park – Phase 1**			**COPIES TO:** Slater Hanifan Group
Cross Streets:	SWC Skye Canyon Park Bl & Skye Village Dr			Section 12, LLC / Ninety-Five Mgmt.
File Number:	F:\Depot\DSMemos\DS4707B-Rev.doc			Bart Anderson, P.E., DevCo
Parcel Number:	126-12-000-001			CCRFCD
Zoning Action:	SDR-XXXXX			
FEMA Flood Zone	YES	NO	X	
Proposed Storm Drain	YES	NO	X	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1st Submittal	10/30/2014	12/10/2014	Not Approved	$400.00	375470: $400
2nd Submittal	2/3/2015	2/19/2015	Not Approved	$400.00	384502: $400
Revised Memo	3/3/2015	3/3/2015	See Comments Below	N/C	N/C
			TOTAL FEES (LDDRS):	**$800.00**	**----**

REMARKS:

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

	is approved subject to conformance to all City standards and the following conditions:
	must be resubmitted or supplemented including the following:
	is conditionally approved subject to Clark County Regional Flood Control District concurrence.
X	is conditionally approved until the *Skye Canyon Development Agreement* is approved by the *City of Las Vegas City Council*

<u>Note to Land Development: The improvement plans of the subject project is allowed to be submitted for processing. However, no permits will be issued until the *Skye Canyon Development Agreement* is approved by the City Council</u>

1. The ***Skye Canyon Development Agreement*** must be approved by the ***City of Las Vegas City Council*** prior to the final approval of the subject drainage study.

TECHNICAL DRAINAGE STUDY
ADDENDUM #1

Skye Canyon Park – Phase 1

City of Las Vegas, Nevada

Job No.: OLY1401.002
Date: February 2015

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

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



2/2/2015

Steve Jones, P.E.
NV Professional Engineer No. 19638

Assisted by: Andrew Howard, P.E.

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE STUDY INFORMATION FORM

Name of Development: Skye Canyon Park – Phase 1 (Addendum 1) Date: February 2015

Location of Development: a) Descriptive (Cross Streets): North/South: Hualapai Way

East/West: Skye Canyon Parkway

b) Section: 12 Township: 19 South Range: 59 East

c) APN: 126-12-000-001

Name of Owner/Developer: Section 12, LLC, LLC / Ninety-Five Management, LLC

Telephone No.: 702-220-6565 Fax No.: 702-220-6566 E-mail Address: mbolduc@olympiacompanies.com

Address: 11411 Southern Highlands Parkway, Suite 300; Las Vegas, NV 89141

Contact Person – Name: Steve Jones, P.E. Telephone No.: 702-284-5300

*E-mail Address: sjones@shg-inc.com Fax No.: 702-284-5399

Firm: Slater Hanifan Group

Address: 5740 S. Arville Street, Suite 216; Las Vegas, NV 89118

Type of Land Development/Land Disturbance Process:

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

1. Total Owned Land Area: At Site: 1662 acres Being Developed/Disturbed: 11 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

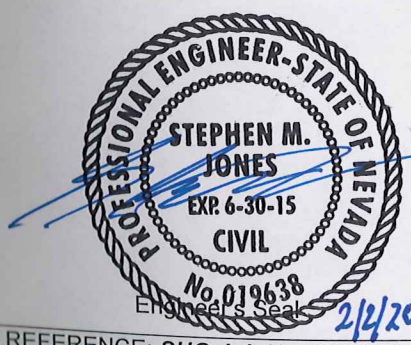
4. Proposed type of development (Residential, Commercial, Etc.): Commercial/Recreation Park

5. Approximate upstream land area which drains to the subject site: 0.5 sq. miles

6. Has the site drainage been evaluated in the past? ☒ Yes** ☐ No If yes, please identify documentation: *Master Drainage Study for Kyle Canyon* (SHG, DS4420); *Master Drainage Study for Kyle Canyon* (GCW, DS4091); *Technical Drainage Study for Skye Canyon Phase 1 Infrastructure* (SHG, DS4661)

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: Skye Canyon Park Blvd. & Skye Village Drive (MOHU 0036),

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



Engineer's Seal 2/4/2015

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

*Newly Required Field

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

Revision	Date

Local Entity File No.

REFERENCE: *SHG Job No. OLY1401.003*

STANDARD FORM 1

Updated 05/01/2008

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS

OLY1401.003

February 2, 2015

Albert Sung, P.E.
Flood Control Project Engineer
City of Las Vegas Department of Public Works
333 N. Rancho Drive
Las Vegas, Nevada 89106

Subject: Addendum No. 1 to the Technical Drainage Study for Skye Canyon Park – Phase 1 (CLV DS4707)

Dear Mr. Sung:

This letter is submitted in response to comments contained in the December 10, 2014 review memorandum, regarding the above referenced project. A copy of the City of Las Vegas (CLV) Department of Public Works comment letter has been provided in Appendix A, and the comments have been individually addressed as follows:

1. **Comment:** *Sites with a grade difference of 2 feet above or below existing are required to have approval from the City Planning and Development Department. The engineer must submit copies of the grading plans and detail sheet with a letter justifying the grade difference to the City Planning Department (2296301). The engineer must provide Planning approval with the next submittal.*

   Response: A justification letter, approved by the City of Las Vegas Building and Safety Department on December 23, 2014, has been provided in Appendix B for reference.

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

   Response: The drainage study is being resubmitted with the understanding that approval is contingent upon the SDR approval.

3. **Comment:** *The subject drainage study is premised on the Clark County Regional Flood Control District (CCRFCD) Las Vegas Valley Flood Control Master Plan Update (2013 MPU) to revise facility "MOHU 0085" from a 72"-RCP to a 60"-RCP. The "2013 MPU" must be fully adopted by the City of Las Vegas City Council prior to the final approval of the subject drainage study.*

   Response: Facility MOHU was technically designed and proposed as a 60-inch RCP in the Phase 1 Infrastructure Study, which was approved by the City of Las Vegas, and all

flows presented in this Skye Canyon Park Study are in conformance with the Phase 1 Infrastructure Study. While coordination between Slater Hanifan Group and the City of Las Vegas is ongoing for a future CCRFCD MPU Amendment that may or may not impact the CCRFCD facility adjacent to the Skye Canyon Park, the approval of the Phase 1 Infrastructure Study should be sufficient for approval of the Skye Canyon Park Study.

4. **Comment:** *The parent Kyle Canyon Master Drainage Study must be fully approved prior to the final acceptance of the subject drainage study.*

   Response: Ongoing coordination between Slater Hanifan Group and the City of Las Vegas will continue in regards to the Master Drainage Study for Skye Canyon. However, Skye Canyon Master Drainage Study Update #1 conditionally approved by CLV on 12/30/2014 addressed this site as a park and is considered sufficient for approval of the Skye Canyon Park – Phase 1 Drainage Study.

5. **Comment:** *The premise of the subject drainage study is also on the adjacent Phase 1 Infrastructure improvements being completed and functioning for flood protection. No building permit for the subject development will be issued prior to Phase 1 Infrastructure improvements in place and functioning.*

   Response: Acknowledged.

6. **Comment:** *The subject study proposes to re-route 9 cfs from Basin UOFF4 (ultimate condition) away from the regional facility MOHU to CNKC. Submit an update for Phase 1 Infrastructure study which must be approved prior to the final approval of the subject study.*

   Response: After inspection of the current Phase 1 Infrastructure design, capacity is not provided for the additional 9-cfs previously proposed to be routed south; therefore, the site has been redesigned to route Basin OFF4 flows through the project site where they will be conveyed north through the MOHU facility as previously planned by the Phase 1 Infrastructure. In the ultimate condition, the master drainage study shows that developments to the south and east will alter the limits of Basin OFF4 from the developed condition, reducing flows routed through the park site. Tables 1 and 2 below compare the designed flow rates in the Phase 1 Infrastructure Study to those of the Park Study.

Table 1: Flow Rate Comparison
Park Study vs. Phase 1 Infrastructure Study

Developed Condition			
Park Study		**Phase 1 Infrastructure Study**	
Location	**Q_{100} (cfs)**	**Location**	**Q_{100} (cfs)**
D1	7	Skye Village Drive SD	42
CP3 (D2 + OFF3 + IOFF4)	42		

Table 2: Flow Rate Comparison Park Study vs. Phase 1 Infrastructure Study			
Ultimate Condition			
Park Study		Phase 1 Infrastructure Study	
Location	Q_{100} (cfs)	Location	Q_{100} (cfs)
D1	7	Skye Village Drive SD	42
CP3 (D2 + OFF3 + UOFF4)	35		

Although the Phase 1 Infrastructure Study anticipated a total of 42-cfs entering the Skye Village Drive storm drain system, the 49-cfs flow presented in the developed condition is considered acceptable because it is temporary. Additionally, the capacity of the storm drain system is not exceeded in the developed condition, therefore making the increased flows acceptable. In the ultimate condition, a total of 42-cfs enters the Skye Village Drive storm drain system; therefore the ultimate condition flow rates are also considered acceptable. The interim ditch along the south edge of the site will remain in the developed condition to collect offsite flows from Basin OFF5, but the flows will be less than previously proposed. The interim ditch will be removed in the ultimate condition when developments to the south are constructed and flows are permanently conveyed by each development.

Due to the increased flows being routed through the site in the developed condition, the following design changes have been made:

- The primary drainage swale along the east edge of the field has been increased in size to accommodate higher flows, while maintaining flow depths less than 1.0-foot.
- The primary storm drain inlet at the termination of the drainage swale at the southeast corner of the field has been changed to a 4-foot x 4-foot Jensen precast drop inlet (DI4848).
- The onsite storm drain between SDDI #2 to SDMH #3 (as shown on the grading plans) has been increased from 24-inch PVC to 30-inch PVC.
- The interim ditch along the south edge of the site is being modified to only accept flows that naturally drain toward the ditch, without re-routing any flows west of the site. The cross section of the ditch is remaining the same but the western limit has been modified since the previous submittal.

Design computations for the proposed changes have been provided in Appendix C for reference.

7. **Comment:** ***Sheet G-1 and Sheet G-2:***
   1. The extension storm drain in Skye Canyon Park Boulevard is proposed to be a 60"-RCP, however, a Construction Note #12 indicates that it will be a 24"-PVC. Review and revise accordingly.
   2. It appears that some of the onsite area drain inlets are designed in a sump condition. In the next submittal, address whether any overflow paths are provided.

Note that the maximum allowable ponding depth is 12". Address and verify in the next addendum.

Response: Sheet G-1 and G-2:

1. Sheet G-1 has been updated to show the correct construction note on the 60" RCP SD in Skye Canyon Park Boulevard.
2. All onsite low points have been provided with adequate emergency overflow paths, as shown below in Table 3.

Table 3: Emergency Overflow Depth Analysis

Location	DI Grate Elevation (ft)	Closest Overflow Path Elevation (ft)	Maximum Ponding Depth (ft)	Closest Finished Floor Elevation (ft)	Finished Floor Elevation Above Overflow Depth (ft)
SD #2	57.4	58.4	1.0	61.0	4.6
SD #4	60.5	60.9	0.4	61.0	0.9
SD #5	60.5	61.0	0.5	61.0	1.0
SD #6	65.3	65.8	0.5	N/A	N/A
SD #7	66.1	67.0	0.9	N/A	N/A
SD #8	60.2	60.7	0.5	61.0	1.3
SD #9	62.1	62.5	0.4	63.3	1.6
SD #42	58.2	58.6	0.4	61.0	3.2
SD #44	59.0	59.5	0.5	61.0	2.5
SD #45	58.2	58.6	0.4	61.0	3.2

As Table 1 shows, no overflow path exceeds 0.9-ft of flow depth and all finished floors are a minimum of 0.9-ft above the overflow depth.

8. **Comment:** *Sheet G-2: Explain why the upstream onsite storm drains are 30" in diameter while the downstream pipes are 18".*

   Response: Sheet G-2 has been updated to show the correct construction note for the 18" PVC storm drains.

9. **Comment:** *Sheet G-2 and Sheet G-3: On all 3:1 slopes, provide erosion control measures.*

   Response: The berm along the south edge of the site is the only location where 3:1 slopes are proposed. At this location, the only flow that will be on the slopes is the flow generated on the slopes, therefore erosion protection is not necessary.

10. **Comment:** *Provide a note on the grading plans: ALL ONSITE STORM DRAINS AND THE ASSOCIATED FLOOD CONTROL FACILITIES ARE PRIVATELY OWNED AND TO BE PRIVATELY MAINTAINED BYTHE HOA".*

    Response: Note #9 on the grading plans states that all onsite storm drains and associated flood control facilities are privately owned and maintained by the HOA.

11. **Comment:** *Add a note in all pertinent sheets for the construction of all storm drain drop inlets per a newly adopted USDCCA Drawing No. 421 (Stormwater Quality Management Stamp and Sign Detail).*

    Response: The construction notes have been revised to include the USDCCA Drawing No. 421 for public storm drain inlets.

Additional Revisions:

- The Phase 1 Infrastructure Study has been updated to change the location of the drop inlet in Skye Village Drive. The updated location of the storm drain stub at the southeast edge of the site has been incorporated in the latest Park Study WSPGW model.

- The Park Study has been updated to relocate the beehive drop inlet in the landscape area at the southeast corner of the site. The beehive inlet has been relocated approximately 25-feet to the south, utilizing an 18-inch PVC storm drain lateral to tie-in to the 30-inch RCP/PVC storm drain.

The revised improvement plans adopting the revisions addressed in this letter have been included in Appendix F. If you have any questions or require additional information, please do not hesitate to contact us at 284-5300.

Respectfully Submitted,

SLATER HANIFAN GROUP

Andrew Howard, P.E.
Flood Control Division

cc: Mark Failla, P.E., CFM – SHG
Steve Jones, P.E. - SHG
Jerry Slater, P.E. – SHG

APPENDIX

Appendix A – CLV Drainage Comment Letter

Appendix B – Response to Comment #1 – Grading Justification Letter

Appendix C – Response to Comment #6 – Onsite Drainage Facility Design Changes
- Primary Drainage Swale Design
- Primary Field Inlet Design
- Onsite Storm Drain Design

Appendix D – Reference Material
Technical Drainage Study for Skye Canyon – Phase 1 Infrastructure, by SHG
- Approval Letters
- Street Hydraulic Condition Maps
- Skye Village Drive Storm Drain Model

Appendix E – Drainage Exhibits

Appendix F – Improvement Plans

APPENDIX A

CLV Comment Letter

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM				DATE: December 10, 2014
TO: **Land Development Services** Department of Building & Safety				FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for: **Skye Canyon Park – Phase 1**			**COPIES TO:** Slater Hanifan Group
Cross Streets:	SWC Skye Canyon Park Bl & Skye Village Dr			Section 12, LLC / Ninety-Five Mgmt.
File Number:	F:\Depot\DSMemos\DS4707A.doc			Bart Anderson, P.E., DevCo
Parcel Number:	126-12-000-001			CCRFCD
Zoning Action:	SDR-XXXXX			
FEMA Flood Zone	YES	NO	X	
Proposed Storm Drain	YES	NO	X	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1st Submittal	10/30/2014	12/10/2014	See Comments Below	$400.00	375470: $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. Sites with a grade difference of 2 feet above or below existing are required to have approval from the *City Planning and Development Department*. The engineer must submit copies of the grading plans and detail sheet with a letter justifying the grade difference to the *City Planning Department* (229-6301). The engineer must provide Planning approval with the next submittal.
2. Provide a copy of the zoning/planning conditions associated with this site (**SDR-XXXXX**) 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.
3. The subject drainage study is premised on the *Clark County Regional Flood Control District (CCRFCD) Las Vegas Valley Flood Control Master Plan Update* (2013 MPU) to revise facility "MOHU 0085" from a 72"-RCP to a 60"-RCP. The "2013 MPU" must be fully adopted by the *City of Las Vegas City Council* prior to the final approval of the subject drainage study.
4. The parent ***Kyle Canyon Master Drainage Study*** must be fully approved prior to the final acceptance of the subject drainage study.

5. The premise of the subject drainage study is also on the adjacent ***Phase 1 Infrastructure*** improvements being completed and functioning for flood protection. No building permit for the subject development will be issued prior to ***Phase 1 Infrastructure*** improvements in place and functioning.

6. The subject study proposes to re-route 9 cfs from *Basin UOFF4* (ultimate condition) away from the regional facility **MOHU** to **CNKC**. Submit an update for ***Phase 1 Infrastructure*** study which must be approved prior to the final approval of the subject study.

7. **Sheet G-1 and Sheet G-2:**

   - The extension storm drain in *Skye Canyon Park Boulevard* is proposed to be a 60"-RCP, however, a *Construction Note #12* indicates that it will be a 24"-PVC. Review and revise accordingly.

   - It appears that some of the onsite area drain inlets are designed in a sump condition. In the next submittal, address whether any overflow paths are provided. Note that the maximum allowable ponding depth is 12". Address and verify in the next addendum.

8. **Sheet G-2:**

   Explain why the upstream onsite storm drains are 30" in diameter while the downstream pipes are 18".

9. **Sheet G-2 and Sheet G-3:**

   On all 3:1 slopes, provide erosion control measures.

10. Provide a note on the grading plans: ALL ONSITE STORM DRAINS AND THE ASSOCIATED FLOOD CONTROL FACILITIES ARE PRIVATELY OWNED AND TO BE PRIVATELY MAINTAINED BY THE HOA".

11. Add a note in all pertinent sheets for the construction of all storm drain drop inlets per a newly adopted USDCCA Drawing No. 421 (*Stormwater Quality Management Stamp and Sign Detail*).

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

END OF REMARKS
ays

T/R/S: T19S/R59E/07
AREA F-12

APPENDIX B

Response to Comment #1:
Grading Justification Letter

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS

OLY1401-003

18 December 2014

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

RE: Justification Letter for proposed grades greater than 2-feet from existing ground for Skye Canyon Park – Phase 1 (portion of APN 126-12-000-001)

Ms. Hartman-Maynard,

Slater Hanifan Group (SHG) hereby submits this justification letter in support of proposed grades greater than 2-feet from existing ground on the subject site. The subject site of Skye Canyon Park – Phase 1 is located on the southwest corner of the Horse Drive and Hualapai Way intersection. The project is approximately 12 acre being a portion of Assessor's Parcel Number 126-12-000-001.

Our Drainage Study comments are requiring that we submit an approval to grade greater than 2-feet with our Drainage Study resubmittal. The existing slope of the site has an average rate of grade of approximately 4.5% from west to east. Although the intent is to match existing grade as closely as possible, there is much of the site which exceeds a difference of 2-feet from our proposed grades to existing ground. Most of this is due to the excessive steepness of the site area and the requirement to have the soccer field and other site amenities to have slopes not exceeding 2% and to provide handicap accessibility to all parts of the subject site. Attached is one- (1) set of the grading plans that represent future grades and existing contours for your information.

We hope that you will concur with our design and justified grade difference, but should you have any questions, please contact me.

Sincerely,

Slater Hanifan Group

David Wilson
Sr. Project Manager

dwilson@shg-inc.com

PLANS APPROVED
PLANNING
Building & Safety Dept.
City of Las Vegas, Nevada
2 FOOT GRADE DIFFERENCE ONLY
LHM DEC 23 2014

Conforms to the minimum requirements 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.

5740 S. Arville Street#216, Las Vegas, NV 89118 ph (702) 284-5300 fax (702) 284-5399

APPENDIX C

Response to Comment #6:
Onsite Drainage Facility Design Changes

Primary Drainage Swale Design
Primary Field Inlet Design
Onsite Storm Drain Design

Primary Drainage Swale Design

Section B - Onsite V Swale
Worksheet for Triangular Channel

Project Description	
Worksheet	Section B - Onsite V Swale
Flow Element	Triangular Channel
Method	Manning's Formula
Solve For	Channel Depth

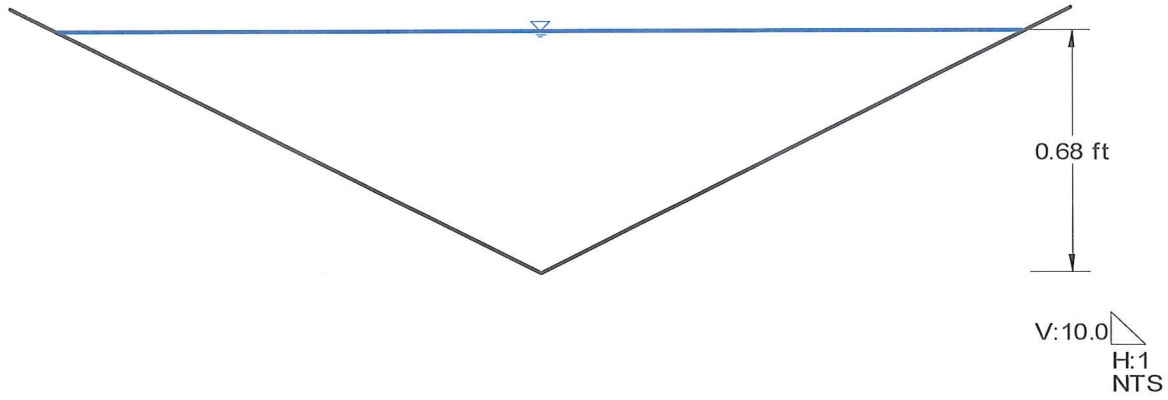
Input Data		
Mannings Coefficient	0.030	
Channel Slope	1.00	%
Left Side Slope	20.00	H : V
Right Side Slope	20.00	H : V
Discharge	22.00	cfs

Results		
Depth	0.68	ft
Flow Area	9.2	ft²
Wetted Perimeter	27.09	ft
Top Width	27.06	ft
Critical Depth	0.60	ft
Critical Slope	1.97	%
Velocity	2.40	ft/s
Velocity Head	0.09	ft
Specific Energy	0.77	ft
Froude Number	0.73	
Flow Type	Subcritical	

Section B - Onsite V Swale
Cross Section for Triangular Channel

Project Description	
Worksheet	Section B - Onsite V Swale
Flow Element	Triangular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data		
Mannings Coefficient	0.030	
Channel Slope	1.00	%
Depth	0.68	ft
Left Side Slope	20.00	H : V
Right Side Slope	20.00	H : V
Discharge	22.00	cfs



Primary Field Inlet Design

SLATER HANIFAN GROUP
CONSULTING ENGINEERS AND PLANNERS

Grate Inlet Headwater Depth Computation

FACILITY DESCRIPTION

Project Name: **Skye Canyon Park - Phase 1**
Date: **Jan-15**
File Name: OLY1401-003 TDS DI Calc.xls
By: **AJH**

Known Information:

Q =	Flow (cfs)	22.0
W =	Width of Grate (ft)	4.00
L =	Length of Grate (ft)	4.00
D =	Diameter of Circle (in)	
Cf =	Clogging Factor (%)	50

Weir Conditions:

$$HW = (Q/(Cw*Pc))^{2/3}$$

Cw =	Weir Coefficient	3.00
P =	Perimeter of grate (ft)	16.0
Pc =	Perimeter (w/clogging) (ft)	8.0
HW =	Headwater depth (ft)	0.94

Orifice Conditions:

$$HW = (Q/(Co*Ac))^2/2*g$$

Co =	Orifice Coefficient	0.67
Ag =	Grate Area (ft^2)	16.00
Gf =	Grate Opening Factor	0.67
Ac =	Grate Open Area (w/ clogging) (ft^2)	5.36
g =	Gravity (fps)	32.20
HW =	Headwater depth (ft)	0.58

Worst Case Scenario Occurs Under Weir Conditions

Headwater Depth = 0.94 ft with grate

Use 4'x4' Jensen Precast drop inlet

5740 S. Arville St., Suite 216 - Las Vegas, NV 89118
Ph. 702-284-5300 - Fx. 702-284-5399

Onsite Storm Drain Design

```
T1 SKYE CANYON PARK - PHASE 1
T2 ULTIMATE CONDITION STORM DRAIN ANALYSIS
T3 30" RCP LATERAL FROM 30" RCP TRUNKLINE IN SKYE VILLAGE DR. TO ONSITE INLETS
SO   1000.0002843.350 30      .013                2845.521
R    1032.0002843.870 30      .013                                                  1
JX   1032.0002843.870 30 30   .013    4.000         2843.660         90.0
R    1056.2002844.150 30      .013                                                  1
JX   1056.2002844.150 30 18   .013    2.000         2845.150         90.0
R    1256.0302851.540 30      .013                                        45.000 1
JX   1256.0302852.540 18 18   .013   22.000         2854.310         90.0
R    1400.5702855.660 18      .013                                        45.000 1
SH   1400.5702855.660 18      .013
CD  18  4   1    .000   1.500     .000  .000  .000   .00
CD  30  4   1    .000   2.500     .000  .000  .000   .00
Q            14.000   .0
```

FILE: 30INCH.WSW W S P G W - EDIT LISTING - Version 14.07 Date: 1-28-2015 Time: 5:53: 4

WATER SURFACE PROFILE - CHANNEL DEFINITION LISTING

CARD CODE	SECT NO	CHN TYPE	NO OF PIER/PIP	AVE PIER WIDTH	HEIGHT 1 DIAMETER	BASE WIDTH	ZL	ZR	INV DROP	Y(1)	Y(2)	Y(3)	Y(4)	Y(5)	Y(6)	Y(7)	Y(8)	Y(9)	Y(10)
CD	18	4	1		1.500														
CD	30	4	1		2.500														

W S P G W

WATER SURFACE PROFILE - TITLE CARD LISTING

HEADING LINE NO 1 IS -

SKYE CANYON PARK - PHASE 1

HEADING LINE NO 2 IS -

ULTIMATE CONDITION STORM DRAIN ANALYSIS

HEADING LINE NO 3 IS -

30" RCP LATERAL FROM 30" RCP TRUNKLINE IN SKYE VILLAGE DR. TO ONSITE INLET

W S P G W

WATER SURFACE PROFILE - ELEMENT CARD LISTING

ELEMENT NO 1 IS A SYSTEM OUTLET	*	*	*											
U/S DATA	STATION	INVERT	SECT							W S ELEV				
	1000.000	2843.350	30							2845.521				
ELEMENT NO 2 IS A REACH	*	*	*											
U/S DATA	STATION	INVERT	SECT			N				RADIUS	ANGLE		ANG PT	MAN H
	1032.000	2843.870	30			.013				.000	.000		.000	1
ELEMENT NO 3 IS A JUNCTION	*	*	*	*			*			*		*		
U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4		INVERT-3	INVERT-4	PHI 3	PHI 4	
	1032.000	2843.870	30	30	0	.013	4.000	.000		2843.660	.000	90.000	.000	
										RADIUS	ANGLE			
										.000	.000			

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

ELEMENT NO 4 IS A REACH	*	*	*											
U/S DATA	STATION	INVERT	SECT			N				RADIUS	ANGLE		ANG PT	MAN H
	1056.200	2844.150	30			.013				.000	.000		.000	1
ELEMENT NO 5 IS A JUNCTION	*	*	*	*			*			*		*		
U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4		INVERT-3	INVERT-4	PHI 3	PHI 4	
	1056.200	2844.150	30	18	0	.013	2.000	.000		2845.150	.000	90.000	.000	
										RADIUS	ANGLE			
										.000	.000			

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

ELEMENT NO 6 IS A REACH	*	*	*											
U/S DATA	STATION	INVERT	SECT			N				RADIUS	ANGLE		ANG PT	MAN H
	1256.030	2851.540	30			.013				.000	.000		45.000	1
ELEMENT NO 7 IS A JUNCTION	*	*	*	*			*			*		*		
U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4		INVERT-3	INVERT-4	PHI 3	PHI 4	
	1256.030	2852.540	18	18	0	.013	22.000	.000		2854.310	.000	90.000	.000	
										RADIUS	ANGLE			
										.000	.000			

W S P G W

WATER SURFACE PROFILE - ELEMENT CARD LISTING

ELEMENT NO 8 IS A REACH	*	*	*											
U/S DATA	STATION	INVERT	SECT			N				RADIUS	ANGLE		ANG PT	MAN H
	1400.570	2855.660	18			.013				.000	.000		45.000	1
ELEMENT NO 9 IS A SYSTEM HEADWORKS			*						*					
U/S DATA	STATION	INVERT	SECT							W S ELEV				
	1400.570	2855.660	18							.000				

SKYE CANYON PARK - PHASE 1
ULTIMATE CONDITION STORM DRAIN ANALYSIS
30" RCP LATERAL FROM 30" RCP TRUNKLINE IN SKYE VILLAGE DR. TO ONSITE I

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/ Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
1000.000	2843.350	1.751	2845.101	42.00	11.44	2.03	2847.13	.00	2.17	2.29	2.500	.000	.00	1 .0
32.000	.0163					.0145	.47	1.75	1.59	1.70	.013	.00	.00	PIPE
1032.000	2843.870	1.789	2845.659	42.00	11.17	1.94	2847.60	.00	2.17	2.26	2.500	.000	.00	1 .0
JUNCT STR	.0000					.0189	.00	1.79	1.53		.013	.00	.00	PIPE
1032.000	2843.870	1.400	2845.270	38.00	13.43	2.80	2848.07	.00	2.08	2.48	2.500	.000	.00	1 .0
8.276	.0116					.0243	.20	1.40	2.22	1.79	.013	.00	.00	PIPE
1040.276	2843.966	1.374	2845.340	38.00	13.75	2.94	2848.28	.00	2.08	2.49	2.500	.000	.00	1 .0
15.924	.0116					.0268	.43	1.37	2.30	1.79	.013	.00	.00	PIPE
1056.200	2844.150	1.322	2845.472	38.00	14.42	3.23	2848.70	.00	2.08	2.50	2.500	.000	.00	1 .0
JUNCT STR	.0000					.0321	.00	1.32	2.47		.013	.00	.00	PIPE
1056.200	2844.150	1.197	2845.347	36.00	15.50	3.73	2849.08	.00	2.03	2.50	2.500	.000	.00	1 .0
80.354	.0370					.0340	2.73	1.20	2.83	1.19	.013	.00	.00	PIPE
1136.554	2847.122	1.234	2848.355	36.00	14.92	3.45	2851.81	.00	2.03	2.50	2.500	.000	.00	1 .0
39.942	.0370					.0303	1.21	1.23	2.68	1.19	.013	.00	.00	PIPE
1176.495	2848.599	1.281	2849.880	36.00	14.22	3.14	2853.02	.00	2.03	2.50	2.500	.000	.00	1 .0
22.959	.0370					.0267	.61	1.28	2.49	1.19	.013	.00	.00	PIPE
1199.455	2849.448	1.330	2850.778	36.00	13.56	2.86	2853.63	.00	2.03	2.49	2.500	.000	.00	1 .0
15.438	.0370					.0235	.36	1.33	2.32	1.19	.013	.00	.00	PIPE

SKYE CANYON PARK - PHASE 1
ULTIMATE CONDITION STORM DRAIN ANALYSIS
30" RCP LATERAL FROM 30" RCP TRUNKLINE IN SKYE VILLAGE DR. TO ONSITE I

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/ Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch

1214.893	2850.019	1.382	2851.401	36.00	12.93	2.60	2854.00	.00	2.03	2.49	2.500	.000	.00	1	.0
11.184	.0370					.0208	.23	1.38	2.15	1.19	.013	.00	.00	PIPE	
1226.077	2850.433	1.437	2851.870	36.00	12.33	2.36	2854.23	.00	2.03	2.47	2.500	.000	.00	1	.0
8.413	.0370					.0184	.15	1.44	2.00	1.19	.013	.00	.00	PIPE	
1234.490	2850.744	1.495	2852.239	36.00	11.75	2.15	2854.38	.00	2.03	2.45	2.500	.000	.00	1	.0
6.451	.0370					.0163	.10	1.50	1.85	1.19	.013	.00	.00	PIPE	
1240.941	2850.982	1.556	2852.539	36.00	11.21	1.95	2854.49	.00	2.03	2.42	2.500	.000	.00	1	.0
4.965	.0370					.0144	.07	1.56	1.72	1.19	.013	.00	.00	PIPE	
1245.905	2851.166	1.622	2852.787	36.00	10.68	1.77	2854.56	.00	2.03	2.39	2.500	.000	.00	1	.0
3.790	.0370					.0128	.05	1.62	1.58	1.19	.013	.00	.00	PIPE	
1249.695	2851.306	1.691	2852.997	36.00	10.19	1.61	2854.61	.00	2.03	2.34	2.500	.000	.00	1	.0
2.806	.0370					.0114	.03	1.69	1.46	1.19	.013	.00	.00	PIPE	
1252.501	2851.410	1.766	2853.175	36.00	9.71	1.47	2854.64	.00	2.03	2.28	2.500	.000	.00	1	.0
1.954	.0370					.0102	.02	1.77	1.34	1.19	.013	.00	.00	PIPE	
1254.455	2851.482	1.847	2853.328	36.00	9.26	1.33	2854.66	.00	2.03	2.20	2.500	.000	.00	1	.0
1.169	.0370					.0091	.01	1.85	1.23	1.19	.013	.00	.00	PIPE	
1255.624	2851.525	1.935	2853.460	36.00	8.83	1.21	2854.67	.00	2.03	2.09	2.500	.000	.00	1	.0
.406	.0370					.0082	.00	1.94	1.11	1.19	.013	.00	.00	PIPE	

♀ FILE: 30INCH.WSW W S P G W - CIVILDESIGN Version 14.07

Program Package Serial Number: 1704

WATER SURFACE PROFILE LISTING

Date: 1-28-2015 Time: 5:53: 7

SKYE CANYON PARK - PHASE 1
ULTIMATE CONDITION STORM DRAIN ANALYSIS
30" RCP LATERAL FROM 30" RCP TRUNKLINE IN SKYE VILLAGE DR. TO ONSITE I

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1256.030	2851.540	2.034	2853.574	36.00	8.42	1.10	2854.67	.00	2.03	1.95	2.500	.000	.00	1 .0
JUNCT STR	.0000					.0128	.00	2.03	1.00		.013	.00	.00	PIPE
1256.030	2852.540	3.008	2855.548	14.00	7.92	.97	2856.52	.00	1.38	.00	1.500	.000	.00	1 .0
144.540	.0216					.0178	2.57	3.01	.00	1.12	.013	.00	.00	PIPE
1400.570	2855.660	2.649	2858.309	14.00	7.92	.97	2859.28	.00	1.38	.00	1.500	.000	.00	1 .0

♀♀

SKYE CANYON PARK - PHASE 1

ULTIMATE CONDITION STORM DRAIN ANALYSIS

30" RCP LATERAL FROM 30" RCP TRUNKLINE IN SKYE VILLAGE DR. TO ONSITE I

```
1000.00    .I         W  C H       E                                          .    R
1008.17    .                                                                  .
1016.35    .                                                                  .
1024.52    .                                                                  .
1032.70    .   I          W C H       E                                       .    JX
1040.87    .   I        W   C H          E                                    .    R
1049.05    .   I        W   C  H         E                                    .    R
1057.22    .     I      W    C H           E                                 .    JX
1065.40    .     I      W    C  H            E                              .    R
1073.57    .                                                                  .
1081.75    .                                                                  .
1089.92    .                                                                  .
1098.10    .                                                                  .
1106.27    .                                                                  .
1114.45    .                                                                  .
1122.62    .                                                                  .
1130.80    .                                                                  .
```

```
1138.97   .                    I      W   C  H          E                    .   R
1147.15   .                                                                 .
1155.32   .                                                                 .
1163.50   .                                                                 .
1171.67   .                                                                 .
1179.85   .                  I      W   C  H          E                    .   R
1188.02   .                                                                 .
1196.20   .                                                                 .
1204.37   .                      I      W   C H         E                   .   R
1212.55   .                                                                 .
1220.72   .                        I       W   C  H       E                 .   R
1228.90   .                           I      W   C  H      E                .   R
1237.07   .                          I       W   C  H     E                 .   R
1245.25   .                            I       W  C  H    E                 .   R
1253.42   .                             I       W C  H    E                 .   R
1261.60   .                             I        W C  H   E                 .   R
1269.77   .                              I       W C  H   E                 .   R
1277.95   .                              I        WC  H   E                 .   R
1286.12   .                              I         WC H   E                 .   R
1294.30   .                              I          W  H  E                 .   JX
```

```
  1302.47    .                                                  I        CH        W     E                 .    R

  1310.65    .                                                                                             .

  1318.82    .                                                                                             .

  1327.00    .                                                                                             .

  1335.17    .                                                                                             .

  1343.35    .                                                                                             .

  1351.52    .                                                                                             .

  1359.70    .                                                                                             .

  1367.87    .                                                                                             .

  1376.05    .                                                                                             .

  1384.22    .                                                                                             .

  1392.40    .                                                                                             .

  1400.57    .                                                                          I       CH      W      E.    R

           2843.350  2844.943  2846.537  2848.130  2849.723  2851.316  2852.910  2854.503  2856.096  2857.689  2859.283
```

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

APPENDIX D

Reference Material

Technical Drainage Study for Skye Canyon – Phase 1 Infrastructure, by SHG

Approval Letter
Street Hydraulic Condition Map
Skye Village Drive Storm Drain Model

Approval Letter

UPDATE TO THE TECHNICAL DRAINAGE STUDY

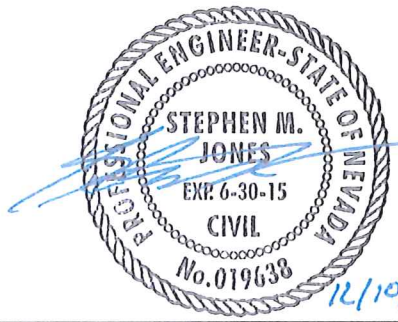
Skye Canyon – Phase 1 Infrastructure

City of Las Vegas, Nevada

Job No.: OLY1401.001
Date: December 2014

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

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



12/10/2014

Steve Jones, P.E.
NV Professional Engineer No. 19638

Assisted By: Erick Mata, E.I.

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM			DATE: January 7, 2015
TO: **Land Development Services** Department of Building & Safety			FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for: **Skye Canyon – Phase 1 Infrastructure - Update**		**COPIES TO:** Slater Hanifan Group
Cross Streets:	NEC of Grand Teton Blvd. & Hualapai Way		K A G Development South, LLC / Ninety-Five Management, LLC
File Number:	F:\Depot\DSMemos\DS4661E.doc		Bart Anderson, P.E., DevCo
Parcel Number:	125-07-301-001 & 125-07-301-002; 125-07-401-001 & 125-07-401-002		CCRFCD
Zoning Action:	TMP-53058		
FEMA Flood Zone	YES	NO X	
Proposed Storm Drain	YES X	NO	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1st Submittal	3/19/2014	4/17/2014	Not Approved	$400.00	351277: $400
2nd Submittal	5/14/2014	6/12/2014	Conditionally Approved	$400.00	356797: $400
Supplemental	8/25/2014	9/15/2014	Approved	----	----
3rd Submittal	11/25/2014	12/10/2014	Approved	$100.00	377769: $100
4th Submittal	12/10/2014	1/7/2015	See Comments Below	$100.00	379537: $100
			TOTAL FEES (LDDRS):	**$1,000.00**	----

REMARKS:

4th Submittal: Update for revision of storm drains alignment in *Grand Canyon Drive, Eagle Canyon Avenue, Mountain Landing Street* and *Hualapai Way*

3rd Submittal: Update for Stockpile Permit Only

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.

The following comments are repeated until they are complete:

1. The *Kyle Canyon Master Drainage Study* is proposing to revise the hydrology and facilities indentified in the *Clark County Regional Flood Control District's (CCRFCD) 2008 Las Vegas Valley Flood Control Master Plan Update*. A *Master Plan Amendment* (MPA) must be submitted to the *City of Las Vegas* for approval. The *City of Las Vegas* will coordinate the MPA submittal to CCRFCD for approval. The Master Developer will be responsible for preparing all submittals needed for CCRFCD along with any and all presentations. The MPU must be approved by the *City of Las Vegas City Council* prior to the final approval of the *Master Drainage Study*.

2. For all culvert entrances or exits located outside of the Public Right-of-Way or dedicated "Public Drainage Easement to be Privately Maintained" 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. Also, show the easement on the grading plan.

3. In an overview perspective for the proposed *Phase 1 Infrastructures*, *Eagle Canyon Avenue (formerly Racel Street)* with its regional storm drain act as the sole perpetuation pathway for offsite flows during a major storm event in the interim condition (reference Sheets GR-01 & GR-02).

   In a worst case scenario that the upstream culvert entrance is completely clogged, ie, the 100-year flow will be conveyed on the *Eagle Canyon Avenue* surface. Provide a hydraulic calculation for the worst case 100-year water surface in *Eagle Canyon Avenue*. The finish floor elevation of future houses in the PODs adjacent to *Eagle Canyon* shall be above the corresponding water surface or flood wall for protection to that effect. This shall serve as a guideline in the future technical drainage studies for the PODs.

4. Provide a detail grading around the culvert entrance at Eagle Canyon Avenue Storm Drain and make sure freeboard requirements are satisfied.

5. All drainage facilities proposed in this *Phase 1 Infrastructure Study* are considered interim facilities and must be maintained by the master developer until the facilities are formally accepted by the *City of Las Vegas.*

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

7. The project proposes to build a temporary drainage facility on the west side of *Hualapai Way*. Prior to final plan approval the developer must complete a ***Maintenance and Liability Agreement*** for the interim drainage improvements (off-site berms or channels) and post a minimum maintenance bond of $50,000 or 50-percent of the construction cost for the improvements, whichever is greater. The engineer must submit an estimate of the quantities for constructing the facility and an exhibit that adequately shows the location and limits of the drainage facility to *Flood Control* for approval. Once the drainage study is conditionally approved, the engineer/developer should contact the *City's Land Development Section* (229-6371) to begin the agreement process.

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

8. **Sheet SD-09**: Review and revise an appeared low point "61.95TC" in *Grand Canyon Drive* at the intersection with *Grand Teton Drive*.

9. Technical drainage studies are required for each of the POD's. The technical drainage studies for the POD's may not be conditional approved until the final approval of the pertinent infrastructure drainage study is obtained.

10. Building permits for the homes within the individual POD's will not be issued until construction of the street and flood control infrastructure around the POD is substantially complete or interim protection is provided per the approved technical drainage study.

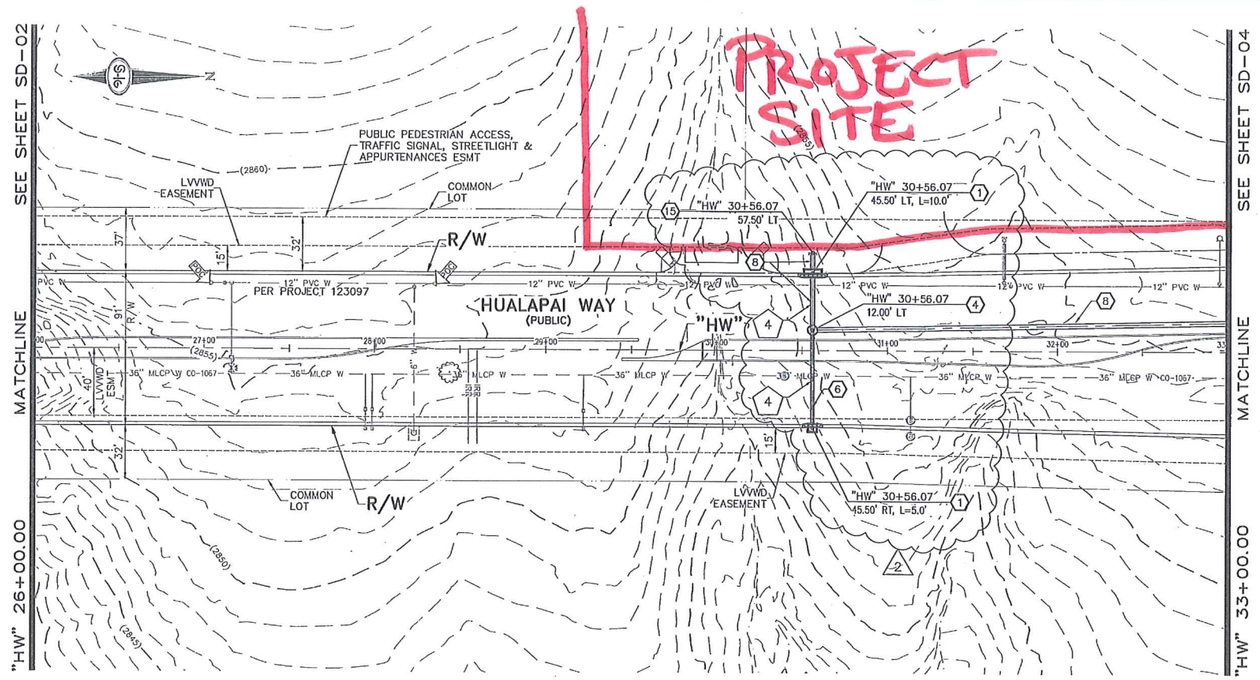
NOTE: Any future changes to the proposed design (or design assumptions) as outlined in the approved drainage study and attached preliminary grading plan which affect drainage must be addressed in a Drainage Study Update and accepted by the *City of Las Vegas Flood Control Section.* Additionally, conditional 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.

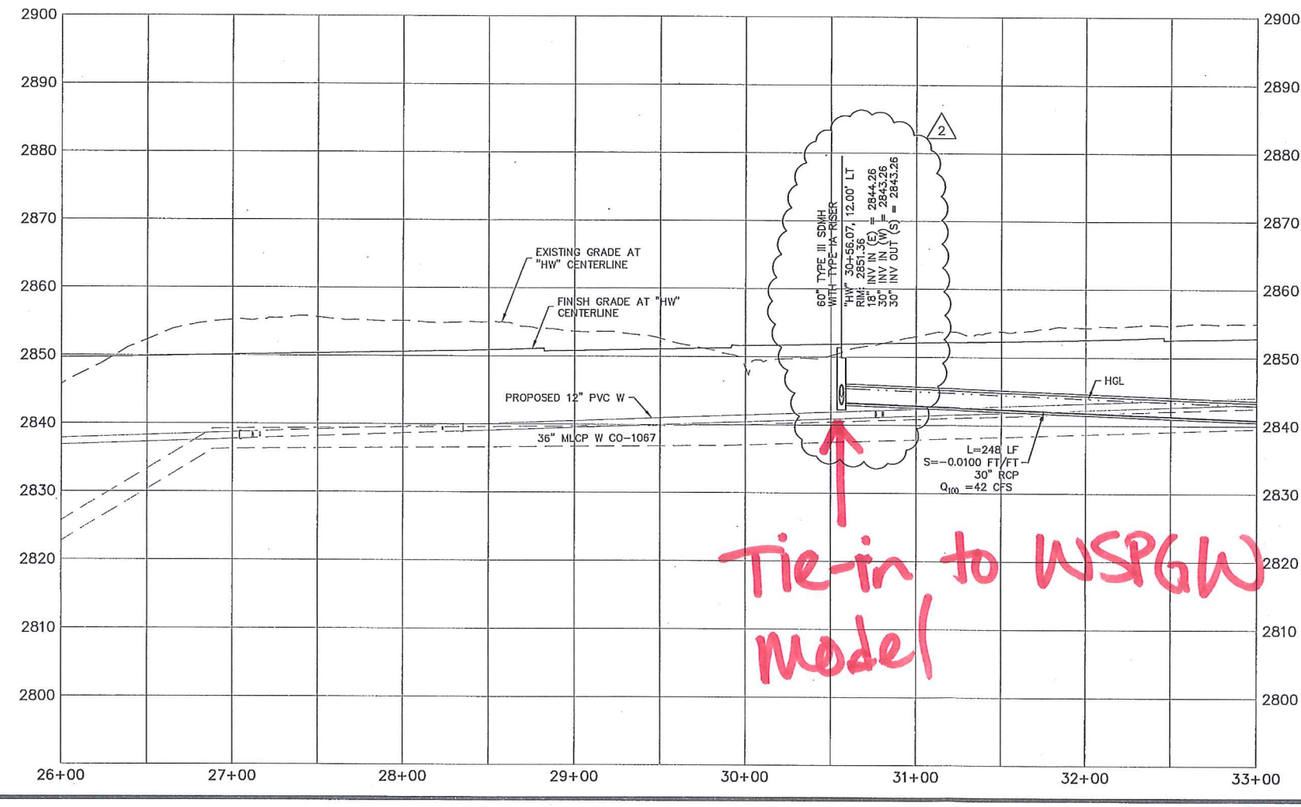
NOTE: Please be advised that all land surface area disturbances over 1 acre or any area adjacent to a water way must submit to the *Nevada Division of Environmental Protection* a "Notice of Intent" to discharge that certifies a stormwater pollution prevention plan has been developed and is maintained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

T/R/S: T19S/R60E/07
AREA G-07

Street Hydraulic Condition Maps





STORM DRAIN NOTES

1. CONSTRUCT TYPE "CM2" DROP INLET (USDCCA STD. DWG. NO. 412.1)
2. CONSTRUCT 60" TYPE I MANHOLE (USDCCA STD. DWG. NO. 403.1)
3. CONSTRUCT 60" TYPE III MANHOLE (USDCCA STD. DWG. NO. 406.1)
4. CONSTRUCT 60" TYPE III MANHOLE WITH TYPE IA RISER (USDCCA STD. DWG. NOS. 404.1 & 406.1)
5. CONSTRUCT RCB ACCESS MANHOLE (TYPE I OR IA MANHOLE ASSEMBLY PER USDCCA STD. DWG. NO. 403 OR 404, USE OF TYPE I OR IA SHALL BE DETERMINED BASED ON FINAL COVER REQUIRED)
6. INSTALL 18" RCP (USDCCA STD. DWG. NO. 503.2)
7. INSTALL 24" RCP (USDCCA STD. DWG. NO. 503.2)
8. INSTALL 30" RCP (USDCCA STD. DWG. NO. 503.2)
9. INSTALL 36" RCP (USDCCA STD. DWG. NO. 503.2)
10. INSTALL 42" RCP (USDCCA STD. DWG. NO. 503.2)
11. INSTALL 48" RCP (USDCCA STD. DWG. NO. 503.2)
12. INSTALL 60" RCP (USDCCA STD. DWG. NO. 503.2)
13. CONSTRUCT PRECAST 8' X 5' RCB (NDOT STD. PLAN B-20.1.8)
14. CONSTRUCT JUNCTION STRUCTURE (SEE STRUCTURAL DETAILS)
15. CONSTRUCT BRICK AND MORTAR PLUG (SEE DETAIL 1, DRAWING SD-06)
16. CONSTRUCT 30" RCP END SECTION (NDOT STD. PLAN R-2.3.1)

NOTES

1. ALL RCP SHALL BE CLASS III UNLESS OTHERWISE SHOWN.
2. ALL PIPE LENGTHS ARE MEASURED ALONG PIPE CENTERLINE TO CENTER OF MANHOLE OR INSIDE EDGE OF DI OR RCB/RCA.
3. ALL DROP INLETS SHALL INCLUDE STORM WATER MANAGEMENT STAMP AND DETAIL PER USDCCA STD. DWG. NO. 421.
4. SEE STRUCTURAL PLANS FOR ADDITIONAL STRUCTURAL DETAILS AND CONNECTIONS.
5. ALL PIPES ARE PUBLICLY MAINTAINED.

DROP INLET NOTE

WHERE 10 FEET PARALLEL SEPARATION IS NOT PRACTICABLE

CAST-IN-PLACE MONOLITHIC POUR WITH WATERSTOP BETWEEN SLAB AND WALLS. BASE, WALLS AND TOP TO BE CONSTRUCTED WITH WATERSTOPS, CENTER BULB, OR FLAT STRIP (VINYLEX, GREENSTREAK PLASTIC PRODUCTS OR APPROVED EQUAL)

LEGEND

(1) STORM DRAIN LATERAL # (SEE SHEET SD-05)

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY DS-4661 ON FILE AT THE CITY OF LAS VEGAS FOR THE SUBJECT PROJECT

JERRY SLATER, P.E. 14167 DATE

FLOOD ZONE

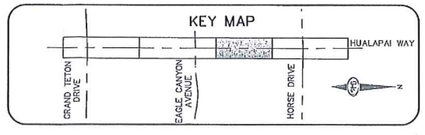
THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE 'X' (OUTSIDE THE 500-YEAR FLOOD PLAIN) ON THE FLOOD INSURANCE RATE MAP (FIRM) PANELS: 32003C1735E, 32003C1745E, 32003C1750E, ALL DATED SEPTEMBER 27, 2002

APPROVED FOR CONSTRUCTION

LVVWD ENGINEERING SERVICES MANAGER DATE

PROJECT NO. 122936 1ST APP'D 10/29/14

KEY MAP



SCALE 40 0 40 80 FEET

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

FAST Call before you UnderGround. 1-702-412-3100 FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

Call before you Dig Avoid hitting underground utility lines. It's easy. Call 811 or 1-800-227-2600

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

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.
1	REVISED STORM DRAIN	11/19/14	JJS		

NINETY-FIVE MANAGEMENT LLC

SKYE CANYON PHASE 1
HUALAPAI WAY
STORM DRAIN PLAN AND PROFILE - "HW" 26+00.00 TO "HW" 33+00.00

DATE: 9/17/14
DRAFTER: SPC
DESIGNER: DAM
CHECKED: JSR

PROJECT NO.
OLY1401-001

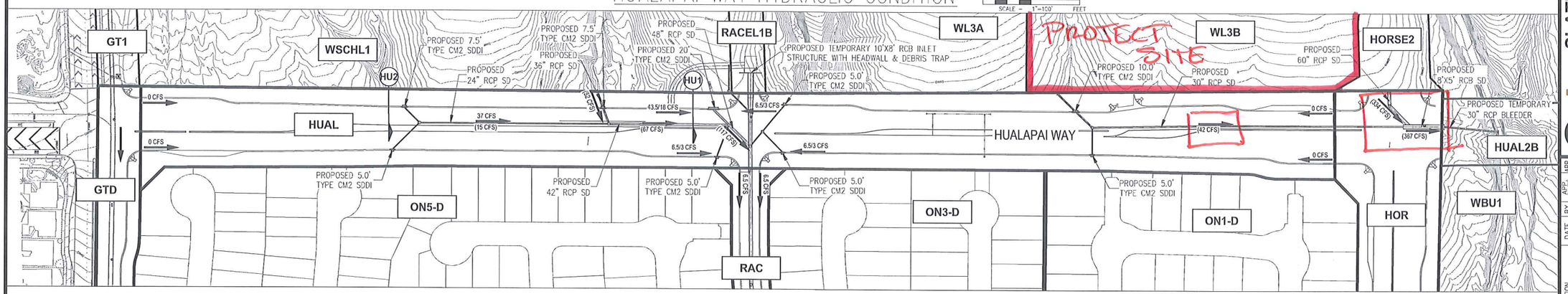
PROFESSIONAL ENGINEER - STATE OF NEVADA - STEPHEN M. JONES - No. 019639 - CIVIL - 9/19/15

SD-03
SHEET 18 OF 36

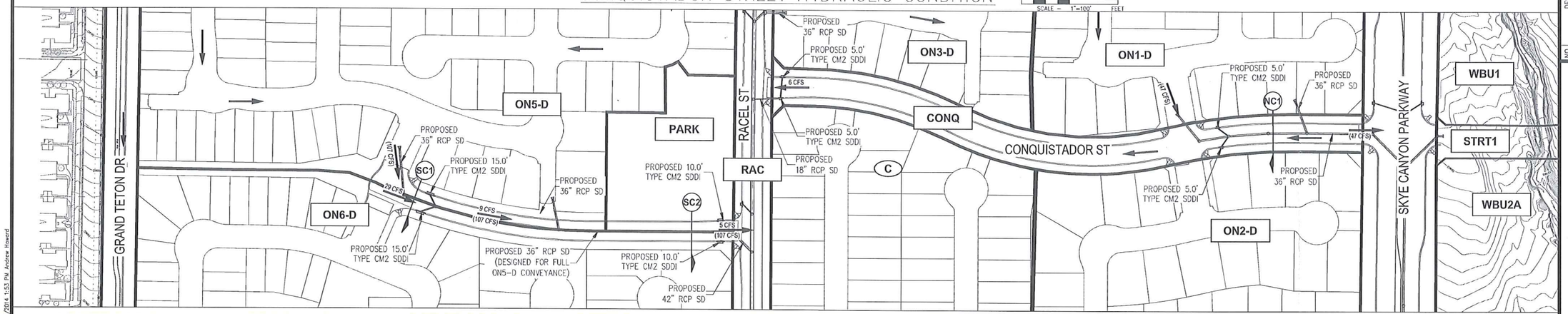
DWG NO. 107V6296-HW
HANSEN NO. 54676

J:\OLY1401\201 Skye Canyon\Admin\Construction Support\Dwg\141114 Raw Center 22\Drawings\Raw Center SD-03.dwg, SD-03, 12/2/2014 4:43:33 PM, dmyers

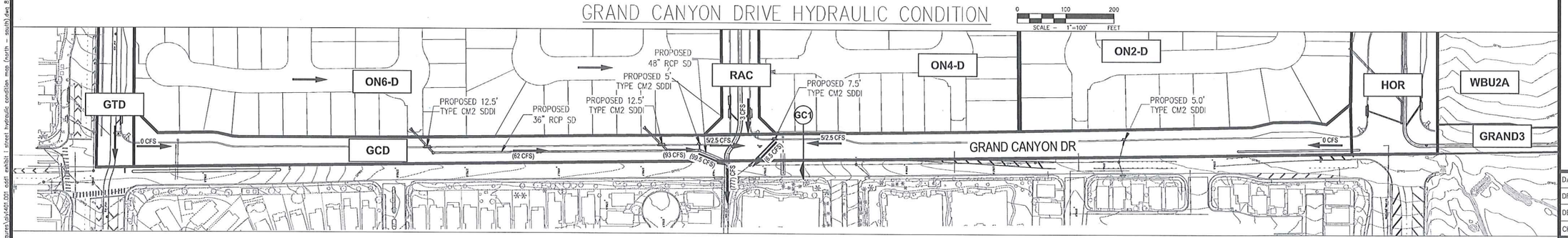
HUALAPAI WAY HYDRAULIC CONDITION



CONQUISTADOR STREET HYDRAULIC CONDITION



GRAND CANYON DRIVE HYDRAULIC CONDITION



10-Year & 100-Year Street Flow Summary
Hualapai Way

Cross Section	Slope (%)	Q_{10} (cfs)	Depth (ft)	Velocity (fps)	DxV	Dry Lane (ft)
HU1 (100-YR)	0.57	43.5	0.83	3.6	2.9	N/A
HU1 (10-YR)	0.57	18	0.63	2.9	1.8	14.0
HU2 (100-YR)	0.57	52	0.88	3.7	3.3	N/A
HU2 (10-YR)	0.57	24	0.69	3.1	2.1	11.0

*MODELED AS HALF STREET

100-Year Street Flow Summary
Conquistador Street

Cross Section	Slope (%)	Q_{100} (cfs)	Depth (ft)	Velocity (fps)	DxV
NC1	0.61	6	0.36	2.1	0.8
SC1	1.59	29	0.51	4.1	2.1
SC2	1.59	13	0.40	3.6	1.4

10-Year & 100-Year Street Flow Summary
Grand Canyon Drive

Cross Section	Slope (%)	Q_{10} (cfs)	Depth (ft)	Velocity (fps)	DxV	Dry Lane (ft)
GC1 (100-YR)	0.50	10	0.54	2.4	1.3	N/A
GC1 (10-YR)	0.50	5	0.44	2.1	0.9	19.5

*MODELED AS HALF STREET

LEGEND
- BASIN BOUNDARY
- ID — BASIN ID
- FLOW DIRECTION
- (ID) — FLOWMASTER SECTION
- XX CFS — 100-YR STREET FLOW
- (XX CFS) — 100-YR STORM DRAIN FLOW

N

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

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT, LLC.

SKYE CANYON - PHASE 1 INFRASTRUCTURE
STREET HYDRAULIC CONDITION MAP
(NORTH/SOUTH STREETS)

DATE: MAY 2014
DRAFTER: AJH
DESIGNER: AJH
CHECKED: SMJ

PROJECT NO.
OLY1401.001

EXHIBIT I
SHEET 2 OF 2

J:\oly1401.001 skye canyon\Engineering\Technical studs\Addendum\Volume1\oly1401.001 addl exhibit I street hydraulic condition map (north - south).dwg, 8/15/2014 11:53 PM, Andrew Howard

Skye Village Drive Storm Drain Model

HUN-MAIN	
WSPG Station	Corresponding Roadway Station
1000	37+75.20
1066	37+10.00
1086	36+90.47
1472	33+04.07
1730	30+46.29

← Tie-in to Skye Canyon Park WSPGW model

1472.00	2840.78	2.11	2842.890	42.0	9.50	1.402	2844.292	0.00	2.171		2.50	0.00	0.00	0	0.00
232.29	0.00996					.009982	2.32			2.110			0.00		

LICENSEE: SLATER HANIFAN GROUP

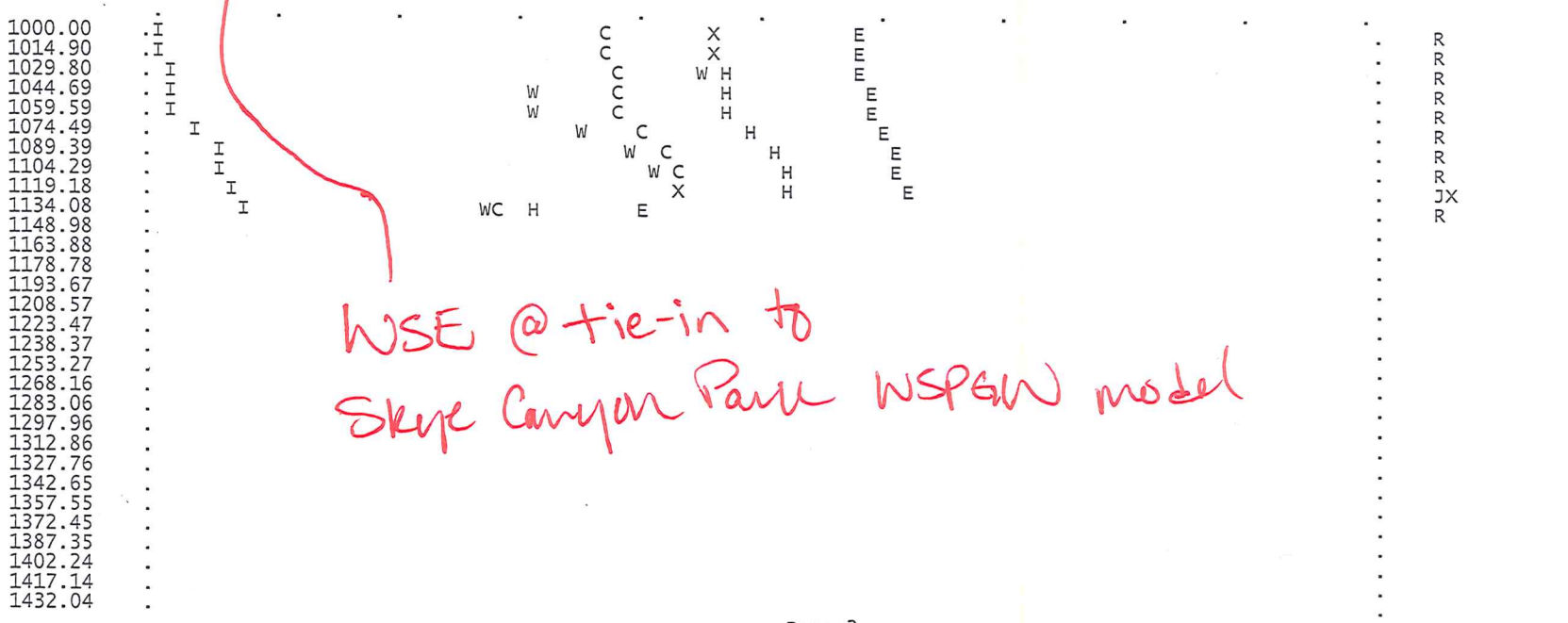
F0515P

WATER SURFACE PROFILE LISTING

SKYE CANYON INFRASTRUCTURE - PHASE 1
BY OLYMPIA COMPANIES
HUALAPAI WAY (NORTH) - TRUNK STORM DRAIN

STATION	INVERT ELEV	DEPTH OF FLOW	W.S. ELEV	Q	VEL	VEL HEAD	ENERGY GRD.EL.	SUPER ELEV	CRITICAL DEPTH		HGT/ DIA	BASE/ ID NO.	ZL	NO PIER	AVBPR
L/ELEM	SO					SF AVE	HF			NORM DEPTH			ZR		
1704.29	2843.09	2.110	2845.204	42.0	9.50	1.402	2846.606	0.00	2.171		2.50	0.00	0.00	0	0.00
25.71	0.00996					.009784	0.25			2.110			0.00		
1730.00	2843.35	2.171	2845.521	42.0	9.28	1.337	2846.858	0.00	2.171		2.50	0.00	0.00	0	0.00

SKYE CANYON INFRASTRUCTURE - PHASE 1
BY OLYMPIA COMPANIES
HUALAPAI WAY (NORTH) - TRUNK STORM DRAIN



WSE @ tie-in to Skye Canyon Park WSPGW model

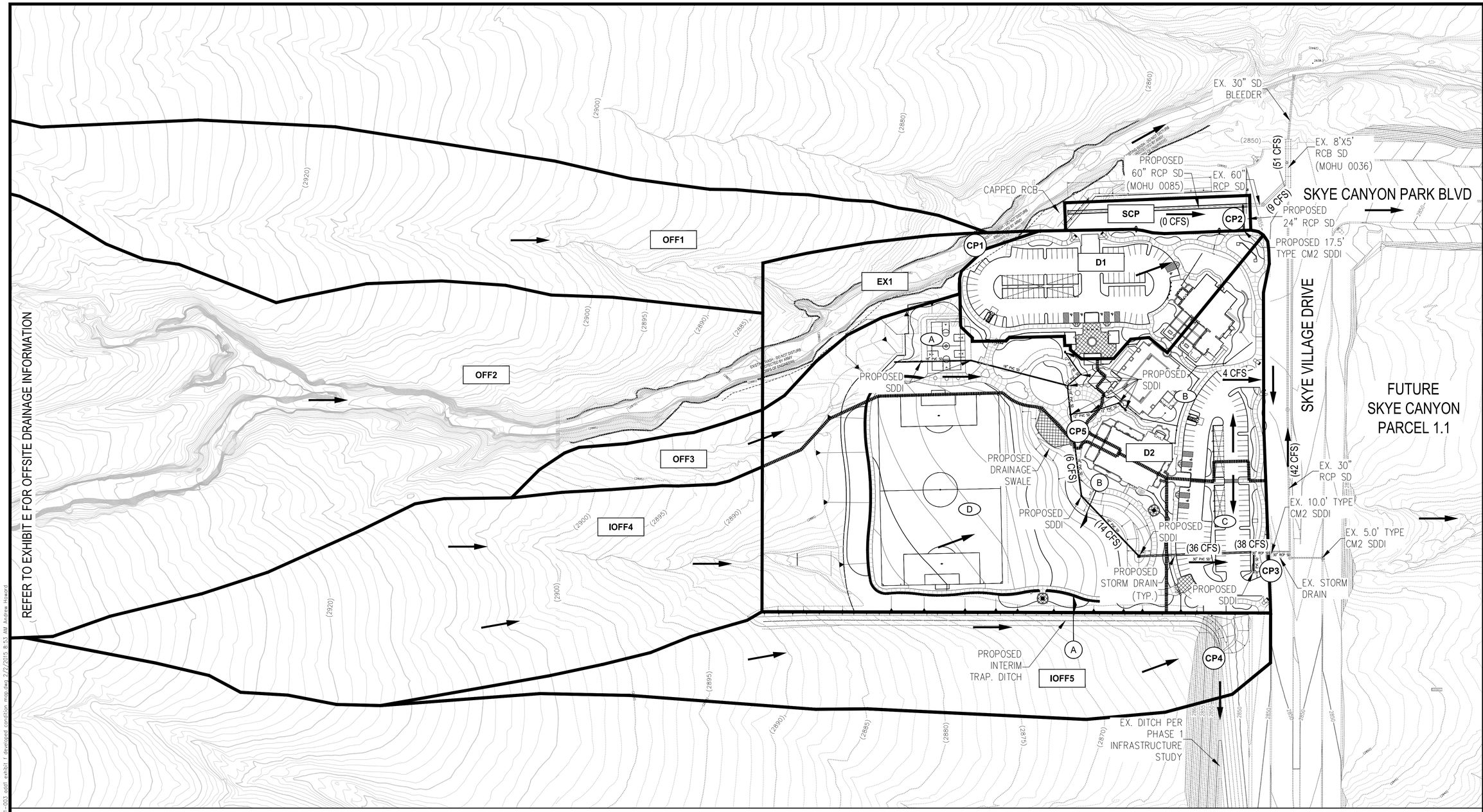
APPENDIX E

Drainage Exhibits

APPENDIX F

Improvement Plans

(REFER TO EXHIBIT E FOR OFFSITE DRAINAGE INFORMATION)



100-Year Interim Ditch Flow Hydraulic Summary

Cross Section ID	Slope (%)	Q_{100} (cfs)	Normal Depth (ft)	Velocity (fps)	Description
A	4.0	26	0.29	5	Earth Lined Trap. Channel; 17-ft Bottom, 3:1 SS, Min. 2.0-ft Depth
B	1.0	22	0.68	2.4	Grass Lined V-Ditch Swale, 20:1 SS, Min. 1.0-ft Depth

Prorated Flow Summary

Basin	Q_{100} (cfs)	Q_{10} (cfs)	Area (acres)	Unit Flow 100 (cfs/acre)	Unit Flow 10 (cfs/acre)
D2	24	9	9.8	2.4	0.9
Subbasin	**Q_{100} (cfs)**	**Q_{10} (cfs)**	**Area (acres)**	**Unit Flow$_{100}$ (cfs/acre)**	**Unit Flow$_{100}$ (cfs/acre)**
A	4	2	1.7	2.4	0.9
B	4	2	1.8	2.4	0.9
C	2	1	1.0	2.4	0.9
D	14	4	5.3	2.4	0.9
TOTAL	***24***	***9***	***9.8***		

Developed Condition Flow Rate Summary

Basin ID	Area (ac)	Q_{100} (cfs)	Q_{10} (cfs)
EX1	1.4	3	1
EX2	1.8	2	1
D1	2.0	7	4
D2	9.6	24	9
OFF1	14.4	31	12
OFF2	277.6	328	125
OFF3	0.8	2	1
IOFF4	6.7	16	7
IOFF5	4.3	10	3
SCP	0.4	1	1
Concentration Point ID	**Area (sq-mi)**	**Q_{100} (cfs)**	**Q_{10} (cfs)**
CP1 *(OFF1 + OFF2 + EX1)*	0.46	338	128
CP2 *(SCP + D1)*	0.00	9	4
CP3 *(OFF3 + IOFF4 + D2)*	0.04	42	17
CP4 *(IOFF5)*	0.01	10	3
CP5 *(OFF3 + D2(A))*	N/A	6	3

LEGEND

- BASIN BOUNDARY
- PRO-RATED SUBBASIN BOUNDARY
- ID — BASIN ID
- (ID) — PRO-RATED SUBBASIN ID
- FLOW DIRECTION
- (ID) — CONCENTRATION POINT
- (ID) — FLOWMASTER SECTION

N

0 80 160
SCALE – 1"=80' FEET

NOTE: INTERIM OFFSITE DITCH IS PROPOSED FOR DEVELOPED CONDITION ONLY AND WILL NO LONGER BE NECESSARY AFTER THE ADJACENT RESIDENTIAL POD IS DEVELOPED.

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

NO.	DESCRIPTION	DATE	BY	APP'D DATE	APP

NINETY-FIVE MANAGEMENT, LLC.

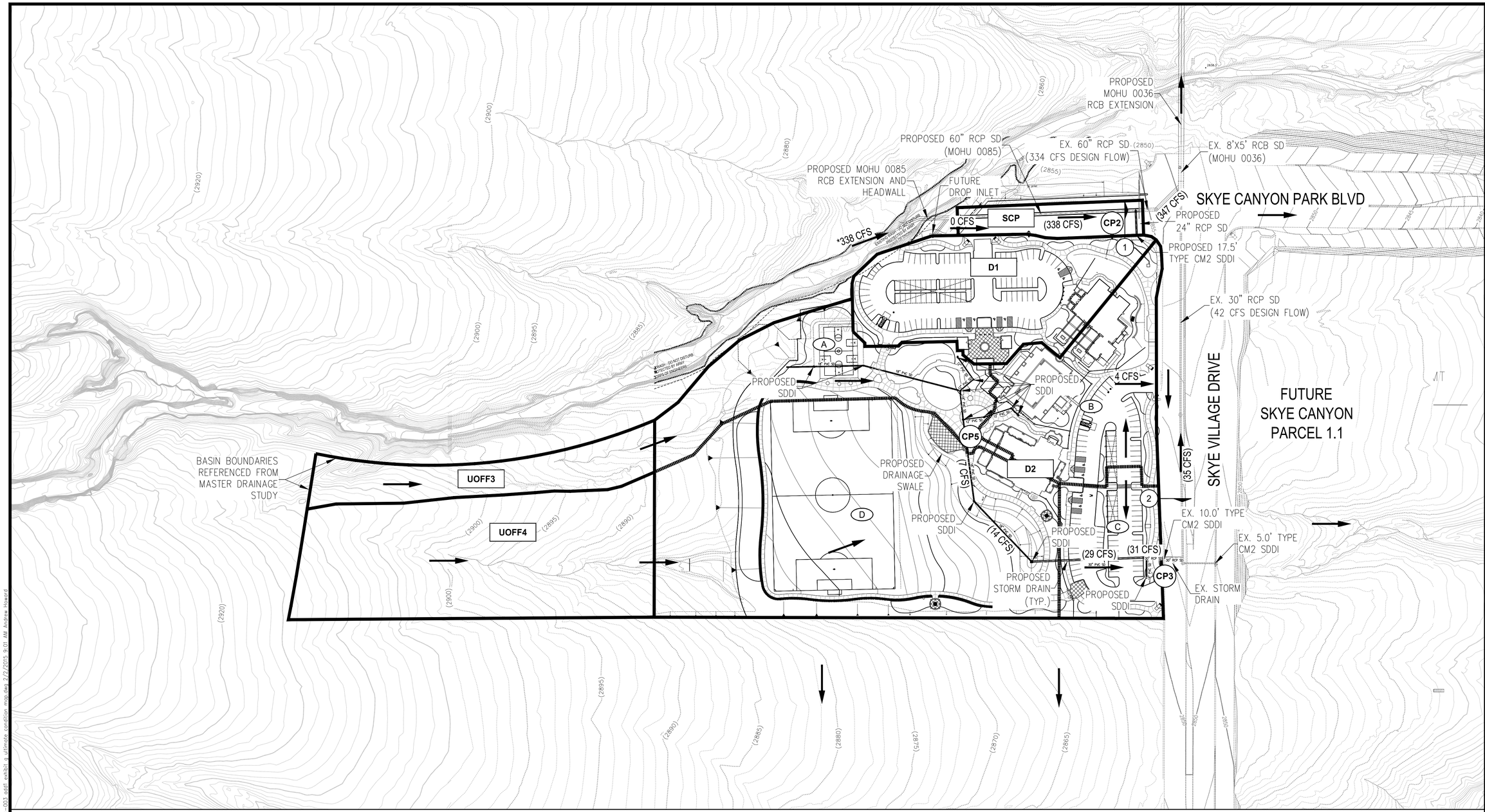
SKYE CANYON PARK - PHASE 1

DEVELOPED CONDITION DRAINAGE MAP

DATE: FEB. 2015
DRAFTER: AJH
DESIGNER: AJH
CHECKED: SMJ
PROJECT NO. OLY1401.003

EXHIBIT F
SHEET 1 OF 1

J:\OLY401-003 skye canyon exc contr\Drainage\Technical study\additional\Figures\OLY401_003 ddf exhibit f developed condition map.dwg 2/2/2015 8:53 AM Andrea Howard



100-Yr Perimeter Street Flow Summary					
Cross Section	Slope (%)	Q_{100} (cfs)	Depth (ft)	Velocity (fps)	DxV
1	0.59	9.0	0.51	2.5	1.3
2	0.50	8.0	0.51	2.3	1.2

Prorated Flow Summary					
Basin	Q_{100} (cfs)	Q_{10} (cfs)	Area (acres)	Unit Flow 100 (cfs/acre)	Unit Flow 10 (cfs/acre)
D2	24	9	9.8	2.4	0.9
Subbasin	**Q_{100} (cfs)**	**Q_{10} (cfs)**	**Area (acres)**	**Unit Flow$_{100}$ (cfs/acre)**	**Unit Flow$_{100}$ (cfs/acre)**
A	4	2	1.7	2.4	0.9
B	4	2	1.8	2.4	0.9
C	2	1	1.0	2.4	0.9
D	14	4	5.3	2.4	0.9
TOTAL	***24***	***9***	***9.8***		

Ultimate Condition Flow Rate Summary			
Basin ID	Area (ac)	Q_{100} (cfs)	Q_{10} (cfs)
D1	2.0	7	4
D2	9.8	24	9
UOFF3	1.0	3	1
UOFF4	3.0	8	3
SCP	0.4	1	1
Concentration Point ID	**Area (ac)**	**Q_{100} (cfs)**	**Q_{10} (cfs)**
CP1 *NOT USED*	N/A	N/A	N/A
CP2 *(SCP + D1)*	N/A	9	4
CP3 *(UOFF3 + UOFF4 + D2)*	N/A	35	13
CP4 *NOT USED*	N/A	N/A	N/A
CP5 *(UOFF3 + D2(A))*	N/A	7	3

LEGEND

- BASIN BOUNDARY
- PRO-RATED SUBBASIN BOUNDARY
- ID — BASIN ID
- (ID) — PRO-RATED SUBBASIN ID
- FLOW DIRECTION
- (ID) — CONCENTRATION POINT
- (ID) — FLOWMASTER SECTION

N

0 80 160

SCALE – 1"=80' FEET

* FLOW RATE OBTAINED FROM SKYE CANYON MASTER DRAINAGE STUDY FLOW AT FACILITY P39AW.

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

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP

NINETY-FIVE MANAGEMENT, LLC.

SKYE CANYON PARK - PHASE 1

ULTIMATE CONDITION DRAINAGE MAP

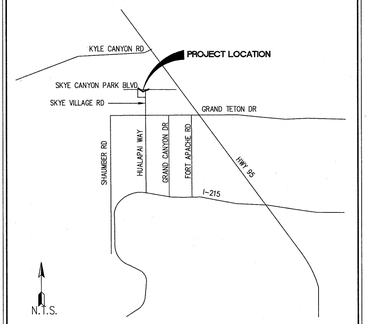
DATE: FEB. 2015
DRAFTER: AJH
DESIGNER: AJH
CHECKED: SMJ
PROJECT NO.
OLY1401.003

EXHIBIT G
SHEET 1 OF 1

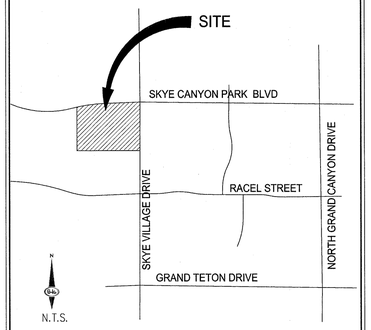
J:\OLY1401-003 skye canyon rcc center\drainage\technical study\addendum\figures\OLY1401-003 add1 exhibit g ultimate condition map.dwg 2/2/2015 9:01 AM Andrew Howard

IMPROVEMENT PLANS FOR
SKYE CANYON PARK PHASE 1
CITY OF LAS VEGAS, NEVADA
A PORTION OF APN:126-12-000-001

VICINITY MAP



KEY MAP



OWNER/DEVELOPER

NINETY-FIVE MANAGEMENT, LLC
11411 SOUTHERN HIGHLANDS PARKWAY
SUITE 300
LAS VEGAS, NV 89141
PHONE: 702-220-6565
CONTACT: MARC BOLDUC

ENGINEER

SLATER HANIFAN GROUP, INC.
5740 S. ARVILLE STREET, SUITE 216
LAS VEGAS, NV 89118
PHONE: (702) 284-5300 FAX: (702) 284-5399
CONTACT: BRENT PARRISH

FEMA FLOOD ZONE DESIGNATION

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE X (AREA OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD EVENT), PER FIRM PANEL 32003C1750E, DATED SEPTEMBER 27, 2002.

BASIS OF BEARING

NORTH 00°26'16" WEST BEING THE BEARING OF THE EAST LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 13, TOWNSHIP 19 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA AS SHOWN ON BY MAP THEREOF ON FILE IN THE CLARK COUNTY'S RECORDER'S OFFICE IN BOOK 118, PAGE 88 OF PLATS.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK 6LV99 13C4

ELEVATION=900.071 METERS
ELEVATION=2952.98 U.S. SURVEY FEET

RIVET & PLATE TOP CURB NE CORNER FARM RD & (ALPINE RIDGE WAY) CRESCENT MTN



Sheet List Table

NO.	SHEET	TITLE
1	C-1	COVER SHEET
2	C-2	GENERAL NOTES SHEET
3	G-1	GRADING PLAN I
4	G-2	GRADING PLAN II
5	G-3	GRADING PLAN III
6	D-1	DETAIL SHEET
7	P-1	PLAN & PROFILE I
8	P-2	PLAN AND PROFILE II

UTILITY SERVICE BY

WATER:	LAS VEGAS VALLEY WATER DISTRICT
SEWER:	CITY OF LAS VEGAS
GARBAGE:	REPUBLIC SERVICES OF NEVADA
POWER:	NV ENERGY
GAS	SOUTHWEST GAS CORP.
COMMUNICATIONS	CENTRAL TELEPHONE COMPANY D/B/A CENTURYLINK

APPROVALS

CITY ENGINEER-DAVID BOWERS PE, PTOE #16736 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 STANDAROS 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

CHRIS KNIGHT, DIRECTOR DATE
BUILDING AND SAFETY DEPARTMENT

THIS PLAN MEETS THE APPLICABLE STANDARDS OF THE PLANNING DEPARTMENT.

CENTRAL TELEPHONE COMPANY D/B/A CENTURYLINK DATE

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

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
PROJECT NO. ---- ---- DATE:
SHEETS:C-1, C-2, MUT, U-1, AND U-2

LVVWD APPROVED FIREFLOW: 1,500 GPM AT 20 PSI RESIDUAL

APPROVAL BY THE FIRE DEPARTMENT HAVING JURISDICTION IS REQUIRED PRIOR TO OBTAINING FINAL APPROVAL FROM THE 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 DATE

COX COMMUNICATIONS LAS VEGAS, INC. DATE

NOTE

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

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL SYSTEMS AND STREET LIGHT SYSTEM CONDUITS. IT'S COSTLY.
Call before you do UnderGround
1-702-455-7511
CLARK COUNTY TRAFFIC OPERATIONS
AND
1-702-229-6611
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION
AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811
1-800-227-2600
AND
CLARK COUNTY TRAFFIC OPERATIONS
1-702-455-7544

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

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

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

CITY OF LAS VEGAS, NEVADA
NINETY-FIVE MANAGEMENT LLC
SKYE CANYON PARK PHASE 1
COVER SHEET
S12 T19 R59E

DATE: 1/15/15
DRAFTER: CS
DESIGNER: DW
CHECKED: DW
PROJECT NO.
OLY1401.003

PROFESSIONAL ENGINEER-STATE OF NEVADA
DAVID D. WILSON
Exp: 6/30/16
CIVIL
No. 8441
2 FEB 2015
DRAINAGE STUDY

C-1
SHEET 1 OF 15

####

J:\oly1401_003 skye canyon res center\dwg\topo\oly1401_003_cvr.dwg 2/2/2015 2:58 PM Christopher Solimon

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 ONLY. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. EXISTING UTILITY SERVICE LATERALS MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND AND OVERHEAD INTERFERENCE'S WHICH MAY AFFECT HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH.

3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING UTILITY LINES, STRUCTURES AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED SATISFACTORY TO THE CITY ENGINEER AND OWNING UTILITY COMPANY AT THE EXPENSE OF THE CONTRACTOR.

4. ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE PLANS, ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.

5. TYPE V CEMENT SHALL BE USED IN ALL OFF-SITE CONCRETE WORK. CONCRETE TO BE 3000 P.S.I. MINIMUM @ 28 DAYS. MIX DESIGNS TO BE APPROVED BY THE CITY, PRIOR TO THE USE ON THE PROJECT.

6. PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.

7. EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300' IN EXTRUDED-TYPE CURB.

8. AC PAVEMENT TO BE ONE-HALF INCH (½") ABOVE LIP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS AND CROSS GUTTERS.

9. CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED PER STANDARD DRAWING 216.

10. SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.

11. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF THE TRANSITIONS TO BE AS SHOWN ON PLANS.

12. ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY GEOTEK RESIDENTIAL, LLC, REPORT #11630-LVR6, 02/14/2014 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.R.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 APRONS, FLOWLINES, AND CROSS GUTTERS UNLESS WRITTEN APPROVAL IS GRANTED BY THE UTILITY COMPANY AND THE CITY ENGINEER. ALL ABOVE GROUND UTILITY APPERTANANCES SHALL CONFORM TO THE REQUIREMENTS OF 19.12.040.

WALL NOTES:
16. 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.

17. ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT OF WAY.

18. CONTRACTOR SHALL ADJUST ALL NEW AND 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.

19. 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.

20. WHEN INSTALLING UNDERGROUND FACILITIES THAT REQUIRE UNDERGROUND LOCATING DEVICES SUCH AS MARKER BALLS, LOCATING RIBBON, ETC, THE CONTRACTOR SHALL PROVIDES 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.

21. SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S) SHALL BE PROVIDED TO THE OFFSITE INSPECTION AND TESTING SECTION PRIOR TO PROJECT ACCEPTANCE AND BOND RELEASE. THE MAP(S) SHALL INCLUDE THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES, STORM DRAIN LATERALS & THE CONNECTION TO THE STORM DRAIN MAIN AND AT THE CONNECTION TO A DROP INLET, AND THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS EXITS THE PUBLIC RIGHT-OF-WAY. THE LOCATION SHALL BE DESCRIBED BY STATE PLANE COORDINATES WHICH SHALL BE BASED ON THE "NEVADA COORDINATE SYSTEM OF 1983, EAST ZONE" AS DEFINED BY THE NEVADA REVISED STATUTES CHAPTER 327, AND TIED TO THE CITY OF LAS VEGAS VERTICAL CONTROL BENCHMARK NETWORK. COORDINATES MUST BE CERTIFIED BY A NEVADA PROFESSIONAL LAND SURVEYOR TO HAVE POSITIONAL CERTAINTIES OF +/- 0.1 METER (+/- 0.3 FEET). A SEPARATE ELECTRONIC COMA DELIMITED FILE FOR THE SANITARY SEWER AND STORM DRAIN COORDINATES SHALL ALSO ACCOMPANY THE SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S).

22. STORM DRAIN LATERALS REQUIRE THE INSTALLATION OF A MARKER BALL AT THE CONNECTION OF THE STORM DRAIN LATERAL TO THE STORM DRAIN MAIN AND WHERE THE STORM DRAIN LATERAL EXITS THE PUBLIC RIGHT-OF-WAY OR WHERE THE STORM DRAIN LATERAL CONNECTS TO A DROP INLET. THE MARKER BALL SHALL BE 3M 4" MARKER BALL 1404-XR OR APPROVED EQUAL.

23. 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.

24. A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.

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 "C" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.

4. POLYVINYL (PVC) SEWER PIPE SHALL MEET ASTM D-3034 SDR 35 SPECIFICATIONS, INSTALLED WITH SAND BEDDING AND BACKFILL OF TYPE II AGGREGATE BASE.

5. ALL MANHOLES PAVED IN STREETS EIGHTY (80') FOOT R/W AND LARGER SHALL HAVE CONCRETE COLLARS. STREETS LESS THAN EIGHTY (80') FOOT R/W WILL REQUIRE RETROFIT IF PAVING DOES NOT CONFORM TO CITY STANDARDS AT THE MANHOLE.

6. TEE SADDLES SHALL BE USED TO CONNECT SEWER LATERALS TO EXISTING MAIN LINES UP TO TWELVE INCH (12") DIAMETER. CONNECTIONS TO FIFTEEN INCH (15") OR LARGER MAINS SHALL REQUIRE SPECIAL PROCEDURES. IN LINE "Y" S SHALL BE USED ON LINES TWELVE INCHES (12") OR ABOVE.

7. WATER MAINS SHALL BE PROTECTED IN ACCORDANCE WITH LVVWD STANDARDS WHENEVER A SEWER MAIN CROSSES OVER A WATER MAIN OR THE SEWER IS LESS THAN EIGHTEEN INCH (18") UNDER A WATER MAIN.

8. ALL CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CITY OF LAS VEGAS MUST BE STATE OF NEVADA CLASS "A" CONTRACTORS.

9. THE CITY OF LAS VEGAS WILL NOT ACCEPT ANY SEWER MAINS WHICH HAVE A VERTICAL DEFLECTION OF MORE THAN ONE TENTH (0.1) OF A FOOT FROM THE APPROVED CONSTRUCTION PLANS AT ANY LOCATION. SEWER MAINS FOUND TO EXCEED THIS TOLERANCE WILL HAVE TO BE REPAIRED OR REMOVED OR REPLACED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO ACCEPTANCE BY THE CITY OF LAS VEGAS.

10. INSTALLATION OF CURVED SEWER REQUIRES THE USE OF C-900 PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.

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 GRINDING 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 THE 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 DIAMOND GRADE VIP 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 UNDER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.

9. STREET SIGNS AND STOPS 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 ON HAND AT THE WORK SITE. SAFETY 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, ONCE BEGUN, 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 EVENTS UNIT (PHONE # 828-3442) 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 DEPICTING 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, AND THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST REVISION, AND ANY ADOPTED SPECIAL AREA STANDARDS.

2. NO DEVIATION OF STREET LIGHT, PULL BOX, CONDUITS (ETC.) LOCATIONS SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF TRAFFIC ENGINEERING AND THE CITY ENGINEER.

3. ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION.

4. ALL STREET LIGHTING CONDUITS STUB SHALL HAVE AT LEAST ONE GREEN #8 THW WIRE INSTALLED, AS TRACER WIRE. WHEN "EMPTY" CONDUIT IS COMPLETELY INSTALLED FROM PB TO PB, IT SHALL HAVE MINIMUM OF 2 #4 AND 1 #8 THW WIRE WITH THE ENDS TAPED OR "SAFE OFF" PRIOR TO FINAL INSPECTION.

5. ANY STRUCTURE SUCH AS BLOCK WALLS, CHAIN LINK FENCES, RETAINING WALLS, ETC., SHALL LEAVE A MINIMUM CLEARANCE IN ACCORDANCE WITH THE USD NO. 326A.

6. AS-BUILT DRAWINGS SHALL BE SUPPLIED TO THE TEFO PRIOR TO ANY PRE-FINAL INSPECTION. THE ASBUILT DRAWING NEEDS TO BE STAMPED AS-BUILT AND SIGNED BY THE PREPARER.

7. SERVICE POINT SHALL BE COORDINATED WITH NV ENERGY COMPANY, AND WHEREVER POSSIBLE, BE LOCATED NEAR THE CENTER OF THE CIRCUIT. SERVICE POINTS SHALL BE SHOWN ON THE CIVIL PLANS.

8. IT SHALL BE ASSUMED THAT IN THE ABSENCE OF AN EXISTING, WORKABLE CIRCUIT TO ATTACH TO, ALL INSTALLATIONS SHALL REQUIRE A NEW SERVICE FOR OPERATION OF THE CIRCUIT.

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, AT NO EXPENSE TO THE CITY OF LAS VEGAS, BEFORE STREETLIGHT BASES ARE INSTALLED.

10. THE CONTRACTOR SHALL FURNISH COMPLETE SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON PLANS.

11. THE DEVELOPER/OWNER WILL BE REQUIRED TO SUPPLY POWER TO ALL NEW PUBLIC STREET LIGHTS INSTALLED UNDER THIS DESIGN PRIOR TO BOND RELEASE OR PROJECT COMPLETION. THE DEVELOPER/OWNER WILL BE RESPONSIBLE FOR ALL ITEMS ASSOCIATED WITH THE INSTALLATION, CONSTRUCTION, ENERGIZING, MAINTENANCE AND OPERATIONAL COST OF SAID STREET LIGHTS PRIOR TO PROJECT COMPLETION. REFER TO THE PLAN FOR ANY NEW SERVICE REQUIREMENTS. THE TRANSFER OF OWNERSHIP FROM THE DEVELOPER/OWNER TO THE CITY OF LAS VEGAS FOR ALL NEW PUBLIC STREET LIGHT/S AND/OR SERVICE/S INSTALLED UNDER THIS PLAN DESIGN WILL BE IN CONJUNCTION WITH THIS PROJECT COMPLETION. COORDINATE ALL MAINTENANCE AND OPERATIONAL TRANSFERS WITH THE CITY OF LAS VEGAS TRAFFIC ENGINEERING DEPARTMENT (TEFO) AT (702) 229-6331.

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 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.

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 # 6124 FOR HYDRANT SPECIFICATIONS AND HYDRANT INSTALLATION SPECIFICATIONS. AUTHORIZED FIRE HYDRANTS ARE AS FOLLOWS;

- KENNEDY – GUARDIAN MODELS K81A AND K81D
- MUELLER– SUPER CENTURION 250, MODEL A-423
- CLOW – MEDALLION MODEL F-2546LVD
- U.S.PIPE – METROFLOW/M-03

2. 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.

3. 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. SNFC #6124, SECTION 1412.

4. TO IDENTIFY THE FIRE HYDRANT LOCATIONS, THE CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT THE CENTER LINE OF THE STREET ADJACENT TO THE FIFE HYDRANTS. SNFC #6124 SECTION 507.5.7.3

5. 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

6. 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. SNFC 507.2.1, NFPA 24

7. PAINTING OF CURBS, FIRE HYDRANTS, PADS, PROTECTION OF FIRE HYDRANTS FROM PHYSICAL DAMAGE, AND ALL OTHER WORK NECESSARY PER PLANS SHALL BE COMPLETED BEFORE APPROVAL BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION IFC 507; SNFC 507.5.7

8. PRIVATE HYDRANTS SHALL BE PAINTED RED. SNFC 507.5.7.1

9. PRIOR TO THE FINAL OCCUPANCY, A FIRE FLOW TEST SHALL BE WITNESSED BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW. IFC 507; SNFC 507.1

10. FIRE HYDRANT SPACING SHALL BE AS FOLLOWS: SNFC C102

- RESIDENTIAL– 500 FT UNSPRINKLERED; 600 FT SPRINKLERED.
- COMMERCIAL– 300 FT UNSPRINKLERED; 400 FT SPRINKLERED.

11. WHERE THE 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 1000 FT SPACING, TO PROVIDE FOR TRANSPORTATION HAZARDS. WHERE STREETS ARE PROVIDED WITH MEDIAN DIVIDERS OR HAVE FOUR (4) OR MORE TRAFFIC LANES AND HAVE A TRAFFIC COUNT OF MORE THAN 30,000 PER DAY, HYDRANTS ARE REQUIRED ON EACH SIDE OF THE STREET SPACED AT 500 FT ON AN ALTERNATING BASIS. SNFC C102.14

12. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE RADIUS OF A CUL-DE-SAC OR WITHIN 20 FT OF THE PERIMETER OF THE RADIUS OF THE CUL-DE-SAC.

13. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN 6 FT OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREETLIGHT OR ANY OTHER OBSTRUCTION. SNFC C102.12

14. A MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A ONE-TWO FAMILY DWELLING SHALL NOT EXCEED 300 FT, AS MEASURED BY AN APPROVED ROUTE. SNFC 102.4

15. THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A FIRE DEPARTMENT CONNECTION (FDC) SHALL NOT EXCEED 100 FT, AS MEASURED BY AN APPROVED ROUTE. SNFC C1 02.7

16. THE MAXIMUM DISTANCE FROM A HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. SNFC 102.6

17. TWO (2) SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE IS 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.

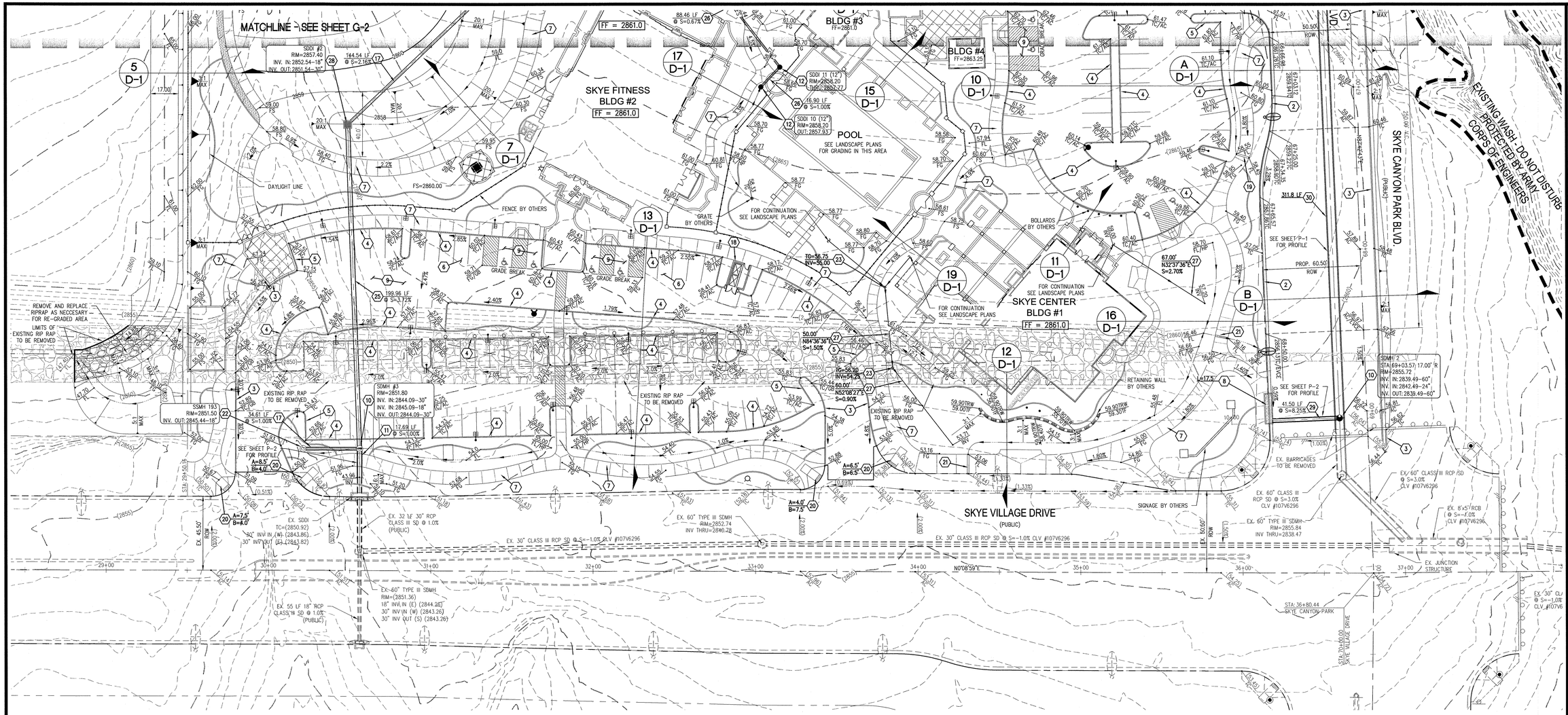
18. ALL FIRE APPARATUS ACCESS ROADS SHALL BE PAVED TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES, AND SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF THE FIRE APPARATUS. SNFC 503.2.3

19. THE GRADIENT FOR THE FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 12% ANGLES OF APPROACH AND ANGLES OF DEPARTURE SHALL NOT EXCEED 6% FOR 25 FT PRIOR TO OR AFTER THE GRADE CHANGE. ADJACENT TO THE STRUCTURES GRADIENT SHALL NOT EXCEED 6% SNFC 503.2.7 / 503.2.8

20. THE TURNING RADIUS OF THE FIRE APPARATUS ACCESS ROADS SHALL BE NO LESS THAN 52 FT OUTSIDE AND 28 FT INSIDE TURNING RADIUS. SNFC 503.2.4

21. VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL NOT BE LESS THAN 13 FT 6 INS. SNFC 503.2.1.1 IFC 503

22. FIRE DEPARTMENT ACCESS ROADS IN ALL RESIDENTIAL DEVELOPMENTS (EXCEPT APARTMENT BUILDINGS) SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF NOT LESS THAN 36 FT FLOW LINE TO FLOW LINE (THIS WIDTH MAY BE REDUCED TO 24 FT IF ALL BUILDINGS FRONTING THE STREET ARE SPRINKLERED) FOR MAIN RESIDENTIAL STREETS, WITH PAR



GRADING QUANTITIES

EARTHWORK QUANTITIES (RAW):
-CUT = XXXXX CUBIC YARDS.
-FILL = XXXXX 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.
D. ALL ONSITE GRADING SHALL COMPLY WITH THE CONDITIONS SET FORTH IN THE GEOTECHNICAL REPORT REFERENCED ON SHEET C-2.

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 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 ANY ACTUAL RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12.

5. ACCUMULATED SEDIMENT IN BMPS SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

FEMA FLOOD ZONE DESIGNATION

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE X (AREA OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD EVENT), PER FIRM PANEL 32003C1750E, DATED SEPTEMBER 27, 2002.

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 PRIOR TO THE PLACEMENT OF TYPE II AND CURB.

NOTES

1. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS OF EXISTING STRUCTURES INCLUDING LOCATION, ELEVATION, DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
2. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION DURING CONSTRUCTION THROUGH THE USE OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
3. MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON THE GEOTECH REPORT.
4. SEE DETAIL SHEET D-1 FOR STREET SECTIONS AND DETAILS.
5. SEE SHEET C-2 FOR LEGEND.
6. ADD 2800 TO PLAN GRADES WITH THE EXCEPTION OF FINISHED FLOORS AND EXISTING AND PROPOSED CONTOURS.
7. CONTRACTOR TO VERIFY ALL HANDICAP ACCESSIBLE ROUTES AND PARKING STALLS ARE IN CONFORMANCE WITH A.D.A ACCESSIBILITY GUIDELINES AND DO NOT EXCEED MAXIMUM SLOPES IN ANY DIRECTION PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCIES.
8. CONSTRUCT A.D.A. ROUTE, HAND RAILS, PARKING, SIGNAGE & RAMPS TO COMPLY WITH ICC/ANSI A117.1-2003
9. ALL ON-SITE STORM DRAINS AND THE ASSOCIATED FACILITIES ARE PRIVATELY OWNED AND MAINTAINED.
10. ANY FUTURE DEVELOPMENT WILL REQUIRE A TECHNICAL DRAINAGE STUDY UPDATE.
11. CONCRETE SIDEWALKS SHALL NOT EXCEED 5% IN A LONGITUDINAL DIRECTION OR 2% IN A CROSS SLOPE DIRECTION. ANY CONCRETE SIDEWALK LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION AND SHALL BE A MINIMUM OF 5 FEET BY 5 FEET.

CONSTRUCTION NOTES

1. CONSTRUCT AC PAVEMENT OVER TYPE II AGGREGATE BASE. SEE SOILS REPORT FOR SECTION.
2. CONSTRUCT "L" TYPE CURB PER CCAUSD DWG No. 216
3. CONSTRUCT "A" TYPE CURB PER CCAUSD DWG No. 219
4. CONSTRUCT "DEPRESSED" TYPE CURB PER DETAIL 1, SHEET D-1
5. CONSTRUCT 10' CURB TRANSITION, SEE DETAIL 3, SHEET D-1
6. CONSTRUCT AC PARKING AREA. SEE SOILS REPORT FOR SECTION.
7. CONSTRUCT 4" THICK CONCRETE SIDEWALK OVER 5" MIN TYPE II AGG. BASE. WIDTH PER PLAN. SEE LANDSCAPE PLAN FOR FINISH.
8. CONSTRUCT "TYPE CM2" DROP INLET, LENGTH PER PLAN, PER CCAUSD DWG NO. 412.1 & 421
9. CONSTRUCT HANDICAPPED VAN ACCESSIBLE PARKING STALL IN ACCORDANCE WITH ADA STANDARDS.
10. INSTALL 48" TYPE II STORM DRAIN MANHOLE PER CCAUSD NO. 401 & 405
11. INSTALL 30" RCP CLASS III SD, LENGTH PER PLAN
12. INSTALL NYLOPLAST DRAIN BASIN, OR APPROVED EQUAL W/ GRATED AND LOCKING LID ASSEMBLY, SIZE PER PLAN.
13. INSTALL BUMPER BLOCKS PER CCAUSD DWG No. 238
14. CHILD PLAY AREA. SEE LANDSCAPE PLANS FOR CONSTRUCTION MATERIALS AND HORIZONTAL DIMENSIONS.
15. SOCCER FIELD. SEE LANDSCAPE PLANS FOR HORIZONTAL DIMENSIONS AND STRIPING DETAILS.
16. BASKETBALL COURT. SEE LANDSCAPE PLANS FOR HORIZONTAL DIMENSIONS AND STRIPING DETAILS.
17. INSTALL 18" SDR-35 PVC SD, LENGTH PER PLAN
18. CONSTRUCT TRASH ENCLOSURE. SEE ARCHITECTURAL PLANS FOR CONSTRUCTION MATERIALS AND DETAILS.
19. INSTALL ZURN TRENCH DRAIN OR APPROVED EQUAL, SEE DETAIL 2, SHEET D-1
20. CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT CCAUSD NO. 235, CASE II & 235.1
21. INSTALL SIDEWALK UNDER DRAIN PER CCAUSD DWG NO. 236
22. INSTALL 48" TYPE I STORM DRAIN MANHOLE W/ BEEHIVE GRATE AND FRAME, NEENAH R-2560 SERIES OR EQUAL PER CCAUSD NO. 401 & 403
23. INSTALL NYLOPLAST DRAIN BASIN, OR APPROVED EQUAL W/ DOME GRATE AND LOCKING LID ASSEMBLY, SIZE PER PLAN.
24. INSTALL BRICK AND MORTAR CAP, PER DETAIL 20, SHEET D-1
25. INSTALL 30" SDR-35 PVC SD, LENGTH PER PLAN
26. INSTALL 12" SDR-35 PVC SD, LENGTH PER PLAN
27. INSTALL 6" SDR-35 PVC SD, LENGTH PER PLAN

SEE SHEET C-2 FOR ABBREVIATIONS AND QUANTITIES

CONSTRUCTION NOTES

28. INSTALL 4'x4' JENSEN PRECAST DROP INLET DI4848
29. INSTALL 24" RCP CLASS III SD, LENGTH PER PLAN
30. INSTALL 60" RCP CLASS III SD, LENGTH PER PLAN

SEE SHEET C-2 FOR ABBREVIATIONS AND QUANTITIES

BASIS OF BEARING

NORTH 00°26'16" WEST BEING THE BEARING OF THE EAST LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 13, TOWNSHIP 19 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA AS SHOWN ON BY MAP THEREOF ON FILE IN THE CLARK COUNTY'S RECORDER'S OFFICE IN BOOK 118, PAGE 88 OF PLATS.

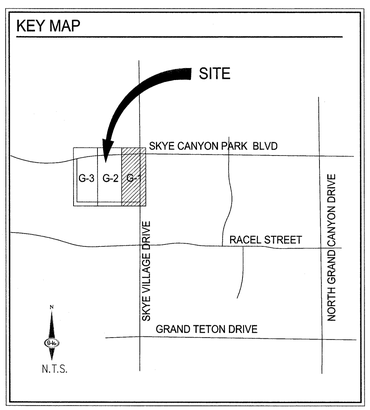
BENCHMARK

CITY OF LAS VEGAS BENCHMARK 6LV99 13C4

ELEVATION=900.071 METERS
ELEVATION=2952.98 U.S. SURVEY FEET

RIVET & PLATE TOP CURB NE CORNER FARM RD & (ALPINE RIDGE WAY) CRESCENT MTN

KEY MAP



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

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811
1-800-227-2600
AND
CLARK COUNTY TRAFFIC OPERATIONS
1-702-455-6000

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL SYSTEMS AND STREET LIGHT SYSTEM CONDUITS. IT'S COSTLY.
Call before you do UnderGround
1-702-455-6000
CLARK COUNTY TRAFFIC OPERATIONS
AND
1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

SCALE – 1"=30' (0, 30, 60 FEET)

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

NO.	DESCRIPTION	DATE	BY	APP.	APP. DATE

CITY OF LAS VEGAS, NEVADA

NINETY-FIVE MANAGEMENT LLC

SKYE CANYON PARK PHASE 1

GRADING PLAN I

S12 T19 R59E

DATE: 1/15/15
DRAFTER: CS
DESIGNER: DW
CHECKED: DW
PROJECT NO.
OLY1401.003

NEVADA STATE OF PROFESSIONAL ENGINEER
DAVID D. WILSON
Exp: 12/31/16
CIVIL
No. 8441
02 Feb 2015
DRAINAGE STUDY

G-1
SHEET 3 OF 15

####

J:\oly1401_003_skye canyon\c_cards\Vanpro\oly1401.003_grdpln 2/2/2015, 5:51 PM, Christopher Salmon

MATCHLINE - SEE SHEET G-3

MATCHLINE - SEE SHEET G-1

DAYLIGHT LINE

FENCE BY OTHERS

EXISTING WASH - DO NOT DISTURB PROTECTED BY ARMY CORPS OF ENGINEERS

SIDEWALK RETAINING W/ GUARDRAIL BY OTHERS

INSTALL PORTABLE CONCRETE BARRIER RAIL PER CCAUSD NO. 602 W/ TYPE III BARRICADE & RED AND WHITE STRIPING (LENGTH 80 FT) AND RII-2 "ROAD CLOSED" SIGN

TOT LOT GRADING BY OTHERS

SPLASHPAD GRADING BY OTHERS

SKYE CANYON PARK BLVD

BLDG #6 FF=2863.25

BLDG #5 FF=2863.25

BLDG #4

BLDG #3 FF=2861.0

FF = 2861.0

SDDI 7 (18") RIM=2866.10 THRU: 2861.68

SDDI 6 (18") RIM=2864.80 THRU: 2861.02

SDDI 5 (18") RIM=2860.50 THRU: 2857.50

SDDI 9 (12") RIM=2861.00 THRU: 2858.28

SDDI 8 (12") RIM=2860.20 THRU: 2857.80

SDDI #3 (18") RIM=2859.80 THRU: 2855.66

SDDI 13 (18") RIM=2860.45 THRU: 2856.63

SDDI 12 (12") RIM=2860.20 THRU: 2857.18

SDDI #2 RIM=2857.40

47.53 LF @ S=1.00%

86.00 LF @ S=1.00%

173.28 LF @ S=2.03%

30.12 LF @ S=1.00%

47.51 LF @ S=1.00%

36.66 LF @ S=1.91%

6.94 LF @ S=1.00%

107.26 LF @ S=1.00%

144.54 LF @ S=2.16%

88.46 LF @ S=0.67%

144.54 LF

311.8 LF

FS=2863.8

SS8"S 101°E, R=8.00'

GRADING QUANTITIES

EARTHWORK QUANTITIES (RAW):
-CUT = XXXXX CUBIC YARDS.
-FILL = XXXXX 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.
D. ALL ONSITE GRADING SHALL COMPLY WITH THE CONDITIONS SET FORTH IN THE GEOTECHNICAL REPORT REFERENCED ON SHEET C-2.

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 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 ANY ACTUAL RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12.

5. ACCUMULATED SEDIMENT IN BMPS SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

FEMA FLOOD ZONE DESIGNATION

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE X (AREA OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD EVENT), PER FIRM PANEL 32003C1750E, DATED SEPTEMBER 27, 2002.

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 PRIOR TO THE PLACEMENT OF TYPE II AND CURB.

NOTES

1. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS OF EXISTING STRUCTURES INCLUDING LOCATION, ELEVATION, DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
2. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION DURING CONSTRUCTION THROUGH THE USE OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
3. MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON THE GEOTECH REPORT.
4. SEE DETAIL SHEET D-1 FOR STREET SECTIONS AND DETAILS.
5. SEE SHEET C-2 FOR LEGEND.
6. ADD 2800 TO PLAN GRADES WITH THE EXCEPTION OF FINISHED FLOORS AND EXISTING AND PROPOSED CONTOURS.
7. CONTRACTOR TO VERIFY ALL HANDICAP ACCESSIBLE ROUTES AND PARKING STALLS ARE IN CONFORMANCE WITH A.D.A ACCESSIBILITY GUIDELINES AND DO NOT EXCEED MAXIMUM SLOPES IN ANY DIRECTION PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCIES.
8. CONSTRUCT A.D.A. ROUTE, HAND RAILS, PARKING, SIGNAGE & RAMPS TO COMPLY WITH ICC/ANSI A117.1-2003
9. ALL ON-SITE STORM DRAINS AND THE ASSOCIATED FACILITIES ARE PRIVATELY OWNED AND MAINTAINED.
10. ANY FUTURE DEVELOPMENT WILL REQUIRE A TECHNICAL DRAINAGE STUDY UPDATE.
11. CONCRETE SIDEWALKS SHALL NOT EXCEED 5% IN A LONGITUDINAL DIRECTION OR 2% IN A CROSS SLOPE DIRECTION. ANY CONCRETE SIDEWALK LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION AND SHALL BE A MINIMUM OF 5 FEET BY 5 FEET.

CONSTRUCTION NOTES

1. CONSTRUCT AC PAVEMENT OVER TYPE II AGGREGATE BASE. SEE SOILS REPORT FOR SECTION.
2. CONSTRUCT "L" TYPE CURB PER CCAUSD DWG No. 216
3. CONSTRUCT "A" TYPE CURB PER CCAUSD DWG No. 219
4. CONSTRUCT "DEPRESSED" TYPE CURB PER DETAIL 1, SHEET D-1
5. CONSTRUCT 10' CURB TRANSITION, SEE DETAIL 3, SHEET D-1
6. CONSTRUCT AC PARKING AREA. SEE SOILS REPORT FOR SECTION.
7. CONSTRUCT 4" THICK CONCRETE SIDEWALK OVER 5" MIN TYPE II AGG. BASE. WIDTH PER PLAN. SEE LANDSCAPE PLAN FOR FINISH.
8. CONSTRUCT "TYPE CM2" DROP INLET, LENGTH PER PLAN, PER CCAUSD DWG NO. 412.1 & 421
9. CONSTRUCT HANDICAPPED VAN ACCESSIBLE PARKING STALL IN ACCORDANCE WITH ADA STANDARDS.
10. INSTALL 48" TYPE II STORM DRAIN MANHOLE PER CCAUSD NO. 401 & 405
11. INSTALL 30" RCP CLASS III SD, LENGTH PER PLAN
12. INSTALL NYLOPLAST DRAIN BASIN, OR APPROVED EQUAL W/ GRATED AND LOCKING LID ASSEMBLY, SIZE PER PLAN.
13. INSTALL BUMPER BLOCKS PER CCAUSD DWG No. 238
14. CHILD PLAY AREA. SEE LANDSCAPE PLANS FOR CONSTRUCTION MATERIALS AND HORIZONTAL DIMENSIONS.
15. SOCCER FIELD. SEE LANDSCAPE PLANS FOR HORIZONTAL DIMENSIONS AND STRIPING DETAILS.
16. BASKETBALL COURT. SEE LANDSCAPE PLANS FOR HORIZONTAL DIMENSIONS AND STRIPING DETAILS.
17. INSTALL 18" SDR-35 PVC SD, LENGTH PER PLAN
18. CONSTRUCT TRASH ENCLOSURE. SEE ARCHITECTURAL PLANS FOR CONSTRUCTION MATERIALS AND DETAILS.
19. INSTALL ZURN TRENCH DRAIN OR APPROVED EQUAL, SEE DETAIL 2, SHEET D-1
20. CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT CCAUSD NO. 235, CASE II & 235.1
21. INSTALL SIDEWALK UNDER DRAIN PER CCAUSD DWG NO. 236
22. INSTALL 48" TYPE I STORM DRAIN MANHOLE W/ BEEHIVE GRATE AND FRAME, NEENAH R-2560 SERIES OR EQUAL PER CCAUSD NO. 401 & 403
23. INSTALL NYLOPLAST DRAIN BASIN, OR APPROVED EQUAL W/ DOME GRATE AND LOCKING LID ASSEMBLY, SIZE PER PLAN.
24. INSTALL BRICK AND MORTAR CAP, PER DETAIL 20, SHEET D-1
25. INSTALL 30" SDR-35 PVC SD, LENGTH PER PLAN
26. INSTALL 12" SDR-35 PVC SD, LENGTH PER PLAN
27. INSTALL 6" SDR-35 PVC SD, LENGTH PER PLAN

SEE SHEET C-2 FOR ABBREVIATIONS AND QUANTITIES

CONSTRUCTION NOTES

28. INSTALL 4'x4' JENSEN PRECAST DROP INLET DI4848
29. INSTALL 24" RCP CLASS III SD, LENGTH PER PLAN
30. INSTALL 60" RCP CLASS III SD, LENGTH PER PLAN

SEE SHEET C-2 FOR ABBREVIATIONS AND QUANTITIES

BASIS OF BEARING

NORTH 00°26'16" WEST BEING THE BEARING OF THE EAST LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 13, TOWNSHIP 19 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA AS SHOWN ON BY MAP THEREOF ON FILE IN THE CLARK COUNTY'S RECORDER'S OFFICE IN BOOK 118, PAGE 88 OF PLATS.

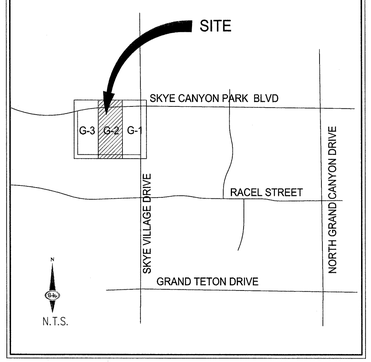
BENCHMARK

CITY OF LAS VEGAS BENCHMARK 6LV99 13C4

ELEVATION=900.071 METERS
ELEVATION=2952.98 U.S. SURVEY FEET

RIVET & PLATE TOP CURB NE CORNER FARM RD & (ALPINE RIDGE WAY) CRESCENT MTN

KEY MAP



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

Call before you Dig
Avoid cutting underground utility lines. It's easy.
Call 811
or
1-800-227-2600
AND
CLARK COUNTY TRAFFIC OPERATIONS
1-702-455-6000

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL SYSTEMS AND STREET LIGHT SYSTEM CONDUITS. IT'S COSTLY.
Call before you do UnderGround
1-702-455-6000
CLARK COUNTY TRAFFIC OPERATIONS
AND
1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

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

DAVID D. WILSON, Exp: 6/30/16, CIVIL, STATE OF NEVADA, PROFESSIONAL ENGINEER
02 Feb 2015
Drainage Study

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

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

CITY OF LAS VEGAS, NEVADA

NINETY-FIVE MANAGEMENT LLC

SKYE CANYON PARK PHASE 1
GRADING PLAN II

S12 R59E

DATE: 1/15/15
DRAFTER: CS
DESIGNER: DW
CHECKED: DW
PROJECT NO.
OLY1401.003

G-2
SHEET 4 OF 15

####

J:\oly1401_003_skye canyon park - center\Mech\Arch\oly1401.003_grd.dwg 2/2/2015 5:36 PM Christopher Salmon



GRADING QUANTITIES

EARTHWORK QUANTITIES (RAW):
-CUT = XXXXX CUBIC YARDS.
-FILL = XXXXX 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.
D. ALL ONSITE GRADING SHALL COMPLY WITH THE CONDITIONS SET FORTH IN THE GEOTECHNICAL REPORT REFERENCED ON SHEET C-2.

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 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 ANY ACTUAL RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12.

5. ACCUMULATED SEDIMENT IN BMPS SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

FEMA FLOOD ZONE DESIGNATION

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE X (AREA OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD EVENT), PER FIRM PANEL 32003C1750E, DATED SEPTEMBER 27, 2002.

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 PRIOR TO THE PLACEMENT OF TYPE II AND CURB.

NOTES

1. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS OF EXISTING STRUCTURES INCLUDING LOCATION, ELEVATION, DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
2. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION DURING CONSTRUCTION THROUGH THE USE OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
3. MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON THE GEOTECH REPORT.
4. SEE DETAIL SHEET D-1 FOR STREET SECTIONS AND DETAILS.
5. SEE SHEET C-2 FOR LEGEND.
6. ADD 2800 TO PLAN GRADES WITH THE EXCEPTION OF FINISHED FLOORS AND EXISTING AND PROPOSED CONTOURS.
7. CONTRACTOR TO VERIFY ALL HANDICAP ACCESSIBLE ROUTES AND PARKING STALLS ARE IN CONFORMANCE WITH A.D.A ACCESSIBILITY GUIDELINES AND DO NOT EXCEED MAXIMUM SLOPES IN ANY DIRECTION PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCIES.
8. CONSTRUCT A.D.A. ROUTE, HAND RAILS, PARKING, SIGNAGE & RAMPS TO COMPLY WITH ICC/ANSI A117.1-2003
9. ALL ON-SITE STORM DRAINS AND THE ASSOCIATED FACILITIES ARE PRIVATELY OWNED AND MAINTAINED.
10. ANY FUTURE DEVELOPMENT WILL REQUIRE A TECHNICAL DRAINAGE STUDY UPDATE.
11. CONCRETE SIDEWALKS SHALL NOT EXCEED 5% IN A LONGITUDINAL DIRECTION OR 2% IN A CROSS SLOPE DIRECTION. ANY CONCRETE SIDEWALK LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION AND SHALL BE A MINIMUM OF 5 FEET BY 5 FEET.

CONSTRUCTION NOTES

1. CONSTRUCT AC PAVEMENT OVER TYPE II AGGREGATE BASE. SEE SOILS REPORT FOR SECTION.
2. CONSTRUCT "L" TYPE CURB PER CCAUSD DWG No. 216
3. CONSTRUCT "A" TYPE CURB PER CCAUSD DWG No. 219
4. CONSTRUCT "DEPRESSED" TYPE CURB PER DETAIL 1, SHEET D-1
5. CONSTRUCT 10' CURB TRANSITION, SEE DETAIL 3, SHEET D-1
6. CONSTRUCT AC PARKING AREA. SEE SOILS REPORT FOR SECTION.
7. CONSTRUCT 4" THICK CONCRETE SIDEWALK OVER 5" MIN TYPE II AGG. BASE. WIDTH PER PLAN. SEE LANDSCAPE PLAN FOR FINISH.
8. CONSTRUCT "TYPE CM2" DROP INLET, LENGTH PER PLAN, PER CCAUSD DWG NO. 412.1 & 421
9. CONSTRUCT HANDICAPPED VAN ACCESSIBLE PARKING STALL IN ACCORDANCE WITH ADA STANDARDS.
10. INSTALL 48" TYPE II STORM DRAIN MANHOLE PER CCAUSD NO. 401 & 405
11. INSTALL 30" RCP CLASS III SD, LENGTH PER PLAN
12. INSTALL NYLOPLAST DRAIN BASIN, OR APPROVED EQUAL W/ GRATED AND LOCKING LID ASSEMBLY, SIZE PER PLAN.
13. INSTALL BUMPER BLOCKS PER CCAUSD DWG No. 238
14. CHILD PLAY AREA. SEE LANDSCAPE PLANS FOR CONSTRUCTION MATERIALS AND HORIZONTAL DIMENSIONS.
15. SOCCER FIELD. SEE LANDSCAPE PLANS FOR HORIZONTAL DIMENSIONS AND STRIPING DETAILS.
16. BASKETBALL COURT. SEE LANDSCAPE PLANS FOR HORIZONTAL DIMENSIONS AND STRIPING DETAILS.
17. INSTALL 18" SDR-35 PVC SD, LENGTH PER PLAN
18. CONSTRUCT TRASH ENCLOSURE. SEE ARCHITECTURAL PLANS FOR CONSTRUCTION MATERIALS AND DETAILS.
19. INSTALL ZURN TRENCH DRAIN OR APPROVED EQUAL, SEE DETAIL 2, SHEET D-1
20. CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT CCAUSD NO. 235, CASE II & 235.1
21. INSTALL SIDEWALK UNDER DRAIN PER CCAUSD DWG NO. 236
22. INSTALL 48" TYPE I STORM DRAIN MANHOLE W/ BEEHIVE GRATE AND FRAME, NEENAH R-2560 SERIES OR EQUAL PER CCAUSD NO. 401 & 403
23. INSTALL NYLOPLAST DRAIN BASIN, OR APPROVED EQUAL W/ DOME GRATE AND LOCKING LID ASSEMBLY, SIZE PER PLAN.
24. INSTALL BRICK AND MORTAR CAP, PER DETAIL 20, SHEET D-1
25. INSTALL 30" SDR-35 PVC SD, LENGTH PER PLAN
26. INSTALL 12" SDR-35 PVC SD, LENGTH PER PLAN
27. INSTALL 6" SDR-35 PVC SD, LENGTH PER PLAN

SEE SHEET C-2 FOR ABBREVIATIONS AND QUANTITIES

CONSTRUCTION NOTES

28. INSTALL 4'x4' JENSEN PRECAST DROP INLET DI4848
29. INSTALL 24" RCP CLASS III SD, LENGTH PER PLAN
30. INSTALL 60" RCP CLASS III SD, LENGTH PER PLAN

SEE SHEET C-2 FOR ABBREVIATIONS AND QUANTITIES

BASIS OF BEARING

NORTH 00°26'16" WEST BEING THE BEARING OF THE EAST LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 13, TOWNSHIP 19 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA AS SHOWN ON BY MAP THEREOF ON FILE IN THE CLARK COUNTY'S RECORDER'S OFFICE IN BOOK 118, PAGE 88 OF PLATS.

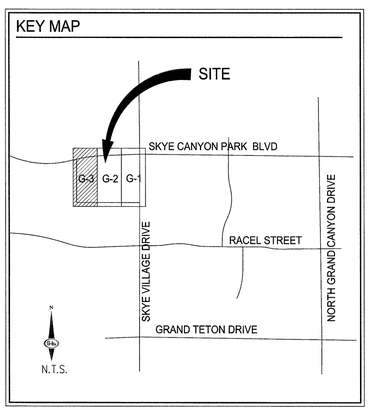
BENCHMARK

CITY OF LAS VEGAS BENCHMARK 6LV99 13C4

ELEVATION=900.071 METERS
ELEVATION=2952.98 U.S. SURVEY FEET

RIVET & PLATE TOP CURB NE CORNER FARM RD & (ALPINE RIDGE WAY) CRESCENT MTN

KEY MAP



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

0 30 60
SCALE - 1"=30' FEET

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811
1-800-227-2600
AND
CLARK COUNTY TRAFFIC OPERATIONS
1-702-455-6000

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL SYSTEMS AND STREET LIGHT SYSTEM CONDUITS. IT'S COSTLY.
Call before you do UnderGround
1-702-455-6000
CLARK COUNTY TRAFFIC OPERATIONS
AND
1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

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

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

CITY OF LAS VEGAS, NEVADA

NINETY-FIVE MANAGEMENT LLC

SKYE CANYON PARK PHASE 1
GRADING PLAN III

S12 R59E

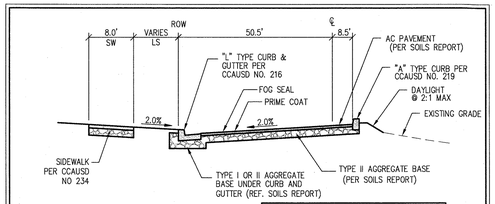
DATE: 1/15/15
DRAFTER: CS
DESIGNER: DW
CHECKED: DW
PROJECT NO.
OLY1401,003

PROFESSIONAL ENGINEER-STATE OF NEVADA
DAVID D. WILSON
Exp: 12/31/16
CIVIL
No. 8441
01 FEB 2015
DRAINAGE STUDY

G-3
SHEET 5 OF 15

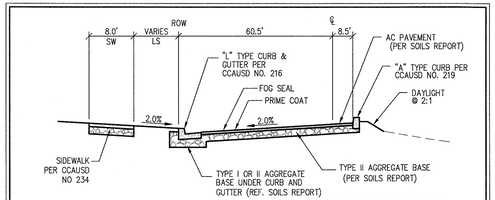
####

J:\oly1401_003_skye canyon ne\cad\land\mrenco\oly1401.003 grading 2-2-2015 5:36 PM Christopher Salmon



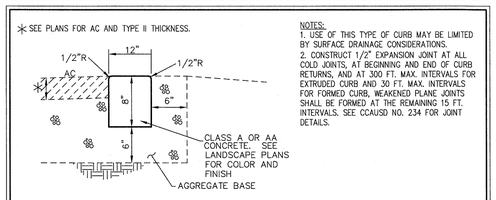
A. STREET SECTION
NOT TO SCALE

NOTE: SEE GEOTECHNICAL REPORT FOR AC AND BASE SECTIONS. SOILS REPORT DONE BY OTHERS.



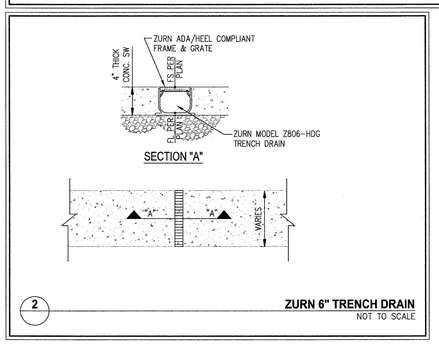
B. STREET SECTION
NOT TO SCALE

NOTE: SEE GEOTECHNICAL REPORT FOR AC AND BASE SECTIONS. SOILS REPORT DONE BY OTHERS.

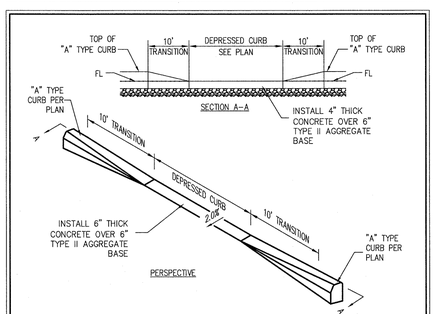


NOTES:
1. USE OF THIS TYPE OF CURB MAY BE LIMITED BY SURFACE DRAINAGE CONSIDERATIONS.
2. CONSTRUCT 1/2" EXPANSION JOINT AT ALL COLD JOINTS, AT BEGINNING AND END OF CURB RETURNS, AND AT 300 FT. MAX. INTERVALS FOR EXTRUDED CURB AND 30 FT. MAX. INTERVALS FOR FORMED CURB, WEAKENED PLANE JOINTS SHALL BE FORMED AT THE REMAINING 15 FT. INTERVALS. SEE CCAUSD NO. 234 FOR JOINT DETAILS.

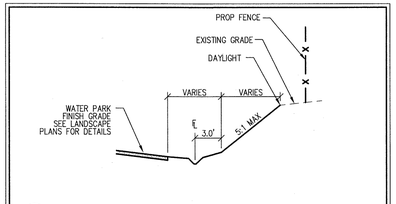
1 **DEPRESSED CURB**
NOT TO SCALE



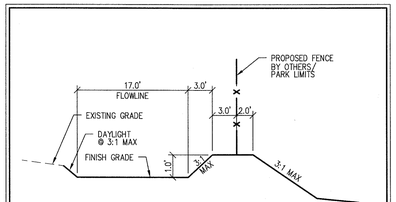
2 **ZURN 6" TRENCH DRAIN**
NOT TO SCALE



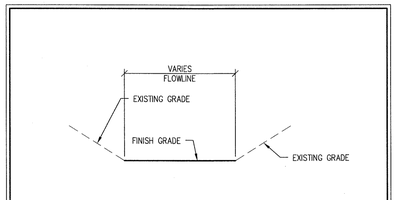
3 **DEPRESSED CURB**
NOT TO SCALE



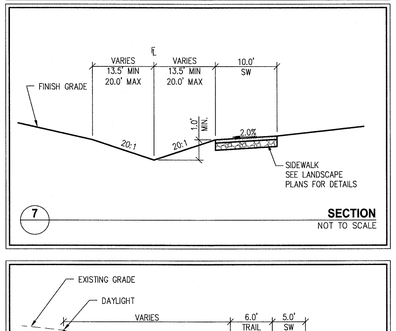
4 **SECTION**
NOT TO SCALE



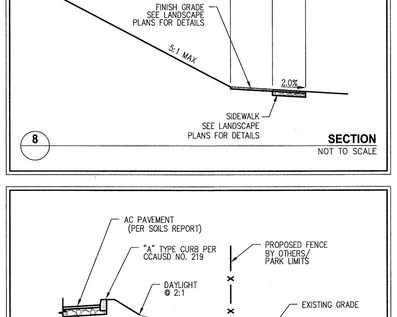
5 **SECTION**
NOT TO SCALE



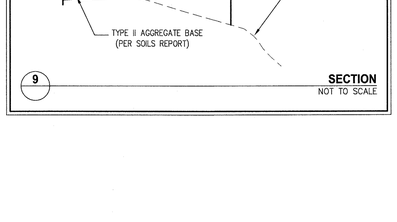
6 **SECTION**
NOT TO SCALE



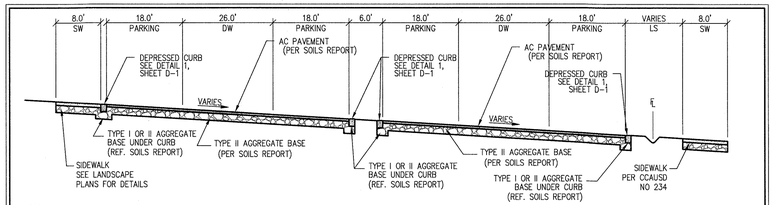
7 **SECTION**
NOT TO SCALE



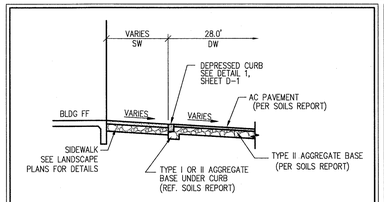
8 **SECTION**
NOT TO SCALE



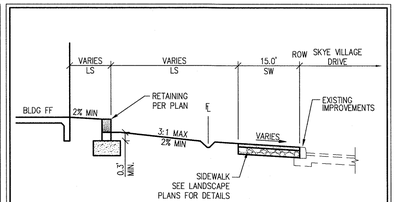
9 **SECTION**
NOT TO SCALE



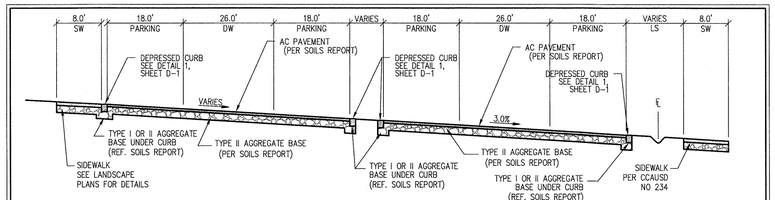
10 **SECTION**
NOT TO SCALE



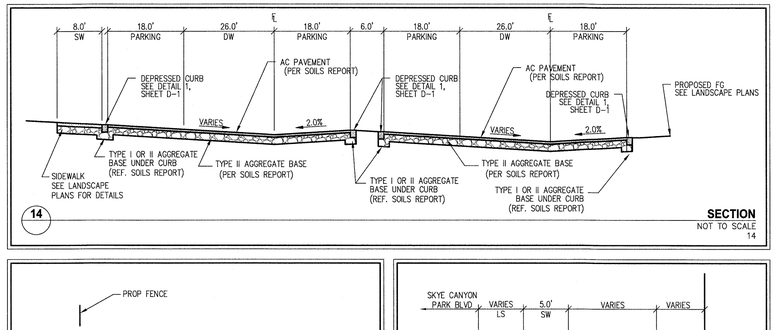
11 **SECTION**
NOT TO SCALE



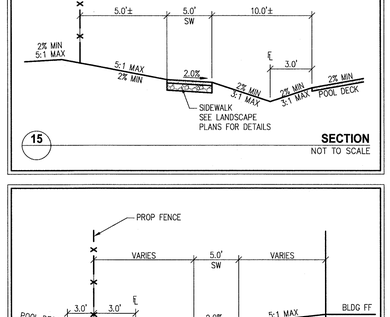
12 **SECTION**
NOT TO SCALE



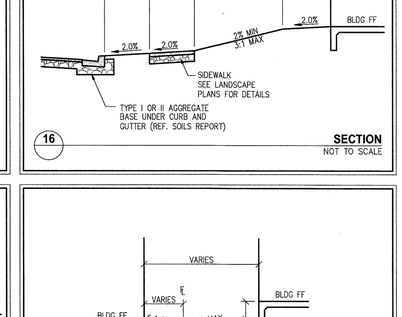
13 **SECTION**
NOT TO SCALE



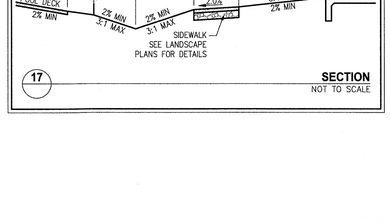
14 **SECTION**
NOT TO SCALE
14



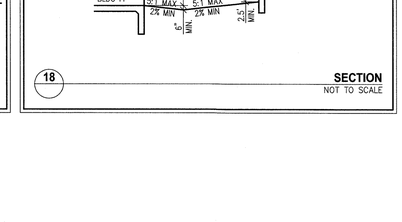
15 **SECTION**
NOT TO SCALE



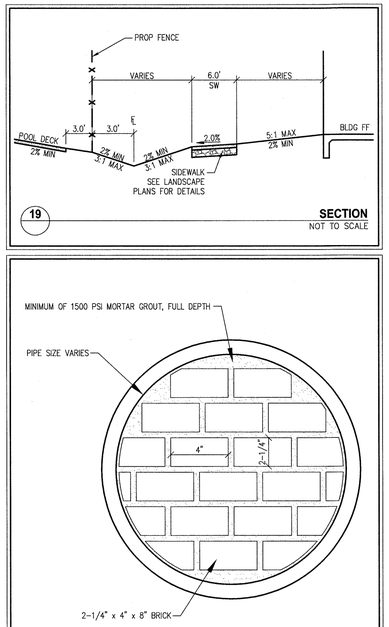
16 **SECTION**
NOT TO SCALE



17 **SECTION**
NOT TO SCALE



18 **SECTION**
NOT TO SCALE



20 **BRICK AND MORTAR PLUG**
NOT TO SCALE

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

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL SYSTEMS AND STREET LIGHT SYSTEM CONDUITS. IT'S COSTLY.
Call before you do UnderGround
1-702-455-7511
CLARK COUNTY TRAFFIC OPERATIONS
AND
1-702-229-6611
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION
OR
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811
OR
1-800-227-2600
AND
CLARK COUNTY TRAFFIC OPERATIONS
1-702-455-7544

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

NO.	DESCRIPTION	DATE	BY	APP.	APP. DATE

CITY OF LAS VEGAS, NEVADA

NINETY-FIVE MANAGEMENT LLC

SKYE CANYON PARK PHASE 1

DETAIL SHEET

S12 T19 R59E

DATE: 1/15/15
DRAFTER: CS
DESIGNER: DW
CHECKED: DW

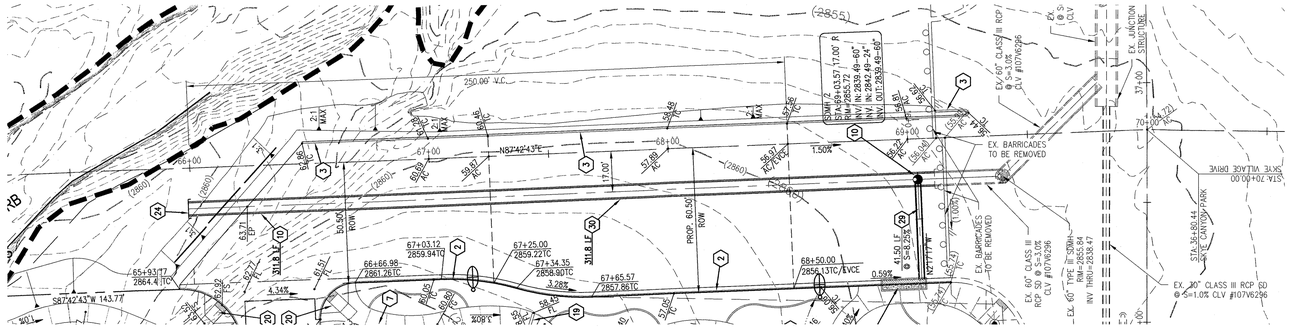
PROJECT NO.
OLY1401.003

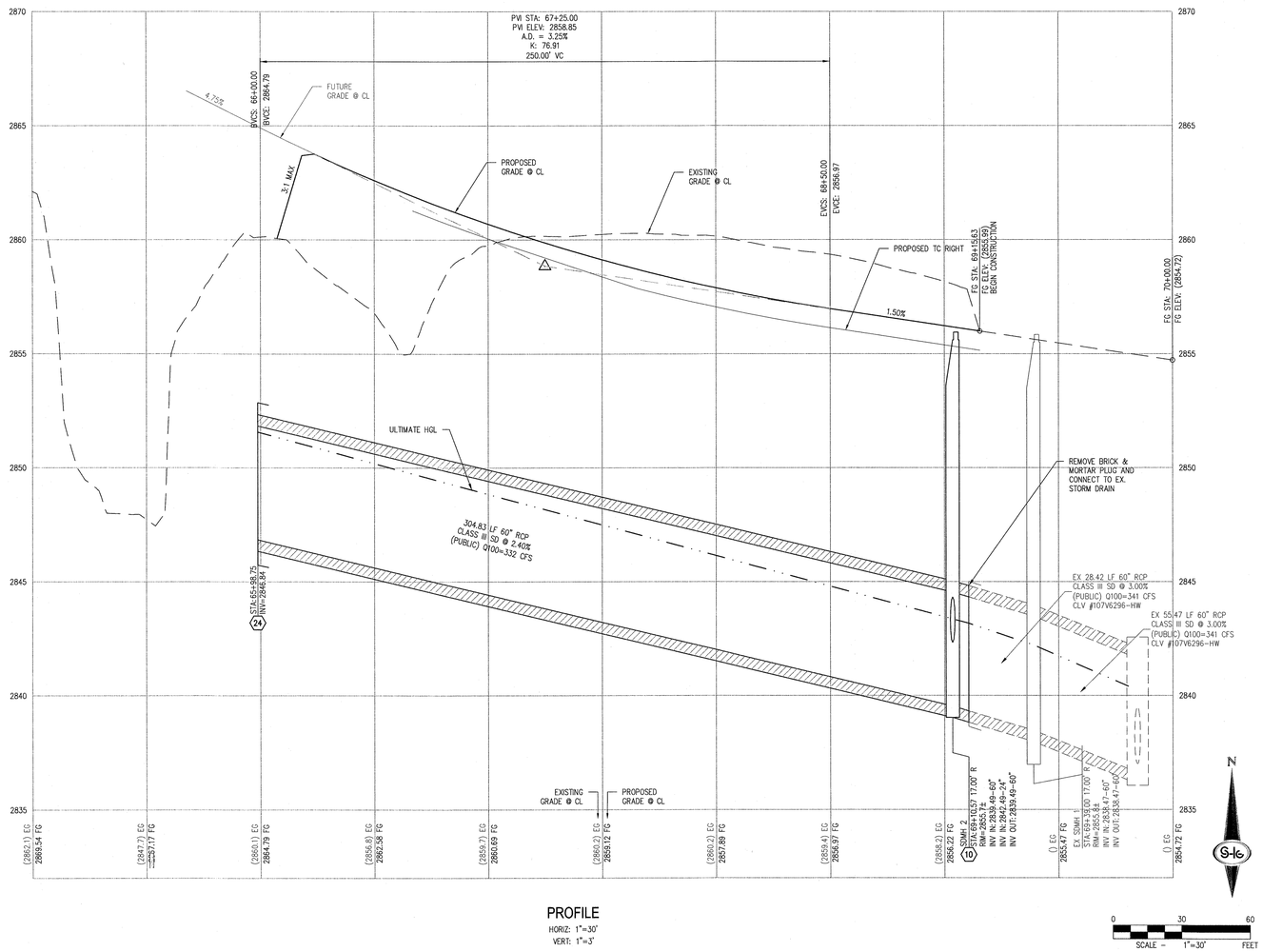
REGISTERED PROFESSIONAL ENGINEER STATE OF NEVADA
DAVID D. WILSON
Exp. 12/31/16
CIVIL
No. 8441
OLY1401.003 Drainage Study

D-1
SHEET 6 OF 15

####

J:\oly\1401-003 skye canyon rec center\dwg\Unrico\oly1401.003 det.dwg 2/2/2015 5:30 PM Christopher Solimon



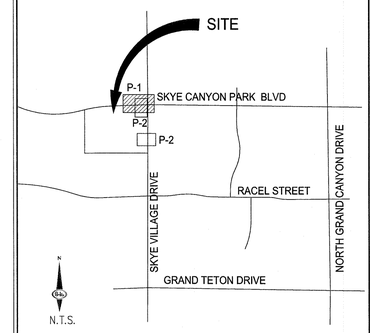


PROFILE

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

SCALE – 1"=30' (0, 30, 60 FEET)

KEY MAP



CONSTRUCTION NOTES

1. CONSTRUCT AC PAVEMENT OVER TYPE II AGGREGATE BASE. SEE SOILS REPORT FOR SECTION.
2. CONSTRUCT "L" TYPE CURB PER CCAUSD DWG No. 216
3. CONSTRUCT "A" TYPE CURB PER CCAUSD DWG No. 219
4. CONSTRUCT "DEPRESSED" TYPE CURB PER DETAIL 1, SHEET D-1
5. CONSTRUCT 10' CURB TRANSITION, SEE DETAIL 3, SHEET D-1
6. CONSTRUCT AC PARKING AREA. SEE SOILS REPORT FOR SECTION.
7. CONSTRUCT 4" THICK CONCRETE SIDEWALK OVER 5" MIN TYPE II AGG. BASE. WIDTH PER PLAN. SEE LANDSCAPE PLAN FOR FINISH.
8. CONSTRUCT "TYPE CM2" DROP INLET, LENGTH PER PLAN, PER CCAUSD DWG NO. 412.1 & 421
9. CONSTRUCT HANDICAPPED VAN ACCESSIBLE PARKING STALL IN ACCORDANCE WITH ADA STANDARDS.
10. INSTALL 48" TYPE II STORM DRAIN MANHOLE PER CCAUSD NO. 401 & 405
11. INSTALL 30" RCP CLASS III SD, LENGTH PER PLAN
12. INSTALL NYLOPLAST DRAIN BASIN, OR APPROVED EQUAL W/ GRATED AND LOCKING LID ASSEMBLY, SIZE PER PLAN.
13. INSTALL BUMPER BLOCKS PER CCAUSD DWG No. 238
14. CHILD PLAY AREA. SEE LANDSCAPE PLANS FOR CONSTRUCTION MATERIALS AND HORIZONTAL DIMENSIONS.
15. SOCCER FIELD. SEE LANDSCAPE PLANS FOR HORIZONTAL DIMENSIONS AND STRIPING DETAILS.
16. BASKETBALL COURT. SEE LANDSCAPE PLANS FOR HORIZONTAL DIMENSIONS AND STRIPING DETAILS.
17. INSTALL 18" SDR-35 PVC SD, LENGTH PER PLAN
18. CONSTRUCT TRASH ENCLOSURE. SEE ARCHITECTURAL PLANS FOR CONSTRUCTION MATERIALS AND DETAILS.
19. INSTALL ZURN TRENCH DRAIN OR APPROVED EQUAL, SEE DETAIL 2, SHEET D-1
20. CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT CCAUSD NO. 235, CASE II & 235.1
21. INSTALL SIDEWALK UNDER DRAIN PER CCAUSD DWG NO. 236
22. INSTALL 48" TYPE I STORM DRAIN MANHOLE W/ BEEHIVE GRATE AND FRAME, NEENAH R-2560 SERIES OR EQUAL PER CCAUSD NO. 401 & 403
23. INSTALL NYLOPLAST DRAIN BASIN, OR APPROVED EQUAL W/ DOME GRATE AND LOCKING LID ASSEMBLY, SIZE PER PLAN.
24. INSTALL BRICK AND MORTAR CAP, PER DETAIL 20, SHEET D-1
25. INSTALL 30" SDR-35 PVC SD, LENGTH PER PLAN
26. INSTALL 12" SDR-35 PVC SD, LENGTH PER PLAN
27. INSTALL 6" SDR-35 PVC SD, LENGTH PER PLAN
28. INSTALL 4'x4' JENSEN PRECAST DROP INLET DI4848
29. INSTALL 24" RCP CLASS III SD, LENGTH PER PLAN
30. INSTALL 60" RCP CLASS III SD, LENGTH PER PLAN

SEE SHEET C-2 FOR ABBREVIATIONS AND QUANTITIES

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 FOR 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 PRIOR TO THE PLACEMENT OF TYPE II AND CURB.

BASIS OF BEARING

NORTH 00°26'16" WEST BEING THE BEARING OF THE EAST LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 13, TOWNSHIP 19 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA AS SHOWN ON BY MAP THEREOF ON FILE IN THE CLARK COUNTY'S RECORDER'S OFFICE IN BOOK 118, PAGE 88 OF PLATS.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK 6LV99 13C4

ELEVATION=900.071 METERS
ELEVATION=2952.98 U.S. SURVEY FEET

RIVET & PLATE TOP CURB NE CORNER FARM RD & (ALPINE RIDGE WAY) CRESCENT MTN

NOTES

1. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS OF EXISTING STRUCTURES INCLUDING LOCATION, ELEVATION, DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
2. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION DURING CONSTRUCTION THROUGH THE USE OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
3. MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON THE GEOTECH REPORT.
4. SEE DETAIL SHEET D-1 FOR STREET SECTIONS AND DETAILS.
5. SEE SHEET C-1 FOR LEGEND.
6. ADD 2900 TO PLAN GRADES WITH THE EXCEPTION OF FINISHED FLOORS AND EXISTING AND PROPOSED CONTOURS.
7. CONTRACTOR TO VERIFY ALL HANDICAP ACCESSIBLE ROUTES AND PARKING STALLS ARE IN CONFORMANCE WITH A.D.A ACCESSIBILITY GUIDELINES AND DO NOT EXCEED MAXIMUM SLOPES IN ANY DIRECTION PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCIES.
8. CONSTRUCT A.D.A. ROUTE, HAND RAILS, PARKING, SIGNAGE & RAMPS TO COMPLY WITH ICC/ANSI A117.1-2003
9. ALL ON-SITE STORM DRAINS AND THE ASSOCIATED FACILITIES ARE PRIVATELY OWNED AND TO BE MAINTAINED.
10. ANY FUTURE DEVELOPMENT WILL REQUIRE A TECHNICAL DRAINAGE STUDY UPDATE.







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

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

CITY OF LAS VEGAS, NEVADA

NINETY-FIVE MANAGEMENT LLC

SKYE CANYON PARK PHASE 1
PLAN & PROFILE I

S12 T19 R59E

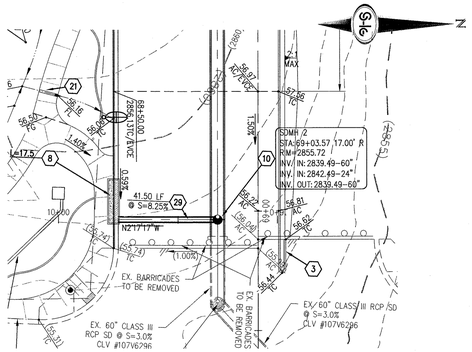
DATE: 1/15/15
DRAFTER: CS
DESIGNER: DW
CHECKED: DW

PROJECT NO.
OLY1401.003

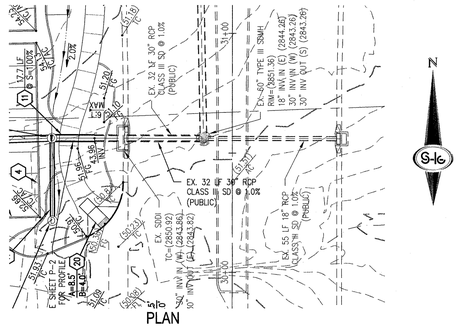
P-1
SHEET 7 OF 15

####

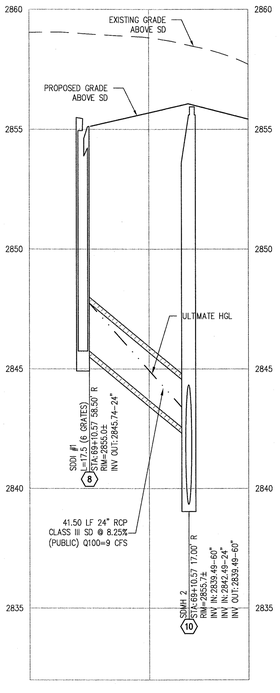
I:\olv1401-003 skye canyon rac center\dwg\improv\olv1401.003 pnp.dwg 2/2/2015 5:36 PM Christopher Salmon



PLAN

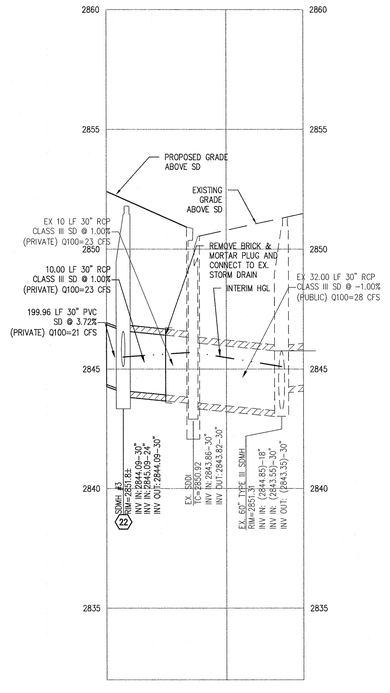


PLAN



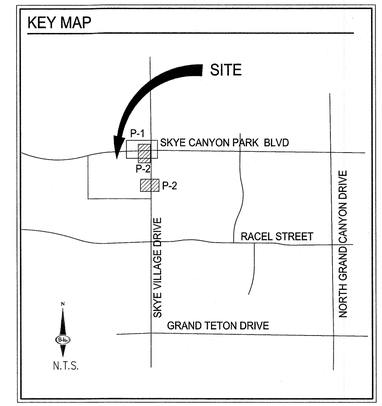
PROFILE

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



PROFILE

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



CONSTRUCTION NOTES

1. CONSTRUCT AC PAVEMENT OVER TYPE II AGGREGATE BASE. SEE SOILS REPORT FOR SECTION.
2. CONSTRUCT "L" TYPE CURB PER CCAUSD DWG No. 216
3. CONSTRUCT "A" TYPE CURB PER CCAUSD DWG No. 219
4. CONSTRUCT "DEPRESSED" TYPE CURB PER DETAIL 1, SHEET D-1
5. CONSTRUCT 10' CURB TRANSITION, SEE DETAIL 3, SHEET D-1
6. CONSTRUCT AC PARKING AREA. SEE SOILS REPORT FOR SECTION.
7. CONSTRUCT 4" THICK CONCRETE SIDEWALK OVER 5" MIN TYPE II AGG. BASE. WIDTH PER PLAN. SEE LANDSCAPE PLAN FOR FINISH.
8. CONSTRUCT "TYPE CM2" DROP INLET, LENGTH PER PLAN, PER CCAUSD DWG NO. 412.1 & 421
9. CONSTRUCT HANDICAPPED VAN ACCESSIBLE PARKING STALL IN ACCORDANCE WITH ADA STANDARDS.
10. INSTALL 48" TYPE II STORM DRAIN MANHOLE PER CCAUSD NO. 401 & 405
11. INSTALL 30" RCP CLASS III SD, LENGTH PER PLAN
12. INSTALL NYLOPLAST DRAIN BASIN, OR APPROVED EQUAL W/ GRATED AND LOCKING LID ASSEMBLY, SIZE PER PLAN.
13. INSTALL BUMPER BLOCKS PER CCAUSD DWG No. 238
14. CHILD PLAY AREA. SEE LANDSCAPE PLANS FOR CONSTRUCTION MATERIALS AND HORIZONTAL DIMENSIONS.
15. SOCCER FIELD. SEE LANDSCAPE PLANS FOR HORIZONTAL DIMENSIONS AND STRIPING DETAILS.
16. BASKETBALL COURT. SEE LANDSCAPE PLANS FOR HORIZONTAL DIMENSIONS AND STRIPING DETAILS.
17. INSTALL 18" SDR-35 PVC SD, LENGTH PER PLAN
18. CONSTRUCT TRASH ENCLOSURE. SEE ARCHITECTURAL PLANS FOR CONSTRUCTION MATERIALS AND DETAILS.
19. INSTALL ZURN TRENCH DRAIN OR APPROVED EQUAL, SEE DETAIL 2, SHEET D-1
20. CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT CCAUSD NO. 235, CASE II & 235.1
21. INSTALL SIDEWALK UNDER DRAIN PER CCAUSD DWG NO. 236
22. INSTALL 48" TYPE I STORM DRAIN MANHOLE W/ BEEHIVE GRATE AND FRAME, NEENAH R-2560 SERIES OR EQUAL PER CCAUSD NO. 401 & 403.
23. INSTALL NYLOPLAST DRAIN BASIN, OR APPROVED EQUAL W/ DOME GRATE AND LOCKING LID ASSEMBLY, SIZE PER PLAN.
24. INSTALL BRICK AND MORTAR CAP, PER DETAIL 20, SHEET D-1
25. INSTALL 30" SDR-35 PVC SD, LENGTH PER PLAN
26. INSTALL 12" SDR-35 PVC SD, LENGTH PER PLAN
27. INSTALL 6" SDR-35 PVC SD, LENGTH PER PLAN
28. INSTALL 4'x4' JENSEN PRECAST DROP INLET DI4848
29. INSTALL 24" RCP CLASS III SD, LENGTH PER PLAN
30. INSTALL 60" RCP CLASS III SD, LENGTH PER PLAN

SEE SHEET C-2 FOR ABBREVIATIONS AND QUANTITIES

SCALE – 1"=30' (0, 30, 60 FEET)

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 PRIOR TO THE PLACEMENT OF TYPE II AND CURB.

BASIS OF BEARING

NORTH 00°26'16" WEST BEING THE BEARING OF THE EAST LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 13, TOWNSHIP 19 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA AS SHOWN ON BY MAP THEREOF ON FILE IN THE CLARK COUNTY'S RECORDER'S OFFICE IN BOOK 118, PAGE 88 OF PLATS.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK 6LV99 13C4

ELEVATION=900.071 METERS
ELEVATION=2952.98 U.S. SURVEY FEET

RIVET & PLATE TOP CURB NE CORNER FARM RD & (ALPINE RIDGE WAY) CRESCENT MTN

NOTES

1. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS OF EXISTING STRUCTURES INCLUDING LOCATION, ELEVATION, DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
2. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION DURING CONSTRUCTION THROUGH THE USE OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
3. MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON THE GEOTECH REPORT.
4. SEE DETAIL SHEET D-1 FOR STREET SECTIONS AND DETAILS.
5. SEE SHEET C-1 FOR LEGEND.
6. ADD 2900 TO PLAN GRADES WITH THE EXCEPTION OF FINISHED FLOORS AND EXISTING AND PROPOSED CONTOURS.
7. CONTRACTOR TO VERIFY ALL HANDICAP ACCESSIBLE ROUTES AND PARKING STALLS ARE IN CONFORMANCE WITH A.D.A ACCESSIBILITY GUIDELINES AND DO NOT EXCEED MAXIMUM SLOPES IN ANY DIRECTION PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCIES.
8. CONSTRUCT A.D.A. ROUTE, HAND RAILS, PARKING, SIGNAGE & RAMPS TO COMPLY WITH ICC/ANSI A117.1-2003
9. ALL ON-SITE STORM DRAINS AND THE ASSOCIATED FACILITIES ARE PRIVATELY OWNED AND TO BE MAINTAINED.
10. ANY FUTURE DEVELOPMENT WILL REQUIRE A TECHNICAL DRAINAGE STUDY UPDATE.

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

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL SYSTEMS AND STREET LIGHT SYSTEM CONDUITS. IT'S COSTLY.
Call before you do UnderGround
1-702-455-7511
CLARK COUNTY TRAFFIC OPERATIONS
AND
1-702-229-6611
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION
AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811
OR
1-800-227-2600
AND
CLARK COUNTY TRAFFIC OPERATIONS
1-702-455-7544

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

NO.	DESCRIPTION	DATE	BY	APP.	APP. DATE

CITY OF LAS VEGAS, NEVADA

NINETY-FIVE MANAGEMENT LLC

SKYE CANYON PARK PHASE 1
PLAN AND PROFILE II

S:12
T:19
R:59E

DATE: 1/15/15
DRAFTER: CS
DESIGNER: DW
CHECKED: DW

PROJECT NO.
OLY1401.003

PROFESSIONAL ENGINEER · STATE OF NEVADA · No. 9441 · DAVID D. WILSON, Exp: 6/30/16 · CIVIL · OF RECORD · DRAINAGE STUDY

P-2
SHEET 8 OF 15

####

J:\Oly1401-003 skye canyon rec center\dwg\xrecs\oly1401.003 pnp.dwg 2/2/2015 5:36 PM Christopher Solomon