

SUPPLEMENT 1 to ADDENDUM 2

TECHNICAL DRAINAGE STUDY
for
LV Medical District Mixed Use

April 2024

Prepared For:

Zenith Engineering
1980 Festival Plaza Dr., Ste. 450
Las Vegas, NV 89135
(702) 866-9535

Prepared By:

Reynolds Engineering Co.
1925 Village Center Cir., Ste. 150
Las Vegas, NV 89134
(702) 582-8008

Job No. 23007

SUPPLEMENT 1 to ADDENDUM 2

TECHNICAL DRAINAGE STUDY
for
LV Medical District Mixed Use

April 2024

Prepared For:
Zenith Engineering
1980 Festival Plaza Dr., Ste. 450
Las Vegas, NV 89135
(702) 866-9535

Prepared By:
Reynolds Engineering Co.
1925 Village Center Cir., Ste. 150
Las Vegas, NV 89134
(702) 582-8008



Job No. 23007

HYDROLOGIC CRITERIA AND DRAINAGE MANUAL
DRAINAGE STUDY INFORMATION FORM

Name of Development: LV MEDICAL DISTRICT MIXED USE Date: 4/15/24

Location of Development: a) Descriptive (Cross Streets) North/South: SHADOW LN
 East/West: WELLNESS WY

b) Section: 33 Township: 20 SOUTH Range: 61 EAST

c) APN : 139-33-402-014, 015, 034 AND PORTION OF 139-33-406-006

Name of Owner: BOARD OF REGENTS OF THE NEVADA SYSTEM OF HIGHER EDUCATION CONTACT: PATTY CHARLTON

Telephone No.: (702) 889-8426 Fax No.: _____ E-Mail Address: PCHARLTON@NSHE.NEVADA.EDU

Address: 4505 S. MARYLAND PKWY. LAS VEGAS, NV 89154

Contact Person-Name: JAMES G. REYNOLDS, P.E. Telephone No.: (702) 582-8008

* E-Mail Address: JR@REYNOLDSENGINEERING.CO ***.CO, NOT .COM*** Fax No.: _____

Firm: REYNOLDS ENGINEERING CO.

Address: 1925 VILLAGE CENTER CIR., STE. 150 LAS VEGAS, NV 89134

Type of Land Development/Land Disturbance Process:

<input type="checkbox"/> Rezoning	<input type="checkbox"/> Subdivision Map	<input type="checkbox"/> Clearing and Grading Only
<input type="checkbox"/> Parcel Map	<input type="checkbox"/> Planned Unit Development	<input type="checkbox"/> Other (Please specify below)
<input type="checkbox"/> Large Parcel Map	<input checked="" type="checkbox"/> Building Permit	

1. Total Owned Land Area: At Site: 17.48 ACRES Being Developed/Disturbed: 3.7 ACRES

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

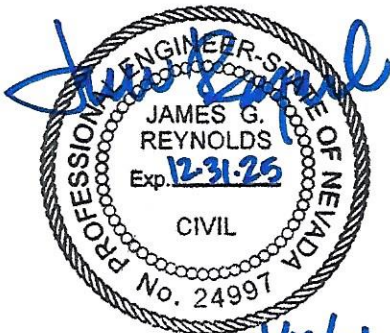
4. Proposed type of development (Residential, Commercial, Etc.): MIXED USE

5. Approximate upstream land area which drains to the subject site: 95 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: HASTINGS AVE (PRIVATE) TO SOUTH AND WELLNESS WY TO NORTH; CONSISTENT WITH HISTORICAL DRAINAGE PATTERNS

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.**

Revision	Date

Local Entity File No. _____

REFERENCE:

STANDARD FORM 1

REYNOLDS ENGINEERING CO.

LAS VEGAS, NEV

April 15, 2024

City of Las Vegas
Department of Public Works
Flood Control Section
495 S Main St, 1st Floor
Las Vegas, NV 89101

Attn: Albert Sung, P.E.

**Re: Technical Drainage Study Supplement 1 to Addendum 2
LV Medical District Mixed Use (DS 5719)
Reynolds Engineering Co. Job No. 23007**

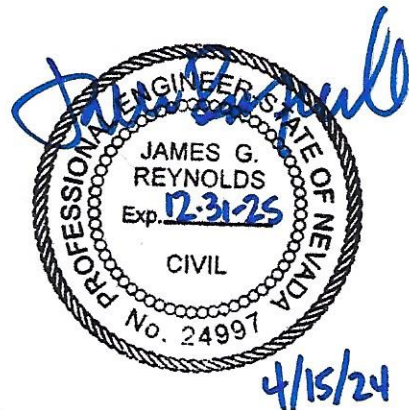
Dear Mr. Sung:

This letter certifies that all documents comprising Technical Drainage Study Supplement 1 to Addendum 2 for LV Medical District Mixed Use provided on CD matches 100% of the hardcopy submittal.

Respectfully submitted,

Reynolds Engineering Co.

James G. Reynolds, P.E.
Principal Civil Engineer



REYNOLDS ENGINEERING CO.

LAS VEGAS, NEV

April 15, 2024

City of Las Vegas
Department of Public Works
Flood Control Section
495 S Main St, 1st Floor
Las Vegas, NV 89101

Attn: Albert Sung, P.E.

Re: Technical Drainage Study Supplement 1 to Addendum 2
LV Medical District Mixed Use (DS 5719)
Reynolds Engineering Co. Job No. 23007

Dear Mr. Sung:

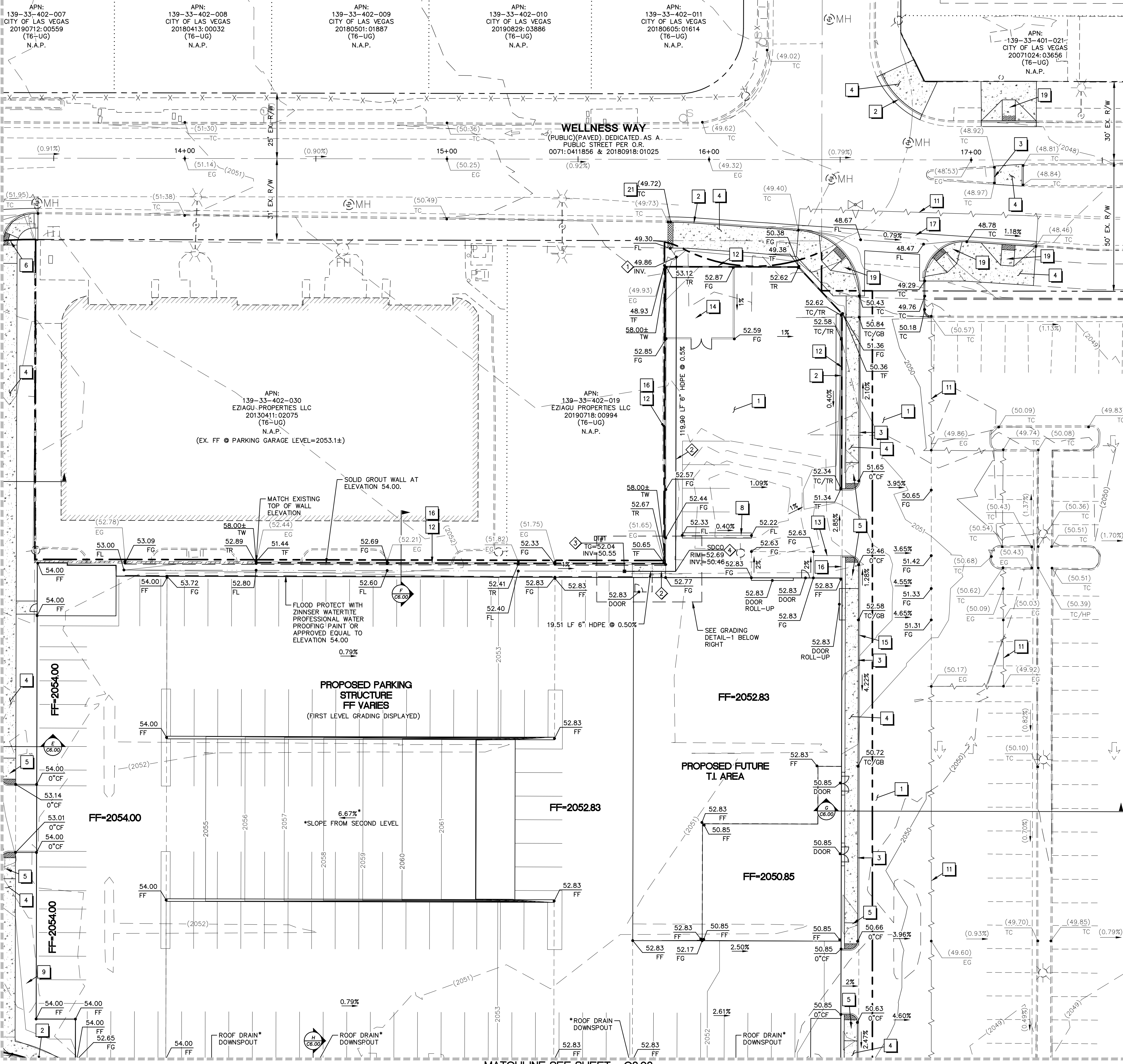
Per our telephone conversation on April 15, 2024, grading plan sheet C3.02 has been revised to remove the callout for a screen wall on the west side of the concrete landing at the door on the north side of the parking garage, which conflicted with the proposed overflow path discussed in Response 2 of the previous submittal. The revised plan is attached to this submittal.

If you have any questions regarding this submittal or require additional information to complete your review, please contact this office.

Respectfully submitted,

Reynolds Engineering Co.

James G. Reynolds, P.E.
Principal Civil Engineer



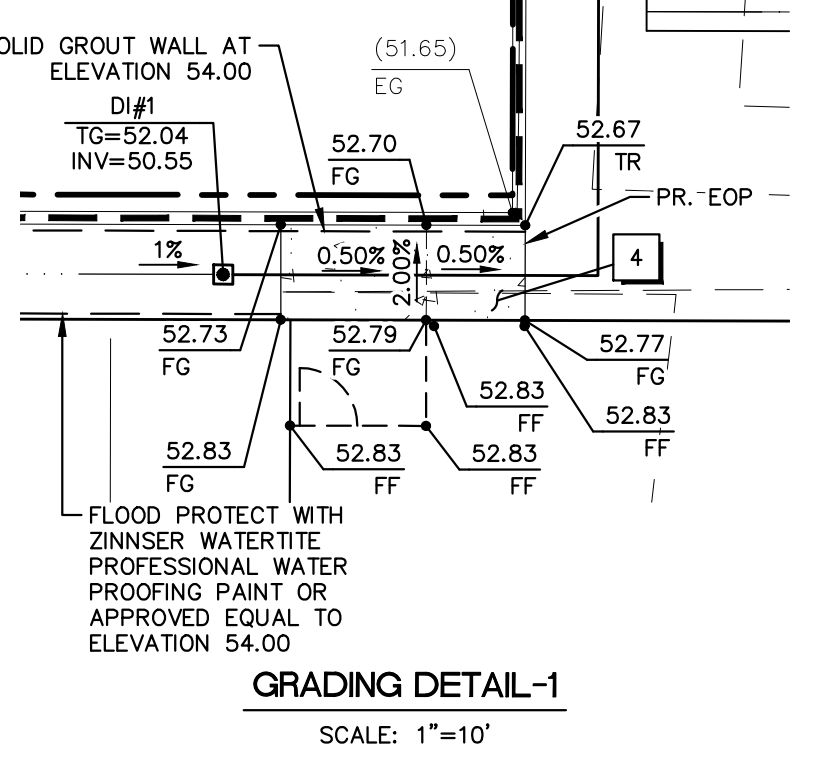
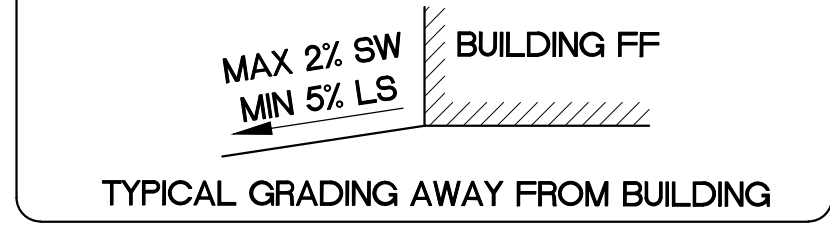
CITY OF LAS VEGAS POST-CONSTRUCTION STORMWATER BEST MANAGEMENT PRACTICES NOTES

- STANDARD NOTE NO. 1: THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO OR ACCUMULATED IN THE PUBLIC RIGHTS OF WAY OF THE CITY OF LAS VEGAS AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.
- STANDARD NOTE NO. 2: ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN THE LVMC 14.18.130 AND CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT'S HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL SECTION 1500 AND THE LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL.
- STANDARD NOTE NO. 3: TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY. REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NV100000, SECTION III.A.5.
- STANDARD NOTE NO. 4: AT A MINIMUM, THE CONTRACTOR OR AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS, AND ALL BMPs WEEKLY, AND WITHIN 24 HOURS AFTER ANY RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS MAY APPLY. REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NV100000, SECTION III.A.12.
- STANDARD NOTE NO. 5: ACCUMULATED SEDIMENT IN BMPs SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.
- STANDARD NOTE NO. 6: POST-CONSTRUCTION BMPs (PCBMPs) / CONTROL MEASURES NOTED ON THE GRADING PLANS ARE MANDATORY PERMANENT REGULATORY STORMWATER POLLUTION CONTROLS. THESE PCBMPs MUST BE INSTALLED PER THE APPROVED PLANS AND MUST BE PERMANENTLY MAINTAINED.

GRADING NOTES

- CONTRACTOR SHALL VERIFY ALL EXISTING GRADES PRIOR TO CONSTRUCTION. IF CONFLICTS EXIST BETWEEN FIELD CONDITIONS AND THE ELEVATIONS SHOWN ON THESE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
- CONTRACTOR SHALL DETERMINE FOOTING OR BASEMENT EXCAVATION QUANTITIES. STRUCTURE BACKFILL COSTS SHALL BE INCLUDED IN THE COST OF THE STRUCTURE, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.
- EROSION CONTROL FABRIC/MATERIAL SHALL BE USED FOR SLOPE PROTECTION FOR SLOPES 4:1 OR GREATER AND DISTURBED FINE-GRAINED MATERIALS, UNLESS OTHERWISE SPECIFIED BY LANDSCAPE DRAWINGS AND/OR SPECIFICATIONS OR THE SOILS REPORT.
- CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE. PONDING IS DISALLOWED. CONTRACTOR SHALL FOLLOW RECOMMENDATIONS AS OUTLINED IN THE GEOTECHNICAL REPORT FOR THIS PROJECT. REFER TO THE REPORT PREPARED BY: ### PROJECT No.: _____ DATED: _____

EARTHWORKS	DISTURBED ACRES
CUT: 340 CY	ON-SITE: 3.75 ACRES
FILL: 8114 CY	OFF-SITE: 0.33 ACRES
NET: 7774 CY (F)	



RTC-FAST NOTES

- CONTRACTOR IS TO MAINTAIN AND KEEP OPERATIONAL ALL EXISTING INFRASTRUCTURE WITHIN THE CONSTRUCTION LIMITS. IF ANY EXISTING INFRASTRUCTURE IS DAMAGED DUE TO CONSTRUCTION WITHIN THE PROJECT LIMITS, THE CONTRACTOR SHALL IMMEDIATELY CONTACT MR. LONNIE BROWN (RTC/FAST MANAGER TRAFFIC SYSTEMS MAINTENANCE AT 702-290-1979 CELL OR 702-432-5300 GENERAL).
- IF ANY EXISTING FIBER OPTIC CABLE IS TO BE CUT, SPLICED AND/OR PULLED, ALONG OR ADJACENT TO THE PROJECT LIMITS, THE CONTRACTOR IS TO CONTACT MR. LONNIE BROWN 2 WEEKS IN ADVANCE FOR SYSTEM SHUTDOWN COORDINATION.
- CONTRACTOR MUST NOTIFY MR. LONNIE BROWN AT 702-290-1979 CELL, OR 702-432-5300 GENERAL, OR AT BrownL@ctcnv.com ONCE ALL PROJECT ITS FIBER OPTIC WORK IS COMPLETE. A COPY OF AS-BUILT DRAWINGS MUST BE PROVIDED TO RTC/FAST UPON COMPLETION OF PROJECT.

CONSTRUCTION NOTES:

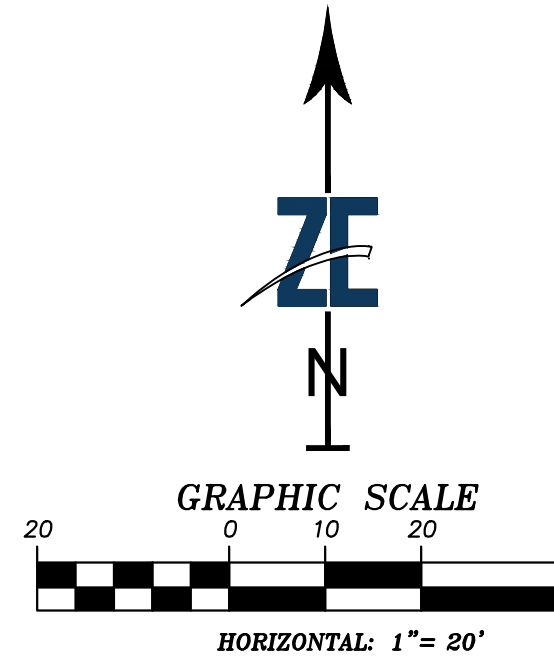
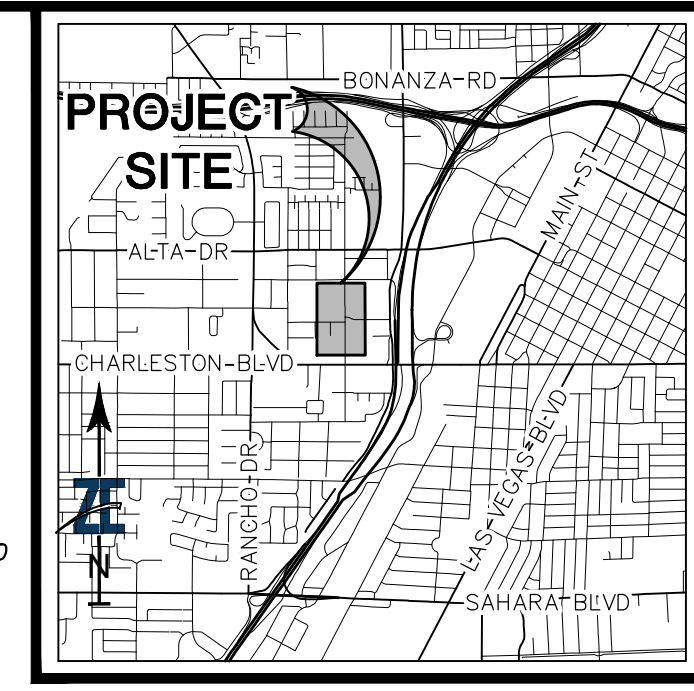
- CONSTRUCT AC PAVEMENT OVER AGGREGATE BASE PER DETAIL-1 ON SHEET
- CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD STANDARD DRAWING NO. 216
- CONSTRUCT "A" CURB PER DETAIL-2, ON SHEET
- CONSTRUCT CONCRETE SIDEWALK PER CCAUSD DRAWING NO. 234
- CONSTRUCT SIDEWALK CURB RAMP IN PER DETAIL-3 ON SHEET C6.01
- CONSTRUCT SIDEWALK CURB RAMP IN PER DETAIL-4 ON SHEET C6.01
- INSTALL DETECTABLE WARNING SURFACE PER CCAUSD STANDARD DRAWING NO. 235
- CONSTRUCT 2' VALLEY GUTTER PER DETAIL-5 ON SHEET
- CONSTRUCT ROCK LINED BMP SWALE PER DETAIL-6 ON SHEET C6.01
- CONSTRUCT SIDEWALK DRAIN PER NDOT STANDARD DRAWING NO. DS-46. SEE SHEET C6.01
- MATCH EXISTING ELEVATION
- RETAINING WALL BY BUILDING PERMIT.
- PROPOSED EDGE OF PAVEMENT
- PROPOSED STORAGE ENCLOSURE BY OTHERS
- CONSTRUCT 0"-6" CURB FACE TRANSITION PER DETAIL-8 ON SHEET C6.01
- SCREEN WALL BY OTHERS
- CONSTRUCT CROSS GUTTER PER CCAUSD STANDARD DRAWING NO. 228
- CONSTRUCT MODIFIED CROSS GUTTER PER CCAUSD STANDARD DRAWING NO. 228
- CONSTRUCT CASE-II SIDEWALK RAMP PER CCAUSD STANDARD DRAWING NO. 235
- CONSTRUCT CASE-III SIDEWALK RAMP PER CCAUSD STANDARD DRAWING NO. 235
- CONSTRUCT SIDEWALK DRAIN PER CCAUSD STANDARD DRAWING NO. 236

STORM DRAIN CONSTRUCTION NOTES:

- INSTALL ADS FLARED END SECTION OUTLET
- INSTALL 6" HDPE STORM DRAIN PIPE
- INSTALL 12" NDS DROP INLET WITH RISER PIPE
- INSTALL CLEANOUT PER DETAIL-7 ON SHEET C6.01

STORM DRAIN NOTE

ALL ON-SITE STORM DRAINS AND ASSOCIATED FACILITIES ARE PRIVATELY OWNED AND TO BE PRIVATELY MAINTAINED BY THE PROPERTY OWNER.



FLOOD ZONE NOTE

THE SITE IS COVERED BY THE FLOOD INSURANCE RATE MAP (FIRM) FOR CLARK COUNTY, NEVADA AND INCORPORATED AREAS, AS SHOWN ON MAP NUMBER 320032170F WITH AN EFFECTIVE DATE OF NOVEMBER 16, 2011. THE SITE IS LOCATED WITHIN A FEMA ZONE X (UNSHADED), DEFINED BY FEMA AS, "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN."

ASSESSOR'S PARCEL NUMBER

APN: 139-33-402-014, 139-33-402-015, 139-33-402-034
PORTION OF 139-33-406-006

BENCHMARK

CITY OF LAS VEGAS BENCHMARK 7LV013353W6
RIVET & PLATE IN TOP OF CURB AT NE CORNER OF CHARLESTON & SHADOW LN
ELEVATION (METERS): 625.78
ELEVATION (FEET): 2,053.08 (NAVD 88)

BASIS OF BEARING

NORTH 00°11'13" EAST
BEING THE BEARING OF THE WEST LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 33, TOWNSHIP 20 SOUTH, RANGE 61 EAST, M.D.M. CITY OF LAS VEGAS, CLARK COUNTY, NEVADA SHOWN AS THE CENTERLINE OF SHADOW LANE IN FILE 122 OF SURVEYS, PAGE 15.

UTILITIES DISCLAIMER

EXISTING UTILITY LOCATIONS SHOWN ON THIS PLAN ARE APPROXIMATE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. ZENITH ENGINEERING ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION. ALL DISCREPANCIES MUST BE IMMEDIATELY REPORTED TO THE ENGINEER.

DESIGNED BY: J. IZZOLO	DRAWN BY: J. IZZOLO	CHECKED BY: J. IZZOLO	HORIZ. AS SHOWN	VERT. AS SHOWN		DRAWING No. C3.02										
							DATE: APRIL, 2024	8/XX								
<p>REVISION</p> <table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>BY</th> <th>DATE</th> <th>APPROVAL</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>						REV.	DESCRIPTION	BY	DATE	APPROVAL						<p>PROJECT SITE</p> <p>BONANZA RD</p> <p>ALTA DR</p> <p>CHARLESTON BLVD</p> <p>SAHARAF BLVD</p> <p>MAIN ST</p> <p>VICINITY MAP</p>
REV.	DESCRIPTION	BY	DATE	APPROVAL												
<p>ZENITH ENGINEERING</p> <p>1980 FESTIVAL PLAZA DRIVE SUITE 450 LAS VEGAS, NV 89135 (702) 866-9635</p>						<p>LAS VEGAS MEDICAL DISTRICT MIXED USE</p> <p>@ SHADOW LANE AND WELLNESS WAY</p> <p>GRADING PLAN-2</p>										
<p>Call before you Dig</p> <p>811</p> <p>Before you Overhead</p> <p>1-800-642-2444 1-702-227-2929</p>						<p>APN: 139-33-402-007 CITY OF LAS VEGAS 20190712:00559 (T6-UG) N.A.P.</p> <p>APN: 139-33-402-008 CITY OF LAS VEGAS 20180413:00032 (T6-UG) N.A.P.</p> <p>APN: 139-33-402-009 CITY OF LAS VEGAS 20180501:01887 (T6-UG) N.A.P.</p> <p>APN: 139-33-402-010 CITY OF LAS VEGAS 20190829:03886 (T6-UG) N.A.P.</p> <p>APN: 139-33-402-011 CITY OF LAS VEGAS 20180605:01614 (T6-UG) N.A.P.</p> <p>APN: 139-33-401-021 CITY OF LAS VEGAS 20071024:03656 (T6-UG) N.A.P.</p>										

C:\Users\Cabrera\Zenith Engineering\Julia Izzolo - Projects\231010-UNLV Medical District\Drawings\231010-C301-GR.dwg - Layout: C3.02 - Apr 15, 2024 - 3:33pm