

DS #: 4782

APN: 125-26-203-002, 003 & 004

PROJECT: Azure S. Torrey Pines North

SUBMITTAL: 1st Submittal

SCANNED BY/DATE:

CHECKED BY/DATE:



CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		March 22, 2016
TO: Land Development Services Department of Building & Safety		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for:	
	Azure & Torrey Pines North	
Cross Streets:	SWC of Azure Drive & Torrey Pines Drive	
File Number:	F:\Depot\DSMemos\DS4782A.doc	
Parcel Number:	125-26-203-002; -003 & -004	
Zoning Action:	ZON-62784; WVR-62786 & TMP-62787	
FEMA Flood Zone	YES	NO X
Proposed Storm Drain	YES	NO X
COPIES TO:		Triton Engineering
		DR Horton
		Bart Anderson, P.E., DevCo

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	2/25/2016	3/22/2016	See Comments Below	\$400.00	434413: \$400
			TOTAL FEES (LDDRS):	\$400.00	----

REMARKS:

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

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

1. Sites with a grade difference of 2 feet above or below existing are required to have approval from the *City Planning and Development Department*. The engineer must submit copies of the grading plans and detail sheet with a letter justifying the grade difference to the *City Planning Department* (229-6301). The engineer must provide Planning approval with the next submittal.
2. The proposed development appears to have negative impact to the adjacent parcel to the west (APN: 125-26-203-001). The subject development must either perpetuate the offsite drainage or obtain a notarized letter of agreement from the adjacent parcel owner prior to the final approval of the subject drainage study.
3. In the adjacent parcel to the southwest (APN: 125-26-203-006), it appears that after the construction of the subject development, the northeast corner of the adjacent parcel will be situated at a local low point. Either provide enough topographic information to verify positive drainage in the adjacent lot or perpetuate the offsite flow in the next submittal.
4. Comment #3 also applies to the adjacent parcels to the south (APN: 125-26-203-007 and 125-26-203-008). Address and resolve in the next submittal.

5. The proposed finished floor elevations of Lots 1 to 4 do not meet the twice-the-depth criteria of 100-year flow depth in *Azure Drive*. Add a detail section specifically for Lots 1 to 4 to provide a minimum of two courses 8"-CMU solid grouted wall along *Azure Drive*.
6. Provide a nominal drop inlet at approximately Station 7+50 in *Azure Drive*. Note that nominal drop inlets must be provided at an interval of maximum 600' to collect nuisance flows. Revise the grading plan and all pertinent plans and construction note accordingly.
7. Revise all drop inlets to Type "CM" or Neenah Pre-cast inlets. Contact Raul Cruz at 229-3224 or email at rsantiago@lasvegasnevada.gov for an AutoCAD detail to be included within the improvement plans if Type "CM" drop inlets are used. Note that the lengths of "CM" inlets are in the multiple of 2.5'. Revise all pertinent construction notes and callouts accordingly.
8. Revise all callout of proposed drop inlets to include only the length of the inlets without adding the number of grates. There were projects constructed in which the contractors followed only the number of grates without double checking the total length whether matching the length callout. Shorter inlets were constructed as a result. Review and revise accordingly.
9. Show finished floor elevations in the adjacent houses to the north, east and south on the grading plan.
10. Label existing storm drain systems in *Azure Drive* and *Torrey Pines Drive* with *City of Las Vegas* recorded drawing numbers on the grading plan.
11. This drainage study assumes that the project will be constructed in one phase. If improvement plans are submitted to break the project into separate phases, a drainage study update will be required for each phase addressing the interim condition.
12. Add a note in all pertinent sheets for the construction of all storm drain drop inlets per a newly adopted USDCCA Drawing No. 421 (*Stormwater Quality Management Stamp and Sign Detail*).

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

END OF REMARKS
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T/R/S: T19S/R60E/26
AREA G-26

 *** FAX TX REPORT ***

TRANSMISSION OK

JOB NO. 4324
 DESTINATION ADDRESS 7022543062
 PSWD/SUBADDRESS
 DESTINATION ID
 ST. TIME 03/22 16:08
 USAGE T 00' 58
 PGS. 2
 RESULT OK

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM		DATE: March 22, 2016
TO: Land Development Services Department of Building & Safety		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
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TECHNICAL DRAINAGE STUDY

FOR

Azure & Torrey Pines North Residential Development

City of Las Vegas, Nevada

Prepared for:

DR Horton

1081 Whitney Ranch Drive, #141

Henderson, NV 89014

Office: (702)635-3600 - Fax: (702)538.0735

Prepared by:

Triton Engineering

6757 W. Charleston Blvd., Suite B

Las Vegas, NV 89146

Office: (702) 254-1480 - Fax: (702) 254-3062

APN 125-26-203-002; -003; -004

February 2016

HYDROLOGIC CRITERIA AND DRAINAGE MANUAL
DRAINAGE STUDY INFORMATION FORM

Name of Development: Technical Drainage Study for Azure & Torrey Pines North Date: February 2016

Location of Development: a) Descriptive (Cross Streets) North/South: Torrey Pines

East/West: Bullring

b) Section: 26 Township: 19S Range: 60E

c) APN : 125-26-203-002; -003; -004

Name of Owner: Azure & Torrey Pines 24, LLC, Owners, - DR Horton, Developers

Telephone No.: (702)672-1939 Fax No.: (702) 538-0735 E-Mail Address: MEJones3@DRHorton.com

Address: 1081 Whitney Ranch Drive #141, Henderson, NV 89014

Contact Person-Name: Kelly J. Wittwer, P.E. Telephone No.: (702) 254-1480

* E-Mail Address: KWittwer@tritoneng.com Fax No.: (702) 254-3062

Firm: Triton Engineering, LLC

Address: 6757 West Charleston Boulevard, Suite B, Las Vegas, NV 89146

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: 6.08 ac Being Developed/Disturbed: 6.08 ac.

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

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

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

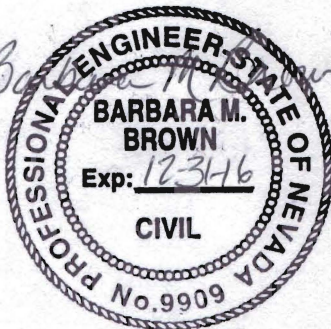
5. Approximate upstream land area which drains to the subject site: 60 acres + / -

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

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: _____

Discharge to the east to Torrey Pines Drive

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

*New 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



CITY OF LAS VEGAS

MINIMUM DRAINAGE STUDY CRITERIA STANDARD FORM 2 CHECKLIST SUPPLEMENT

(Revised 5/18/11)

The following checklist is intended as a supplemental guide for the engineer preparing a Technical Drainage Study submittal to the City of Las Vegas. This supplement focuses on requirements specific to the City of Las Vegas. The requirements presented are in addition to the Clark County Regional Flood Control District (CCRFCDD) Manual Standard Form 2. The listed items are the minimum information required prior to the City performing a review. The engineer will remain responsible to ensure the Technical Drainage Study is prepared within the guidelines as set forth in the CCRFCDD Hydrologic Criteria and Drainage Design Manual (Design Manual).

An appointment must be made to preview this checklist in conjunction with CCRFCDD Standard Form 2 prior to the City accepting a new drainage study for review. The engineer must contact the Flood Control Section at (702) 229-6541 to schedule a submittal appointment.

If items are not applicable for the subject site, provide N/A.

I. GENERAL REQUIREMENT		
Yes	No	
	X	A notarized letter from the adjacent property owner(s) allowing off-site grading. (A copy of the letter must be received prior to final acceptance of the drainage study.)
X		Copies of all conditions of approval for development related to this property. (e.g. zoning, use permit, tentative map, etc.) Verify compliance with conditions.
X		An electronic copy of the complete submittal is required to be submitted with one original hard copy of the study. Electronic documents should be on a universal computer-readable digital output device replicating your submittal. An Indexed Portable Document Format (PDF) or Print Ready CAD file formats with a minimum of 300dpi are the desired formats. If figures are in color, they must be scanned in color and saved as a separate file.  by initial here, the engineer on record acknowledges that the electronic copy is an identical replicate of the original hard copy submitted to the City of Las Vegas.

II. GRADING PLAN INFORMATION		
Yes	No	
X		(1) 24" X 36" copy of the Grading Plan, (including all Detail Sheets) sealed by the engineer.
X		Proposed future and existing spot grades for top of curbs and street crowns at lot lines, grade breaks, and along curb returns on both sides of the street. Note: Proposed top of curb elevations must be provided for both sides of roadways even if only half street construction is required.
X		Label existing topography at a minimum 5 foot elevation interval including adjacent developments, finished floor elevations of existing buildings and top of existing curbs extending 100 feet around the perimeter of the site. (*Measured from the centerline of the adjacent roadway.)

CITY OF LAS VEGAS MINIMUM DRAINAGE STUDY CRITERIA CHECKLIST

II. GRADING PLAN INFORMATION		
Yes	No	
X		Proposed on-site and off-site storm drains and other flood control facilities with plan and profile sheets for public storm drains showing the class of pipe, (Class III, IV, V, etc.), design hydraulic grade line, (HGL) and 100 year storm flow. A public drainage easement must be provided over on-site storm drains conveying off-site flows. An overflow path must be provided over all storm drains.
X		All existing and "to be constructed" walls with cross-sections showing wall type, (e.g. block wall, retaining wall, flood wall, etc.), with limits clearly defined, adjacent ground elevations. Wall heights must meet current ordinances and in no case exceed 14 feet above the adjacent property.
X		Street slopes for both interior and perimeter streets. Note: The minimum slope for a roadway is 0.4 percent, a minimum 18-inch storm drain must be provided where minimum slopes cannot be met.
X		Back of lot elevations and lot drainage pattern for all lots including common lots.
	X	Sites with a grade difference two feet above or below existing ground are required to have approval from City of Las Vegas Current Planning. Current Planning approval is required prior to final approval of the drainage study.
X		On-site facilities must perpetuate flows through or around the site without significantly impacting adjacent property owners. (The project must pass flows through the site every 600 feet where the project is blocking flow paths.)
	X	This project uses a solid grouted stem wall (or approved alternate) at the back of sidewalk to provide erosion protection for landscaped areas where the depth of flow in the roadway exceeds the back of walk elevation. A corresponding cross-section detail is included.
	X	Commercial and Common Lot Landscape areas are not allowed to drain over the sidewalk. The grading plans show flow lines with grades and sidewalk under drains for all landscape areas draining to the public ROW.

III. Local Entity Criteria - City of Las Vegas – Manual Section 1600		
Yes	No	
	X	Concrete valley gutters are required in parking lots with slopes less than 1 percent. Slopes through cul-de-sac must be at a 1 percent minimum where flow is drained through the cul-de-sac.
X		Ten-foot wide public drainage easements to be privately maintained are allowed for flow less than 20 cfs. The depth of flow entering the easement must be checked using the submerged weir calculation.
	X	The limits of the flood zones and the base flood elevations (BFE) must be shown on all grading plans for all developments within a Special Flood Hazard Zone A, AO, AE, etc.
X		Minimum finish floor elevation is 6 inches above highest adjacent top of curb. Finish floor calculations must include allowances for super elevations on curves and velocity head for tee intersections.
X		Finished floor elevations for buildings adjacent to public drainage easements must be a minimum of 18 inches above the Q100 weir of submerged weir elevation, whichever is greater.

CITY OF LAS VEGAS MINIMUM DRAINAGE STUDY CRITERIA CHECKLIST

III. Local Entity Criteria - City of Las Vegas – Manual Section 1600		
Yes	No	
	X	Lots with "B and C Type Drainage" that drain from one lot to another through a drainage easement shall be required to install an underground nuisance drainage system or a 2-foot valley gutter. 16" x 24" minimum block wall openings are required for both options.
	X	Bubblers are required across 80 foot and greater ROW streets. When flows exceed 10 cfs, bubblers larger than 18 inches will be required up to a maximum of 36". Inlets must be sized to match the pipe size provided.

- Contact the Flood Control Section regarding the drainage study review fee. These fees are payable at the time of submittal.
- The Drainage Study must be conditionally approved prior to submitting improvement plans to the Civil and Planning Development of the Department of Building and Safety for review.

This document is intended as an aid in preparing Technical Drainage Studies for the City of Las Vegas. Each study submitted is reviewed for compliance with local and regional criteria. This form is not intended to be all-inclusive and does not limit the extent of the information, calculations or exhibits which may be necessary to properly evaluate the intended land use.

INTRODUCTION

This Technical Drainage Study was prepared to address drainage and grading design of a 6.09-acre site planned for development of 20 single-family residential lots. The site is in the northwest portion of the Las Vegas Valley, in the City of Las Vegas, Nevada.

This Technical Drainage study was prepared in accordance with criteria specified in the Clark County Regional Flood Control District (CCRFCD) Hydrologic Criteria and Drainage Design Manual (updated 2000), which is herein referred to as the "Drainage Manual". All pertinent reference information and calculations is presented in the Appendix of this report.

LOCATION

The site of the proposed development is located in the South Half (S1/2) of the Northwest Quarter (NW1/4) of Section 26, Township 19 South (T19S), Range 60 East (R60E), M.D.M. in the City of Las Vegas, Nevada. The site is located on the southwest corner of Torrey Pines Drive and Azure Drive. See Figure 1, *Vicinity Map*, and Figure 2, *Location Map*.

SITE DESCRIPTION

The subject site is currently undeveloped and has natural desert terrain, with very light colored exposed soils and an extremely sparse amount of vegetal covering. The site is very flat, sloping gradually to drain to the Torrey Pines Drive alignment at a slope of approximately 0.4%. The site is impacted by storm water runoff from offsite only on the western boundary and in the bordering streets of Azure Drive on the north and Torrey Pines Drive on the east.

The site is bound by Azure Drive (60-foot right-of-way) on the north, which is currently partially improved with rural standards on the south side (site side) and full street improvements on the north side. Full street improvements are planned to Azure Drive with the current project on the south half of the street. Improvements will include full curb and gutter, pavement and sidewalk to the 30-foot half street width and the common element 5 feet back of sidewalk.

The site is bound by Torrey Pines Drive (80-foot right-of-way) on the east which is currently improved with rural standards on the west side (site side), and full street improvements on the east side. The west half of the street along the subject site will be fully improved with the subject project. Improvements to Torrey Pines Drive will include full pavement, curb and gutter and sidewalk to the 40-foot half street at back of sidewalk, and the common element 5 feet back of sidewalk.

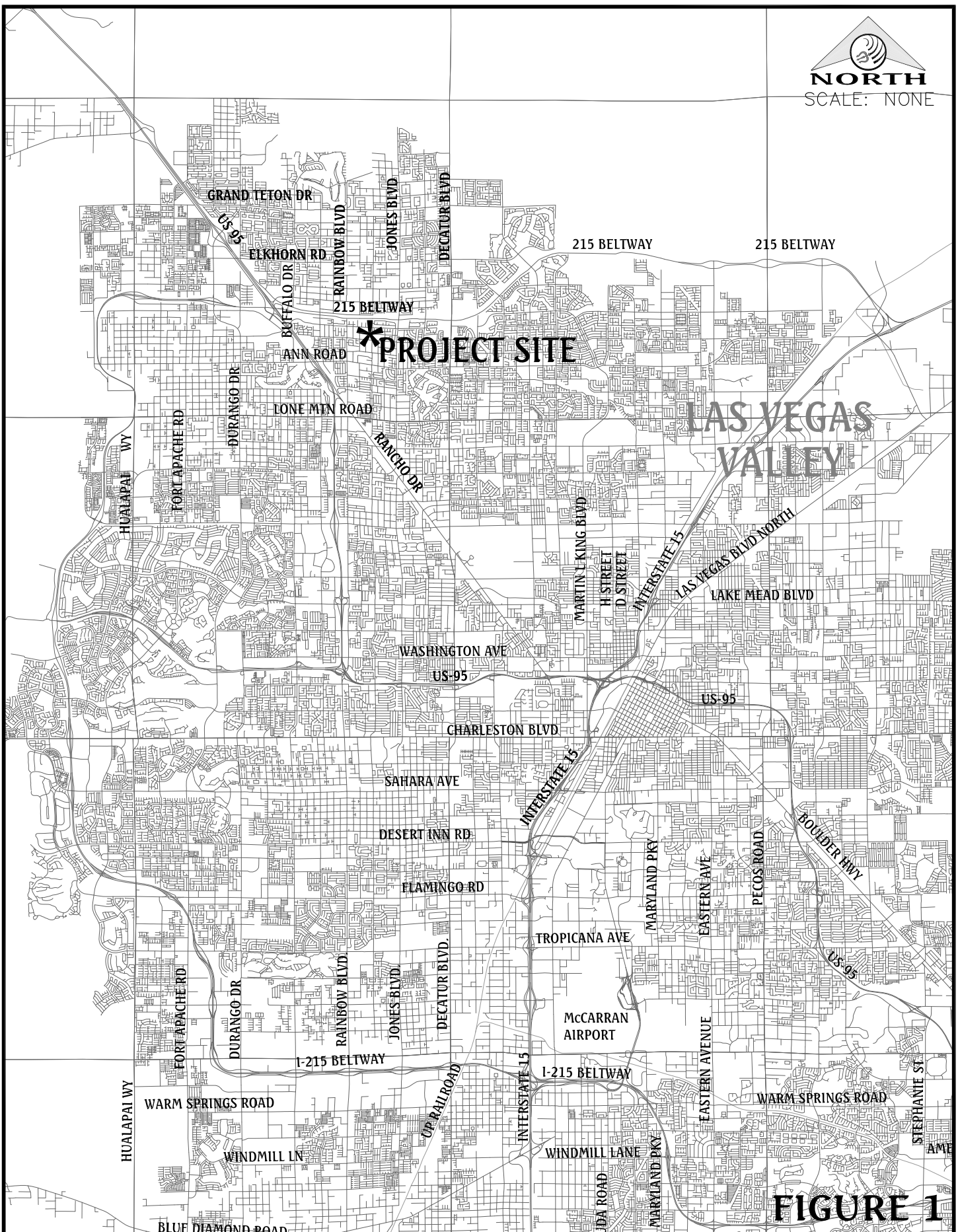


FIGURE 1



FIGURE 2

It is noted that Azure Drive has extremely flat slopes, varying from 0.5% to 0.3% in some areas near the subject site. This is an existing condition which is not worsened by the development of the subject site. Nuisance drains exist and will be expanded upon with the development of the subject site.

The site is bound by existing large-lot single-family residences along the southern boundary.

The site is bound by undeveloped natural desert areas to the west.

MASTER PLANNING INFORMATION

The subject site is not located adjacent to, nor crossed by any existing or planned CCRFCD Regional Drainage Facilities, as shown on Figure F-19 of the CCRFCD MPU updated 2013. Figures F19 and H19 of the MPU have been copied, annotated and included in the appendix of this report.

FLOODPLAIN INFORMATION

The subject site is not located within a Federal Emergency Management Agency (FEMA) Special Flood Hazard Zone. According to the Flood Insurance Rate Map (FIRM) Map 32003C1745F, dated November 16, 2011, the subject site is located within "Zone X", which is described as "Areas determined to be outside the 0.2% annual chance floodplain". The FIRM panel has been annotated and included in the appendix of this report.

PREVIOUS STUDIES

Technical Drainage Study for Copperfield Parcel Map, (by L. R. Nelson Consulting Engineers, August 1997) DS 2185

The Copperfield Parcel Map study applies to an 89-acre parcel of land being planned for development of single-family residential homes, located on the north side of Azure Drive, between Torrey Pines Drive and Jones Boulevard. The Copperfield site is located on the north side of Azure Drive at subject site. The study was prepared before the construction of the 215 Beltway project, which is now fully developed, along with its major regional drainage facilities, and is located less than 1000 feet north of the Copperfield site. The first submittal was reviewed for general information, and was referenced for street and storm drain improvements in Azure Drive at the site. The storm drain is intended for nuisance flow only.

Technical Drainage Study for Joseph M. Neal Elementary School, (by G C Wallace, Inc., May 1998) DS 2269

The *Technical Drainage Study for Joseph M. Neal Elementary School* applies to the existing school located on the west side of Rebecca Road, approximately 660 feet west of, and upstream of, the subject site. The study was reviewed and found to be reasonable and acceptable. The study utilized the City of Las Vegas' *Northwest Neighborhood Study (CLVNWNS, see below)*, which was being prepared at the time by another firm, for reference of offsite flows. No specific data was referenced from the school study.

City of Las Vegas Northwest Neighborhood Study (Phase I), (by PBS & J, Inc., September 1999)

The *City of Las Vegas' Northwest Neighborhood Study* (referred to as *CLVNWNS* in this report) was prepared for drainage planning in the northwest areas of the City of Las Vegas. The study gives existing conditions hydrology as well as future conditions hydrology along with planned drainage facilities. In the study, the existing conditions hydrology was created using developed conditions curve numbers, with only existing drainage facilities present. The developed conditions hydrology incorporates all upstream drainage facilities along with the developed conditions land usage. The developed conditions hydrology was found to be the most accurate for the subject site, since the implementation of the facilities along the 215 Beltway greatly reduced offsite flows tributary to the site, and additional facilities exist upstream of the site. The specific data referenced from the *CLVNWNS* are peak flow rates of 34 cfs and 167 cfs flowing south on Torrey Pines Drive from the Azure Drive intersection in the 10- and 100-year storm events, respectively. It is noted that the existing storm drain (36-inch pipe) in Torrey Pines Drive at the subject site was sized to carry the 10-year flow of 34 cfs. However, under existing conditions, there is no outflow for the pipe, so all flow is expected to be flowing on the surface in the street. As a worst case condition, the entire flow is assumed to be contained in the 80-foot right-of-way of Torrey Pines Drive, giving the

highest possible flow depth for site design. Reference material from the *CLVNWNS* is included in the appendix of this report.

Technical Drainage Study for Torrey Pines II, (by Lochsa Engineering, April 2003) DS 3299

The Torrey Pines II study applies to the existing 30+-acre residential development, located on the north side of Azure Drive, extending from the Rebecca Road alignment (not a road at the site), extending westerly past Rainbow Boulevard to Rio Vista Street. The 215 Beltway acts as the northern boundary for much of the Torrey Pines II development. The study was reviewed and found to be reasonable and acceptable. The study utilized the City of Las Vegas' *Northwest Neighborhood Study (CLVNWNS)* for reference of offsite flows. The project provides design for an 18-inch diameter storm drain in Azure Drive, which is north of the site but does not border the site. The 18-inch diameter storm drain is intended for nuisance flow only.

Technical Drainage Study for Jones/Azure II, (by Tetra Tech, Inc., September 2003)

The Jones/Azure II study applies to the existing 30+- acre residential development located opposite corner to the subject site, on the northeast corner of Torrey Pines Drive at Bullring Lane. A 36-inch diameter storm drain pipe in Torrey Pines Drive was constructed with the Jones/Azure II project. The pipe was designed to convey 34 cfs from the north, based on the hydrology of the *CLVNWNS*. It is noted that the pipe is currently non-functional since it has no discharge point. A nuisance flow storm drain was also built with the Jones/Azure II site, extending down Bullring Lane from the Torrey Pines intersection.

EXISTING DRAINAGE DESCRIPTION

EXISTING ONSITE DRAINAGE DESCRIPTION

Referring to *Figure 3, Existing Conditions Drainage Basins*, under existing conditions, the subject site (basin XN1) drains to the east into the Torrey Pines Drive alignment, which is currently partially improved with rural standard street improvements at the subject site on the west side (site side) of the street.

EXISTING OFFSITE DRAINAGE DESCRIPTION

Under existing conditions, the subject site is impacted by runoff flow in the bordering street sections of Azure Drive on the north, and Torrey Pines Drive on the east.

The subject site is impacted on the western boundary by offsite basin XF2, which flows onto the site for combination with onsite area XN1 at the discharge point to Torrey Pines Drive at point CP1.

Offsite area XF1 discharges runoff flow into the Azure Drive street section upstream of the subject site, however, the local flow is not additive to the referenced flow from the *CLVNWNS* study at point CPAZ. Peak flow rates at CPAZ (Azure and Torrey Pines intersection) are referenced from the *CLVNWNS* as 34 cfs and 291 cfs in the 10- and 100-year storms, respectively.

Peak flow rates in Torrey Pines Drive were referenced directly from the *CLVNWNS*. Since drainage improvements in the upstream watershed have been mostly completed, the Future Conditions hydrology was referenced at point CPAZ, which is the corner of Azure Drive and Torrey Pines Drive, which is located north of the subject site. The peak flow rates referenced for point CPAZ are 34 cfs and 167 cfs in the 10- and 100-year storms, respectively. The flow is based on more regional approach hydrology, hence as flow continues southerly on Torrey Pines Drive from Azure Drive, inflow from the west is not additive to the peak flow rates in the street. As a result, the peak flow rates at the Torrey Pines/Azure intersection are assumed to be the same as the peak flow rates at the subject site. It is also noted that a 36-inch diameter storm drain pipe exists in Torrey Pines Drive between Azure Drive and Bullring Lane. However, since there is currently no outlet for the pipe, it is considered non-functional and all flow is assumed to be surface flow and contained in the street section at the subject site, 34 cfs and 167 cfs in the 10- and 100-year storm events, respectively.

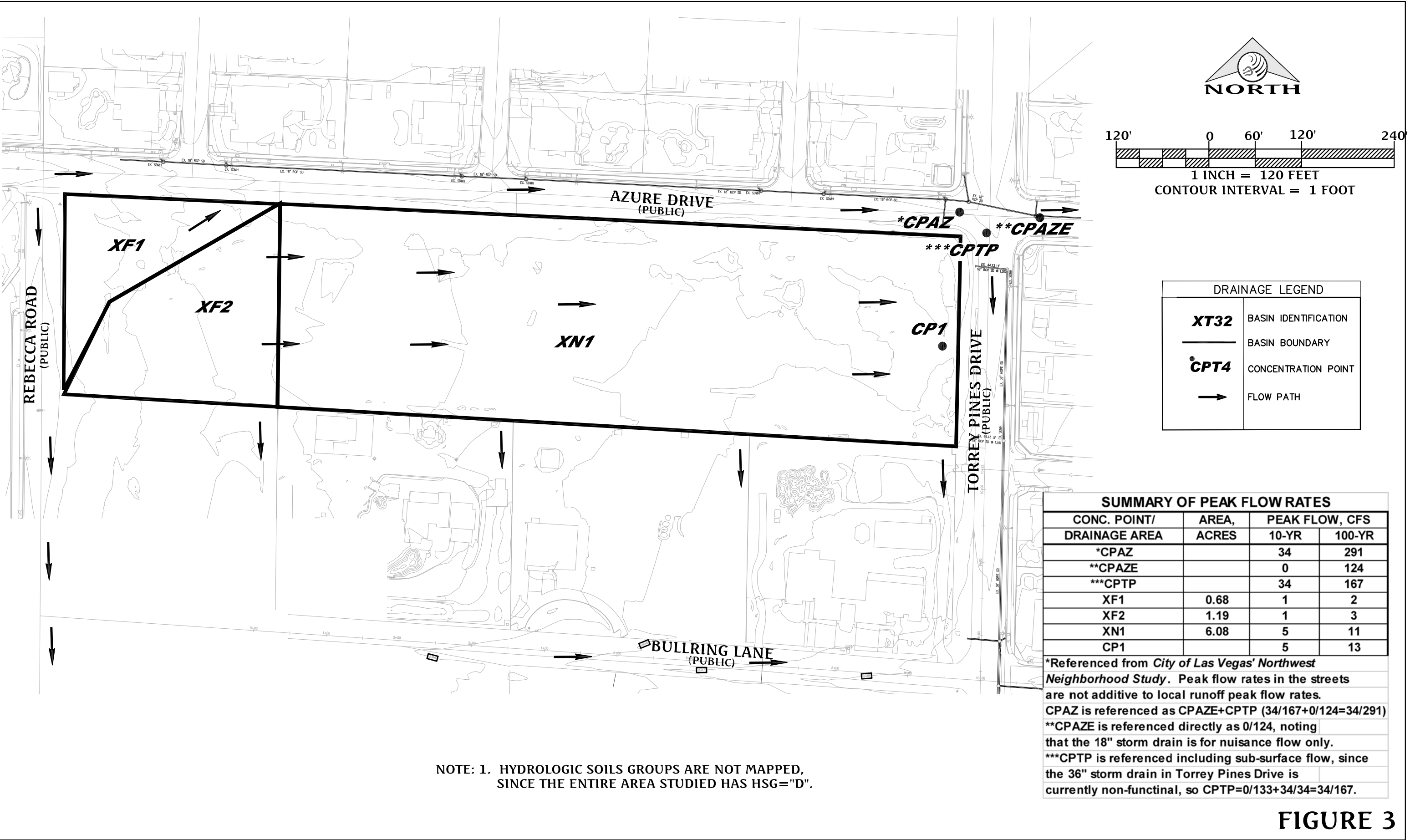


FIGURE 3

DEVELOPED DRAINAGE DESCRIPTION

For the subject site, "Developed Conditions" refers to worst case conditions, which consists of offsite basins in developed condition, with onsite basins being developed as proposed.

DEVELOPED ONSITE DRAINAGE DESCRIPTION

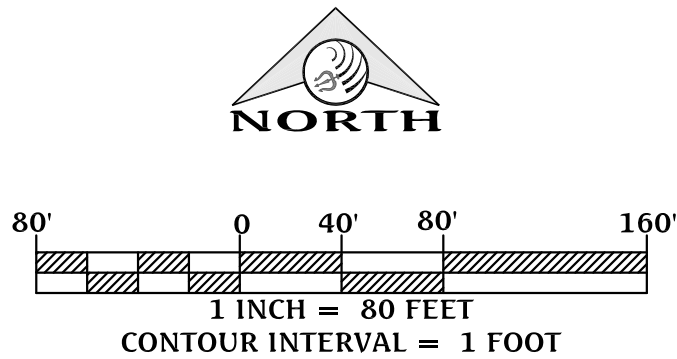
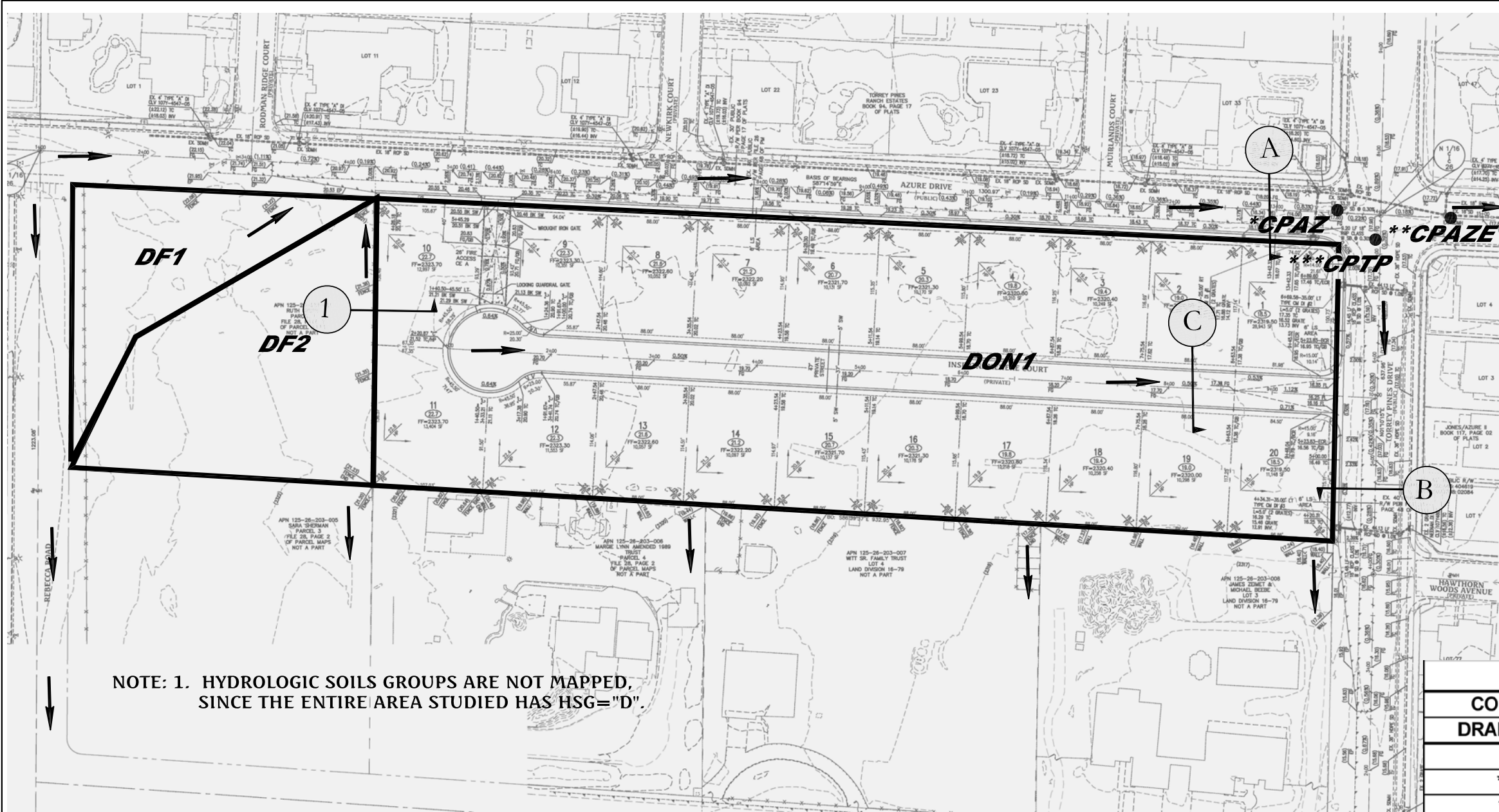
Referring to *Figure 4, Developed Conditions Drainage Basins*, the subject site becomes developed as proposed with twenty residential lots. Runoff from onsite area DON1 flows easterly into Torrey Pines Drive. The proposed onsite street is a cul-de-sac designed with the flattest onsite slope recommended, of 0.5%.

DEVELOPED OFFSITE DRAINAGE DESCRIPTION

Referring to *Figure 4, Developed Conditions Drainage Basins*, peak flow rates in Azure Drive at the Torrey Pines Drive intersection were referenced directly from the *CLVNWNS*. Since drainage improvements in the upstream watershed have been mostly completed, the Future Conditions hydrology was referenced at point CPAZ, which is the corner of Azure Drive and Torrey Pines Drive, which is located north of the subject site. The peak flow rates referenced for point CPAZ are 34 cfs and 167 cfs in the 10- and 100-year storms, respectively. The flow is based on more regional approach hydrology, hence as flow continues southerly on Torrey Pines Drive from Azure Drive, inflow from the west is not additive to the peak flow rates in the street. As a result, the peak flow rates at the Torrey Pines/Azure intersection are assumed to be the same as the peak flow rates at the subject site. It is also noted that a 36-inch diameter storm drain pipe exists in Torrey Pines Drive between Azure Drive and Bullring Lane. However, since there is currently no outlet for the pipe, it is considered non-functional and all flow is assumed to be surface flow and contained in the street section at the subject site, 34 cfs and 167 cfs in the 10- and 100-year storm events, respectively.

Offsite basins DF1 and DF2 become developed residentially, in a manner similar to the proposed site, with the same runoff potential. Basin DF1 discharges runoff flow into Azure Drive to the north. Basin DF2 discharges a small amount of runoff flow, which will flow along the western boundary of the subject site and into the Azure Drive alignment. Peak runoff flow rates entering Azure Drive from basins DF1 and DF2 are not additive to the referenced peak flow rates at point CPAZ.

It is noted that Azure Drive and Torrey Pines Drive have extremely flat slopes, varying from 0.5% to 0.3% near the subject site. This is an existing condition which is not worsened by the development of the subject site. Nuisance drains exist and will be expanded upon with the development of the subject site to help ponding potential in the streets.



DRAINAGE LEGEND	
XT32	BASIN IDENTIFICATION
—	BASIN BOUNDARY
CPT4	CONCENTRATION POINT
→	FLOW PATH

SUMMARY OF PEAK FLOW RATES			
CONC. POINT/ DRAINAGE AREA	AREA, ACRES	PEAK FLOW, CFS	
		10-YR	100-YR
*CPAZ		34	291
**CPAZE		0	124
***CPTP		34	167
DF1	0.68	1	2
DF2	1.19	1	3
DON1	6.08	6	14

*Referenced from *City of Las Vegas' Northwest Neighborhood Study*. Peak flow rates in the streets are not additive to local runoff peak flow rates. CPAZ is referenced as CPAZE+CPTP (34/167+0/124=34/291) **CPAZE is referenced directly as 0/124, noting that the 18" storm drain is for nuisance flow only. ***CPTP is referenced including sub-surface flow, since the 36" storm drain in Torrey Pines Drive is currently non-functional, so CPTP=0/133+34/34=34/167.

NORMAL DEPTH CALCULATIONS DEVELOPED CONDITIONS					
HYDRAULIC SECTION LABEL	DESCRIPTION	SLOPE, PERCENT	Q ₁₀₀ CFS	D ₁₀₀ NORMAL FEET	V ₁₀₀ NORMAL FEET/SEC
1	West Boundary wall	0.30	3	0.22	0.6

NORMAL DEPTH FLOW CALCULATIONS					
HYDRAULIC SECTION	SLOPE, %	Q ₁₀ / Q ₁₀₀ CFS	D ₁₀ / D ₁₀₀ , FEET	V ₁₀ / V ₁₀₀ , FPS	V ₁₀ * D ₁₀ / V ₁₀₀ * D ₁₀₀
A - Azure Drive-60-ft ROW	0.30	34 / 291	0.68 / 0.14	2.1 / 4.9	1.4 / 6.9
*B - Torrey Pines Drive - 80-ft ROW	0.30	34 / 167	0.69 / 1.08	2.0 / 3.5	1.4 / 3.8
C - Onsite street 37-foot back of curb	0.50	6 / 14	0.39 / 0.49	1.7 / 2.1	0.7 / 1.0
*In the future, 34 cfs will be flowing sub-surface in the storm drain pipe.					2/22/2016

FIGURE 4

HYDROLOGIC ANALYSIS

COMPUTER MODELING

The HEC-1 Flood Hydrograph Package was used to compute the storm water runoff peak flow rates for the hydrologic analysis. Standard Form 4 from the *Drainage Manual* was implemented as a spreadsheet used for tabulation of the variables for input to the HEC-1 modeling program. See appendix for hydrology calculations.

Results of the computer modeling are summarized on Figures 3 and 4 of this report.

RAINFALL

Rainfall depths were calculated based on the CCRFCD Drainage Manual Criteria, which allows application of McCarran Airport rainfall depths of 1.58" and 2.77" in the 10- and 100-year, 6-hour storm events, respectively. In the hydrologic HEC-1 model there were no losses allowed for Depth Area and no losses for hydrograph routing.

RUNOFF

The Soil Conservation Services (SCS) Curve Number methodology was used in this computation within the HEC-1 computer model. The Hydrologic Soils Group for the watershed studied was determined from the USDA Soils Conservation Service to be entirely within Hydrologic Soils Group D, which has the highest potential for precipitation runoff. Mapping of the watershed's Hydrologic Soils Group was not necessary since the entire area is within the same Group. Curve numbers were selected from the Drainage Manual for the land usage and hydrologic condition of each drainage basin. It is noted that the curve number for the proposed residential land usage was chosen conservatively for 8000 square-foot lots at 90, when the lots are actually larger than 8000 square feet.

Times of concentration were calculated on the Drainage Manual Form 4, and were input to the HEC-1 computer model as lag time.

HYDRAULIC ANALYSIS

NORMAL DEPTH STREET CALCULATIONS

Normal street flow depths were calculated using the FlowMaster computer program. It is noted that no flow is expected to be flowing underground in the existing storm drain system, since it is currently plugged. However, in the future, when an outlet is constructed for the system(s), the 10-year dry lane criterion is expected to be met, according to the research material. Results of the normal depth calculations show that street and finished floor criteria are met. It is noted that minimum street slopes are not met, since the geometry of the existing conditions could not be matched. Development of the subject site does not worsen the situation in the streets either upstream or downstream of the subject site. Calculations are included in the appendix and summarized on Figure 4, *Developed Conditions Drainage Basins*.

STORM DRAIN COLLECTION

Drop inlets are proposed at all locations where stubs exist from the previous projects storm drain projects. Drop inlets are planned for nuisance flow collection only, and are specified as City of Las Vegas accepted standard CM drop inlets. One inlet is planned on Azure Drive upstream of the Torrey Pines intersection, while two inlets are planned for the Torrey Pines Drive alignment, both upstream and downstream of the entry to the subject site. Hence there are a total of three (3) drop inlets planned with the subject development, all of which are intended for nuisance flow collection. Reference material is included in the appendix of this report.

SUMMARY/CONCLUSION

This study and improvement drawings complies with the drainage laws and regulations set forth by the City of Las Vegas and the Clark County Regional Flood Control District.

Development of this site is not expected to have a negative drainage impact on any upstream or downstream properties.

The site is adequately protected from flood damage caused by a 100-year flood or less, as specified by the CCRFCD Hydrologic Criteria and Drainage Design Manual.

This site is not within a Special Flood Hazard Zone as designated by FEMA.

Nuisance flow is released from the site into the lined curb and gutter adjacent street sections of Azure Drive and Torrey Pines Drive, where it is immediately collected into an underground conveyance system.

REFERENCES

Hydrologic Criteria and Drainage Design Manual, by Clark County Regional Flood Control District, Updated 2000.

Clark County Regional Flood Control District Master Plan Update 2008, (Facility update 2013) prepared by PBS&J and VTN Nevada.

<http://websoilsurvey.sc.egov.usda.gov/>

Technical Drainage Study for Copperfield Parcel Map, (by L. R. Nelson Consulting Engineers, August 1997) DS 2185

Technical Drainage Study for Joseph M. Neal Elementary School, (by G C Wallace, Inc., May 1998) DS 2269

City of Las Vegas Northwest Neighborhood Study (Phase I), (by PBS & J, Inc., September 1999)

Technical Drainage Study for Torrey Pines II, (by Lochsa Engineering, April 2003) DS 3299

Technical Drainage Study for Jones/Azure II, (by Tetra Tech, Inc., September 2003)

APPENDIX

NOTES

This map is for assessment use only and does NOT represent a survey.

No liability is assumed for the accuracy of the data delineated herein. Information on roads and other non-assessed parcels may be obtained from the Road Document Listing in the Assessor's Office.

This map is compiled from official records, including surveys and deeds, but only contains the information required for assessment. See the recorded documents for more detailed legal information.

MAP LEGEND

PARCEL BOUNDARY

SUB BOUNDARY

PM/LD BOUNDARY

ROAD EASEMENT

MATCH / LEADER LINE

HISTORIC LOT LINE

HISTORIC SUB BOUNDARY

HISTORIC PM/LD BOUNDARY

SECTION LINE

CONDOMINIUM UNIT

AIR SPACE PCL

RIGHT OF WAY PCL

SUB-SURFACE PCL

001

ROAD PARCEL NUMBER

001

PARCEL NUMBER

1.00

ACREAGE

202

PARCEL SUB/SEQ NUMBER

PB 24-45

PLAT RECORDING NUMBER

5

BLOCK NUMBER

5

LOT NUMBER

GL5

GOV. LOT NUMBER

BOOK

T19S R60E

SEC.

26

MAP

S 2 NW 4

125-26-2

125

124

138

139

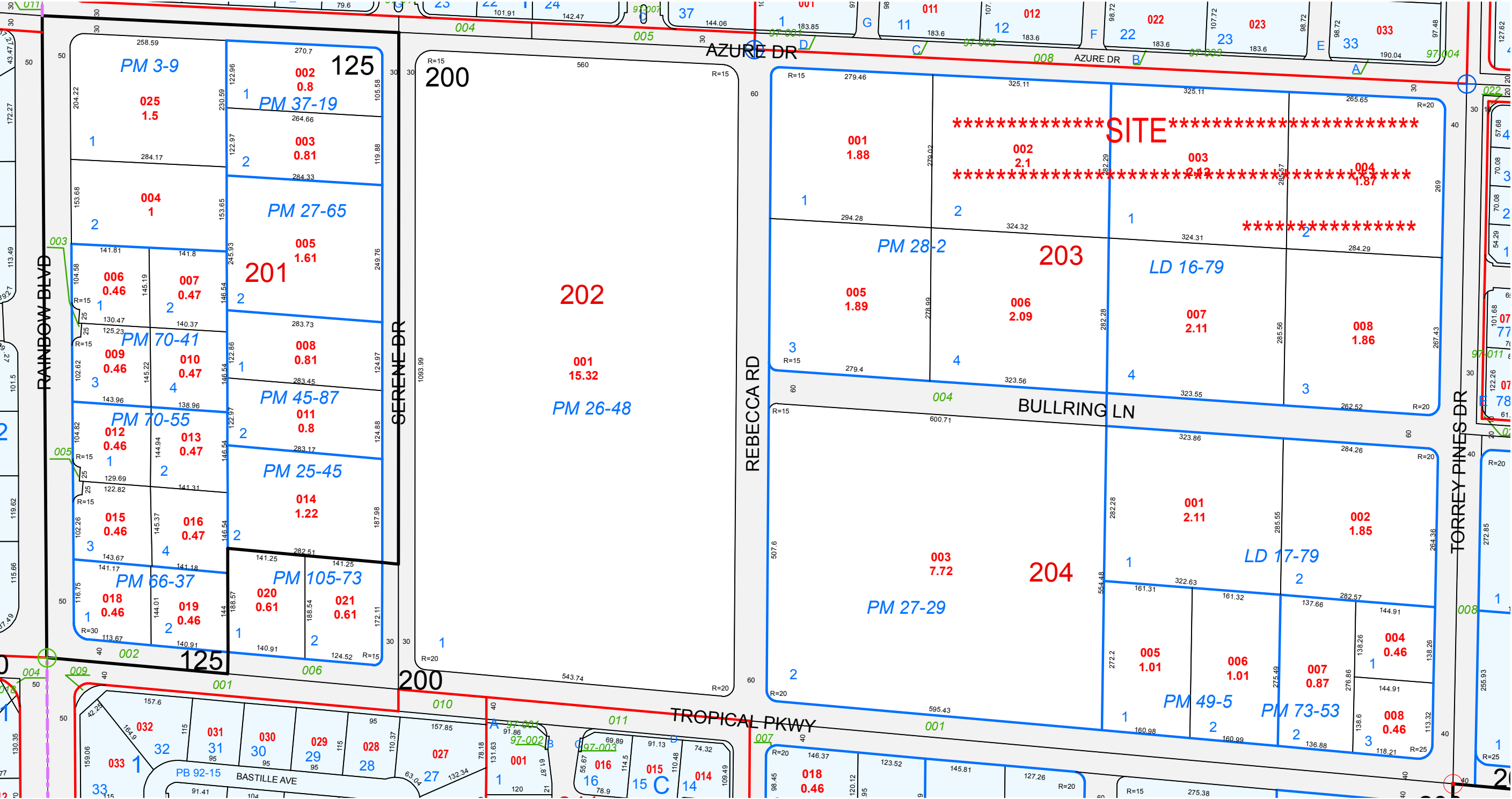
Scale: 1" = 200'

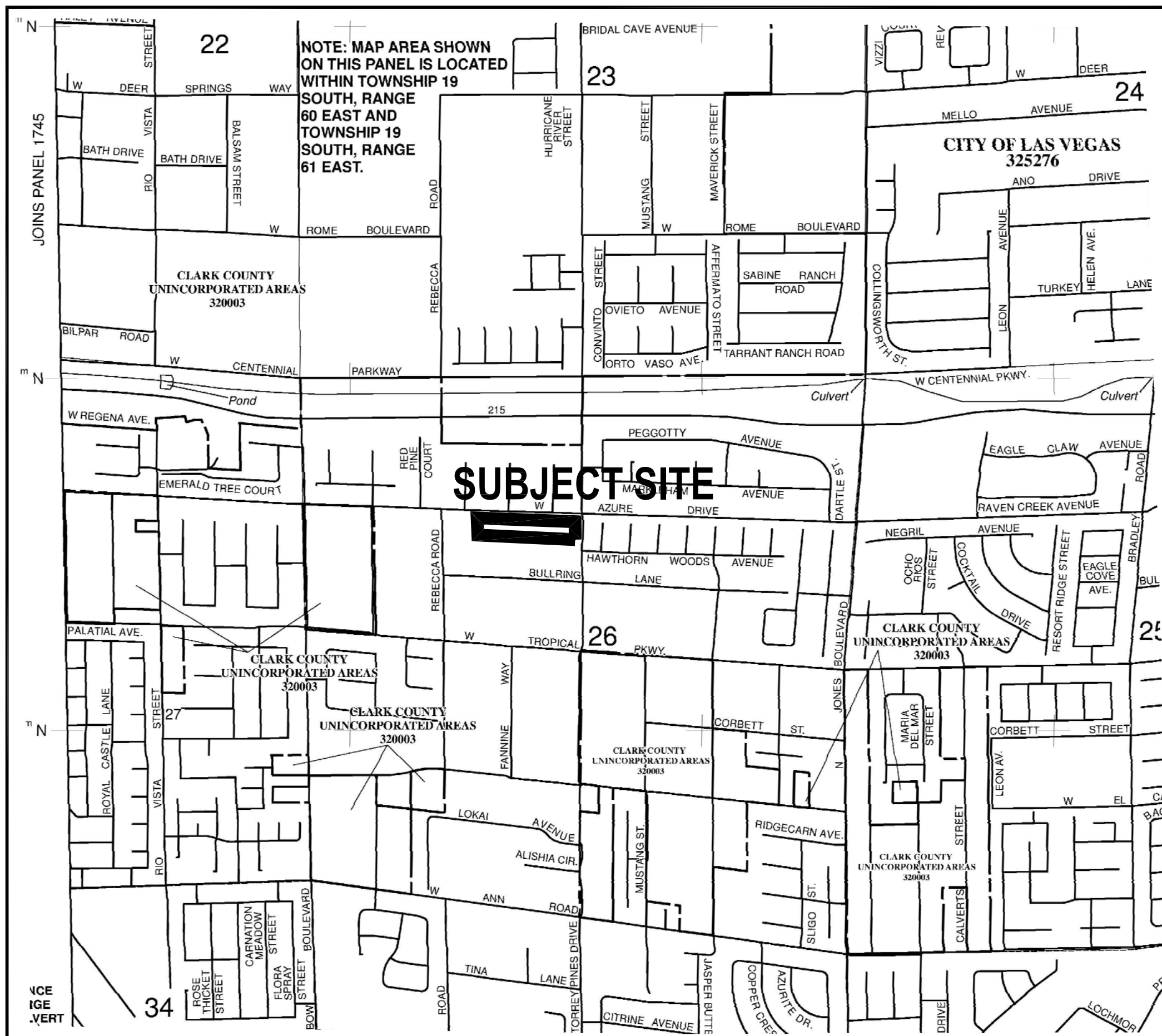
Rev: 12/31/2014

CLARK COUNTY

ASSESSOR

NEVADA





NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
CLARK COUNTY,
NEVADA
AND INCORPORATED AREAS

PANEL 1765 OF 4090
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CLARK COUNTY	320003	1765	F
LAS VEGAS, CITY OF	325276	1765	F
NORTH LAS VEGAS, CITY OF	320007	1765	F

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
32003C1765F
MAP REVISED
NOVEMBER 16, 2011

Federal Emergency Management Agency



MAP SCALE 1" = 1000'
500 0 1000 2000 FEET

Technical Drainage Study for Azure & Torrey Pines North

FEMA FIRM MAP -- PANEL 1765



ZONING CONDITIONS

LEGAL DESCRIPTION

125-26-203-002:
THAT PORTION OF THE SOUTHEAST QUARTER (SE1/4) OF THE NORTHWEST QUARTER (NW1/4) OF SECTION 26, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M.

LOT TWO (2) AS SHOWN BY MAP THEREOF IN FILE 28 OF PARCEL MAPS, PAGE 2 IN THE OFFICE OF THE COUNTY RECORDER, CLARK COUNTY, NEVADA.

125-26-203-003 & 004:
THE NORTH HALF (N1/2) OF THE NORTHEAST QUARTER (NE1/4) OF THE SOUTHEAST QUARTER (SE1/4) OF THE NORTHWEST QUARTER (NW1/4) OF SECTION 26, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M. & M.

EXCEPT THE NORTH 30.02 FEET, THE EAST 40.03 FEET AND THAT CERTAIN SPANDREL AREA IN THE NORTHEAST CORNER, AS GRANTED TO THE CITY OF LAS VEGAS, FOR ROADS, UTILITIES, AND OTHER PUBLIC PURPOSES, AS DEDICATED IN THAT CERTAIN PARCEL MAP RECORDED JUNE 8, 1979 IN BOOK 1068 AS INSTRUMENT NO. 1027238 OF OFFICIAL RECORDS, IN FILE 26 OF PARCEL MAPS, PAGE 48, CLARK COUNTY, NEVADA.

LAND USE TABULATION

LAND USE DESIGNATION

EXISTING CLV ZONING	R-E
PROPOSED CLV ZONING	R-D
MINIMUM LOT SIZE (SF)	10,000 SF

SITE SUMMARY

TOTAL UNITS	20 UNITS
ACREAGE (NET)	6.08 ACRES
DENSITY	3.29 UNITS/ACRE

OPEN SPACE REQUIRED

NONE

OPEN SPACE PROVIDED

COMMON LOT A	8,625 SF
COMMON LOT B	669 SF
TOTAL (3.51% OF NET ACREAGE)	9,294 SF

PARKING ANALYSIS

TOTAL LOTS: 20

REQUIRED SPACES: 44
(2 PER HOUSE PLUS 1 ADDITIONAL FOR EVERY 5 HOUSES)

PROVIDED SPACES: 60
(3 SPACES PER LOT: 2-CAR GARAGE AND 20' DRIVEWAY)

EST. SEWAGE CONTRIBUTION

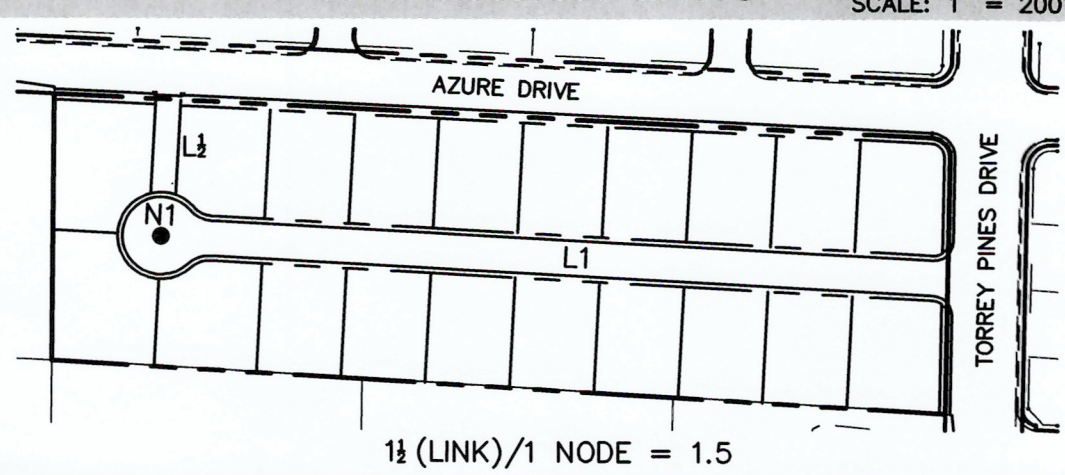
AVERAGE FLOW = 0.005 MILLION GALLONS PER DAY
PEAK FLOW = 0.0175 MILLION GALLONS PER DAY
WET PEAK FLOW = 0.0219 MILLION GALLONS PER DAY

PROPOSED STREET NAMES

INSERTNAMEHERE COURT
ALTERNATENAME COURT

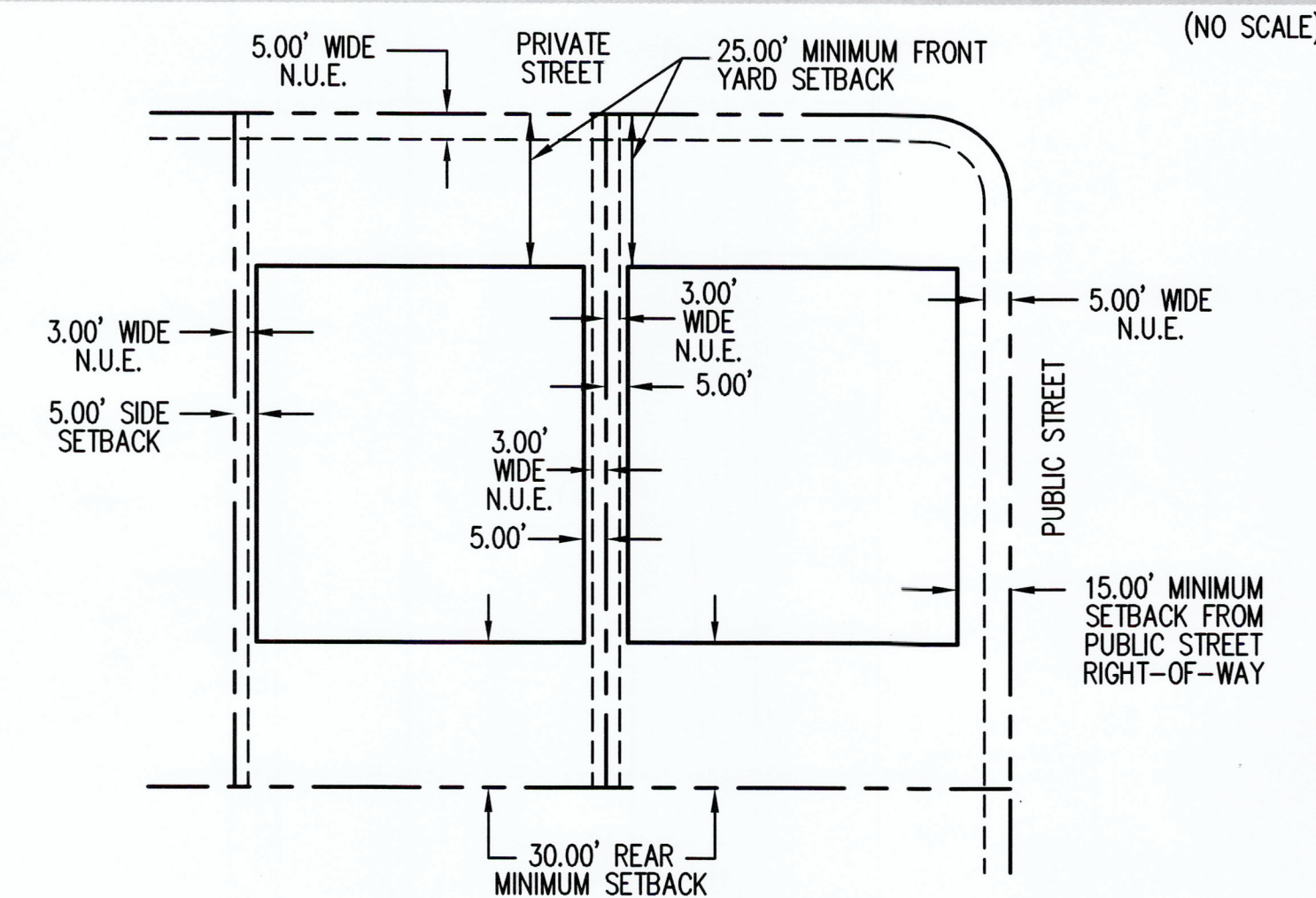
CONNECTIVITY RATIO

SCALE: 1" = 200'



TYPICAL LOT

(NO SCALE)



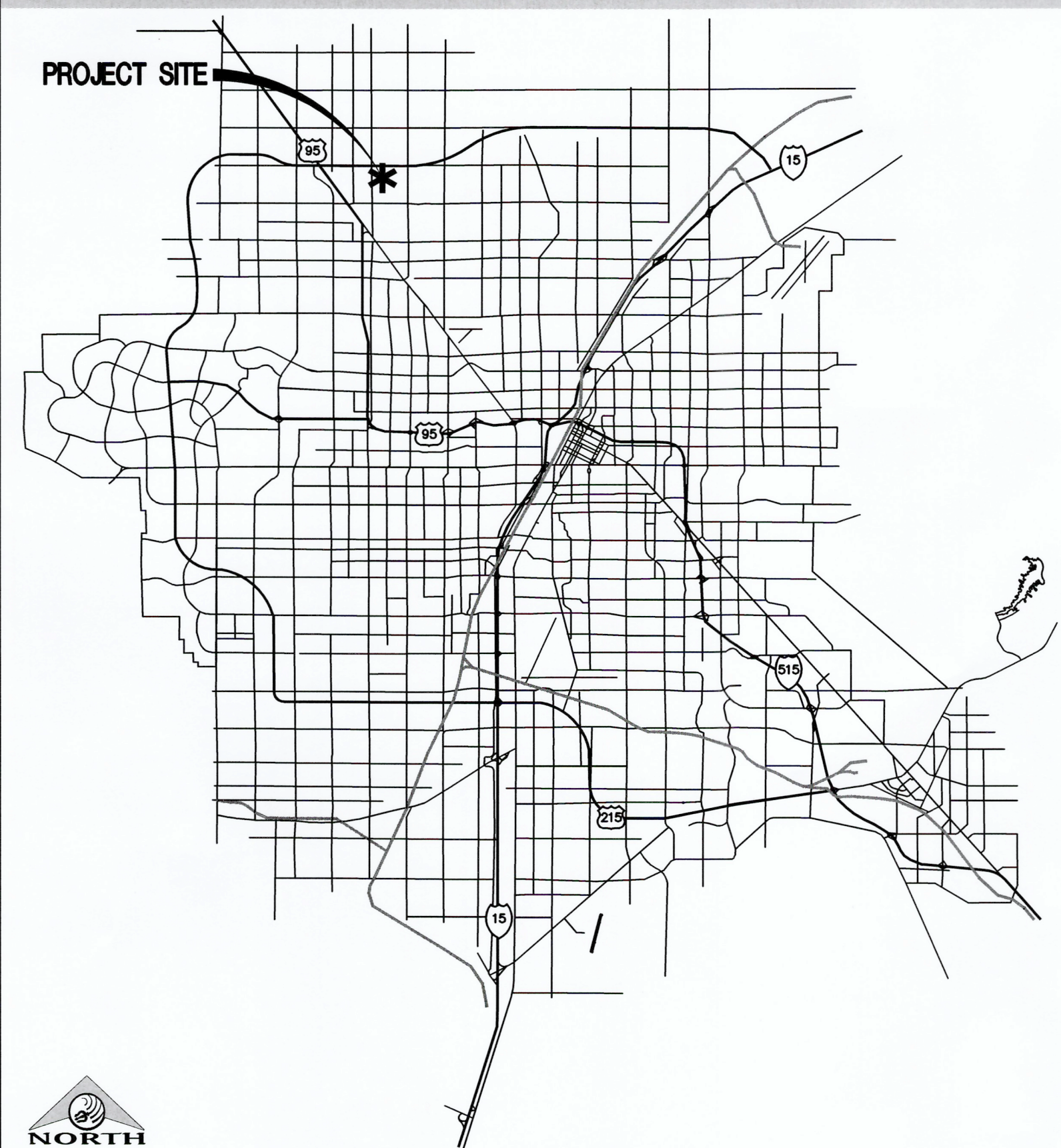
AZURE AND TORREY PINES NORTH

TENTATIVE MAP

A RESIDENTIAL SUBDIVISION

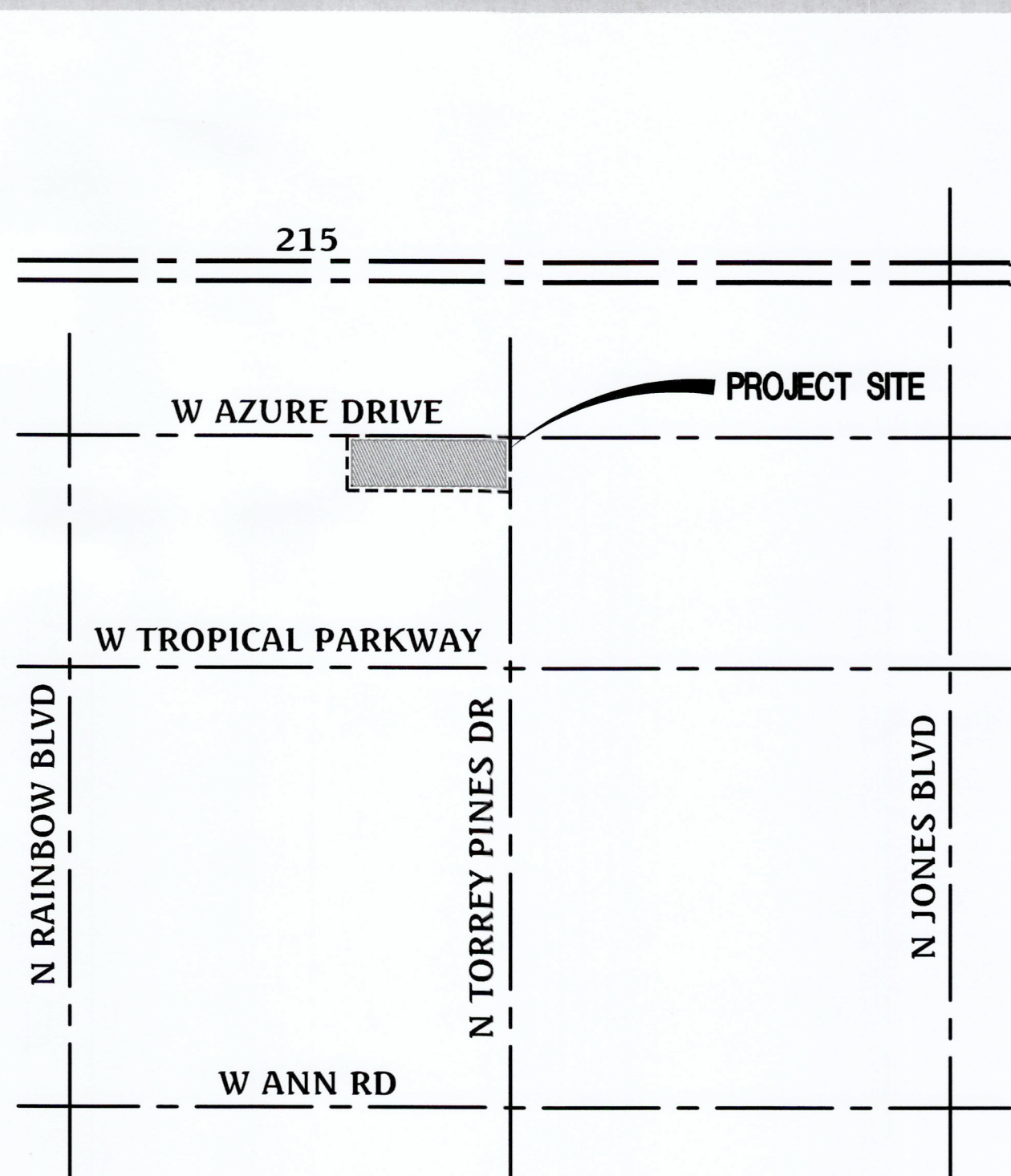
AREA MAP

SCALE: NONE



VICINITY MAP

SCALE: NONE



GENERAL LEGEND

(2485)	EXISTING MAJOR CONTOUR
---	EXISTING MINOR CONTOUR
---	RIGHT-OF-WAY
---	BOUNDARY LINE
---	STREET CENTERLINE
---	EDGE OF PAVEMENT
---	EXISTING CURB, GUTTER, & SIDEWALK
---	PROPOSED CURB, GUTTER, & SIDEWALK
---	PROPOSED WATER
---	EXISTING WATER
---	PROPOSED SEWER WITH FLOW DIRECTION
---	EXISTING SEWER
---	FIRE HYDRANT
---	RETAINING WALL
---	PROPOSED AC PAVING
---	SAWOUT LINE
---	EXISTING FENCE
---	EXISTING GAS
---	EXISTING SEWER MAIN
---	PROPOSED SEWER MAIN
---	PROPOSED SEWER LATERAL
---	EXISTING STORM DRAIN
---	PROPOSED STORM DRAIN
---	EXISTING WATER MAIN
---	PROPOSED WATER MAIN
---	PROPOSED FIRE HYDRANT
---	LOT NUMBER
---	PROPOSED 250W STREETLIGHT
---	EXISTING STREETLIGHT

ASSESSOR'S PARCEL NUMBER

125-26-203-002
125-26-203-003
125-26-203-004

OWNER

AZURE & TORREY PINES 24 L L C
8485 W. SUNSET RD #204
LAS VEGAS, NEVADA 89113
PHONE: (702) 384-7717

DEVELOPER

DR HORTON
1081 WHITNEY RANCH DRIVE, SUITE #141
HENDERSON, NEVADA 89014
PHONE: (702) 635-3600

ENGINEER

TRITON ENGINEERING
6757 WEST CHARLESTON BOULEVARD, SUITE B
LAS VEGAS, NV 89146
OFFICE: (702) 254-1480
FAX: (702) 254-3062

SURVEYOR

TRI-CORE SURVEYING
6755 W. CHARLESTON BLVD STE A
LAS VEGAS, NV 89146
OFFICE: (702) 524-4085

DEVEATIONS NOTE

- CENTERLINE OFFSET 177' WHERE 220' IS REQUIRED.
- TO ALLOW A 874-FOOT RESIDENTIAL BLOCK LENGTH WHERE THE MAXIMUM ALLOWED IS 660 FEET.

INDEX OF DRAWINGS

SHEET NUMBER	DESCRIPTION
1	COVER SHEET
2	TENTATIVE MAP
3	SECTIONS AND DETAILS

NOTES

- ALL EXTERIOR STREETS ARE PUBLIC. ALL INTERIOR STREETS ARE PRIVATE WITH SIDEWALK ON BOTH SIDES OF THE STREET.
- UTILITY SERVICES TO BE PROVIDED BY:
CITY OF LAS VEGAS SEWER
LAS VEGAS VALLEY WATER DISTRICT
CENTURYLINK TELEPHONE
REPUBLIC SERVICES
SOUTHWEST GAS COMPANY
NV ENERGY
- A HOME OWNERS ASSOCIATION WILL BE ESTABLISHED, (AND WILL MAINTAIN LANDSCAPING AND PRIVATE STREETS), THEREFORE, CC&R'S WILL BE REQUIRED.
- THERE ARE NO OBSERVABLE FAULTS OR FISSURES LOCATED ON THIS SITE.
- AS PROPOSED, DEVELOPMENT IS CONSIDERED FEASIBLE FROM A GEOTECHNICAL STANDPOINT.
- GROUNDWATER WAS NOT OBSERVED DURING EXCAVATIONS AND IS NOT SHOWN ON MAPS OF KNOWN GROUNDWATER ELEVATIONS IN THE AREA TO BE WITHIN 20 FEET OF THE KNOWN GROUND ELEVATION.
- THIS SITE IS LOCATED IN ZONE X PER FEMA MAP #32003C1765F. ZONE X IS DETERMINED TO BE OUTSIDE THE 100-YEAR FLOODPLAIN.
- SOILS REPORT PREPARED BY:
NAME
PROJECT No.
DATED:
- WATER AND SEWER EXIST ADJACENT TO THE SITE.

BASIS OF BEARING

SOUTH 87°14'59" EAST, BEING THE BEARING OF THE NORTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 26, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN ON THAT CERTAIN MAP ON FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 160, PAGE 26 OF SURVEYS.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK STATION: OL90 26N6
RIVET & PLATE IN TOP OF CURB @ NW CORNER OF TORREY PINES & AZURE
ELEVATION = 706.598 METERS (NAVD'88 2008 ADJ.)
ELEVATION = 2318.23 U.S. FEET (NAVD'88 2008 ADJ.)

FOR
DR HORTON
1081 WHITNEY RANCH DRIVE, SUITE #141
HENDERSON, NV 89014
PHONE: (702) 635-3600

BY



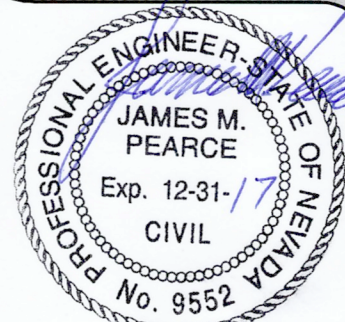
Triton
Engineering

6757 W. Charleston Boulevard
Suite B
Las Vegas, Nevada 89146

Office: (702) 254-1480
Fax: (702) 254-3062
www.tritoneng.com

DR HORTON
AZURE & TORREY PINES NORTH

COVER SHEET



SHEET **1** OF 3
C.L.V. DWG.#

HYDROLOGY



United States
Department of
Agriculture

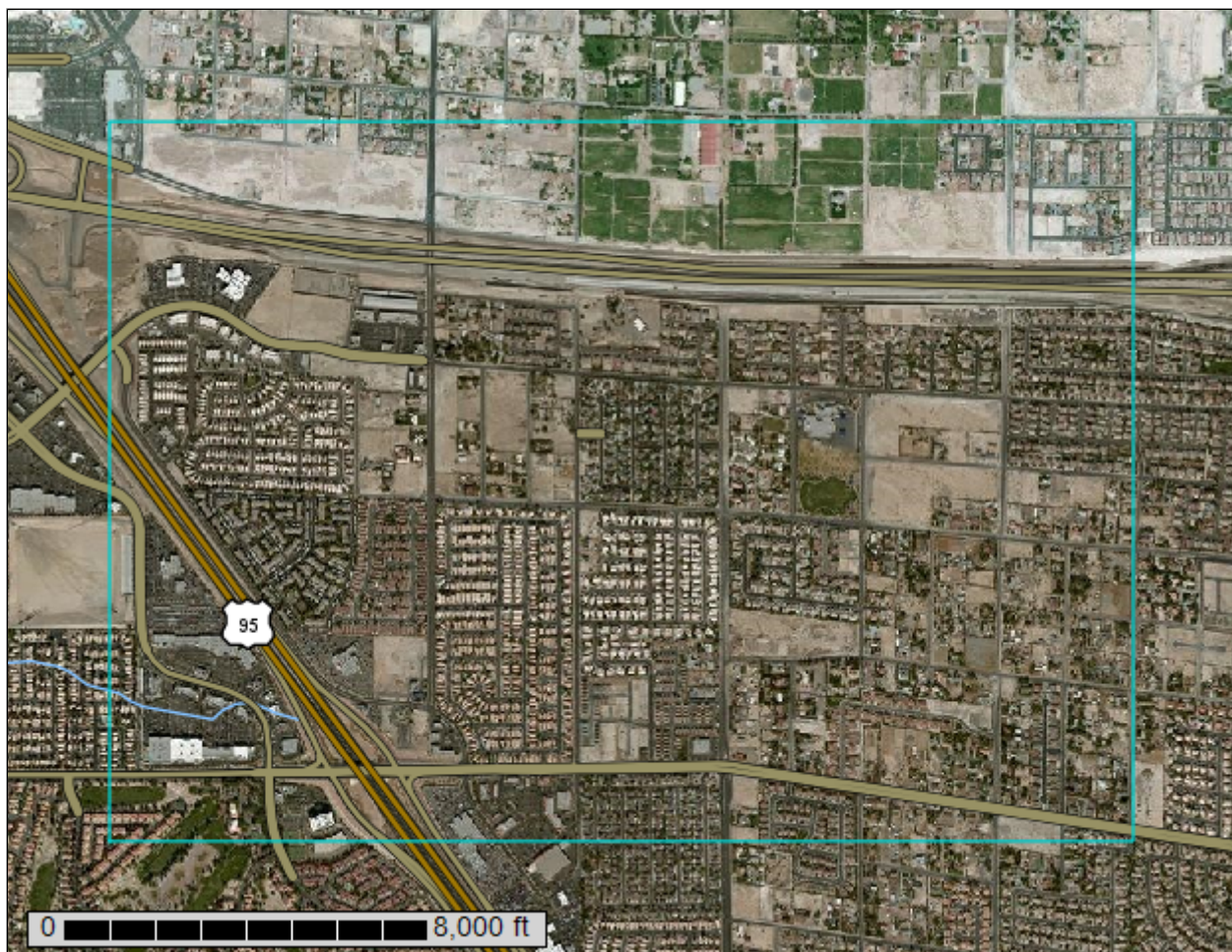
NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Las Vegas Valley Area, Nevada, Part of Clark County

(EXCERPTS ONLY)



February 10, 2016

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group (Azure & Torrey Pines)

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

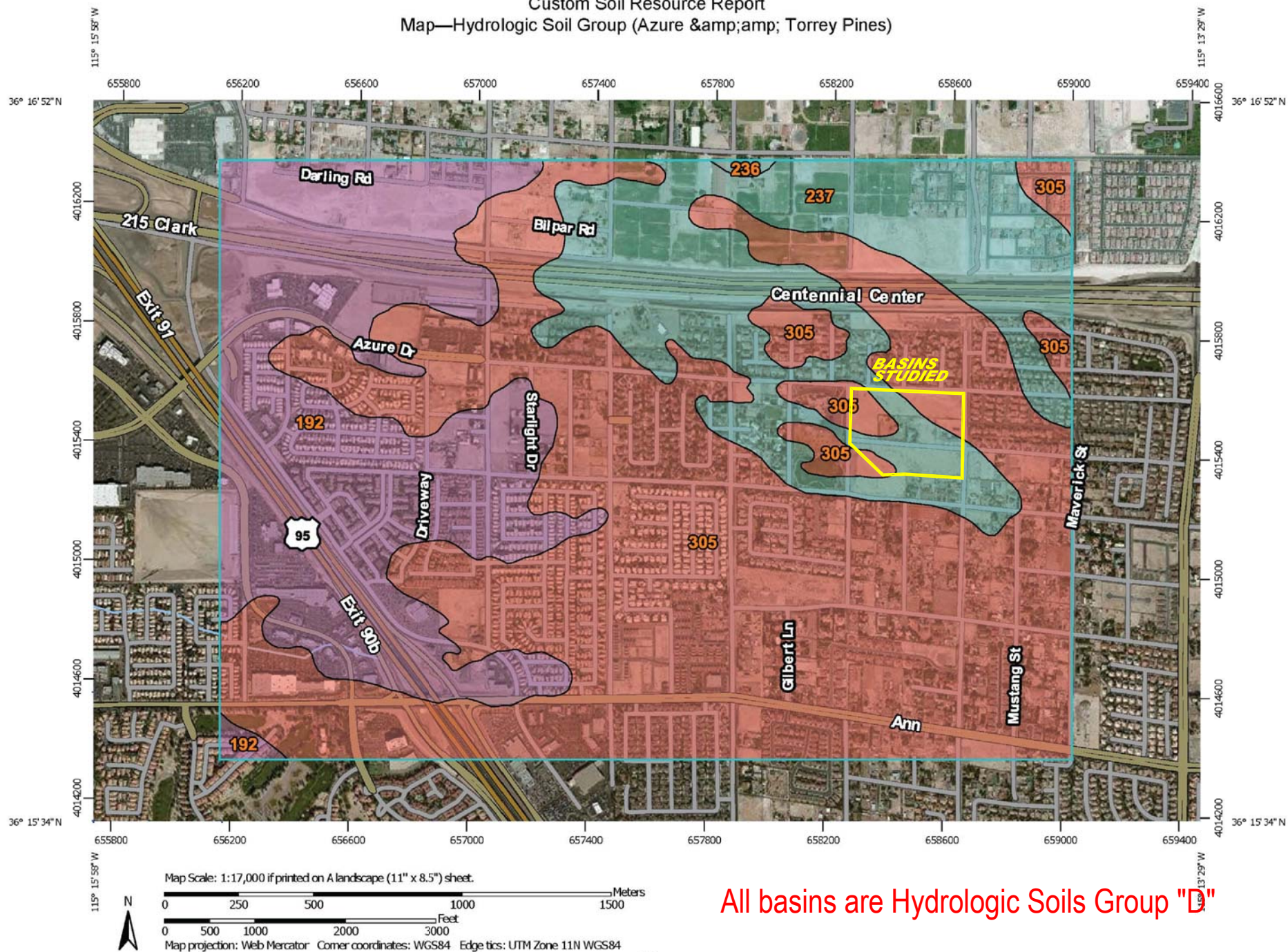
Custom Soil Resource Report

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Custom Soil Resource Report
Map—Hydrologic Soil Group (Azure & Torrey Pines)



All basins are Hydrologic Soils Group "D"

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points

 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Las Vegas Valley Area, Nevada, Part of Clark County
 Survey Area Data: Version 10, Aug 22, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 7, 2011—Feb 25, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydrologic Soil Group (Azure & Torrey Pines)

Hydrologic Soil Group— Summary by Map Unit — Las Vegas Valley Area, Nevada, Part of Clark County (NV788)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
192	Dalian-McCullough complex, 0 to 4 percent slopes	A	360.7	25.2%
236	Glencarb very fine sandy loam, saline	C	2.1	0.1%
237	Glencarb very fine sandy loam, hardpan substratum	C	276.7	19.3%
305	Las Vegas-DeStazo complex, 0 to 2 percent slopes	D	793.3	55.4%
Totals for Area of Interest			1,432.8	100.0%

Rating Options—Hydrologic Soil Group (Azure & Torrey Pines)

Aggregation Method: Dominant Component

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Component" returns the attribute value associated with the component with the highest percent composition in the map unit. If more than one component shares the highest percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher attribute value should be returned in the case of a percent composition tie. The result returned by this aggregation method may or may not represent the dominant condition throughout the map unit.

Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

RUNOFF CURVE NUMBERS (URBAN AREAS¹)

Cover description		Curve numbers for hydrologic soil group—			
Cover type and hydrologic condition	Average percent impervious area ²	A	B	C	D
<i>Fully developed urban areas (vegetation established)</i>					
Open space (lawns, parks, golf courses, cemeteries, etc.): ³					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved: curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved: open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) ⁴ ...		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					

See Table 602A

Developing urban areas

Newly graded areas (pervious areas only, no vegetation) ⁵	77	86	91	94
--	----	----	----	----

1 Average runoff condition, and $I_p = 0.2S$.

2 The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system. Impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using Figure 603.

3 CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

4 Composite CN's for natural desert landscaping should be computed using Figure 603 based on the impervious area percentage (CN #98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

5 Composite CN's to use for the design of temporary measures during grading and construction should be computed using Figure 603 based on the degree of development impervious area percentage) and the CN's for the newly graded pervious areas.

Revision	Date

RUNOFF CURVE NUMBERS (SEMIARID RANGELANDS¹)

Cover description		Curve numbers for hydrologic soil group—			
Cover type	Hydrologic condition ²	A ³	B	C	D
Herbaceous—mixture of grass, weeds, and low-growing brush, with brush the minor element.	Poor		80	87	93
	Fair		71	81	89
	Good		62	74	85
Oak-aspen—mountain brush mixture of oak brush, aspen, mountain mahogany, bitter brush, maple, and other brush.	Poor		66	74	79
	Fair		48	57	63
	Good		30	41	48
Pinyon-juniper—pinyon, juniper, or both; grass understory.	Poor		75	85	89
	Fair		58	73	80
	Good		41	61	71
Sagebrush with grass understory.	Poor		67	80	85
	Fair		51	63	70
	Good		35	47	55
Desert shrub—major plants include saltbush, greasewood, creosotebush, blackbrush, bursage, palo verde, mesquite, and cactus.	Poor	63	77	85	88
	Fair	55	72	81	86
	Good	49	68	79	84

¹Average runoff condition, and $I_a = 0.2S$.

²Poor: <30% ground cover (litter, grass, and brush overstory).

Fair: 30 to 70% ground cover.

Good: >70% ground cover.

³Curve numbers for group A have been developed only for desert shrub.

Revision	Date

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

RUNOFF CURVE NUMBERS - RESIDENTIAL DISTRICTS

Average Lot Size or Usage ¹	Percent Impervious ²	Curve Number for Hydrologic Soil Groups			
		A	B	C	D
Apartments/Condos	72	81	88	91	93
Townhouses/6,000 sq ft lots or less ³	69	80	87	90	92
7,000 sq ft lots	63	76	84	89	91
8,000 sq ft lots	58	73	82	88	90
10,000 sq ft lots	38	61	75	83	87
14,000 sq ft lots	30	57	72	81	86
20,000 sq ft lots	25	54	70	80	85
40,000 sq ft lots	20	51	68	79	84
80,000 sq ft lots	12	46	65	77	82

1 Lot size should represent the size of the average lot and not the gross acreage divided by the number of lots.

2 Actual percent impervious value should be compared to selected land use type.

3 In cases where average residential lots are smaller than 6,000 sq ft, commercial/business/industrial land use should be used.

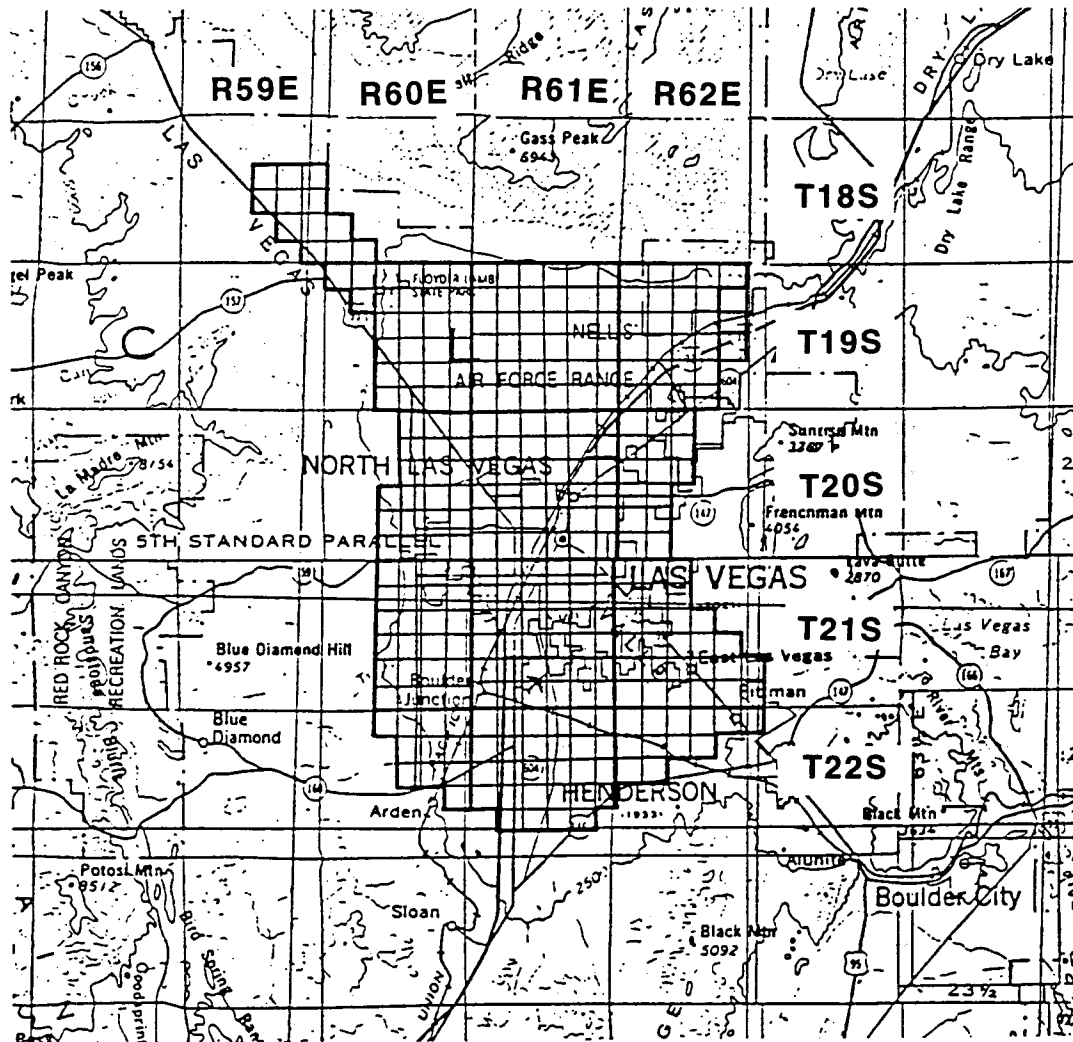
Revision	Date

REFERENCE:

TABLE 602A

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

McCARRAN AIRPORT RAINFALL AREA



TOWNSHIP RANGE SECTIONS

18 South 59 East 13-15,22-26,36

18 South 60 East 30-32

19 South 60 East 1-6,8-16,21-28,33-36

19 South 61 East ALL SECTIONS

19 South 62 East 2-11,14-23,27-34

20 South 60 East 1-3,10-15,21-28,33-36

20 South 61 East ALL SECTIONS

TOWNSHIP RANGE SECTIONS

20 South 62 East 4-9,16-20,29-32

21 South 60 East 1-4,9-16,21-28,33-36

21 South 61 East ALL SECTIONS

21 South 62 East 4-9,15-23, 25-36

22 South 60 East 1-4,10-15,24

22 South 61 East 1-24,26-29

22 South 62 East 1-10,17-18

Notes:

1. Refer to Table 505 and Figure 516 Depth-Duration- Frequency values in the McCarran Airport Rainfall Area.
2. Refer to Table 506 and Figure 517 for Time-Intensity-Frequency values on the McCarran Airport Rainfall Area.

Revision	Date

WRC
ENGINEERING

REFERENCE:

USACE, Los Angeles District, 1988

FIGURE 513

SEC. 26

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DEPTH-DURATION-FREQUENCY VALUES FOR McCARRAN AIRPORT RAINFALL AREA (IN INCHES)

TIME	RECURRENCE INTERVAL					
	2-YR	5-YR	10-YR	25-YR	50-YR	100-YR
5 min.	0.15	0.27	0.35	0.46	0.54	0.63
10 min.	0.25	0.44	0.57	0.74	0.89	1.02
15 min.	0.33	0.57	0.74	0.97	1.15	1.32
30 min.	0.44	0.78	1.01	1.31	1.55	1.79
1 hour	0.52	0.89	1.15	1.50	1.78	2.06
2 hour	0.59	1.01	1.30	1.70	2.01	2.30
3 hour	0.64	1.08	1.39	1.82	2.15	2.48
6 hour	0.72	1.22	<u>1.58</u>	2.05	2.41	<u>2.77</u>
24 hour (TR-55)	1.20	1.60	1.80	2.40	2.70	2.96

- NOTE: 1. Refer to Figure 513 for a description and drawing of the area included in the McCarran Airport Rainfall Area.
2. The 24 hour values presented above are for use with TR-55 only.
3. Table 501 adjustments not required.

Revision	Date

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL - STANDARD FORM 4

Momentum Engineers, Ltd.

6101 Kings Brook Ct.
Las Vegas NV 89149

Sub-Basin Data					Initial/Overland Time (T _i)			Travel Time (T _t)					T _c	T _c Check (Urbanized Basins)		Final T _c	T _{lag}	Remarks		
DESIG (1)	CN (2)	K (3)	AREA (acres) (4)	AREA (mi²) (5)	LENGTH (ft) (6)	SLOPE (%) (7)	T _i (min) (8)	LENGTH (ft) (9)	SLOPE (%) (10)	V ₁ (fps) (11)	V ₂ (fps) (12)	T _t (min) (13)	T _c =T _i +T _t (min) (14)	TOTAL (ft) (15)	T _c (min) (16)	T _c (min) (17)	T _{lag} (hrs) (18)	Remarks (19)		
DEVELOPED CONDITION																				
DON1	90	0.798	6.08	0.0095	110	1.0	5.7	820	0.5	1.0	2.2	10.8	16.5	930	15.2	15.2	0.152			
DF1	90	0.798	0.68	0.0011	110	1.0	5.7	200	0.5	1.0	N/A	3.3	9.0	310	11.7	9.0	0.090			
DF2	90	0.798	1.19	0.0019	110	1.0	5.7	200	0.5	1.0	N/A	3.3	9.0	310	11.7	9.0	0.090			
UNDEVELOPED CONDITION																				
XF1	88	0.77	0.68	0.0011	200	0.9	8.7	110	0.9	1.4	N/A	1.3	10.0	N/A	N/A	10.0	0.100			
XF2	88	0.77	1.19	0.0019	200	1.0	8.4	110	0.9	1.4	N/A	1.3	9.7	N/A	N/A	9.7	0.100			
XN1	88	0.77	6.08	0.0095	200	0.5	10.5	730	0.4	0.9	1.9	11.0	21.5	N/A	N/A	21.5	0.215			
$T_i = (1.8(1.1-K)L^{1/2}) / (S^{1/3})$ $T_c = T_i + T_t$ $K = 0.0132(CN) - 39$ $T_{lag} = 0.6T_c$										For the travel time (T _t) calculations, V ₁ applies to the first 500 feet of travel distance; V ₂ applies to the remaining travel distance.				Travel Time Velocity Formulas Existing $V_1 = 14.8(S/100)^{1/2}$ $V_2 = 29.4(S/100)^{1/2}$		Developed $V_1 = 20.2(S/100)^{1/2}$ $V_2 = 30.6(S/100)^{1/2}$		All basins over one square mile are calculated by the equation $T_{lag} = 20Kn(L \cdot L_e / S^{0.5})^{0.33}$ (SEE SEPARATE SPREADSHEET)		
REFERENCE:									CCRFCD HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL											
STANDARD FORM 4																				

CURVE NUMBER DETERMINATION*
AZURE & TORREY PINES NORTH

2/20/2016

BY B.BROWN

BASIN	HYDROLOGIC SOIL GROUP	LAND USE	CURVE NUMBER	PERCENT OF TOTAL	FINAL CN	REMARKS
DON1 DF1 DF2	D	8000 SF LOTS RESIDENTIAL	90	100	90	TABLE 602A (CONSERVATIVE, LOTS ARE ACTUALLY LARGER)
XF1 XF2 XN1	D	DESERT SHRUB	88	100	88	Table 602, 4 of 4 Semiarid Rangeland

*Based on Clark County Regional Flood Control District Hydrologic Criteria and Drainage Design Manual, Latest update.


```

1*****
*
* FLOOD HYDROGRAPH PACKAGE (HEC-1)
*   JUN 1998
*   VERSION 4.1
*
* RUN DATE 20FEB16 TIME 17:31:22
*
*****

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*****
*
* U.S. ARMY CORPS OF ENGINEERS
* HYDROLOGIC ENGINEERING CENTER
* 609 SECOND STREET
* DAVIS, CALIFORNIA 95616
* (916) 756-1104
*
*****

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X   X XXXXXXX XXXXX   X
X   X X   X   X   X   XX
X   X X   X   X   X   X
XXXXXXX XXXX   X   XXXXX X
X   X X   X   X   X   X
X   X X   X   X   X   X
X   X XXXXXXX XXXXX   XXX

```

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
 THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
 NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
 DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
 KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1

HEC-1 INPUT

PAGE 1

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
1          ID
2          ID    EXISTING AND DEVELOPED CONDITIONS MODEL
3          ID    DR HORTON - AZURE & TORREY PINES NORTH
4          ID    MOMENTUM ENGINEERS FOR TRITON ENG - B BROWN
5          ID
6          ID
7          ID    6-HOUR STORM DISTRIBUTION #3
8          ID    10- AND 100-YEAR STORM EVENTS
9          ID    MC CARRAN AIRPORT RAINFALL DATA ACCEPTABLE PER HCCDM
10         ID    NO REDUCTION FOR DEPTH AREA
11         ID    NO HYDROGRAPH ROUTING LOSSES
12         ID
13         IT      5      0      0      300
14         IO      5      0      0
15         IN      5      0      0
16         JR    PREC    0.57    1
17         KK      XF1

```

EXISTING
+
DEVELOPED

INPUT LINE	(V) ROUTING	(--->) DIVERSION OR PUMP FLOW
NO.	(.) CONNECTOR	(<---) RETURN OF DIVERTED OR PUMPED FLOW
17	XF1	
	.	
32	.	XF2
	.	.
36	.	.
	.	XN1
	.	.
40	.	CP1.....
	.	.
42	.	.
	.	DON1
	.	.
47	.	.
	.	DF1
	.	.
51	.	.
	.	DF2

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```

1*****
*
* FLOOD HYDROGRAPH PACKAGE (HEC-1)
* JUN 1998
* VERSION 4.1
*
* RUN DATE 20FEB16 TIME 17:31:22
*
*****

```

```

*****
*
* U.S. ARMY CORPS OF ENGINEERS
* HYDROLOGIC ENGINEERING CENTER
* 609 SECOND STREET
* DAVIS, CALIFORNIA 95616
* (916) 756-1104
*
*****

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EXISTING AND DEVELOPED CONDITIONS MODEL
DR HORTON - AZURE & TORREY PINES NORTH
MOMENTUM ENGINEERS FOR TRITON ENG - B BROWN

6-HOUR STORM DISTRIBUTION #3
10- AND 100-YEAR STORM EVENTS
MC CARRAN AIRPORT RAINFALL DATA ACCEPTABLE PER HCCDM
NO REDUCTION FOR DEPTH AREA
NO HYDROGRAPH ROUTING LOSSES

14 IO OUTPUT CONTROL VARIABLES

IPRNT	5	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE

IT HYDROGRAPH TIME DATA

NMIN	5	MINUTES IN COMPUTATION INTERVAL
IDATE	1 0	STARTING DATE
ITIME	0000	STARTING TIME
NQ	300	NUMBER OF HYDROGRAPH ORDINATES
NDDATE	2 0	ENDING DATE
NDTIME	0055	ENDING TIME
ICENT	19	CENTURY MARK

COMPUTATION INTERVAL .08 HOURS
TOTAL TIME BASE 24.92 HOURS

ENGLISH UNITS

DRAINAGE AREA	SQUARE MILES
PRECIPITATION DEPTH	INCHES
LENGTH, ELEVATION	FEET
FLOW	CUBIC FEET PER SECOND
STORAGE VOLUME	ACRE-FEET
SURFACE AREA	ACRES
TEMPERATURE	DEGREES FAHRENHEIT

JP MULTI-PLAN OPTION
NPLAN 1 NUMBER OF PLANS

JR MULTI-RATIO OPTION
RATIOS OF PRECIPITATION
.57 1.00

PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
FLOWS IN CUBIC FEET PER SECOND, AREA IN SQUARE MILES
TIME TO PEAK IN HOURS

OPERATION	STATION	AREA	PLAN		RATIOS APPLIED TO PRECIPITATION	
					RATIO 1 .57	RATIO 2 1.00
HYDROGRAPH AT						
+	XF1	.00	1	FLOW	1.	2.
				TIME	3.50	3.50
HYDROGRAPH AT						
+	XF2	.00	1	FLOW	1.	3.
				TIME	3.50	3.50
HYDROGRAPH AT						
+	XN1	.01	1	FLOW	5.	11.
				TIME	3.67	3.67
2 COMBINED AT						
+	CP1	.01	1	FLOW	5.	13.
				TIME	3.58	3.58
HYDROGRAPH AT						
+	DON1	.01	1	FLOW	6.	14.

↑ EXISTING
↓ DEVELOPED

				TIME	3.58	3.58
HYDROGRAPH AT						
+	DF1	.00	1	FLOW	1.	2.
				TIME	3.50	3.50
HYDROGRAPH AT						
+	DF2	.00	1	FLOW	1.	3.
				TIME	3.50	3.50

*** NORMAL END OF HEC-1 ***

HYDRAULICS

Worksheet for Sec A Azure 10yr

Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Channel Slope 0.00300 ft/ft
Discharge 34.00 ft³/s
Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.60
0+05.00	0.50
0+05.50	0.50
0+05.50	0.00
0+07.00	0.13
0+07.00	0.17
0+30.00	0.63
0+53.00	0.17
0+53.00	0.13
0+54.50	0.00
0+54.50	0.50
0+55.00	0.50
0+60.00	0.60

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.60)	(0+60.00, 0.60)	0.016

Options

Current Roughness Weighted Method Improved Lotter's Method
Open Channel Weighting Method Improved Lotter's Method
Closed Channel Weighting Method Horton's Method

Worksheet for Sec A Azure 10yr

Results

Normal Depth	0.68	ft
Elevation Range	0.00 to 0.63 ft	
Flow Area	16.20	ft²
Wetted Perimeter	61.26	ft
Hydraulic Radius	0.26	ft
Top Width	60.00	ft
Normal Depth	0.68	ft
Critical Depth	0.62	ft
Critical Slope	0.00637	ft/ft
Velocity	2.10	ft/s
Velocity Head	0.07	ft
Specific Energy	0.75	ft
Froude Number	0.71	
Flow Type	Subcritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.68	ft
Critical Depth	0.62	ft
Channel Slope	0.00300	ft/ft
Critical Slope	0.00637	ft/ft

Cross Section for Sec A Azure 10yr

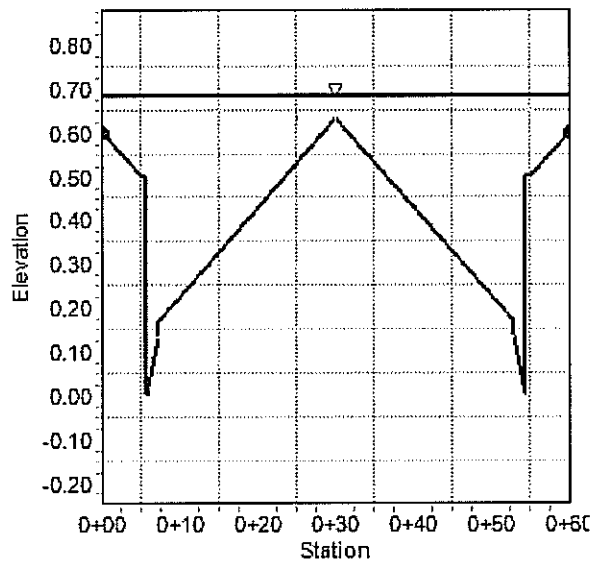
Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Channel Slope 0.00300 ft/ft
Normal Depth 0.68 ft
Discharge 34.00 ft³/s

Cross Section Image



Worksheet for Sec A Azure 100yr

Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Channel Slope 0.00300 ft/ft
Discharge 291.00 ft³/s

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.60
0+05.00	0.50
0+05.50	0.50
0+05.50	0.00
0+07.00	0.13
0+07.00	0.17
0+30.00	0.63
0+53.00	0.17
0+53.00	0.13
0+54.50	0.00
0+54.50	0.50
0+55.00	0.50
0+60.00	0.60

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.60)	(0+60.00, 0.60)	0.016

Options

Current Roughness Weighted Method Improved Lotter's Method
Open Channel Weighting Method Improved Lotter's Method
Closed Channel Weighting Method Horton's Method

Worksheet for Sec A Azure 100yr

Results

Normal Depth	1.40	ft
Elevation Range	0.00 to 0.63	ft
Flow Area	59.33	ft²
Wetted Perimeter	62.70	ft
Hydraulic Radius	0.95	ft
Top Width	60.00	ft
Normal Depth	1.40	ft
Critical Depth	1.31	ft
Critical Slope	0.00408	ft/ft
Velocity	4.90	ft/s
Velocity Head	0.37	ft
Specific Energy	1.77	ft
Froude Number	0.87	
Flow Type	Subcritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	1.40	ft
Critical Depth	1.31	ft
Channel Slope	0.00300	ft/ft
Critical Slope	0.00408	ft/ft

Cross Section for Sec A Azure 100yr

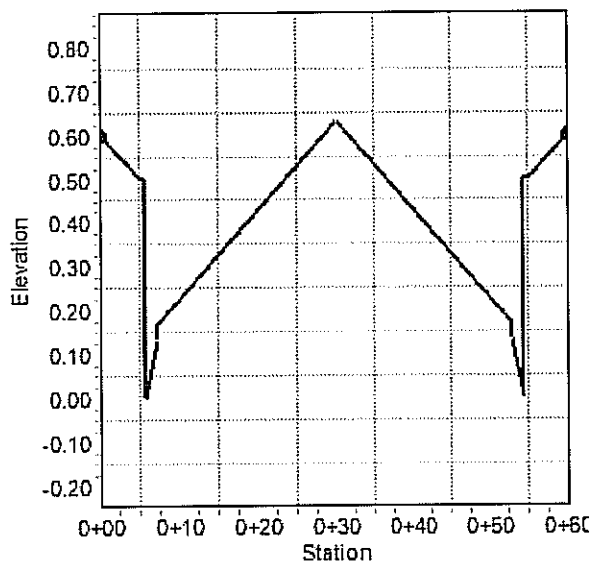
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.00300	ft/ft
Normal Depth	1.40	ft
Discharge	291.00	ft ³ /s

Cross Section Image



Worksheet for Sec B Torrey Pines 10yr

Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Channel Slope 0.00300 ft/ft
Discharge 34.00 ft³/s
Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.60
0+05.00	0.50
0+05.50	0.50
0+05.50	0.00
0+07.00	0.13
0+07.00	0.17
0+40.00	0.83
0+73.00	0.17
0+73.00	0.13
0+74.50	0.00
0+74.50	0.50
0+75.00	0.50
0+80.00	0.60

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.60)	(0+80.00, 0.60)	0.016

Options

Current Roughness Weighted Method Improved Lotter's Method
Open Channel Weighting Method Improved Lotter's Method
Closed Channel Weighting Method Horton's Method

Worksheet for Sec B Torrey Pines 10yr

Results

Normal Depth	0.69	ft
Elevation Range	0.00 to 0.83 ft	
Flow Area	16.82	ft ²
Wetted Perimeter	67.03	ft
Hydraulic Radius	0.25	ft
Top Width	65.75	ft
Normal Depth	0.69	ft
Critical Depth	0.62	ft
Critical Slope	0.00637	ft/ft
Velocity	2.02	ft/s
Velocity Head	0.06	ft
Specific Energy	0.75	ft
Froude Number	0.70	
Flow Type	Subcritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.69	ft
Critical Depth	0.62	ft
Channel Slope	0.00300	ft/ft
Critical Slope	0.00637	ft/ft

Cross Section for Sec B Torrey Pines 10yr

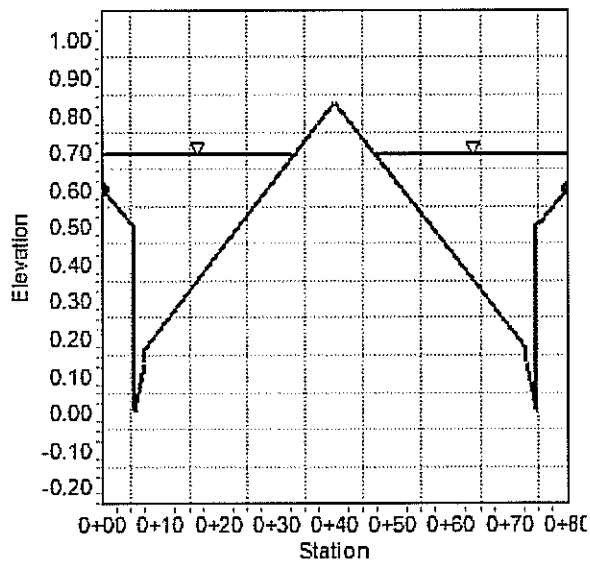
Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Channel Slope 0.00300 ft/ft
Normal Depth 0.69 ft
Discharge 34.00 ft³/s

Cross Section Image



Worksheet for Sec B Torrey Pines 100yr

Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Channel Slope 0.00300 ft/ft
Discharge 167.00 ft³/s
Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.60
0+05.00	0.50
0+05.50	0.50
0+05.50	0.00
0+07.00	0.13
0+07.00	0.17
0+40.00	0.83
0+73.00	0.17
0+73.00	0.13
0+74.50	0.00
0+74.50	0.50
0+75.00	0.50
0+80.00	0.60

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.60)	(0+80.00, 0.60)	0.016

Options

Current Roughness Weighted Method Improved Lotter's Method
Open Channel Weighting Method Improved Lotter's Method
Closed Channel Weighting Method Horton's Method

Worksheet for Sec B Torrey Pines 100yr

Results

Normal Depth	1.08	ft
Elevation Range	0.00 to 0.83	ft
Flow Area	47.35	ft²
Wetted Perimeter	82.07	ft
Hydraulic Radius	0.58	ft
Top Width	80.00	ft
Normal Depth	1.08	ft
Critical Depth	1.00	ft
Critical Slope	0.00481	ft/ft
Velocity	3.53	ft/s
Velocity Head	0.19	ft
Specific Energy	1.28	ft
Froude Number	0.81	
Flow Type	Subcritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	1.08	ft
Critical Depth	1.00	ft
Channel Slope	0.00300	ft/ft
Critical Slope	0.00481	ft/ft

Cross Section for Sec B Torrey Pines 100yr

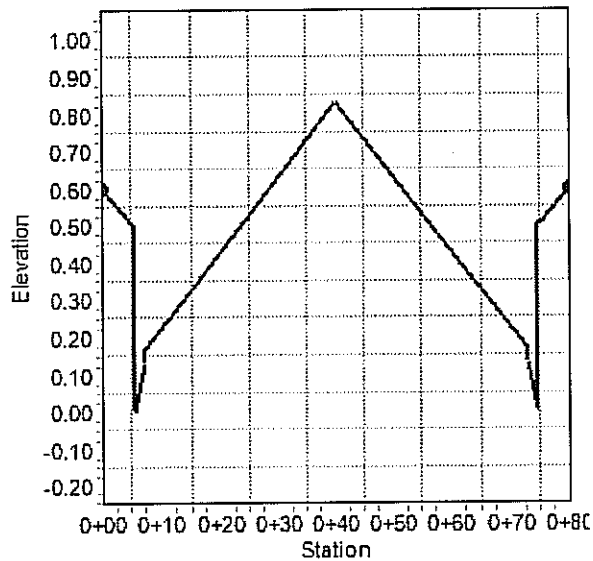
Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Channel Slope 0.00300 ft/ft
Normal Depth 1.08 ft
Discharge 167.00 ft³/s

Cross Section Image



Worksheet for Sec C Onsite st 37' L-curb10yr

Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Channel Slope 0.00500 ft/ft
Discharge 6.00 ft³/s
Section Definitions

Station (ft)	Elevation (ft)
-0+05.00	0.60
0+00.00	0.50
0+00.50	0.50
0+00.50	0.00
0+02.00	0.13
0+02.00	0.17
0+18.50	0.50
0+34.50	0.17
0+34.50	0.13
0+36.50	0.00
0+36.50	0.50
0+37.00	0.50
0+42.00	0.60

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(-0+05.00, 0.60)	(0+42.00, 0.60)	0.016

Options

Current Roughness Weighted Method Improved Lotter's Method
Open Channel Weighting Method Improved Lotter's Method
Closed Channel Weighting Method Horton's Method

Worksheet for Sec C Onsite st 37' L-curb 10yr

Results

Normal Depth	0.39	ft
Elevation Range	0.00 to 0.60 ft	
Flow Area	3.48	ft²
Wetted Perimeter	25.89	ft
Hydraulic Radius	0.13	ft
Top Width	25.02	ft
Normal Depth	0.39	ft
Critical Depth	0.37	ft
Critical Slope	0.00774	ft/ft
Velocity	1.72	ft/s
Velocity Head	0.05	ft
Specific Energy	0.43	ft
Froude Number	0.81	
Flow Type	Subcritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.39	ft
Critical Depth	0.37	ft
Channel Slope	0.00500	ft/ft
Critical Slope	0.00774	ft/ft

Cross Section for Sec C Onsite st 37' L-curb10yr

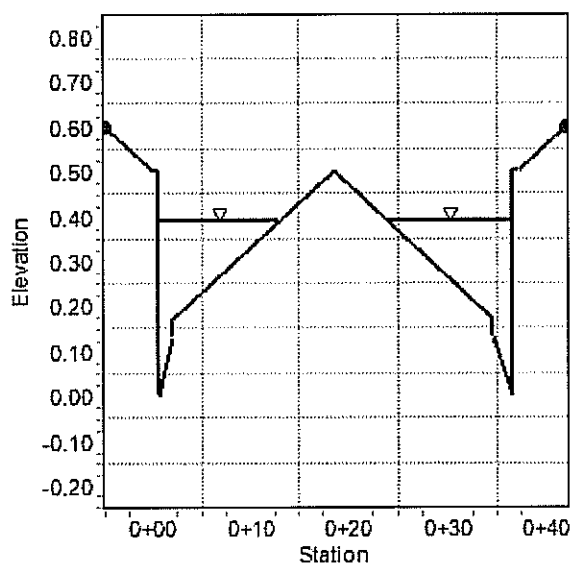
Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Channel Slope 0.00500 ft/ft
Normal Depth 0.39 ft
Discharge 6.00 ft³/s

Cross Section Image



Worksheet for Sec C Onsite st 37' L-curb100yr

Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Channel Slope 0.00500 ft/ft
Discharge 14.00 ft³/s
Section Definitions

Station (ft)	Elevation (ft)
-0+05.00	0.60
0+00.00	0.50
0+00.50	0.50
0+00.50	0.00
0+02.00	0.13
0+02.00	0.17
0+18.50	0.50
0+34.50	0.17
0+34.50	0.13
0+36.50	0.00
0+36.50	0.50
0+37.00	0.50
0+42.00	0.60

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(-0+05.00, 0.60)	(0+42.00, 0.60)	0.016

Options

Current Roughness Weighted Method Improved Lotter's Method
Open Channel Weighting Method Improved Lotter's Method
Closed Channel Weighting Method Horton's Method

Worksheet for Sec C Onsite st 37' L-curb100yr

Results

Normal Depth	0.49	ft
Elevation Range	0.00 to 0.60 ft	
Flow Area	6.63	ft²
Wetted Perimeter	36.39	ft
Hydraulic Radius	0.18	ft
Top Width	35.30	ft
Normal Depth	0.49	ft
Critical Depth	0.47	ft
Critical Slope	0.00692	ft/ft
Velocity	2.11	ft/s
Velocity Head	0.07	ft
Specific Energy	0.56	ft
Froude Number	0.86	
Flow Type	Subcritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.49	ft
Critical Depth	0.47	ft
Channel Slope	0.00500	ft/ft
Critical Slope	0.00692	ft/ft

Cross Section for Sec C Onsite st 37' L-curb100yr

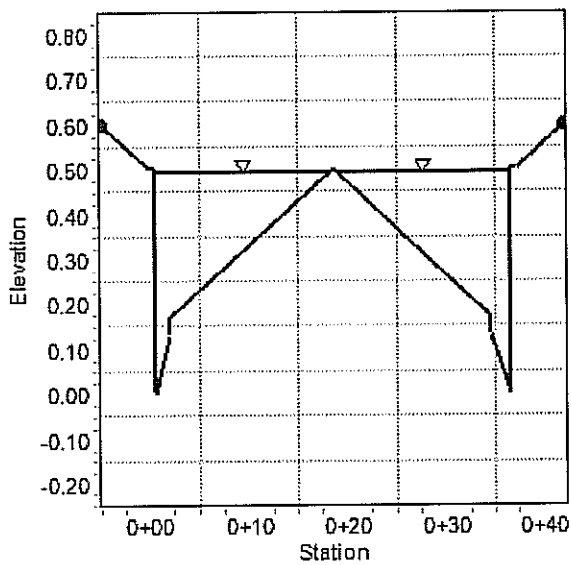
Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Channel Slope 0.00500 ft/ft
Normal Depth 0.49 ft
Discharge 14.00 ft³/s

Cross Section Image



Worksheet for Sec 1 boundary

Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Roughness Coefficient	0.030	
Channel Slope	0.00300	ft/ft
Left Side Slope	200.00	ft/ft (H:V)
Right Side Slope	0.10	ft/ft (H:V)
Discharge	3.00	ft ³ /s

Results

Normal Depth	0.22	ft
Flow Area	4.84	ft ²
Wetted Perimeter	44.19	ft
Hydraulic Radius	0.11	ft
Top Width	43.99	ft
Critical Depth	0.14	ft
Critical Slope	0.03193	ft/ft
Velocity	0.62	ft/s
Velocity Head	0.01	ft
Specific Energy	0.23	ft
Froude Number	0.33	
Flow Type	Subcritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.22	ft
Critical Depth	0.14	ft
Channel Slope	0.00300	ft/ft
Critical Slope	0.03193	ft/ft

Cross Section for Sec 1 boundary

Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Roughness Coefficient	0.030	
Channel Slope	0.00300	ft/ft
Normal Depth	0.22	ft
Left Side Slope	200.00	ft/ft (H:V)
Right Side Slope	0.10	ft/ft (H:V)
Discharge	3.00	ft ³ /s

Cross Section Image



V: 1
H: 1

REFERENCE MATERIAL



NORTHWEST
NEIGHBORHOOD
STUDY

LEGEND

SUB-BASIN BOUNDARY

FLOW ARROW

250 10-YEAR STREET FLOW
500 100-YEAR STREET FLOW
300 10-YEAR FACILITY FLOW
800 100-YEAR FACILITY FLOW

(FLOWS IN CFS)

BWJS Basin-ID
(13 / 59) Contributing flow
(10-Year / 100-Year)
from the basin (cfs)

PHOTO DATE: APRIL 1996

FIGURE E-6



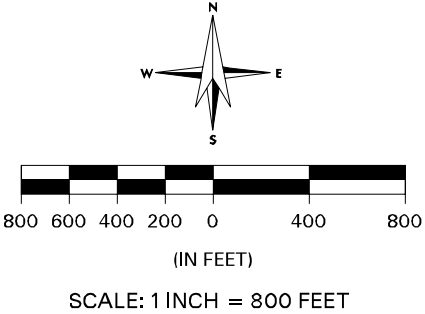
EXISTING DRAINAGE CONDITIONS

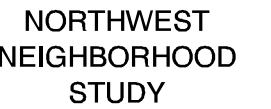
PBS POST, BUCKLEY, SCHUH & JERNIGAN, INC.
ENGINEERING PLANNING SURVEYING GIS
901, N. Green Valley Pkwy, Ste 100, Henderson NV 89014
Phone: (702) 263-7275 Fax: (702) 263-7200

HUALAPAI	FT. APACHE	DURANGO	BUFFALO	RAINBOW	JONES	DECATUR
1	2	3				ELKHORN
4	5	6				CENTENNIAL
7	8	9				ANN
10	11	12				LONE MOUNTAIN
		13	14			ALEXANDER
		15	16			CHEYENNE
		17	18			SMOKE RANCH

REVISED SEPTEMBER 1999

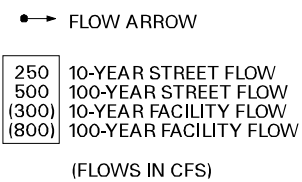
NOTE:
Existing conditions are based on future
CN values with only existing local and
CCRFCD facilities in place





	EXISTING REGIONAL DETENTION BASINS
	PROPOSED REGIONAL DETENTION BASINS
	EXISTING LOCAL DETENTION BASINS
	EXISTING REGIONAL BRIDGES
	PROPOSED REGIONAL BRIDGES
	EXISTING LOCAL BRIDGES
	EXISTING REGIONAL CULVERT
	PROPOSED REGIONAL CULVERT
	EXISTING LOCAL CULVERT
	EXISTING REGIONAL PIPELINE
	PROPOSED REGIONAL PIPELINE
	EXISTING LOCAL PIPELINE
	PROPOSED LOCAL PIPELINE
	EXISTING REGIONAL CHANNEL
	PROPOSED REGIONAL CHANNEL
	EXISTING LOCAL CHANNEL
	PROPOSED REGIONAL PIPELINE (Not Included In 1996 MPU)
	PROPOSED REGIONAL CHANNEL (Not Included In 1996 MPU)
	EXISTING REGIONAL DIKE/LEVEE
	PROPOSED REGIONAL DIKE/LEVEE
	EXISTING LOCAL DIKE/LEVEE
	EXISTING STORM WATER PUMPING STATION
	PROPOSED BELTWAY ALIGNMENT

The image is a detailed engineering site plan for a proposed development. The plan shows a grid of streets including Rainbow, Rebecca, Tropical, Jones, Maverick, Leon, Ann, and Decatur. A central area is labeled "SITE" in a red box. The plan includes numerous utility lines (water, sewer, gas, electric) and structures (manholes, valves, hydrants). Elevation points are marked with numbers in parentheses. The plan also shows existing and proposed building footprints, parking areas, and landscaping. A north arrow is located in the top right corner.



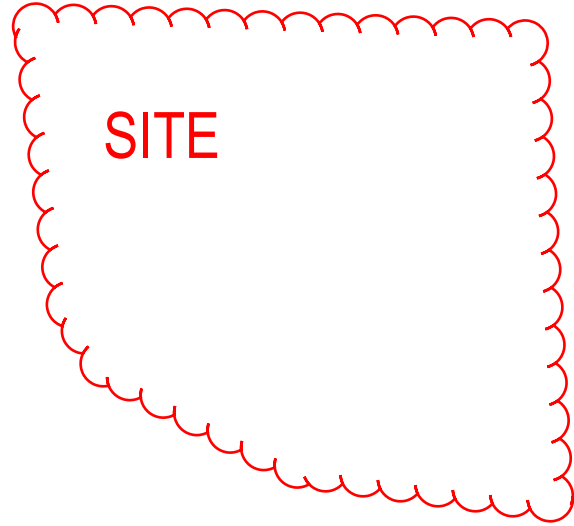
See the "September 1999 City of Las Vegas Northwest Neighborhood Study Phase 2" for proposed facilities in and north of Elkhorn.

HUALPAI	FT. APACHE	DURANGO	BUFFALO	RAINBOW	JONES	DECATUR	
1	2	3					ELKHORN
4	5	6					CENTENNIAL
7	8	9					ANN
10	11	12					LONE MOUNTAIN
			13	14			ALEXANDER
			15	16			CHEYENNE
			17	18			SMOKE RANCH

PBSJ

901 North Green Valley Parkway, Suite 100
Henderson, Nevada 89014-6139
Phone: 702/263-7275
Fax: 702/263-7200

ENGINEERING PLANNING GIS SURVEYING CONSTRUCTION SERVICES



SITE

SITE

SITE

SITE

SITE

SITE

SITE

SITE

GRADING PLANS



**LAS VEGAS
CITY COUNCIL**

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RICKY Y. BARLOW
STAVROS S. ANTHONY
BOB COFFIN
BOB BEERS

ELIZABETH N. FRETWELL
CITY MANAGER

February 10, 2016

Mr. Thomas L. Brooker
Azure & Torrey Pines 24, LLC
8485 West Sunset Road, Ste. 204
Las Vegas, Nevada 89113

**RE: ZON-62784 [PRJ-62712] - REZONING RELATED TO VAR-62756, VAR-62765 THROUGH VAR-62783, VAR-62785, WVR-62786 AND TMP-62787
PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016**

Dear Applicant:

Your request for a Rezoning FROM: R-E (RESIDENCE ESTATES) TO: R-D (SINGLE FAMILY RESIDENTIAL-RESTRICTED) on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

The Planning Commission voted to recommend **APPROVAL** of your request.

This item will be considered by the City Council on March 16, 2016, at 1:00 P.M. in the Council Chambers of City Hall, 495 South Main Street, Las Vegas, Nevada. ***The Council requires that you or your representative be present at this meeting.*** If you or your representative chooses not to attend, the City Council may act in your absence without your input.

Sincerely,

Andrew P. Reed, AICP
Planning Supervisor
Case Planning Division

AR:nl

cc:

Mr. Mark Jones
DR Horton
1081 Whitney Ranch Drive, Ste. 141
Henderson, Nevada 89014

Ms. Aimee English
Triton Engineering
6757 West Charleston Blvd., Ste. B
Las Vegas, Nevada 89146

CITY OF LAS VEGAS
DEPARTMENT OF PLANNING

DEVELOPMENT SERVICES CENTER
333 NORTH RANCHO DRIVE
3RD FLOOR
LAS VEGAS, NEVADA 89106

VOICE 702.229.6301

FAX 702.474.0352

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BOB COFFIN
BOB BEERS

ELIZABETH N. FRETWELL
CITY MANAGER

February 10, 2016

Mr. Thomas L. Brooker
Azure & Torrey Pines 24, LLC
8485 West Sunset Road, Ste. 204
Las Vegas, Nevada 89113

***RE: VAR-62756 [PRJ-62712] - VARIANCE RELATED TO ZON-62784, VAR-62765 THROUGH VAR-62783, VAR-62785, WVR-62786 AND TMP-62787
PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016***

Dear Applicant:

Your request for a Variance TO ALLOW A 874-FOOT RESIDENTIAL BLOCK LENGTH WHERE THE MAXIMUM ALLOWED IS 660 FEET on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), R-E (Residence Estates) Zone, [PROPOSED: R-D (Single Family Residential-Restricted)], Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

The Planning Commission voted to recommend ***APPROVAL*** of your request, subject to the following:

Planning

1. Approval of Rezoning (ZON-62784).
2. Approval of and conformance to the Conditions of Approval for Waiver (WVR-62786) and Tentative Map (TMP-62787) shall be required, if approved.
3. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
4. This Variance approves an internal street block length of 874 feet, where 660 feet is required.
5. All necessary building permits shall be obtained and final inspections shall be completed in compliance with Title 19 and all codes as required by the Department of Building and Safety.
6. These Conditions of Approval shall be affixed to the cover sheet of any plan set submitted for building permit.

CITY OF LAS VEGAS
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7. All City Code requirements and design standards of all City departments must be satisfied, except as modified herein.

This item will be considered by the City Council on March 16, 2016, at 1:00 P.M. in the Council Chambers of City Hall, 495 South Main Street, Las Vegas, Nevada. ***The Council requires that you or your representative be present at this meeting.*** If you or your representative chooses not to attend, the City Council may act in your absence without your input.

Sincerely,

A handwritten signature in black ink that reads "Andrew P. Reed". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Andrew P. Reed, AICP
Planning Supervisor
Case Planning Division

AR:nl

cc:

Mr. Mark Jones
DR Horton
1081 Whitney Ranch Drive, Ste. 141
Henderson, Nevada 89014

Ms. Aimee English
Triton Engineering
6757 West Charleston Blvd., Ste. B
Las Vegas, Nevada 89146



**LAS VEGAS
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STAVROS S. ANTHONY
BOB COFFIN
BOB BEERS

ELIZABETH N. FRETWELL
CITY MANAGER

February 10, 2016

Mr. Thomas L. Brooker
Azure & Torrey Pines 24, LLC
8485 West Sunset Road, Ste. 204
Las Vegas, Nevada 89113

RE: VAR-62765 [PRJ-62712] - VARIANCE RELATED TO ZON-62784, VAR-62756, VAR-62766 THROUGH VAR-62783, VAR-62785, WVR-62786 AND TMP-62787
PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016

Dear Applicant:

Your request for a Variance TO ALLOW A 10-FOOT FRONT YARD SETBACK WHERE 25 FEET IS REQUIRED AND A 25-FOOT REAR YARD SETBACK WHERE 30 FEET IS REQUIRED ON LOT ONE OF A PROPOSED 20-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), R-E (Residence Estates) Zone, [PROPOSED: R-D (Single Family Residential-Restricted)], Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

The Planning Commission voted to recommend **APPROVAL** of your request, subject to the following:

Planning

1. Approval of Rezoning (ZON-62784).
2. Approval of and conformance to the Conditions of Approval for Variance (VAR-62756), Waiver (WVR-62786) and Tentative Map (TMP-62787) shall be required, if approved.
3. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
4. These Variances approve a front yard setback of 20 feet, where 25 feet is normally required and a rear yard setback of 25 feet, where 30 feet is normally required.
5. All necessary building permits shall be obtained and final inspections shall be completed in compliance with Title 19 and all codes as required by the Department of Building and Safety.

CITY OF LAS VEGAS
DEPARTMENT OF PLANNING
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333 NORTH RANCHO DRIVE
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LAS VEGAS, NEVADA 89106

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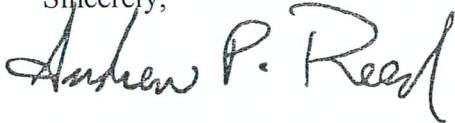
/city of las vegas

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

This item will be considered by the City Council on March 16, 2016, at 1:00 P.M. in the Council Chambers of City Hall, 495 South Main Street, Las Vegas, Nevada. ***The Council requires that you or your representative be present at this meeting.*** If you or your representative chooses not to attend, the City Council may act in your absence without your input.

Sincerely,



Andrew P. Reed, AICP
Planning Supervisor
Case Planning Division

AR:nl

cc:

Mr. Mark Jones
DR Horton
1081 Whitney Ranch Drive, Ste. 141
Henderson, Nevada 89014

Ms. Aimee English
Triton Engineering
6757 West Charleston Blvd., Ste. B
Las Vegas, Nevada 89146



**LAS VEGAS
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BOB BEERS

ELIZABETH N. FRETWELL
CITY MANAGER

February 10, 2016

Mr. Thomas L. Brooker
Azure & Torrey Pines 24, LLC
8485 West Sunset Road, Ste. 204
Las Vegas, Nevada 89113

RE: VAR-62766 [PRJ-62712] - VARIANCE RELATED TO ZON-62784, VAR-62756, VAR-62765, VAR-62767 THROUGH VAR-62783, VAR-62785, WVR-62786 AND TMP-62787

PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016

Dear Applicant:

Your request for a Variance TO ALLOW A 10-FOOT FRONT YARD SETBACK WHERE 25 FEET IS REQUIRED AND A 25-FOOT REAR YARD SETBACK WHERE 30 FEET IS REQUIRED ON LOT TWO OF A PROPOSED 20-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), R-E (Residence Estates) Zone, [PROPOSED: R-D (Single Family Residential-Restricted)], Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

The Planning Commission voted to recommend **APPROVAL** of your request, subject to the following:

Planning

1. Approval of Rezoning (ZON-62784).
2. Approval of and conformance to the Conditions of Approval for Variance (VAR-62756), Waiver (WVR-62786) and Tentative Map (TMP-62787) shall be required, if approved.
3. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
4. These Variances approve a front yard setback of 20 feet, where 25 feet is normally required and a rear yard setback of 25 feet, where 30 feet is normally required.
5. All necessary building permits shall be obtained and final inspections shall be completed in compliance with Title 19 and all codes as required by the Department of Building and Safety.

CITY OF LAS VEGAS
DEPARTMENT OF PLANNING
DEVELOPMENT SERVICES CENTER
333 NORTH RANCHO DRIVE
3RD FLOOR
LAS VEGAS, NEVADA 89106

VOICE 702.229.6301

FAX 702.474.0352

TTY 7-1-1

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

This item will be considered by the City Council on March 16, 2016, at 1:00 P.M. in the Council Chambers of City Hall, 495 South Main Street, Las Vegas, Nevada. ***The Council requires that you or your representative be present at this meeting.*** If you or your representative chooses not to attend, the City Council may act in your absence without your input.

Sincerely,



Andrew P. Reed, AICP
Planning Supervisor
Case Planning Division

AR:nl

cc:

Mr. Mark Jones
DR Horton
1081 Whitney Ranch Drive, Ste. 141
Henderson, Nevada 89014

Ms. Aimee English
Triton Engineering
6757 West Charleston Blvd., Ste. B
Las Vegas, Nevada 89146



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BOB BEERS

ELIZABETH N. FRETWELL
CITY MANAGER

February 10, 2016

Mr. Thomas L. Brooker
Azure & Torrey Pines 24, LLC
8485 West Sunset Road, Ste. 204
Las Vegas, Nevada 89113

**RE: VAR-62767 [PRJ-62712] - VARIANCE RELATED TO ZON-62784, VAR-62756, VAR-62765, VAR-62766, VAR-62768 THROUGH VAR-62783, VAR-62785, WVR-62786 AND TMP-62787
PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016**

Dear Applicant:

Your request for a Variance TO ALLOW A 10-FOOT FRONT YARD SETBACK WHERE 25 FEET IS REQUIRED AND A 25-FOOT REAR YARD SETBACK WHERE 30 FEET IS REQUIRED ON LOT THREE OF A PROPOSED 20-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), R-E (Residence Estates) Zone, [PROPOSED: R-D (Single Family Residential-Restricted)], Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

The Planning Commission voted to recommend **APPROVAL** of your request, subject to the following:

Planning

1. Approval of Rezoning (ZON-62784).
2. Approval of and conformance to the Conditions of Approval for Variance (VAR-62756), Waiver (WVR-62786) and Tentative Map (TMP-62787) shall be required, if approved.
3. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
4. These Variances approve a front yard setback of 20 feet, where 25 feet is normally required and a rear yard setback of 25 feet, where 30 feet is normally required.
5. All necessary building permits shall be obtained and final inspections shall be completed in compliance with Title 19 and all codes as required by the Department of Building and Safety.

CITY OF LAS VEGAS
DEPARTMENT OF PLANNING

DEVELOPMENT SERVICES CENTER
333 NORTH RANCHO DRIVE
3RD FLOOR
LAS VEGAS, NEVADA 89106

VOICE 702.229.6301

FAX 702.474.0352

TTY 7-1-1

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/city of las vegas

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

This item will be considered by the City Council on March 16, 2016, at 1:00 P.M. in the Council Chambers of City Hall, 495 South Main Street, Las Vegas, Nevada. ***The Council requires that you or your representative be present at this meeting.*** If you or your representative chooses not to attend, the City Council may act in your absence without your input.

Sincerely,



Andrew P. Reed, AICP
Planning Supervisor
Case Planning Division

AR:nl

cc:

Mr. Mark Jones
DR Horton
1081 Whitney Ranch Drive, Ste. 141
Henderson, Nevada 89014

Ms. Aimee English
Triton Engineering
6757 West Charleston Blvd., Ste. B
Las Vegas, Nevada 89146



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BOB COFFIN
BOB BEERS

ELIZABETH N. FRETWELL
CITY MANAGER

February 10, 2016

Mr. Thomas L. Brooker
Azure & Torrey Pines 24, LLC
8485 West Sunset Road, Ste. 204
Las Vegas, Nevada 89113

**RE: VAR-62768 [PRJ-62712] - VARIANCE RELATED TO ZON-62784, VAR-62756, VAR-62765 THROUGH VAR-62767, VAR-62769 THROUGH VAR-62783, VAR-62785, WVR-62786 AND TMP-62787
PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016**

Dear Applicant:

Your request for a Variance TO ALLOW A 10-FOOT FRONT YARD SETBACK WHERE 25 FEET IS REQUIRED AND A 25-FOOT REAR YARD SETBACK WHERE 30 FEET IS REQUIRED ON LOT FOUR OF A PROPOSED 20-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), R-E (Residence Estates) Zone, [PROPOSED: R-D (Single Family Residential-Restricted)], Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

The Planning Commission voted to recommend **APPROVAL** of your request, subject to the following:

Planning

1. Approval of Rezoning (ZON-62784).
2. Approval of and conformance to the Conditions of Approval for Variance (VAR-62756), Waiver (WVR-62786) and Tentative Map (TMP-62787) shall be required, if approved.
3. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
4. These Variances approve a front yard setback of 20 feet, where 25 feet is normally required and a rear yard setback of 25 feet, where 30 feet is normally required.
5. All necessary building permits shall be obtained and final inspections shall be completed in compliance with Title 19 and all codes as required by the Department of Building and Safety.

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CITY OF LAS VEGAS
DEPARTMENT OF PLANNING

DEVELOPMENT SERVICES CENTER
333 NORTH RANCHO DRIVE
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LAS VEGAS, NEVADA 89106

VOICE 702.229.6301

FAX 702.474.0352

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

This item will be considered by the City Council on March 16, 2016, at 1:00 P.M. in the Council Chambers of City Hall, 495 South Main Street, Las Vegas, Nevada. ***The Council requires that you or your representative be present at this meeting.*** If you or your representative chooses not to attend, the City Council may act in your absence without your input.

Sincerely,



Andrew P. Reed, AICP
Planning Supervisor
Case Planning Division

AR:nl

cc:

Mr. Mark Jones
DR Horton
1081 Whitney Ranch Drive, Ste. 141
Henderson, Nevada 89014

Ms. Aimee English
Triton Engineering
6757 West Charleston Blvd., Ste. B
Las Vegas, Nevada 89146



**LAS VEGAS
CITY COUNCIL**

CAROLYN G. GOODMAN
MAYOR

STEVEN D. ROSS
MAYOR PRO TEM

LOIS TARKANIAN
RICKI Y. BARLOW
STAVROS S. ANTHONY
BOB COFFIN
BOB BEERS

ELIZABETH N. FRETWELL
CITY MANAGER

February 10, 2016

Mr. Thomas L. Brooker
Azure & Torrey Pines 24, LLC
8485 West Sunset Road, Ste. 204
Las Vegas, Nevada 89113

**RE: VAR-62769 [PRJ-62712] - VARIANCE RELATED TO ZON-62784, VAR-62756, VAR-62765 THROUGH VAR-62768, VAR-62770 THROUGH VAR-62783, VAR-62785, WVR-62786 AND TMP-62787
PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016**

Dear Applicant:

Your request for a Variance TO ALLOW A 10-FOOT FRONT YARD SETBACK WHERE 25 FEET IS REQUIRED AND A 25-FOOT REAR YARD SETBACK WHERE 30 FEET IS REQUIRED ON LOT FIVE OF A PROPOSED 20-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), R-E (Residence Estates) Zone, [PROPOSED: R-D (Single Family Residential-Restricted)], Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

The Planning Commission voted to recommend **APPROVAL** of your request, subject to the following:

Planning

1. Approval of Rezoning (ZON-62784).
2. Approval of and conformance to the Conditions of Approval for Variance (VAR-62756), Waiver (WVR-62786) and Tentative Map (TMP-62787) shall be required, if approved.
3. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
4. These Variances approve a front yard setback of 20 feet, where 25 feet is normally required and a rear yard setback of 25 feet, where 30 feet is normally required.
5. All necessary building permits shall be obtained and final inspections shall be completed in compliance with Title 19 and all codes as required by the Department of Building and Safety.

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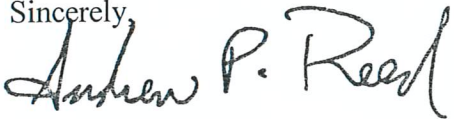


/city of las vegas

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7. All City Code requirements and design standards of all City departments must be satisfied, except as modified herein.

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Sincerely,



Andrew P. Reed, AICP
Planning Supervisor
Case Planning Division

AR:nl

cc:

Mr. Mark Jones
DR Horton
1081 Whitney Ranch Drive, Ste. 141
Henderson, Nevada 89014

Ms. Aimee English
Triton Engineering
6757 West Charleston Blvd., Ste. B
Las Vegas, Nevada 89146



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BOB COFFIN
BOB BEERS

ELIZABETH N. FRETWELL
CITY MANAGER

February 10, 2016

Mr. Thomas L. Brooker
Azure & Torrey Pines 24, LLC
8485 West Sunset Road, Ste. 204
Las Vegas, Nevada 89113

**RE: VAR-62770 [PRJ-62712] - VARIANCE RELATED TO ZON-62784, VAR-62756, VAR-62765 THROUGH VAR-62769, VAR-62771 THROUGH VAR-62783, VAR-62785, WVR-62786 AND TMP-62787
PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016**

Dear Applicant:

Your request for a Variance TO ALLOW A 10-FOOT FRONT YARD SETBACK WHERE 25 FEET IS REQUIRED AND A 25-FOOT REAR YARD SETBACK WHERE 30 FEET IS REQUIRED ON LOT SIX OF A PROPOSED 20-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), R-E (Residence Estates) Zone, [PROPOSED: R-D (Single Family Residential-Restricted)], Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

The Planning Commission voted to recommend **APPROVAL** of your request, subject to the following:

Planning

1. Approval of Rezoning (ZON-62784).
2. Approval of and conformance to the Conditions of Approval for Variance (VAR-62756), Waiver (WVR-62786) and Tentative Map (TMP-62787) shall be required, if approved.
3. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
4. These Variances approve a front yard setback of 20 feet, where 25 feet is normally required and a rear yard setback of 25 feet, where 30 feet is normally required.
5. All necessary building permits shall be obtained and final inspections shall be completed in compliance with Title 19 and all codes as required by the Department of Building and Safety.

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7. All City Code requirements and design standards of all City departments must be satisfied, except as modified herein.

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Sincerely,



Andrew P. Reed, AICP
Planning Supervisor
Case Planning Division

AR:nl

cc:

Mr. Mark Jones
DR Horton
1081 Whitney Ranch Drive, Ste. 141
Henderson, Nevada 89014

Ms. Aimee English
Triton Engineering
6757 West Charleston Blvd., Ste. B
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ELIZABETH N. FRETWELL
CITY MANAGER

February 10, 2016

Mr. Thomas L. Brooker
Azure & Torrey Pines 24, LLC
8485 West Sunset Road, Ste. 204
Las Vegas, Nevada 89113

**RE: VAR-62771 [PRJ-62712] - VARIANCE RELATED TO ZON-62784, VAR-62756, VAR-62765 THROUGH VAR-62770, VAR-62772 THROUGH VAR-62783, VAR-62785, WVR-62786 AND TMP-62787
PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016**

Dear Applicant:

Your request for a Variance TO ALLOW A 10-FOOT FRONT YARD SETBACK WHERE 25 FEET IS REQUIRED AND A 25-FOOT REAR YARD SETBACK WHERE 30 FEET IS REQUIRED ON LOT SEVEN OF A PROPOSED 20-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), R-E (Residence Estates) Zone, [PROPOSED: R-D (Single Family Residential-Restricted)], Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

The Planning Commission voted to recommend **APPROVAL** of your request, subject to the following:

Planning

1. Approval of Rezoning (ZON-62784).
2. Approval of and conformance to the Conditions of Approval for Variance (VAR-62756), Waiver (WVR-62786) and Tentative Map (TMP-62787) shall be required, if approved.
3. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
4. These Variances approve a front yard setback of 20 feet, where 25 feet is normally required and a rear yard setback of 25 feet, where 30 feet is normally required.
5. All necessary building permits shall be obtained and final inspections shall be completed in compliance with Title 19 and all codes as required by the Department of Building and Safety.

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7. All City Code requirements and design standards of all City departments must be satisfied, except as modified herein.

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Sincerely,



Andrew P. Reed, AICP
Planning Supervisor
Case Planning Division

AR:nl

cc:

Mr. Mark Jones
DR Horton
1081 Whitney Ranch Drive, Ste. 141
Henderson, Nevada 89014

Ms. Aimee English
Triton Engineering
6757 West Charleston Blvd., Ste. B
Las Vegas, Nevada 89146



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ELIZABETH N. FRETWELL
CITY MANAGER

February 10, 2016

Mr. Thomas L. Brooker
Azure & Torrey Pines 24, LLC
8485 West Sunset Road, Ste. 204
Las Vegas, Nevada 89113

**RE: VAR-62772 [PRJ-62712] - VARIANCE RELATED TO ZON-62784, VAR-62756, VAR-62765 THROUGH VAR-62771, VAR-62773 THROUGH VAR-62783, VAR-62785, WVR-62786 AND TMP-62787
PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016**

Dear Applicant:

Your request for a Variance TO ALLOW A 10-FOOT FRONT YARD SETBACK WHERE 25 FEET IS REQUIRED AND A 25-FOOT REAR YARD SETBACK WHERE 30 FEET IS REQUIRED ON LOT EIGHT OF A PROPOSED 20-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), R-E (Residence Estates) Zone, [PROPOSED: R-D (Single Family Residential-Restricted)], Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

The Planning Commission voted to recommend **APPROVAL** of your request, subject to the following:

Planning

1. Approval of Rezoning (ZON-62784).
2. Approval of and conformance to the Conditions of Approval for Variance (VAR-62756), Waiver (WVR-62786) and Tentative Map (TMP-62787) shall be required, if approved.
3. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
4. These Variances approve a front yard setback of 20 feet, where 25 feet is normally required and a rear yard setback of 25 feet, where 30 feet is normally required.
5. All necessary building permits shall be obtained and final inspections shall be completed in compliance with Title 19 and all codes as required by the Department of Building and Safety.

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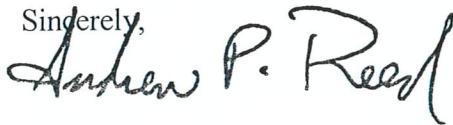


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Sincerely,


Andrew P. Reed, AICP
Planning Supervisor
Case Planning Division

AR:nl

cc:

Mr. Mark Jones
DR Horton
1081 Whitney Ranch Drive, Ste. 141
Henderson, Nevada 89014

Ms. Aimee English
Triton Engineering
6757 West Charleston Blvd., Ste. B
Las Vegas, Nevada 89146



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ELIZABETH N. FRETWELL
CITY MANAGER

February 10, 2016

Mr. Thomas L. Brooker
Azure & Torrey Pines 24, LLC
8485 West Sunset Road, Ste. 204
Las Vegas, Nevada 89113

**RE: VAR-62773 [PRJ-62712] - VARIANCE RELATED TO ZON-62784, VAR-62756, VAR-62765 THROUGH VAR-62772, VAR-62774 THROUGH VAR-62783, VAR-62785, WVR-62786 AND TMP-62787
PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016**

Dear Applicant:

Your request for a Variance TO ALLOW A 10-FOOT FRONT YARD SETBACK WHERE 25 FEET IS REQUIRED AND A 25-FOOT REAR YARD SETBACK WHERE 30 FEET IS REQUIRED ON LOT NINE OF A PROPOSED 20-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), R-E (Residence Estates) Zone, [PROPOSED: R-D (Single Family Residential-Restricted)], Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

The Planning Commission voted to recommend **APPROVAL** of your request, subject to the following:

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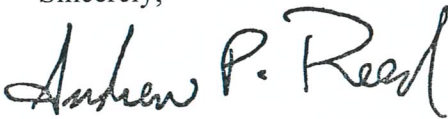
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3. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
4. These Variances approve a front yard setback of 20 feet, where 25 feet is normally required and a rear yard setback of 25 feet, where 30 feet is normally required.
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6. These Conditions of Approval shall be affixed to the cover sheet of any plan set submitted for building permit.
7. All City Code requirements and design standards of all City departments must be satisfied,
 - except as modified herein.

This item will be considered by the City Council on March 16, 2016, at 1:00 P.M. in the Council Chambers of City Hall, 495 South Main Street, Las Vegas, Nevada. ***The Council requires that you or your representative be present at this meeting.*** If you or your representative chooses not to attend, the City Council may act in your absence without your input.

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Andrew P. Reed, AICP
Planning Supervisor
Case Planning Division

AR:nl

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1081 Whitney Ranch Drive, Ste. 141
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ELIZABETH N. FRETWELL
CITY MANAGER

February 10, 2016

Mr. Thomas L. Brooker
Azure & Torrey Pines 24, LLC
8485 West Sunset Road, Ste. 204
Las Vegas, Nevada 89113

**RE: VAR-62774 [PRJ-62712] - VARIANCE RELATED TO ZON-62784, VAR-62756, VAR-62765 THROUGH VAR-62773, VAR-62775 THROUGH VAR-62783, VAR-62785, WVR-62786 AND TMP-62787
PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016**

Dear Applicant:

Your request for a Variance TO ALLOW A 10-FOOT FRONT YARD SETBACK WHERE 25 FEET IS REQUIRED AND A 25-FOOT REAR YARD SETBACK WHERE 30 FEET IS REQUIRED ON LOT 10 OF A PROPOSED 20-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), R-E (Residence Estates) Zone, [PROPOSED: R-D (Single Family Residential-Restricted)], Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

The Planning Commission voted to recommend **APPROVAL** of your request, subject to the following:

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Sincerely,



Andrew P. Reed, AICP
Planning Supervisor
Case Planning Division

AR:nl

cc:

Mr. Mark Jones
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1081 Whitney Ranch Drive, Ste. 141
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CITY MANAGER

February 10, 2016

Mr. Thomas L. Brooker
Azure & Torrey Pines 24, LLC
8485 West Sunset Road, Ste. 204
Las Vegas, Nevada 89113

**RE: VAR-62775 [PRJ-62712] - VARIANCE RELATED TO ZON-62784, VAR-62756, VAR-62765 THROUGH VAR-62774, VAR-62776 THROUGH VAR-62783, VAR-62785, WVR-62786 AND TMP-62787
PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016**

Dear Applicant:

Your request for a Variance TO ALLOW A 10-FOOT FRONT YARD SETBACK WHERE 25 FEET IS REQUIRED AND A 25-FOOT REAR YARD SETBACK WHERE 30 FEET IS REQUIRED ON LOT 11 OF A PROPOSED 20-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), R-E (Residence Estates) Zone, [PROPOSED: R-D (Single Family Residential-Restricted)], Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

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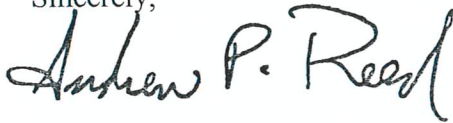
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February 10, 2016

Mr. Thomas L. Brooker
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8485 West Sunset Road, Ste. 204
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ELIZABETH N. FRETWELL
CITY MANAGER

**RE: VAR-62776 [PRJ-62712] - VARIANCE RELATED TO ZON-62784, VAR-62756, VAR-62765 THROUGH VAR-62775, VAR-62777 THROUGH VAR-62783, VAR-62785, WVR-62786 AND TMP-62787
PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016**

Dear Applicant:

Your request for a Variance TO ALLOW A 10-FOOT FRONT YARD SETBACK WHERE 25 FEET IS REQUIRED AND A 25-FOOT REAR YARD SETBACK WHERE 30 FEET IS REQUIRED ON LOT 12 OF A PROPOSED 20-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), R-E (Residence Estates) Zone, [PROPOSED: R-D (Single Family Residential-Restricted)], Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

The Planning Commission voted to recommend **APPROVAL** of your request, subject to the following:

Planning

1. Approval of Rezoning (ZON-62784).
2. Approval of and conformance to the Conditions of Approval for Variance (VAR-62756), Waiver (WVR-62786) and Tentative Map (TMP-62787) shall be required, if approved.
3. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
4. These Variances approve a front yard setback of 20 feet, where 25 feet is normally required and a rear yard setback of 25 feet, where 30 feet is normally required.
5. All necessary building permits shall be obtained and final inspections shall be completed in compliance with Title 19 and all codes as required by the Department of Building and Safety.

CITY OF LAS VEGAS
DEPARTMENT OF PLANNING
DEVELOPMENT SERVICES CENTER
333 NORTH RANCHO DRIVE
3RD FLOOR
LAS VEGAS, NEVADA 89106

VOICE 702.229.6301

FAX 702.474.0352

TTY 7-1-1

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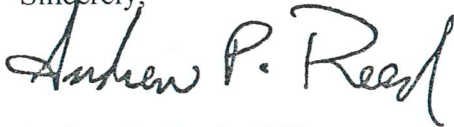
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6. These Conditions of Approval shall be affixed to the cover sheet of any plan set submitted for building permit.
7. All City Code requirements and design standards of all City departments must be satisfied, except as modified herein.

This item will be considered by the City Council on March 16, 2016, at 1:00 P.M. in the Council Chambers of City Hall, 495 South Main Street, Las Vegas, Nevada. ***The Council requires that you or your representative be present at this meeting.*** If you or your representative chooses not to attend, the City Council may act in your absence without your input.

Sincerely,



Andrew P. Reed, AICP
Planning Supervisor
Case Planning Division

AR:nl

cc:

Mr. Mark Jones
DR Horton
1081 Whitney Ranch Drive, Ste. 141
Henderson, Nevada 89014

Ms. Aimee English
Triton Engineering
6757 West Charleston Blvd., Ste. B
Las Vegas, Nevada 89146



**LAS VEGAS
CITY COUNCIL**

CAROLYN G. GOODMAN
MAYOR

STEVEN D. ROSS
MAYOR PRO TEM

LOIS TARKANIAN
RICKI Y. BARLOW
STAVROS S. ANTHONY
BOB COFFIN
BOB BEERS

ELIZABETH N. FRETWELL
CITY MANAGER

February 10, 2016

Mr. Thomas L. Brooker
Azure & Torrey Pines 24, LLC
8485 West Sunset Road, Ste. 204
Las Vegas, Nevada 89113

**RE: VAR-62777 [PRJ-62712] - VARIANCE RELATED TO ZON-62784, VAR-62756, VAR-62765 THROUGH VAR-62776, VAR-62778 THROUGH VAR-62783, VAR-62785, WVR-62786 AND TMP-62787
PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016**

Dear Applicant:

Your request for a Variance TO ALLOW A 10-FOOT FRONT YARD SETBACK WHERE 25 FEET IS REQUIRED AND A 25-FOOT REAR YARD SETBACK WHERE 30 FEET IS REQUIRED ON LOT 13 OF A PROPOSED 20-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), R-E (Residence Estates) Zone, [PROPOSED: R-D (Single Family Residential-Restricted)], Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

The Planning Commission voted to recommend **APPROVAL** of your request, subject to the following:

Planning

1. Approval of Rezoning (ZON-62784).
2. Approval of and conformance to the Conditions of Approval for Variance (VAR-62756), Waiver (WVR-62786) and Tentative Map (TMP-62787) shall be required, if approved.
3. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
4. These Variances approve a front yard setback of 20 feet, where 25 feet is normally required and a rear yard setback of 25 feet, where 30 feet is normally required.
5. All necessary building permits shall be obtained and final inspections shall be completed in compliance with Title 19 and all codes as required by the Department of Building and Safety.

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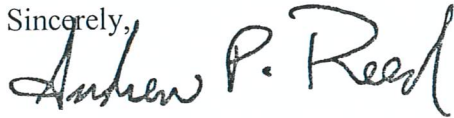
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7. All City Code requirements and design standards of all City departments must be satisfied, except as modified herein.

This item will be considered by the City Council on March 16, 2016, at 1:00 P.M. in the Council Chambers of City Hall, 495 South Main Street, Las Vegas, Nevada. ***The Council requires that you or your representative be present at this meeting.*** If you or your representative chooses not to attend, the City Council may act in your absence without your input.

Sincerely,



Andrew P. Reed, AICP
Planning Supervisor
Case Planning Division

AR:nl

cc:

Mr. Mark Jones
DR Horton
1081 Whitney Ranch Drive, Ste. 141
Henderson, Nevada 89014

Ms. Aimee English
Triton Engineering
6757 West Charleston Blvd., Ste. B
Las Vegas, Nevada 89146



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BOB BEERS

ELIZABETH N. FRETWELL
CITY MANAGER

February 10, 2016

Mr. Thomas L. Brooker
Azure & Torrey Pines 24, LLC
8485 West Sunset Road, Ste. 204
Las Vegas, Nevada 89113

**RE: VAR-62778 [PRJ-62712] - VARIANCE RELATED TO ZON-62784, VAR-62756, VAR-62765 THROUGH VAR-62777, VAR-62779 THROUGH VAR-62783, VAR-62785, WVR-62786 AND TMP-62787
PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016**

Dear Applicant:

Your request for a Variance TO ALLOW A 10-FOOT FRONT YARD SETBACK WHERE 25 FEET IS REQUIRED AND A 25-FOOT REAR YARD SETBACK WHERE 30 FEET IS REQUIRED ON LOT 14 OF A PROPOSED 20-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), R-E (Residence Estates) Zone, [PROPOSED: R-D (Single Family Residential-Restricted)], Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

The Planning Commission voted to recommend **APPROVAL** of your request, subject to the following:

Planning

1. Approval of Rezoning (ZON-62784).
2. Approval of and conformance to the Conditions of Approval for Variance (VAR-62756), Waiver (WVR-62786) and Tentative Map (TMP-62787) shall be required, if approved.
3. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
4. These Variances approve a front yard setback of 20 feet, where 25 feet is normally required and a rear yard setback of 25 feet, where 30 feet is normally required.
5. All necessary building permits shall be obtained and final inspections shall be completed in compliance with Title 19 and all codes as required by the Department of Building and Safety.

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

This item will be considered by the City Council on March 16, 2016, at 1:00 P.M. in the Council Chambers of City Hall, 495 South Main Street, Las Vegas, Nevada. ***The Council requires that you or your representative be present at this meeting.*** If you or your representative chooses not to attend, the City Council may act in your absence without your input.

Sincerely,



Andrew P. Reed, AICP
Planning Supervisor
Case Planning Division

AR:nl

cc:

Mr. Mark Jones
DR Horton
1081 Whitney Ranch Drive, Ste. 141
Henderson, Nevada 89014

Ms. Aimee English
Triton Engineering
6757 West Charleston Blvd., Ste. B
Las Vegas, Nevada 89146



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CITY COUNCIL**

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BOB BEERS

ELIZABETH N. FRETWELL
CITY MANAGER

February 10, 2016

Mr. Thomas L. Brooker
Azure & Torrey Pines 24, LLC
8485 West Sunset Road, Ste. 204
Las Vegas, Nevada 89113

**RE: VAR-62779 [PRJ-62712] - VARIANCE RELATED TO ZON-62784, VAR-62756, VAR-62765 THROUGH VAR-62778, VAR-62780 THROUGH VAR-62783, VAR-62785, WVR-62786 AND TMP-62787
PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016**

Dear Applicant:

Your request for a Variance TO ALLOW A 10-FOOT FRONT YARD SETBACK WHERE 25 FEET IS REQUIRED AND A 25-FOOT REAR YARD SETBACK WHERE 30 FEET IS REQUIRED ON LOT 15 OF A PROPOSED 20-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), R-E (Residence Estates) Zone, [PROPOSED: R-D (Single Family Residential-Restricted)], Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

The Planning Commission voted to recommend **APPROVAL** of your request, subject to the following:

Planning

1. Approval of Rezoning (ZON-62784).
2. Approval of and conformance to the Conditions of Approval for Variance (VAR-62756), Waiver (WVR-62786) and Tentative Map (TMP-62787) shall be required, if approved.
3. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
4. These Variances approve a front yard setback of 20 feet, where 25 feet is normally required and a rear yard setback of 25 feet, where 30 feet is normally required.
5. All necessary building permits shall be obtained and final inspections shall be completed in compliance with Title 19 and all codes as required by the Department of Building and Safety.

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7. All City Code requirements and design standards of all City departments must be satisfied, except as modified herein.

This item will be considered by the City Council on March 16, 2016, at 1:00 P.M. in the Council Chambers of City Hall, 495 South Main Street, Las Vegas, Nevada. ***The Council requires that you or your representative be present at this meeting.*** If you or your representative chooses not to attend, the City Council may act in your absence without your input.

Sincerely,



Andrew P. Reed, AICP
Planning Supervisor
Case Planning Division

AR:nl

cc:

Mr. Mark Jones
DR Horton
1081 Whitney Ranch Drive, Ste. 141
Henderson, Nevada 89014

Ms. Aimee English
Triton Engineering
6757 West Charleston Blvd., Ste. B
Las Vegas, Nevada 89146



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BOB BEERS

ELIZABETH N. FRETWELL
CITY MANAGER

February 10, 2016

Mr. Thomas L. Brooker
Azure & Torrey Pines 24, LLC
8485 West Sunset Road, Ste. 204
Las Vegas, Nevada 89113

**RE: VAR-62780 [PRJ-62712] - VARIANCE RELATED TO ZON-62784, VAR-62756, VAR-62765 THROUGH VAR-62779, VAR-62781 THROUGH VAR-62783, VAR-62785, WVR-62786 AND TMP-62787
PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016**

Dear Applicant:

Your request for a Variance TO ALLOW A 10-FOOT FRONT YARD SETBACK WHERE 25 FEET IS REQUIRED AND A 25-FOOT REAR YARD SETBACK WHERE 30 FEET IS REQUIRED ON LOT 16 OF A PROPOSED 20-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), R-E (Residence Estates) Zone, [PROPOSED: R-D (Single Family Residential-Restricted)], Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

The Planning Commission voted to recommend **APPROVAL** of your request, subject to the following:

Planning

1. Approval of Rezoning (ZON-62784).
2. Approval of and conformance to the Conditions of Approval for Variance (VAR-62756), Waiver (WVR-62786) and Tentative Map (TMP-62787) shall be required, if approved.
3. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
4. These Variances approve a front yard setback of 20 feet, where 25 feet is normally required and a rear yard setback of 25 feet, where 30 feet is normally required.
5. All necessary building permits shall be obtained and final inspections shall be completed in compliance with Title 19 and all codes as required by the Department of Building and Safety.

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This item will be considered by the City Council on March 16, 2016, at 1:00 P.M. in the Council Chambers of City Hall, 495 South Main Street, Las Vegas, Nevada. ***The Council requires that you or your representative be present at this meeting.*** If you or your representative chooses not to attend, the City Council may act in your absence without your input.

Sincerely,



Andrew P. Reed, AICP
Planning Supervisor
Case Planning Division

AR:nl

cc:

Mr. Mark Jones
DR Horton
1081 Whitney Ranch Drive, Ste. 141
Henderson, Nevada 89014

Ms. Aimee English
Triton Engineering
6757 West Charleston Blvd., Ste. B
Las Vegas, Nevada 89146



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BOB COFFIN
BOB BEERS

ELIZABETH N. FRETWELL
CITY MANAGER

February 10, 2016

Mr. Thomas L. Brooker
Azure & Torrey Pines 24, LLC
8485 West Sunset Road, Ste. 204
Las Vegas, Nevada 89113

**RE: VAR-62781 [PRJ-62712] - VARIANCE RELATED TO ZON-62784, VAR-62756, VAR-62765 THROUGH VAR-62780, VAR-62782, VAR-62783, VAR-62785, WVR-62786 AND TMP-62787
PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016**

Dear Applicant:

Your request for a Variance TO ALLOW A 10-FOOT FRONT YARD SETBACK WHERE 25 FEET IS REQUIRED AND A 25-FOOT REAR YARD SETBACK WHERE 30 FEET IS REQUIRED ON LOT 17 OF A PROPOSED 20-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), R-E (Residence Estates) Zone, [PROPOSED: R-D (Single Family Residential-Restricted)], Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

The Planning Commission voted to recommend **APPROVAL** of your request, subject to the following:

Planning

1. Approval of Rezoning (ZON-62784).
2. Approval of and conformance to the Conditions of Approval for Variance (VAR-62756), Waiver (WVR-62786) and Tentative Map (TMP-62787) shall be required, if approved.
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4. These Variances approve a front yard setback of 20 feet, where 25 feet is normally required and a rear yard setback of 25 feet, where 30 feet is normally required.
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7. All City Code requirements and design standards of all City departments must be satisfied, except as modified herein.

This item will be considered by the City Council on March 16, 2016, at 1:00 P.M. in the Council Chambers of City Hall, 495 South Main Street, Las Vegas, Nevada. ***The Council requires that you or your representative be present at this meeting.*** If you or your representative chooses not to attend, the City Council may act in your absence without your input.

Sincerely,



Andrew P. Reed, AICP
Planning Supervisor
Case Planning Division

AR:nl

cc:

Mr. Mark Jones
DR Horton
1081 Whitney Ranch Drive, Ste. 141
Henderson, Nevada 89014

Ms. Aimee English
Triton Engineering
6757 West Charleston Blvd., Ste. B
Las Vegas, Nevada 89146



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BOB COFFIN
BOB BEERS

ELIZABETH N. FRETWELL
CITY MANAGER

February 10, 2016

Mr. Thomas L. Brooker
Azure & Torrey Pines 24, LLC
8485 West Sunset Road, Ste. 204
Las Vegas, Nevada 89113

**RE: VAR-62782 [PRJ-62712] - VARIANCE RELATED TO ZON-62784, VAR-62756, VAR-62765 THROUGH VAR-62781, VAR-62783, VAR-62785, WVR-62786 AND TMP-62787
PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016**

Dear Applicant:

Your request for a Variance TO ALLOW A 10-FOOT FRONT YARD SETBACK WHERE 25 FEET IS REQUIRED AND A 25-FOOT REAR YARD SETBACK WHERE 30 FEET IS REQUIRED ON LOT 18 OF A PROPOSED 20-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), R-E (Residence Estates) Zone, [PROPOSED: R-D (Single Family Residential-Restricted)], Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

The Planning Commission voted to recommend **APPROVAL** of your request, subject to the following:

Planning

1. Approval of Rezoning (ZON-62784).
2. Approval of and conformance to the Conditions of Approval for Variance (VAR-62756), Waiver (WVR-62786) and Tentative Map (TMP-62787) shall be required, if approved.
3. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
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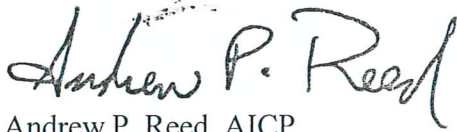


/city of las vegas

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This item will be considered by the City Council on March 16, 2016, at 1:00 P.M. in the Council Chambers of City Hall, 495 South Main Street, Las Vegas, Nevada. ***The Council requires that you or your representative be present at this meeting.*** If you or your representative chooses not to attend, the City Council may act in your absence without your input.

Sincerely,



Andrew P. Reed, AICP
Planning Supervisor
Case Planning Division

AR:nl

cc:

Mr. Mark Jones
DR Horton
1081 Whitney Ranch Drive, Ste. 141
Henderson, Nevada 89014

Ms. Aimee English
Triton Engineering
6757 West Charleston Blvd., Ste. B
Las Vegas, Nevada 89146



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BOB BEERS

ELIZABETH N. FRETWELL
CITY MANAGER

February 10, 2016

Mr. Thomas L. Brooker
Azure & Torrey Pines 24, LLC
8485 West Sunset Road, Ste. 204
Las Vegas, Nevada 89113

**RE: VAR-62783 [PRJ-62712] - VARIANCE RELATED TO ZON-62784, VAR-62756, VAR-62765 THROUGH VAR-62782, VAR-62785, WVR-62786 AND TMP-62787
PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016**

Dear Applicant:

Your request for a Variance TO ALLOW A 10-FOOT FRONT YARD SETBACK WHERE 25 FEET IS REQUIRED AND A 25-FOOT REAR YARD SETBACK WHERE 30 FEET IS REQUIRED ON LOT 19 OF A PROPOSED 20-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), R-E (Residence Estates) Zone, [PROPOSED: R-D (Single Family Residential-Restricted)], Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

The Planning Commission voted to recommend **APPROVAL** of your request, subject to the following:

Planning

1. Approval of Rezoning (ZON-62784).
2. Approval of and conformance to the Conditions of Approval for Variance (VAR-62756), Waiver (WVR-62786) and Tentative Map (TMP-62787) shall be required, if approved.
3. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
4. These Variances approve a front yard setback of 20 feet, where 25 feet is normally required and a rear yard setback of 25 feet, where 30 feet is normally required.
5. All necessary building permits shall be obtained and final inspections shall be completed in compliance with Title 19 and all codes as required by the Department of Building and Safety.

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7. All City Code requirements and design standards of all City departments must be satisfied, except as modified herein.

This item will be considered by the City Council on March 16, 2016, at 1:00 P.M. in the Council Chambers of City Hall, 495 South Main Street, Las Vegas, Nevada. ***The Council requires that you or your representative be present at this meeting.*** If you or your representative chooses not to attend, the City Council may act in your absence without your input.

Sincerely,



Andrew P. Reed, AICP
Planning Supervisor
Case Planning Division

AR:nl

cc:

Mr. Mark Jones
DR Horton
1081 Whitney Ranch Drive, Ste. 141
Henderson, Nevada 89014

Ms. Aimee English
Triton Engineering
6757 West Charleston Blvd., Ste. B
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BOB BEERS

ELIZABETH N. FRETWELL
CITY MANAGER

February 10, 2016

Mr. Thoma Ward 6 (Ross) s L. Brooker
Azure & Torrey Pines 24, LLC
8485 West Sunset Road, Ste. 204
Las Vegas, Nevada 89113

**RE: VAR-62785 [PRJ-62712] - VARIANCE RELATED TO ZON-62784, VAR-62756, VAR-62765 THROUGH VAR-62783, WVR-62786 AND TMP-62787
PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016**

Dear Applicant:

Your request for a Variance TO ALLOW A 10-FOOT FRONT YARD SETBACK WHERE 25 FEET IS REQUIRED AND A 25-FOOT REAR YARD SETBACK WHERE 30 FEET IS REQUIRED ON LOT 20 OF A PROPOSED 20-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), R-E (Residence Estates) Zone, [PROPOSED: R-D (Single Family Residential-Restricted)], Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

The Planning Commission voted to recommend **APPROVAL** of your request, subject to the following:

Planning

1. Approval of Rezoning (ZON-62784).
2. Approval of and conformance to the Conditions of Approval for Variance (VAR-62756), Waiver (WVR-62786) and Tentative Map (TMP-62787) shall be required, if approved.
3. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
4. This Variance approves a front yard setback of 20 feet, where 25 feet is normally required and a rear yard setback of 25 feet, where 30 feet is normally required.
5. All necessary building permits shall be obtained and final inspections shall be completed in compliance with Title 19 and all codes as required by the Department of Building and Safety.

CITY OF LAS VEGAS
DEPARTMENT OF PLANNING
DEVELOPMENT SERVICES CENTER
333 NORTH RANCHO DRIVE
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6. These Conditions of Approval shall be affixed to the cover sheet of any plan set submitted for building permit.
7. All City Code requirements and design standards of all City departments must be satisfied, except as modified herein.

This item will be considered by the City Council on March 16, 2016, at 1:00 P.M. in the Council Chambers of City Hall, 495 South Main Street, Las Vegas, Nevada. ***The Council requires that you or your representative be present at this meeting.*** If you or your representative chooses not to attend, the City Council may act in your absence without your input.

Sincerely,



Andrew P. Reed, AICP
Planning Supervisor
Case Planning Division

AR:nl

cc:

Mr. Mark Jones
DR Horton
1081 Whitney Ranch Drive, Ste. 141
Henderson, Nevada 89014

Ms. Aimee English
Triton Engineering
6757 West Charleston Blvd., Ste. B
Las Vegas, Nevada 89146



**LAS VEGAS
CITY COUNCIL**

CAROLYN G. GOODMAN
MAYOR

STEVEN D. ROSS
MAYOR PRO TEM

LOIS TARKANIAN
RICKI Y. BARLOW
STAVROS S. ANTHONY
BOB COFFIN
BOB BEERS

ELIZABETH N. FRETWELL
CITY MANAGER

February 10, 2016

Mr. Thomas L. Brooker
Azure & Torrey Pines 24, LLC
8485 West Sunset Road, Ste. 204
Las Vegas, Nevada 89113

**RE: WVR-62786 [PRJ-62712] - WAIVER RELATED TO ZON-62784, VAR-62756,
VAR-62765 THROUGH VAR-62783, VAR-62785 AND TMP-62787
PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016**

Dear Applicant:

Your request for a Waiver TO ALLOW A 177-FOOT EXTERNAL INTERSECTION OFFSET WHERE 220 FEET IS THE MINIMUM DISTANCE SEPARATION REQUIRED on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), R-E (Residence Estates) Zone, [PROPOSED: R-D (Single Family Residential-Restricted)], Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

The Planning Commission voted to recommend **APPROVAL** of your request, subject to the following:

Planning

1. Approval of Rezoning (ZON-62784).
2. Approval of and conformance to the Conditions of Approval for Variance (VAR-62756) and Tentative Map (TMP-62787) shall be required, if approved.
3. This approval shall be void four (4) years from date of final approval, unless a building permit has been issued for new construction. An Extension of Time may be filed for consideration by the City of Las Vegas.
4. All City Code requirements and design standards of all City departments must be satisfied, except as modified herein.

This item will be considered by the City Council on March 16, 2016, at 1:00 P.M. in the Council Chambers of City Hall, 495 South Main Street, Las Vegas, Nevada. ***The Council requires that you or your representative be present at this meeting.*** If you or your representative chooses not to attend, the City Council may act in your absence without your input.

Sincerely,

Andrew P. Reed, AICP
Planning Supervisor
Case Planning Division

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WVR-62786 [PRJ-62712] - Page Two
February 10, 2016

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Henderson, Nevada 89014

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February 10, 2016

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BOB COFFIN
BOB BEERS

ELIZABETH N. FRETWELL
CITY MANAGER

**RE: TMP-62787 [PRJ-62712] - TENTATIVE MAP RELATED TO ZON-62784,
VAR-62756, VAR-62765 THROUGH VAR-62783, VAR-62785 AND WVR-
62786**

PLANNING COMMISSION MEETING OF FEBRUARY 9, 2016

Dear Applicant:

Your request for a Tentative Map FOR A 20-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION on 6.08 acres at the southwest corner of Azure Drive and Torrey Pines Drive (APNs 125-26-203-002 through 004), R-E (Residence Estates) Zone, [PROPOSED: R-D (Single Family Residential-Restricted)], Ward 6 (Ross) [PRJ-62712], was considered by the Planning Commission on February 9, 2016.

The Planning Commission voted to recommend **APPROVAL** of your request, subject to the following:

Planning

1. Approval of the Tentative Map shall be for no more than four (4) years. If a Final Map is not recorded on all or a portion of the area embraced by the Tentative Map with four (4) years of the approval of the Tentative Map, this action is void.
2. Approval of Rezoning (ZON-62784).
3. All development shall conform to the Conditions of Approval for Variance (VAR-62756) and Waiver (WVR-62786) applications.
4. Housing units are restricted to single-story construction on all 20 lots.
5. Street names must be provided in accordance with the City's Street Naming Regulations.
6. In conjunction with creation, declaration and recordation of the subject common-interest community, and prior to recordation of the Covenants, Codes and Restrictions ("CC&R"), or conveyance of any unit within the community, the Developer is required to record a Declaration of Private Maintenance Requirements ("DPMR") as a covenant on all associated properties, and on behalf of all current and future property owners. The DPMR is to include a

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listing of all privately owned and/or maintained infrastructure improvements, along with assignment of maintenance responsibility for each to the common interest community or the respective individual property owners, and is to provide a brief description of the required level of maintenance for privately maintained components. The DPMR must be reviewed and approved by the City of Las Vegas Department of Field Operations prior to recordation, and must include a statement that all properties within the community are subject to assessment for all associated costs should private maintenance obligations not be met, and the City of Las Vegas be required to provide for said maintenance. Also, the CC&R are to include a statement of obligation of compliance with the DPMR. Following recordation, the Developer is to submit copies of the recorded DPMR and CC&R documents to the City of Las Vegas Department of Field Operations.

7. A fully operational fire protection system, including fire apparatus roads, fire hydrants and water supply, shall be installed and functioning prior to construction of any combustible structures.
8. All development is subject to the conditions of City Departments and State Subdivision Statutes.

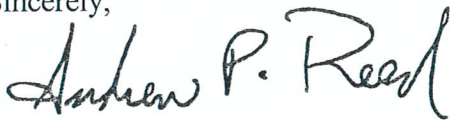
Public Works

9. Construct half-street improvements on Azure Drive and Torrey Pines Drive adjacent to the site to match existing improvements to the north, east, and northeast, as shown on the site plan dated 12/24/15; i.e. attached sidewalk with no amenity zone. All existing paving damaged or removed by this development shall be restored at its original location and to its original width concurrent with development of this site.
10. The private street for this site must be granted as a "Public Utility Easement, Public Sewer Easement, and Public Drainage Easement with private surface maintenance by the Homeowner's Association" on the Final Map for this site.
11. A working sanitary sewer connection shall be in place prior to final inspection of any units within this development. Full permanent improvements on all major access streets, including all required landscaped areas between the perimeter wall and adjacent public street, shall be constructed and accepted by the City prior to issuance of any building permits beyond 50% of all units within this development. All off-site improvements adjacent to this site, including all required landscaped areas between the perimeter walls and adjacent public streets, shall be constructed and accepted prior to issuance of building permits beyond 75%. The above thresholds notwithstanding, all required improvements shall be constructed in accordance with Title 19.02.130.D.
12. All landscaping and private improvements installed with this project shall be situated and maintained so as to not create sight visibility obstructions for vehicular traffic at all development access drives and abutting street intersections.

13. As per Unified Development Code (UDC) 19.16.060.G, all requirements must be complied with or such future compliance must be guaranteed by an approved performance security method in accordance with UDC sections 19.02.130.C and 19.02.130.E.
14. A Drainage Plan and Technical Drainage Study must be submitted to and approved by the Department of Public Works prior to the issuance of any building or grading permits or submittal of any construction drawings, whichever may occur first. Provide and improve all drainageways recommended in the approved drainage plan/study. The developer of this site shall be responsible to construct such neighborhood or local drainage facility improvements as are recommended by the City of Las Vegas Neighborhood Drainage Studies and approved Drainage Plan/Study concurrent with development of this site.
15. The approval of all Public Works related improvements shown on this Tentative Map is in concept only. Specific design and construction details relating to size, type and/or alignment of improvements, including but not limited to street, sewer and drainage improvements, shall be resolved prior to approval of the construction plans by the City. No deviations from adopted City Standards shall be allowed unless specific written approval for such is received from the City Engineer prior to the recordation of a Final Map or the approval of subdivision-related construction plans, whichever may occur first. Approval of this Tentative Map does not constitute approval of any deviations. If such approval cannot be obtained, a revised Tentative Map must be submitted showing elimination of such deviations.

This item will be considered by the City Council on March 16, 2016, at 1:00 P.M. in the Council Chambers of City Hall, 495 South Main Street, Las Vegas, Nevada. ***The Council requires that you or your representative be present at this meeting.*** If you or your representative chooses not to attend, the City Council may act in your absence without your input.

Sincerely,



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AZURE & TORREY PINES NORTH TECHNICAL DRAINAGE STUDY

VICINITY MAP

SCALE: NONE

215

W AZURE DRIVE

PROJECT SITE

W TROPICAL PARKWAY

N RAINBOW BLVD

N TORREY PINES DR

N JONES BLVD

W ANN RD

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10.	STORM DRAIN PLAN & PROFILES

SHEET **1** OF 10
C.L.V. DWG.#



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Q:\Triton Drawings\007.099 AzureTorrey Pines North\Drawings\URANAGE PLAN SET\01_drainage cover-notes.dwg chere Wed, 24 Feb 2016 - 10:14am

ABBREVIATIONS

ABAN - ABANDON	IN - INCH	S - SOUTH/SLOPE
AC - ASPHALTIC CONCRETE	INST - INSTALL	S/C - SAW CUT
AGGR - AGGREGATE	INT - INTERIOR	SCOP - STEEL CYLINDER CONCRETE
& - AND	INV - INVERT	SD - SCHEDULE
APPR - ASSESSOR PARCEL NUMBER	IRR - IRRIGATION	SD - STORM DRAIN
APPROX - APPROXIMATE		SDMH - STORM DRAIN MANHOLE
ASSY - ASSEMBLY	LB OR # - POUND	SDWK - SIDEWALK
AVE - AVENUE	LEN OR L - LENGTH OF CURVATURE	SE - SOUTHEAST
	LF - LINEAR FOOT	SEC - SECTION/SECOND
BC - BACK OF CURB	LG - LONG	SEG - SEGMENT
BCK - BACK OF CURVE RETURN	LN - LANE	SHDR - SHOULDER
BK - BODY/BACK	LT - LEFT/LIGHT	SHT - SHEET
BLDG - BUILDING	LVWD - LAS VEGAS VALLEY	SD - SPECIAL IMPROVEMENT
BLK - BLOCK	LWR - LOWER	SIG - SIGNAL
BLM - BUREAU OF LAND		SL - SLOPE
MANAGEMENT		SLV - SLEEVE
BLVD - BOULEVARD	M - METER	SNWA - SOUTHERN NEVADA WATER
BM - BENCHMARK	MATL - MATERIAL	
BO - BLOW OFF ASSEMBLY	MAX - MAXIMUM	
BOC - BACK OF CURB	MCH - MECHANICAL	
BOT - BOTTOM	MFR - MANUFACTURER	SPEC(S) - SPECIFICATION(S)
BOW - BACK OF WALK	MG - MILLION GALLONS	SQ - SQUARE
BRD - BEARING	MGO - MILLION GALLONS PER DAY	SQ FT - SQUARE FOOT/FEET
BVC - BEGIN VERTICAL CURVE	BU - BULKHEAD	SY - SQUARE YARD
BW - BACK OF WALK	MIN - MINIMUM	SS - SANITARY SEWER
BWC - BACK WATER VALVE	MISC - MISCELLANEOUS	ST - STREET
	MJ - MECHANICAL JOINT	STA - STATION
	MKR - MARKER	STD - STANDARD
	ML - MORTAR LINED	STL - STEEL
	MLC - MORTAR LINED & COATED	STLT - STREET LIGHT
	MVC - MIDDLE OF VERTICAL CURVE	SUR - SURVEY
		SW - SIDEWALK OR SOUTHWEST
		SY - SQUARE YARD
	N - NORTH	SYM - SYMBOL
	N/A - NOT APPLICABLE	SYS - SYSTEM
	NAP - NOT A PART	
	NDOT - NEVADA DEPARTMENT	T&B - TOP & BOTTOM
	OF TRANSPORTATION	TAN - TANGENT
		TC - TOP OF CURB
CL - CIRCLE	NE - NORTHEAST	TCR - TOP OF CURB RAMP
CL OR C - CENTERLINE	NF - NORTH FACE	TOB - TOP OF BENCH
ONLY - LAS VEGAS	NO - NATURAL GROUND	TOG - TOP OF GRATE
	NG - NO. OR # - NUMBER	TOH - TOP OF HOLE
	NIS - NOT TO SCALE	TOI - TOP OF INLET
	NW - NORTHWEST	TOS - TOP OF SLAB
		TOSW - TOP OF SIDEWALK
		TOT - TOTAL
		OVFL - OVERFLOW
		TOW - TOP OF WALL
		(TYP) - TYPICAL
	O/O - OUT TO OUT	UNO - UNLESS NOTED OTHERWISE
	OC - ON CENTER	UPRR - UNION PACIFIC RAILROAD
	OD - OUTSIDE DIAMETER	USGS - UNITED STATES GEOLOGIC
	OF - OUTSIDE FACE	SURVEY
	OH - OVER HEAD POWER	UTIL - UTILITY
	OHTEL - OVER HEAD TELEPHONE	
	ORIG - ORIGINAL	
	OVFL - OVERFLOW	
	O/O - OUT TO OUT	
	OC - ON CENTER	
	OD - OUTSIDE DIAMETER	
	OF - OUTSIDE FACE	
	OH - OVER HEAD POWER	
	OHTEL - OVER HEAD TELEPHONE	
	ORIG - ORIGINAL	
	OVFL - OVERFLOW	
	PL OR P - PROPERTY LINE	V - VOLT OR VALVE
	PAVMT - PAVEMENT	VAR - VARIES
	PG - PULL BOX	VB - VALVE BOX
	PC - POINT OF CURVE	VCP - VERTICAL CURVE
	PCC - POINT OF COMPOUND CURVE	VEL - VELOCITY
	PE - POLYETHYLENE	VERT - VERTICAL
	PED - PEDESTAL	VC - VALLEY CUTTER
	PERM - PERMANENT	VOL - VOLUME
	PERP - PERPENDICULAR	VPI - VERTICAL POINT OF
	PH - PHASE	INTERSECTION
	PI - POINT OF INTERSECTION	
	PKG - PACKAGE	W/ - WITH
	PKWY - PARKWAY	W - WEST/WATER
	PL - PLACE/PLATE/PARCEL LINE	W/O - WITH OUT
	PLT - PLATE (DRAWING)	WD - WIDTH
	POLY - POLYETHYLENE	WDN - WASTE DRAIN
	PP - POWER POLE	WI - WROUGHT IRON
	PR - PAIR	ML - MOUNTED LIGHT
	PRC - POINT OF REVERSE CURVE/	WP - WORK POINT/WEATHER PROOF
	PRELIM - PRELIMINARY	WS - WATER SURFACE
	PROP - PROPOSED	WT - WEIGHT
	PS - PUMP STATION	WTR - WATER
	PSF - POUNDS PER SQUARE FOOT	WW - WATER VALVE
	PSI - POUNDS PER SQUARE INCH	WWF - WELDED WIRE FABRIC
	PT - POINT/POINT OF TANGENT	WWM - WELDED WIRE MESH
	PUE - PUBLIC UTILITY EASEMENT	
	PVI - POINT OF VERTICAL	XFMR - TRANSFORMER
	INTERSECTION	XFR - TRANSFER
	PVC - POLYVINYL CHLORIDE PIPE	XSEC - CROSS SECTION
	QTR - QUARTER	
	QTY - QUANTITY	YD - YARD
		YLD - YIELD
	R - RADIUS	
	(R) - RADIAL	
	R/W - RIGHT OF WAY	
	RCB - REINFORCED CONCRETE BOX	
	RCP - REINFORCED CONCRETE PIPE	
	RD - ROAD	
	RED - REDUCER	
	REQD - REQUIRED	
	RET - RETURN	
	REV - REVISION OR REVERSE	
	ROW - RIGHT OF WAY	
	RPPA - REDUCED PRESSURE	
	PRINCIPLE ASSEMBLY	
	RR - RAILROAD	
	RT - RIGHT	

CITY OF LAS VEGAS SEWER NOTES

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

CITY OF LAS VEGAS GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA NEVADA; LATEST ISSUE; THE UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY AREA NEVADA; LATEST REVISED EDITION; THE SUMMERLIN IMPROVEMENT STANDARDS FOR WORK IN THE SUMMERLIN AREA; AND OTHER APPLICABLE APPROVED STANDARDS ISSUED BY THE CONTROLLING AGENCY; THE UNIFORM BUILDING CODE; AND ALL LOCAL CITY CODES AND ORDINANCES APPLICABLE, EXCEPT AS NOTED ON THIS SHEET AS DEVIATIONS FROM STANDARDS.
 2. THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. EXISTING UTILITIES AS SHOWN FROM CLV PLANS LIBRARY ARE APPROXIMATE AND FOR RECORD PURPOSES. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. EXISTING UTILITY SERVICE LATERALS MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND AND OVERHEAD INTERFERENCE'S WHICH MAY AFFECT HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH.
 3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING UTILITY LINES, STRUCTURES AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED SATISFACTORY TO THE CITY ENGINEER AND OWNING UTILITY COMPANY AT THE EXPENSE OF THE CONTRACTOR.
 4. ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE PLANS, ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.
 5. TYPE V CEMENT SHALL BE USED IN ALL OFF-SITE CONCRETE WORK. CONCRETE TO BE 3000 P.S.I. MINIMUM @ 28 DAYS. MIX DESIGNS TO BE APPROVED BY THE CITY, PRIOR TO THE USE ON THE PROJECT.
 6. PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.
 7. EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300' IN EXTRUDED-TYPE CURB.
 8. AC PAVEMENT TO BE ONE-HALF INCH (1/2) ABOVE LIP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK MANHOLES AND CROSS UTILITY.
 9. CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED PER STANDARD DRAWING 216.
 10. SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.
 11. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING STRUCTURES. ALL OTHER WORK NECESSARY 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 THE (COMPANY, _ REPORT #, DATE) APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.
 13. EXACT LOCATION OF ALL SAWCUT LINES MAY BE ADJUSTED OR DETERMINED IN THE FIELD BY A CITY OF LAS VEGAS ENGINEER. LOCATION ON PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES RELOCATIONS.
 14. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEY MONUMENTS. ANY MONUMENTS DISTURBED SHALL BE REPLACED AND ADJUSTED PER AVAILABLE RECORDS IN ACCORDANCE WITH N.R.S. STATUTE NO. 625.380 & CITY OF LAS VEGAS TITLE 18, APPENDIX D.
 15. UTILITY COMPANY METER BOXES, MANHOLE LIDS, VALVE COVERS, ETC., SHALL BE LOCATED OUT OF DRIVEWAYS, DRIVEWAY APRONS, FLOWLINES, AND GROSS GUTTERS UNLESS WRITTEN APPROVAL IS GRANTED BY THE UTILITY COMPANY AND THE CITY ENGINEER.
- WALL NOTES:
16. ALL WALLS, NEW OR EXISTING, ARE ONLY SHOWN ON CIVIL PLANS FOR THE PURPOSE OF REVIEWING GRADING RELATIONSHIPS; FLOOD CONTROL AND SIGHT DISTANCE AT INTERSECTIONS. NEW WALLS REQUIRE A SEPARATE PERMIT AND INSPECTION BY THE BUILDING DEPARTMENT.
 17. ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT OF WAY.
 18. CONTRACTOR SHALL ADJUST ALL NEW AND EXISTING INLETS, VALVE BOXES, MANHOLE RIMS, AND SEWER CLEAN OUTS, ETC. TO FINISH GRADE AS APPLICABLE. WHETHER OR NOT THEY ARE SHOWN ON THE PLANS.
 19. MATERIALS, HANDLING AND PLACEMENT OF PORTLAND CEMENT CONCRETE SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF NDOT OR THE CLARK COUNTY AREA SPECIFICATIONS (AS APPLICABLE) AND THE PLANS AND DETAILS SHOWN HEREON.
 20. WHEN INSTALLING UNDERGROUND FACILITIES THAT REQUIRE UNDERGROUND LOCATING DEVICES SUCH AS MARKER BALLS, LOCATING RIBBON, ETC., THE CONTRACTOR SHALL 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. ~~SECONDARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S) SHALL BE PROVIDED TO THE CITY AND APPROVED PRIOR TO ACCEPTANCE OF FACILITY VIDEO INSPECTION. THE MAP(S) SHALL INCLUDE THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES AND TRANSITION STRUCTURES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND AT 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, 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 MAPS MUST BE SEALED AND CERTIFIED BY A NEVADA PROFESSIONAL LAND SURVEYOR TO THE NEAREST POSITIONAL CERTAINTIES OF ± 0.05 METERS (± 0.3 FEET) HORIZONTALLY AND VERTICALLY. A SEPARATE 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).~~

OR

SANITARY SEWER AND STORM DRAIN FACILITIES SHOWN ON THESE PLANS SHALL BE USED TO MEET THE REQUIREMENTS OF MRS 455 AND SHALL SHOW AT A MINIMUM THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND AT THE CONNECTION TO A DROP INLET, AND THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS EXIT THE PUBLIC RIGHT-OF-WAY. ANY DEVIATIONS FROM THE INFORMATION SHOWN SHALL BE NOTED AND SUBMITTED AS A REVISION TO THE PLANS AND APPROVED PRIOR TO ACCEPTANCE OF FACILITY VIDEO INSPECTION.

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 EDITION.

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

REVISED 02/03/15

CITY OF LAS VEGAS FIRE DEPARTMENT NOTES

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LAS VEGAS FIRE AND RESCUE ADOPTED FIRE CODE ORDINANCE # 6325 FOR HYDRANT SPECIFICATIONS AND HYDRANT INSTALLATION SPECIFICATIONS.
2. AUTHORIZED FIRE HYDRANTS ARE AS FOLLOWS:
 - KENNEDY - GUARDIAN MODELS KB1A AND KB1D
 - MUELLER - SUPER CENTURION 250, MODEL A-423
 - CLOW - MEDALLION MODEL F-2546LVD
 - U.S.PIPE - METROFLOW/M-03
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 § 105.7.12]
4. ON ANY RESIDENTIAL OR COMMERCIAL INSTALLATIONS, FIRE HYDRANTS SHALL BE INSTALLED AND FIRE APPARATUS ACCESS ROADS SHALL BE MAINTAINED BEFORE COMMENCEMENT OF ANY COMBUSTIBLE CONSTRUCTION. ALL FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER AND SHALL BE CAPABLE OF DELIVERING THE REQUIRED FIRE FLOW. [IFC § 3310, § 3312]
5. TO IDENTIFY THE FIRE HYDRANT LOCATIONS, THE CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT THE CENTER LINE OF THE STREET ADJACENT TO THE FIRE HYDRANTS. [IFC § 507.5.7.3]
6. ALL UNDERGROUND INSPECTIONS, PRESSURE AND FLUSH VERIFICATIONS OF ALL FIRE HYDRANTS AND FIRE LINES, SHALL BE CONDUCTED BEFORE COVERING THE LINES. CENTER LOADING IS ACCEPTABLE FOR THE HYDRO TESTS WITH PRIOR FIRE PREVENTION APPROVAL. [IFC § 106.3]
7. ALL ON-SITE UNDERGROUND WATER MAINS AND MATERIALS SHALL BE U.L. LISTED, A.W.W.A APPROVED AND SHALL BE RATED FOR THE APPROPRIATE WORKING PRESSURE. [IFC § 507.2.1, NFPA 24]
8. PAINTING OF CURBS, FIRE HYDRANTS, PADS, PROTECTION OF FIRE HYDRANTS FROM PHYSICAL DAMAGE, AND ALL OTHER WORK NECESSARY PER PLANS SHALL BE COMPLETED BEFORE APPROVAL BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION. [IFC § 507]
9. PRIVATE HYDRANTS SHALL BE PAINTED RED. [IFC § 507.5.7.1]
10. PRIOR TO THE FINAL OCCUPANCY, A FIRE FLOW TEST SHALL BE WITNESSED BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW. [IFC § 507]
11. FIRE HYDRANT SPACING SHALL BE AS FOLLOWS: [IFC § C102]
 - RESIDENTIAL - 500 FT UNSPRINKLERED; 600 FT SPRINKLERED.
 - COMMERCIAL - 300 FT UNSPRINKLERED; 400 FT SPRINKLERED.
12. WHERE THE WATER MAINS ARE EXTENDED ALONG STREETS OR NEW STREETS ARE INSTALLED WHERE FIRE HYDRANTS ARE NOT NEEDED FOR PROTECTION OF THE STRUCTURES, FIRE HYDRANTS SHALL BE INSTALLED AT A MAXIMUM OF 1000 FT SPACING. TO PROVIDE FOR TRANSPORTATION HAZARDS, WHERE STREETS ARE PROVIDED WITH MEDIAN DIVIDERS OR HAVE FOUR (4) OR MORE TRAFFIC LANES AND HAVE A TRAFFIC COUNT OF MORE THAN 30,000 PER DAY, HYDRANTS ARE REQUIRED ON EACH SIDE OF THE STREET SPACED AT 500 FT ON AN ALTERNATING BASIS. [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 § C102.12]
15. A MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A ONE-TWO FAMILY DWELLING SHALL NOT EXCEED 300 FT, AS MEASURED BY AN APPROVED ROUTE. [IFC § C102.4]
16. THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A FIRE DEPARTMENT CONNECTION (FDC) SHALL NOT EXCEED 100 FT, AS MEASURED BY AN APPROVED ROUTE. [IFC § C102.7]
17. THE MAXIMUM DISTANCE FROM A HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. [IFC § C102.6]
18. TWO (2) SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE IS A 4 OR MORE FIRE HYDRANTS/SPRINKLER LEAD-INS ARE INSTALLED ON A SINGLE SYSTEM. SECTIONAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 2 FIRE HYDRANTS CAN BE OUT OF SERVICE DUE TO A BREAK IN A WATER MAIN. [IFC § C104]
19. ALL FIRE APPARATUS ACCESS ROADS SHALL BE PAVED TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES, AND SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF THE FIRE APPARATUS. [IFC § 503.2.3]
20. THE GRADIENT FOR THE FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 12% ANGLES OF APPROACH AND ANGLES OF DEPARTURE SHALL NOT EXCEED 6% FOR 25 FT PRIOR TO OR AFTER THE GRADE CHANGE. ADJACENT TO THE STRUCTURES GRADIENT SHALL NOT EXCEED 6% [IFC § 503.2.7, § 503.2.8]
21. THE TURNING RADIUS OF THE FIRE APPARATUS ACCESS ROADS SHALL BE NO LESS THAN 52 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 40 FT FLOW LINE TO FLOW LINE WITH PARALLEL PARKING PERMITTED ON BOTH SIDES. NOT LESS THAN 32 FT WIDE, FLOW-LINE TO FLOW-LINE, WHERE PARKING IS PERMITTED ONLY ON ONE SIDE OF THE FIRE APPARATUS ACCESS ROAD, NOT LESS THAN 24 FT WIDE, FLOW-LINE TO FLOW-LINE, WHERE NO PARKING IS PERMITTED ON EITHER SIDE. FIRE LANES THROUGH PARKING LOTS SHALL BE NOT LESS THAN 24 FT. [IFC § 503.2.1.1]
24. A FIRE APPARATUS ACCESS 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. THIS DISTANCE COULD BE INCREASED TO 250 FT IF THE BUILDING IS SPRINKLERED. [IFC § 503.1.1]
25. APPROVED SECONDARY FIRE APPARATUS ACCESS SHALL BE PROVIDED FOR 100 OR MORE DWELLING UNITS, ROAD(S) WITH DEAD-ENDS OR WITH A SINGLE POINT OF ACCESS IN EXCESS OF 600 FT. COMMERCIAL AND INDUSTRIAL DEVELOPMENTS WHERE BUILDINGS EXCEED 2 STORIES OR 30 FEET IN HEIGHT, OR EXCEEDING 62,000 SQUARE FEET IN AREA. [IFC § 503.1.2]
26. ALL DEAD-END FIRE APPARATUS ROADS AND/OR FIRE LANES, PUBLIC OR PRIVATE, IN EXCESS OF 150 FT IN LENGTH SHALL BE PROVIDED WITH AN APPROVED TURN AROUND HAVING A MINIMUM DIAMETER OF 81 FT. [IFC § 503.2.5]
27. ALL FIRE APPARATUS ACCESS ROADS SHALL BE MARKED BY PLACING APPROVED SIGNS AT THE START OF THE DESIGNATED FIRE LANE, ONE SIGN AT THE END OF THE FIRE LANE AND WITH SIGNS AT INTERVALS OF 100 FT ALONG THE DESIGNATED FIRE LANES. SIGNS TO BE PLACED ON BOTH SIDES OF AN ACCESS ROADWAY IF NEEDED TO PREVENT PARKING ON EITHER SIDE. SIGNS TO BE INSTALLED NO HIGHER THAN 10 FT OR LESS THAN 6 FT FROM THE ROADWAY LEVEL. THE CURB ALONG OR ON THE PAVEMENT OR CEMENT (IF NO CURB IS PROVIDED) SHALL BE PAINTED WITH A RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS. [IFC § 503.3]
28. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE IFC § 503.6 AND IFC APPENDIX M.

EFFECTIVE 06/01/14

GENERAL LEGEND

	CENTERLINE
	UNIT BOUNDARY
	PROPOSED 1' GRADE CONTOUR
	PROPOSED 5' GRADE CONTOUR
	EXISTING 1' GRADE CONTOUR
	EXISTING 5' GRADE CONTOUR
	PROPOSED PROPERTY LINE
	PROPOSED SETBACK LINE
	PROPOSED HINGE LINE
	PROPOSED SWALE
	EXISTING CURB AND GUTTER
	PROPOSED CURB AND GUTTER
	RETAINING WALL
	GARDEN WALL WITH SOLID GROUT
	EXISTING FENCE
	EXISTING EDGE OF PAVEMENT
	PROPOSED EDGE OF PAVEMENT
	PROPOSED STREETLIGHT CONDUIT
	PROPOSED NO. 3 1/2 CONCRETE PULL BOX W/ METAL COVER
	EXISTING GAS
	EXISTING SEWER MAIN
	PROPOSED SEWER MAIN
	PROPOSED SEWER LATERAL
	EXISTING STORM DRAIN
	PROPOSED STORM DRAIN
	EXISTING WATER MAIN
	PROPOSED WATER MAIN
	PROPOSED FIRE HYDRANT
	LOT NUMBER
	PROPOSED FINISH FLOOR
	PROPOSED PAD ELEVATION
	EXISTING STREET LIGHT
	PROPOSED 100w HPS STREET LIGHT
	PROPOSED 150w HPS STREET LIGHT
	PROPOSED 200w HPS STREET LIGHT
	PROPOSED 250w HPS STREET LIGHT
	PROPOSED 400w HPS STREET LIGHT
	PROPOSED HANDICAP RAMP
	0" LIP DRIVEWAY
	2:1 SCARP
	COURSES OF 8" CMU
	NUMBER OF COURSES
	CUL-DE-SAC BACK OF CURB STATION
	KNUCKLE BACK OF CURB STATION
	SIGHT VISIBILITY ZONE
	PROPOSED RATE & FLOW DIRECTION
	PROPOSED ELEVATION WITH DESCRIPTION
	EXISTING ELEVATION WITH DESCRIPTION

Triton Engineering



DR HORTON

AZURE & TORREY PINES NORTH

GENERAL NOTES AND LEGEND



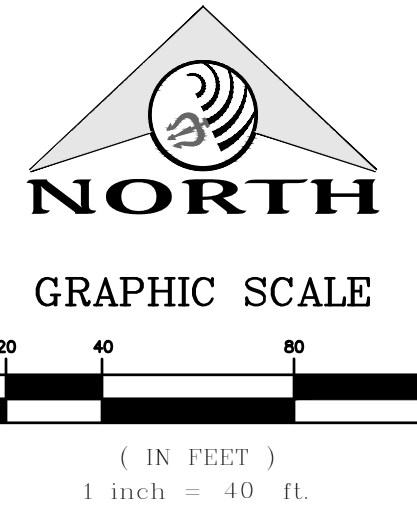
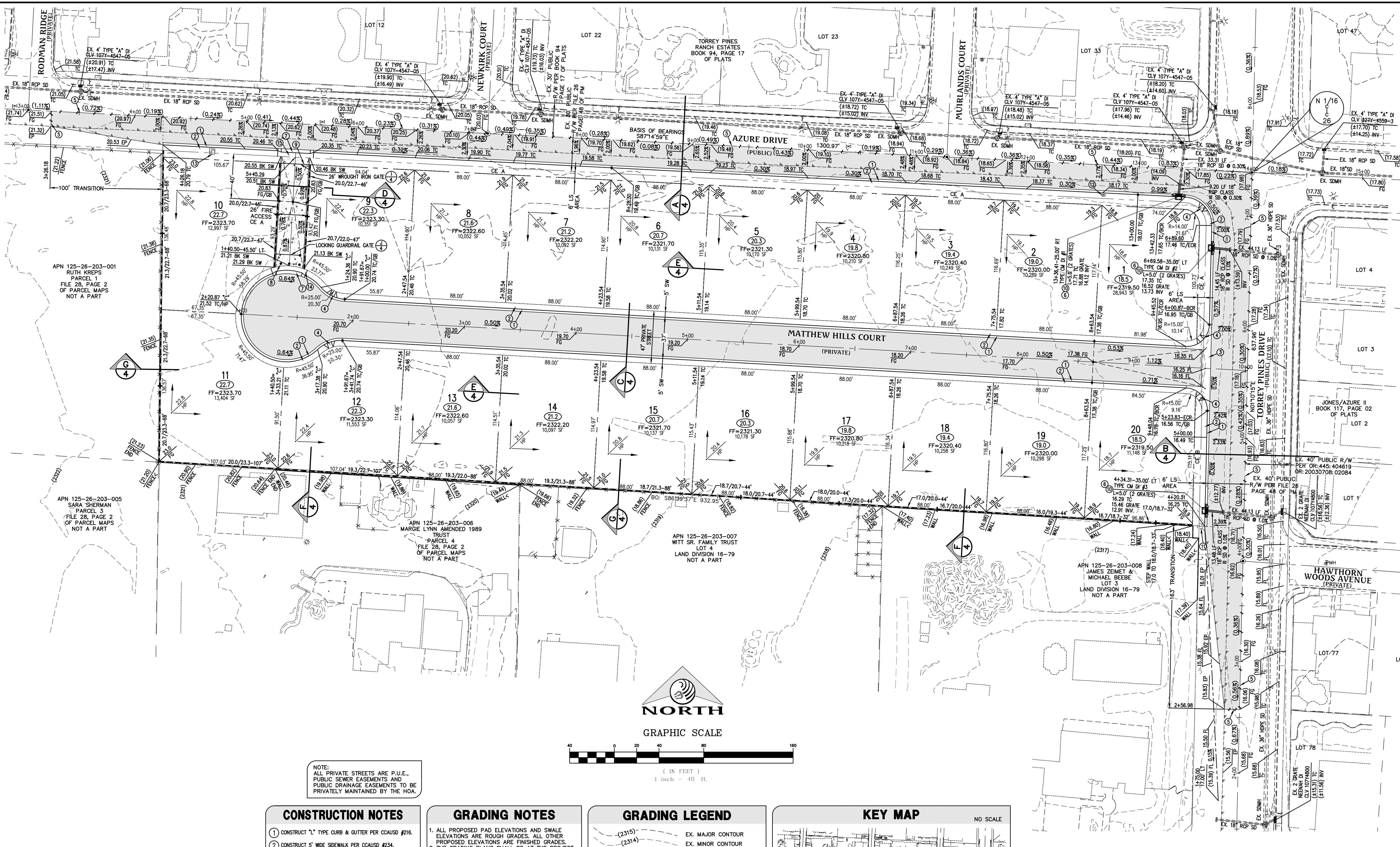
Call before you Dig
Underground
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Call before you Dig
Overhead
1-702-227-2929



OR
1-800-227-2600

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

CONSTRUCTION NOTES

1. CONSTRUCT "L" TYPE CURB & GUTTER PER CCAUSD #216.
2. CONSTRUCT 5' WIDE SIDEWALK PER CCAUSD #234.
3. CONSTRUCT 8" WIDE VALLEY GUTTER PER CCAUSD #228.
4. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT PER CCAUSD #235, CASE I.
5. SAWCUT AND MATCH EXISTING ASPHALT.
6. STORM WATER STAMP TO BE LOCATED ADJACENT TO DROP INLET PER CCAUSD #421.
7. CONSTRUCT "M" TYPE CURB AND GUTTER, PER CCAUSD #222 & 223.
8. INSTALL 3 (A) REMOVABLE LOCKING BOLLARDS @ 7' O.C. PER DETAIL N/4.
9. INSTALL 26" WIDE WROUGHT IRON GATE ONLY PER CCAUSD #421 B. SEE DETAIL ON SHEET 5.
10. CONSTRUCT TYPE CM 2 GRATE DROP INLET PER CCAUSD #4121. SEE DETAIL ON SHEET 5. SEE PROFILE SHEET 10.
11. ADJUST EXISTING FIRE HYDRANT TO GRADE.
12. ADJUST EXISTING CABLE BOX TO GRADE.
13. ADJUST EXISTING ELECTRICAL VAULT TO GRADE.
14. CONSTRUCT 26" WIDE RESIDENTIAL DRIVEWAY PER CCAUSD #223.
15. CONSTRUCT 26" WIDE COMMERCIAL DRIVEWAY PER CCAUSD #224.

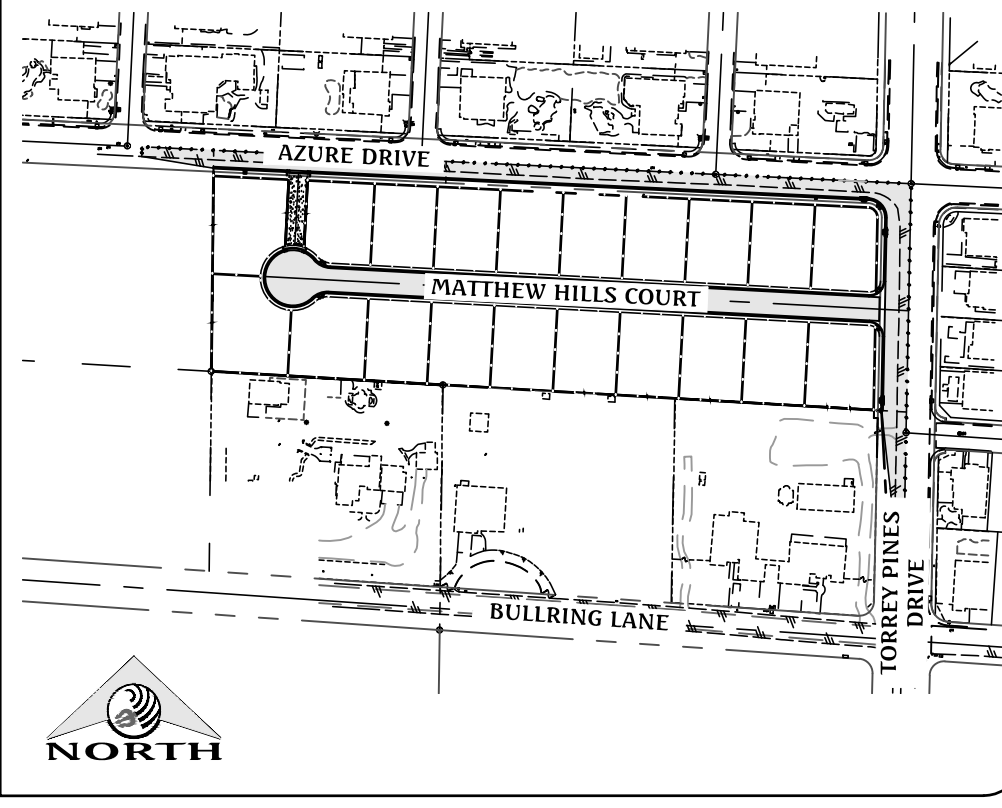
GRADING NOTES

1. ALL PROPOSED PAD ELEVATIONS AND SWALE ELEVATIONS ARE ROUGH GRADES. ALL OTHER PROPOSED ELEVATIONS ARE FINISHED GRADES.
2. THE GRADING PLANS SHALL BE AT THE PROJECT SITE THROUGHOUT THE COURSE OF CONSTRUCTION.
3. ALL GRADING SHALL BE PERFORMED IN CONFORMANCE WITH THE LINES, GRADES AND DETAILS AS SHOWN ON THESE PLANS. ANY DEVIATION FROM THESE PLANS WILL ONLY BE PERMITTED UPON WRITTEN APPROVAL FROM THE ENGINEER.
4. ALL PADS ARE TO BE GRADED WITHIN $\pm 0.3'$ OF THE ELEVATIONS AS SHOWN ON THE PLANS. GRADING IS NOT COMPLETE UNTIL THE ENGINEER HAS CERTIFIED THAT THE PADS HAVE BEEN GRADED IN SUBSTANTIAL CONFORMANCE TO THE PLANS.
5. ALL PLACEMENT OF OVERSIZED MATERIALS AND/OR FILL MATERIALS SHALL BE PER THE SOILS REPORT REFERENCED ON THIS PLAN.
6. ADD 2700 TO ALL SPOT GRADES AND TOP OF CURBS, FLOW LINE AND FINISH GRADE ELEVATIONS.
7. ALL PRIVATE STREETS ARE P.U.E., PUBLIC SEWER EASEMENTS AND PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY THE HOA.
8. ANY CURVED CURB LESS THAN 1% MUST BE WATER TESTED BY CONTRACTOR AS REQUIRED BY CITY INSPECTOR.

GRADING LEGEND

- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- PROPERTY LINE
- EXISTING R/W
- STREET CENTERLINE
- EDGE OF PAVEMENT
- EXISTING CURB, GUTTER, & SIDEWALK
- PROPOSED CURB, GUTTER, & SIDEWALK
- PROPOSED AC PAVING
- EX. FENCE
- EX. BLOCK WALL
- PROPOSED RETAINING WALL
- TOP OF FOOTING
- APPROX. WALL LENGTH
- TOP OF RETAINING WALL
- PROPOSED SCARP

KEY MAP



SOILS INFORMATION

1. SOILS REPORT BY: GEOTEK RESIDENTIAL, LLC
PROJECT NO. 12679-LVR
DATED: DECEMBER 18, 2015
2. CUT TOTAL: 5,675 C.Y.
FILL TOTAL: 7,515 C.Y.
NET: 1,840 C.Y. (FILL)

FLOOD ZONE NOTE

THE PROJECT SITE IS LOCATED ON FEMA FLOOD INSURANCE RATE MAP #32003C1765 F. THE SITE IS LOCATED WITHIN DESIGNATED FLOOD HAZARD ZONE X BEING AN AREA DETERMINED TO BE OUTSIDE THE 100 YEAR FLOOD PLAIN.

BASIS OF BEARING

SOUTH 87°14'59" EAST, BEING THE BEARING OF THE NORTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 26, TOWNSHIP 19 SOUTH, RANGE 60 EAST, W.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA AS SHOWN ON THAT CERTAIN MAP ON FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 160, PAGE 26 OF SURVEYS.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK STATION: OLV90 26N6
RIVET & PLATE IN TOP OF CURB @ NW CORNER OF TORREY PINES & AZURE
ELEVATION = 706.598 METERS (NAVD'88 2008 ADJ)
ELEVATION = 2318.23 U.S. FEET (NAVD'88 2008 ADJ)

FAST
Call before you
Underground
1-702-432-5300

Avoid overhead power
line contact. It's costly.
Call before you Overhead
1-702-227-2929

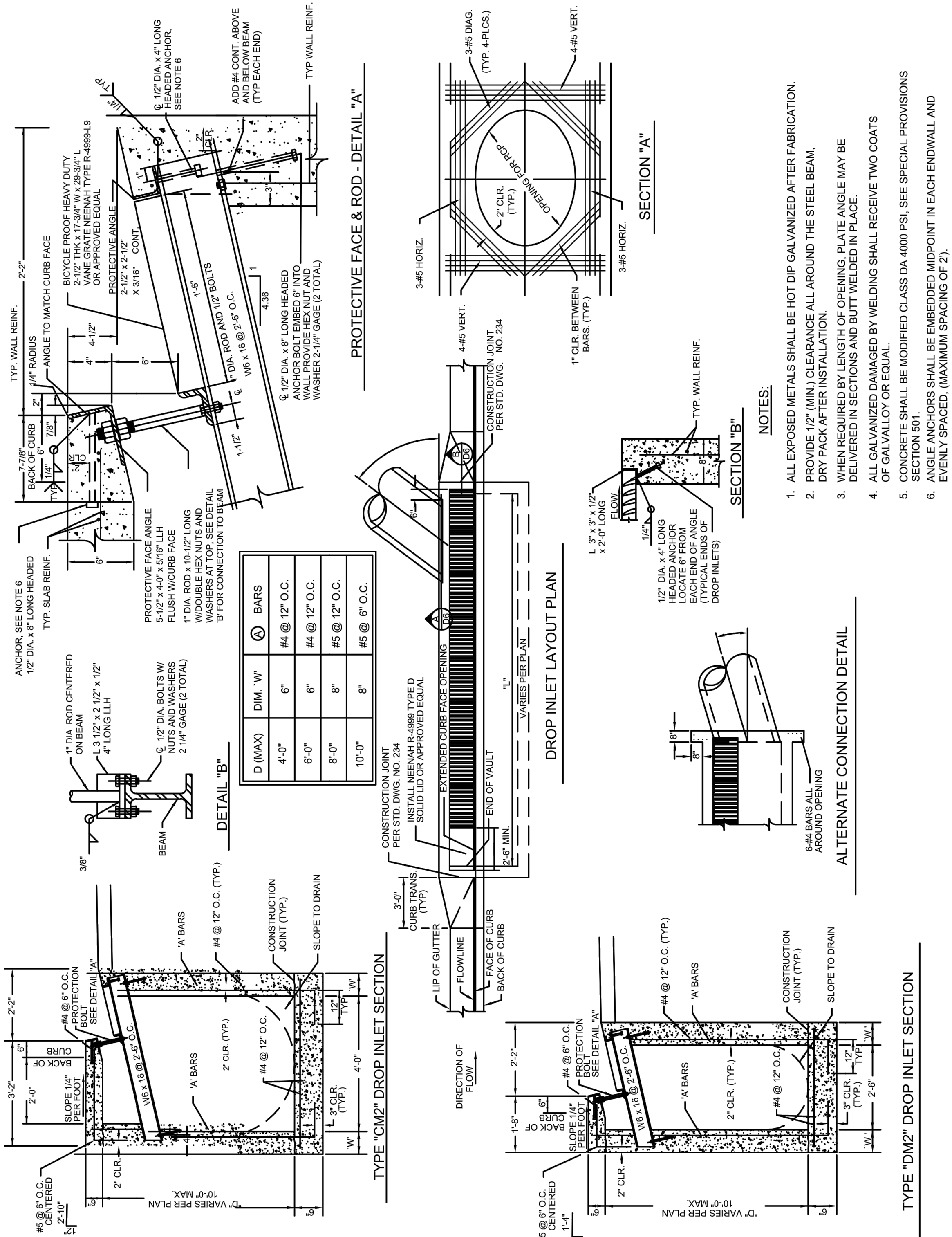
Call before you
Dig
Avoid cutting underground
utility lines. It's costly.
811
OR
1-800-227-2600

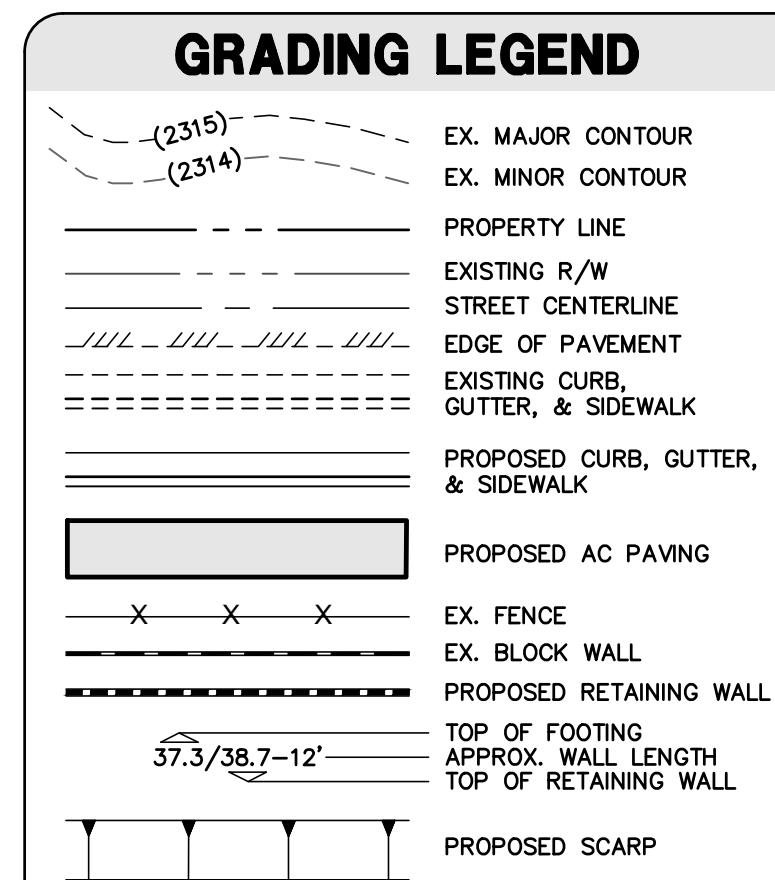
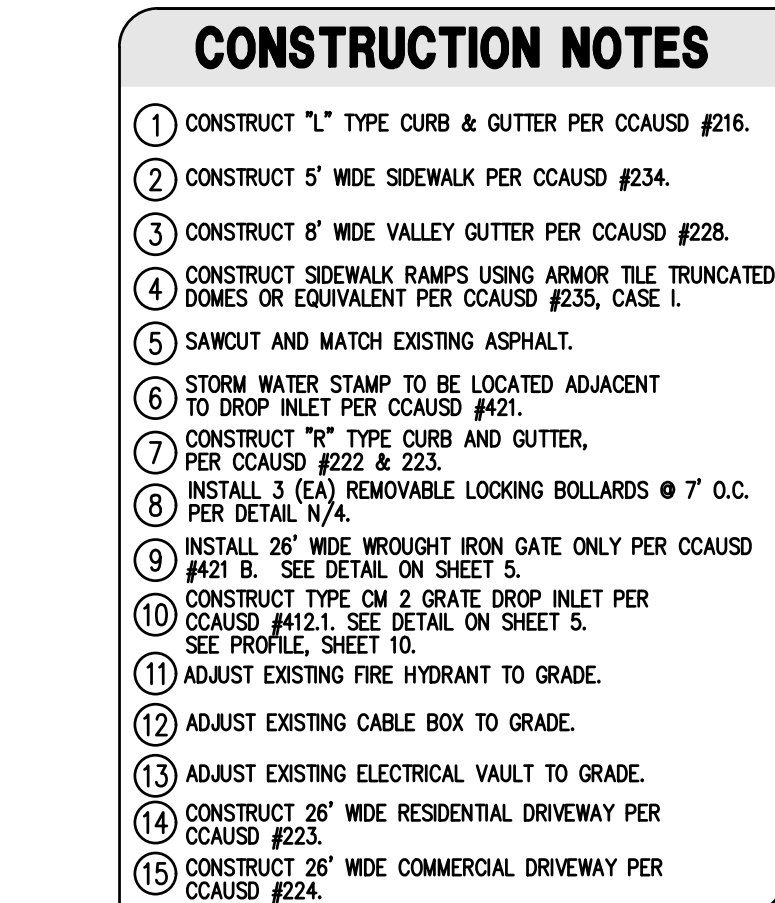
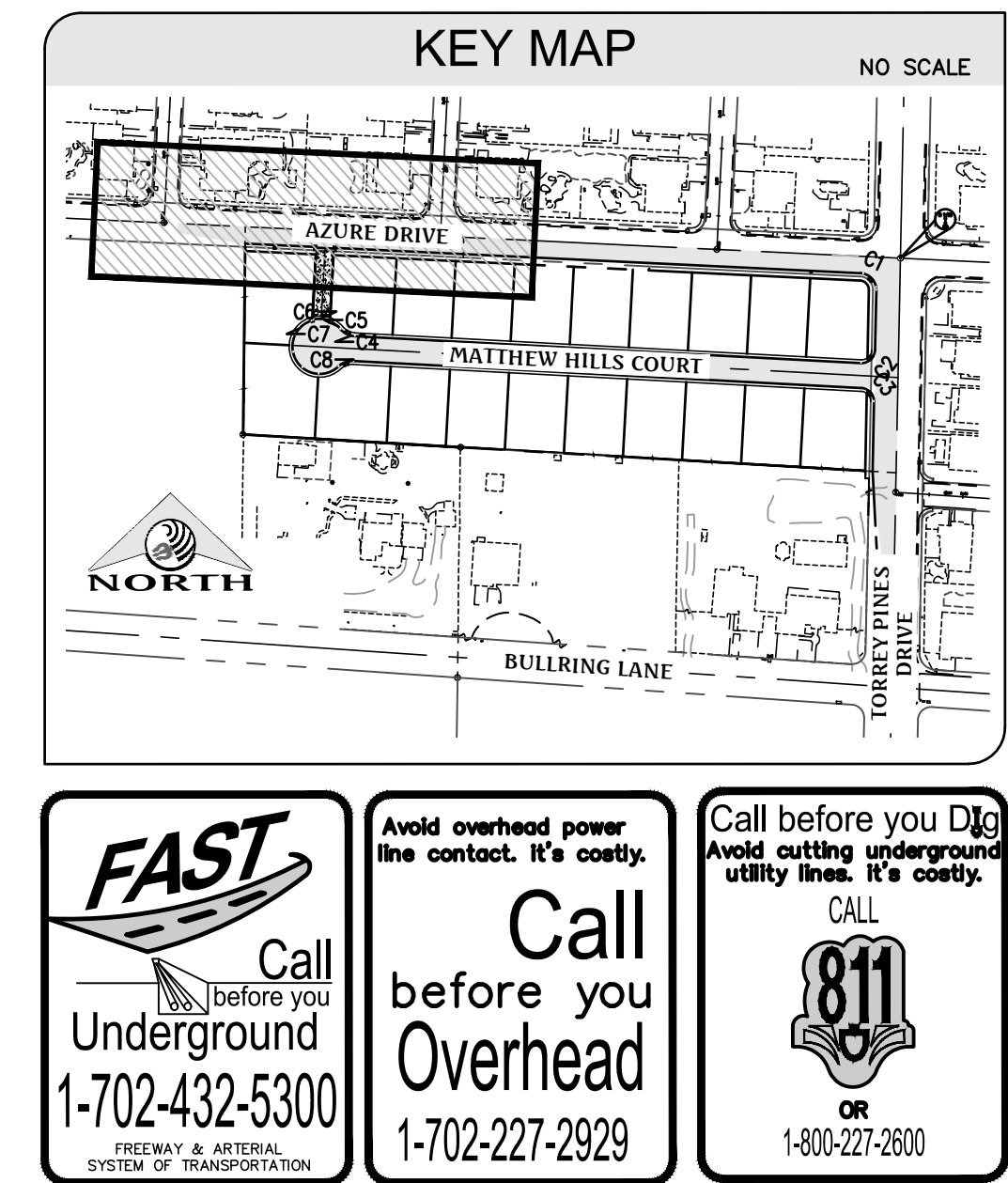
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DESIGNED BY:
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ADA CHECKED:
JOB NO.: 007099
SCALE: 1" = 40'
NO. DESCRIPTION
DATE

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Las Vegas, Nevada 89146
Office: (702) 254-1480
Fax: (702) 254-3062
www.tritoneng.com

DR HORTON
AZURE & TORREY PINES NORTH
GRADING PLAN
SHEET 3 OF 10
C.L.V. DWG.#

		AGENCY APPROVED		B	C	H	L	M	N
SPECIFICATION REFERENCE		UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA							
501	CONCRETE	TYPE "C-D" MODIFIED DROP INLET							
501	CONCRETE STRUCTURES								
501	REINFORCING STEEL								
501	STEEL								
		DATE	9-14-06	DWG. NO.	412.1				

[illegible]



FLOOD ZONE NOTE

THE PROJECT SITE IS LOCATED ON FEMA FLOOD INSURANCE RATE MAP #32003C1765F. THE SITE IS LOCATED WITHIN DESIGNATED FLOOD HAZARD ZONE X BEING AN AREA DETERMINED TO BE OUTSIDE THE 100 YEAR FLOOD PLAIN.

BASIS OF BEARING

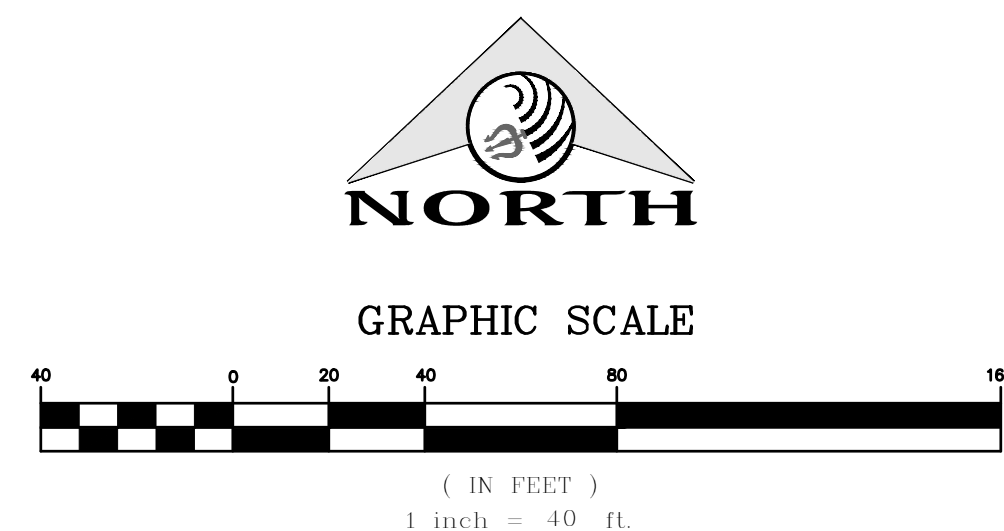
SOUTH 87°14'59" EAST, BEING THE BEARING OF THE NORTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 26, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA AS SHOWN ON THAT CERTAIN MAP ON FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 160, PAGE 26 OF SURVEYS.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK STATION: 0LV90 26N6

RIVET & PLATE IN TOP OF CURB @ NW CORNER OF
TORREY PINES & AZURE

ELEVATION = 706.598 METERS (NAVD'88 2008 ADJ)
ELEVATION = 2318.23 U.S. FEET (NAVD'88 2008 ADJ)



NOTE:
ALL PRIVATE STREETS ARE P.U.E.,
PUBLIC SEWER EASEMENTS AND
PUBLIC DRAINAGE AND ACCESS
EASEMENTS TO BE PRIVATELY
MAINTAINED BY THE HOA.

[illegible]

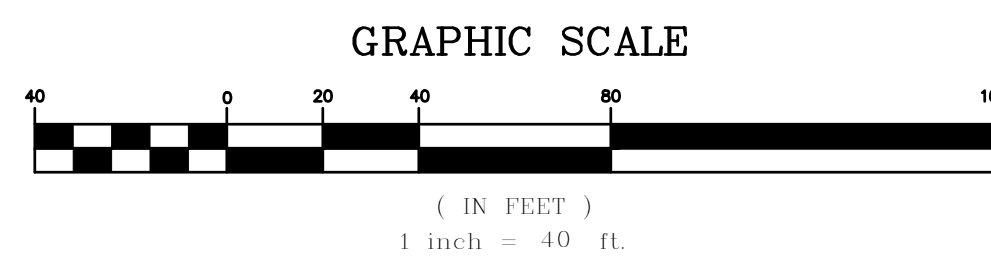
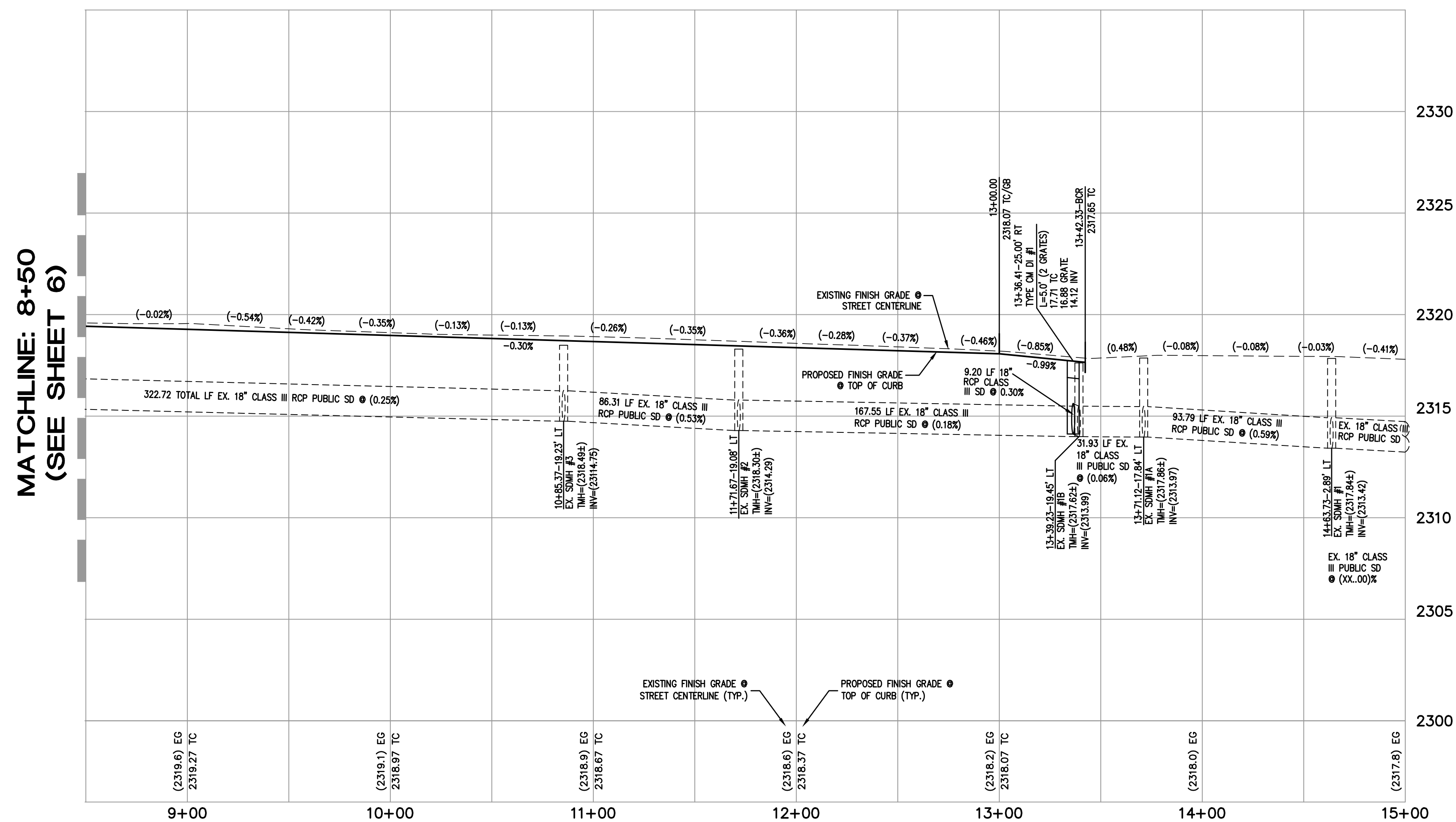
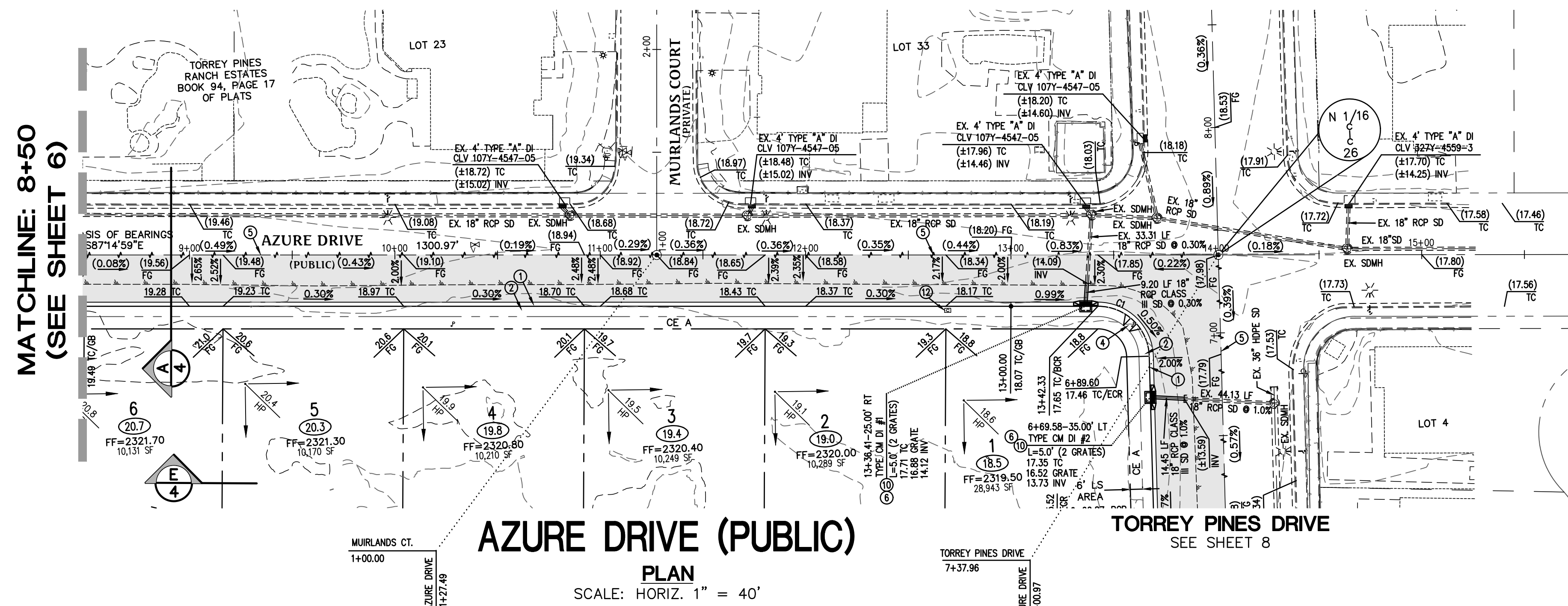
DATE : 02/22/2016
PM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.039
SCALE : 1" = 40'

Triton
Engineering

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Suite B
Las Vegas, Nevada 89146

DR HORTON
AZURE & TORREY PINES NORTH
AZURE DRIVE
PLAN AND PROFILE
2+00 - 8+50



CURVE TABLE				
CURVE	DELTA	RADIUS	LENGTH	TANGENT
C1	088°25'14"	25.00'	38.58'	24.32'
C2	091°52'17"	20.00'	32.07'	20.66'
C3	088°07'43"	20.00'	30.76'	19.36'
C4	046°31'57"	30.00'	24.36'	12.90'
C5	025°27'55"	40.50'	18.00'	9.15'
C6	033°12'11"	41.50'	24.05'	12.37'
C7	205°27'55"	40.50'	145.23'	179.24'
C8	046°31'57"	30.00'	24.36'	12.90'

- ## CONSTRUCTION NOTES

- 1 CONSTRUCT 7" TYPE CURB & GUTTER PER CCAUSD #216.
- 2 CONSTRUCT 5' WIDE SIDEWALK PER CCAUSD #234.
- 3 CONSTRUCT 8' WIDE VALWAY GUTTER PER CCAUSD #228.
- 4 CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DUMES OR EQUIVALENT PER CCAUSD #235, CASE I.
- 5 SAWCUT AND MATCH EXISTING ASPHALT.
- 6 STORM WATER STAMP TO BE LOCATED ADJACENT TO DRAIN INLET PER CCAUSD #421.
- 7 CONSTRUCT "R" TYPE CURB AND GUTTER, PER CCAUSD #222 & 223.
- 8 INSTALL 3" (EA) REMOVABLE LOGGING BOLLARDS @ 7' O.C. PER DETAIL N/4.
- 9 INSTALL 26" WIDE WROUGHT IRON GATE ONLY PER CCAUSD #223. SEE DETAIL ON SHEET 5.
- 10 CONSTRUCT TYPE CM 2 GATE DRAIN INLET PER CCAUSD #211, SEE DETAIL ON SHEET 5.
SEE PROFILE, SHEET 5.
- 11 ADJUST EXISTING FIRE HYDRANT TO GRADE.
- 12 ADJUST EXISTING CABLE BOX TO GRADE.
- 13 ADJUST EXISTING ELECTRICAL VAULT TO GRADE.
- 14 CONSTRUCT 26" WIDE RESIDENTIAL DRIVEWAY PER CCAUSD #223.
- 15 CONSTRUCT 26" WIDE COMMERCIAL DRIVEWAY PER CCAUSD #224.

- ## GRADING LEGEND

-
- Diagram illustrating various road cross-section symbols and their corresponding descriptions:
- EX. MAJOR CONTOUR**: Represented by a dashed line with the elevation (2315).
 - EX. MINOR CONTOUR**: Represented by a dashed line with the elevation (2314).
 - PROPERTY LINE**: Represented by a solid horizontal line.
 - EXISTING R/W**: Represented by a solid horizontal line.
 - STREET CENTERLINE**: Represented by a solid horizontal line.
 - EDGE OF PAVEMENT**: Represented by a dashed line with a wavy pattern.
 - EXISTING CURB, GUTTER, & SIDEWALK**: Represented by a dashed line with a wavy pattern.
 - PROPOSED CURB, GUTTER, & SIDEWALK**: Represented by a solid horizontal line.
 - PROPOSED AC PAVING**: Represented by a solid horizontal line.
 - EX. FENCE**: Represented by a solid horizontal line with 'X' marks.
 - EX. BLOCK WALL**: Represented by a solid horizontal line with a wavy pattern.
 - PROPOSED RETAINING WALL**: Represented by a solid horizontal line with a wavy pattern.
 - TOP OF FOOTING**: Represented by a solid horizontal line.
 - APPROX. WALL LENGTH**: Represented by a solid horizontal line with a wavy pattern.
 - TOP OF RETAINING WALL**: Represented by a solid horizontal line with a wavy pattern.
 - PROPOSED SCARP**: Represented by a solid horizontal line with a wavy pattern.

FLOOD ZONE NOTE

THE PROJECT SITE IS LOCATED ON FEMA FLOOD INSURANCE RATE MAP #32003C1765F. THE SITE IS LOCATED WITHIN DESIGNATED FLOOD HAZARD ZONE X BEING AN AREA DETERMINED TO BE OUTSIDE THE 100 YEAR FLOOD PLAIN.

BASIS OF BEARING

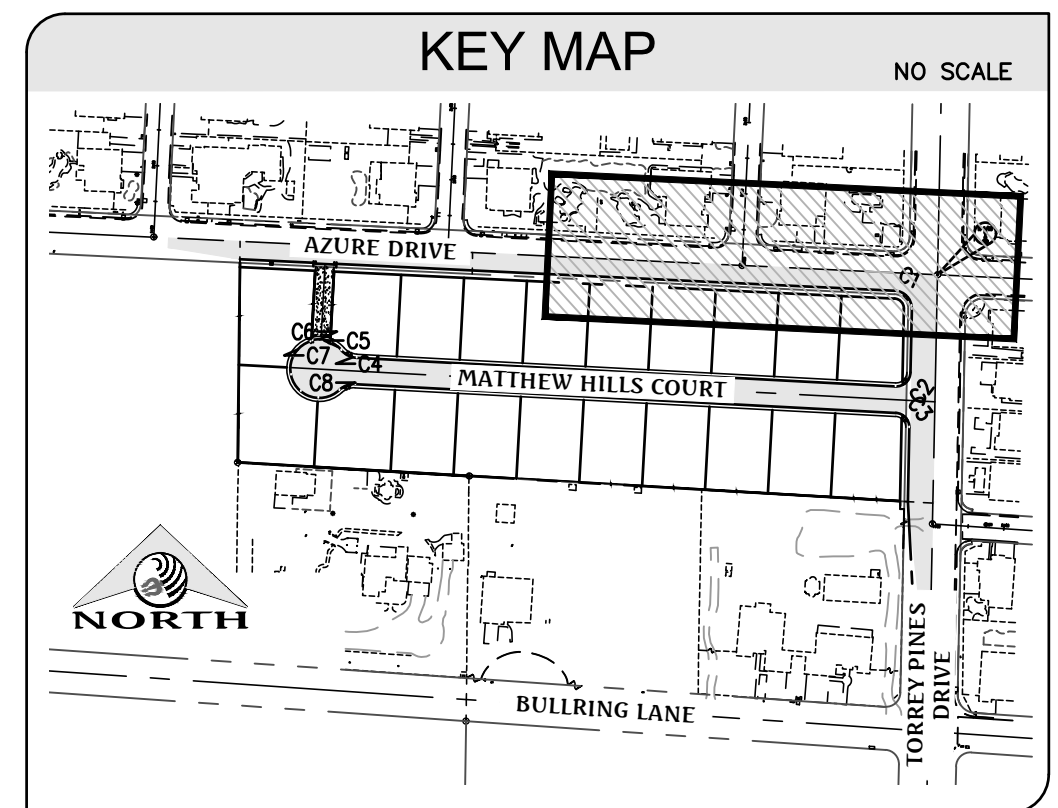
SOUTH 87°14'59" EAST, BEING THE BEARING OF THE NORTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 26, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA AS SHOWN ON THAT CERTAIN MAP ON FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 160, PAGE 26 OF SURVEYS.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK STATION: 0LV90 26N6

RIVET & PLATE IN TOP OF CURB @ NW CORNER OF
TORREY PINES & AZURE

ELEVATION = 706.598 METERS (NAVD'88 2008 ADJ)
ELEVATION = 2318.23 U.S. FEET (NAVD'88 2008 ADJ)



 FAST Call before you Underground 1-702-432-5300 INSTRUMENT & MATERIAL SYSTEMS OF TRANSPORTATION	Avoid overhead power line contact. It's costly. Call before you Overhead 1-702-227-2929	Call before you Dig Avoid cutting underground utility lines. It's costly. CALL 811 OR 1-800-227-2600
--	--	--

PM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.099
SCALE : 1" = 4'

Triton Engineering

6757 W. Charleston Blvd.
Suite B
Las Vegas, Nevada 89146

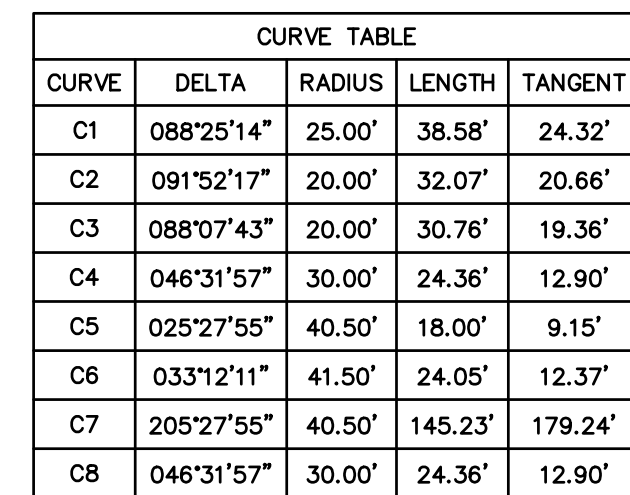
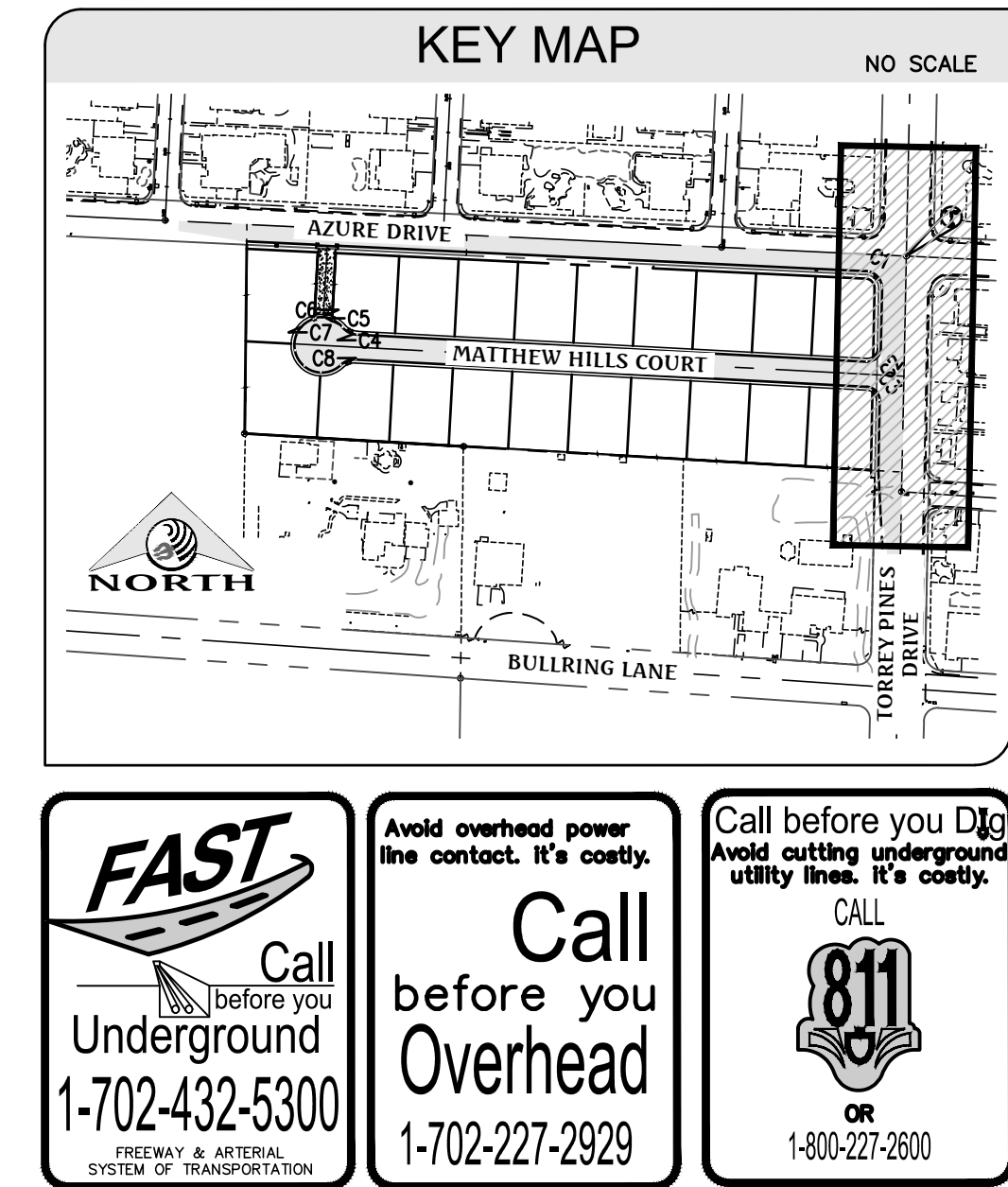
Office: (702) 254-1480
Fax: (702) 254-3062
www.tritonenrg.com

DK HORTON

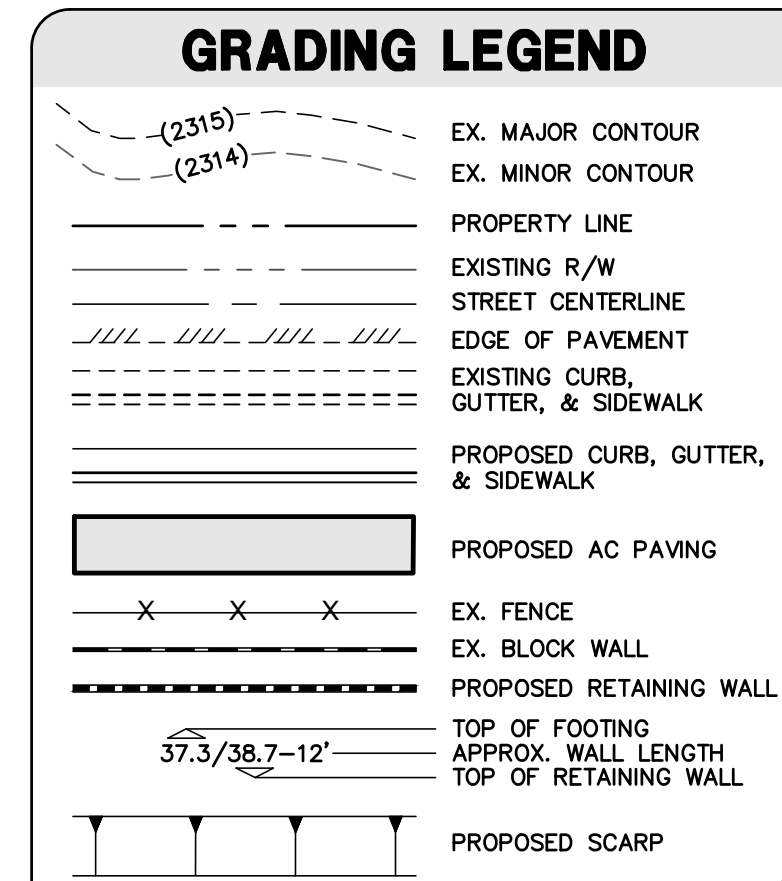
TORREY PINES NORTH

PLAN AND PROFILE
8+50 - 15+00

EET **7** OF 10
C.L.V. DWG.#



- # CONSTRUCTION NOTES
- 1) CONSTRUCT "L" TYPE CURB & GUTTER PER CAUSD #216.
 - 2) CONSTRUCT 5' WIDE SIDEWALK PER CAUSD #234.
 - 3) CONSTRUCT 8' WIDE VALLEY GUTTER PER CAUSD #228.
 - 4) CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DOWNS OR EQUIVALENT PER CAUSD #235, CASE 1.
 - 5) SAWCUT AND MATCH EXISTING ASPHALT.
 - 6) STORM WATER STAMP TO BE LOCATED ADJACENT TO DROP INLET PER CAUSD #421.
 - 7) CONSTRUCT "R" TYPE CURB AND GUTTER, PER CAUSD #222 & 223.
INSTALL 3 LEAF REMOVABLE LOCKING BOLLARDS @ 7' O.C. PER DETAIL N.A.
 - 8) INSTALL 26" WIDE WROUGHT IRON GATE ONLY PER CAUSD #221, SEE DETAIL ON SHEET 5.
 - 9) CONSTRUCT 26" WIDE WROUGHT IRON GATE PER CAUSD #121.2, SEE DETAIL ON SHEET 5.
PROFILE, SHEET 10.
 - 10) ADJUST EXISTING FINE HYDRANT TO GRADE.
 - 11) ADJUST EXISTING CABLE BOX TO GRADE.
 - 12) ADJUST EXISTING ELECTRICAL VALVE TO GRADE.
 - 13) CONSTRUCT 26" WIDE RESIDENTIAL DRIVEWAY PER CAUSD #223.
 - 14) CONSTRUCT 26" WIDE COMMERCIAL DRIVEWAY PER CAUSD #224.



FLOOD ZONE NOTE

PROJECT SITE IS LOCATED ON FEMA FLOOD INSURANCE MAP #32003C1765F. THE SITE IS LOCATED WITHIN UNDESIGNATED FLOOD HAZARD ZONE X BEING AN AREA DETERMINED TO BE OUTSIDE THE 100 YEAR FLOOD PLAIN.

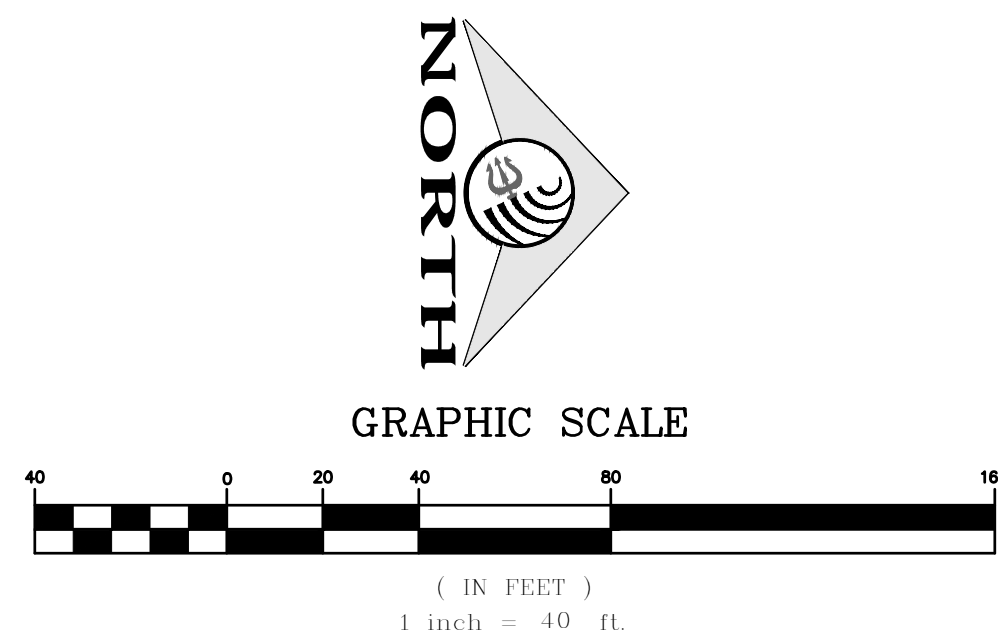
BASIS OF BEARING

BENCHMARK

VEGAS BENCHMARK STATION: 0LV90 26N6

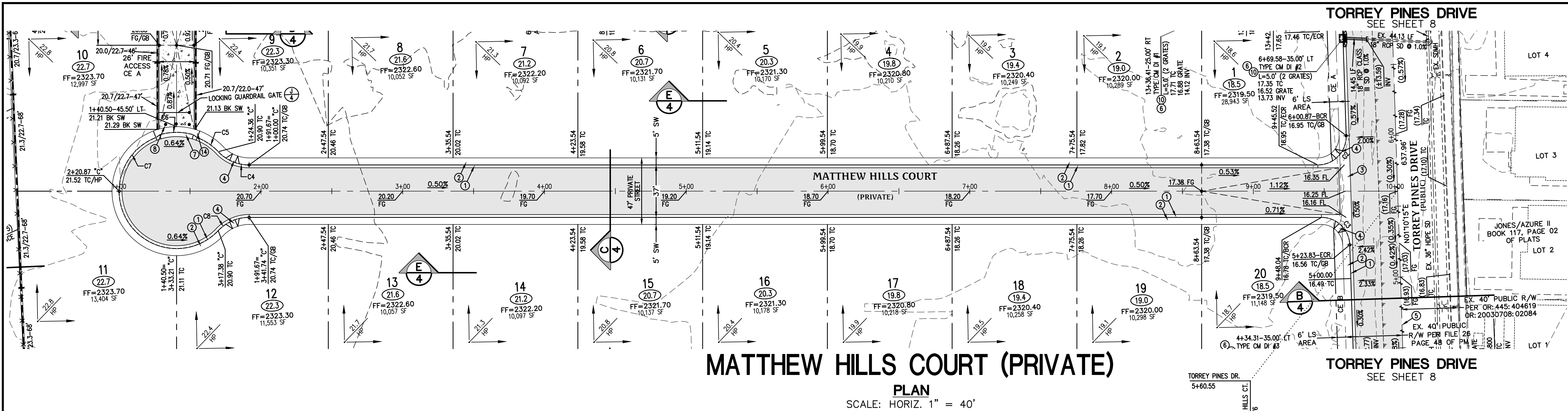
E IN TOP OF CURB @ NW CORNER OF
& AZURE

706.598 METERS (NAVD'88 2008 ADJ)
2318.23 U.S. FEET (NAVD'88 2008 ADJ)

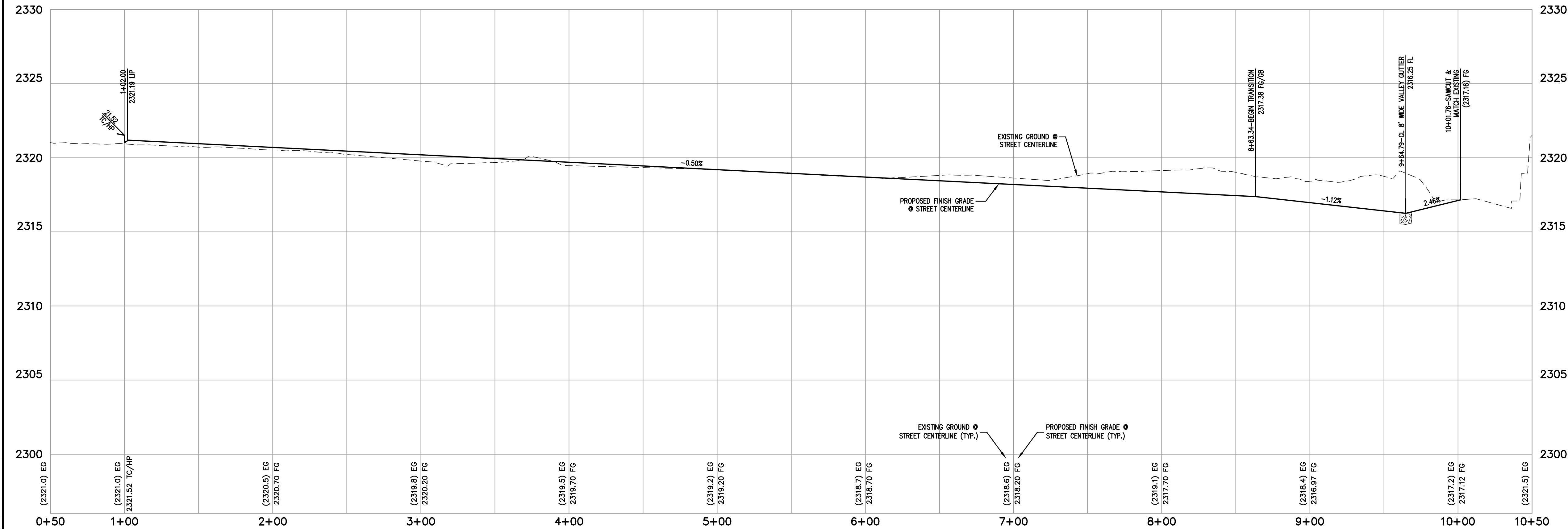


NOTE:
ALL PRIVATE STREETS ARE P.U.E.,
PUBLIC SEWER EASEMENTS AND
PUBLIC DRAINAGE AND ACCESS
EASEMENTS TO BE PRIVATELY
MAINTAINED BY THE HOA.

Q:\Triton Drawings\007.099 AzureTorrey Pines North\Drawings\URANAGE PLAN SET\06_drainage plan\profiles.dwg chore Wed, 24 Feb 2016 - 10:15am



CURVE TABLE				
CURVE	DELTA	RADIUS	LENGTH	TANGENT
C1	088°25'14"	25.00'	38.58'	24.32'
C2	091°52'17"	20.00'	32.07'	20.66'
C3	088°07'43"	20.00'	30.76'	19.36'
C4	046°31'57"	30.00'	24.36'	12.90'
C5	025°27'55"	40.50'	18.00'	9.15'
C6	033°12'11"	41.50'	24.05'	12.37'
C7	205°27'55"	40.50'	145.23'	179.24'
C8	046°31'57"	30.00'	24.36'	12.90'



- CONSTRUCTION NOTES**
1. CONSTRUCT "L" TYPE CURB & GUTTER PER CCAUSD #216.
 2. CONSTRUCT 5' WIDE SIDEWALK PER CCAUSD #234.
 3. CONSTRUCT 8' WIDE VALLEY GUTTER PER CCAUSD #228.
 4. CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT PER CCAUSD #235, CASE I.
 5. SAWCUT AND MATCH EXISTING ASPHALT.
 6. STORM WATER STAMP TO BE LOCATED ADJACENT TO DROP INLET PER CCAUSD #421.
 7. CONSTRUCT "R" TYPE CURB AND GUTTER, PER CCAUSD #222 & 223.
 8. INSTALL 3 (EA) REMOVABLE LOOKING BOLLARDS @ 7' O.C. PER DETAIL N/4.
 9. INSTALL 26" WIDE WROUGHT IRON GATE ONLY PER CCAUSD #421 B. SEE DETAIL ON SHEET 5.
 10. CONSTRUCT TYPE CM 2 GRATE DROP INLET PER CCAUSD #412.1. SEE DETAIL ON SHEET 5. SEE PROFILE, SHEET 10.
 11. ADJUST EXISTING FIRE HYDRANT TO GRADE.
 12. ADJUST EXISTING CABLE BOX TO GRADE.
 13. ADJUST EXISTING ELECTRICAL VAULT TO GRADE.
 14. CONSTRUCT 26" WIDE RESIDENTIAL DRIVEWAY PER CCAUSD #223.
 15. CONSTRUCT 26" WIDE COMMERCIAL DRIVEWAY PER CCAUSD #224.

GRADING LEGEND

(2315)	EX. MAJOR CONTOUR
(2314)	EX. MINOR CONTOUR
---	PROPERTY LINE
---	EXISTING R/W
---	STREET CENTERLINE
---	EDGE OF PAVEMENT
---	EXISTING CURB, GUTTER, & SIDEWALK
---	PROPOSED CURB, GUTTER, & SIDEWALK
---	PROPOSED AC PAVING
X X X	EX. FENCE
---	EX. BLOCK WALL
---	PROPOSED RETAINING WALL
---	TOP OF FOOTING
---	APPROX. WALL LENGTH
---	TOP OF RETAINING WALL
---	PROPOSED SCARP

FLOOD ZONE NOTE

THE PROJECT SITE IS LOCATED ON FEMA FLOOD INSURANCE RATE MAP #3200301765F. THE SITE IS LOCATED WITHIN DESIGNATED FLOOD HAZARD ZONE X BEING AN AREA DETERMINED TO BE OUTSIDE THE 100 YEAR FLOOD PLAIN.

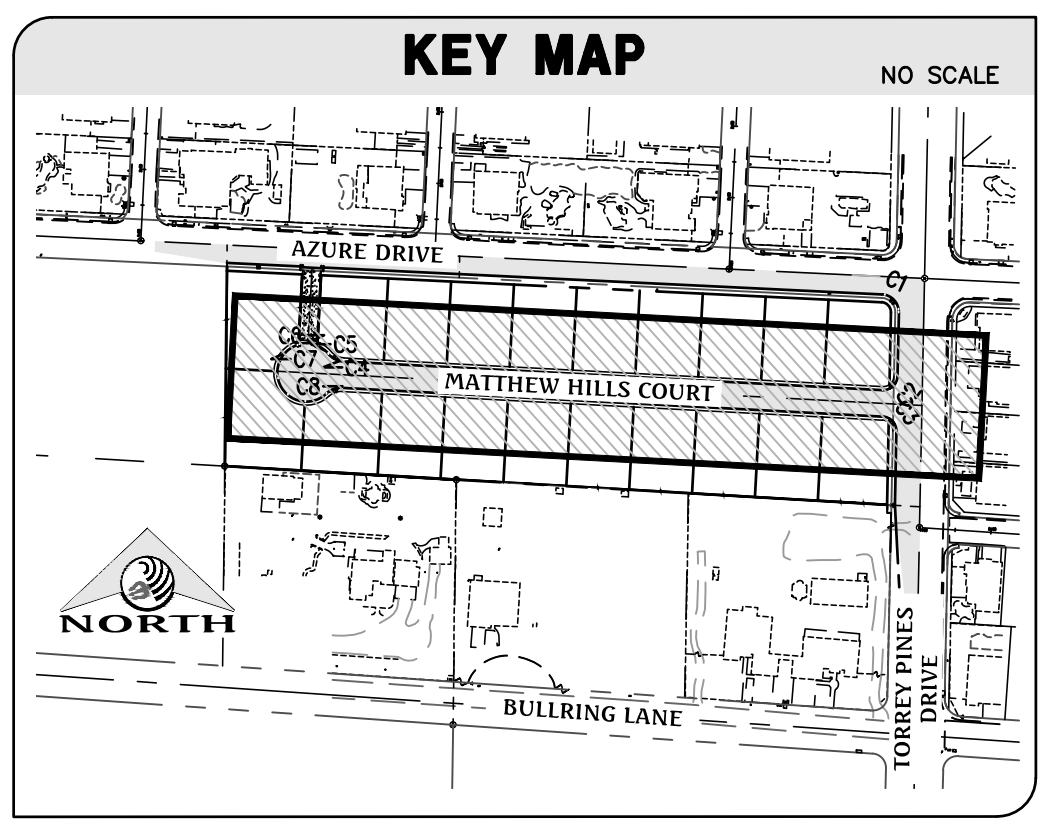
BASIS OF BEARING

SOUTH 87°14'59" EAST, BEING THE BEARING OF THE NORTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 26, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA AS SHOWN ON THAT CERTAIN MAP ON FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 160, PAGE 26 OF SURVEYS.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK STATION: OL90 26N6
RIVET & PLATE IN TOP OF CURB @ NW CORNER OF TORREY PINES & AZURE
ELEVATION = 706.598 METERS (NAVD'88 2008 ADJ.)
ELEVATION = 2318.23 U.S. FEET (NAVD'88 2008 ADJ.)

NOTE:
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PUBLIC SEWER EASEMENTS AND
PUBLIC DRAINAGE AND ACCESS
EASEMENTS TO BE PRIVATELY
MAINTAINED BY THE HOA.



FAST

Call before you Dig

Underground

1-702-432-5300

SYSTEM OF TRANSPORTATION

Avoid overhead power line contact. It's costly.

Call before you Dig

Overhead

1-702-227-2929

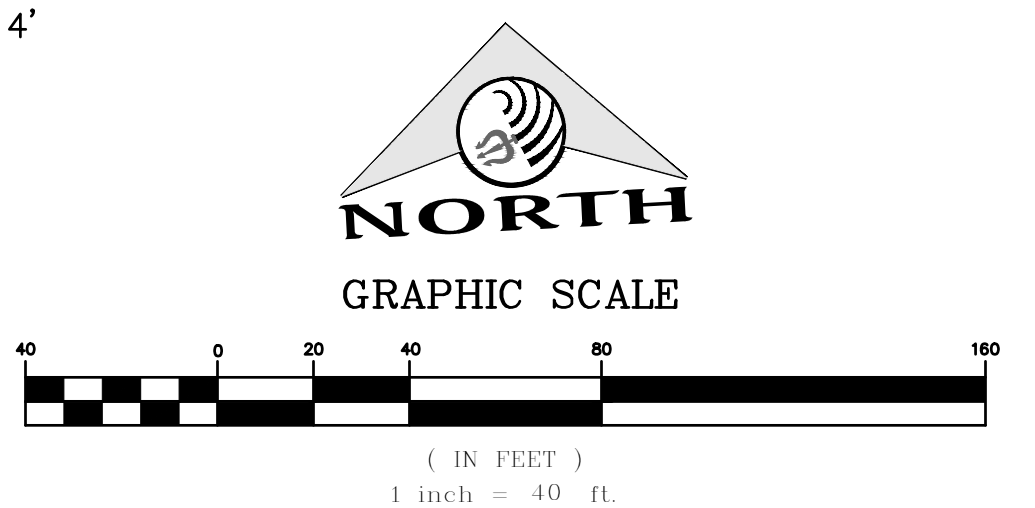
Call before you Dig

Avoid cutting underground utility lines. It's costly.

CALL 811

OR

1-800-227-2600



DATE: 02/22/2016

PM: J. PEARCE

DRAWN BY:

DESIGNED BY:

CHECKED BY:

ADA CHECKED:

JOB NO.: 007.099

SCALE: 1" = 40'

NO. DESCRIPTION

DATE

APP'D

Triton Engineering

Office: (702) 254-1480

6757 W. Charleston Blvd. Suite B

Las Vegas, Nevada 89146

Fax: (702) 254-3062

www.tritoneng.com

DR HORTON

AZURE & TORREY PINES NORTH

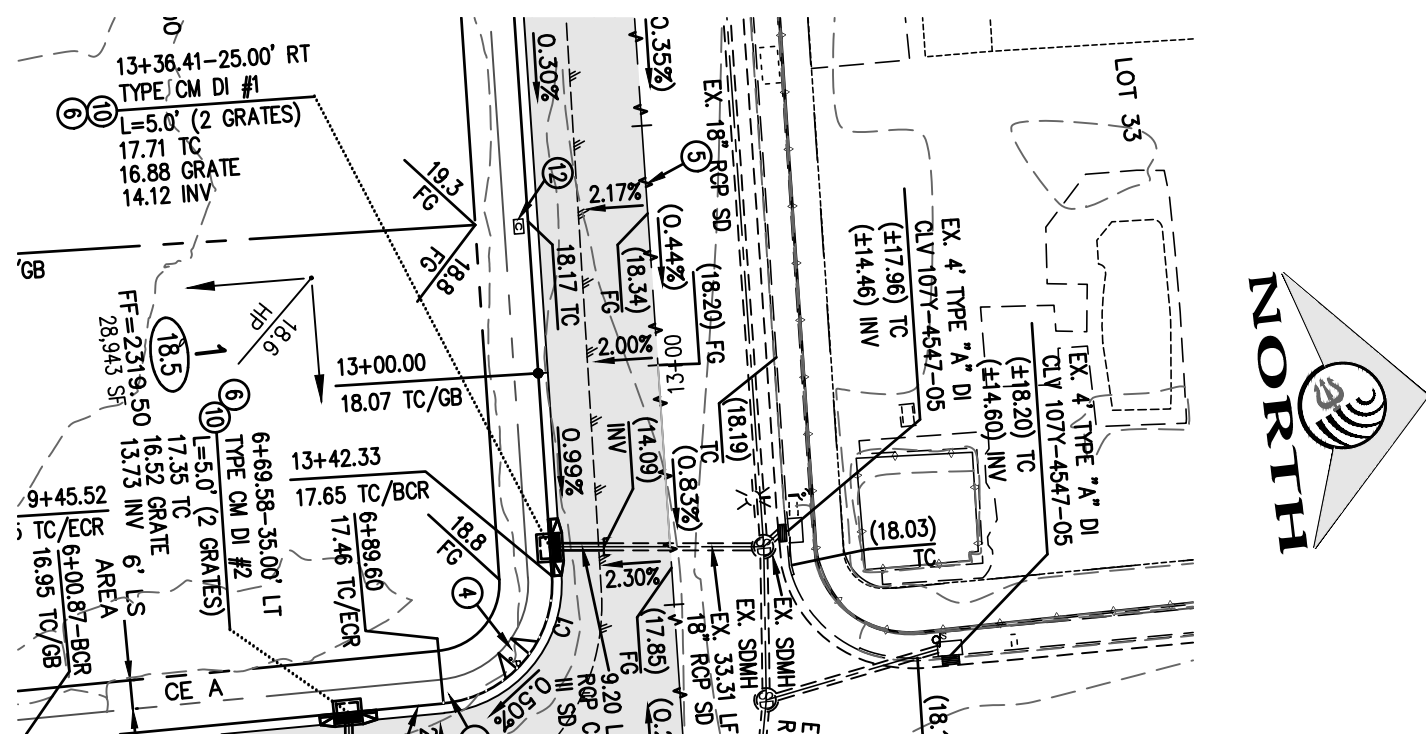
MATTHEW HILLS COURT

PLAN AND PROFILE

1+00 - 11+00

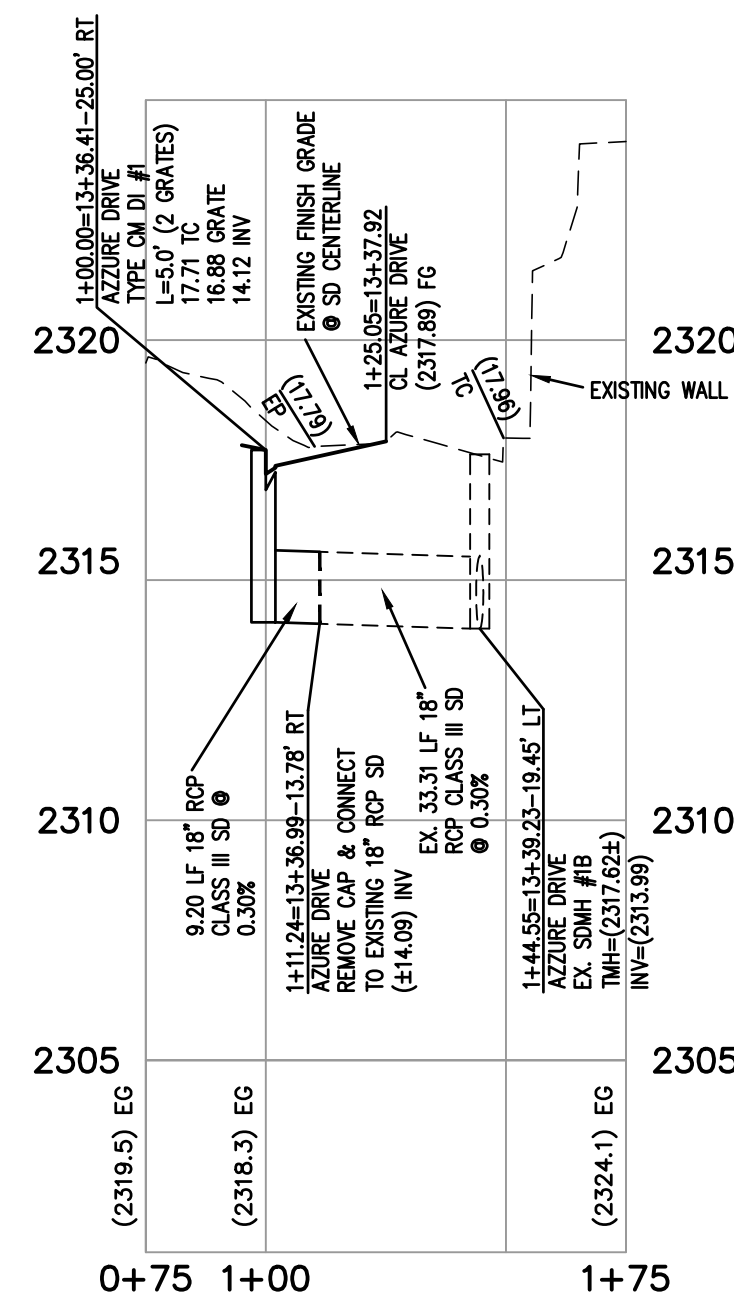
SHEET 9 OF 10

C.L.V. DWG.#



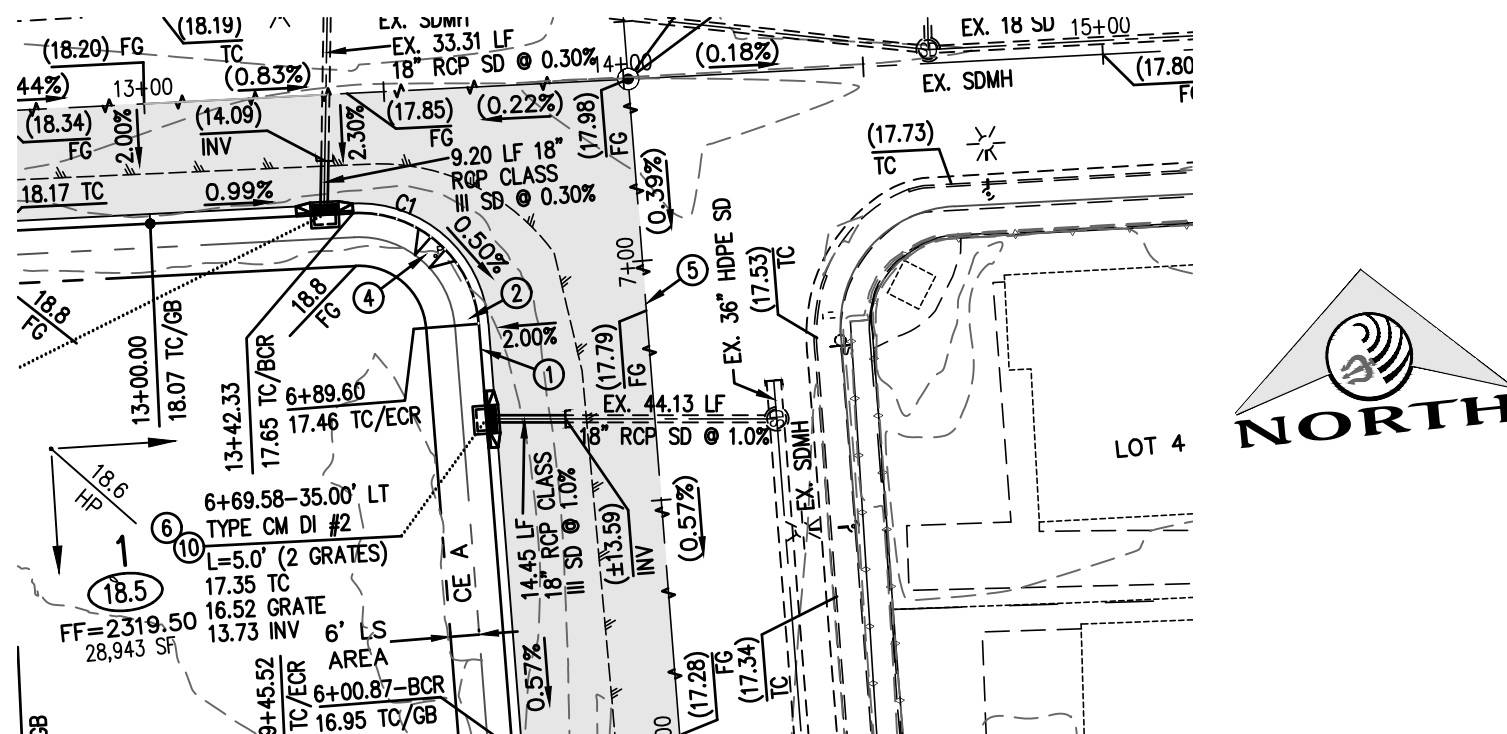
STORM DRAIN #1

PLAN
SCALE: HORIZ. 1" = 40'



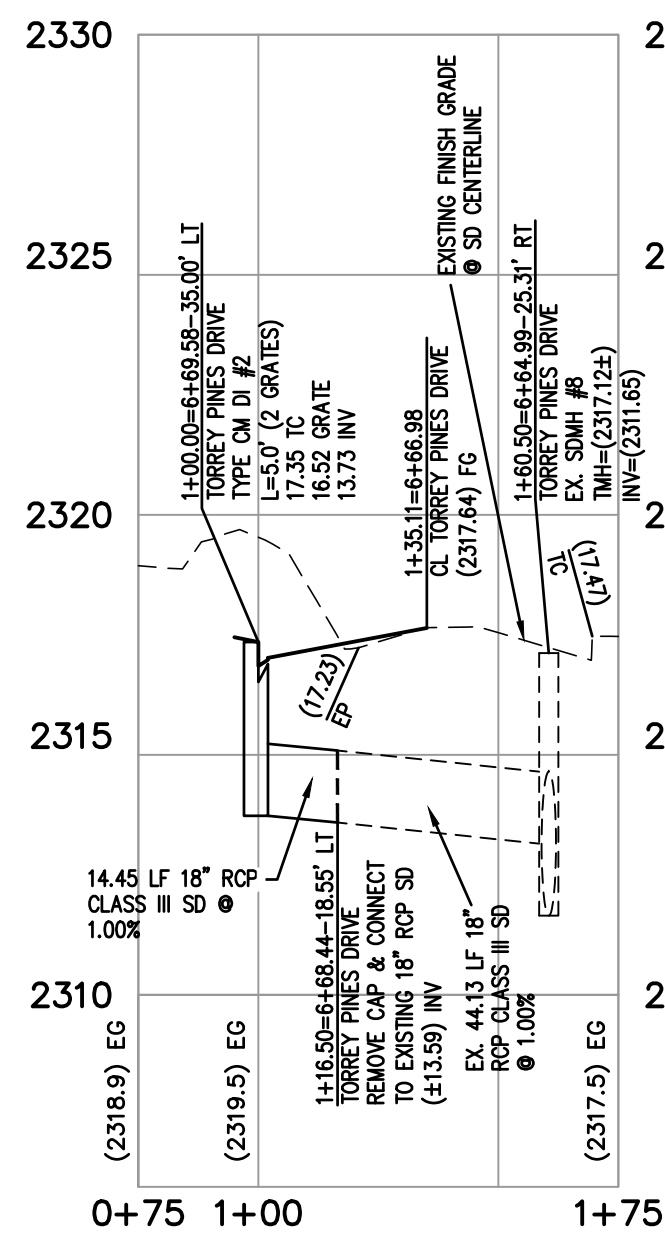
STORM DRAIN #1

PROFILE
SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'



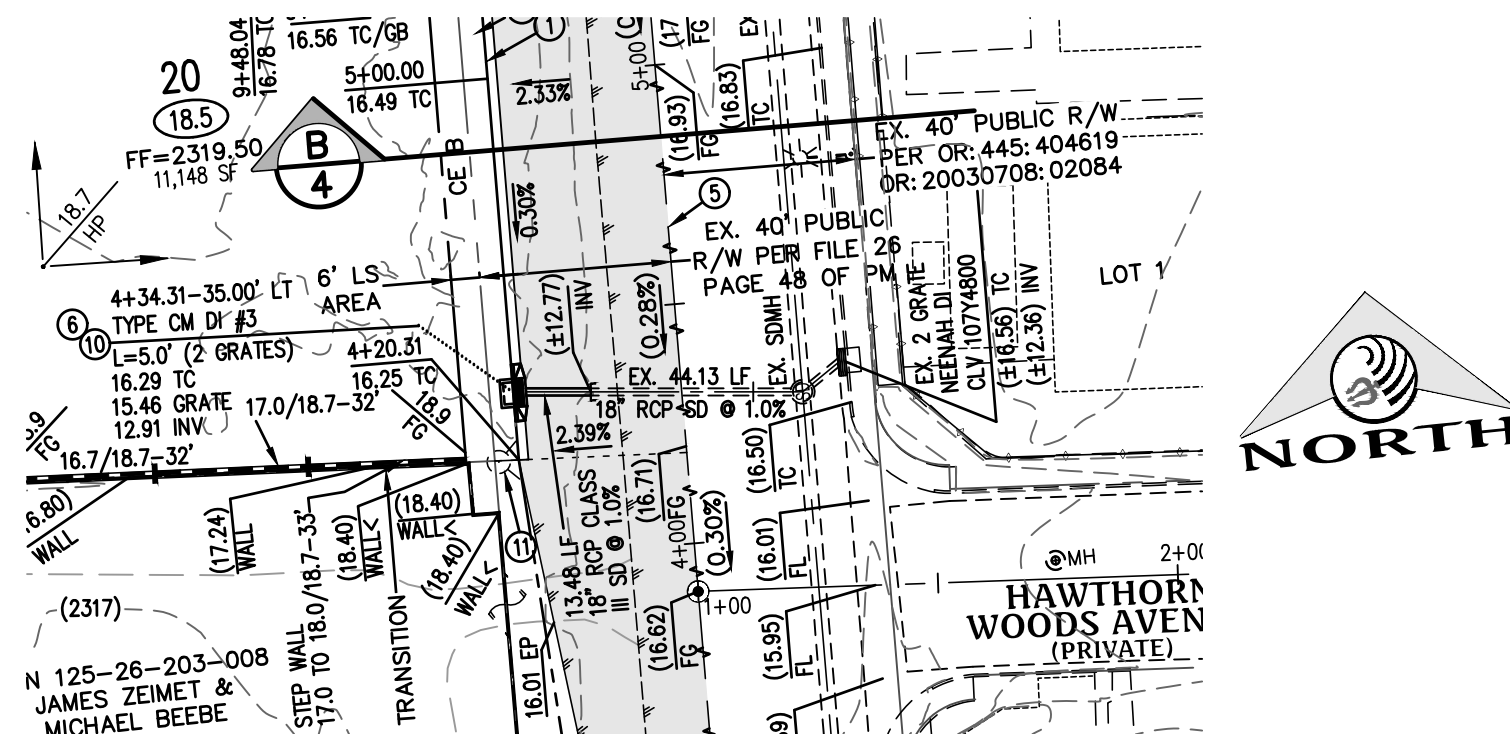
STORM DRAIN #2

PLAN
SCALE: HORIZ. 1" = 40'



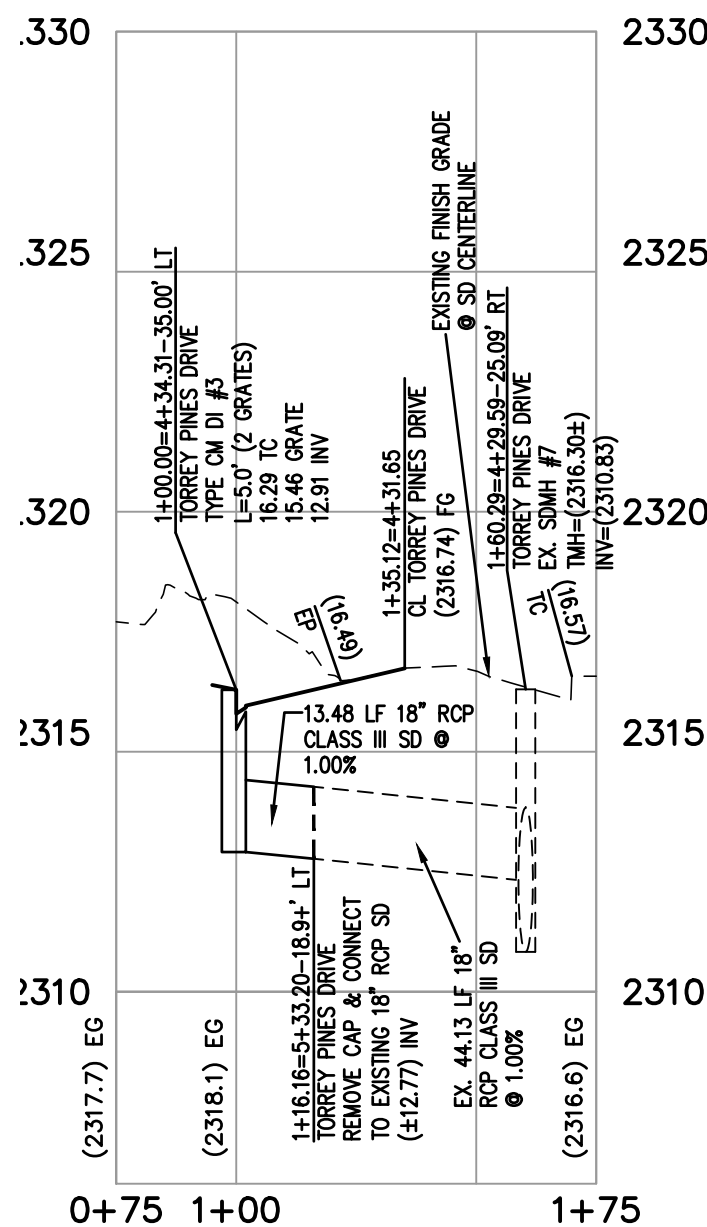
STORM DRAIN #2

PROFILE
SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'



STORM DRAIN #3

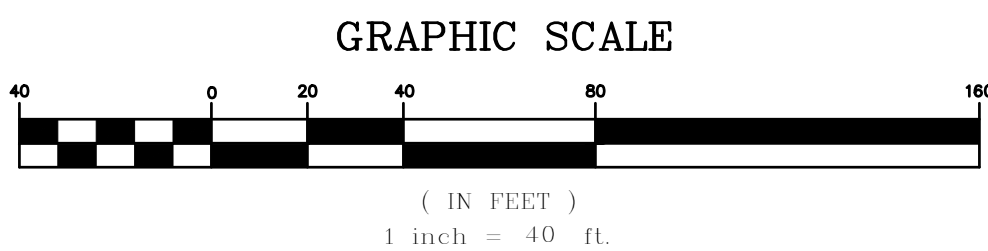
PLAN
SCALE: HORIZ. 1" = 40'



STORM DRAIN #3

PROFILE
SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'

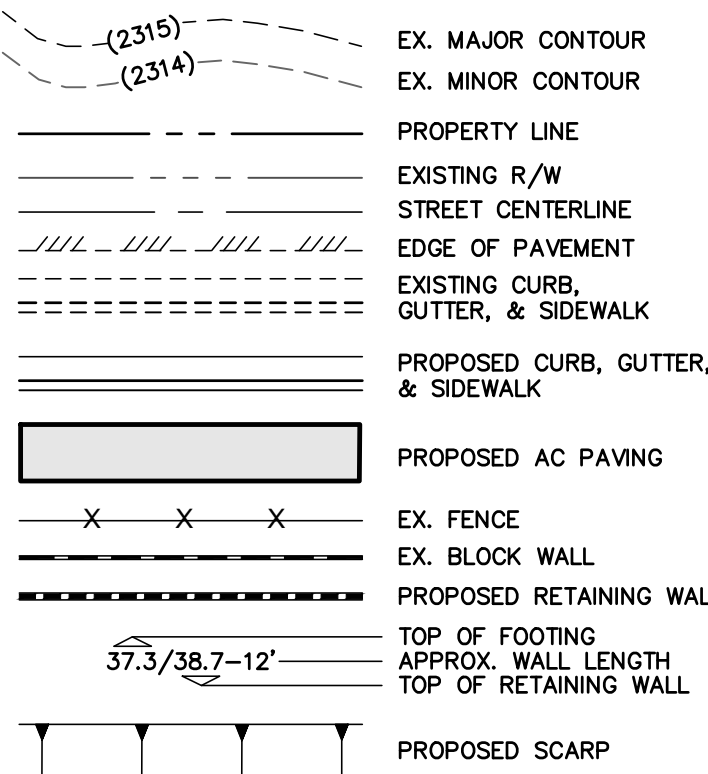
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CONSTRUCTION NOTES

- CONSTRUCT "L" TYPE CURB & GUTTER PER CCAUSD #216.
- CONSTRUCT 5' WIDE SIDEWALK PER CCAUSD #234.
- CONSTRUCT 8' WIDE VALLEY GUTTER PER CCAUSD #228.
- CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT PER CCAUSD #235, CASE I.
- SAWOUT AND MATCH EXISTING ASPHALT.
- STORM WATER STAMP TO BE LOCATED ADJACENT TO DROP INLET PER CCAUSD #421.
- CONSTRUCT 16" TYPE CURB AND GUTTER, PER CCAUSD #222 & 223.
- INSTALL 3 (EA) REMOVABLE LOCKING BOLLARDS @ 7' O.C. PER DETAIL N/4.
- INSTALL 26" WIDE WROUGHT IRON GATE ONLY PER CCAUSD #401 B. SEE DETAIL ON SHEET 5.
- CONSTRUCT TYPE CM 2 GRATE DROP INLET PER CCAUSD #4121. SEE DETAIL ON SHEET 5.
- ADJUST EXISTING FIRE HYDRANT TO GRADE.
- ADJUST EXISTING CABLE BOX TO GRADE.
- ADJUST EXISTING ELECTRICAL VAULT TO GRADE.
- CONSTRUCT 26" WIDE RESIDENTIAL DRIVEWAY PER CCAUSD #223.
- CONSTRUCT 26" WIDE COMMERCIAL DRIVEWAY PER CCAUSD #224.

GRADING LEGEND



FLOOD ZONE NOTE

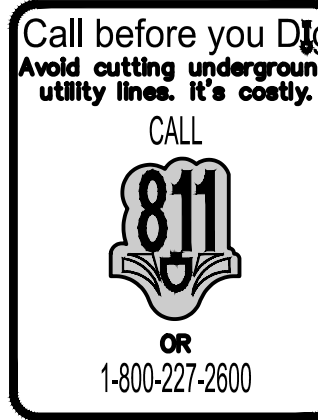
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BASIS OF BEARING

SOUTH 87°14'59" EAST, BEING THE BEARING OF THE NORTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 26, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA AS SHOWN ON THAT CERTAIN MAP ON FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 160, PAGE 26 OF SURVEYS.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK STATION: 0LV90 26N6
RIVET & PLATE IN TOP OF CURB @ NW CORNER OF TORREY PINES & AZURE
ELEVATION = 706.598 METERS (NAVD'88 2008 ADJ.)
ELEVATION = 2318.23 U.S. FEET (NAVD'88 2008 ADJ.)



DR HORTON

AZURE & TORREY PINES NORTH

STORM DRAIN
PLAN AND PROFILES

SHEET

10

OF 10
C.L.V. DWG.#

DATE: 02/22/2016

PM: J. PEARCE

DRAWN BY:

DESIGNED BY:

CHECKED BY:

ADA CHECKED:

JOB NO.: 007.099

SCALE: 1" = 40'

NO.

DESCRIPTION

DATE

APP'D



DR HORTON

AZURE & TORREY PINES NORTH

STORM DRAIN
PLAN AND PROFILES

SHEET

10

OF 10
C.L.V. DWG.#