

DS #: 5107

APN: 125-07-211-002

PROJECT: Skye Canyon 11 - Parcel 2.04

SUBMITTAL: 3rd

SCANNED BY/DATE:

CHECKED BY/DATE:



CITY OF LAS VEGAS		DATE: September 3, 2019
INTER-OFFICE MEMORANDUM		
TO: Land Development Services Department of Building & Safety		FROM: Jennifer Shinn, P.E. Flood Control, Engr. Associate Department of Public Works
SUBJECT:	Drainage Study for:	
	Skye Canyon II – Parcel 2.06	
Cross Streets:	Skye Canyon Park Dr. & Skye Village Rd.	COPIES TO: Slater Hanifan Group
File Number:	F:\Depot\DSMemos\DS5107C.doc	Ninety-Five Management
Parcel Number:	125-07-211-002	Bart Anderson, P.E., DevCo
Zoning Action:	TMP-75348; VAC-75349	CCRFCFCD
FEMA Flood Zone	YES NO X	
Proposed Storm Drain	YES X NO	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	3/4/2019	3/28/2019	See Comments Below	\$400.00	\$400
2 nd Submittal	7/18/2019	8/5/2019		\$400.00	3497195: \$400
3 rd Submittal	8/15/2019	8/29/2019		\$400.00	
TOTAL FEES (LDDRS):				\$1200.00	----

REMARKS:

*****The Conditional Approval of this Drainage Study is to allow the engineer/developer to submit the Improvement Plans to Land Development Only.**

*****Do no submit the Drainage Study to Clark County Regional Flood Control District (CCRFCFCD) prior to the Structural Design and Calculations being approved by the City Building & Safety Department.**

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

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

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

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

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

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

2. The study assumes that all necessary perimeter roadway and drainage infrastructure improvements associated with Phase 3A are in place and functioning prior to the development of Skye Canyon II – Parcel 2.06.
3. Skye Canyon II – Parcel 2.06 onsite development is to be flood protected by Skye Canyon Phase 3A. No occupancy permits within onsite Phase 3A will be issued prior to the substantial completion of Skye Canyon Phase 3A infrastructure.
4. The development of Lots 15 through 38, including the plugging of the 72" RCP, the removal of the interim channel, and the vacation of easements will require an update to the drainage study or be analyzed as 'Phase 2'. Said Update or 'Phase 2' is contingent upon the substantial completion of the Ultimate MPU facilities per Moccasin Road CCRFCD Flood Control Facility (US95/Kyle Canyon Road Interchange to Moccasin Road).
5. An update for Skye Canyon Phase 3A will be required to address the plugging of the 72" RCP prior to the completion of the ultimate MPU facilities per Moccasin Road CCRFCD Flood Control Facility. The Phase 2 improvements of this project will be dependent on the plugging of the 72" RCP.
6. Public drainage easements must be recorded by separate document prior to the final acceptance of the improvement plans unless they are to be recorded by parcel or final map.
7. Structural plans for the storm drain improvements, including the deep drop inlets, custom storm drain manhole, and junction structures, must be submitted for review. Provide a soils report, structural calculations and specifications, two wet stamped structural sets, and a grading plan to the Building Department for processing. The engineer must provide a copy of Building Department approval of the structures to Flood Control prior to final acceptance of the drainage study.
8. The project proposes to build temporary drainage facilities during Phase 1. Prior to final plan approval the developer must complete a Maintenance & Liability Agreement for the interim drainage improvements and post a minimum maintenance bond of \$50,000 or 50-percent of the construction cost for the improvements, whichever is greater. The engineer must submit an estimate of the quantities for constructing the facilities and an exhibit that adequately shows the location and limits of the drainage facilities and an exhibit that adequately shows the location and limits of the drainage facilities to City of Las Vegas Flood Control for approval. Once the drainage study is conditionally approved, the engineer should contact the City's Land Development Section (702-229-6371) to begin the agreement process.

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

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

END OF REMARKS
JKS

T/R/S: T19S/R60E/S07
AREA G-07

**TECHNICAL DRAINAGE STUDY
ADDENDUM #2
Skye Canyon II - Parcel 2.06**

City of Las Vegas, Nevada

Job No.: OLY1813.000

Date: August 2019

Prepared By:

Slater Hanifan Group, a Westwood Team
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


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

Assisted by: D'Amato C. Hyche



OLY1813.000

August 15, 2019

Jennifer Shinn, P.E.
City of Las Vegas
333 N. Rancho Drive
Las Vegas, NV 89106

Subject: Addendum No. 2 to the Technical Drainage Study for Skye Canyon II – Parcel 2.06 (DS5107A)

Ms. Shinn:

This letter certifies that all items provided on the *Addendum to the Technical Drainage Study for Skye Canyon II – Parcel 2.06* submittal CD match the paper version bound into the study.

Respectfully Submitted,
SLATER HANIFAN GROUP A WESTWOOD TEAM

A handwritten signature in blue ink, appearing to read 'Stanley Okey Amadi'.

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

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL
DRAINAGE STUDY INFORMATION FORM

Name of Development: Skye Canyon II - Parcel 2.06 (Addendum No. 2) Date: August 15, 2019
 Location of Development: a) Descriptive (Cross Streets): North/South: Skye Canyon Park Drive
East/West: Skye Village Road
 b) Section: 7 Township: 19 South Range: 60 East
 c) APN: 125-07-211-002

Name of Owner: MF Land, 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: Stanley Okey Amadi, P.E., CFM Telephone No.: (702) 284-5300
 *E-mail Address: stanley.amadi@westwoodps.com Fax No.: (702) 284-5399
 Firm: Slater Hanifan Group, A Westwood Team
 Address: 5740 S. Arville St. Las Vegas NV 89118

Type of Land Development/Land Disturbance Process:

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

1. Total Owned Land Area: At Site: 21.97 +/- Acres Being Developed/Disturbed: 21.97 +/- Acres

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

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

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

5. Approximate upstream land area which drains to the subject site: 704 acres

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

Skye Canyon II Phase 3A (SHG, DS4931); Master Drainage Study for Skye Canyon (SHG DS4420)

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: Onsite storm drain to existing storm drain in Skye Park Drive

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



Engineer's Seal

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

***Newly Required Field**

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

Local Entity File No.	Revision	Date

REFERENCE:

STANDARD FORM 1

Updated 05/01/2008



OLY1813.000

8/15/2019

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

Subject: Addendum #2 to the Technical Drainage Study for Skye Canyon II – Parcel 2.06 (DS5107A)

Dear Ms. Shinn:

This letter is submitted in response to the comments contained in the August 6, 2019 review memorandum, regarding the above referenced project. A copy of the City of Las Vegas (CLV) comment letter has been provided in Appendix A.

The comments in the review memorandum have been individually addressed as follows:

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

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

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

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

Response: Acknowledged. A copy of the drainage study and addenda with all structural calculations and plans will be submitted to CCRFCD for concurrence upon receipt of a conditional approval from CLV.

2. **Comment:** *The study assumes that all necessary perimeter roadway and drainage infrastructure improvements associated with Phase 3A are in place and functioning prior to the development of Skye Canyon II – Parcel 2.06;*

Response: Acknowledged.

3. **Comment:** *Skye Canyon II – Parcel 2.06 onsite development is to be flood protected by Skye Canyon Phase 3A. No occupancy permits within onsite Phase 3A will be issued prior to the substantial completion of Skye Canyon Phase 3A infrastructure;*

Response: Acknowledged.

4. **Comment:** *The development of Lots 15 through 38, including plugging of the 72" RCP, the removal of the interim channel, and the vacation of easements will require an update to the drainage study or be analyzed as 'Phase 2'. Said Update or 'Phase 2' is contingent upon the substantial completion of the Ultimate MPU facilities per Moccasin Road CCRFCD Flood Control Facility (US95/Kyle Canyon Road Interchange to Moccasin Road);*

Response: It is acknowledged that lots 15 thru 38 and removal of the interim channel as well as vacation of easements will require an update to the study. However, the Phase 2 improvements will only be dependent on the plugging of the 72" RCP which is currently being addressed by an Update for Skye Canyon Phase 3A. The Phase 2 improvements can be constructed as soon as the 72" RCP is plugged prior to the substantial completion of the Ultimate MPU facilities per Moccasin Road CCRFCD Flood Control Facility (US95/Kyle Canyon Road Interchange to Moccasin Road).

5. **Comment:** *An update for Skye Canyon Phase 3A will be required to address the plugging of the 72" RCP prior to the completion of the ultimate MPU facilities per Moccasin Road CCRFCD Flood Control Facility. The Phase 2 improvements of this project will be dependent on the plugging of the 72" RCP;*

Response: Acknowledged. The Update for Skye Canyon Phase 3A is being submitted concurrently with the subject addendum.

6. **Comment:** *Public drainage easements must be recorded by separate document prior to the final acceptance of the improvement plans unless they are to be recorded by parcel or final map;*

Response: Acknowledged.

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

Response: Acknowledged. Please refer to the revised grading plans for the P.U.E note.

8. **Comment:** *Provide a note on the Grading Plans: "All interim drainage facilities are privately owned and maintained by property owner";*

Response: Acknowledged. Please refer to the revised grading plans for the note provided.

9. **Comment:** *Structural plans for the storm drain improvements, including the deep drop inlets, custom storm drain manhole, and junction structures, must be submitted for review. Provide a soils report, structural calculations and specifications, two wet stamped structural sets, and a grading plan to the Building Department for processing. The engineer must provide a copy of Building Department approval of the structures to Flood Control prior to final acceptance of the drainage study;*

Response: Acknowledged. The geotechnical report, structural calculations and plans will be submitted to the building department upon conditional approval of the drainage study.

10. **Comment:** *The project proposes to build temporary drainage facilities during Phase 1 & 2. Prior to final plan approval the developer must complete a Maintenance & Liability Agreement for the interim drainage improvements and post a minimum maintenance bond of \$50,000 or 50-percent of the construction costs for the improvements, whichever is greater. The engineer must submit an estimate of the quantities for constructing the facilities and an exhibit that adequately shows the location and limits of the drainage facilities to City of Las Vegas Flood Control for approval. Once the drainage study is conditionally approved, the engineer should contact the City's Land Development Section (702-229-6371) to begin the agreement process;*

Response: Noted. The exhibit and quantities estimated will be submitted with the improvement plans upon approval of the drainage study.

11. **Comment:** *Revise the grading to demonstrate the site entrance is adequately humped 6" above the 100-year water surface;*

Response: Acknowledged. The grading and design of the site entrance has been revised to ensure that the driveway hump meets the required 6" of freeboard above the 100-year flow depth in Canyon View Lane. Note that street basin STR1 that contributes surface flows in Canyon View Lane has been prorated to quantify the flow conveyed upstream of the site entrance. A new street Section ST1 has been provided to determine the flow depth ($D_{100}=0.26$ -ft) for the driveway hump design. Please refer to Appendix B for the hydraulic calculation and to Appendix C for the revised Exhibit F with the updated prorate and sections summary tables.

12. **Comment:** *Revise the Cross-Section Details used for the perimeter walls at Lots 1, 2, 3, 6, 47, 63, and 85 to show sufficient solid grouting as required per the Adjacent/Perimeter Street Check Table;*

Response: Acknowledged. Please refer to the revised grading plans and detail Section 15/D-2, 16/D-2 and 25/D-2 provided for the lots.

13. **Comment:** *Label RCP size on profiles;*

Response: The RCP sizes have been labeled in both the plan and profile views of the revised profile sheets provided.

14. **Comment:** *Provide PDE's through common lots along Skye Village Road and Skye Park Drive;*

Response: Acknowledged. The common elements along Skye Village Road and Skye Park Drive have been labeled as common elements and the Private Streets and Common Elements note on the gradings plans shows all common elements as PDEs.

15. **Comment:** *Revise label Section Detail F/D-1 to reflect “80 ft drainage channel and stockpile”;*

Response: The label for Section Detail F/D-1 has been revised to correctly reflect “80-ft Drainage Channel & Stockpile”.

16. **Comment:** *Shift the storm drain manhole #5 such that it does not straddle the property line. Relocate the storm drain manhole onsite within the Public Drainage Easement;*

Response: Storm Drain manhole #5 has been relocated as noted. The shift results in change in invert thru of 0.09-ft. The lengths of the two pipe segments entering and leaving the manhole also changed by approximately 5.0-ft and 1.31-ft respectively. The invert change is considered very insignificant while the shortened pipe will result in less friction loss for the longer pipe segment; thus, the WSPGW hydraulic model of the 36” storm drain has not been revised.

17. **Comment:** *Revise the existing storm drain size on Sheet PP-11;*

Response: Acknowledged. The existing storm drain size call out has been revised as noted.

18. **Comment:** *Provide a Section Detail callout along the southern property line of Lot 38 to show the required solid grouted wall per the Supplemental Finished Floor Checks Table;*

Response: The subject wall along the southern property line of Lot 38 adjacent to Street F will be constructed with the future Phase 2 improvements and the required detail with solid grouting, if required to will be addressed in the subsequent update and improvement plans.

We believe the above responses, revised computations and revisions provided on the plans have adequately satisfied your concerns as stipulated in the review memorandum. The revised plan, profile, and detail sheets adopting the revisions addressed in in this letter have been included in Appendix D. If you have any questions or require additional information, please do not hesitate to contact us at (702) 284-5300.

Respectfully Submitted,

SLATER HANIFAN GROUP, A WESTWOOD TEAM



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

cc: D’Amato C. Hyche – SHG
Mark Failla, P.E., CFM – SHG
Josh Johnson, P.E. – SHG

APPENDIX

Appendix A CLV Comment Letter

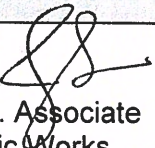
Appendix B Street Section

Appendix C Revised Drainage Map

Appendix D CD of Electronic Files & Revised Improvement Plans

APPENDIX A

CLV Comment Letter

CITY OF LAS VEGAS		DATE: August 6, 2019
INTER-OFFICE MEMORANDUM		
TO: Land Development Services Department of Building & Safety		FROM: Jennifer Shinn, P.E.  Flood Control, Engr. Associate Department of Public Works
SUBJECT: Drainage Study for: Skye Canyon II – Parcel 2.06		COPIES TO:
Cross Streets: Skye Canyon Park Dr. & Skye Village Rd.		Slater Hanifan Group
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Parcel Number: 125-07-211-002		Bart Anderson, P.E., DevCo
Zoning Action: TMP-75348; VAC-75349		CCRFCD
FEMA Flood Zone	YES	NO X
Proposed Storm Drain	YES X	NO

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TOTAL FEES (LDDRS):				\$800.00	----

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analyzed as 'Phase 2'. Said Update or 'Phase 2' is contingent upon the substantial completion of the Ultimate MPU facilities per Moccasin Road CCRFCD Flood Control Facility (US95/Kyle Canyon Road Interchange to Moccasin Road).

5. An update for Skye Canyon Phase 3A will be required to address the plugging of the 72" RCP prior to the completion of the ultimate MPU facilities per Moccasin Road CCRFCD Flood Control Facility. The Phase 2 improvements of this project will be dependent on the plugging of the 72" RCP.
6. Public drainage easements must be recorded by separate document prior to the final acceptance of the improvement plans unless they are to be recorded by parcel or final map.
7. Private streets must be public drainage easements. Provide a note on the grading plans "Note: All private streets are P.U.E., Public Sewer Easements, and Public Drainage Easements to be privately maintained by HOA."
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11. Revise the grading to demonstrate the site entrance is adequately humped 6" above the 100 year water surface.
12. Revise the Cross Section Details used for the perimeter walls at Lots 1, 2, 3, 6, 47, 63, and 85 to show sufficient solid grouting as required per the Adjacent/Perimeter Street Check Table.
13. Label RCP size on profiles.
14. Provide PDEs through common lots along Skye Village Road and Skye Park Drive.
15. Revise label Section Detail F/D-1 to reflect "80 ft drainage channel and stockpile".
16. Shift the storm drain manhole #5 such that it does not straddle the property line. Relocate the storm drain manhole onsite within the Public Drainage Easement.
17. Revise the existing storm drain size on Sheet PP-11.
18. Provide a Section Detail callout along the southern property line of Lot 38 to show the required solid grouted wall per the Supplemental Finished Floor Checks Table.

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

END OF REMARKS
JKS

T/R/S: T19S/R60E/S07
AREA G-07

APPENDIX B

Street Section

Worksheet for ST1 (min %)

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	2.00	%
Discharge	2.60	ft³/s
Section Definitions		

Station (ft)	Elevation (ft)
0+00.00	0.50
0+00.50	0.48
0+00.50	0.00
0+02.00	0.13
0+02.00	0.17
0+22.50	0.58
0+43.00	0.17
0+43.00	0.13
0+44.50	0.00
0+44.50	0.48
0+45.00	0.50

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.50)	(0+02.00, 0.13)	0.013
(0+02.00, 0.13)	(0+43.00, 0.13)	0.016
(0+43.00, 0.13)	(0+45.00, 0.50)	0.013

Options

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

Worksheet for ST1 (min %)

Results

Normal Depth		0.26	ft
Elevation Range	0.00 to 0.58 ft		
Flow Area		1.02	ft²
Wetted Perimeter		12.86	ft
Hydraulic Radius		0.08	ft
Top Width		12.24	ft
Normal Depth		0.26	ft
Critical Depth		0.30	ft
Critical Slope		0.00784	ft/ft
Velocity		2.55	ft/s
Velocity Head		0.10	ft
Specific Energy		0.36	ft
Froude Number		1.56	
Flow Type	Supercritical		

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.26	ft
Critical Depth	0.30	ft
Channel Slope	2.00	%
Critical Slope	0.00784	ft/ft

Cross Section for ST1 (min %)

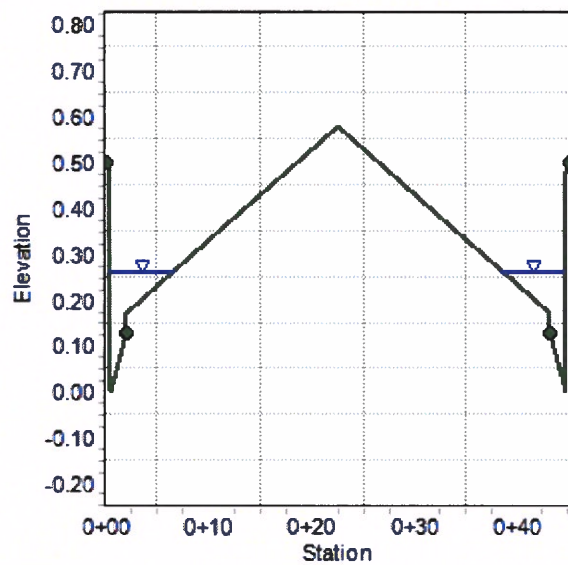
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	2.00 %
Normal Depth	0.26 ft
Discharge	2.60 ft ³ /s

Cross Section Image



Project Description

Normal Depth

Section Definitions

Worksheet for ST1 (max %)

Results

Normal Depth		0.23	ft
Elevation Range	0.00 to 0.58 ft		
Flow Area		0.69	ft ²
Wetted Perimeter		9.69	ft
Hydraulic Radius		0.07	ft
Top Width		9.14	ft
Normal Depth		0.23	ft
Critical Depth		0.30	ft
Critical Slope		0.00760	ft/ft
Velocity		3.78	ft/s
Velocity Head		0.22	ft
Specific Energy		0.45	ft
Froude Number		2.43	
Flow Type	Supercritical		

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.23	ft
Critical Depth	0.30	ft
Channel Slope	4.95	%
Critical Slope	0.00760	ft/ft

Cross Section for ST1 (max %)

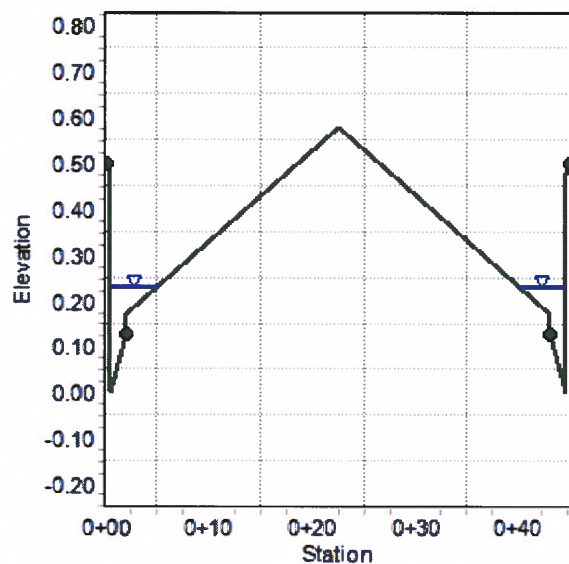
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	4.95 %
Normal Depth	0.23 ft
Discharge	2.60 ft ³ /s

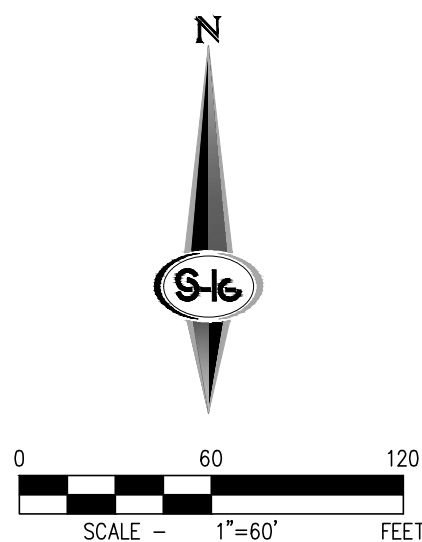
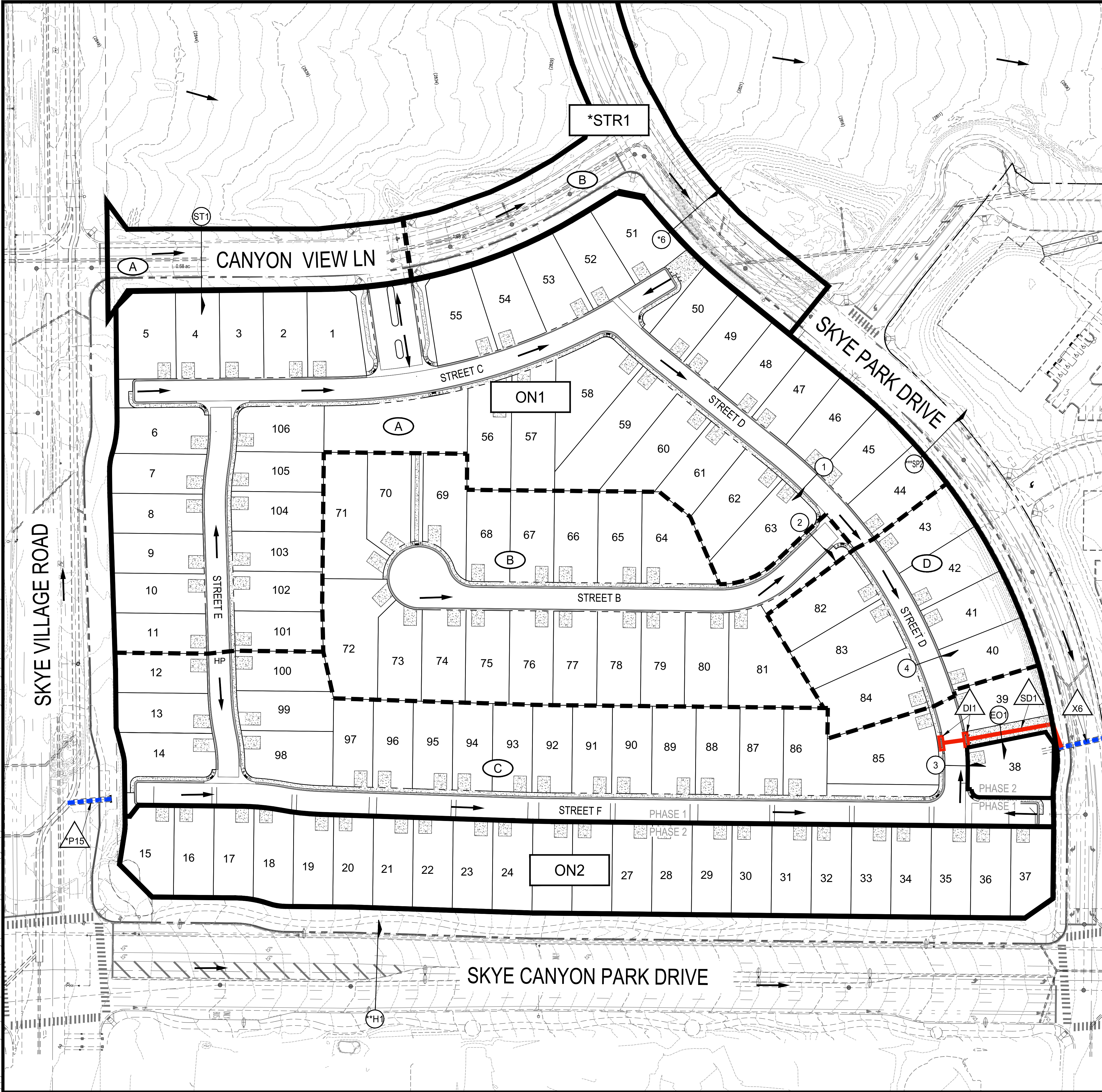
Cross Section Image



APPENDIX C

Drainage Exhibits

\\s01\1813-000\skye canyon ii - parcel 2.06\drainage\technical study\addendum 2\figures\oly1813.dwg2 exhibit 1 ultimate condition drainage map.dwg 8/15/2019 9:42 AM DC hlyche



LEGEND	
	BASIN BOUNDARY
	PRO-RATED SUBBASIN BOUNDARY
	EXISTING FACILITY
	PROPOSED FACILITY
	BASIN ID
	PRO-RATED SUBBASIN ID
	FLOW DIRECTION
	FLOWMASTER SECTION
	FACILITY ID

Ultimate Condition Flow Rate Summary				
Basin ID	Area (ac)	Q ₁₀₀ (cfs)	Q ₁₀ (cfs)	Q ₅ (cfs)
ON1	16.71	50.0	25.0	
ON2	3.06	10.0	5.0	

Prorated Flow Summary					
Basin ID	Q ₁₀₀ (cfs)	Q ₁₀ (cfs)	Area (acres)	100-yr Unit Flow (cfs/acre)	10-yr Unit Flow (cfs/acre)
ON1	50.00	25.00	16.71	2.99	1.50
Subbasin ID	Q ₁₀₀ (cfs)	Q ₁₀ (cfs)	Area (acres)	100-yr Unit Flow (cfs/acre)	10-yr Unit Flow (cfs/acre)
ON1(A)	22.2	11.1	7.42	2.99	1.50
ON1(B)	10.8	5.4	3.61	2.99	1.50
ON1(C)	12.8	6.4	4.29	2.99	1.50
ON1(D)	4.2	2.1	1.39	2.99	1.50
TOTAL	50.0	25.0	16.71		

Prorated Flow Summary					
Basin ID	Q ₁₀₀ (cfs)	Q ₁₀ (cfs)	Area (acres)	100-yr Unit Flow (cfs/acre)	10-yr Unit Flow (cfs/acre)
*STR1	10.0	5.0	2.60	3.85	1.92
Subbasin ID	Q ₁₀₀ (cfs)	Q ₁₀ (cfs)	Area (acres)	100-yr Unit Flow (cfs/acre)	10-yr Unit Flow (cfs/acre)
STR1(A)	2.6	1.3	0.68	3.85	1.92
STR1(B)	7.4	3.7	1.92	3.85	1.92
TOTAL	10.00	5.00	2.60		

Ultimate Condition 100-Year Section Summary					
Section ID	Q ₁₀₀ (cfs)	Slope (%)	Depth (ft)	Velocity (fps)	DxV
1	0.60	0.49	2.76	1.35	
Q = ON1(A)	22.2	4.00	0.37	5.23	1.94
2	3.11	0.31	4.01	1.24	
Q = ON1(B)	10.8	5.10	0.29	4.83	1.40
3	1.50	0.43	3.77	1.62	
Q = ON1(C) + ON2	22.8	3.81	0.38	5.15	1.96
4	37.2	1.00	0.52	3.96	2.06
Q = ON1(A) + ON1(B) + ON1(D)					
ST1	2.6	2.00	0.26	2.55	0.66
Q = *STR1(A)	4.95	0.23	3.78	0.87	
*6	9.0	2.3	0.42	4.44	1.90
**H1	15.0	3.56	0.37	5.20	1.90
***SP2	37.0	1.90	0.54	4.40	2.40

Emergency Overflow Easement Summary						
Section ID	Q ₁₀₀ (cfs)	Type (ft)	Type of Analysis	Slope (%)	Depth (ft)	Velocity (fps)
Section EO1 (Q = ON1 + ON2)	60.0	Concrete U-Channel	Normal Depth	0.50	0.56	5.32
			Weir	N/A	0.98	3.06

Flood Control Facilities Summary			
Facility ID	Facility Description	Q ₁₀₀ (cfs)	Notes
SD1	36" RCP	60	Proposed Storm Drain Lateral
DI1	15" Type CM2 Sump	Two DI's each collecting 30 cfs	Proposed Drop Inlets
X6	72" RCP	112	Referenced Facility
*P15	72" RCP	422	Capped off

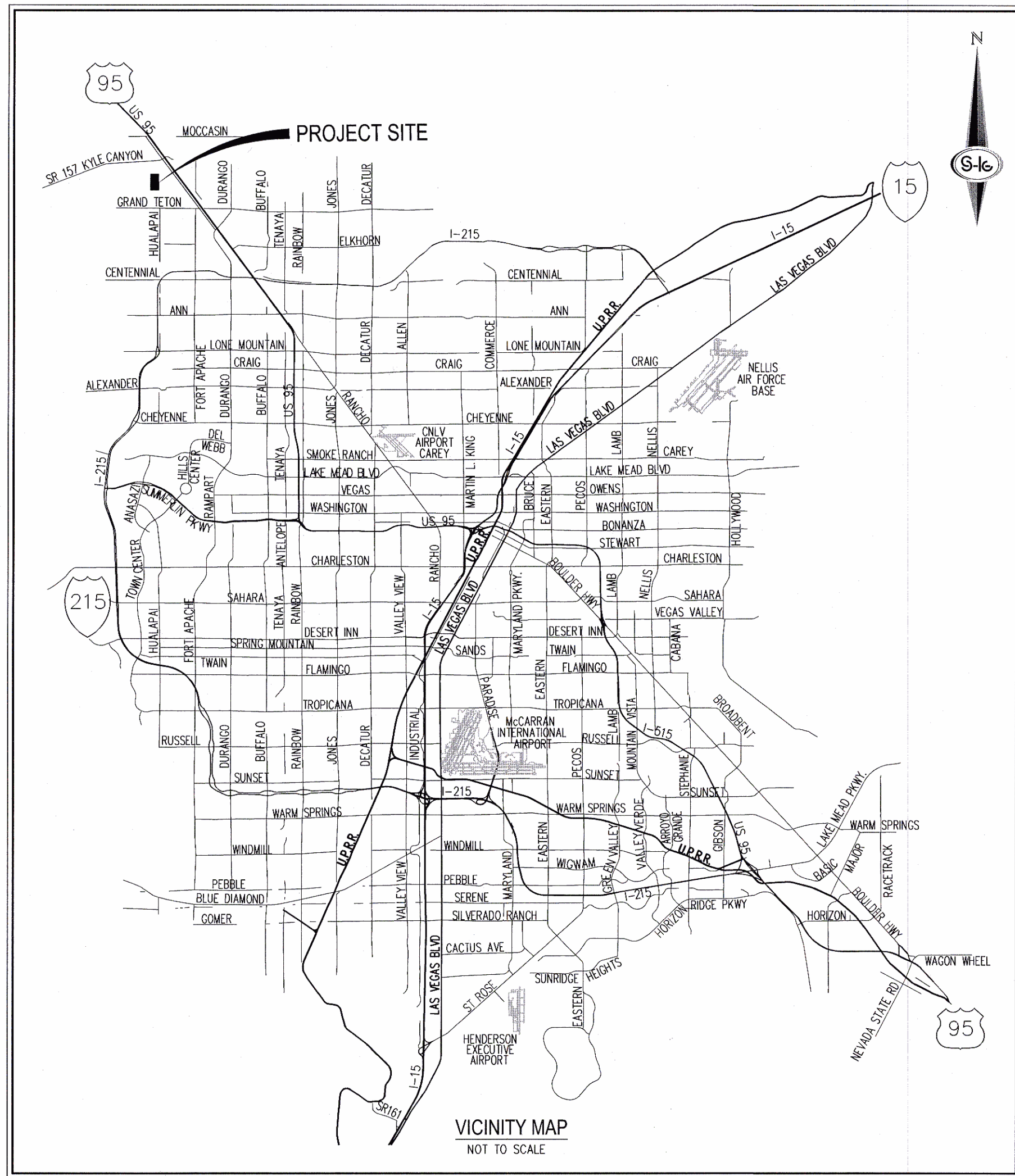
*REFERENCED FROM INFRASTRUCTURE 3A STUDY
**REFERENCED FROM SKYE CANYON PHASE 1 INFRASTRUCTURE STUDY
***REFERENCED FROM SKYE CANYON PHASE 3 (SMITH CENTER) STUDY

NO.	DESCRIPTION	DATE	BY	APP.
1				

APPENDIX D

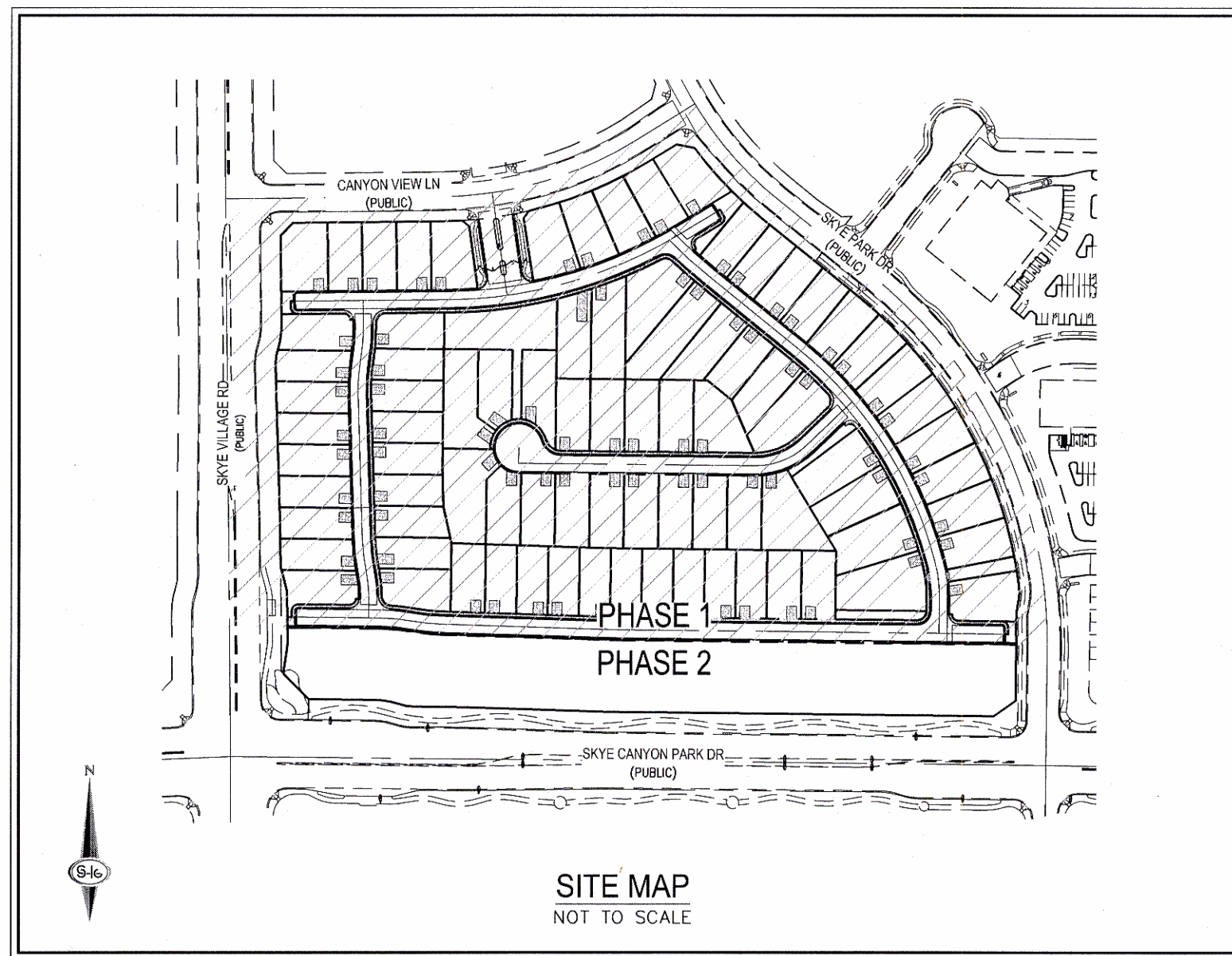
CD of Electric Files & Revised Improvement Plans

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NINETY FIVE MANAGEMENT, LLC IMPROVEMENT PLANS FOR SKYE CANYON II PARCEL 2.06 - PHASE 1

CITY OF LAS VEGAS, NEVADA
RESIDENTIAL SUBDIVISION
APN: 125-07-211-002



DEVIATIONS FROM STANDARDS

NONE

SWPPP NOTE

NOTE: ALL LAND SURFACE AREA DISTURBANCES OVER 1 ACRE REQUIRE A STORMWATER DISCHARGE PERMIT ISSUED BY THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION (NDEP). A PHASED CONSTRUCTION UNIT IN A CONTIGUOUS SUBDIVISION IS CONSIDERED UNDER CONSTRUCTION UNTIL ALL STRIPPED SURFACE AREAS HAVE BEEN COVERED BY PAVING, BUILDING CONSTRUCTION OR PLANTING. A STORMWATER DISCHARGE PERMIT APPLICATION AND ASSOCIATED INFORMATION MAY BE DOWNLOADED FROM THE WEB SITE: [HTTP://WWW.STATE.NV.US/BWPC/STORM01.HTM](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. NVRI00000 ALONG WITH THE APPROPRIATE FILLING FEE.

PROJECT INFORMATION

APN NUMBERS: 125-07-211-002
GROSS AREA: 21.97± ACRES
NET AREA: 19.11± ACRES
CURRENT ZONING: R-1
PROPOSED ZONING: R-1
TOTAL LOT COUNT: 107
TOTAL DENSITY: 4.87 DU/AC
NO. OF COMMON ELEMENTS: 10
OPEN SPACE PROVIDED: 124,564 SF

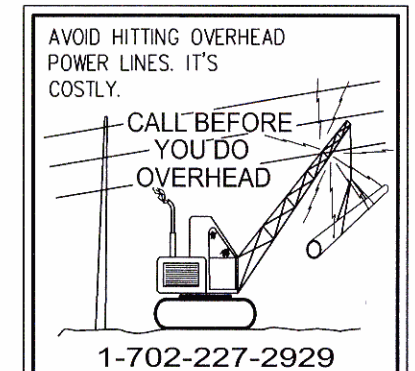
EARTHWORK SUMMARY (UNADJUSTED)

CUT 128,656 CY.
FILL 58,338 CY.
NET 70,318 CY.

GEOTECHNICAL ENGINEER

PREPARED BY: SOUTHWEST GEOTECHNICAL
ADDRESS: 5275 ARVILLE ST. LAS VEGAS, NV 89118
PHONE: 702-321-5000
PROJECT NO. 175337
DATED: 10/17/2018

SHEET INDEX		
NO.	SHEET	TITLE
1	C-1	COVER SHEET
2	C-2	STANDARD NOTES
3	C-3	QUANTITIES, LEGEND, & ABBREVIATIONS
4	G-1	GRADING PLAN I
5	G-2	GRADING PLAN II
6	G-3	GRADING PLAN III
7	G-4	GRADING PLAN IV
8	G-5	GRADING PLAN V
9	D-1	SITE CROSS SECTIONS
10	D-2	SITE DETAILS
11	PP-1	PLAN & PROFILE STREET A STA 9+50 - STA 11+18
12	PP-2	PLAN & PROFILE STREET B STA 9+50 - STA 13+00
13	PP-3	PLAN & PROFILE STREET B STA 13+00 - STA 15+38
14	PP-4	PLAN & PROFILE STREET C STA 9+50 - STA 13+00
15	PP-5	PLAN & PROFILE STREET C STA 13+00 - STA 16+51
16	PP-6	PLAN & PROFILE STREET D STA 9+36 - STA 14+50
17	PP-7	PLAN & PROFILE STREET D STA 14+50 - STA 17+50
18	PP-8	PLAN & PROFILE STREET E STA 9+37 - STA 14+70
19	PP-9	PLAN & PROFILE STREET F STA 9+50 - STA 15+00
20	PP-10	PLAN & PROFILE STREET F STA 15+00 - STA 19+50
21	PP-11	PLAN & PROFILE STREET F STA 19+50 - STA 20+83
21	SD-1	PLAN & PROFILE DRAINAGE CHANNEL STA 9+15 - STA 14+50
22	SD-2	PLAN & PROFILE DRAINAGE CHANNEL STA 14+50 - STA 20+00
23	SD-3	PLAN & PROFILE DRAINAGE CHANNEL STA 20+00 - STA 23+00
24	MU-1	MASTER UTILITY PLAN
25	U-1	UTILITY PLAN I
26	U-2	UTILITY PLAN II
27	U-3	UTILITY PLAN III
28	U-4	UTILITY PLAN IV
29	U-5	UTILITY PLAN V
30	T-1	TRAFFIC PLAN I
31	T-2	TRAFFIC PLAN II
32	T-3	TRAFFIC PLAN III
33	T-4	TRAFFIC PLAN IV
34	T-5	TRAFFIC PLAN V
35	S-1	GENERAL STRUCTURAL NOTES & TYPICAL DETAILS
36	S-2	STORM DRAIN TRANSITION STRUCTURE
37	S-3	STORM DRAIN MANHOLE STRUCTURES



APPROVALS	
CITY ENGINEER-ALLEN PAVELKA PE, #9029	DATE
APPROVAL OF THESE PLANS BY THE CITY ENGINEER IS LIMITED TO THOSE IMPROVEMENTS CONSTRUCTED IN THE DEDICATED RIGHT-OF-WAY, AND/OR DEDICATED EASEMENTS. THIS APPROVAL DOES NOT AUTHORIZE CONSTRUCTION OF ANY IMPROVEMENTS THAT DEVIATE FROM ADOPTED STANDARDS AND/OR SPECIFICATIONS EXCEPT THOSE SPECIALLY LISTED UNDER DEVIATIONS FORM STANDARDS. THE ENGINEER SHALL RESOLVE ANY DEVIATION OTHER THAN THOSE LISTED IN DEVIATIONS FROM STANDARDS IN FAVOR OF THE UNIFORM STANDARD DRAWINGS AND SPECIFICATIONS, CLARK COUNTY AREA, NEVADA.	
LAS VEGAS FIRE AND RESCUE	DATE
CITY OF LAS VEGAS - PLANNING DEPARTMENT	
THIS PLAN MEETS THE APPLICABLE STANDARDS OF THE PLANNING DEPARTMENT.	
CENTRAL TELEPHONE CO. DBA CENTURYLINK	DATE
THE AFFIXED CENTURYLINK APPROVAL DOES NOT ASSUME OR GUARANTEE LIABILITY FOR KNOWN OR UNKNOWN CONFLICTS WITH EXISTING OR PROPOSED IMPROVEMENTS. RESOLUTION OF ANY CONFLICT WILL BE ACCOMPLISHED PURSUANT TO LOCAL ORDINANCES, NEVADA REVISED STATUTES AND / OR PUBLIC UTILITY COMMISSION RULES AND REGULATIONS.	
APPROVED FOR CONSTRUCTION	
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES PROJECT NO. 136742 LVWMD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 20 GPM	
SHEETS: PP-1 THRU PP-11, MU-1, U-1 THRU U-5 LVWMD APPROVAL IS VALID FOR ONE (1) YEAR FROM SIGNATURE DATE. IF CONSTRUCTION IS NOT STARTED, PLANS MUST BE RESUBMITTED FOR REVIEW AND APPROVAL.	
NV ENERGY	DATE
NV ENERGY ACKNOWLEDGES THAT WE HAVE RECEIVED YOUR PLANS AND WILL PROVIDE SERVICE TO ALL ELECTRICAL NEEDS ASSOCIATED WITH THIS PROJECT. NV ENERGY RESERVES THE RIGHT TO ADDRESS ANY EXISTING OR FUTURE CONFLICTS ONCE THE FINAL DESIGN IS COMPLETED. THE NEW SERVICE AND THE RESOLUTION OF ANY CONFLICTS WILL BE ACCOMPLISHED PURSUANT TO THE NEVADA PUBLIC UTILITY COMMISSION'S RULES AND REGULATIONS.	
SOUTHWEST GAS CORPORATION	DATE
COX COMMUNICATIONS LAS VEGAS, INC.	DATE

ENGINEER SLATER HANIFAN GROUP, INC. 5740 S. ARVILLE STREET, SUITE 216 LAS VEGAS, NV 89118 PH: (702) 284-5300 FX: (702) 284-5399 CONTACT: JOSH JOHNSON, P.E.	OWNER/DEVELOPER M F LAND, LLC OLYMPIA COMPANIES 11411 SOUTHERN HIGHLANDS #300 LAS VEGAS, NV 89141 PH: (702) 220-6565
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LEGAL DESCRIPTION

THE PORTIONS OF GOVERNMENT LOT 17 OF SECTION 6 AND GOVERNMENT LOTS 7, 9, 10, 11 OF SECTION 7, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA

BENCHMARK

USDA BRASS CAP ON AN IRON PIPE, 140' SOUTHWEST OF TELEPHONE POLE #26047, SOUTHWEST CORNER OF THE U.S. 95/KYLE CANYON TURNOFF.
ELEVATION = 2817.62 FEET, 858.813 METERS
N.A.V.D. 88
PER THE CLARK COUNTY VERTICAL CONTROL LAST REVISED 2003

BASIS OF BEARING

SOUTH 00°22'12" WEST, BEING THE BEARING OF THE WEST LINE OF THE NORTHWEST QUARTER (NW1/4) OF SECTION 6, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE 151, PAGE 14 OF SURVEYS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

FEMA FLOOD ZONE INFORMATION

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE 'X' (UNSHADED), AS DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANELS 32003C1735E, DATED SEPTEMBER 27, 2002. A ZONE 'X' (UNSHADED) IS DEFINED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% (500 YEAR) ANNUAL CHANCE FLOOD PLAIN.

SLATER HANIFAN GROUP
a Westwood team

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

NINETY FIVE MANAGEMENT, LLC

SKYE CANYON II PARCEL 2.06 - PHASE 1

COVER SHEET

DATE: 8/15/19

DRAFTER: BKS

DESIGNER: BKS

CHECKED: JJ

PROJECT NO. OLY1813-000

Professional Engineer Seal for Joshua L. Johnson, State of Nevada, No. 15789, Civil, Exp. 08/30/2021

C-1
SHEET 1 OF 37

10/15/2019 9:22 AM Brian Scott

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 AND CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATE IN, THE PUBLIC RIGHTS OF WAY OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.
2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN TITLE 24.40 AND THE LAS VEGAS VALLEY CONSTRUCTION SITE BEST MANAGEMENT PRACTICES MANUAL.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVRI00000, SECTION III.A.5.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS AND ALL BMPs WEEKLY, AND WITHIN 24 HOURS AFTER ANY ACTUAL RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVRI00000, SECTION III.A.12.
5. ACCUMULATED SEDIMENT IN BMPs SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

LEGAL DESCRIPTION

THE PORTIONS OF GOVERNMENT LOT 17 OF SECTION 6 AND GOVERNMENT LOTS 7, 9, 10, 11 OF SECTION 7, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA

BENCHMARK

USDA BRASS CAP ON AN IRON PIPE, 140' SOUTHWEST OF TELEPHONE POLE #269941, SOUTHWEST CORNER OF THE U.S. 95/KYLE CANYON TURNOFF.

ELEVATION = 2817.62 FEET, 658.813 METERS

NAVD83 PER THE CLARK COUNTY VERTICAL CONTROL, LAST REVISED 2003

BASIS OF BEARING

SOUTH 07°22'12" WEST, BEING THE BEARING OF THE WEST LINE OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 6, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE 151, PAGE 14 OF SURVEYS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

SOUTHERN NEVADA - SOUTHWEST GAS CORPORATION

GENERAL NOTES

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

SOUTHWEST GAS APPROVAL

SOUTHWEST GAS CORPORATION

DATE

2.2 CITY OF LAS VEGAS SEWER NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS AND THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA, AS AMENDED. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE SPECIFICATIONS.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM CONSTRUCTION AS PER PLANS, ANY ADDITIONS, DELETIONS, OR CHANGES SHALL FIRST MEET WITH THE APPROVAL OF THE CITY ENGINEER.
3. CHISEL "S" OR "O" 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 REINFORC 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-800 PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.

LAS VEGAS VALLEY WATER DISTRICT (LVVWD) STANDARD NOTES

LVVWD PROJECT # 136742 (REVISED 08/01/2017)

1. NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN APPROVED FOR CONSTRUCTION BY THE LVVWD. FOLLOWING WATER PLAN APPROVAL, NOTICE SHALL BE GIVEN TO THE LVVWD COMMUNICATIONS SUPPORT CENTER (258-7771) TWO (2) WORKDAYS PRIOR TO THE START OF CONSTRUCTION FOR FUTURE INSPECTIONS. NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO THE REQUESTED LVVWD INSPECTION. WHEN REQUESTING INSPECTIONS, PLEASE REFER TO THE PROJECT # IDENTIFIED ABOVE.
2. ALL WORK SHALL CONFORM TO LVVWD STANDARD PLATES, DRAWINGS, AND SPECIFICATIONS, AND TO THE 2010 EDITION OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS), THE LATEST EDITION OF UDACS SHALL SUPERSEDE ANY CONFLICTS CONTAINED IN THE APPROVED DRAWINGS AND/OR SPECIFICATIONS.
3. ALL WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2 ABOVE, SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT DRAFT OR EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENT, CLARK COUNTY AREA.
4. A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVVWD.
5. ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING WITH LVVWD APPROVED SERVICE SADDLES.
6. ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
7. ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS, VALLEY AND CURB GUTTERS.
8. ALL WATER AND STORM DRAIN OR SANITARY SEWER CROSSINGS SHALL CONFORM TO SECTION 2.22 OF THE 2010 EDITION OF THE UDACS.
9. ALL WATER FACILITIES AND APPURTENANCES SHALL BE DISINFECTED, PRESSURE TESTED, AND HAVE AN ACCEPTABLE PASSING HEALTH WATER SAMPLE OBTAINED, PRIOR TO OPERATION AND USE.
10. THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 OR 258-3802, TWO (2) WORKING DAYS PRIOR TO METER PICKUP.
11. ANY INTERRUPTION OF SERVICE MUST BE PERFORMED IN ACCORDANCE WITH UDACS SECTION 314.01, AND APPROVED BY THE LVVWD INSPECTION DIVISION PRIOR TO SHUTDOWN. PROPER WRITTEN NOTIFICATION MUST BE GIVEN TO ALL AFFECTED CUSTOMERS.
12. ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE AS LISTED ON THE LVVWD APPROVED PRODUCTS LIST FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS BY SUBMITTING SHOP DRAWINGS.
13. TELEPHONE "CALL BEFORE YOU DIG" AT "811" OR 1-800-227-2600.
14. THE INSTALLATION OF LVVWD MUNICIPAL WATER FACILITIES WITHIN ALL STREETS IS ASSUMED TO BE IN COMPLIANCE WITH THE UNIFORM STANDARDS, INCLUDING THE PLACEMENT OF ASPHALT PAVING STREET SURFACES. ANY REPAIR WORK DONE BY THE LVVWD TO THE MUNICIPAL WATER FACILITIES WILL INCLUDE THE PLACEMENT OF AN APPROPRIATELY SIZED ASPHALT REPAIR PATCH ON THE STREET SURFACE.

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

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

GRADING NOTES

1. INDICATED GRADES OTHER THAN T.C., F.G. & GUTTER F.L. ARE ROUGH GRADES.
2. THE ROUGH GRADING PLANS SHALL BE ON THE JOB SITE AT ALL TIMES. THE ROUGH GRADING SHALL BE FINISHED IN CONFORMANCE WITH THE LINES AND GRADES SHOWN ON THE PLANS. THE GRADING QUANTITIES ARE BASED ON THE ELEVATION AND DETAILS SHOWN ON THE PLANS. ANY DEVIATIONS FROM THE PLANS WILL RESULT IN QUANTITY CHANGES.
3. CARE SHALL BE EXERCISED IN GRADING CORNER LOTS.
4. ROUGH PAD ELEVATIONS SHALL BE GRADED TO WITHIN 0.1' OF THE PAD ELEVATIONS SHOWN ON THE PLANS. WHEN GRADING IS COMPLETE PER THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE LOTS CAN BE INSPECTED. AT THAT TIME THE ENGINEER SHALL ALSO DECIDE IF ANY ADDITIONAL DITCHES OR BERMS ARE REQUIRED. THE CONTRACTOR IS REQUESTED NOT TO REMOVE ANY OF HIS ROUGH GRADING EQUIPMENT UNTIL HE RECEIVES GRADING APPROVAL FROM THE ENGINEER.
5. SOILS REPORT PREPARED BY SOUTHWEST GEOTECHNICAL, PROJECT NO. 175337, DATED 10/17/2018.
6. EARTHWORK QUANTITIES (RAW):
- CUT = 128,656 CUBIC YARDS.
- FILL = 58,338 CUBIC YARDS.
A) THE ABOVE QUANTITIES DO NOT REFLECT LOSSES DUE TO SUBSIDENCE OR SHRINKAGE.
B) THE ABOVE QUANTITIES DO REFLECT USING NATIVE MATERIAL IN LIEU OF TYPE I GRAVEL BASE MATERIAL FOR STREET SECTIONS.
C) THE ABOVE QUANTITIES DO NOT REFLECT ANY EARTHWORK WHICH MAY BE REQUIRED BY THE ENGINEER TO CONSTRUCT ADDITIONAL PROTECTIVE DITCHES OR BERMS NOT SHOWN ON THESE DRAWINGS.

CITY OF LAS VEGAS FIRE AND RESCUE GENERAL NOTES

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LAS VEGAS FIRE AND RESCUE ADOPTED FIRE CODE (UNIFORM) & BEST FOR HYDRANT SPECIFICATIONS AND HYDRANT INSTALLATION SPECIFICATIONS.
2. ONLY FIRE HYDRANTS THAT ARE ON THE LAS VEGAS VALLEY WATER DISTRICT'S - APPROVED PRODUCTS LIST ARE ALLOWED TO BE INSTALLED.
3. A PERMIT IS REQUIRED FROM LAS VEGAS FIRE AND RESCUE FOR 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. IFC § 105.6.15
4. ON ANY RESIDENTIAL OR COMMERCIAL INSTALLATIONS, FIRE HYDRANTS SHALL BE INSTALLED AND FIRE APPARATUS ACCESS ROADS SHALL BE MAINTAINED BEFORE COMMENCEMENT OF ANY COMBUSTIBLE CONSTRUCTION. ALL FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER AND SHALL BE CAPABLE OF DELIVERING THE REQUIRED FIRE FLOW. IFC § 3310, § 3312
5. TO IDENTIFY THE FIRE HYDRANT LOCATIONS, THE CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT THE CENTER LINE OF THE STREET ADJACENT TO THE FIRE HYDRANTS. IFC § 507.5.7.3
6. ALL UNDERGROUND INSPECTIONS, PRESSURE, AND FLUSH VERIFICATIONS OF ALL FIRE HYDRANTS AND FIRE LINES, SHALL BE CONDUCTED BEFORE COVERING THE LINES. CENTER LOADING IS ACCEPTABLE FOR THE HYDRO TESTS WITH PRIOR FIRE PREVENTION APPROVAL. IFC § 106.3
7. ALL ON-SITE UNDERGROUND WATER MAINS AND MATERIALS SHALL BE U.L. LISTED, A.W.W.A APPROVED AND SHALL BE RATED FOR THE APPROPRIATE WORKING PRESSURE. IFC § 507.2.1, N.EPA 24
8. PAINTING OF CURBS, FIRE HYDRANTS, PADS, PROTECTION OF FIRE HYDRANTS FROM PHYSICAL DAMAGE, AND ALL OTHER WORK NECESSARY PER PLANS SHALL BE COMPLETED BEFORE APPROVAL BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION. IFC § 507
9. PRIVATE HYDRANTS SHALL BE PAINTED RED. IFC § 507.5.7.1
10. PRIOR TO THE FINAL OCCUPANCY, A FIRE FLOW TEST SHALL BE WITNESSED BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION. REFER TO AVAILABILITY OF THE REQUIRED FIRE FLOW. IFC § 507
11. FIRE HYDRANT SPACING SHALL BE AS FOLLOWS: IFC § C102.
 - RESIDENTIAL - 500 FT UNSPRINKLERED; 600 FT SPRINKLERED.
 - COMMERCIAL - 300 FT UNSPRINKLERED; 400 FT SPRINKLERED.
12. WHERE 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 STREET ARE PROVIDED WITH MEDIAN DIVIDERS OR HAVE FOUR (4) OR MORE TRAFFIC LANES AND HAVE A TRAFFIC COUNT AT 500 FT ON AN ALTERNATING BASIS. IFC § C102.8
13. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE RADIUS OF A CUL-DE-SAC OR WITHIN 20 FT OF THE PERIMETER OF THE RADIUS OF THE CUL-DE-SAC.
14. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN 6 FT OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREETLIGHT OR ANY OTHER OBSTRUCTION. IFC § C102.10
15. A MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A ONE-TWO FAMILY DWELLING SHALL NOT EXCEED 300 FT, AS MEASURED BY AN APPROVED ROUTE. IFC § C102.4
16. THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A FIRE DEPARTMENT CONNECTION (FDC) SHALL NOT EXCEED 100 FT, AS MEASURED BY AN APPROVED ROUTE. IFC § C102.7
17. THE MAXIMUM DISTANCE FROM A HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. IFC § C102.6
18. TWO (2) SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE IS 4 OR MORE FIRE HYDRANTS/SPRINKLER LEAD-INS ARE INSTALLED ON A SINGLE SYSTEM FOR SYSTEMS REQUIRED TO HAVE TWO (2) SOURCES OF WATER SUPPLY, SECTIONAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 2 FIRE HYDRANTS AND/OR FIRE SPRINKLER LEAD-INS CAN BE OUT OF SERVICE DUE TO A SERVICE INTERRUPTION. FOR SYSTEMS PERMITTED TO HAVE ONE SOURCE OF WATER SUPPLY, SECTIONAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 3 FIRE HYDRANTS AND/OR FIRE SPRINKLER LEAD-INS CAN BE OUT OF SERVICE DUE TO A SERVICE INTERRUPTION. IFC § C104
19. ALL FIRE APPARATUS ACCESS ROADS SHALL BE PAVED TO PROVIDE ALL WEATHER DRIVING CAPABILITIES, AND SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF THE FIRE APPARATUS. IFC § 503.2.3
20. THE GRADIENT FOR THE FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 12% ANGLES OF APPROACH AND ANGLES OF DEPARTURE SHALL NOT EXCEED 6% FOR 25 FT PRIOR TO OR AFTER THE GRADE CHANGE. ADJUSTED TO THE STRUCTURES GRADIENT SHALL NOT EXCEED 6%. IFC § 503.2.7, § 503.2.8
21. THE TURNING RADIUS OF THE FIRE APPARATUS ACCESS ROADS SHALL BE NO LESS THAN 52 FT OUTSIDE AND 28 FT INSIDE TURNING RADIUS. IFC § 503.2.4
22. VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL NOT BE LESS THAN 13FT 6 INS. IFC § 503.2.1
23. FIRE DEPARTMENT ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF NOT LESS THAN 33 FT WITH PARKING ON BOTH SIDES MEASURED TO FACE OF CURB, NOT LESS THAN 28 FT WIDE WITH PARKING RESTRICTED TO ONE SIDE MEASURED TO FACE OF CURB, NOT LESS THAN 24 FT WIDE WITH NO PARKING ON EITHER SIDE MEASURED TO FACE OF CURB. FIRE LINES THROUGH PARKING LOTS SHALL BE NOT LESS THAN 24 FT. IFC § 503.2.1.1
24. A FIRE APPARATUS ACCESS ROAD SHALL BE REQUIRED WHEN ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY IS LOCATED MORE THAN 150 FT FROM A FIRE DEPARTMENT VEHICLE ACCESS. IFC § 503.1.1
25. APPROVED SECONDARY FIRE APPARATUS ACCESS SHALL BE PROVIDED FOR 200 OR MORE DWELLING UNITS, ROAD(S) WITH DEAD-ENDS OR A SINGLE POINT OF ACCESS IN EXCESS OF 600 FT, CLV REGULATION AND MOU
26. ALL DEAD-END FIRE APPARATUS ROADS AND/OR FIRE LINES, PUBLIC OR PRIVATE, IN EXCESS OF 150 FT IN LENGTH SHALL BE PROVIDED WITH AN APPROVED TURN AROUND HAVING A MINIMUM DIAMETER OF 81 FT, CLV REGULATION
27. ALL FIRE APPARATUS ACCESS ROADS SHALL BE MARKED BY PLACING APPROVED SIGNS AT THE START OF THE DESIGNATED FIRE LANE, ONE SIGN AT THE END OF THE FIRE LANE AND WITH SIGNS AT INTERVALS OF 100 FT ALONG THE DESIGNATED FIRE LINES. SIGNS TO BE PLACED ON BOTH SIDES OF AN ACCESS ROADWAY IF NEEDED TO PREVENT PARKING ON EITHER SIDE. SIGNS TO BE INSTALLED NO HIGHER THAN 10 FT OR LESS THAN 6 FT FROM THE ROADWAY LEVEL. THE CURB ALONG OR ON THE PAVEMENT OR CURB (IF NO CURB IS PROVIDED) SHALL BE PAINTED WITH A RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS. IFC § 503.3
28. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. IFC § 503.6
29. WHERE STREETS ARE PROVIDED WITH MEDIAN DIVIDERS, OR HAVING FOUR OR MORE TRAVEL LANES AND A TRAFFIC COUNT OF MORE THAN 30,000 VEHICLES PER DAY, ALL HYDRANTS BEING UTILIZED TO DELIVER FIRE FLOW TO THE PROPOSED LOCATION SHALL BE LOCATED ON THE SAME SIDE OF THE STREET AS THE PROPOSED DEVELOPMENT. CLV REGULATION

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 ACHIEVE 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 CAUSING OF THE EXCAVATION.
4. THE CONTRACTOR IS WARNED THAT AN EARTHWORK BALANCE WAS NOT NECESSARILY THE INTENT OF THIS PROJECT. ANY ADDITIONAL MATERIAL REQUIRED OR LEFTOVER MATERIAL FOLLOWING EARTHWORK OPERATIONS BECOMES THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE GRADING CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE OWNER TO PROVIDE FOR THE REQUIREMENTS OF THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND ASSOCIATED PERMIT.
6. CONTRACTOR SHALL GRADE TO THE LINES AND ELEVATIONS SHOWN ON THE PLANS WITHIN THE FOLLOWING HORIZONTAL AND VERTICAL TOLERANCES AND DEGREES OF COMPACTION, IN THE AREAS INDICATED:

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

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

UTILITY LOCATION NOTE TO CONTRACTOR

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

2.1 CITY OF LAS VEGAS GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST ISSUE, THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY AREA, NEVADA", LATEST REVISED EDITION; THE "SUMMERLIN IMPROVEMENT STANDARDS" FOR WORK IN THE SUMMERLIN AREA; AND OTHER APPLICABLE APPROVED STANDARDS ISSUED BY THE CONTROLLING AGENCY; THE UNIFORM BUILDING CODE; AND ALL LOCAL CITY CODES AND ORDINANCES APPLICABLE, EXCEPT AS NOTED ON THIS SHEET AS "DEVIATIONS FROM STANDARDS".
2. THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. EXISTING UTILITIES AS SHOWN FROM CLV PLANS LIBRARY ARE APPROXIMATE AND FOR RECORD PURPOSES. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. EXISTING UTILITY SERVICE LATERALS MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND AND OVERHEAD INTERFERENCE 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 (1/2") ABOVE UP OF ALL GUTTERS AFTER INTERSECTION, EXCEPT AT SIDEWALK RAMP(S).
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 RAMP(S) SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235; EXACT LOCATION OF RAMP(S) MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.
11. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF THE TRANSITIONS TO BE AS SHOWN ON PLANS.
12. ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY SOUTHWEST GEOTECHNICAL, REPORT #175337, DATED 10/17/2018, APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.
13. EXACT LOCATION OF ALL SAWDUT LINES MAY BE ADJUSTED OR DETERMINED IN THE FIELD BY A CITY OF LAS VEGAS ENGINEER IF LOCATION ON PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES RELOCATIONS.
14. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEY MONUMENTS. ANY MONUMENTS DISTURBED SHALL BE REPLACED AND ADJUSTED PER AVAILABLE RECORDS IN ACCORDANCE WITH N.E.S. STATUTE NO. 225.380 & 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.
16. WALL NOTES.
17. 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.
18. ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT OF WAY.
19. 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.
20. WHEN INSTALLING UNDERGROUND FACILITIES THAT REQUIRE UNDERGROUND LOCATING DEVICES SUCH AS MARKER BALLS, LOCATING RIBBON, ETC., THE CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION TO OFFSITE INSPECTION AND TESTING CERTIFYING THAT ALL DEVICES HAVE BEEN PLACED AND VERIFIED TO BE IN GOOD WORKING CONDITION PRIOR TO THE CONSTRUCTION OF ANY ROAD BASE.
21. SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S) SHALL BE PROVIDED TO THE CITY AND APPROVED PRIOR TO ACCEPTANCE OF FACILITY VIDEO INSPECTION. MAP(S) SHALL INCLUDE THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF THE PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES AND TRANSITION STRUCTURES. STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND THE CONNECTION TO A DROP INLET, THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS EXIT THE PUBLIC RIGHT-OF-WAY, SEWER AND STORM DRAIN MAIN ALIGNMENT, INCLUDING DEFLECTION POINTS. THE LOCATION SHALL BE DESCRIBED BY COORDINATES WHICH SHALL BE BASED ON THE OFFICIAL HORIZONTAL AND VERTICAL CONTROL NETWORKS OF THE CITY OF LAS VEGAS. FINAL LOCATION MAP(S) MUST BE SEALED AND CERTIFIED BY A NEVADA PROFESSIONAL LAND SURVEYOR TO HAVE POSITIONAL CERTANTIES OF ± 0.09 METERS (± 0.3 FEET) HORIZONTALLY AND VERTICALLY. A SEPARATION ELECTRONIC COMMA DELIMITED FILE FOR THE SANITARY SEWER AND STORM DRAIN COORDINATES SHALL ALSO accompany the SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S).
22. 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.
23. A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.

2.3 CITY OF LAS VEGAS TRAFFIC NOTES

1. ALL CONSTRUCTION SIGNING, BARRICADEING, AND TRAFFIC DELINEATION SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.
2. THE PLANNING DESIGN CONTRACTOR SHALL OBTAIN STREET NAMES AND BLOCK NUMBERING FROM THE STREET DEPARTMENT PRIOR TO CONSTRUCTION.
3. BEFORE ANY WORK IS STARTED IN THE RIGHT-OF-WAY, THE CONTRACTOR SHALL INSTALL ALL ADVANCE WARNING SIGNS FOR THE CONSTRUCTION ZONE. THE CONTRACTOR SHALL INSTALL TEMPORARY STOP SIGNS AT ALL NEW STREET ENCROACHMENTS INTO EXISTING CITY STREETS WHERE WARRANTED IMMEDIATELY AFTER FIRST GRADING WORK IS ACCOMPLISHED, AND SHALL MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED.
4. WHEN A DESIGNATED "SAFE ROUTE TO SCHOOL" IS ENCLOSED UPON BY A CONSTRUCTION WORK ZONE AND PUBLIC WORKS STAFF IDENTIFIES A NEED FOR STUDENTS TO BE ASSISTED IN THE SAFE CROSSING THROUGH THE CONSTRUCTION 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 MARKINGS, 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 B REFLECTIVE SHEETING ON APPROVED EQUAL. ALL NEW TRAFFIC SIGNS, EXCEPT STREET NAME AND SCHOOL SPEED LIMIT SIGNS, SHALL HAVE 3M SERIES 1660 OR APPROVED EQUIVALENT ANTI-GRAFFITI PROTECTIVE OVERLAY FILM. SCHOOL ZONE SIGNS SHALL HAVE 3M SERIES 1155 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 PLACED SIGN.
10. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL DEVICES AND FLAGGERS TO INSURE THE SAFETY OF THE PUBLIC IN OR AROUND THE WORK AREA. THE CONTRACTOR SHALL HAVE A CERTIFIED ATSSA TRAFFIC CONTROL TECHNICIAN OR INSA WORK ZONE 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 # 828-4442) WHO WILL PROVIDE OFFICERS PROPERLY TRAINED IN TRAFFIC CONTROL. FEES FOR THE USE OF THESE OFFICERS SHALL BE SET BY METRO AND WILL BE PAID BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR ALL ARRANGEMENTS WITH METRO.
14. ANY WORK WITHIN 300' OF A SIGNALIZED INTERSECTION WILL BE NIGHT WORK, UNLESS OTHERWISE DIRECTED BY THE CITY OF LAS VEGAS TRAFFIC ENGINEER.
15. THE CONTRACTOR SHALL CONTACT THE TRAFFIC ENGINEERING DIVISION (TRANSPORTATION SECTION) THROUGH THE PROJECT'S OFFSITE INSPECTOR PRIOR TO INITIATING PAVING TO RECEIVE DIRECTION FOR ANY PERMANENT OR TEMPORARY MODIFICATION TO THE APPROVED DRAWINGS REGARDING FINAL PAVEMENT TRANSITIONS, MARKINGS AND SIGNING THAT ARE REQUIRED TO MATCH ADJACENT EXISTING PAVEMENT. THE CONTRACTOR SHALL PROVIDE A DRAWING FOR APPROVAL BY THE TRAFFIC ENGINEERING DIVISION DETAILING ANY ADJUSTMENTS TO THE FINAL PAVEMENT MARKINGS AND SIGNAGE, WHICH MAY INCLUDE OMITTING, ADDING OR MODIFYING PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS SUCH THAT ADEQUATE TRANSITIONS AND LANE TERMINATIONS BETWEEN ADJACENT ROADWAY SEGMENTS ARE CONSTRUCTED.

2.4 CITY OF LAS VEGAS STREETLIGHT NOTES

1. ALL STREET LIGHTING INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE STREET LIGHTING PLANS, THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST REVISION (USS), AND THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA" (USD), LATEST REVISION.
2. DESIGN PROFESSIONAL AND CONTRACTOR SHALL VERIFY CITY'S LATEST LED FIXTURE SPECIFICATIONS AND APPROVED FIXTURES PER CLV WEBSITE, UNDER BUILDING AND SAFETY FORMS, PRIOR TO ORDERING MATERIALS.
3. NO DEVIATION OF STREET LIGHT, PULL BOX, CONDUITS ETC. LOCATIONS SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF TRAFFIC AND CITY ENGINEER. ANY DEVIATION FROM THE PLAN LOCATION WILL REQUIRE COMPLIANCE WITH SECTION 623 OF THE USS.
4. ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION IN ACCORDANCE WITH SECTION 623 G.03.01 OF THE USS.
5. ALL EMPTY CONDUIT SHALL HAVE AT LEAST ONE GREEN NO. 8B AWG WIRE INSTALLED AS TRACER WIRE IN ACCORDANCE WITH SECTION 623 G.02.01 OF THE USS PRIOR TO BACKFILLING AND FINAL INSPECTION.
6. ANY STRUCTURE SUCH AS BLOCK WALLS, CHAIN LINK FENCES, RETAINING WALLS, ETC., SHALL LEAVE A MINIMUM CLEARANCE IN ACCORDANCE WITH THE USD NO. 320A. WHEN POLE IS INSTALLED BEHIND SIDEWALK, AND SHALL AT NO TIME COMPLETELY ENCLOSE THE STREET LIGHTING POLE.
7. AS-BUILT DRAWINGS SHALL BE SUPPLIED TO THE TRAFFIC ENGINEERING DIVISION. PRIOR TO ANY PRE-FINAL INSPECTION, THE AS-BUILT DRAWING NEEDS TO BE STAMPED AS-BUILT AND SIGNED BY THE PREPARE.
8. SERVICE POINT SHALL BE COORDINATED WITH MV ENERGY, AND WHEREVER POSSIBLE, BE LOCATED NEAR THE CENTER OF THE CIRCUIT. SERVICE POINTS SHALL BE SHOWN ON THE PLANS.
9. WHEREVER THERE IS AN OVERHEAD UTILITY THAT MAY CONFLICT WITH THE INSTALLATION OF STREET LIGHTING CIRCUITS AND/OR POLES, THESE CONFLICTS MUST BE RESOLVED BETWEEN THE DEVELOPER AND THE UTILITIES INVOLVED BEFORE STREETLIGHT BASES ARE INSTALLED. AT NO EXPENSE TO THE CITY OF LAS VEGAS.
10. THE CONTRACTOR SHALL FURNISH COMPLETE CONDUIT, WIRE, ETC. FROM SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON THE PLANS.

DEVIATIONS FROM STANDARDS

NONE

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 136742 FIRST APPROVED DATE:



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

SLATER HANIFAN GROUP

DATE BY APP. DATE

AC	ASPHALTIC CONCRETE OR ACRE
AGG	AGGREGATE BASE
AS	ASSESSORS PARCEL NUMBER
APPROX OR ~	APPROXIMATE
AVE	AVENUE
Ø	AT
BC	BACK CURVE OR BACK OF CURB
BCH	BEGINNING OF CURB RETURN
BHW	BOTTOM OF HEADWALL
BLDG	BUILDING
BLVD	BOULEVARD
BM	BENCHMARK
BVC	BEGIN VERTICAL CURVE
BWV	BACK WATER VALVE
CL	CLARK COUNTY
CAUSD	CLARK COUNTY AREA UNIFORM STANDARD DRAWINGS
CCPW	CLARK COUNTY PUBLIC WORKS
CCRD	CLARK COUNTY REGIONAL FLOOD DISTRICT
CCWD	CLARK COUNTY WATER RECLAMATION DISTRICT
CE	COMMON ELEMENT
CLC/LC	CENTERLINE
CLR	CLEAR OR CLEARANCE
CLM	CONTROLLED LOW STRENGTH MATERIAL
CLW	CITY OF LAS VEGAS
CLWC	CLEMENT MORTIMER LINED AND COATED
CMU	CONCRETE MASONRY UNIT
CNVL	CITY OF NORTH LAS VEGAS
COH	CITY OF HENDERSON
CONC	CONCRETE
CT	COURT
COY OR CUJ	COUNTY
DCWS	DESIGN AND CONSTRUCTION FOR WASTEWATER COLLECTION SYSTEMS
DET	DETAIL
DI	DUCTILE IRON OR DRAIN INLET
DIA. Ø	DIMENSION
DIP	DUCTILE IRON PIPE
DR	DRIVE
DWG(S)	DRAWING
DWY	DRIVEWAY
EA	EACH
ECR	END CURB RETURN
EX	EXISTING
ELEV	ELEVATION
ESMT	EASEMENT
EP	EDGE OF PAVEMENT
FRU	EQUIVALENT RESIDENTIAL UNIT
EXC	END VERTICAL CURVE
EV OR EXIST	EXISTING
FC	FACE OF CURB
FF	FINISHED FLOOR
FG	FINISHED GRADE
FH	FINISHED GRADE, HIGH SIDE
FLH	FINISHED GRADE, LOW SIDE
FI	FIRE HYDRANT

FL FLOWLINE
FT FEET OR FOOT
FUT FUTURE
G GRADE
GB GRADE OR GROUND
GBS GRADE BREAK OR GRADE CHANGE
GV GATE VALVE
HD HOISTY POLYETHYLENE
HOA HOME OWNERS ASSOCIATION
HORIZ HORIZONTAL
HP HIGH POINT
HWH HIGH WATER LEVEL
HDW HEADWALL
HYD HYDRAULIC OR HYDRANT
ID INSIDE DIAMETER
IN IN
INT INTERSECTION
INV INVERT ELEVATION
IRON IRON PIPE
IRRG IRRIGATION
LF LINEAR FEET
LMC LANDMARK MAINTENANCE CORPORATION
LP LOW POINT
LT OR L LEFT
LV LAS VEGAS VALLEY WATER DISTRICT
LW LOW WATER LEVEL
MAX MAXIMUM
MECH MECHANICAL
MH MANHOLE
MIN MIN
MISC MISCELLANEOUS
MUE MUNICIPAL UTILITY EASEMENT
ND NEVADA DEPARTMENT OF TRANSPORTATION
NOT NOT TO SCALE
NUE NONEXCLUSIVITY UTILITY EASEMENT
NV NV ENERGY
OC ON CENTER
OD OUTSIDE DIAMETER OR OVERALL DIMENSION
OFF OFFSET
ORIG ORIGINAL
PAE PUBLIC OR PEDESTRIAN ACCESS EASEMENT
PB PULL BOX
PC POINT OF CURVE
PCC POINT OF COMPOUND CURVE
PDE PUBLIC DRAINAGE EASEMENT
PE PROPERTY LINE
POB POINT OF BEGINNING
POC POINT OF CURVATURE
POE POINT OF ENDING
PRC POINT OF REVERSE CURVATURE
PRM PREMISARY
PROP PROPOSED
PRV PRESSURE REDUCING VALVE
PUE PUBLIC UTILITY EASEMENT
POT POINT OF TANGENT OR POINT
POLYVNYL POLYVINYL CHLORIDE

PVI	POINT OF VERTICAL INTERSECTION
QTY	QUANTITY
R	RADIUS
RCA	REINFORCED CONCRETE ARCH
RCB	REINFORCED CONCRETE BOX
RD	REINFORCED CONCRETE PIPE
RDWY ESMT	ROADWAY EASEMENT
REQD	REQUIRED
REV	REVISION
RG	ROUGH GRADE
RT OR R	
R/W, ROW	RIGHT OF WAY
S	
SCH	SCHEDULE
SD	STORM DRAIN
SDU	STORM DRAIN DROP INLET
SMH	SEWER DRAIN MANHOLE
SEC	SECTION
SF	SQUARE FEET
SHT	SHEET
SLTC	STREET LIGHT & TRAFFIC CONTROL ESMT
SNWA	SOUTHERN NEVADA WATER AUTHORITY
SPECS	SPECIFICATIONS
ST	STREET
SMH/ST	SANITARY SEWER MANHOLE
STA	STATION
STD	STANDARD
STLT	STEEL
STL	STREET LIGHT
SW	SIDEWALK
SWG	SOUTHWEST GAS
SWR OR SS	SANITARY SEWER
SY	SQUARE YARD
TAN	TANGENT
TC	TOP OF CURB
TF	TOP OF FLOOR OR TOP OF FOOTING
TG	TOP OF GRATE
THRU	THROUGH
THW	TOP OF HEADWALL
TP	TOP OF PIPE
TW	TOP OF WALL
TR	TOP OF RETAINING WALL
TSW	TOP OF SCREEN WALL
TY	TYPICAL
UDACS	UNIFORM DESIGN AND CONSTRUCTION STANDARDS
VC	VERTICAL CURVE
VERT	VERTICAL
VG	VALLEY GUTTER
WI	WROUGHT IRON
WL	WATER LINE
WP2	WATER PRESSURE ZONE
WGT	WEIGHT
WTR	WATER LINE

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

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

-EXISTING UTILITY LOCATIONS SHOWN HEREIN ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING

CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATIONS. CALL BEFORE YOU DIG: (800) 227-2600

EXISTING	PROPOSED	DESCRIPTION
		1' CONTOUR
		SEWER MANHOLE
		CURB AND GUTTER
		SANITARY SEWER PIPE AND FLOW ARROW
		WATER PIPE
		WATER GATE VALVE
		FIRE HYDRANT
		WATER BLOW-OFF
		WATER LATERAL W/ METER
		SANITARY SEWER LATERAL
		STREETLIGHT
		EDGE OF PAVEMENT
		TRAFFIC SIGN
		PAD ELEVATION
		FINISHED FLOOR ELEVATION
		ELEVATION
		RETAINING WALL
		STORM DRAIN W/ MANHOLE
		EXISTING GAS GATE VALVE
		EXISTING UNKNOWN MANHOLE
		EXISTING GAS, SIZE PER PLAN
		EXISTING POWER POLE
		EXISTING TRAFFIC SIGNAL
		EXISTING WALL
		WATER PIPE FITTING
		WATER POINT OF CONNECTION
		SEWER POINT OF CONNECTION
		DAYLIGHT LINE
		STREET CENTERLINE
		RIGHT-OF-WAY
		MATCHLINE
		BOUNDARY LINE
		PHASE LINE
		PROPERTY LINE
		FLOWLINE
		SAWCUT
		CUT/FILL TRANSITION LINE
		SIDEWALK
		EX STRIPING TO BE OBLITERATED
		GRADE BREAK LINE
		REFLECTIVE RAISED PAVEMENT MARKERS
		BACK WATER VALVE
		WROUGHT IRON FENCE
		PONY WALL
		DECORATIVE PERIMETER WALL
		DECORATIVE PERIMETER
		RETAINING WALL
		PROPOSED CURB AND GUTTER WITH RIGHT-OF-WAY AT BACK OF CURB
		EXISTING CURB AND GUTTER WITH RIGHT-OF-WAY AT BACK OF CURB
		FUTURE CURB AND GUTTER WITH RIGHT-OF-WAY AT BACK OF CURB
		PROPOSED SCARP AREA
		DRIVEWAY
		PROPOSED RIP RAP
		SIGHT VISIBILITY ZONE PER STD DWG NO. 201.2
		HANDICAP RAMP

DRAINAGE			
1.	48" TYPE II STORM DRAIN MANHOLE	EA	2
2.	60" TYPE III STORM DRAIN MANHOLE	EA	4
3.	10.0" TYPE "CM2" DROP INLET	EA	-
4.	12.5" TYPE "CM2" DROP INLET	EA	2
5.	20.0" TYPE "CM2" DROP INLET	EA	-
6.	10'W x 12'H RCB CLASS III STORM DRAIN	LF	12
7.	24" RCP CLASS IV STORM DRAIN	LF	-
8.	36" RCP CLASS III STORM DRAIN	LF	173
9.	72" RCP CLASS IV STORM DRAIN	LF	290
10.	RIPRAP D50=18", THK=36"	SF	41292
11.	8" WIDE CONCRETE VALLEY GUTTER W/10" TYPE I AGGREGATE BASE	SF	3067
12.	SIDEWALK UNDER DRAIN	SF	10
13.			
SEWER SYSTEM			
1.	4" PVC SEWER LATERAL (PRIVATE)	LF	-
2.	8" PVC SEWER PIPE (PUBLIC)	LF	-
3.	STANDARD 48" SEWER MANHOLE (PUBLIC)	EA	-
4.	8" SEWER PIPE CAP	EA	-
5.	BACK WATER VALVE	EA	-
6.	8" C-900 WATER QUALITY SEWER PIPE (PUBLIC)	EA	-
7.			
WATER SYSTEM			
1.	FIRE HYDRANT ASSEMBLY W/6" GATE VALVE PER UDACS PLATE NO. 40	EA	-
2.	6" PVC WATER PIPE (CLASS 150)	LF	-
3.	8" PVC WATER PIPE (CLASS 150)	LF	-
4.	8" DIP WATER PIPE (CLASS 55)	LF	-
5.	8" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39	EA	-
6.	8" X 6" REDUCER PLATE NO. 30	EA	-
7.	8" X 8" TEE PER UDACS PLATE NO. 31	EA	-
8.	8" 5 DEGREE BEND WITH RESTRAINED JOINTS	EA	-
9.	8" 11.25 DEGREE BEND PER UDACS PLATE NO. 31	EA	-
10.	8" 22.5 DEGREE BEND PER UDACS PLATE NO. 31	EA	-
11.	8" 45 DEGREE BEND PER UDACS PLATE NO. 31	EA	-
12.	6" 90 DEGREE BEND PER UDACS PLATE NO. 31	EA	-
13.	CAP AND 2" BLOW-OFF ASSEMBLY W/CAP PER UDACS PLATE NO. 36	EA	-
14.	1" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 1	EA	-
15.	6" X 6" TEE PER UDACS PLATE NO. 31	EA	-
16.	1" COPPER SERVICE W/ 3/4" METER & 1" RPPA PER UDACS PLATE NO. 4 & 8	EA	-
17.	8" 45 DEGREE BEND PER UDACS PLATE NO. 31	EA	-
STREET IMPROVEMENTS			
1.	2" A.C. PAVEMENT W/ 4" TYPE II OVER 6" TYPE I AGGREGATE BASE	SY	13767
2.	STANDARD 18" TYPE "I" ISLAND CURB & GUTTER W/6" TYPE I AGGREGATE BASE	LF	10
3.	STANDARD 8" TYPE "A" ISLAND CURB W/6" TYPE I AGGREGATE BASE	LF	156
4.	STANDARD 30" TYPE "ROLL" CURB & GUTTER W/6" TYPE I AGGREGATE BASE	LF	7433
5.	5' WIDE CONCRETE SIDEWALK W/4" TYPE II AGGREGATE BASE	SF	18108
6.			
7.			
TRAFFIC SIGNALS			
1.	30" STOP SIGN WITH POST (R1-1)	EA	7
2.	9" STREET NAME SIGN (D-3, BROWN W/ WHITE LETTERS)(6 POLES x 2 PER POLE=12)	EA	6
3.	BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKER	EA	7
4.	CROSSWALK MARKINGS	LF	-
5.	13" STREET NAME SIGN (D-3, BROWN W/ WHITE LETTERS)(6 POLES x 2 PER POLE=12)	EA	1
6.			
7.			
8.			
DRY UTILITIES			
1.	100W H.P.S. LUMINAIRE STREET LIGHT W/DECORATIVE POLE	EA	-
2.	1-1/4" PVC STREET LIGHT CONDUIT WITH 2" #4 AND 1" #8 CONDUCTORS	LF	-
3.	NO. 3-1/2" PULL BOX W/METAL COVER	EA	-
4.	PEDESTAL SERVICE (IRR)	EA	-
5.	200 AMP SERVICE PEDESTAL (SLT)	EA	-
6.			

1.	30" STOP SIGN WITH POST (RT-1)	EA	7	-
2.	9" STREET NAME SIGN (D-3, BROWN W/ WHITE LETTERS)(6 POLES x 2 PER POLE=12)	EA	6	-
3.	BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKER	EA	7	-
4.	CROSSWALK MARKINGS	LF	-	-
5.	13" STREET NAME SIGN (D-3, BROWN W/ WHITE LETTERS)(6 POLES x 2 PER POLE=12)	EA	1	-
6.				
7.				
8.				

1.	100W H.P.S. LUMINAIRE STREET LIGHT W/DECORATIVE POLE	EA	-	-
2.	1-1/4" PVC STREET LIGHT CONDUIT WITH (2) #4 AND (1) #8 CONDUCTORS	LF	-	-
3.	NO. 3-1/2 PULL BOX W/METAL COVER	EA	-	-
4.	150 AMP SERVICE PEDESTAL (HRR)	EA	-	-
5.	200 AMP SERVICE PEDESTAL (STLT)	EA	-	-
6.				

[illegible]

SKYE CANYON II PARCEL 2.06 - PHASE 1
QUANTITIES, LEGEND, & ABBREVIATIONS

DATE: 8/15/19

DRAFTER: BKS

DESIGNER: BKS

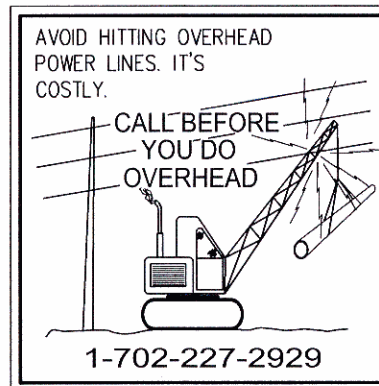
CHECKED: JJ

PROJECT NO.

OLY1813-000

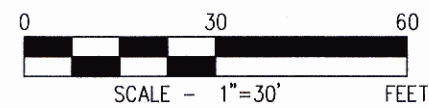
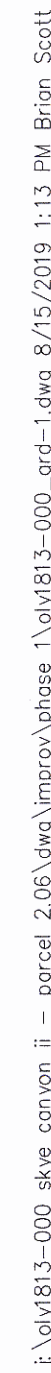


SHEET 3 OF 37



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

Call
811
OR
1-800-227-2600



SURVEY NOTE

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

ELEVATION NOTE
ADD 2800 TO ALL SPOT GRADES WHERE THE HUNDREDS AND THOUSANDS PLACES ARE OMITTED FOR ACTUAL ELEVATION (I.E. 01.00 REPRESENTS 1801.00)

SOILS REPORT

SOILS REPORT BY SOUTHWEST GEOTECHNICAL

PROJECT NO. 175337 DATED 10/17/2018

EARTHWORKS

EARTHWORK QUANTITIES (RAW):
CUT= 128,656 CU YDS
FILL= 58,338 CU YDS

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

DISCLAIMER NOTE

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

GRADING NOTES

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

LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDELINES

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

1. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY BE PRESENT ON THE WORK AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE WORK DONE 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 IF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN CLARK COUNTY TITLE 24.40 AND IN THE LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY. REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVRI00000, SECTION III.A.5.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE TRAFFIC, AND EXISTING AND NEW EROSION CHANNELS. INSPECTIONS SHALL BE CONDUCTED AT LEAST EVERY 0.5 HOURS OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE, OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN, AS NECESSARY. SOME EXCEPTIONS TO MODIFIED INSPECTIONS MAY APPLY. REFER TO INSPECTION AND MONITORING REQUIREMENTS REFERRED TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVRI000000, SECTION III.A.12.
5. ACCUMULATED SEDIMENT IN BMP'S 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 INFORMATION

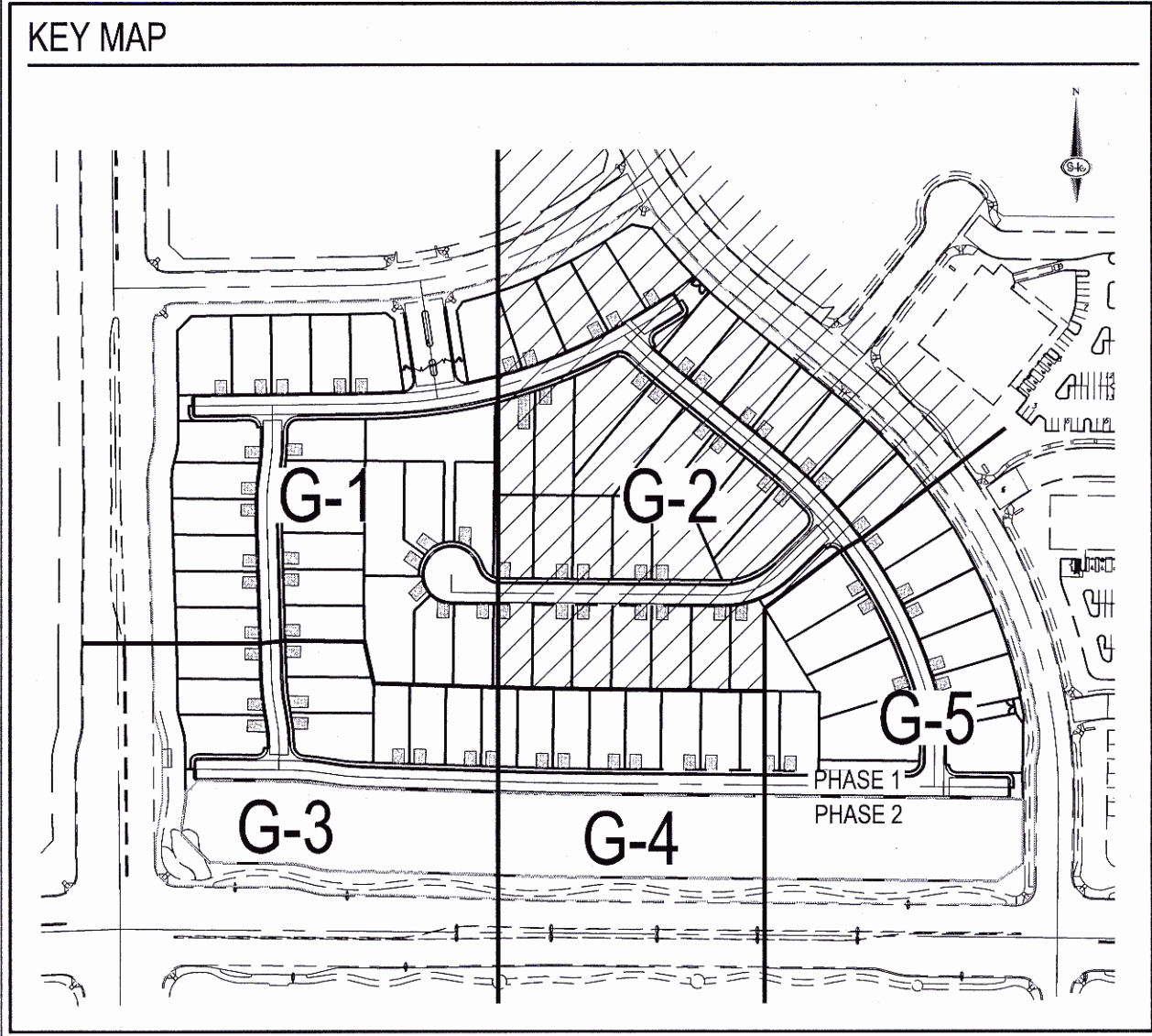
THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE 'X' (UNSHADED), AS DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANELS 32003C1735E, AND 32003C1750 BOTH DATED SEPTEMBER 27, 2002. A ZONE 'X' (UNSHADED) IS DEFINED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% (500 YEAR) ANNUAL CHANCE FLOOD PLAIN.

INTERIM DRAINAGE FACILITIES

ALL INTERIM DRAINAGE FACILITIES ARE PRIVATELY OWNED AND MAINTAINED BY PROPERTY OWNER.

PRIVATE STREET & COMMON ELEMENT NOTE

ALL PRIVATE STREETS AND COMMON ELEMENTS ARE P.U.E., PUBLIC SEWER EASEMENTS, AND PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY HOA



- 1 INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
- 2 INSTALL 5' CURB TRANSITION PER DETAIL 14, SHEET D-2
- 3 INSTALL A TYPE CURB PER CCAUSD NO. 219
- 4 INSTALL ROLL TYPE CURB PER CCAUSD NO. 217.51
- 5 REMOVE EX HEADWALL PROTECT IN PLACE
- 6 INSTALL 5' WIDE SIDEWALK PER CCAUSD NO. 234
- 7 CONSTRUCT 2' SIDEWALK DRAIN PER CCAUSD NO. 236
- 8 INSTALL 8" VALLEY GUTTER PER CCAUSD NO. 228
- 9 INSTALL WROUGHT IRON FENCE W/ACCESS GATES, DESIGN BY OTHERS
- 10 INSTALL ACCESS GATE W/AVI LOOP
- 11 INSTALL 6" WIDE CRUSHED ROCK FOR ACCESS ROAD
- 12 CONSTRUCT SIDEWALK RAMPS USING ARMOR TIE TRUNCATED DOMES OR EQUIVALENT PER CCAUSD NO. 235 CASE I, AND 235.1
- 13 INSTALL 4" CONCRETE OVER 6" TYPE II AGGREGATE BASE
- 14 INSTALL WROUGHT IRON FENCE WITH 20' MAINTENANCE GATE PER DETAIL 19, SHEET D-2
- 15 REMOVE SECTION OF EX 72" RCP STORM DRAIN
- 16 INSTALL WROUGHT IRON 20' MAINTENANCE GATE PER DETAIL 20, SHEET D-2
- 17 INSTALL 4" CONCRETE OVER 6" TYPE II AGGREGATE BASE
- 18 20' PUBLIC DRAINAGE EASEMENT TO BE PRIVATELY MAINTAINED BY HOA
- 19 INSTALL RIP RAP D50=6", THICKNESS=12" (WHERE SHOWN)
- 20 INSTALL 12.5' DROP INLET TYPE "CM2" PER CCAUSD NO. 412.1 AND 421
- 21 INSTALL 48" TYPE I STORM DRAIN MANHOLE PER CCAUSD NO. 403.
- 22 INSTALL CUSTOM SDMH PER STRUCTURAL DETAIL ON SHEET S-3
- 23 INSTALL REMOVABLE BOLLARD PER DETAIL 22, SHEET D-2
- 24 INSTALL 20' CUSTOM JUNCTION STRUCTURE PER STRUCTURAL DETAIL ON SHEET S-2

QUANTITIES		PRIVATE	PUBLIC
DRAINAGE			
48" TYPE I STORM DRAIN MANHOLE	EA	2	
60" TYPE III STORM DRAIN MANHOLE	EA	4	
12.5" TYPE "CM2" DROP INLET	EA	2	
72" RCP STORM DRAIN	LF	290	
36" RCP STORM DRAIN	LF	173	
10'W X 12'H RCB STORM DRAIN	LF	12	

LEGEND



RIP RAP D50=18", THICKNESS=36"

FLOOD CERTIFICATION

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED
TECHNICAL DRAINAGE STUDY DS5107 ON FILE AT CITY OF LAS VEGAS FOR THE
SUBJECT PROJECT.

JOSH JOHNSON, P.E. 15789 _____ DATE _____

FAST

Call
before you
UnderGround

1-702-432-5300

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

AVOID HITTING OVERHEAD
POWER LINES. IT'S
COSTLY.

CALL BEFORE
YOU DO
OVERHEAD

1-702-227-2929

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

Call

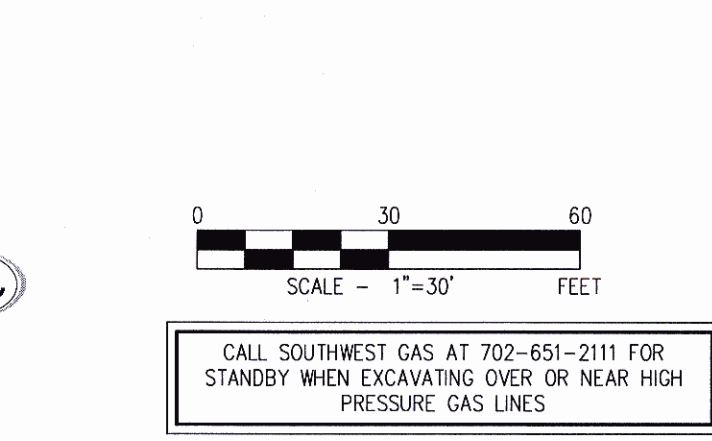
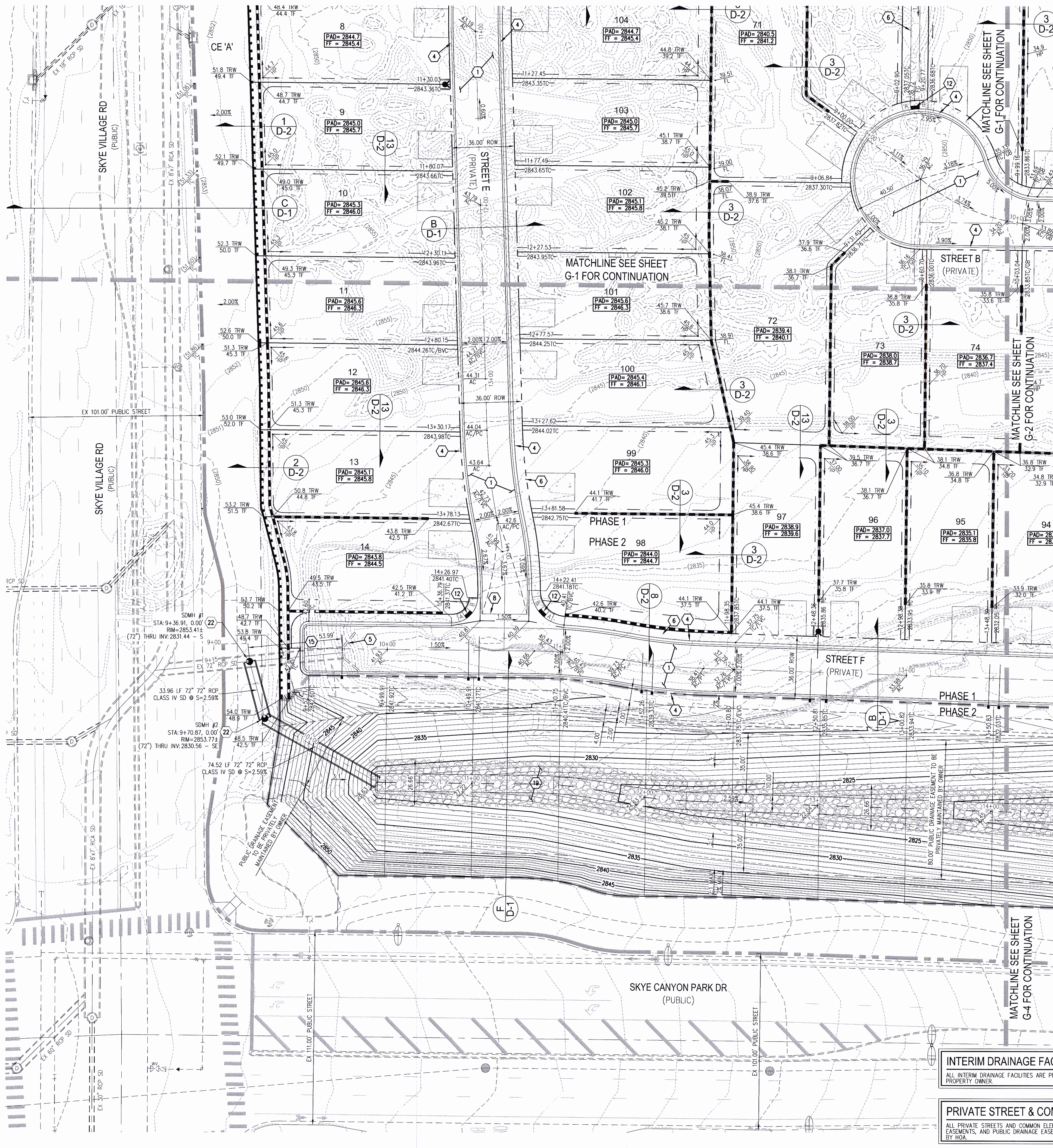


OR

1-800-227-2600

 SLATER HANIFAN GROUP a Westwood team 5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118 PHONE (702) 284-5300 FAX (702) 284-5399	ST. LAS ROUTE CITY OF LAS VEGAS, NEVADA		DATE: 8/15/19
	DRAFTER: BKS		DESIGNER: BKS
CHECKED: JJ		PROJECT NO. OLY1813-000	
 G-2		SHEET 5 OF 37 8/15/19	

N:\91815-000 skye canyon s - parcel 2.06 and Improvements\91815-000 grade-1.dwg 8/15/2019 11:13 PM Brian Scott



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ELEVATION NOTE
ADD 2800 TO ALL SPOT GRADES WHERE THE HUNDREDS AND THOUSANDS PLACES ARE OMITTED FOR ACTUAL ELEVATION (I.E. 01.00 REPRESENTS 1801.00)

SOILS REPORT
SOILS REPORT BY SOUTHWEST GEOTECHNICAL
PROJECT NO. 175337 DATED 10/17/2018

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EARTHWORK QUANTITIES (RAW):
CUT= 128,656 CU YDS
FILL= 58,338 CU YDS
EXPORTED MATERIAL TO BE DISPOSED OF AT AN APPROVED LICENSED DISPOSAL FACILITY OR AT A SITE WITH AN APPROVED AND ACTIVE GRADING PERMIT.

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6. ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
7. CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
8. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER SHALL BE NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLACING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
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LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDELINES
(REQUIRED FOR ALL SITES GREATER THAN 1 ACRE (43,560 SQ.FT.))
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4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS, AND ALL BMPs WEEKLY, AND WITHIN 24 HOURS AFTER A RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NV100000, 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.

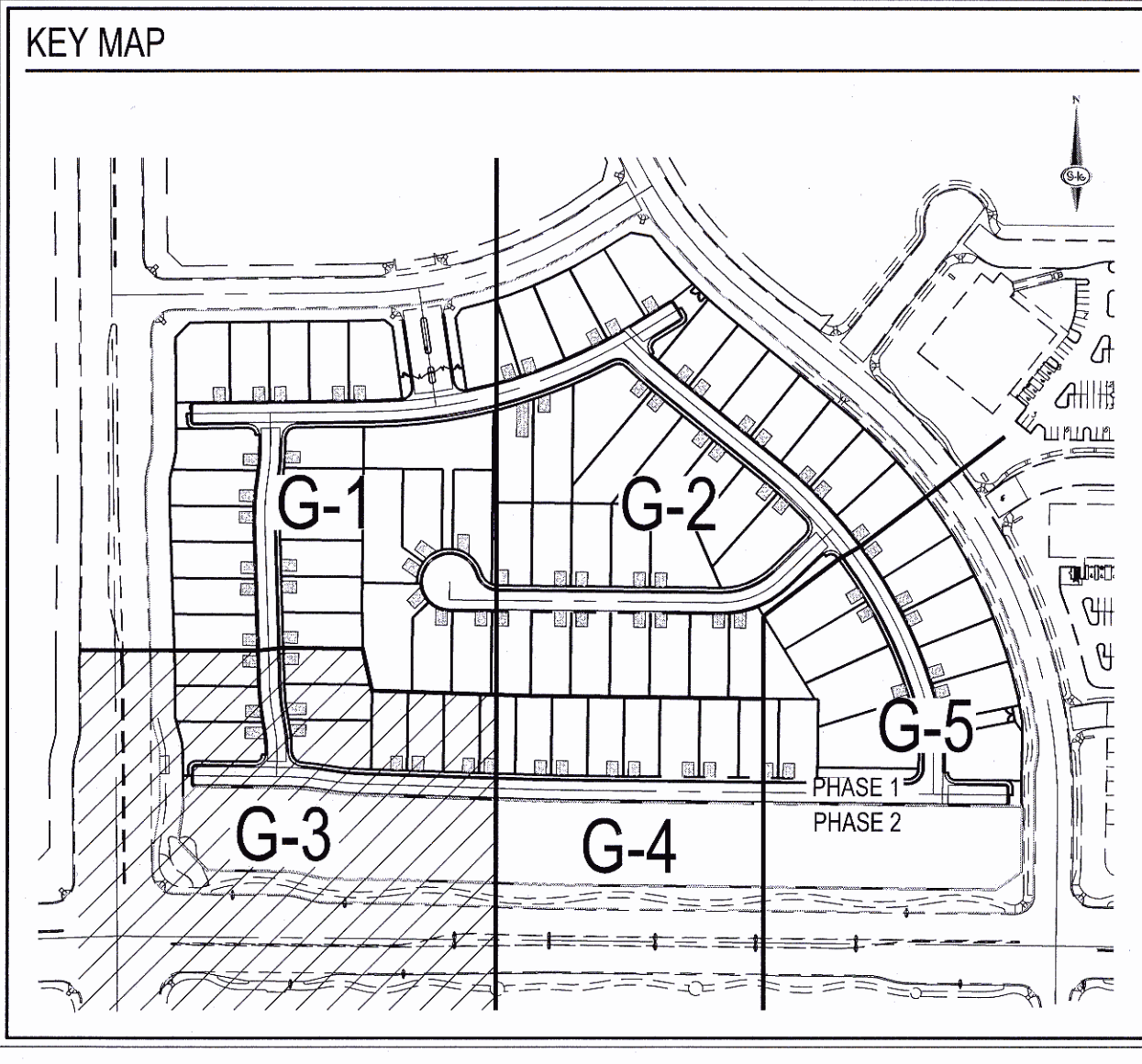
FEMA FLOOD ZONE INFORMATION
THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE "X" (UNSHADED), AS DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANELS 32003C1735E AND 32003C1750 BOTH DATED SEPTEMBER 27, 2002. A ZONE "X" (UNSHADED) IS DEFINED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% (500 YEAR) ANNUAL CHANCE FLOOD PLAIN.

INTERIM DRAINAGE FACILITIES
ALL INTERIM DRAINAGE FACILITIES ARE PRIVATELY OWNED AND MAINTAINED BY PROPERTY OWNER.
PRIVATE STREET & COMMON ELEMENT NOTE
ALL PRIVATE STREETS AND COMMON ELEMENTS ARE P.U.E., PUBLIC SEWER EASEMENTS, AND PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY HOA.

FAST
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Call 811
OR
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GRADING NOTES
1) INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
2) INSTALL 5' CURB TRANSITION PER DETAIL 14, SHEET D-2
3) INSTALL A TYPE CURB PER CCAUSD NO. 219
4) INSTALL ROLL TYPE CURB PER CCAUSD NO. 217.51
5) REMOVE EX HEADWALL PROTECT IN PLACE
6) INSTALL 5" WIDE SIDEWALK PER CCAUSD NO. 234
7) CONSTRUCT 2' SIDEWALK DRAIN PER CCAUSD NO. 236
8) INSTALL 8" VALLEY GUTTER PER CCAUSD NO. 228
9) INSTALL WROUGHT IRON FENCE W/ACCESS GATES, DESIGN BY OTHERS
10) INSTALL ACCESS GATE W/AM LOOP
11) INSTALL 6" WIDE CRUSHED ROCK FOR ACCESS ROAD
12) CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT PER CCAUSD NO. 235 CASE I, AND 235.1
13) INSTALL 4" CONCRETE OVER 6" TYPE II AGGREGATE BASE
14) INSTALL WROUGHT IRON FENCE WITH 20" MAINTENANCE GATE PER DETAIL 19, SHEET D-2
15) REMOVE SECTION OF EX 72" ROP STORM DRAIN
16) INSTALL WROUGHT IRON 20" MAINTENANCE GATE PER DETAIL 20, SHEET D-2
17) INSTALL 4" CONCRETE OVER 6" TYPE II AGGREGATE BASE
18) 20" PUBLIC DRAINAGE EASEMENT TO BE PRIVATELY MAINTAINED BY HOA
19) INSTALL RIP RAP D50=6", THICKNESS=12" (WHERE SHOWN)
20) INSTALL 12.5" DROP INLET TYPE "CM2" PER CCAUSD NO. 412.1 AND 421
21) INSTALL 48" TYPE I STORM DRAIN MANHOLE PER CCAUSD NO. 403
22) INSTALL CUSTOM SDMH PER STRUCTURAL DETAIL ON SHEET S-3
23) INSTALL REMOVABLE BOLLARD PER DETAIL 22, SHEET D-2
24) INSTALL 20" CUSTOM JUNCTION STRUCTURE PER STRUCTURAL DETAIL ON SHEET S-2

QUANTITIES	PRIVATE	PUBLIC
DRAINAGE		
48" TYPE I STORM DRAIN MANHOLE	EA 2	
60" TYPE III STORM DRAIN MANHOLE	EA 4	
12.5" TYPE "CM2" DROP INLET	EA 2	
72" ROP STORM DRAIN	LF 290	
36" ROP STORM DRAIN	LF 173	
10'W X 12'H RCB STORM DRAIN	LF 12	

LEGEND
RIP RAP D50=18", THICKNESS=36"

FLOOD CERTIFICATION
I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY DSS102 ON FILE AT CITY OF LAS VEGAS FOR THE SUBJECT PROJECT.
JOSH JOHNSON, P.E. 15789 DATE

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

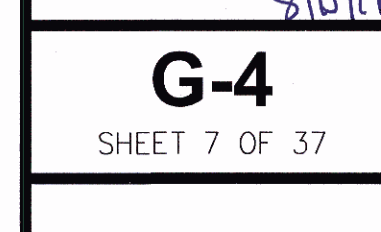
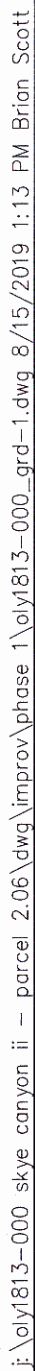
91815-000
DATE: 8/15/19
DRAWN: BKS
DESIGNED: BKS
CHECKED: JJ
PROJECT NO. **OLY1813-000**

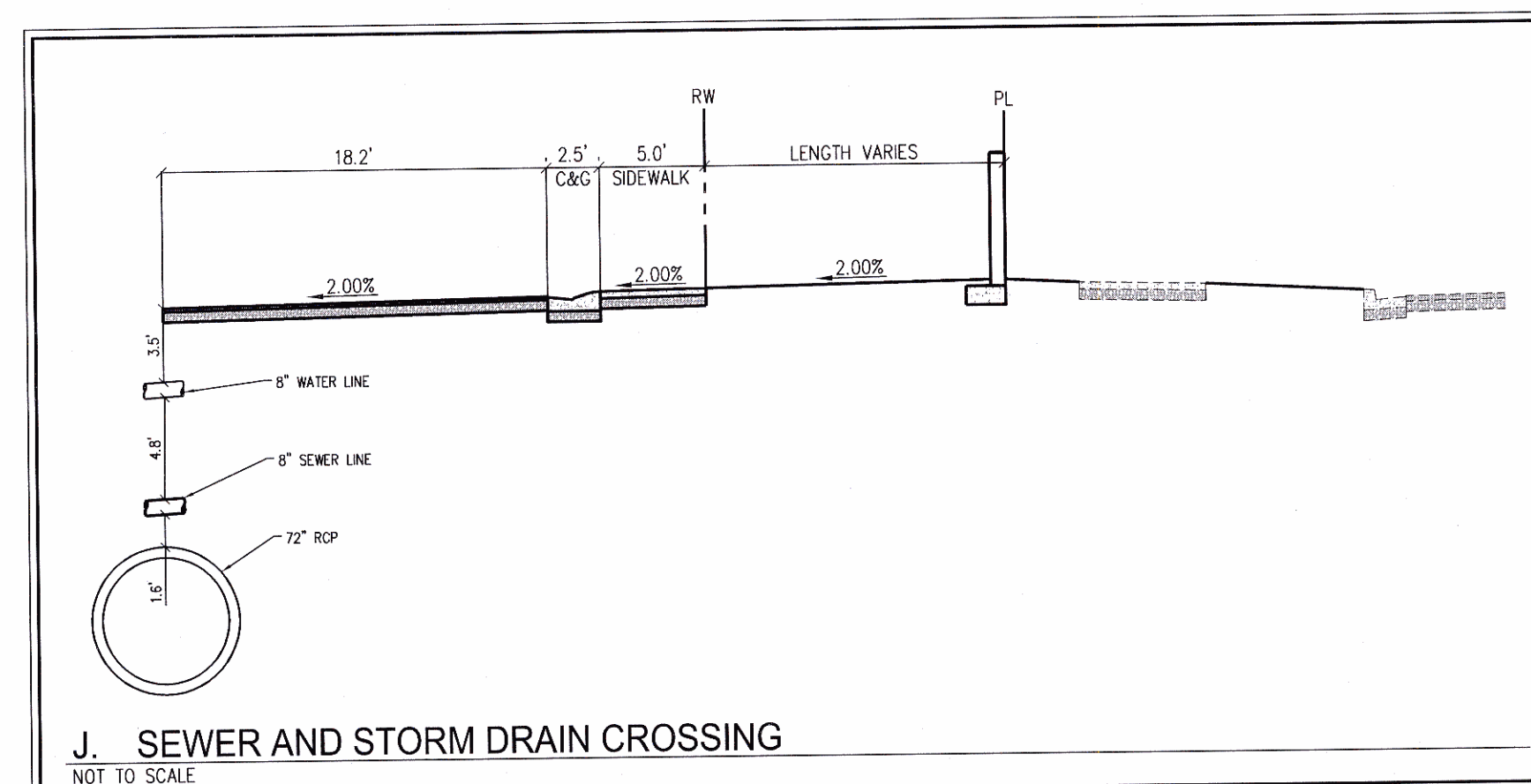
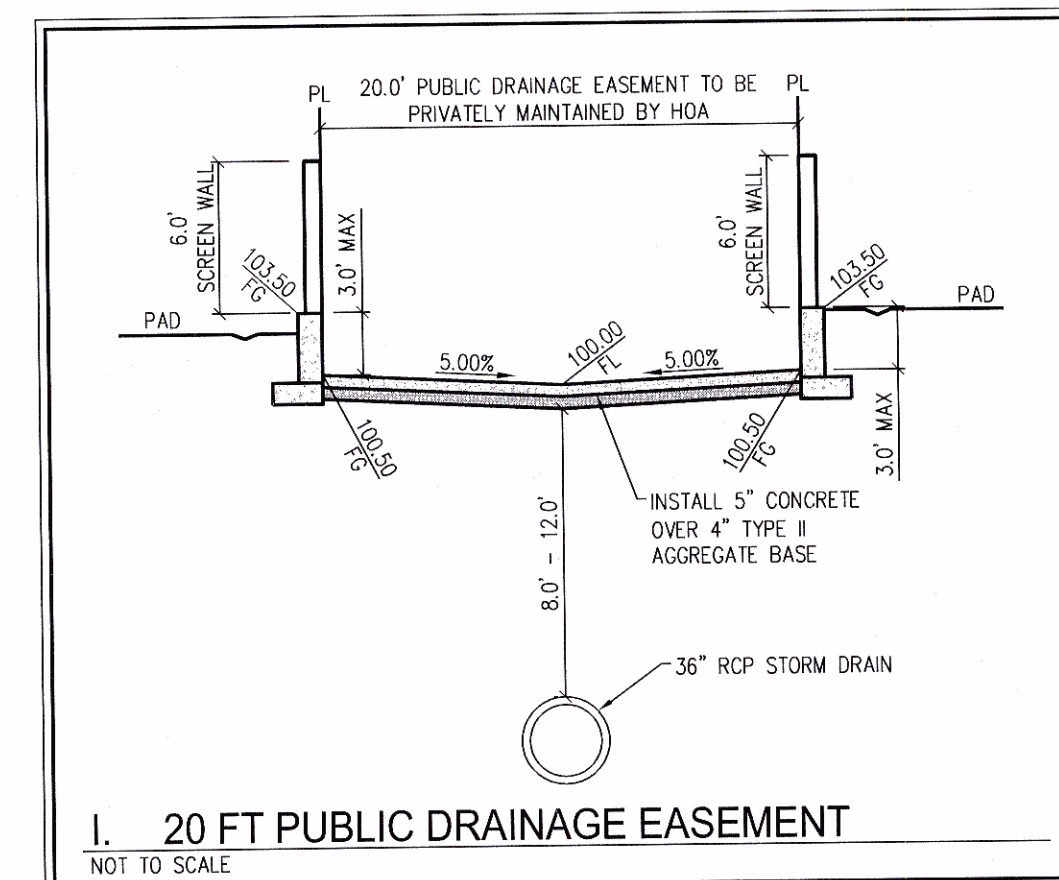
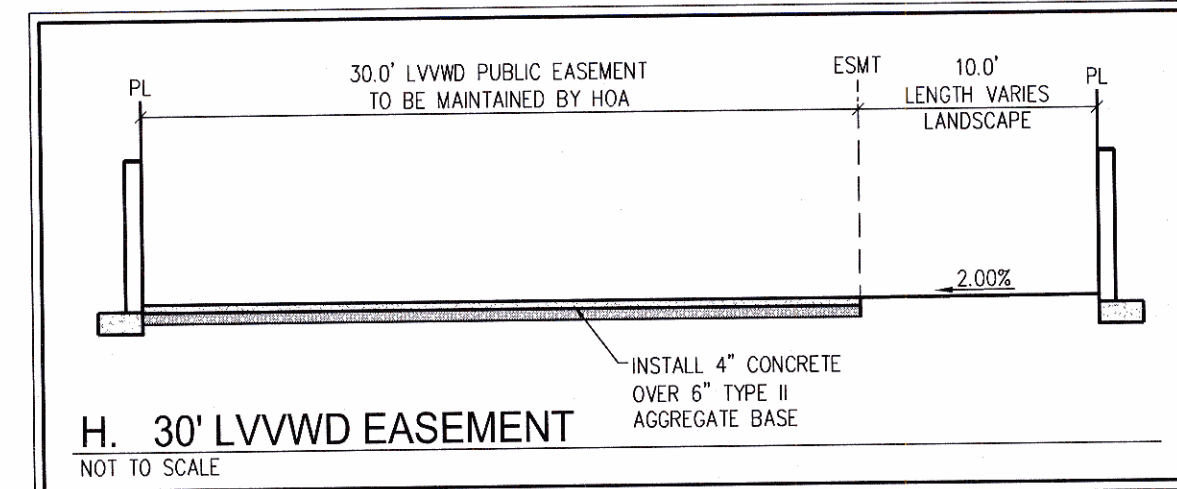
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SHEET 6 OF 37

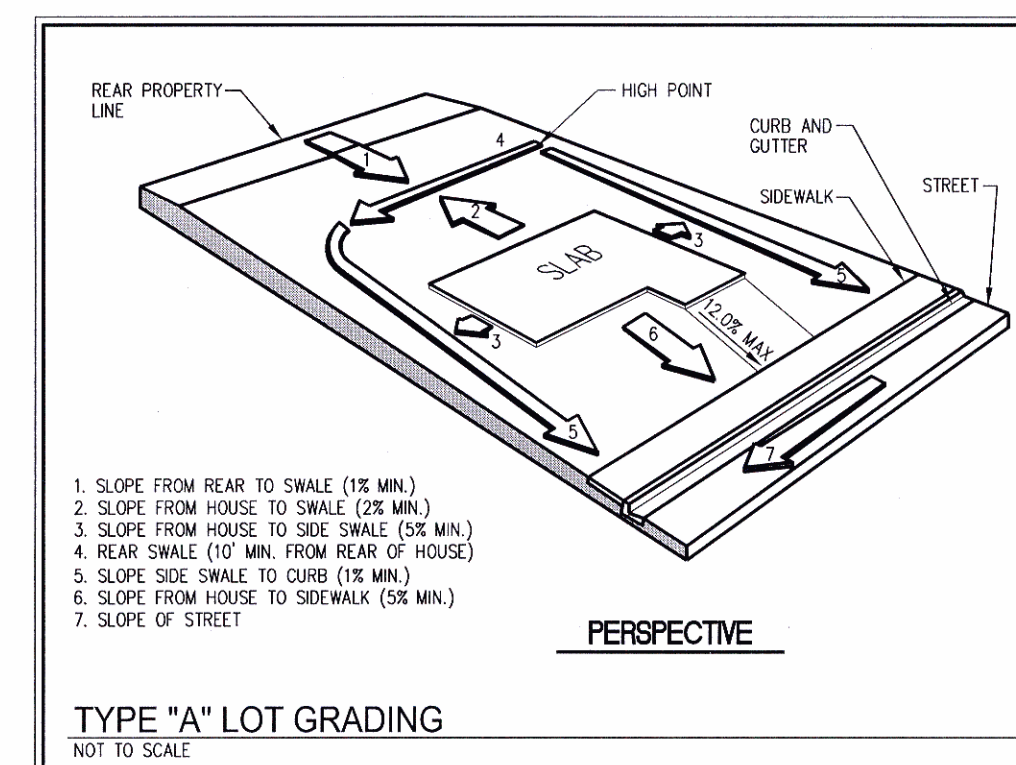
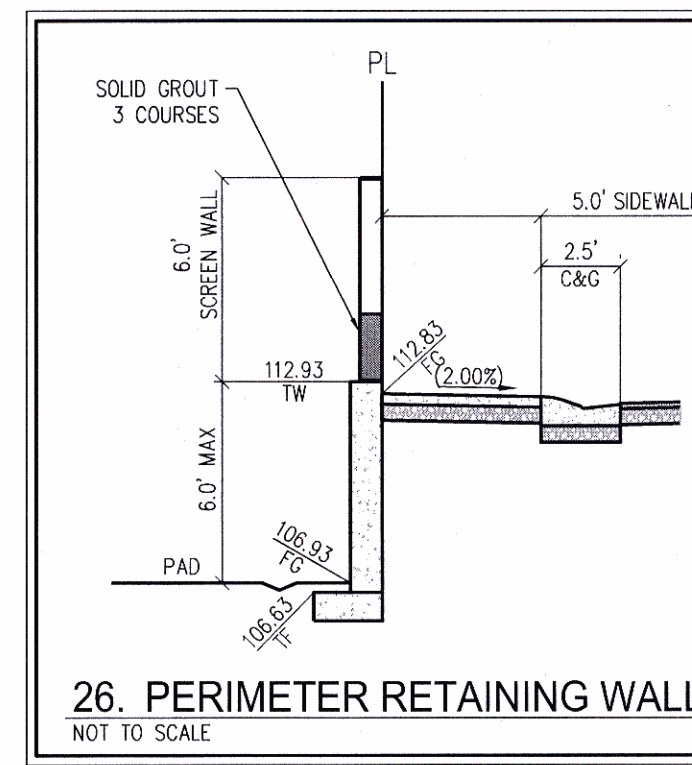
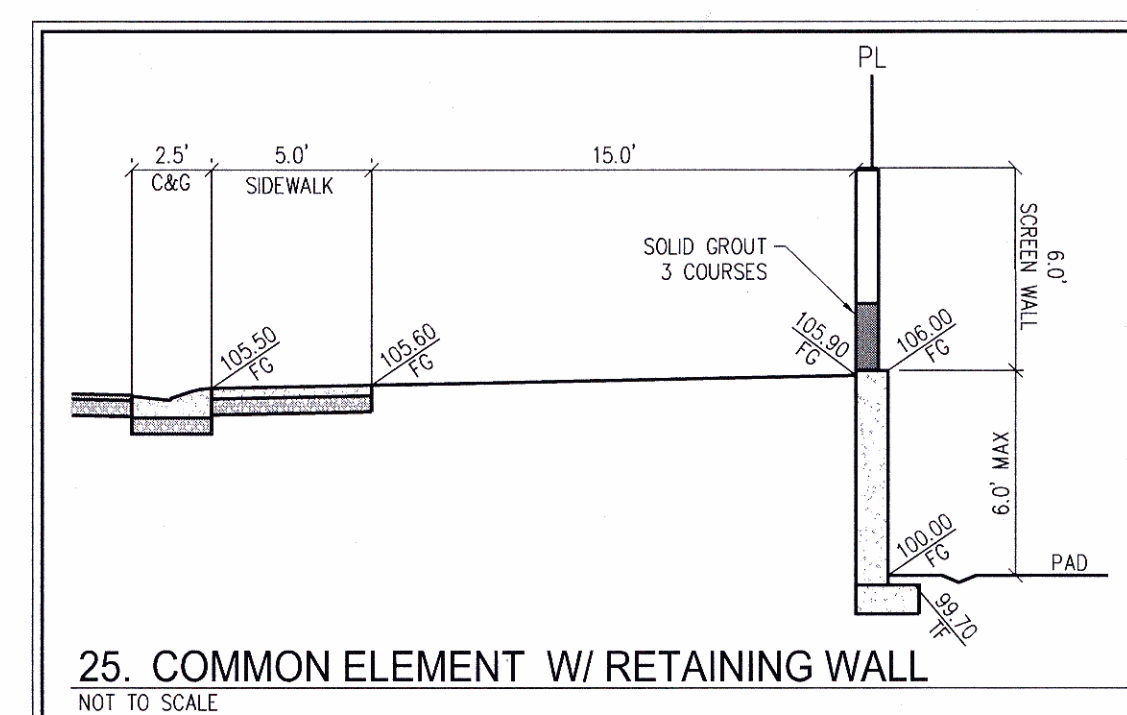
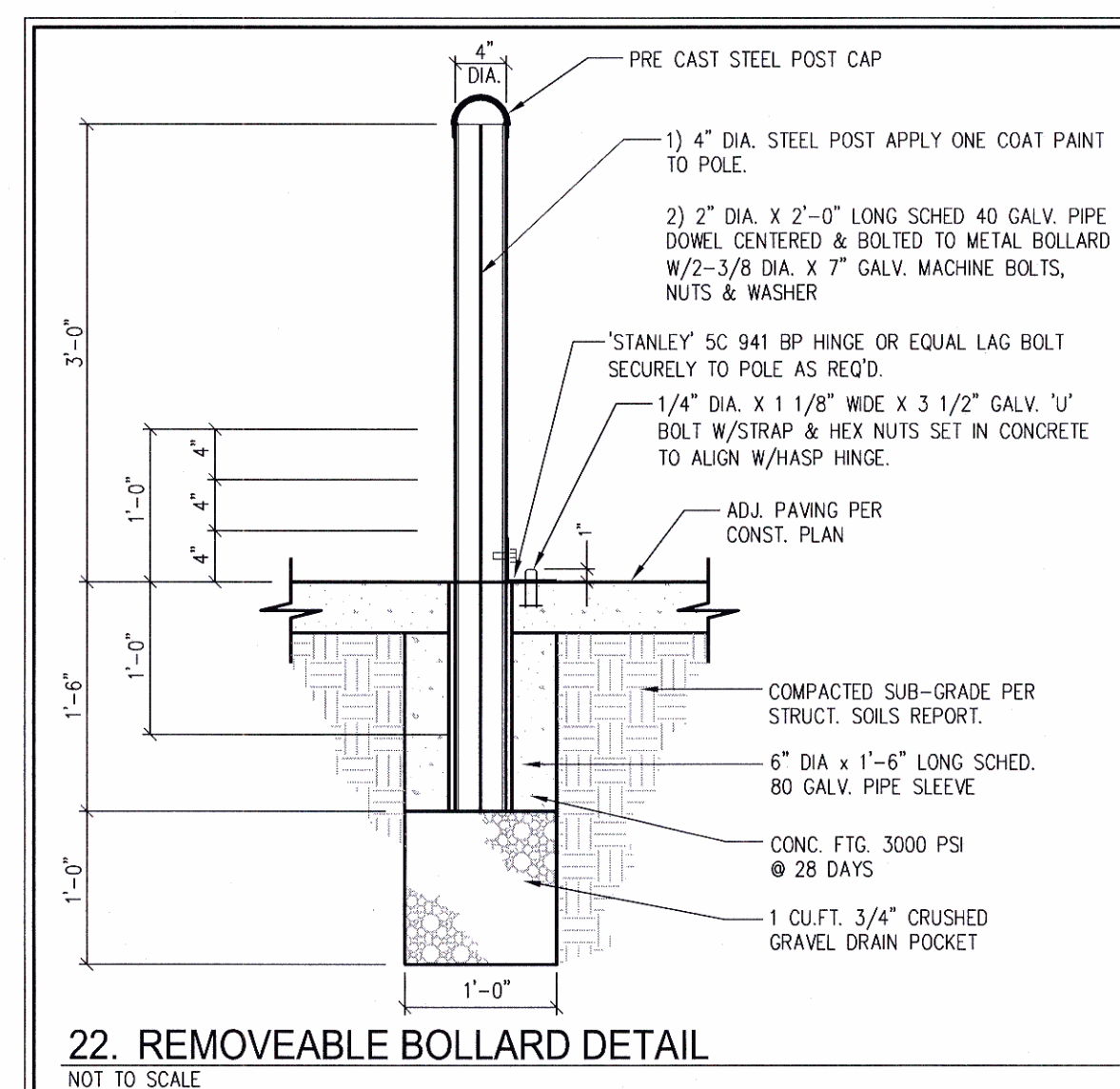
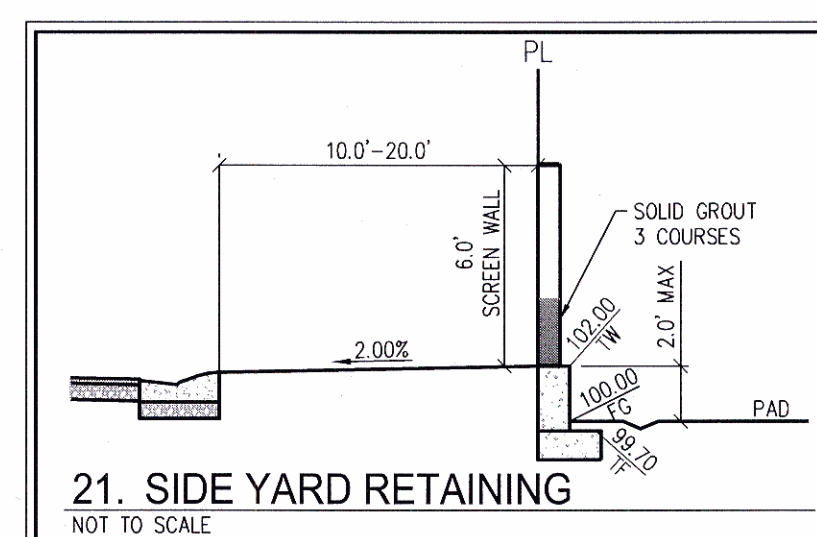
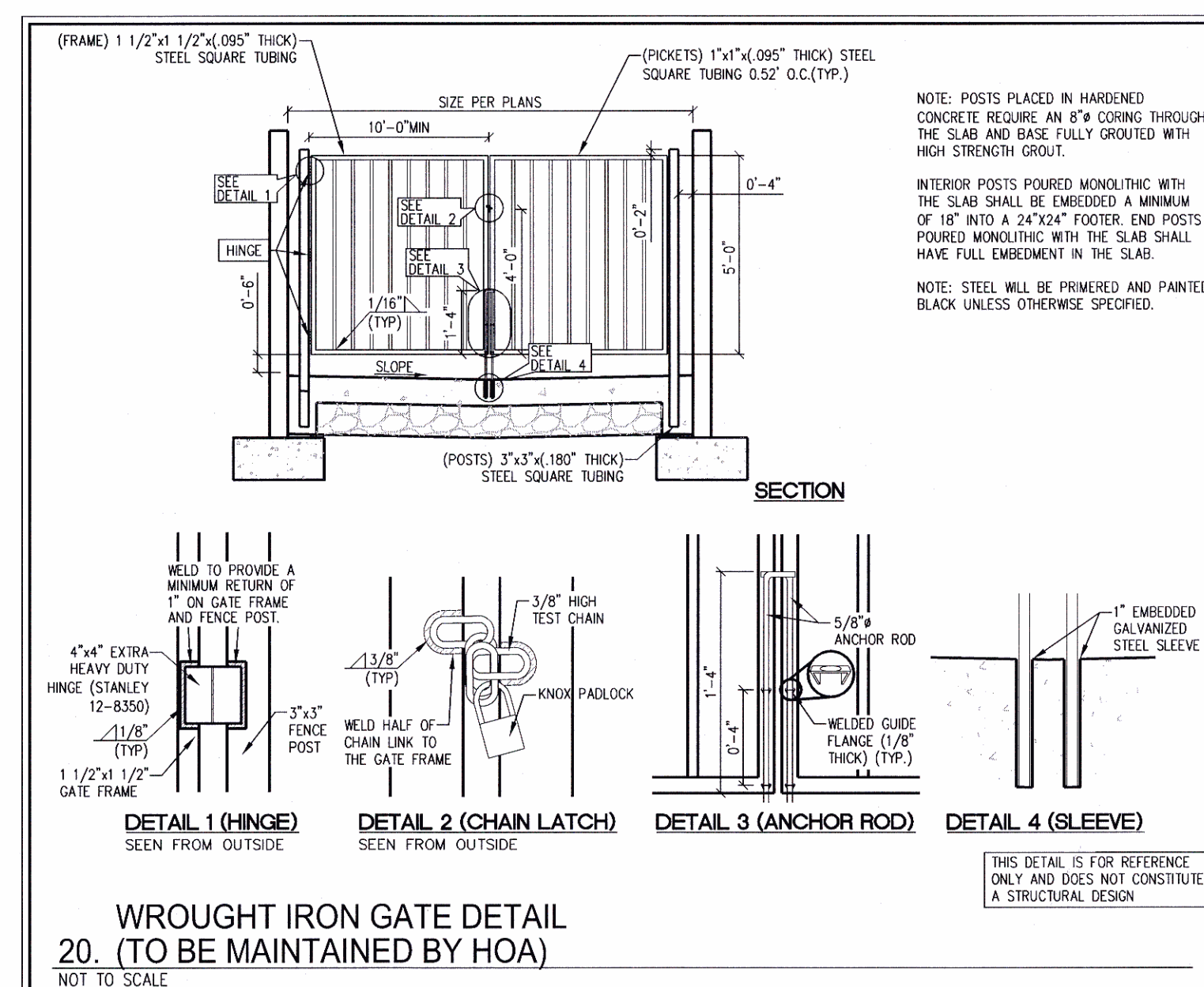
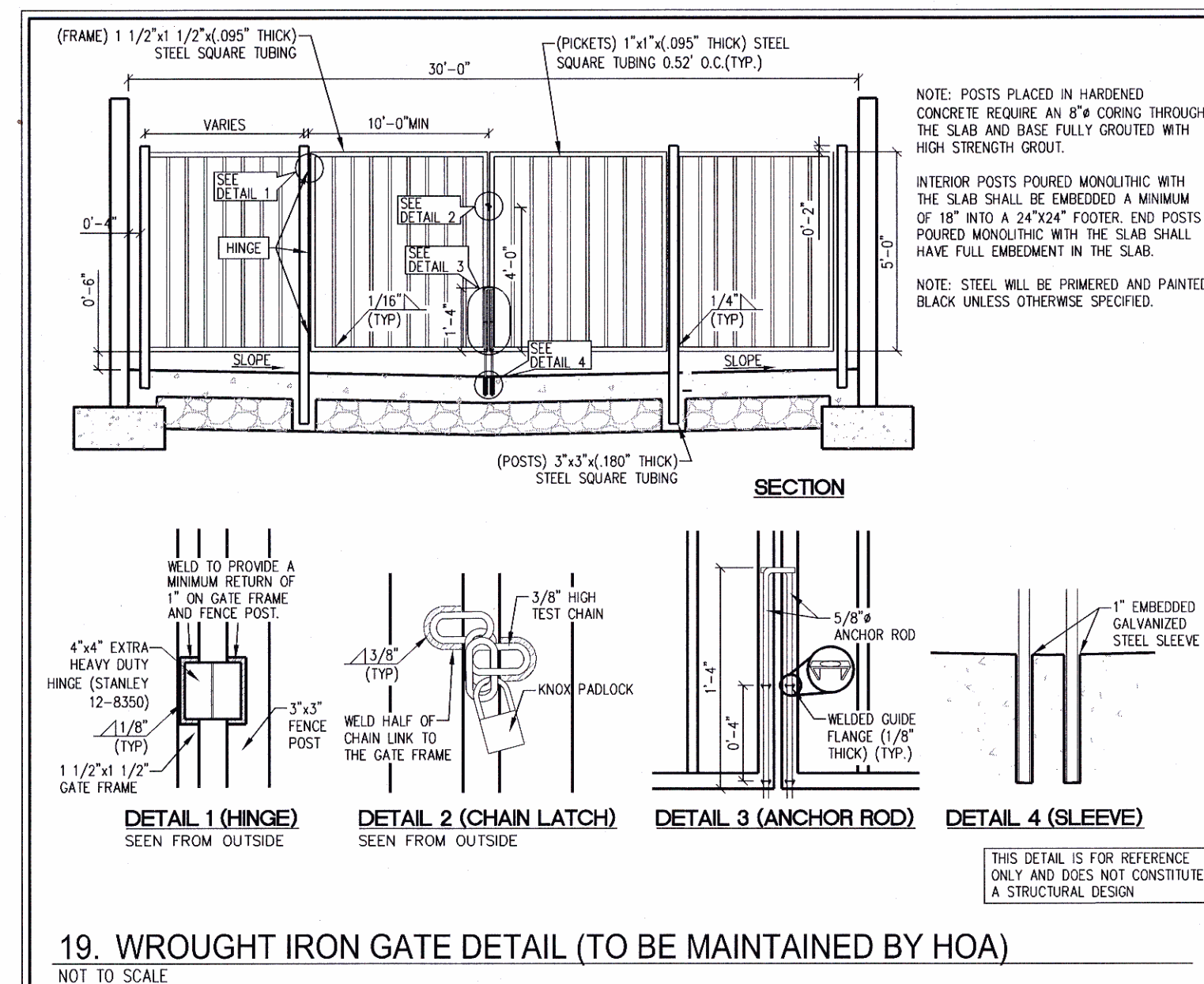
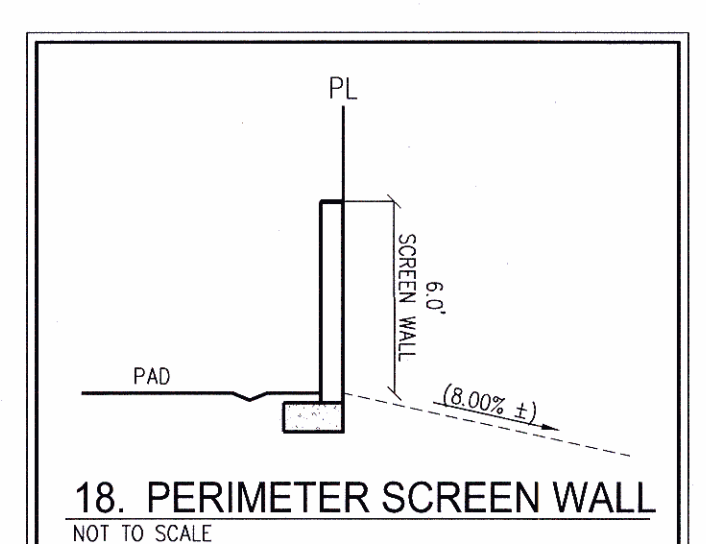
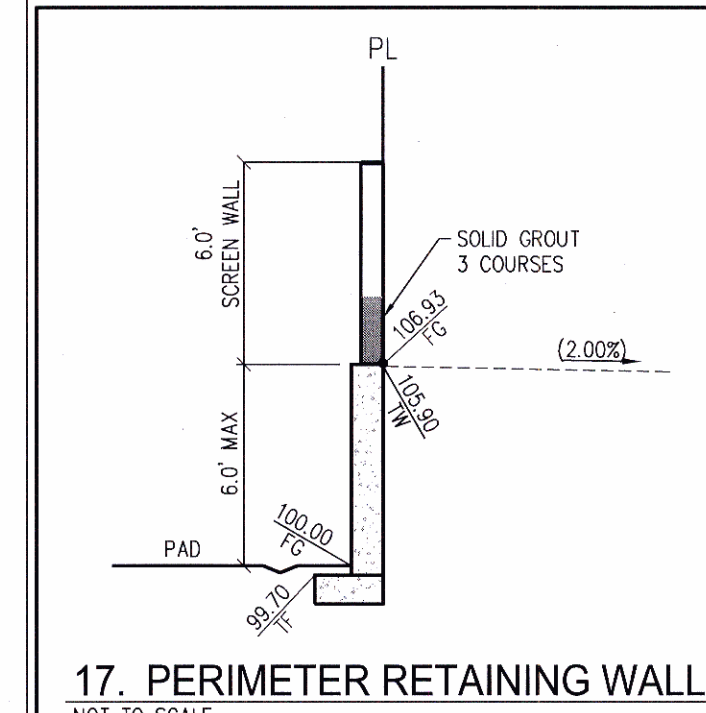
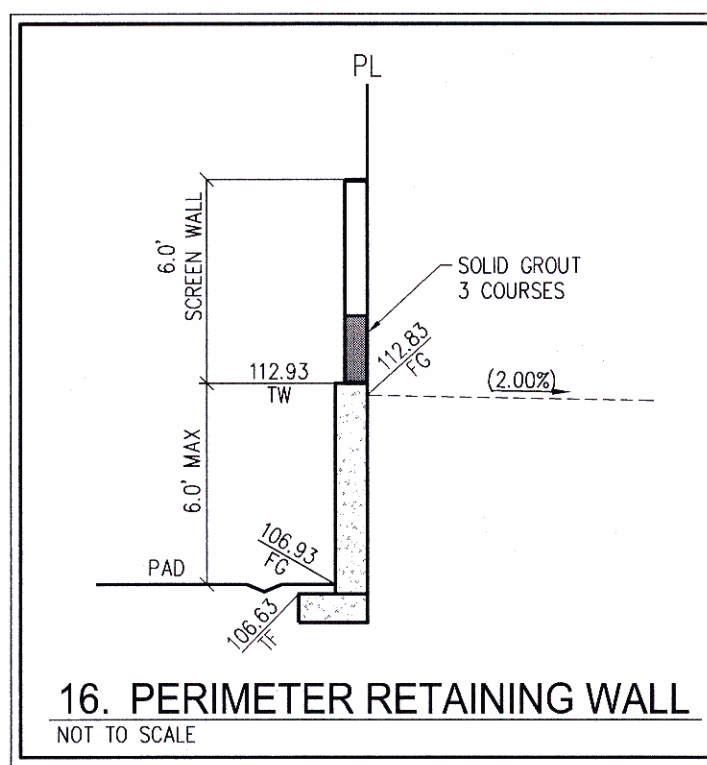
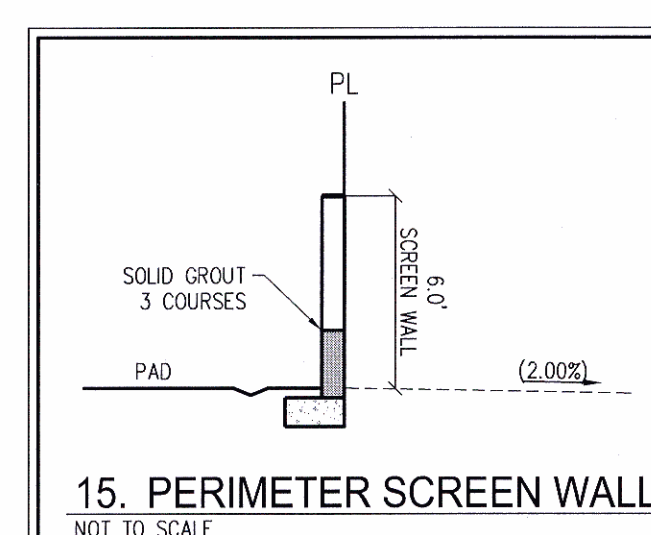
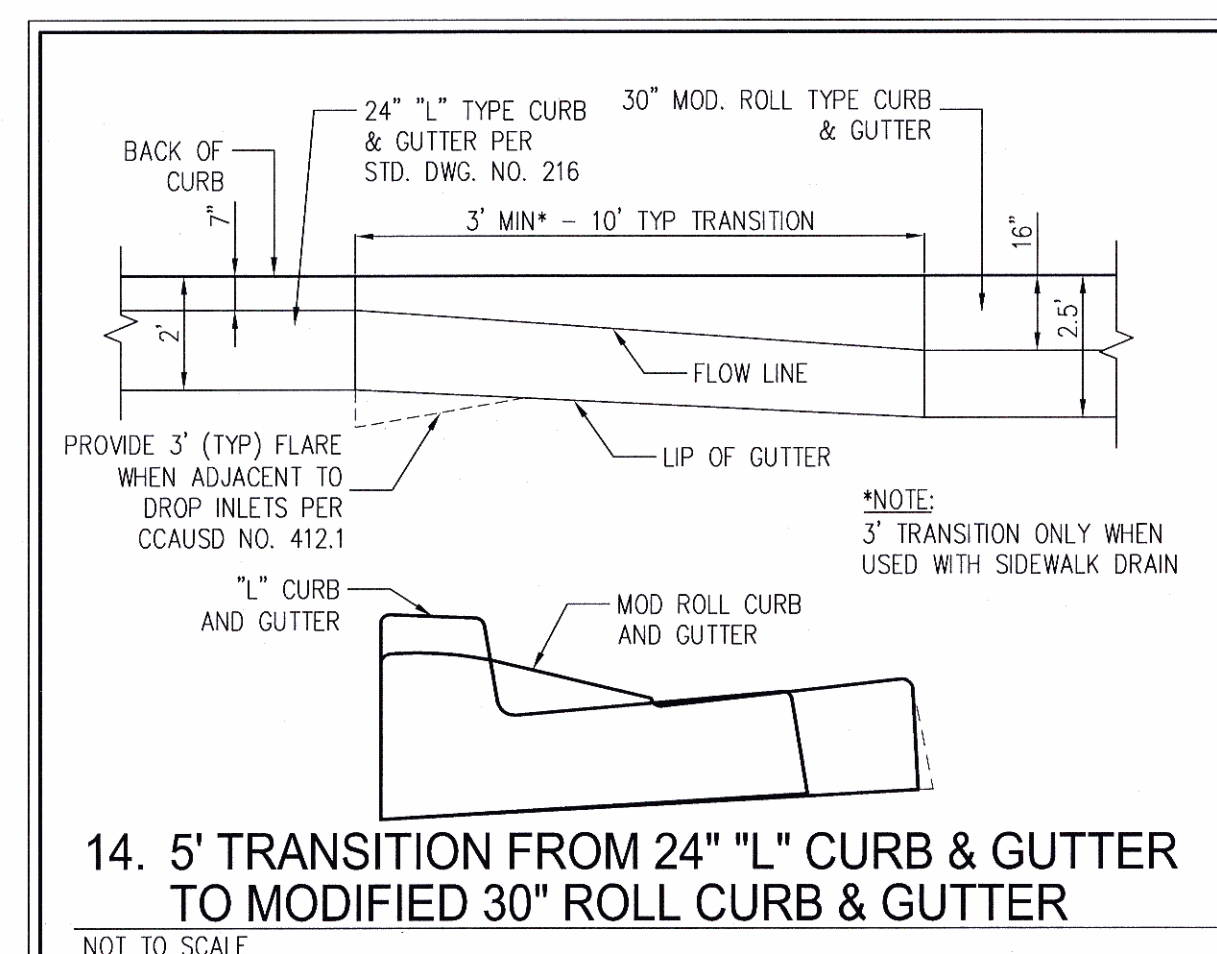
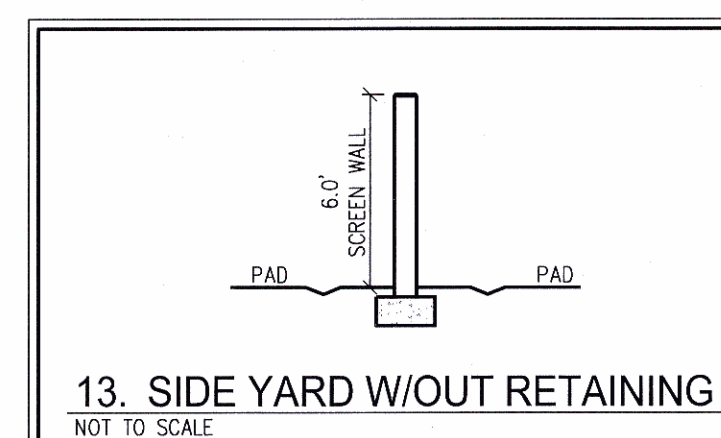
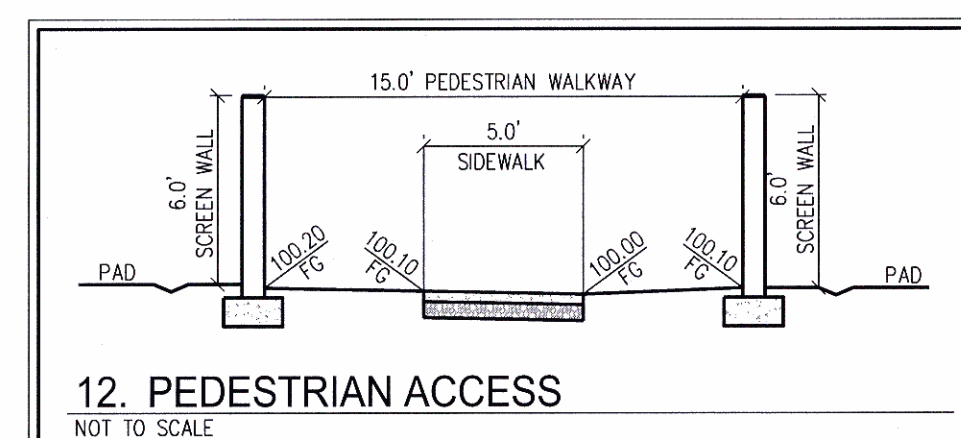
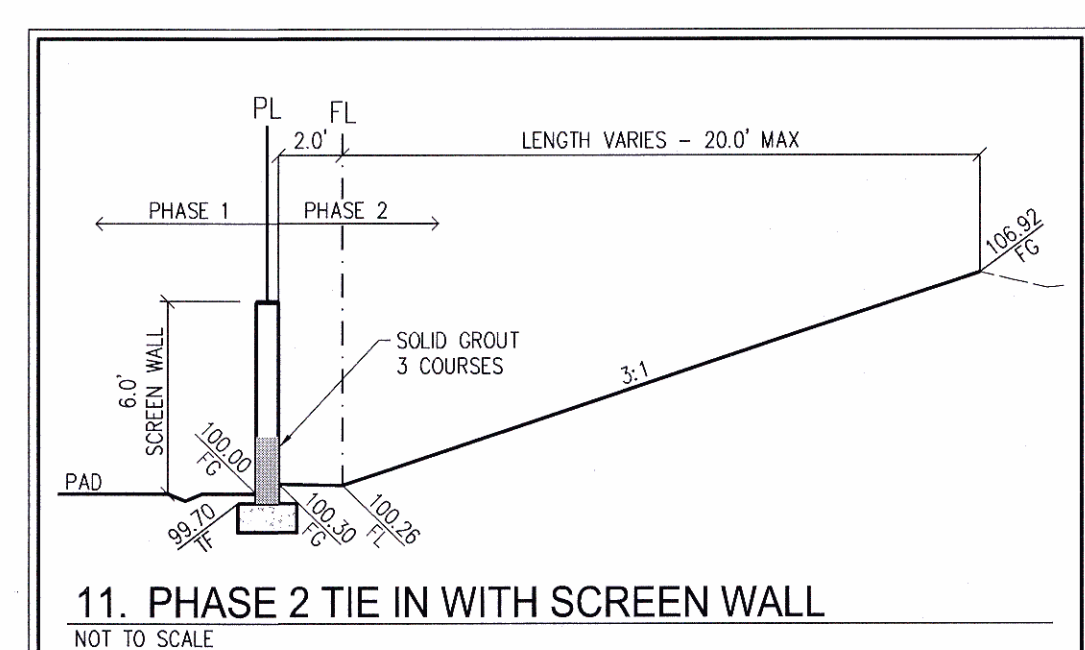
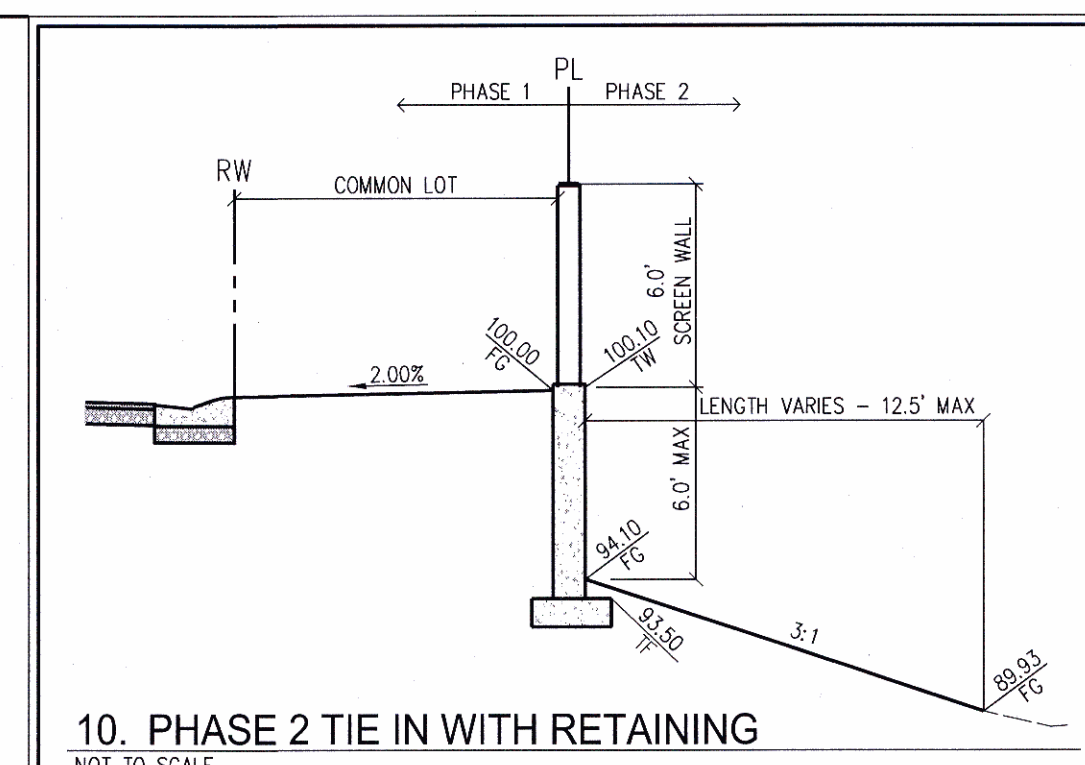
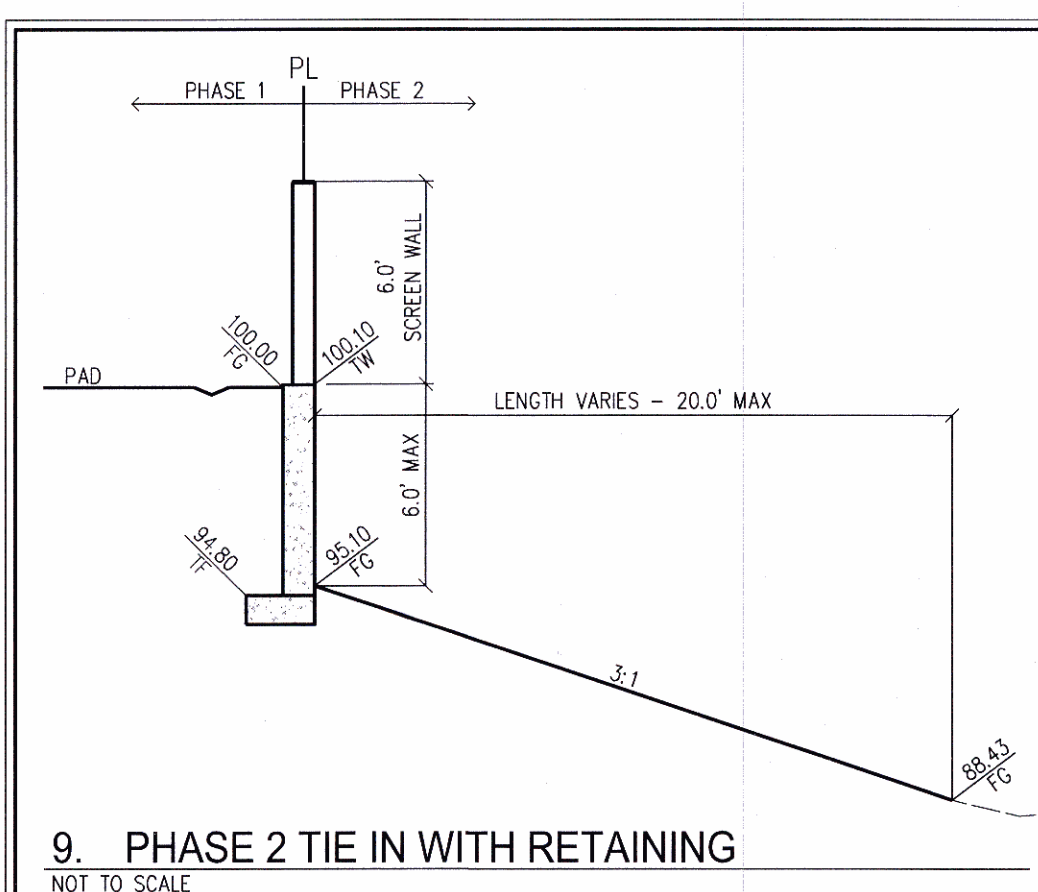
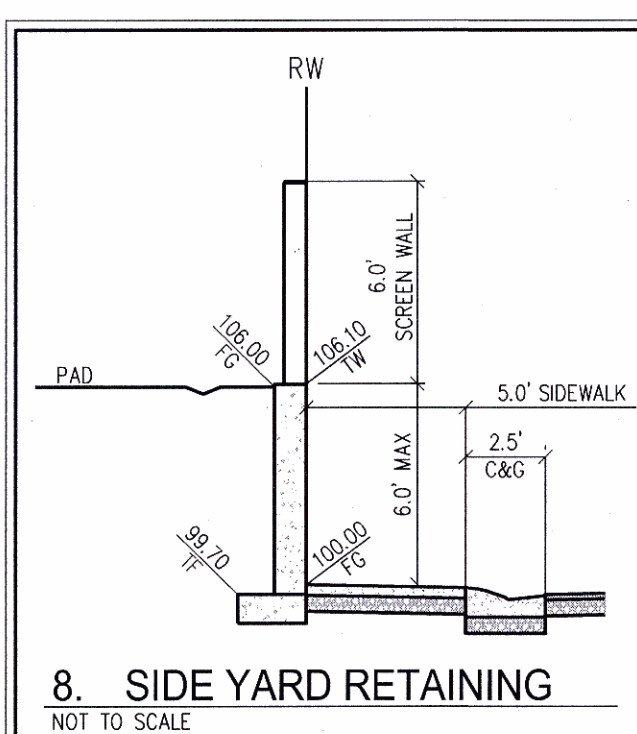
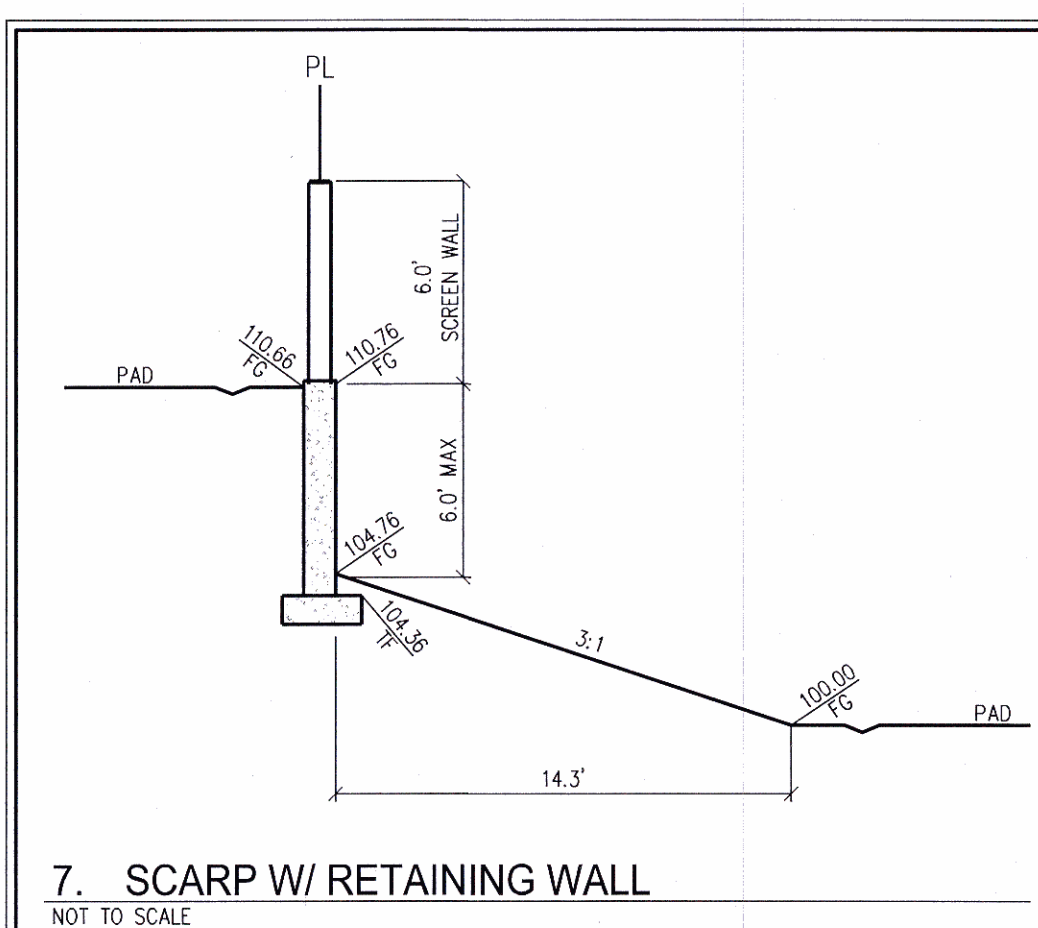
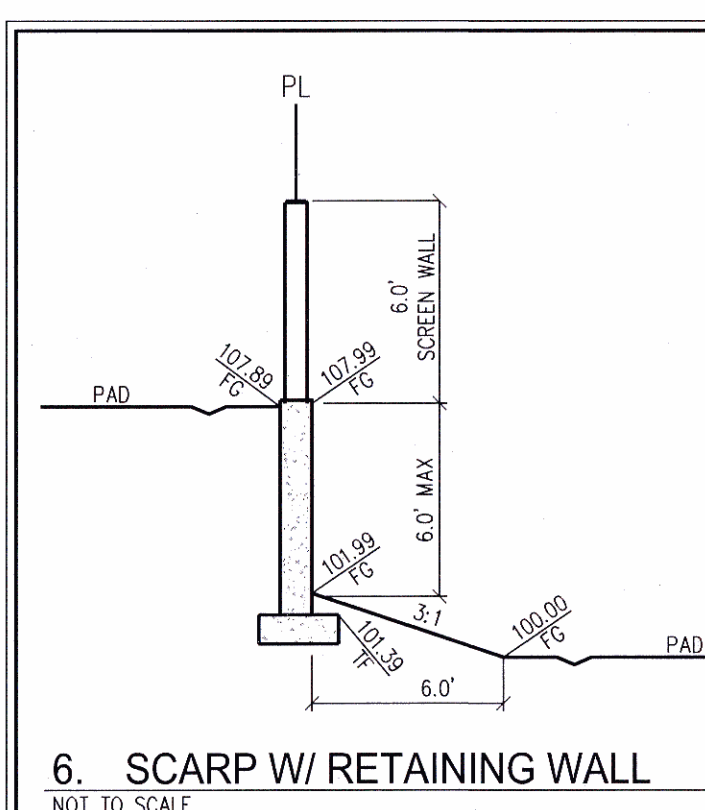
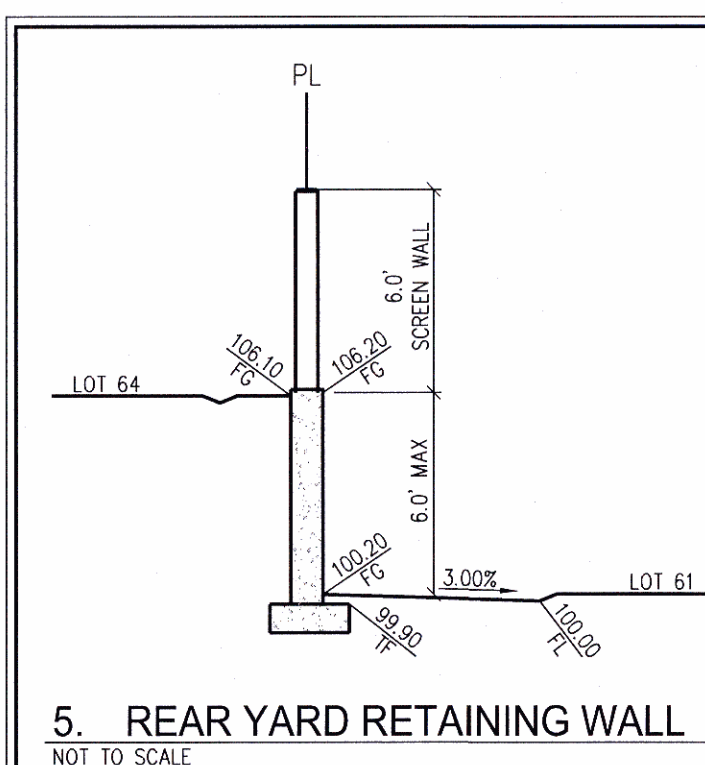
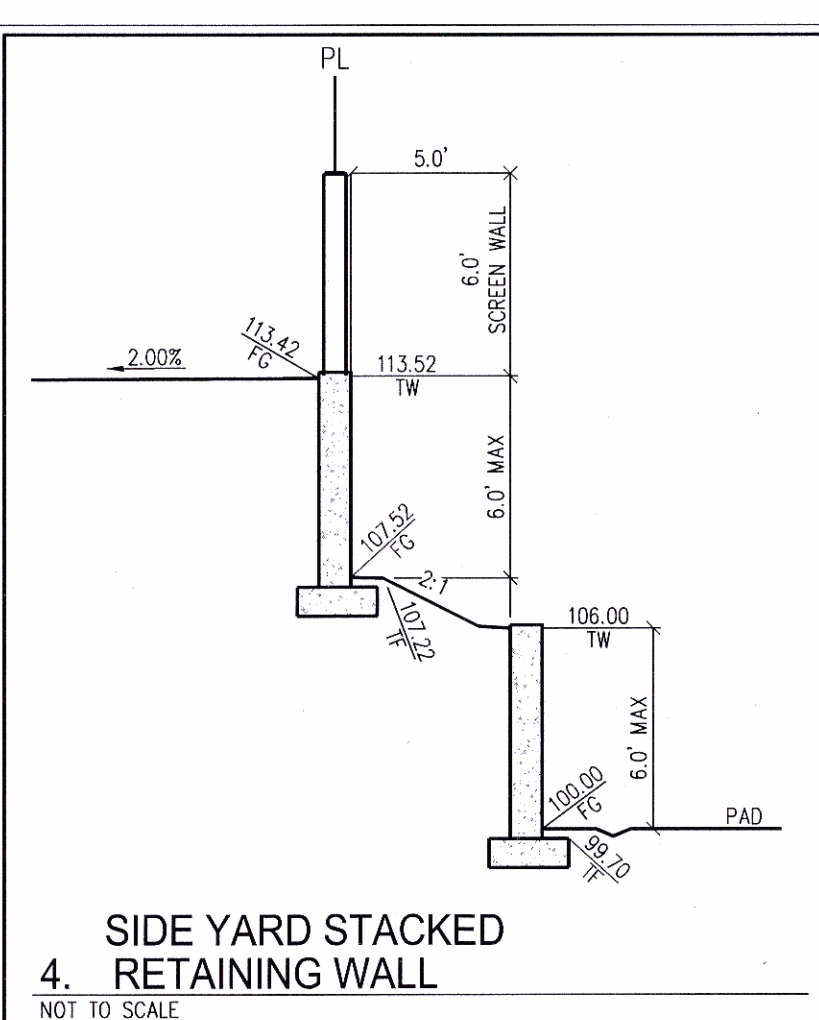
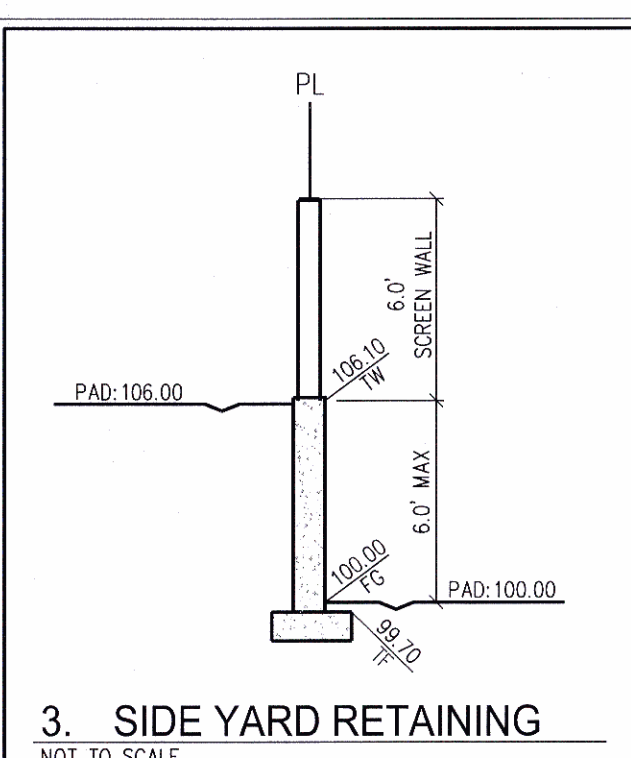
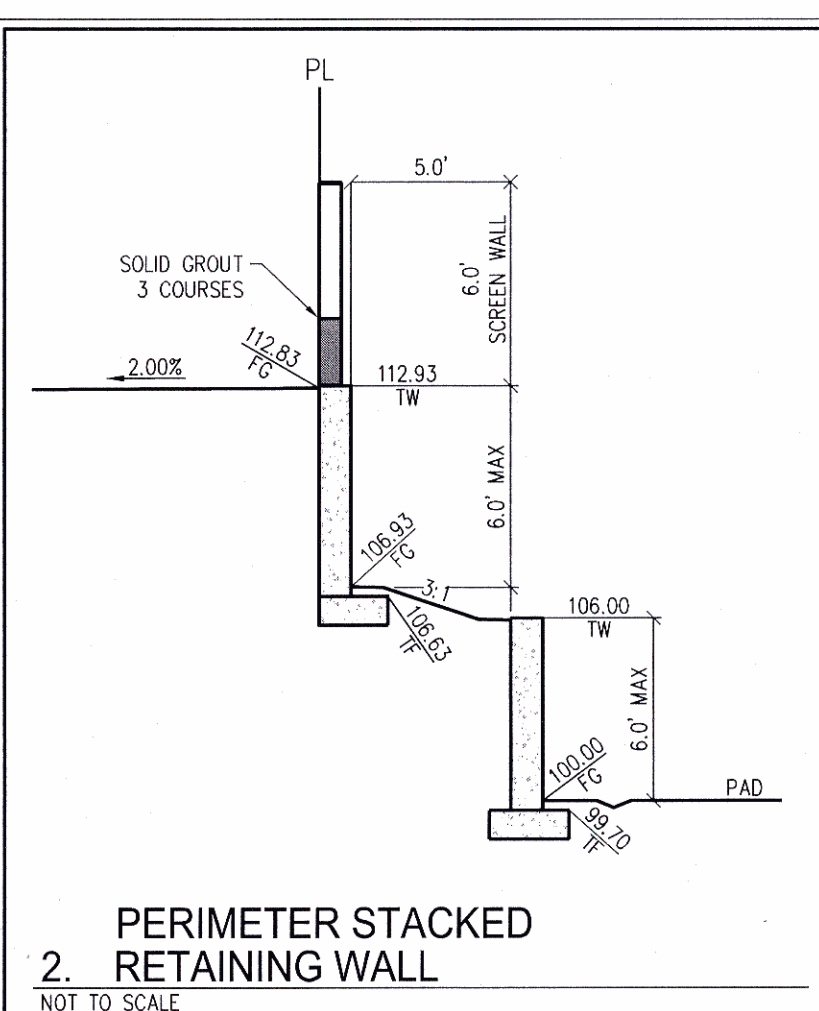
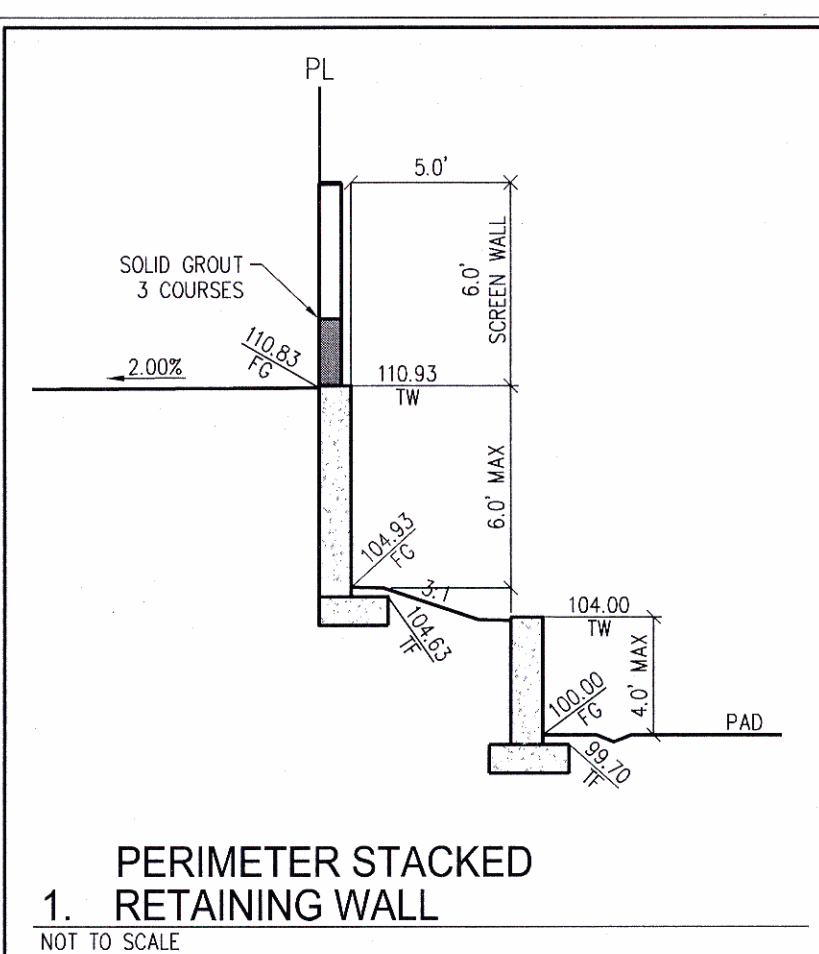
CITY OF LAS VEGAS, NEVADA
NINETY FIVE MANAGEMENT, LLC
SKYE CANYON II PARCEL 2.06 - PHASE 1
GRADING PLAN III

57195 R606
DATE: 8/15/19
DRAWN: BKS
DESIGNED: BKS
CHECKED: JJ
PROJECT NO. **OLY1813-000**

Professional Engineer Seal
JOSHUA JOHNSON
Exp. 04/30/2021
Civil
No. 15789
8/15/19

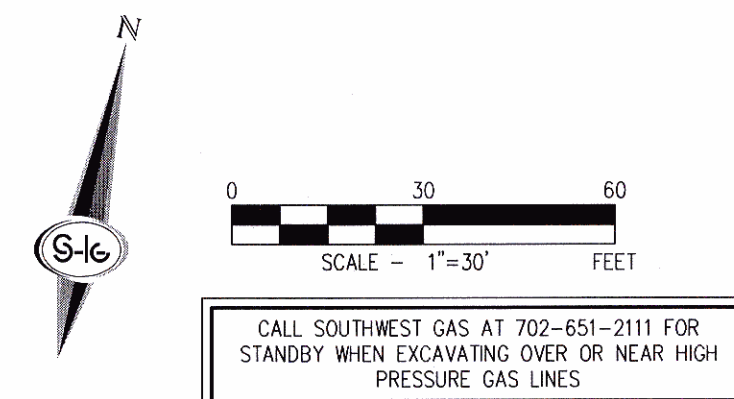
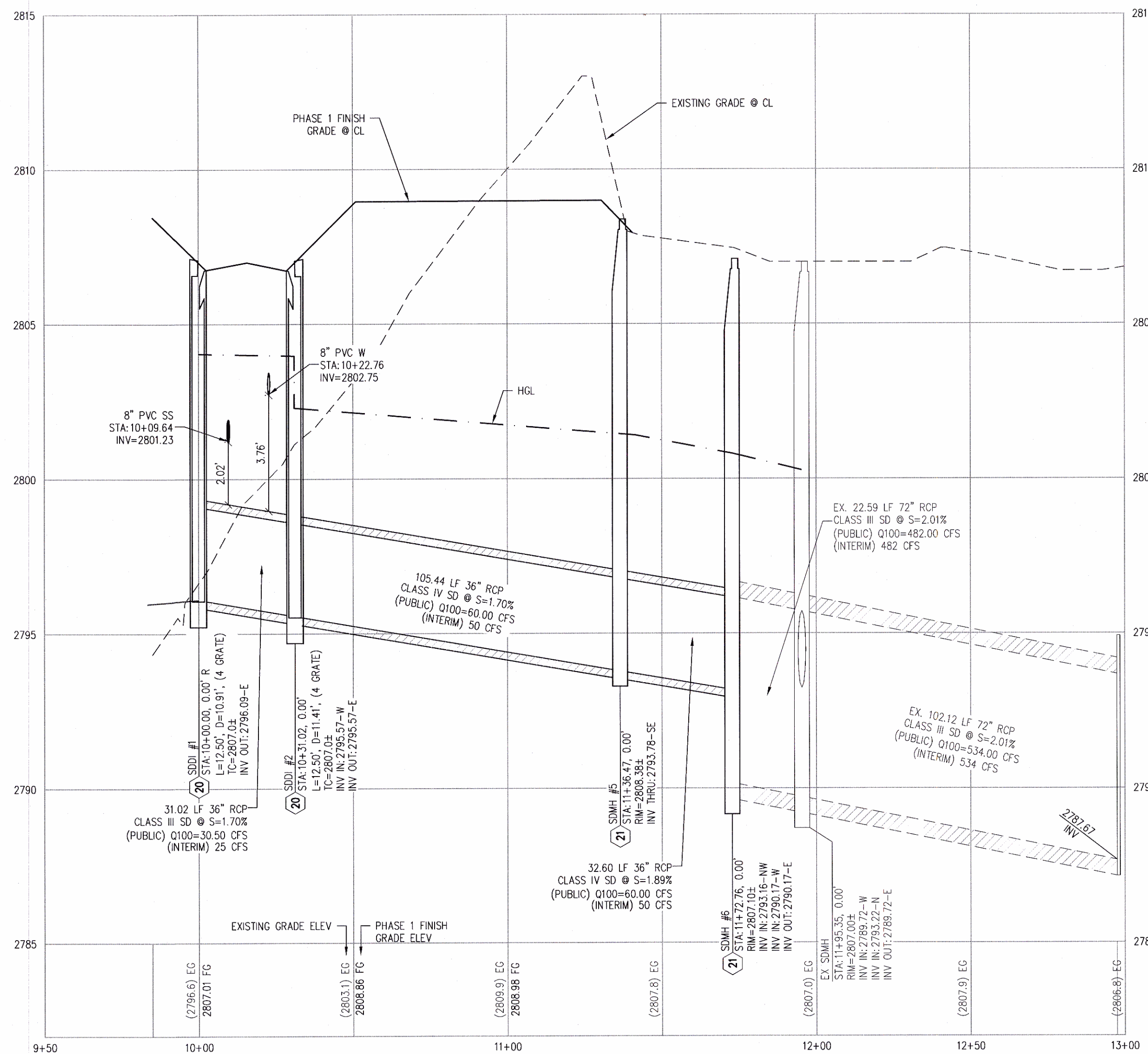
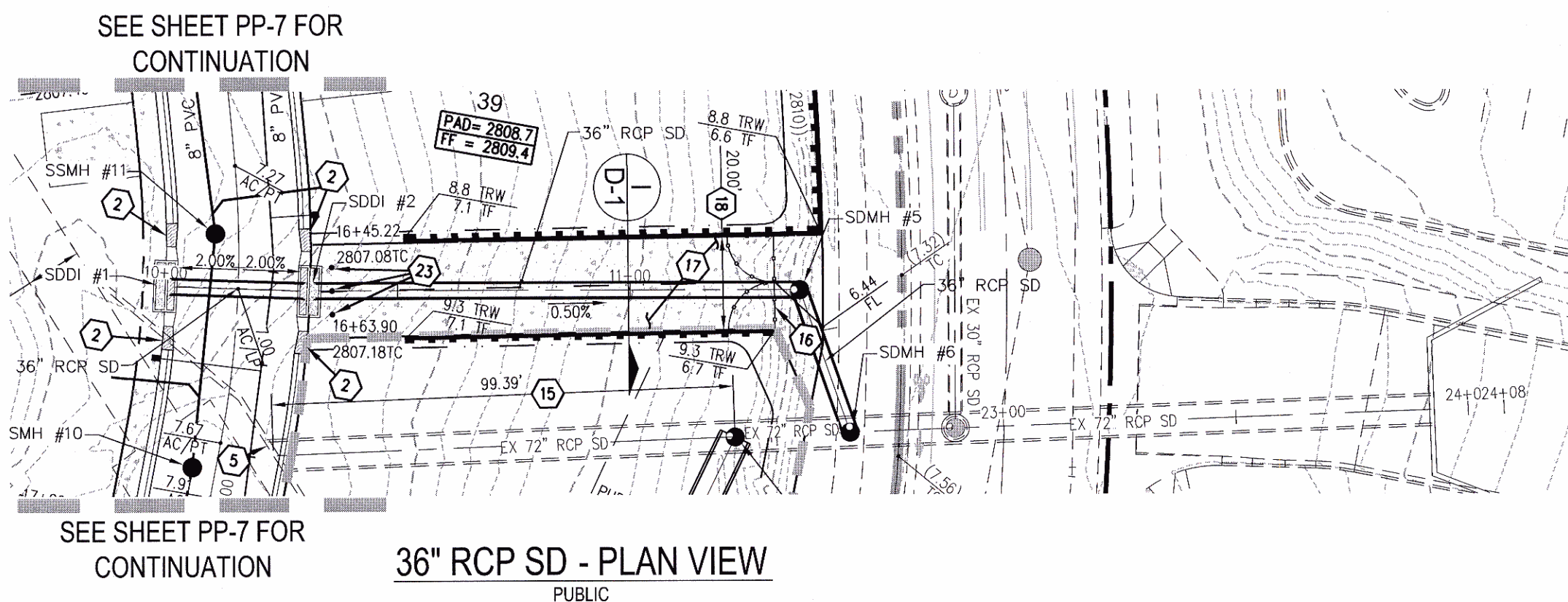
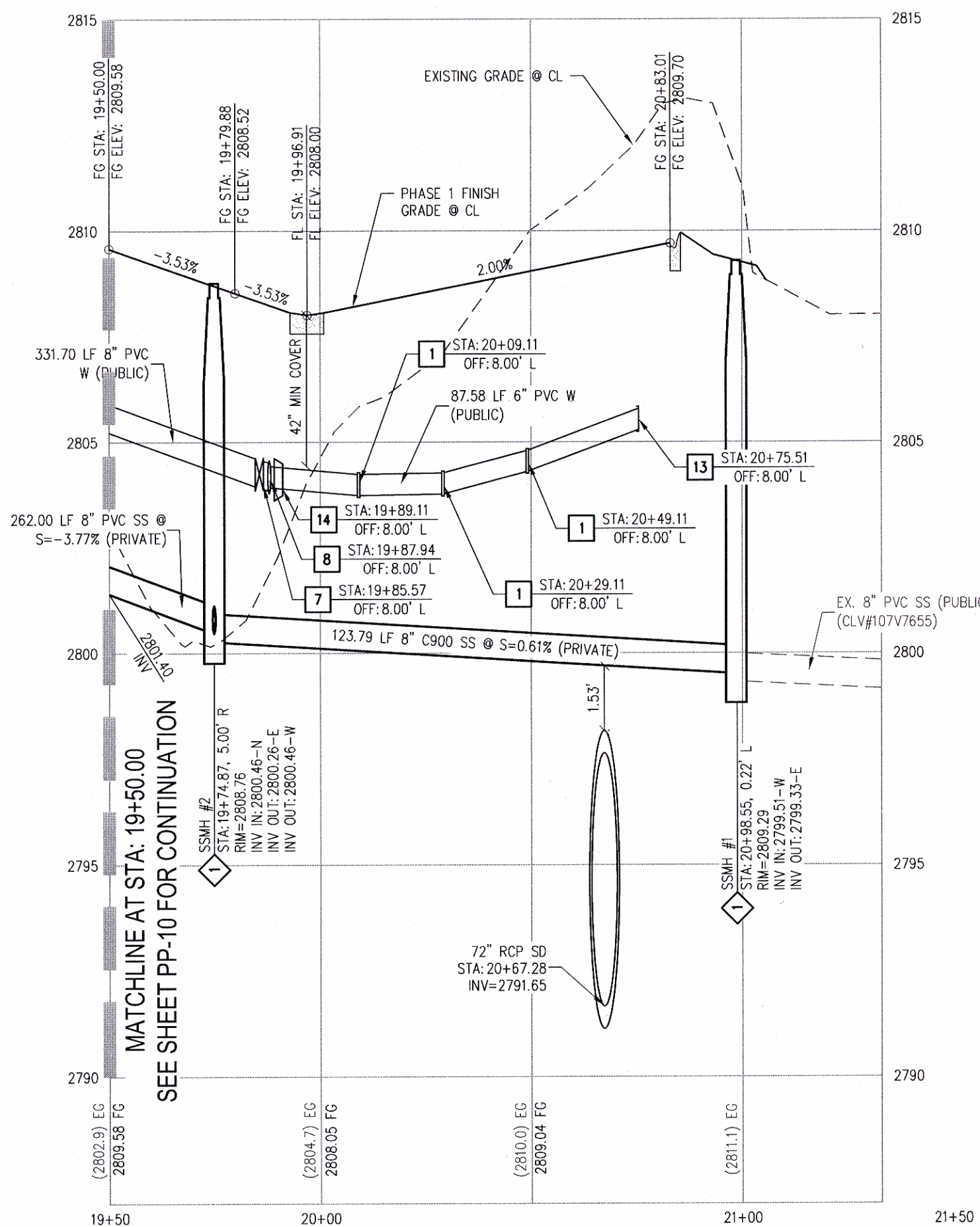
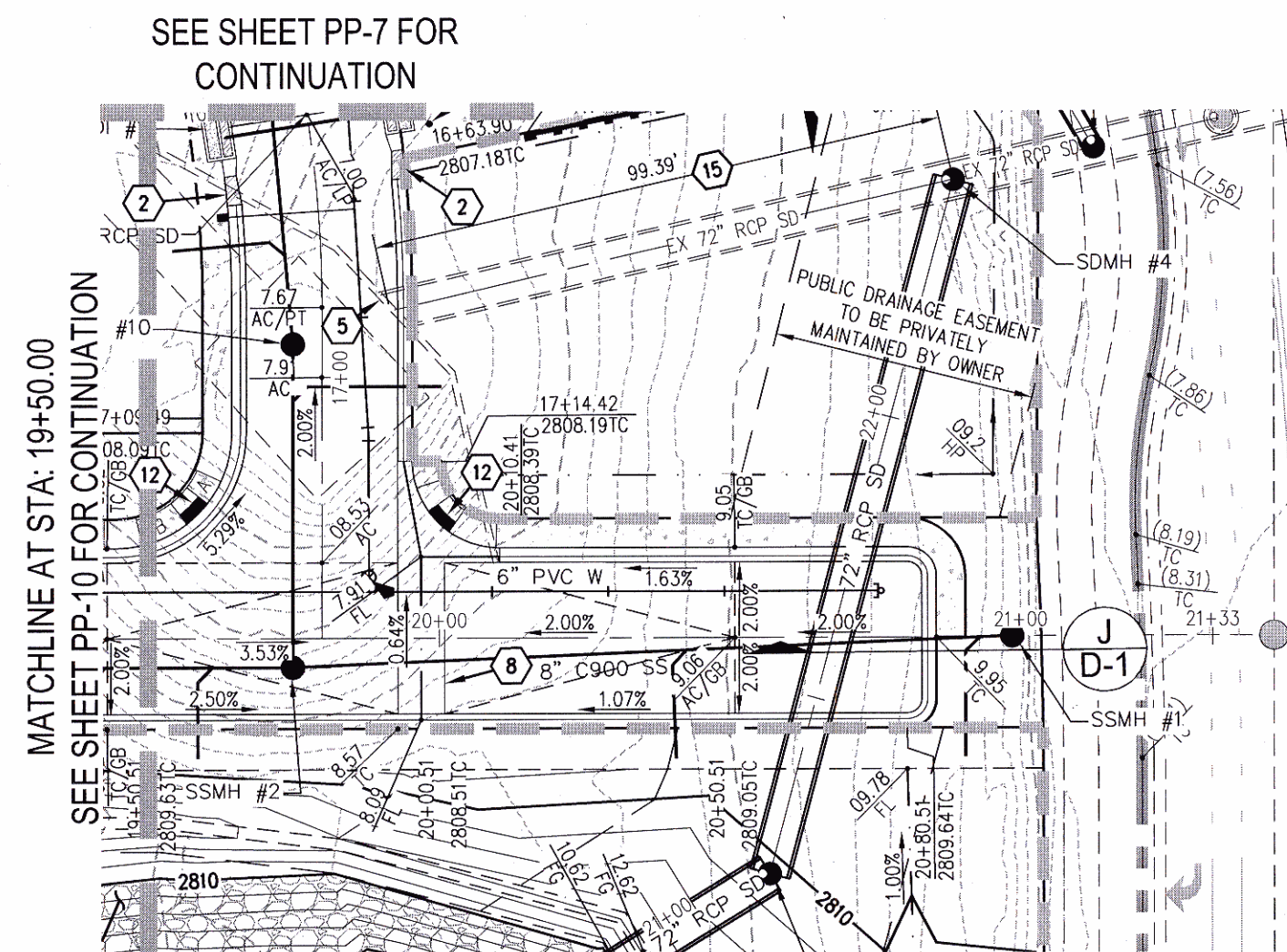






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PROJECT NO. 175337 DATED 10/17/2018

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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 INFORMATION

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE "X" (UNSHADED), AS DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANELS 32003C1735E, AND 32003C1750 BOTH DATED SEPTEMBER 27, 2002. A ZONE "X" (UNSHADED) IS DEFINED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% (500 YEAR) ANNUAL CHANCE FLOOD PLAIN.

SEWER NOTES

- INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWCS SD-1A, SD-1B, AND SD-4, WITH SINGLE 24" LID
- INSTALL 8" C900 SANITARY SEWER PER DCSWCS SD-15 & SD-17
- INSTALL 8" PVC SANITARY SEWER PER DCSWCS SD-15 & SD-17
- INSTALL 4" PVC SANITARY SEWER LATERAL PER DCSWCS SD-17, SD-22, AND SD-25

FAST

Call before you Dig

UnderGround

1-702-432-5300

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

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.

CALL BEFORE YOU DIG OVERHEAD

1-702-227-2929

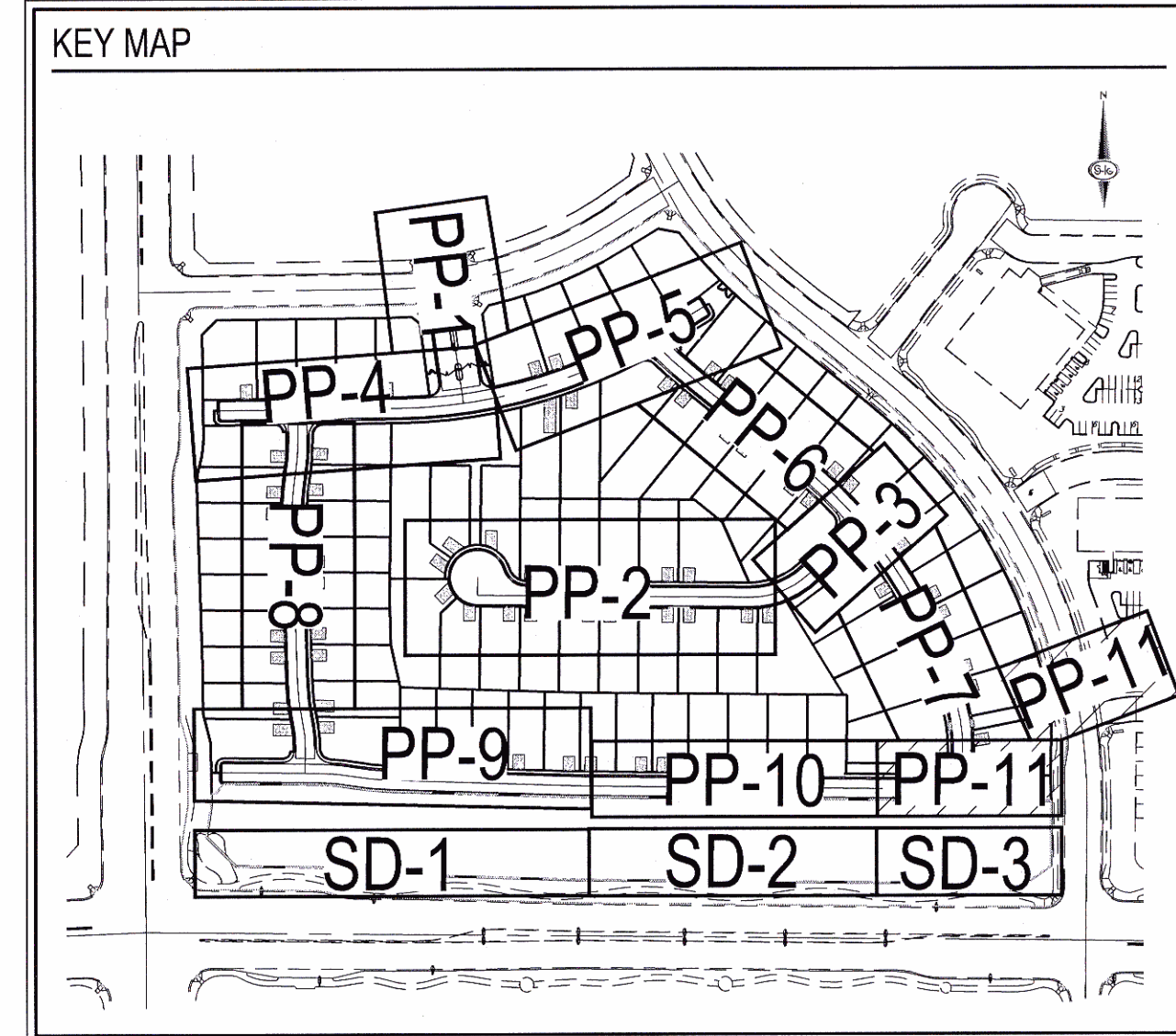
Call before you Dig

AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.

Call 811

OR

1-800-227-2600



GRADING NOTES

- INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
- INSTALL 5" CURB TRANSITION PER DETAIL 14, SHEET D-2
- INSTALL A TYPE CURB PER CCAUSD NO. 219
- INSTALL ROLL TYPE CURB PER CCAUSD NO. 217.51
- REMOVE EX HEADWALL PROTECT IN PLACE
- INSTALL 5" WIDE SIDEWALK PER CCAUSD NO. 234
- CONSTRUCT 2' SIDEWALK DRAIN PER CCAUSD NO. 236
- INSTALL 8" VALLEY GUTTER PER CCAUSD NO. 228
- INSTALL WROUGHT IRON FENCE W/ACCESS GATES, DESIGN BY OTHERS
- INSTALL ACCESS GATE W/AW LOOP
- INSTALL 6" WIDE CRUSHED ROCK FOR ACCESS ROAD
- CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT PER CCAUSD NO. 235 CASE I, AND 235.1
- INSTALL 4" CONCRETE OVER 6" TYPE II AGGREGATE BASE
- INSTALL WROUGHT IRON FENCE WITH 20" MAINTENANCE GATE PER DETAIL 19, SHEET D-2
- REMOVE SECTION OF EX 72" RCP STORM DRAIN
- INSTALL WROUGHT IRON 20" MAINTENANCE GATE PER DETAIL 20, SHEET D-2
- INSTALL 4" CONCRETE OVER 6" TYPE II AGGREGATE BASE
- 20" PUBLIC DRAINAGE EASEMENT TO BE PRIVATELY MAINTAINED BY HOA
- INSTALL RIP RAP D50=6", THICKNESS=12" (WHERE SHOWN)
- INSTALL 48" TYPE I STORM DRAIN MANHOLE PER CCAUSD NO. 403
- INSTALL CUSTOM SDMH PER STRUCTURAL DETAIL ON SHEET S-3
- INSTALL REMOVABLE BOLLARD PER DETAIL 22, SHEET D-2
- INSTALL 20" CUSTOM JUNCTION STRUCTURE PER STRUCTURAL DETAIL ON SHEET S-2

APPROVAL

LAS VEGAS FIRE AND RESCUE

DATE

SOUTHWEST GAS APPROVAL

SOUTHWEST GAS CORPORATION

DATE

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 136742 FIRST APPROVED DATE:

FLOOD CERTIFICATION

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY DSD102Z ON FILE AT LAS VEGAS FOR THE SUBJECT PROJECT.

JOSH JOHNSON, P.E. 15789

DATE

WATER CONSTRUCTION NOTES

- INSTALL VERTICAL 1" MAXIMUM JOINT DEFLECTION PER UDACS SECTION 2.07
- INSTALL 8" 11.25" BEND PER UDACS PLATE NO. 31
- INSTALL 8" 22.5" BEND PER UDACS PLATE NO. 31
- INSTALL 8" 45" BEND PER UDACS PLATE NO. 31
- INSTALL 8" 5" BEND PER UDACS PLATE NO. 31
- INSTALL 8" CAP WITH BLOW-OFF PLATE NO. 31 PER DCSWCS SECTION 2.2.3
- INSTALL 8" GATE VALVE PER UDACS PLATE NO. 30 AND 39
- INSTALL 8" x 8" TEE PER UDACS PLATE NO. 31
- INSTALL 8" PVC (CLASS 150) WATER PIPE
- INSTALL 8" PVC (CLASS 150) WATER PIPE
- INSTALL 8" 11.25" BEND PER UDACS PLATE NO. 40
- INSTALL 8" 45" BEND PER UDACS PLATE NO. 31
- INSTALL 8" CAP WITH BLOW-OFF PLATE NO. 31 PER DCSWCS SECTION 2.2.3
- INSTALL 8" x 6" REDUCER PER UDACS PLATE NO. 30
- INSTALL 1" COPPER SERVICE W/ 3/4" IRRIGATION METER AND 1" RPPA PER UDACS PLATE NO. 4 & 8, BRASS BETWEEN METER AND RPPA. PER DETAIL 23, SHEET MU-1
- INSTALL 1" COPPER SERVICE W/ 3/4" METER PLATE NO. 1 PER UDACS PLATE NO. 2
- FIELD VERIFY INVERT, REMOVE CAP AND BLOW-OFF, AND CONNECT TO EXISTING WATER LINE
- 20' PUBLIC DRAINAGE EASEMENT TO BE PRIVATELY MAINTAINED BY HOA
- INSTALL HORIZONTAL 1" MAXIMUM JOINT DEFLECTION PER UDACS SECTION 2.07
- INSTALL 6" 90" BEND PER UDACS PLATE NO. 31
- INSTALL 6" x 6" TEE PER UDACS PLATE NO. 31
- SAWCUT AND MATCH EXISTING IMPROVEMENTS PER CCAUSD NO. 500.1, 500.2, 500.3, 500.4, 500.5, & 503
- INSTALL 8" 45" VERTICAL BEND PER UDACS PLATE NO. 31
- INSTALL 8" DIP (CLASS 53) WATER PIPE

SLATER HANIFAN GROUP

a Westwood team

5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118

PHONE (702) 284-5300

FAX (702) 284-5399

DATE: 8/15/19

BY: BKS

DESIGNER: BKS

CHECKED: JJ

PROJECT NO. OLY1813-000

CITY OF LAS VEGAS, NEVADA

NINETY FIVE MANAGEMENT, LLC

SKYE CANYON II PARCEL 2.06 - PHASE 1

PLAN & PROFILE STREET F STA 19+50 - STA 20+83

DATE: 8/15/19

DRAFTER: BKS

DESIGNER: BKS

CHECKED: JJ

PROJECT NO. OLY1813-000

DATE: 8/15/19

DRAFTER: BKS

DESIGNER: BKS

CHECKED: JJ

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DRAFTER: BKS

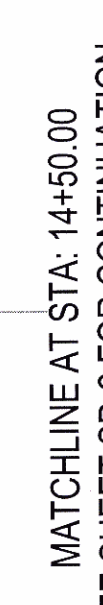
DESIGNER: BKS

CHECKED: JJ

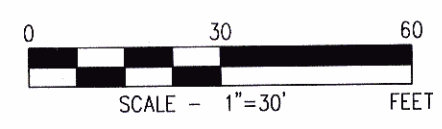
PROJECT NO. OLY1813-000



PUBLIC



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



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

ADD 2800 TO ALL SPOT GRADES WHERE THE HUNDREDS AND THOUSANDS PLACES ARE OMITTED FOR ACTUAL ELEVATION (I.E. 01.00 REPRESENTS 1801.00)

SOILS REPORT BY SOUTHWEST GEOTECHNICAL
PROJECT NO. 175337 DATED 10/17/2018

EARTHWORK QUANTITIES (RAW):
CUT= 128,656 CU YDS
FILL= 58,338 CU YDS

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

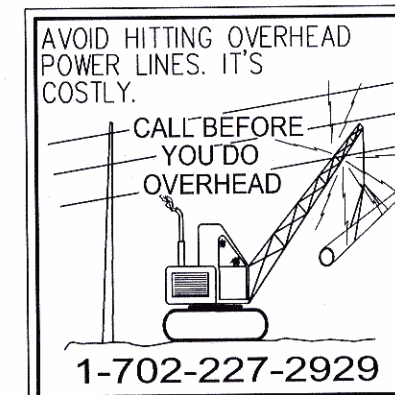
- 1) EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN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

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

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

1. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATED IN, THE PUBLIC RIGHTS OF WAY OF CLARK COUNTY, NEVADA, AS A RESULT OF CONSTRUCTION PRACTICES ASSOCIATED WITH THIS SITE DEVELOPMENT AND 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 OTHER FACTORS SUCH AS LAND USES OR ADJACENT TO THE PROJECT, SUCH AS THE LAS VEGAS COUNTY TIE IN, TIE 24.40 AND IN THE LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS BEEN COMPLETED OR PERMANENT STABILIZATION HAS BEEN INITIATED. THIS PORTION OF THE SITE HAS BEEN TIEING AND OR PERMANENT STABILIZATION FOR CONSTRUCTION ACTIVITY NVRI000000, SECTION III.4.5.
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, WIND, AND/OR EXISTING AND NEW VEGETATION. INSPECTIONS SHALL BE CONDUCTED AT LEAST AFTER A RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS: WEEKLY INSPECTIONS MAY BE REQUIRED ON DISTURBED AREAS THAT ARE NOT COVERED BY THE STORMWATER POLLUTION PREVENTION PLAN. PERMIT FOR CONSTRUCTION ACTIVITY NVRI000000, SECTION III.4.12.
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

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE 'X' (UNSHADED), AS DEPICTED IN FLOOD INSURANCE RATE MAP (FIRM) PANELS 32003C1735E, AND 32003C1750 BOTH DATED SEPTEMBER 27, 2002. A ZONE 'X' (UNSHADED) IS DEFINED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% (500 YEAR) ANNUAL CHANCE FLOOD PLAIN.



The site plan shows a rectangular development area. At the top, there is a north arrow pointing upwards. The plan is divided into several sections. The central area contains building footprints, some of which are labeled with 'PP' followed by a number (PP-1, PP-2, PP-3, PP-4, PP-5, PP-6, PP-7, PP-8, PP-9, PP-10, PP-11). These buildings are arranged in a grid-like pattern. To the right of the buildings, there are parking spaces labeled 'PP-1' through 'PP-11'. At the bottom of the plan, there are three rectangular areas labeled 'SD-1', 'SD-2', and 'SD-3', which are shaded with diagonal lines. A scale bar is located at the bottom right of the plan, indicating a distance of 100 feet. The plan also shows surrounding roads and a street named 'ST. JAMES' on the right side.

- 1) INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
- 2) INSTALL 5' CURB TRANSITION PER DETAIL 14, SHEET D-2
- 3) INSTALL A TYPE CURB PER CCAUSD NO. 219
- 4) INSTALL ROLL TYPE CURB PER CCAUSD NO. 217.51
- 5) REMOVE EX HEADWALL PROJECT IN PLACE
- 6) INSTALL 5' WIDE SIDEWALK PER CCAUSD NO. 234
- 7) CONSTRUCT 2' SIDEWALK DRAIN PER CCAUSD NO. 236
- 8) INSTALL 8' VALLEY GUTTER PER CCAUSD NO. 228
- 9) INSTALL WROUGHT IRON FENCE W/ACCESS GATES, DESIGN BY OTHERS
- 10) INSTALL ACCESS GATE W/AMU LOOP
- 11) INSTALL 6' WIDE CRUSHED ROCK FOR ACCESS ROAD
- 12) CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT PER CCAUSD NO. 235 CSE. 1, AND 235.1
- 13) INSTALL 4" CONCRETE OVER 6" TYPE II AGGREGATE BASE
- 14) INSTALL WROUGHT IRON FENCE WITH 20' MAINTENANCE GATE PER DETAIL 19, SHEET D-2
- 15) REMOVE SECTION OF EX 72" RCP STORM DRAIN
- 16) INSTALL WROUGHT IRON 20' MAINTENANCE GATE PER DETAIL 20, SHEET D-2
- 17) INSTALL 4" CONCRETE OVER 6" TYPE II AGGREGATE BASE
- 18) 20' PUBLIC DRAINAGE EASEMENT TO BE PRIVATELY MAINTAINED BY HOA
- 19) INSTALL RIP RAP D50=6", THICKNESS=12" (WHERE SHOWN)
- 20) INSTALL 12.5" DROF INLET TYPE "CM2" PER CCAUSD NO. 412.1 AND 421
- 21) INSTALL 48" TYPE I STORM DRAIN MANHOLE PER CCAUSD NO. 403.
- 22) INSTALL CUSTOM SDMH PER STRUCTURAL DETAIL ON SHEET S-3
- 23) INSTALL REMOVABLE BOLLARD PER DETAIL 22, SHEET D-2
- 24) INSTALL 20' CUSTOM JUNCTION STRUCTURE PER STRUCTURAL DETAIL ON SHEET

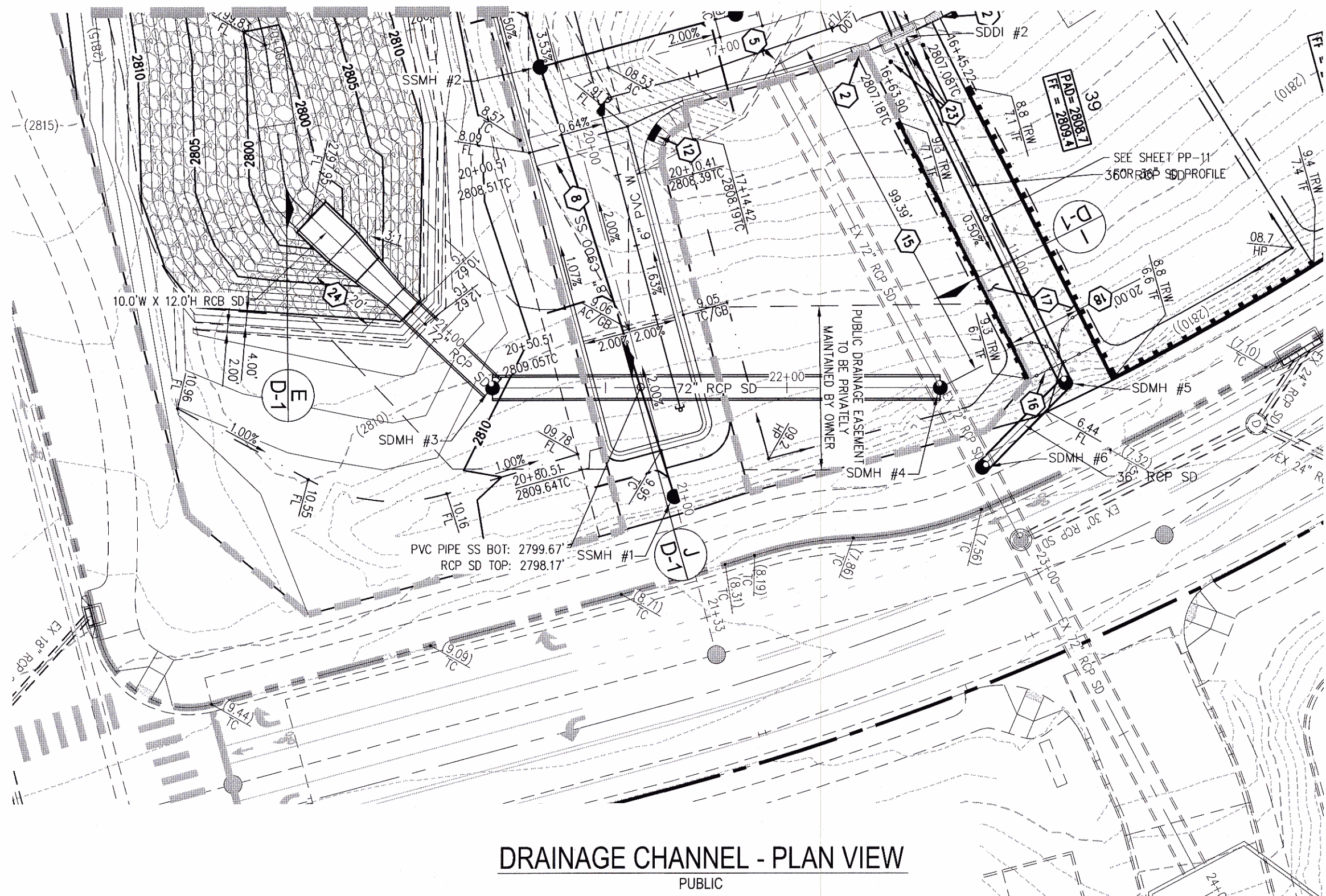
LAS VEGAS FIRE AND RESCUE DATE

SOUTHWEST GAS CORPORATION DATE

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED
TECHNICAL DRAINAGE STUDY D55102 ON FILE AT CITY OF LAS VEGAS FOR THE
SUBJECT PROJECT.

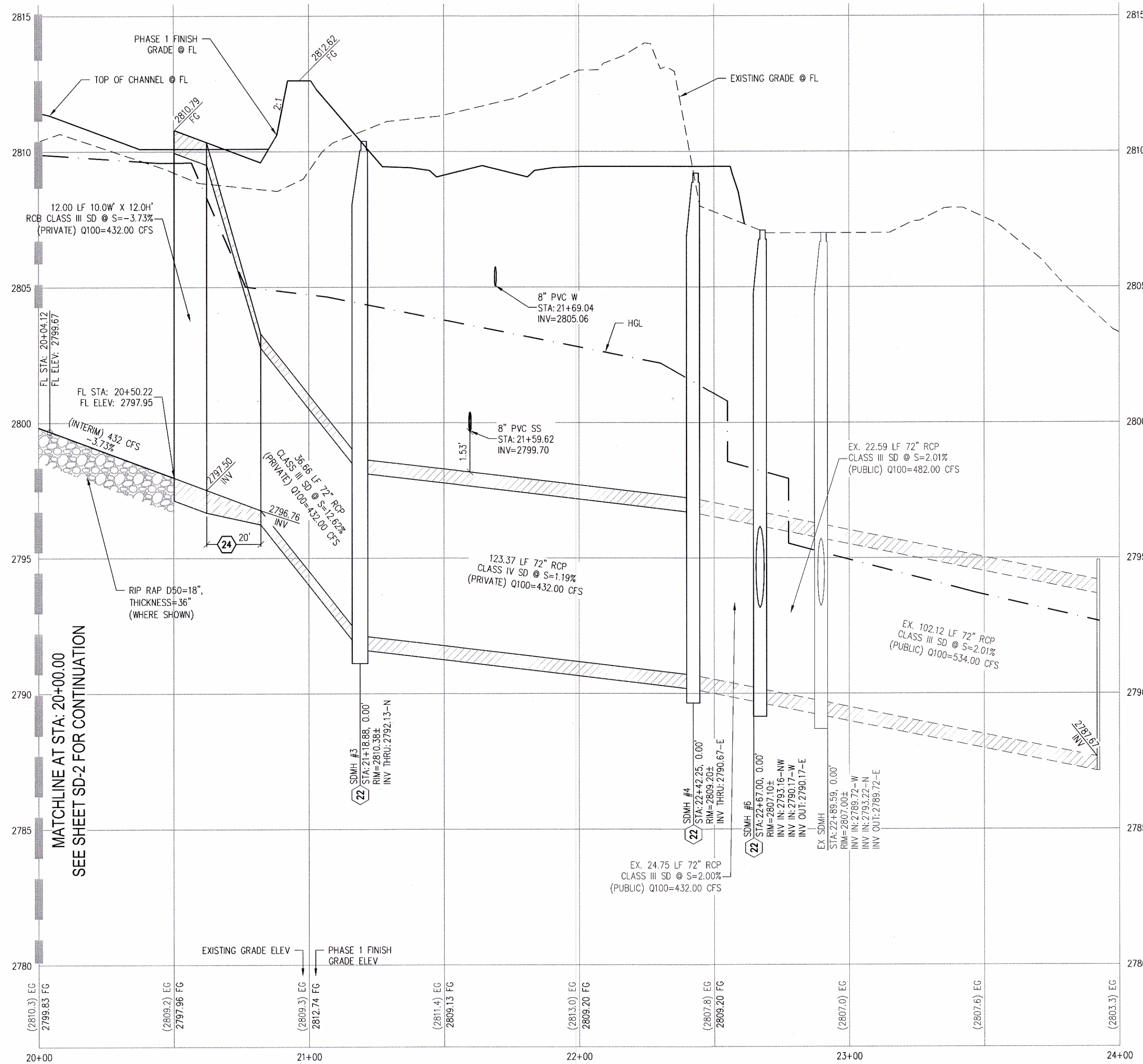
JOSH JOHNSON, P.E. 15789 DATE _____

MATCHLINE AT STA: 20+00.00 SEE SHEET SD-2 FOR CONTINUATION



DRAINAGE CHANNEL - PLAN VIEW

PUBLIC



DRAINAGE CHANNEL - PROFILE VIEW

HORIZ: 1" = 30'
VERT: 1" = 5'



SCALE - 1"=30' FEET

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

SURVEY NOTE

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

ELEVATION NOTE

ADD 2800 TO ALL SPOT GRADES WHERE THE HUNDREDS AND THOUSANDS PLACES ARE OMITTED FOR ACTUAL ELEVATION (I.E. 01.00 REPRESENTS 1801.00)

SOILS REPORT

SOILS REPORT BY SOUTHWEST GEOTECHNICAL
PROJECT NO. 175337 DATED 10/17/2018

EARTHWORKS

EARTHWORK QUANTITIES (RAW):
CUT= 126,656 CU YDS
FILL= 58,338 CU YDS

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

DISCLAIMER NOTE

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- 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 UP 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.

GRADING NOTES

- FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2012, SECTION 2304.11.2.2.
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LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDELINES

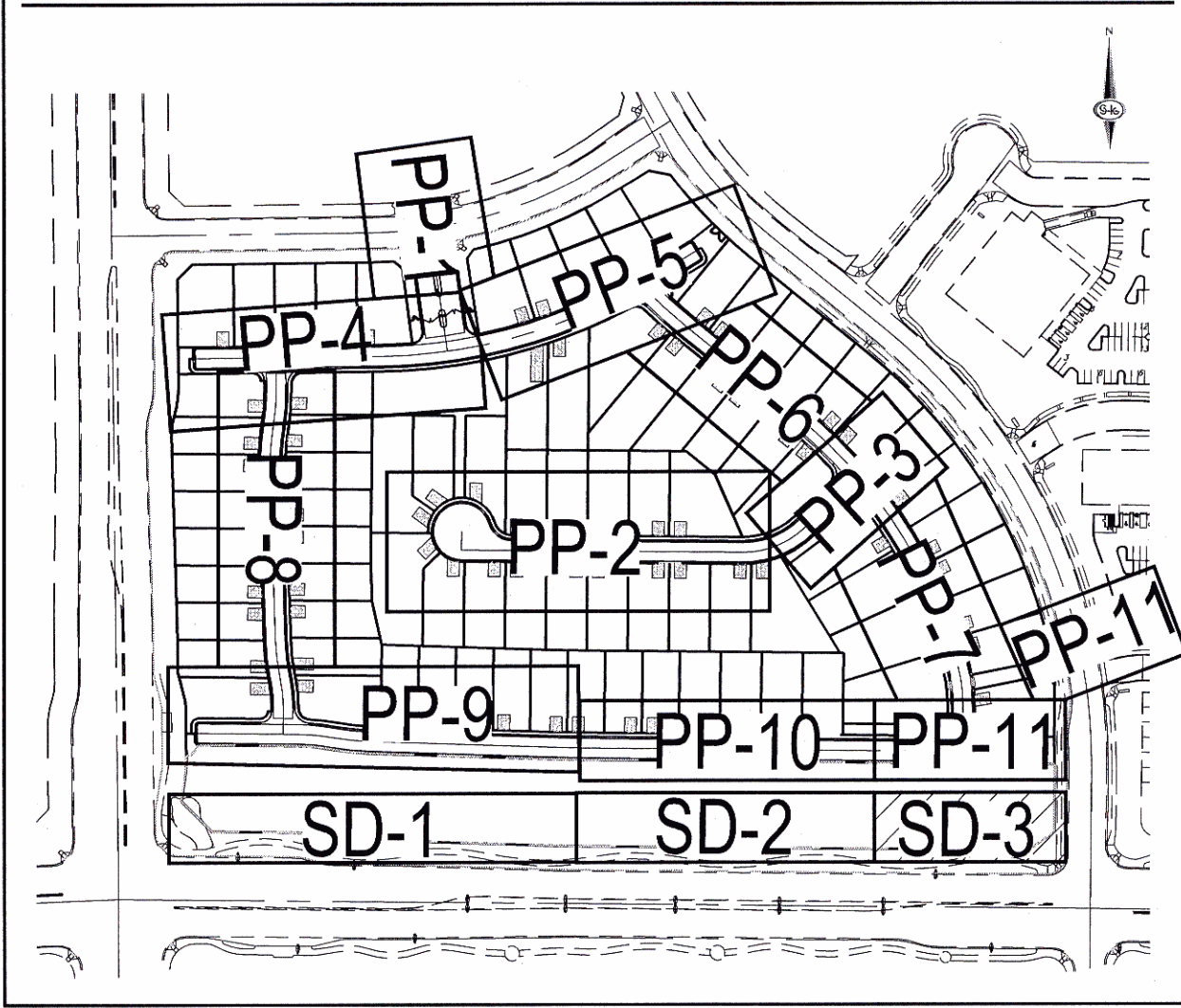
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- ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN CLARK COUNTY TITLE 24.40 AND IN THE LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL.
- TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY. REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.5.
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FEMA FLOOD ZONE INFORMATION

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE 'X' (UNSHADED), AS DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANELS 32003C1735E AND 32003C1750 BOTH DATED SEPTEMBER 27, 2002. A ZONE 'X' (UNSHADED) IS DEFINED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% (500 YEAR) ANNUAL CHANCE FLOOD PLAIN.

KEY MAP



GRADING NOTES

- INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
- INSTALL 5' CURB TRANSITION PER DETAIL 14, SHEET D-2
- INSTALL A TYPE CURB PER CCAUSD NO. 219
- INSTALL ROLL TYPE CURB PER CCAUSD NO. 217.S1
- REMOVE EX HEADWALL PROTECT IN PLACE
- INSTALL 5' WIDE SIDEWALK PER CCAUSD NO. 234
- CONSTRUCT 2' SIDEWALK DRAIN PER CCAUSD NO. 236
- INSTALL 8' VALLEY CUTTER PER CCAUSD NO. 228
- INSTALL WROUGHT IRON FENCE W/ACCESS GATES, DESIGN BY OTHERS
- INSTALL ACCESS GATE W/AV LOOP
- INSTALL 6' WIDE CRUSHED ROCK FOR ACCESS ROAD
- CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE, TRUNCATED DOMES OR EQUIVALENT PER CCAUSD NO. 235 CASE I, AND 235.1
- INSTALL 4" CONCRETE OVER 6" TYPE II AGGREGATE BASE
- INSTALL WROUGHT IRON FENCE WITH 20' MAINTENANCE GATE PER DETAIL 19, SHEET D-2
- REMOVE SECTION OF EX 72" RCP STORM DRAIN
- INSTALL WROUGHT IRON 20' MAINTENANCE GATE PER DETAIL 20, SHEET D-2
- INSTALL 4" CONCRETE OVER 6" TYPE II AGGREGATE BASE
- 20' PUBLIC DRAINAGE EASEMENT TO BE PRIVATELY MAINTAINED BY HOA
- INSTALL RIP RAP D50=6", THICKNESS=12" (WHERE SHOWN)
- INSTALL 12.5' DROP INLET TYPE "CM2" PER CCAUSD NO. 412.1 AND 421
- INSTALL 48" TYPE I STORM DRAIN MANHOLE PER CCAUSD NO. 403.
- INSTALL CUSTOM SDMH PER STRUCTURAL DETAIL ON SHEET S-3
- INSTALL REMOVABLE BOLLARD PER DETAIL 22, SHEET D-2
- INSTALL 20' CUSTOM JUNCTION STRUCTURE PER STRUCTURAL DETAIL ON SHEET S-2

APPROVAL

LAS VEGAS FIRE AND RESCUE

DATE

SOUTHWEST GAS APPROVAL

SOUTHWEST GAS CORPORATION

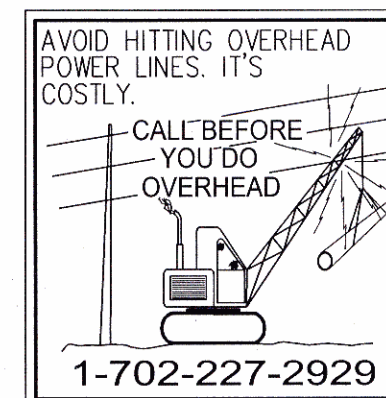
DATE

FLOOD CERTIFICATION

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY DSD102 ON FILE AT CITY OF LAS VEGAS FOR THE SUBJECT PROJECT.

JOSH JOHNSON, P.E. 15789

DATE



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

DATE	BY	APP	DATE

NO.	DESCRIPTION

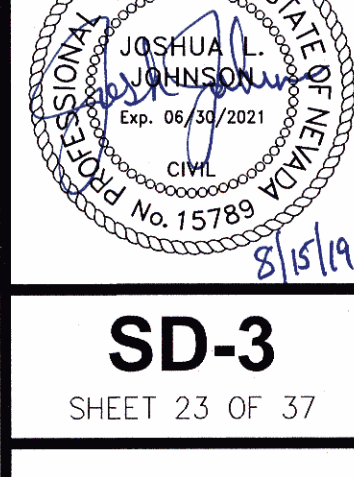
CITY OF LAS VEGAS, NEVADA

NINETY FIVE MANAGEMENT, LLC

SKYE CANYON II PARCEL 2.06 - PHASE 1

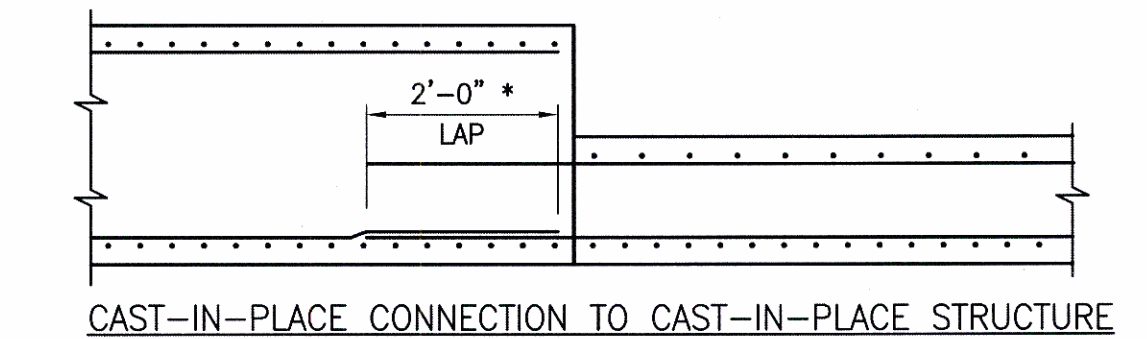
PLAN & PROFILE DRAINAGE CHANNEL STA 20+00 - STA 23+00

DATE: 8/15/19
DRAFTER: BKS
DESIGNER: BKS
CHECKED: JJ
PROJECT NO.
OLY1813-000

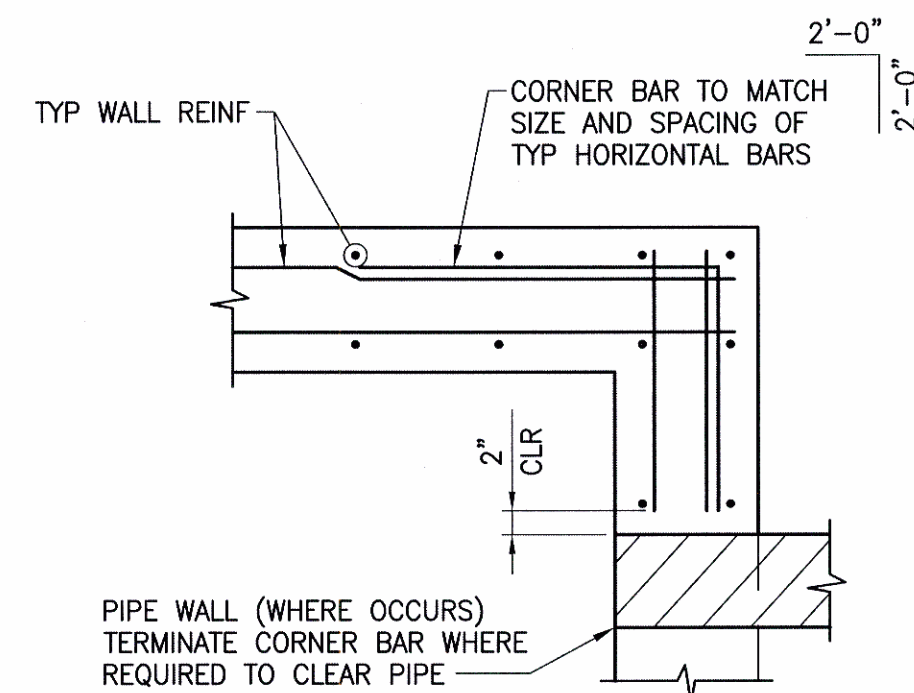


SD-3
SHEET 23 OF 37

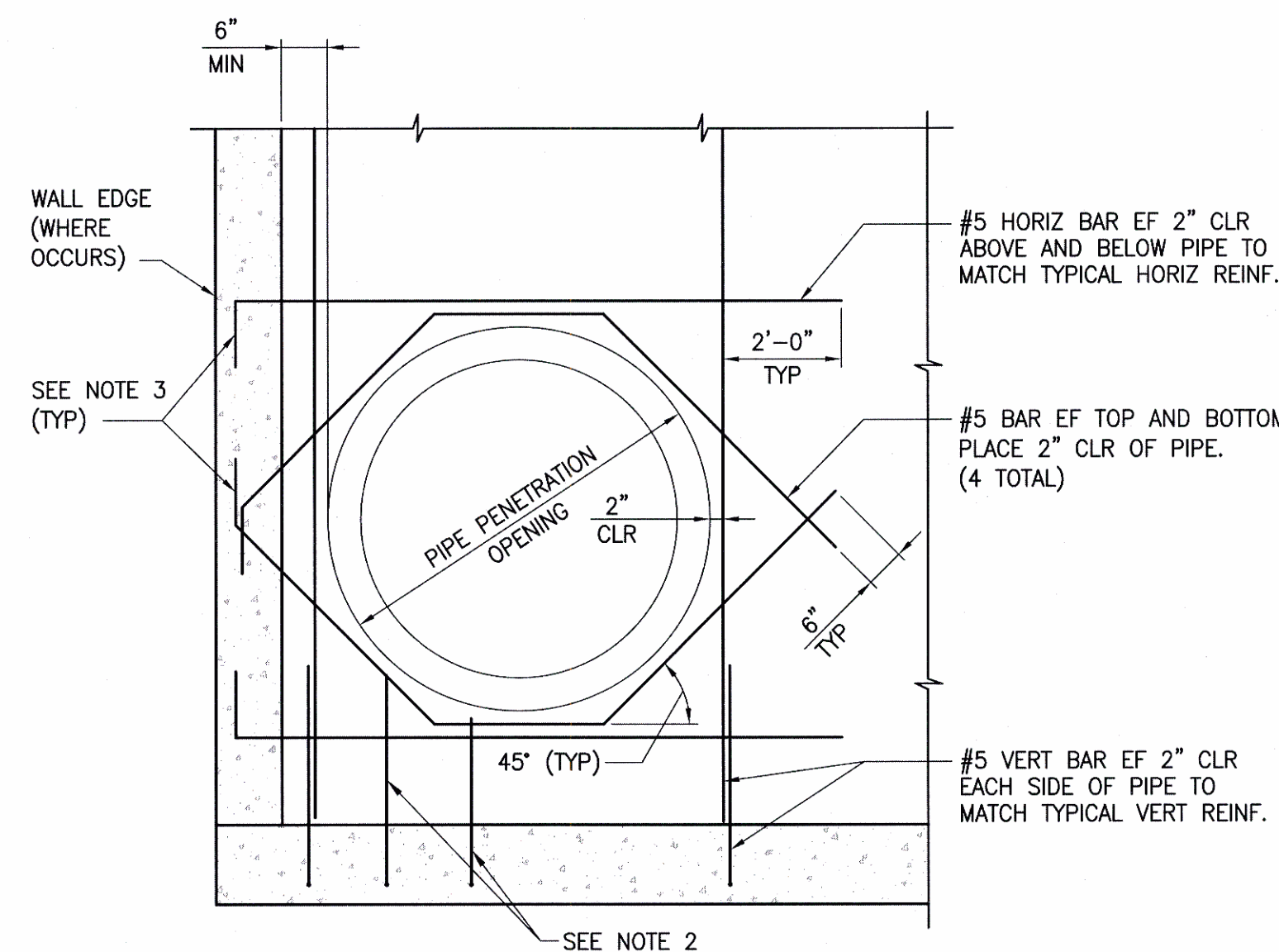




SCALE: NOT TO SCALE



SCALE: NOT TO SCALE



SCALE: NOT TO SCALE

1. DESIGN SPECIFICATIONS: ASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 7TH EDITION, 2018
2. CONSTRUCTION SPECIFICATIONS: CLARK COUNTY UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
3. EXISTING UTILITIES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES WITHIN THE WORK AREA, AND PROVIDING PROTECTION FOR THE VARIOUS UTILITIES AFFECTED PRIOR TO PROCEEDING WITH THE WORK.
4. CONCRETE: CONCRETE SHALL BE CLASS D MODIFIED AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF $f'_c=4,500$ PSI AND A MAXIMUM WATER TO CEMENT RATIO, BY WEIGHT, OF 0.45. USE TYPE V CEMENT PER ASTM C-150. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED $3/4"$, UNLESS NOTED OTHERWISE.
5. REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE ASTM A615 GRADE 60. DIMENSIONS ARE FROM OUT TO OUT OF BARS. MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE $3"$ WHERE CONCRETE IS CAST AGAINST SOIL AND $2"$ ELSEWHERE, UNLESS NOTED OTHERWISE. HOOKS MAY BE ROTATED OR TILTED AS NECESSARY TO PROVIDE THE PROPER CLEARANCES. USE LAP SPLY LENGTH: #4 BAR = $2'-0"$, #5 BAR = $2'-6"$, #6 BAR = $3'-0"$.
6. BEDDING MATERIAL: BEDDING MATERIAL SHALL BE 6-INCHES OF TYPE II AGGREGATE BASE COMPACTED TO 90% OF THE MAXIMUM DRY DENSITY. EXPOSED NATIVE SOILS IN BOTTOMS OF EXCAVATIONS SHALL BE SCARIFIED TO A DEPTH OF 6-INCHES, MOISTURE-CONDITIONED TO WITHIN 2% OF OPTIMUM MOISTURE CONTENT AND COMPACTED TO 90%.
7. EPOXY: SIMPSON STRONG-TIE SET-XP ADHESIVE ANCHOR PER ICC ESR-2508. INSTALL IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS.
8. INVERTS, SLOPES, BEARINGS, ALIGNMENTS, AND ELEVATIONS SHOWN ARE FOR "REFERENCE ONLY". INFORMATION ON CIVIL DRAWINGS SHALL GOVERN.
9. CONTRACTOR SHALL PROVIDE SLOPE STABILIZATION, SHEETING, BRACING, AND/OR SHORING AS REQUIRED TO PROTECT EXISTING EMBANKMENTS, STRUCTURES, AND UNDERGROUND ITEMS.

	CONTINUOUS MONITORING	PERIODIC MONITORING
FOUNDATION SOILS, EXCAVATIONS, FILL MATERIALS, SUBGRADE		X
PLACEMENT AND COMPACTION OF FILL	X	
REBAR PLACEMENT IN CONCRETE		X
ANCHORS CAST IN CONCRETE		X
VERIFICATION OF CONCRETE MIX DESIGN		X
SAMPLING OF FRESH CONCRETE AND PLACEMENT	X	
CONCRETE CURING AND FORMWORK		X

1. SPECIAL INSPECTIONS ARE TO BE PERFORMED BY QUALIFIED FIRMS OR PERSONNEL. THE SPECIAL INSPECTOR MUST BE CERTIFIED BY CLARK COUNTY IN THE CATEGORY OF WORK REQUIRED TO HAVE SPECIAL INSPECTION.
2. THE CONSTRUCTION MATERIALS TESTING LABORATORY MUST BE APPROVED BY CLARK COUNTY, FOR TESTING OF MATERIALS, SYSTEMS, COMPONENTS, AND EQUIPMENTS.
3. AS IDENTIFIED WITHIN THE CONTRACT DOCUMENTS, AND THE IBC 2018 BUILDING CODE CHAPTER 17, THE SPECIAL INSPECTORS SHALL MAINTAIN RECORDS OF ALL INSPECTIONS PERTAINING TO THE PORTIONS OF WORK THEY ARE TO INSPECT. PROVIDE COPIES OF REPORTS TO THE OWNER AND ARCHITECT/ ENGINEER PERIODICALLY AND AS REQUIRED FOR ADEQUATE COMMUNICATION AS WORK PROGRESSES.