Addendum to the Technical Drainage Study

for

MAIN STREET ENTERTAINMENT VENUE

Date Prepared:
July 2022

Prepared for:
The 361 Venture, LLC
426 South Staples St.
Corpus Christi, TX 78401

Prepared by:
Kimley-Horn and Associates, Inc.
6671 Las Vegas Boulevard South, Suite 320
Las Vegas, NV 89119
702.862.3600

Kimley»Horn

HYDROLOGIC CRITERIA AND DRAINAGE MANUAL

DRAINAGE STUDY INFORMATION FORM

Name of Development: Main Street Entertainment Venue Date: July 2022

Location of Development: a) Descriptive (Cross Streets) North/South: Chicago Ave/Philadelphia Ave

East/West: South Main St/Fairfield Ave

b) Section: 3 and 4 Township: 21S Range: 61E

c) APN : 162-03-301-001, -003 through -013 and -015 162-03-399-001, -010, -011, -013, -015

162-04-710-026 through -041 and -056 through -059 162-04-799-008 and -021 through -024

Name of Owner: The 361 Venture, LLC

Telephone No.: N/A Fax No.: N/A E-Mail Address:

Address: 426 South Staples St. Corpus Christi, TX 78401

Contact Person-Name: Michael Schwab, P.E. **Telephone No.:** 702.790.0206

* **E-Mail Address:** michael.schwab@kimley-horn.com **Fax No.:** N/A

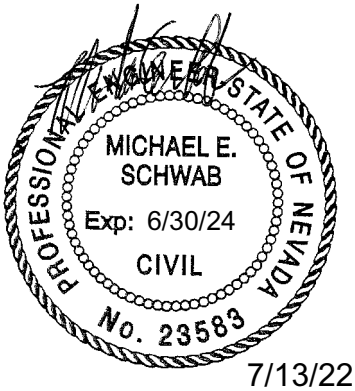
Firm: KIMLEY-HORN

Address: 6671 Las Vegas Boulevard South, Suite 320 Las Vegas, NV 89119

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	GRADING PERMIT	

1. Total Owned Land Area: At Site: +/- 9.76 acres Being Developed/Disturbed: +/- 10.74 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.): Commercial
5. Approximate upstream land area which drains to the subject site: +/- 28 sq-mi
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: 24" RCP Storm Drain in Main Street
   Surface draining to Commerce Street and Main Street
8. Briefly describe your proposed schedule for the subject project: ASAP



7/13/22

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

Updated 05/01/2008

CITY OF LAS VEGAS **INTER-OFFICE MEMORANDUM**				**DATE:** **April 9, 2022**
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:			**COPIES TO:**
Main Street Entertainment Venue				Kimley-Horn and Associates, Inc.
Cross Streets:	Main Street & Chicago Av/Philadelphia Ave			The 361 Venture, LLC
File Number:	F:\Depot\DSMemos\DS5554A.doc			Bart Anderson, P.E., DevCo
Parcel Number:	162-03-301-001; 003-013,015; 162-03-399-001; 010, 011, 013, 015; 162-04-720-041, 056-059, 162-04-799-008, 021-024			
Zoning Action:	???			
FEMA Flood Zone	YES	NO	**X**	
Proposed Storm Drain	YES	NO	**X**	

HISTORY	**DATE RECEIVED**	**DATE REVIEWED**	**COMMENTS**	**REVIEW FEES**	**FEES PAID Payment Trn #**
1st Submittal	3/15/2022	4/9/2022	See Comments Below	$400.00	4697025: $400
			TOTAL FEES (LDDRS):	**$400.00**	**----**

REMARKS:

**** A meeting between the engineer and City staff to resolve the general drainage issue will be required prior to the next submittal.**

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.

1. Provide a copy of the zoning/planning conditions associated with this site with the next submittal to verify compliance with conditions. *Flood Control* will not issue conditional approval of the drainage study without the associated zoning/planning conditions (issued by the *City Council*). Any associated conditions of approval that revise the site drainage parameters will require that the drainage study be revised and resubmitted.
2. Per the grading plans, it appears that the west boundary of the proposed project does not quite reach *Fairfield Avenue*. However, the *Vicinity Map (Figure 1)* shows the project fronting *Fairfield Avenue* which is not accurate. Review and revise *Figure 1* and all pertinent maps accordingly.
3. The proposed onsite storm drain system tying into an existing 24"-storm drain in *Main Street* is problematic. Per the "***City of Las Vegas Downtown Storm Drain Master Plan Figure 2-8 (100-Year Storm Frequency Existing Drainage Condition Overland Flow Inundation Areas)***", Commerce Street and Chicago Avenue is an existing low point. The vicinity of the subject site is experiencing a flood depth of 1.50' to 2.0' centering the intersection of *Commerce Street* and *Chicago Avenue* during a major storm event.

The existing 24”-storm drain in *Main Street* is essentially a nuisance drain and will be over capacity to be burdened by the proposed onsite flow connection. The proposed drainage condition will not alleviate the existing flood problem but will exacerbate the already bad situation.

The engineer shall consider running the proposed onsite storm drain system in *Commerce Street*. A regional facility is proposed in *Commerce Street* north of *Oakey Boulevard*. The storm drain system can tie to the regional facility in the future so that the onsite flooding problem will be permanently resolved.

It is understood that this comment may result in major re-design of the subject grading plan and drainage pattern. The engineer is recommended to meet with the City staff to reach a mutual acceptable resolution prior to submitting any revision.

The following comments are issued per the design in the last submittal. They may not be relevant if a major change in design is resulted per the above Comment #3:

4. **Ultimate Condition Drainage Map ULT-2** The *Street Section Summary Table* says the contributing basin flow for MS-1 is CP-2 and lists 155 cfs however the CP2 100 year flow is 37 cfs. The flowmaster for this sections is calculated using 38.50 cfs. Double check the consistency of the flows used in the summary tables and in the FlowMaster for all hydraulic sections.
5. The proposed onsite storm drain system started from inlets in *Chicago Avenue* collecting public flow (*Chicago Avenue* is a public right-of-way) onto the subject site. The onsite system will be dedicated as PUBLIC storm drain because it conveys public flow. A minimum 20’-wide public drainage easement will be required and to be dedicated containing the storm drains throughout the proposed development area.

   Delineate the required public drainage easements on all pertinent grading plans and record as such either by a final map or by separate document prior to the final approval of the improvement plans.
6. The project proposed eight (8) onsite drop inlets all in sump condition. Looking at DI #1 for example: The grate elevation is at 2031.65 and the high point in the adjacent driveway for emergency overflow is at 33.94 TC/HP. The worst case ponding depth when the onsite system is clogged will be about 2’ deep which is not acceptable. Revise to have a maximum ponding depth of 6” for emergency overflow situation.

   Address the overflow path and the maximum ponding depth situation for every proposed drop inlets clearly in the next submittal.
7. It appears that *Philadelphia Avenue* is narrowed along the frontage of the project site. Provide approval of the vacation of portion of or entirety of the public street from the *City Planning Department* prior to the final approval of the drainage study.
8. Provide Inlet ponding depth calculations for the existing sump inlets in *Main St*. to verify the FF elevation.
9. Inlet DI#8 calculations show a 10.5 cfs bypass, this inlet is in sump so the bypass is going to weir over the curb at this location and go to the trench drains. Confirm this is the intent, does this trench drain have capacity for this overflow?
10. The *WSPG* assumption that the HGL downstream is the elevation of the top of the pipe is not sufficient. Must verify the HGL in the downstream system (in *Main St*) at the 100 year to prove the existing system can handle the additional flow.
11. Provide *City of Las Vegas* recorded drawing number on all existing storm drains shown on the grading plans.

12. Per the referenced *Main Street Improvements* plans there is an existing 24" SD that goes through the proposed site. Show this existing storm drain on the grading plan and show intention for either abandonment or removal for this storm drain.
13. **Sheet C3.01**: There is a hump shown at the entrance on *Commerce St*, however the FL call out at the entrance (south side) is 33.45 and the TC at the HP is 33.90. Therefore, the high point is actually lower than the FL at the entrance. Review the provided grading at the entrance.
14. **Sheet C3.04:** The proposed CDS hydrodynamic separator must be called out on the proposed grading plans.
15. **Sheet C3.04:** Provide existing FL elevations in the valley gutter that crosses the *Main St*. entrance to verify the entrance hump provides 6" of protection.
16. Provide a note on the grading plans: 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.
17. Update the Stormwater Management Notes to the current version with the Improvement Plan submittal to Building Department – Land Development.

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
HDR/AYS

T/R/S: T21S/R61E/03
AREA R-03

Schwab, Michael

From: Peter Jackson <pjackson@LasVegasNevada.GOV>
Sent: Thursday, June 2, 2022 3:35 PM
To: Martin, Scott; Oh-Sang Kwon; Albert Sung
Cc: Moles, Richard; Schwab, Michael; Harvey, David; Blackmon, David
Subject: RE: DS5554A-MAIN STREET ENTERTAINMENT VENUE - Storm Drain Exhibit
Attachments: MFD-094@LASVEGASNEVADA.GOV_20220602_141714.pdf

Categories: External

Scott,
Attached are Flood Control mark-ups.
Flood Control looked at the layout of the Public Storm Drain and needed to see some changes that will reduce easements, manholes & pipe at the Chicago & Commerce intersection.

Include the Demo sheets for the removal of all existing storm drain with the next submittal.
Show the existing 18" sewer within Commerce as well as the water line.
Include these sewer and water crossings on the storm drain plans and any other utility crossings. Need to verify separation requirements.

Review and we can discuss via phone.
Thanks,

Peter Jackson, CFM
Senior Engineering Associate
City of Las Vegas | Dept. of Public Works
City Engineering Division, Flood Control Section
City Hall, 5th Floor
495 S Main St. | Las Vegas, Nevada 89101

Work: 702-229-5266 Link: www.lasvegasnevada.gov
pjackson@lasvegasnevada.gov

"Building Community to Make Life Better"

Your opinion is important! Click here to take a short survey.

From: Martin, Scott <scott.martin@kimley-horn.com>
Sent: Wednesday, June 1, 2022 3:45 PM
To: Peter Jackson <pjackson@LasVegasNevada.GOV>; Oh-Sang Kwon <okwon@LasVegasNevada.GOV>; Albert Sung <YSung@LasVegasNevada.GOV>
Cc: Moles, Richard <Richard.Moles@kimley-horn.com>; Schwab, Michael <Michael.Schwab@kimley-horn.com>; Harvey, David <David.Harvey@kimley-horn.com>; Blackmon, David <David.Blackmon@kimley-horn.com>; Gilland, Phyllis <Phyllis.Gilland@goldenent.com>; Bobak Mostaghasi <bobak@jeansrs.com>
Subject: DS5554A-MAIN STREET ENTERTAINMENT VENUE - Storm Drain Exhibit

CAUTION: This email originated from an **External Source**. Please **use caution** before opening attachments, clicking links, or responding to this email. **Do not sign-in with your City of Las Vegas account credentials.**

All,

Thank you for the time today discussing our potential storm drain options for the Main Street Entertainment Venue project. Per your request, please see attached for an exhibit showing the proposed storm drain redesign (shown in red) for your review.

Feel free to reach out should you have an questions or need any additional information from us.

Thanks,

Scott Martin, P.E.
Kimley-Horn | 6671 S. Las Vegas Boulevard, Suite 320, Las Vegas, NV 89119
Direct: 702 862 3630 | Mobile: 702 553 7242 | Main: 702 862 3600
Connect with us: Twitter | LinkedIn | Facebook | Instagram | Kimley-Horn.com

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Celebrating 14 years as one of FORTUNE's 100 Best Companies to Work For

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For any signed and sealed plans or final deliverables, if there are discrepancies between the Files and the hardcopy of the Files prepared by Kimley-Horn, the hardcopy shall govern. Only printed copies of such documents conveyed by Kimley-Horn may be relied upon. Any use of these electronic Files will be at the Receiving Party's sole risk. Receiving Party accepts the Files on an "as is" basis with all faults.

Where is the Overflow Path. Is building & Existing Structures protected.

Look at single Inlet at low point - See Enlarged view

Show FF (Existing)

Look at Inlet location. Shift to East. Current location is between 18" Sewer and 12" Water. Not an acceptable Location

Locking - Sloped Manholes (All Manholes)

24" SD Connection from Site into Main Street

Loading Dock Drain must go thru a Sand/oil Separator and then Connect to the Sewer, not the S.D.

Minimum 20' Public Drainage Easement (Typ.)

10' Separation between the Multi-Story Building foundation and the Storm Drain. (10' clear to outside of pipe)

W2007 STRATOSPHERE LAND PROPCO
APN:162-03-301-001

JANKOVICS LLC
APN:162-03-301-002
(NOT A PART)

W2007 STRATOSPHER LAND PROPCO
APNS: 162-04-710-010 THRU 162-04-710-025
(NOT A PART)

W2007 STRATOSPHER LAND PROPCO
APNS: 162-04-710-056 THRU 162-04-710-059
(NOT A PART)

LAS VEGAS & OAKEY LLC
APN:162-03-302-009
(NOT A PART)

LVS PARTNERS LLC
APN:162-03-302-010
(NOT A PART)

TM 1800 LLC
APN:162-03-302-011
(NOT A PART)

DENNYS INC. A
HUBER FAMI
TRUST 1995
APN:162-03-302
(NOT A PART)

COMMERCE ST.

CHICAGO AVE.

MAIN ST.

LAS VEGAS BLVD.

EX. R/W

EX. 40.0' R/W

EX. 20.0' 1/2 R/W

EX. 50.0' R/W

EX. 25.0' 1/2 R/W

EX. 15.0' R/W

EX. 90.0' R/W

EX. 45.0' 1/2 R/W

EX. PROPERTY LINE

SURFACE DRAINAGE DISCHARGE LOCATION

PARKING LOT STORM DRAIN REMOVED

PR. DRAINAGE EASEMENT

PR. SDMH-01
RIM: 2029.97
INV IN : 2025.80
INV OUT: 2025.56

PR. SDMH-02
RIM: 2030.94
INV IN (W): 2025.56
INV IN (S): 2025.56
INV OUT (N): 2025.56

PR. SDMH-03
RIM: 2034.12
INV IN (W): 2025.29
INV IN (S): 2025.29
INV OUT (N): 2025.29

PR. SDMH-04
RIM: 2033.56
INV IN: 2025.16
INV OUT: 2025.16

PR. SDMH-05
RIM: 2034.34
INV IN: 2023.96
INV OUT: 2023.96

PR. SDMH-06
RIM: 2034.67
INV IN: 2023.63
INV OUT: 2023.63

PR. SDMH-07
RIM: 2034.03
INV IN (NW): 2023.24
INV IN (S): 2023.24
INV OUT (E): 2023.24

PR. SDMH-10
RIM: (2033.6±)
INV IN (S): (2022.8±)
INV IN (W): 2022.84
INV OUT (N): (2022.8±)

PR. 18" RCP SD

PR. 24" RCP SD

PR. 36" RCP SD

PR. BUILDING
FFE=2035.85

ROOF DRAIN CONNECTIONS TO STORM DRAIN REMOVED

STRATOSPHERE GAMING LLC
APN:162-04-710-041

STRATOSPHERE GAMING LLC
APN:162-04-710-042

STRATOSPHERE GAMING LLC
APN:162-04-710-041

STRATOSPHERE GAMING LLC
APN:162-03-301-016

GRAPHIC SCALE IN FEET
0 20 40 80
SCALE: 1" = 40'

NORTH

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

No.	REVISIONS	DATE	BY

Kimley»Horn

© 2022 KIMLEY-HORN AND ASSOCIATES, INC.
6671 LAS VEGAS BOULEVARD S., SUITE 320, LAS VEGAS, NV 89119
PHONE: 702-862-3600
WWW.KIMLEY-HORN.COM

KHA PROJECT	192197000
DATE	6/1/2022
SCALE	AS SHOWN
DESIGNED BY	KHA
DRAWN BY	KHA
CHECKED BY	KHA

LAS VEGAS BLVD & MAIN STREET ENTERTAINMENT VENUE
PREPARED FOR
THE 361 VENTURE, LLC
CITY OF LAS VEGAS NEVADA

FOR DISCUSSION ONLY

PROPOSED STORM DRAIN REDESIGN EXHIBIT

SHEET NUMBER 1

Show a single drop Inlet at the low point. As this is the sag point, show a 20-foot Inlet.

Low Point per Plans

EX. 20.0' 1/2 R/W

EX. 20.0' 1/2 R/W

EX. 25.0' 1/2 R/W

EX. 25.0' 1/2 R/W

Public

PR. SDMH-04
RIM: 2033.56
INV IN: 2025.16
INV OUT: 2025.16

PR. 36" RCP SD

Public

2035

PR. DRAINAGE EASEMENT

20' Public TYP.

PR. 18" RCP SD

PR. SDMH-03
RIM: 2034.12
INV IN (W): 2025.29
INV IN (S): 2025.29
INV OUT (N): 2025.29

2034

3%

PR. 36" RCP SD

PR. SDMH-02
RIM: 2030.94
INV IN (W): 2025.56
INV IN (S): 2025.56
INV OUT (N): 2025.56

PR. 24" RCP SD

PR. S
RIM:
INV IN (NW):
INV IN (S):
INV OUT (E):

2035

PR. SDMH-01
RIM: 2029.97
INV IN : 2025.80
INV OUT: 2025.56

On-Site Private Storm Drain

2034

2036

2035

2035

2036

2037

PR. DRIVING RANGE

Show 18" Sewer

12" Water

PR. TRENCH DRAIN

PR. BUILDING
FFE=2035.85

Kimley»Horn

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for

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The 361 Venture, LLC
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July 2022
KH Project #192197000

Kimley»Horn

July 13, 2022

City of Las Vegas
Flood Control – Department of Public works
Las Vegas NV

RE: Technical Drainage Study for Main Street Entertainment Venue

To Albert Sung, P.E.,

This is being submitted in response to comments dated April 9, 2022. These comments have been reviewed and are addressed as follows:

Comment 1: **Provide a copy of the zoning/planning conditions associated with this site with the next submittal to verify compliance with conditions. Flood Control will not issue conditional approval of the drainage study without the associated zoning/planning conditions (issued by the City Council). Any associated conditions of approval that revise the site drainage parameters will require that the drainage study be revised and resubmitted**.

Response: The planning conditions have been included in **Appendix A**.

Comment 2: **Per the grading plans, it appears that the west boundary of the proposed project does not quite reach Fairfield Avenue. However, the Vicinity Map (Figure 1) shows the project fronting Fairfield Avenue which is not accurate. Review and revise Figure 1 and all pertinent maps accordingly.**

Response: Although these project improvements do not extend to Fairfield Avenue at this time, the parcels are owned by the same property owner and the parcels are listed on the cover sheet of the improvement plans and shown as future expansion. It is noted that a TDS Update will be needed once this future expansion occurs.

Comment 3: **The proposed onsite storm drain system tying into an existing 24"-storm drain in Main Street is problematic. Per the "City of Las Vegas Downtown Storm Drain Master Plan Figure 2-8 (100-Year Storm Frequency Existing Drainage Condition Overland Flow Inundation Areas)", Commerce Street and Chicago Avenue is an existing low point. The vicinity of the subject site is experiencing a flood depth of 1.50' to 2.0' centering the intersection of Commerce Street and Chicago Avenue during a major storm event.**

The existing 24"-storm drain in Main Street is essentially a nuisance drain and will be over capacity to be burdened by the proposed onsite flow connection. The proposed drainage condition will not alleviate the existing flood problem but will exacerbate the already bad situation.

The engineer shall consider running the proposed onsite storm drain system in Commerce Street. A regional facility is proposed in Commerce Street north of Oakey Boulevard. The storm drain system can tie to the regional facility in the future so that the onsite flooding problem will be permanently resolved.

It is understood that this comment may result in major re-design of the subject grading plan and drainage pattern. The engineer is recommended to meet with the City staff to reach a mutual acceptable resolution prior to submitting any revision.

The following comments are issued per the design in the last submittal. They may not be relevant if a major change in design is resulted per the above Comment #3:

Response: Kimley-Horn held coordination meetings with the City of Las Vegas on April 20, May 5, and June 1. As a result of these meetings some redesign of onsite storm drain facilities took place and are discussed herein.

The onsite flow, excluding basins **DON1-E, DON1-F**, and **DON1-K,** will surface flow to Main Street. Onsite basins **DON1-E** and **DON1-F** drain to onsite trench drains which connects to onsite storm drain which ultimately conveys runoff to the existing 24-inch storm drain in Main Street. Onsite basin **DON1-K** drains to a proposed drop inlet in Philadelphia Avenue, and the runoff is conveyed in onsite storm drain to the existing 24-inch storm drain in Main Street. Per the request of CLV, one 20-foot combination drop inlet is shown in the low point at the intersection of Chicago Avenue and

Commerce Street. Additionally, the proposed drop inlet in Philadelphia Avenue has been shifted east to avoid conflicts with the existing 18-inch sewer and 12-inch water lines. Other markups provided by CLV after our meeting on June 1st, as shown in front of the inside cover of this report, have been addressed on the improvement plans found in **Appendix D**. Drop inlet and normal depth calculations can be found in **Appendix B**. Revised LID calculations and exhibit can be found in **Appendix C**.

Comment 4: **Ultimate Condition Drainage Map ULT-2 The Street Section Summary Table says the contributing basin flow for MS-1 is CP-2 and lists 155 cfs however the CP2 100 year flow is 37 cfs. The flowmaster for this section is calculated using 38.50 cfs. Double check the consistency of the flows used in the summary tables and in the FlowMaster for all hydraulic sections.**

Response: Hydraulic section MS-1 has been updated to reflect to the correct tributary basins and flow rate in Main Street. Runoff from CP2, DON1-G, DON1-I, and DON1-J all contribute runoff to Main Street. Refer to the updated Figure ULT-2 in Appendix A, and Appendix B for the updated hydraulic sections.

Comment 5: **The proposed onsite storm drain system started from inlets in Chicago Avenue collecting public flow (Chicago Avenue is a public right-of-way) onto the subject site. The onsite system will be dedicated as PUBLIC storm drain because it conveys public flow. A minimum 20'-wide public drainage easement will be required and to be dedicated containing the storm drains throughout the proposed development area.**

Delineate the required public drainage easements on all pertinent grading plans and record as such either by a final map or by separate document prior to the final approval of the improvement plans.

Response: Public drainage easements have been delineated on all pertinent grading plan sheets.

Comment 6: **The project proposed eight (8) onsite drop inlets all in sump condition. Looking at DI #1 for example: The grate elevation is at 2031.65 and the high point in the adjacent driveway for emergency overflow Is at 33.94 TC/HP. The worst case ponding depth when the onsite system is clogged will be about 2' deep which is not acceptable. Revise to have a maximum ponding depth of 6" for emergency overflow situation.**

Address the overflow path and the maximum ponding depth situation for every proposed drop inlets clearly in the next submittal.

Response: All proposed drop inlets have been sized to limit ponding depth to 6". The emergency overflow path for the proposed drop inlet in Commerce Street at Chicago Avenue is north in Commerce Street toward New York Avenue. The emergency overflow path for the drop inlet in Philadelphia Avenue is east through the site to Main Street.

Comment 7: **It appears that Philadelphia Avenue is narrowed along the frontage of the project site. Provide approval of the vacation of portion of or entirety of the public street from the City Planning Department prior to the final approval of the drainage study.**

Response: The Planning Commission Approval (21-0422-VAC1) to vacate the public right-of-way including Philadelphia Avenue east of Fairfield Avenue can be found in **Appendix A**.

Comment 8: **Provide Inlet ponding depth calculations for the existing sump inlets in Main St. to verify the FF elevation.**

Response: Building FFE elevation (2035.85') has greater than 18" of freeboard based on the flow depth determined from street section MS-1 (0.90') and the grate elevation at the sump inlet in Main Street (2032.75') adjacent to the building.

Comment 9: **Inlet DI#8 calculations show a 10.5 cfs bypass, this inlet is in sump so the bypass is going to weir over the curb at this location and go to the trench drains. Confirm this is the intent, does this trench drain have capacity for this overflow?**

Response: The calculation for Inlet DI#2 (formerly DI#8) has been revised to show a 15' CM2 inlet in sump location. Refer to Appendix B. Per the discussions with CLV, ponding will occur at this location. The inlet will provide positive drainage once the system is no longer surcharged. The site has been elevated in order to protect the site from the anticipated ponding and the adjacent finished floor elevations are still protected from the 100-year WSE.

Comment 10: **The WSPG assumption that the HGL downstream is the elevation of the top of the pipe is not sufficient. Must verify the HGL in the downstream system (in Main St). at the 100 year to prove the existing system can handle the additional flow.**

Response: Per the discussions with CLV it was agreed that modeling the proposed storm drain would not be necessary due to an unknown starting downstream HGL and that the storm drain systems would be surcharged in the event of a 100-year design storm. To alleviate the pressurized system, locking slotted manhole lids are proposed on all manholes, and grates of drop inlets will be bolted to the frame.

Comment 11: **Provide City of Las Vegas recorded drawing number on all existing storm drains shown on the grading plans.**

Response: Record drawing number has been provided for all existing storm drains shown on the grading plans.

Comment 12: **Per the referenced Main Street Improvements plans there is an existing 24" SD that goes through the proposed site. Show this existing storm drain on the grading plan and show intention for either abandonment or removal for this storm drain.**

Response: Existing 24" storm drain is shown on the grading plans and is called out to be removed.

Comment 13: **Sheet C3.01: There is a hump shown at the entrance on Commerce St, however the FL call out at the entrance (south side) is 33.45 and the TC at the HP is 33.90. Therefore, the high point is actually lower than the FL at the entrance. Review the provided grading at the entrance.**

Response: The driveway hump for the entrance on Commerce Street has been revised to be elevated above the 100-year WSE. Per discussions with CLV, 6" of freeboard above the WSE is not required.

Comment 14: **Sheet C3.04: The proposed CDS hydrodynamic separator must be called out on the proposed grading plans.**

Response: CDS hydrodynamic separator has been called out on Sheet 3.11.

Comment 15: **Sheet C3.04: Provide existing FL elevations in the valley gutter that crosses the Main St. entrance to verify the entrance hump provides 6" of protection.**

Response: Existing FL elevations in valley gutter that crosses Main St entrance have been added to the plans. The driveway has been elevated above the 100-year WSE. Per discussions with CLV, 6" of freeboard above the WSE is not required.

Comment 16: **Provide a note on the grading plans: 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**

Response: Note has been provided on Sheet 3.00 of the grading plans.

Comment 17: **Update the Stormwater Management Notes to the current version with the Improvement Plan submittal to Building Department – Land Development**.

Response: Stormwater management notes have been updated.

With Kimley-Horn, you should expect more and will experience better. Please contact me at (702) 734-5666 or michael.schwab@kimley-horn.com should you have any questions or need any additional information.

Sincerely,

Michael Schwab, P.E.
Project Manager

David Harvey, E.I.

LIST OF APPENDICES

Appendix A – Documents & Figures

- ULT-2 Ultimate Condition Basin Map 2
- CLV ROW Vacations
- CLV Planning Recommendations

Appendix B – Hydraulic Calculations

- Normal Depth Calculations – Streets
- Normal Depth Calculations – Onsite
- Normal Depth Calculations – Swales
- Normal Depth Calculations – Full Flow Capacity
- Drop Inlet Calculations
- Drop Inlet Nomographs

Appendix C – Parking Lot LID Calculations

- LID Parking Lot LID Map & Calculations

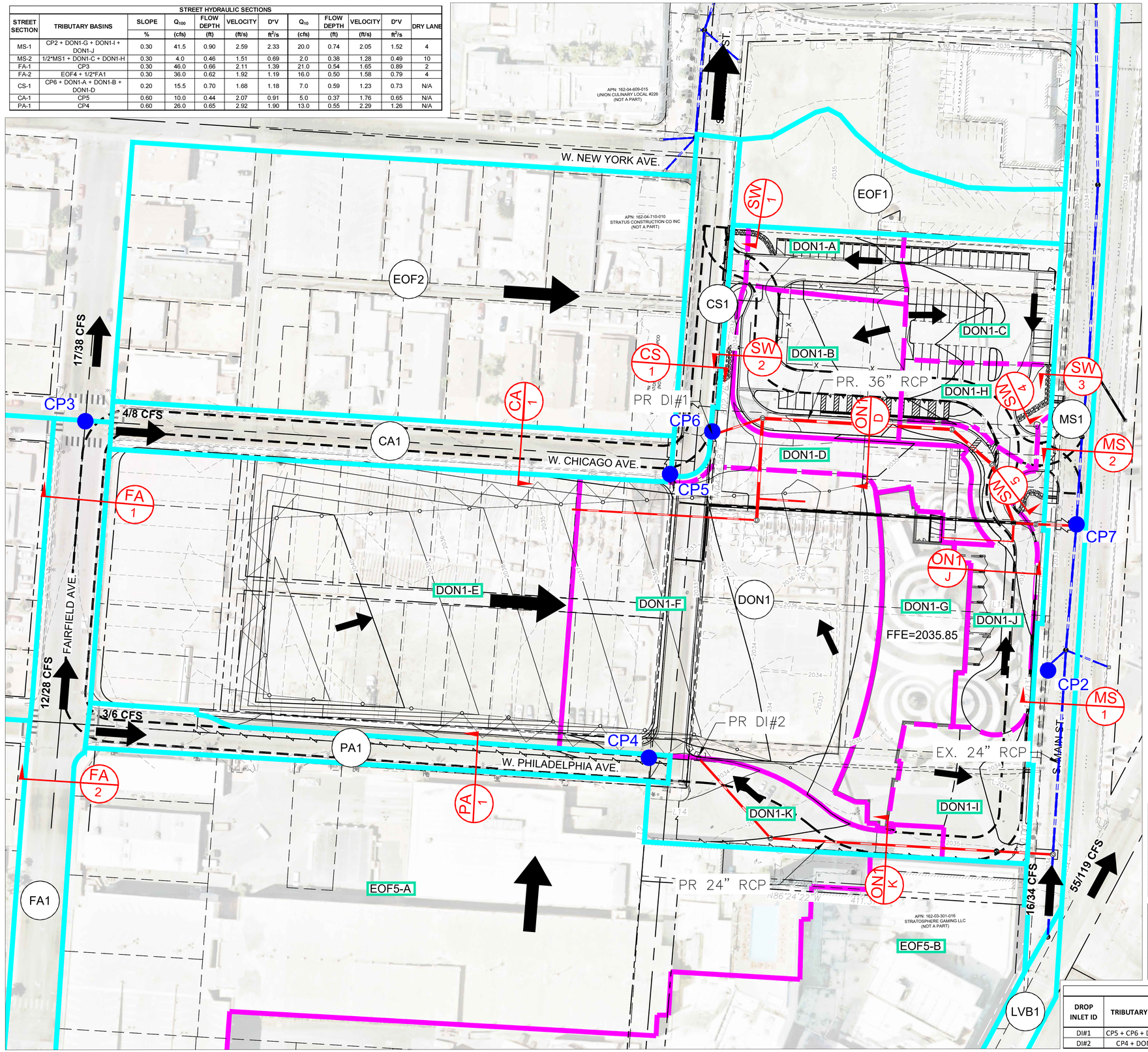
Appendix D – Improvement Plans

Appendix E – Data CD

Appendix A – Documents & Figures

- ULT-2 Ultimate Condition Basin Map 2
- CLV ROW Vacations
- CLV Planning Recommendations

STREET HYDRAULIC SECTIONS											
STREET SECTION	TRIBUTARY BASINS	SLOPE	Q_{100}	FLOW DEPTH	VELOCITY	D*V	Q_{10}	FLOW DEPTH	VELOCITY	D*V	DRY LANE
		%	(cfs)	(ft)	(ft/s)	ft^2/s	(cfs)	(ft)	(ft/s)	ft^2/s	
MS-1	CP2 + DON1-G + DON1-I + DON1-J	0.30	41.5	0.90	2.59	2.33	20.0	0.74	2.05	1.52	4
MS-2	1/2*MS1 + DON1-C + DON1-H	0.30	4.0	0.46	1.51	0.69	2.0	0.38	1.28	0.49	10
FA-1	CP3	0.30	46.0	0.66	2.11	1.39	21.0	0.54	1.65	0.89	2
FA-2	EOF4 + 1/2*FA1	0.30	36.0	0.62	1.92	1.19	16.0	0.50	1.58	0.79	4
CS-1	CP6 + DON1-A + DON1-B + DON1-D	0.20	15.5	0.70	1.68	1.18	7.0	0.59	1.23	0.73	N/A
CA-1	CP5	0.60	10.0	0.44	2.07	0.91	5.0	0.37	1.76	0.65	N/A
PA-1	CP4	0.60	26.0	0.65	2.92	1.90	13.0	0.55	2.29	1.26	N/A



NORTH

GRAPHIC SCALE IN FEET
0 25 50 100
1" = 50'

LEGEND

- SITE — BASIN ID
- BASIN BOUNDARY
- PRORATE BASIN BOUNDARY
- XX/XX CFS — 10YR/100YR CFS
- FLOW ARROW
- FLOW ARROW
- CPX — CONCENTRATION POINT
- X / XX — SECTION ID
- XXX-X — PRORATED BASIN ID
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN

ULTIMATE CONDITION PRORATED FLOW SUMMARY					
Ultimate Onsite					
SUBBASIN	Q_{100} (cfs)	Q_{10} (cfs)	AREA (ac)	$CFS/ACRE_{100}$	$CFS/ACRE_{10}$
DON1	27	14	9.84	2.74	1.42
EOF5	51	26	19.06	2.68	1.36
Ultimate Onsite Prorated Basins					
SUBBASIN	Q_{100} (cfs)	Q_{10} (cfs)	AREA (ac)	$CFS/ACRE_{100}$	$CFS/ACRE_{10}$
DON1-A	1.0	0.5	0.27	2.74	1.42
DON1-B	1.5	1.0	0.62	2.74	1.42
DON1-C	1.5	0.5	0.50	2.74	1.42
DON1-D	1.0	0.5	0.43	2.74	1.42
DON1-E	9.0	5.0	3.31	2.74	1.42
DON1-F	6.5	3.5	2.35	2.74	1.42
DON1-G	1.5	1.0	0.61	2.74	1.42
DON1-H	1.0	0.5	0.28	2.74	1.42
DON1-I	1.5	0.5	0.52	2.74	1.42
DON1-J	1.5	0.5	0.51	2.74	1.42
DON1-K	1.0	0.5	0.44	2.74	1.42
TOTAL	**27**	**14**	**9.84**	**NA**	**NA**
EOF5-A	18	9	6.87	2.68	1.36
EOF5-B	33	17	12.19	2.68	1.36
TOTAL	**51**	**26**	**19.06**	**NA**	**NA**

MAIN STREET ENTERTAINMENT VENUE ULTIMATE FLOW SUMMARY TABLE			
BASIN ID/ COMB. PT.	BASIN AREA (ac)	100-YR FLOW (cfs)	10-YR FLOW (cfs)
IR1	1.53	4	2
EOF6	11.54	26	12
EOF7	45.30	88	40
CP1	-	117	53
SA1	1.73	4	2
LVB1	1.99	5	3
EOF5	19.06	51	26
EOF5-A	-	18	9
EOF5-B	-	33	17
CP1A	-	153	71
LVB	-	119	55
MAIN	-	34	16
MS1	1.02	3	2
CP2	-	37	18
EOF4	15.44	34	15
EOF4-B	-	6	3
EOF4-A	-	28	12
EOF3	6.16	14	6
FA1	1.31	4	2
CP3	-	46	21
CP3-B	-	8	4
CP3-A	-	38	17
RCP3-A	-	8	4
CA1	0.70	2	1
CP5	-	10	5
EOF1	0.66	2	1
EOF2	3.85	9	4
CS1	0.37	1	1
CP6	-	12	5
REOF5-A	-	18	9
PA1	0.49	2	1
REOF4-A	-	6	3
CP4	-	26	13
DON1	9.84	27	14
CP7	-	74	38

ULTIMATE CHANNEL HYDRAULIC SECTIONS									
STREET SECTION	TRIBUTARY BASINS	CHANNEL SLOPE	Q_{100}	FLOW DEPTH	VELOCITY	D*V	TYPE	SIDE SLOPES	Red'd d_{50}
		%	(cfs)	(ft)	(ft/s)	ft^2/s			
SW-1	DON1-A	0.50	1.0	0.47	1.12	0.53	V-DITCH	4:1 4:1	6"
SW-2	DON1-B	0.31	1.5	0.6	1.04	0.62	V-DITCH	4:1 4:1	6"
SW-3	DON1-C	1.19	1.5	0.47	1.72	0.81	V-DITCH	4:1 4:1	6"
SW-4	DON1-H	0.50	1.0	0.47	1.12	0.53	V-DITCH	4:1 4:1	6"
SW-5	DON1-G + DON1-J	0.75	3.0	0.66	1.72	1.14	V-DITCH	4:1 4:1	6"

INTERIM/ULTIMATE ONSITE HYDRAULIC SECTIONS								
SECTION	TRIBUTARY BASINS	CHANNEL SLOPE	Q_{100}	FLOW DEPTH	*FLOW LINE	*FLOW LINE + 2D	*FFE BLDG	BLDG PROTECTED?
		%	(cfs)	(ft)	(ft)	(ft)	(ft)	
ON1-D	DON1-D	0.50	1.0	0.25	34.88	35.38	35.50	YES
ON1-J	DON1-G & DON1-J	0.50	3.0	0.43	33.81	34.67	35.50	YES
ON1-K	DON1-K	0.71	1.0	0.24	35.00	35.48	35.50	YES
*Add 2000 ft								

ULTIMATE CONDITION DROP INLET SUMMARY TABLE									
DROP INLET ID	TRIBUTARY AREA	SLOPE	FLOW DEPTH	Q_{100}	Q_{INT}	Q_{BYP}	Q_{10}	Q_{INT}	Q_{BYP}	DI TYPE
		(%)	(ft)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	
DI#1	CP5 + CP6 + DON1-D	SUMP	0.50	23.00	23.00	0.00	10.50	10.50	0.00	20' CM2
DI#2	CP4 + DON1-K	SUMP	0.50	27.00	27.00	0.00	14.50	14.50	0.00	15' CM2

BY	DATE	No.	REVISIONS

Kimley»Horn
© 2022 KIMLEY-HORN AND ASSOCIATES, INC.
6671 LAS VEGAS BOULEVARD S., SUITE 320, LAS VEGAS, NV 89119
PHONE: 702-862-3600
WWW.KIMLEY-HORN.COM

KHA PROJECT 192197000
DATE 7/12/2022
SCALE AS SHOWN
DESIGNED BY DH
DRAWN BY SS
CHECKED BY MS

ULTIMATE CONDITION DRAINAGE MAP

MAIN STREET ENTERTAINMENT VENUE
PREPARED FOR
THE 361 VENTURE, LLC
CITY OF LAS VEGAS NEVADA

ULT-2

LAS VEGAS CITY COUNCIL

CAROLYN G. GOODMAN
Mayor

STAVROS S. ANTHONY
Mayor Pro Tem

MICHELE FIORE
CEDRIC CREAR
BRIAN KNUDSEN
VICTORIA SEAMAN
OLIVIA DIAZ

JORGE CERVANTES
City Manager

DEPARTMENT OF PLANNING

SETH T. FLOYD
DIRECTOR OF
COMMUNITY DEVELOPMENT

CITY HALL
495 S. MAIN ST.
3RD FLOOR
LAS VEGAS, NV 89101
702.229.6301 | VOICE
702.464.2545 | FAX
711 | TTY

cityoflasvegas
lasvegasnevada.gov

September 15, 2021

Mr. Phyllis Gilland
Stratosphere Gaming LLC
6595 S. Jones Blvd.
Las Vegas, Nevada 89118

RE: 21-0422-VAC1
PLANNING COMMISSION MEETING OF SEPTEMBER 14, 2021

Dear Applicant:

The Planning Commission at a regular meeting held on *September 14, 2021* voted to recommend ***APPROVAL*** of the following Land Use Entitlement project request for a Petition to Vacate public right-of-way generally located at the northwest corner of Commerce Street and Philadelphia Avenue, Ward 3 (Diaz).

This approval is subject to the following amended conditions:

1. A map to consolidate parcels such that no land locked parcel remains shall record prior to the recordation of the Order of Vacation. Alternatively, private access easement(s) may be granted through the Order of Vacation such that each parcel has legal access to a public right-of-way.

2. The limits of this Petition of Vacation are the entire rights-of-way, including the spandrels, on Philadelphia Avenue east of Fairfield Avenue, Commerce Street south of Chicago Avenue and the alleys located south of Chicago Avenue and east of Fairfield Avenue.

3. The Order of Vacation shall be revised to retain a minimum 20-foot wide Public Sewer Easement over all existing sewer lines. Alternatively, provide a sewer relocation/abandonment plan acceptable to the Sanitary Sewer Planning section of the Department of Public Works prior to recordation of the Order of the Vacation. If relocation is required, this vacation shall not record until civil improvement plans are approved by the City of Las Vegas, bonded and permitted for construction prior to recordation.

4. The Order of Vacation shall be revised to retain a public drainage easement, to be privately maintained, over the entire area being vacated. If the easement is not compatible with future development, a Technical Drainage Study must be submitted to and approved by the Department of Public Works prior to the recordation of the Order of Vacation for this application. Appropriate drainage easements shall be reserved if recommended by the approved Drainage Plan/Study.

5. Prior to recordation of the Order of Vacation, coordinate the relocation of all utilities within the portion to be vacated. Alternatively, if approved by the utility companies, this Petition of Vacation shall be amended to retain easements for the various utility companies.

6. Prior to the recordation of the Order of Vacation, construct curb, gutter and sidewalk on Fairfield Avenue across Philadelphia Avenue and on Chicago Avenue across Commerce Street, unless otherwise allowed by the City Engineer.

7. All public improvements, if any, adjacent to and in conflict with this vacation application are to be modified, as necessary, at the applicant's expense prior to the recordation of an Order of Vacation. Existing public streetlights shall be removed and returned to the City yard. Alternatively, the streetlights may remain if the applicant disconnects them from public electrical service and installs a new private electrical service to energize the lights. All existing streetlights that are to remain public must be energized by a public service pedestal and any re-circuiting of streetlights must be done prior to the recordation of the Order of Vacation. Reassignment and or re-circuiting of streetlights shall be coordinated with the Traffic Electrical Field Operations (TEFO) section of the Department of Public Works (702-229-6331).

8. Reservation of easements for the facilities of the various utility companies together with reasonable ingress thereto and egress there from shall be provided if required.

9. All development shall be in conformance with code requirements and design standards of all City Departments.

10. The Order of Vacation shall not be recorded until all of the conditions of approval have been met provided, however, that conditions requiring modification of public improvements may be fulfilled for purposes of recordation by providing sufficient security for the performance thereof in accordance with the Subdivision Ordinance of the City of Las Vegas. City Staff is empowered to modify this application if necessary because of technical concerns or because of other related review actions as long as current City right of way requirements are still complied with and the intent of the vacation application is not changed. If applicable, a five foot wide easement for public streetlight and fire hydrant purposes shall be retained on all vacation actions abutting public street corridors that will remain dedicated and available for public use. Also, if applicable and where needed, public easement corridors and sight visibility or other easements that would/should cross any right-of-way or easement being vacated must be retained.

11. If the Order of Vacation is not recorded within one (1) year after approval by the City of Las Vegas or an Extension of Time is not granted by the Planning Director, then approval will terminate and a new petition must be submitted.

This item will be considered by the City Council on ***October 20, 2021***. This meeting will be held at the Council Chambers of City Hall, 495 South Main Street, Las Vegas, Nevada and is not to be heard before 9:30 A.M. ***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,



Eric McCammond
Senior Management Analyst
Case Planning Division

EM:nl

cc:

Ms. Elisha Scrogum or Mr. Robert Cunningham
Taney Engineering
6030 S. Jones Blvd.
Las Vegas, Nevada 89118

City of Las Vegas

AGENDA MEMO - PLANNING

CITY COUNCIL MEETING DATE: MAY 18, 2022
DEPARTMENT: PLANNING
ITEM DESCRIPTION: APPLICANT: THE 361 VENTURE, LLC - OWNER: STRATOSPHERE GAMING, LLC AND W2007 STATOSPHERE LAND PROPCO

** STAFF RECOMMENDATION(S) **

CASE NUMBER	*RECOMMENDATION*	*REQUIRED FOR APPROVAL*
22-0107-GPA1	Staff recommends APPROVAL.	
22-0107-ZON1	Staff recommends APPROVAL.	22-0107-GPA1
22-0107-SUP1	Staff recommends APPROVAL, subject to conditions:	22-0107-GPA1 22-0107-ZON1
22-0107-SDR1	Staff recommends APPROVAL, subject to conditions:	22-0107-GPA1 22-0107-ZON1 22-0107-SUP1

** NOTIFICATION **

NEIGHBORHOOD ASSOCIATIONS NOTIFIED 27

NOTICES MAILED 723 (by City Clerk)

PROTESTS 0

APPROVALS 10

JB

**** CONDITIONS ****

22-0107-SUP1 CONDITIONS

Planning

1. 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.

2. 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.

3. These Conditions of Approval shall be affixed to the cover sheet of any plan set submitted for building permit, as well as submitted as part of any business license application.

4. Minors shall only be permitted in such areas wherein spirituous, malt or fermented liquors or wines are served only in conjunction with regular meals and where dining tables or booths are provided separate from the bar in conformance with Title 6.50.

5. Approval of this Special Use Permit does not constitute approval of a liquor license.

6. This business shall operate in conformance to Chapter 6.50 of the City of Las Vegas Municipal Code.

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

22-0107-SDR1 CONDITIONS

Planning

1. Approval of a General Plan Amendment (22-0107-GPA1) and Rezoning (22-0107-ZON1) and approval of and conformance to the Conditions of Approval for Special Use Permit (22-0107-SUP1) shall be required, if approved.

2. 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.

3. All development shall be in conformance with the site plan date stamped 03/08/22; landscape plan and building elevations date stamped 02/21/22; and building cross section date stamped 03/01/22, except as amended by conditions herein.

4. A Waiver from Appendix F Interim Downtown Las Vegas setback development standards is hereby approved, to allow zero percent of the first story façade to align with the front property line.

5. A Waiver from Appendix F Interim Downtown Las Vegas development standards is hereby approved, to allow no ornamental parking lot screening, where such is required.

6. A Waiver from Appendix F Interim Downtown Las Vegas development standards is hereby approved, to allow 13 24-inch box trees where 24 15-gallon trees with four one gallon shrubs are required within the parking lot area.

7. 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.

8. These Conditions of Approval shall be affixed to the cover sheet of any plan set submitted for building permit.

9. The applicant shall coordinate with the City Surveyor and other city staff to determine the most appropriate mapping action necessary to consolidate the existing lots. The mapping action shall be completed and recorded prior to the issuance of any building permits.

10. Pursuant to LVMC Title 19.08.040.G for commercial and industrial properties, a perimeter wall shall be constructed adjacent to any residential zoning district or property used solely for residential purposes. The wall or fence is intended to screen the commercial or industrial activity from the residential property, and shall be of a solid decorative material that is a minimum of six feet in height measured from the side of the commercial or industrial property. In no case shall the wall or fence exceed the overall height limitation applicable to the adjacent zoning district or property unless approved through a Variance or other applicable means. The overall height of a wall or fence shall be measured from the side with the greatest vertical exposure above finished grade.

11. All utility or mechanical equipment shall comply with the provisions of the Interim Downtown Las Vegas Development Standards, unless approved by a separate Waiver.

12. A technical landscape plan, signed and sealed by a Registered Architect, Landscape Architect, Residential Designer or Civil Engineer, must be submitted prior to or at the same time application is made for a building permit. A permanent underground sprinkler system is required, which shall be permanently maintained in a satisfactory manner; the landscape plan shall include irrigation specifications. Installed landscaping shall not impede visibility of any traffic control device.

13. A fully operational fire protection system, including fire apparatus roads, fire hydrants and water supply, shall be installed and shall be functioning prior to construction of any combustible structures.

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

Public Works

15. The sidewalk adjacent to this site shall meet Public Right-of-Way Accessibility Guidelines (PROWAG) in accordance with code requirements of Title 13.56.040 to the satisfaction of the City Engineer concurrent with development of this site. Grant any Pedestrian Access Easement needed to complete this requirement.

16. An Order of Vacation must be recorded, such as 21-0422-VAC1, prior to the issuance of permits for this site.

17. Prior to the submittal of any construction drawings, contact the Sanitary Sewer Planning Section of the Department of Public Works to discuss the final location of public sewer lines within this site and for access requirements if public sewer lines are to remain where they currently exist. Complying with the conditions of approval for 21-0422-VAC1 will address this requirement.

18. No trees or landscaping over 3-feet tall shall be allowed within Public sewer easement. All existing trees located within the easement shall be removed concurrent with onsite development.

19. Landscape and maintain all unimproved right-of-way adjacent to this site. 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.

20. Submit a License Agreement for landscaping and private improvements in the public rights of way, if any, prior to the issuance of permits for these improvements. The applicant must carry an insurance policy for the term of the License Agreement and add the City of Las Vegas as an additionally insured entity on this insurance policy. If requested by the City, the applicant shall remove property within the public right-of-way at the applicant's expense pursuant to the terms of the City's License Agreement. The installation and maintenance of all private improvements in the public right of way shall be the responsibility of the applicant and any successors in interest to the property and assigns pursuant to the terms of the License Agreement. Coordinate all requirements for the License Agreement with the Land Development Section of the Department of Building and Safety (229-4836).

21. A Traffic Impact Analysis must be submitted to and approved by the Department of Public Works prior to the issuance of any building or grading permits, submittal of any construction drawings or the recordation of a Map subdividing this site, whichever may occur first. The Traffic Impact Analysis shall also include a section addressing Standard Drawings #234.1 #234.2 and #234.3 to determine additional right-of-way requirements for bus turnouts adjacent to this site, if any; dedicate all areas recommended by the approved Traffic Impact Analysis. All additional rights of way required by Standard Drawing #201.1 for exclusive right turn lanes and dual left turn lanes shall be dedicated prior to or concurrent with the commencement of on site development activities unless specifically noted as not required in the approved Traffic Impact Analysis. Phased compliance will be allowed if recommended by the approved Traffic Impact Analysis. The Traffic Impact Analysis shall also include a pedestrian circulation/access plan to identify nearby pedestrian attractors and recommend measures to accommodate pedestrians, such as but not limited to pedestrian access, crosswalk, pedestrian activated flashers and temporary sidewalks. Comply with the recommendations of the approved Traffic Impact Analysis prior to occupancy of the site. Phased compliance will be allowed if recommended by the approved Traffic Impact Analysis. No recommendation of the approved Traffic Impact Analysis, nor compliance therewith, shall be deemed to modify or eliminate any condition of approval imposed by the Planning Commission or the City Council on the development of this site.

22. 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. Any easements required by an approved Drainage Study shall be reserved. Any drop inlets in Commerce Avenue that may need to be relocated will be the responsible of the applicant.

**** STAFF REPORT ****

PROJECT DESCRIPTION

This is a request for a Site Development Plan Review for a proposed Commercial Recreation/Amusement (Indoor/Outdoor) [Golf Range] and Tavern-Limited Establishment use totaling 99,858 square feet with a 6,625 square-foot outdoor patio area on 10.14 acres located on the west side of Main Street, approximately 230 feet south of Oakey Boulevard.

ISSUES

- The proposed Commercial Recreation/Amusement (Indoor/Outdoor) use is permitted within the C-2 (General Commercial) zoning district.
- The applicant has requested a General Plan Amendment (22-0107-GPA1) from MXU (Mixed Use) and C (Commercial) to GC (General Commercial) on the subject site. Staff recommends approval of the request.
- The applicant has requested a Rezoning (22-0107-ZON1) from R-4 (High Density Residential) and C-M (Commercial/Industrial) to C-2 (General Commercial). Staff recommends approval of the request.
- The applicant has requested a Special Use Permit (22-0107-SUP1) for a proposed 99,858 square-foot Tavern-Limited Establishment use with a 6,625 outdoor patio area in conjunction with the proposed development. Staff recommends approval of the request.
- The applicant has requested the following Waivers of Appendix F Interim Downtown Las Vegas Development Standards. Staff supports the request.
    - To allow zero percent of the first story façade to align with the front property line, where 70 percent is the minimum required.
    - To allow no ornamental parking lot screening where such is required.
    - To allow 13 24-inch box trees where 24 15-gallon trees with four one gallon shrubs are required within the parking lot area.
- The subject site is comprised of multiple parcels. Staff has had added a condition of approval, which will require the applicant to coordinate with the City Surveyor and other city staff to determine the most appropriate mapping action necessary to consolidate the existing lots.

ANALYSIS

The proposed project is located in Area 1 of the Downtown Las Vegas Overlay, within the Gateway District and is located directly adjacent to the northern perimeter of The Strat – Hotel & Casino. The 10.14-acre site is comprised of 32 parcels with three separate zoning designations C-2 (General Commercial), C-M (Commercial/Industrial) and R-4 (High Density Residential). The two commercial zoning districts [C-2 (General Commercial) and C-M (Commercial/Industrial)] have a General Plan designation of C (Commercial) and the residential zoning district [R-4 (High Density Residential)] has a General Plan designation of MXU (Mixed Use). The subject site is located adjacent to existing residential development to the north and west that are zoned R-4 (High Density Residential). An existing hotel/casino and commercial developments buffer the south and east perimeter of the site.

The subject site is located within the Downtown Las Vegas Area as outlined in the City of Las Vegas 2050 Master Plan. The Downtown Las Vegas area is the City's civic, commercial, and cultural hub. Downtown is the original home to local gaming and tourism. It continues to attract visitors looking for a historic and authentic Las Vegas experience.

The applicant has proposed a General Plan Amendment (22-0107-GPA1) from MXU (Mixed Use) and C (Commercial) to GC (General Commercial). The General Commercial category generally allows retail, service, wholesale, office and other general business uses of a more intense commercial character. The GC (General Commercial) General Plan land use designation allows the P-O (Professional Office and Parking), O (Office), C-1 (Limited Commercial) and C-2 (General Commercial) zoning districts.

In addition, the applicant has proposed a Rezoning (22-0107-ZON1) the subject site from R-4 (High Density Residential) and C-M (Commercial/Industrial) to C-2 (General Commercial). The purpose of the C-2 (General Commercial) zoning district is designed to provide the broadest scope of compatible services for both the general and traveling public. This category allows retail, service, automotive, wholesale, office and other general business uses of an intense character. This district should be located away from low and medium density residential development and may be used as a buffer between retail and industrial uses. The zoning district is also appropriate along commercial corridors and is consistent with the General Commercial category of the General Plan. The proposed C-2 (General Commercial) zoning district is consistent with the policies of the GC (General Commercial) category of the General Plan. Staff has determined that the proposed C-2 (General Commercial) zoning district and GC (General Commercial) General Plan land use designation are consistent with the surrounding area.

A Commercial Recreation/Amusement (Indoor) use is described in Title 19.12 as "An enclosed facility or area for sport, entertainment, games of skill, or recreation that is open to use by the general public for a fee. This use includes without limitation bowling alleys, indoor miniature golf courses, roller and ice skating rinks, game courts, swimming pools, walk-in movie theaters, physical fitness centers, gyms, billiard parlors/pool halls, indoor general entertainment establishments, and video arcades." A Commercial Recreation/Amusement (Outdoor) use is described in Title 19.12 as "An outdoor facility or area for sport, entertainment, games of skill, or recreation that is open to use by the general public for a fee. This use includes without limitation game courts, water slides, golf courses, outdoor miniature golf courses, drive-in theaters, batting cages, practice/instructional fields, amusement parks, amphitheaters, indoor general entertainment establishments, and sports events."

Both land uses are permissible within the proposed C-2 (General Commercial) zoning district. In the submitted justification letter, the applicant indicates the golf entertainment facility is a four-story tall venue with 103 hitting bays for game play into the driving range, an interactive putting area, four lounges/bars, one beer/wine tap room, two VIP lounges/bars and three multipurpose meeting rooms.

A Tavern-Limited Establishment is described in Title 19.12 as: "An establishment that is licensed with a tavern-limited license in accordance with LVMC Chapter 6.50." There are no Minimum Special Use Permit Requirements for this use. This use is permitted in the proposed C-2 (General Commercial) zoning district with an approved Special Use Permit. This use will allow the applicant to serve alcoholic beverages to patrons throughout the commercial development. Staff recommends approval of the proposed Special Use Permit, with conditions, as this proposed development specifically meets the goals of the Downtown Las Vegas Overlay – Gateway District by providing a pedestrian friendly development and related services that will amplify the district.

Per the Appendix F Interim Downtown Las Vegas – Area 1 - threshold requirements the new proposed principal structure on-site meets the definition of a Major Site Development Plan Review, with a covenant signed for all future streetscape and civil improvements because of the partial block frontage. The proposed commercial building has been oriented towards Main Street and is located on the northern perimeter of the existing Hotel/Casino "The Strat". The outdoor golf range associated with the building is oriented to the west of the proposed building and is bound by Fairfield Avenue to the west and Chicago Avenue to the north. The applicant has requested a Waiver of Appendix F Interim Downtown Las Vegas building setback development standards to allow zero percent of the first story façade to align with the front property line, where 70 percent is the minimum required. Staff finds that the requested waiver will have minimal negative impact to the surrounding area as the proposed building placement is consistent with other commercial development in the area.

The submitted building elevations indicate the new proposed building will be located on the southern portion of the site and is approximately 60.25 feet in height measured to the top of the parapet. The building façade will incorporate a combination of white, grey, blue and red painted walls with triangular canopies located in front of the primary entrance. All rooftop mechanical equipment has been shielded from view by the roof parapet.

The applicant has proposed to install a permanent surface level parking lot with 146 spaces on the northern perimeter of the subject site, where Title 19.12 requires a minimum of 495 parking spaces for the proposed development. However, projects located within the Downtown Las Vegas Overlay - Area 1 are not subject to the automatic application of parking requirements as adequate parking facilities can be found in the surrounding area to support the commercial development

In addition, the applicant has requested the following Waivers of Appendix F Interim Downtown Las Vegas permanent parking lot development standards to allow no ornamental parking lot screening where such is required and to allow 13 24-inch box trees where 24 15-gallon trees with four one gallon shrubs are required within the parking lot area, where a minimum of one, 15-gallon sized shade tree for every six parking spaces with four, one-gallon sized shrubs per tree in landscaped islands and/or on the perimeter of the lot. Staff supports the requested waivers as the proposed parking lot is consistent with commercial development in the area.

Staff has determined the requested Waivers associated with this project will have minimal negative impact to development surrounding area and is appropriate for this area of the Downtown Las Vegas Overlay. Furthermore, the large scope of this commercial development is consistent with the adjacent hotel/casino and commercial development that buffer the southern, eastern and northern perimeter of the subject site; therefore, staff recommends approval of this project with conditions.

FINDINGS (22-0107-GPA1)

Section 19.16.030(I) of the Las Vegas Zoning Code requires that the following conditions be met in order to justify a General Plan Amendment:

1. **The density and intensity of the proposed General Plan Amendment is compatible with the existing adjacent land use designations,**

   The proposed GC (General Commercial) designation is compatible with the existing adjacent land use designations. The proposed amendment would allow for a commercial development at this location.

2. **The zoning designations allowed by the proposed amendment will be compatible with the existing adjacent land uses or zoning districts,**

   The proposed amendment would allow for the C-2 (General Commercial) zoning district, which would be compatible with the commercial properties fronting Main Street and the existing multi-family and single-family residential developments located to the west.

3. **There are adequate transportation, recreation, utility, and other facilities to accommodate the uses and densities permitted by the proposed General Plan Amendment; and**

   There are transportation, recreation, utility and other facilities that are adequate to accommodate the uses and densities permitted by the proposed General Plan Amendment.

4. **The proposed amendment conforms to other applicable adopted plans and policies.**

   The proposed amendment conforms to the policies for development outlined in the Las Vegas 2050 Master Plan for the Downtown area.

FINDINGS (22-0107-ZON1)

In order to approve a Rezoning application, pursuant to Title 19.16.090(L), the Planning Commission or City Council must affirm the following:

1. **The proposal conforms to the General Plan.**

   The proposed Rezoning to C-2 (General Commercial) would conform to the GC (General Commercial) General Plan designation if approved.

2. **The uses which would be allowed on the subject property by approving the rezoning will be compatible with the surrounding land uses and zoning districts.**

   The proposed C-2 (General Commercial) zoning district would allow for the proposed Commercial Recreation/Amusement (Indoor/Outdoor) [Golf Range] development as permissible land use and Tavern-Limited Establishment use with an approved Special Use Permit. This is compatible with the surrounding uses within the subject site.

3. **Growth and development factors in the community indicate the need for or appropriateness of the rezoning.**

   The pattern of development in this area supports rezoning to C-2 (General Commercial) rather than remaining R-4 (High Density Residential) and C-M (Commercial/Industrial).

4. **Street or highway facilities providing access to the property are or will be adequate in size to meet the requirements of the proposed zoning district.**

   Site access is provided from Main Street a 100-foot Primary Arterial Street as designated in the Master Plan of Streets and Highways and Commerce Street a 40-foot Local Street as designated by Title 13. These streets are sufficient in size to accommodate the needs of the proposed use. These roads are adequate in size to accommodate development in the proposed C-2 (General Commercial) zoning district.

FINDINGS (22-0107-SUP1)

In order to approve a Special Use Permit application, per Title 19.16.110(L) the Planning Commission and City Council must affirm the following:

1. **The proposed land use can be conducted in a manner that is harmonious and compatible with existing surrounding land uses, and with future surrounding land uses as projected by the General Plan.**

   The existing surrounding land uses consist of general retail, multi-family residential, hotel and casino and restaurants uses. The proposed Tavern-Limited Establishment can be conducted in a manner that is harmonious and compatible with the existing surrounding uses.

2. **The subject site is physically suitable for the type and intensity of land use proposed.**

   The subject site can physically accommodate the proposed Tavern-Limited Establishment use and is in close proximity of other commercial uses in the area.

3. **Street or highway facilities providing access to the property are or will be adequate in size to meet the requirements of the proposed use.**

Site access is provided from Main Street a 100-foot Primary Arterial Street as designated in the Master Plan of Streets and Highways and Commerce Street a 40-foot Local Street as designated by Title 13. These streets are sufficient in size to accommodate the needs of the proposed use.

4. **Approval of the Special Use Permit at the site in question will not be inconsistent with or compromise the public health, safety, and welfare or the overall objectives of the General Plan.**

   The proposed Tavern-Limited Establishment will be subject to regular inspections during rehabilitation of the building itself by the Department of Building and Safety, and regular inspections by the Department of Planning – Business Licensing Division once a business license is issued protecting the public health, safety, and welfare. The objectives of the General Plan will be met by the conversion of the subject site into a commercial use.

5. **The use meets all of the applicable conditions per Title 19.12.**

   The proposed Tavern-Limited Establishment use has met the requirements set forth by both Title 19.12 and Title 6.50.250.

FINDINGS (22-0107-SDR1)

In order to approve a Site Development Plan Review application, per Title 19.16.100(E) the Planning Commission and/or City Council must affirm the following:

1. **The proposed development is compatible with adjacent development and development in the area;**

   The proposed commercial development is located in the Downtown Las Vegas Overlay – Gateway District and will serve as a pedestrian friendly commercial development that is complementary to the other restaurants and general retail uses in the neighborhood and is the type of use that is encouraged in the Downtown Las Vegas Overlay - Gateway District.

2. **The proposed development is consistent with the General Plan, this Title, the Design Standards Manual, the Landscape, Wall and Buffer Standards, and other duly-adopted city plans, policies and standards;**

This project is consistent with the General Plan and the uses allowed in the Downtown Las Vegas Overlay – Gateway District. However, it is not consistent with the building setback and permanent parking lot development standards outlined in Appendix F Interim Downtown Las Vegas Development Standards. Staff finds that the requested Waivers associated with the development will have minimal negative impact to the surrounding area.

3. Site access and circulation do not negatively impact adjacent roadways or neighborhood traffic;

Site access is provided from Main Street a 100-foot Primary Arterial Street as designated in the Master Plan of Streets and Highways and Commerce Street a 40-foot Local Street as designated by Title 13. These streets are sufficient in size to accommodate the needs of the proposed use.

4. Building and landscape materials are appropriate for the area and for the City;

The building façade will incorporate a combination of white, grey, blue and red painted walls. The submitted building elevations indicate all rooftop mechanical equipment has been shielded from view by the roof parapet and that metal triangular canopies will be provided above the main entrance to the building adjacent to Main Street.

5. Building elevations, design characteristics and other architectural and aesthetic features are not unsightly, undesirable, or obnoxious in appearance; create an orderly and aesthetically pleasing environment; and are harmonious and compatible with development in the area;

The proposed building elevations have been designed with articulated roof lines and materials to prevent blank and expressionless walls. All roof mounted mechanical equipment has been screened from view using parapet walls. However, it is not consistent with the building setback standards in the Appendix F Interim Downtown Las Vegas Development Standards. The applicant has requested a Waiver to allow zero percent of the first story façade to align with the front property line. Staff has determined the requested Waiver will have minimal negative impact to surrounding development.

6. Appropriate measures are taken to secure and protect the public health, safety and general welfare.

The proposed development is subject to permit review and inspection; therefore, appropriate measures will be taken to protect the health, safety and general welfare.

BACKGROUND INFORMATION

Related Relevant City Actions by Planning, Fire, Bldg., etc.	
03/22/73	The Board of Zoning Adjustment approved a request for Variance (V-0008-73) to allow a full service auto body shop in conjunction with a garage operation at 1811 South Commerce Street.
06/05/96	The City Council approved a request for a Rezoning from R-4 (Apartment Residence) to C-2 (General Commercial) for 163,625 square-foot employee parking lot on property located on the northeast corner of Fairfield Avenue and Philadelphia Avenue.
10/09/18	The Planning Commission approved a request for a Special Use Permit (SUP-74477) for a proposed Tavern-Limited Establishment for a 202,200 square-foot commercial recreation/amusement (outdoor) use at 1850 South Main Street. The Planning Commission approved a request for a Site Development Plan Review (SDR-74478) for a proposed 202,200 square-foot Commercial Recreation/Amusement (Indoor/Outdoor) facility with Waivers of the Title 19 Appendix F Interim Downtown Las Vegas development standards at 1850 South Main Street.
04/12/22	The Planning Commission (7-0 vote) recommends APPROVAL on a Land Use Entitlement project requests on 10.14 acres located on the west side of Main Street, approximately 230 feet south of Oakey Boulevard (APNs Multiple), Ward 3 (Diaz) • 22-0107-GPA1 - GENERAL PLAN AMENDMENT - FROM: MXU (MIXED USE) AND C (COMMERCIAL) TO: GC (GENERAL COMMERCIAL) • 22-0107-ZON1 - REZONING - FROM: R-4 (HIGH DENSITY RESIDENTIAL) AND C-M (COMMERCIAL/INDUSTRIAL) TO: C-2 (GENERAL COMMERCIAL) • 22-0107-SUP1 - SPECIAL USE PERMIT - FOR A PROPOSED 99,858 SQUARE-FOOT TAVERN-LIMITED ESTABLISHMENT USE WITH A 6,625 SQUARE-FOOT OUTDOOR PATIO AREA • 22-0107-SDR1 - SITE DEVELOPMENT PLAN REVIEW - FOR A PROPOSED 99,858 SQUARE-FOOT COMMERCIAL RECREATION/AMUSEMENT (INDOOR/OUTDOOR) FACILITY AND A 6,625 SQUARE-FOOT OUTDOOR PATIO AREA WITH FIELD LIGHTING AND WAIVERS OF THE TITLE 19 APPENDIX F INTERIM DOWNTOWN LAS VEGAS DEVELOPMENT STANDARDS

Related Building Permits/Business Licenses
There are no related Building Permits or Business Licenses associated with the subject site.

Pre-Application Meeting	
02/16/22	A Pre-Application meeting was conducted with the applicant to review the application materials and submittal requirements for a Special Use Permit and Site Development Plan Review for a proposed indoor and outdoor Commercial Recreation/Amusement (Indoor/Outdoor) Facility and Tavern-Limited Establishment.

Neighborhood Meeting	
03/24/22	A neighborhood meeting was held at the Stupak Community Center - Room #126 at 251 Boston Avenue, at 5:30pm to discuss the proposed General Plan Amendment, Rezoning, Special Use Permit and Site Development Plan Review at the subject site. The meeting was attended by one Department of Planning staff member, one Council Ward 3 liaison and one Ward 3 Councilwoman. There were four members of the public in attendance; as such the following concerns were raised regarding the proposed development. • All members of the public in attendance at the meeting expressed support for the project. • Many mentioned that this project would raise property values and serve as a mechanism to clean up the surrounding area. • One individual expressed concerns about increased traffic levels in the surrounding area.

Field Check	
02/24/22	Staff conducted a routine site visit and found the portion of the site east of Commerce Street to be comprised of a large surface parking lot area, storage yard and undeveloped land surrounded by CMU, wrought iron and chain link wall and fencing materials. The portion of the site located to the west of Commerce Street is currently being used for outdoor storage and is surrounded by chain link fencing with plastic mesh screening materials.

Details of Application Request	
Site Area	
Net Acres	10.14

Surrounding Property	***Existing Land Use Per Title 19.12***	***Planned or Special Land Use Designation***	***Existing Zoning District***
Subject Property	Parking Lot	C (Commercial)	C-2 (General Commercial) and C-M (Commercial/Industrial)
	Commercial Recreation/Amusement (Indoor/Outdoor)		
	Storage Yard		
	Undeveloped		
	Undeveloped	MXU (Mixed Use)	R-4 (High Density Residential)
North	Multi-Family Residential	MXU (Mixed Use)	R-4 (High Density Residential)
	Undeveloped	C (Commercial)	C-2 (General Commercial)
South	Hotel & Casino	C (Commercial)	C-2 (General Commercial)
East	General Retail	C (Commercial)	C-2 (General Commercial)
	Restaurant		
West	Multi-Family Residential	MXU (Mixed Use)	R-4 (High Density Residential)

Master and Neighborhood Plan Areas	***Compliance***
Master Plan 2050 Area: Downtown	N/A
Special Area and Overlay Districts	***Compliance***
A-O (Airport Overlay) District – 200 Feet	Y
DTLV-O (Downtown Las Vegas Overlay) District – Area 1 (Gateway District)	Y
Other Plans or Special Requirements	***Compliance***
Trails	N/A
Las Vegas Redevelopment Plan (Area 1)	N/A
Interlocal Agreement	N/A
Project of Significant Impact (Development Impact Notification Assessment)	N/A
Project of Regional Significance	N/A

DEVELOPMENT STANDARDS

Pursuant to Interim Downtown Las Vegas Development Standards, the following standards apply:

Standard	*Required/Allowed*	*Provided*	*Compliance*
Min. Setbacks			
• Front (Main St.)	70% along Property Line	0%	N*
• Side (north)	N/A	208 Feet	Y
• Side (south)	N/A	70 Feet	Y
• Rear	N/A	120 Feet	Y
Trash Enclosure	Screened, Gated, w/ a Roof or Trellis	Screened, Gated, w/ a Roof or Trellis	Y
Mech. Equipment	Screened	Screened	By Condition

**The applicant has requested a Waiver to allow zero percent of the first story façade to align with the front property line.*

Pursuant to Interim Downtown Las Vegas Development Standards, the following standards apply:

Landscaping and Open Space Standards				
Standards	*Required*		*Provided*	*Compliance*
	Ratio	*Trees*		
Buffer Trees:				
• North	1 Tree / 0 Linear Feet	0 Trees	0 Trees	Y
• South	1 Tree / 0 Linear Feet	0 Trees	0 Trees	Y
• East	1 Tree / 0 Linear Feet	0 Trees	20 Trees	Y
• West	1 Tree / 0 Linear Feet	0 Trees	24 Trees	Y
TOTAL PERIMETER TREES		**0 Trees**	**44 Trees**	**Y**
Parking Area Landscaping	One 15-gallon Tree / 6 Uncovered Spaces	24 Trees	13 Trees	N*
	A minimum of ten square feet of landscaped surface area must be provided for each parking space	1,460	3,535 SF	Y

Landscaping and Open Space Standards				
Standards	***Required***		***Provided***	***Compliance***
	Ratio	***Trees***		
LANDSCAPE BUFFER WIDTHS				
Min. Zone Width				
• North	0 Feet		0 Feet	Y
• South	0 Feet		0 Feet	Y
• East	0 Feet		15 Feet	Y
• West	0 Feet		15 Feet	Y
Wall Height	A 42-inch ornamental screening fence is required adjacent to the right-of-way		Not Indicated	N*

*The applicant has requested Waivers of Appendix F Interim Downtown Las Vegas Permanent Parking Lot screening and landscaping development standards.

Existing Zoning	***Permitted Density***	***Units Allowed***
C-2 (General Commercial)	N/A	N/A
C-M (Commercial/Industrial)	N/A	N/A
R-4 (High Density Residential)	Unlimited	Unlimited
Proposed Zoning	***Permitted Density***	***Units Allowed***
C-2 (General Commercial)	N/A	N/A
Existing General Plan	***Permitted Density***	***Units Allowed***
C (Commercial)	N/A	N/A
MXU (Mixed Use)	N/A	N/A
Proposed General Plan	***Permitted Density***	***Units Allowed***
C (Commercial)	N/A	N/A

Street Name	***Functional Classification of Street(s)***	***Governing Document***	***Actual Street Width (Feet)***	***Compliance with Street Section***
Commerce Street	Local Street	Title 13	40	Y
Chicago Avenue	Local Street	Title 13	50	Y
Fairfield Avenue	Local Street	Title 13	50	Y
Main Street	Primary Arterial	Master Plan of Streets and Highways Map	100	Y
Oakey Boulevard	Major Collector	Master Plan of Streets and Highways Map	60	Y
Philadelphia Avenue	Local Street	Title 13	50	Y

Pursuant to the Appendix F Interim Downtown Las Vegas Development Standards, the following is required:

Streetscape Standards	***Required***	***Provided***	***Compliance***
Main Street (north/south street)	5’ amenity zone	5’ amenity zone	Y
	10’ sidewalk	11’ sidewalk	Y
	Sidewalk amenities	Not indicated	N/A
	Street trees 36” box shade at 20’ intervals	Street trees 36” box shade at 20’ intervals	Y

**Per the Interim Downtown Las Vegas Development Standards (Appendix F) - Threshold Document the subject site qualifies as a partial block frontage any streetscape not implemented due to existing conditions will require a Covenant Running with Land to obtain property owner’s consent for future improvements.*

Parking Requirement - Downtown							
Use	***Gross Floor Area or Number of Units***	***Base Parking Requirement***			***Provided***		***Compliance***
		Parking Ratio	*Parking*		*Parking*		
			Regular	Handi-capped	Regular	Handi-capped	
Commercial Recreation / Amusement (Indoor/Outdoor)	99,858 SF	1 per 200 SF	495				
TOTAL SPACES REQUIRED			495		146		Y*
Regular and Handicap Spaces Required			486	9	137	9	Y*

*Projects located within the Downtown Las Vegas Overlay - Area 1 are not subject to the automatic application of parking requirements. However, the above table should be used to illustrate the requirements of an analogous project in another location in the City.

Waivers		
Requirement	***Request***	***Staff Recommendation***
70% of the first story façade shall align along the front and corner side property lines	0% alignment along front property lines	Approval
When parking lots face public streets, an ornamental screen and landscaping shall be incorporated, as approved by Staff.	To allow no ornamental parking lot screening where such is required.	Approval
Surface parking lots shall provide a minimum of one, 15-gallon sized shade tree for every six parking spaces with four, 1-gallon sized shrubs per tree in landscaped islands and/or on the perimeter of the lot.	To allow 13 24-inch box trees where 24 15-gallon trees with four one gallon shrubs are required.	Approval

Appendix B – Hydraulic Calculations

- Normal Depth Calculations – Streets
- Normal Depth Calculations – Onsite
- Normal Depth Calculations – Swales
- Normal Depth Calculations – Full Flow Capacity
- Drop Inlet Calculations
- Drop Inlet Nomographs

Worksheet for CS1 10-YR

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data		
Channel Slope	0.20	%
Discharge	7.00	cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.82
0+05.00	0.72
0+05.50	0.70
0+05.50	0.22
0+07.00	0.35
0+07.00	0.39
0+20.00	0.59
0+33.00	0.17
0+33.00	0.13
0+34.50	0.00
0+34.50	0.48
0+35.00	0.50
0+40.00	0.60

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.82)	(0+40.00, 0.60)	0.016

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

Results		
Normal Depth	0.59	ft
Roughness Coefficient	0.016	
Elevation	0.59	ft
Elevation Range	0.00 to 0.82	ft
Flow Area	5.7	ft²
Wetted Perimeter	35.09	ft
Hydraulic Radius	0.16	ft
Top Width	34.14	ft

Worksheet for CS1 10-YR

Results	
Normal Depth	0.59 ft
Critical Depth	0.51 ft
Critical Slope	0.75 %
Velocity	1.23 ft/s
Velocity Head	0.02 ft
Specific Energy	0.62 ft
Froude Number	0.534
Flow Type	Subcritical

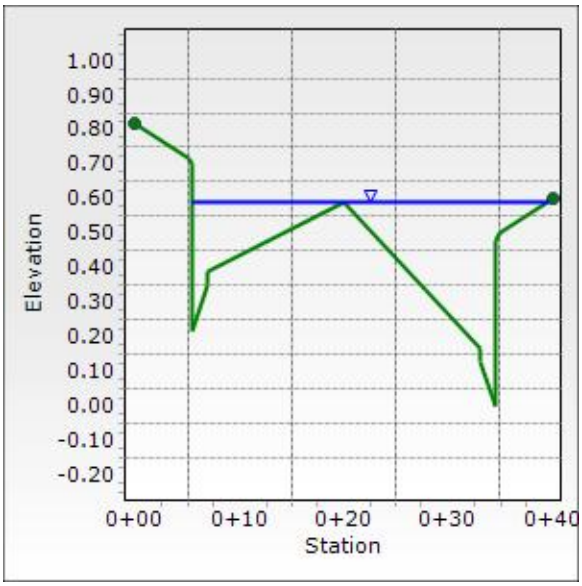
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	0.59 ft
Critical Depth	0.51 ft
Channel Slope	0.20 %
Critical Slope	0.75 %

Cross Section for CS1 10-YR

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.20 %
Normal Depth	0.59 ft
Discharge	7.00 cfs



Worksheet for CS1 100-YR

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data		
Channel Slope	0.20	%
Discharge	15.50	cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.82
0+05.00	0.72
0+05.50	0.70
0+05.50	0.22
0+07.00	0.35
0+07.00	0.39
0+20.00	0.59
0+33.00	0.17
0+33.00	0.13
0+34.50	0.00
0+34.50	0.48
0+35.00	0.50
0+40.00	0.60

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.82)	(0+40.00, 0.60)	0.016

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

Results		
Normal Depth	0.70	ft
Roughness Coefficient	0.016	
Elevation	0.70	ft
Elevation Range	0.00 to 0.82	ft
Flow Area	9.2	ft²
Wetted Perimeter	35.65	ft
Hydraulic Radius	0.26	ft
Top Width	34.50	ft

Worksheet for CS1 100-YR

Results	
Normal Depth	0.70 ft
Critical Depth	0.61 ft
Critical Slope	0.68 %
Velocity	1.68 ft/s
Velocity Head	0.04 ft
Specific Energy	0.74 ft
Froude Number	0.575
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	N/A
Profile Headloss	0.00 ft
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	0.70 ft
Critical Depth	0.61 ft
Channel Slope	0.20 %
Critical Slope	0.68 %

Worksheet for CS1 100-YR

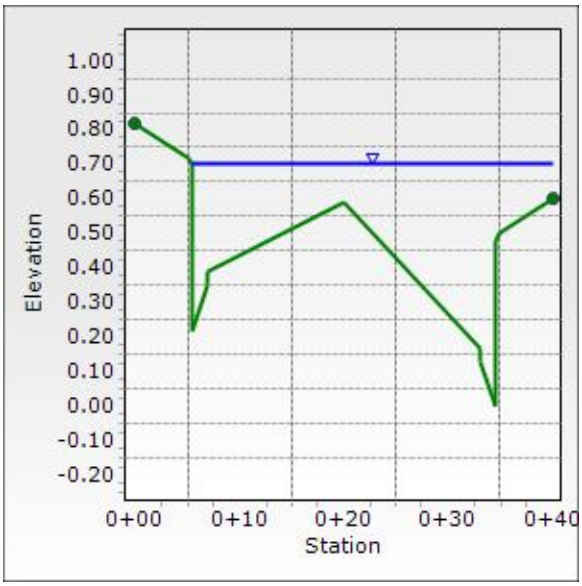
Messages:

Water Surface Elevation exceeds lowest end station by 0.0951293673227448ft.

Cross Section for CS1 100-YR

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.20 %
Normal Depth	0.70 ft
Discharge	15.50 cfs



Worksheet for MS1 10-YR

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data		
Channel Slope	0.30	%
Discharge	20.00	cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	1.86
0+00.00	1.36
0+04.00	0.70
0+14.00	0.50
0+14.50	0.48
0+14.50	0.00
0+16.00	0.13
0+16.00	0.17
0+45.00	0.83

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 1.86)	(0+04.00, 0.70)	0.025
(0+04.00, 0.70)	(0+45.00, 0.83)	0.016

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

Results		
Normal Depth	0.74	ft
Roughness Coefficient	0.016	
Elevation	0.74	ft
Elevation Range	0.00 to 1.86	ft
Flow Area	9.8	ft²
Wetted Perimeter	37.93	ft
Hydraulic Radius	0.26	ft
Top Width	37.40	ft
Normal Depth	0.74	ft
Critical Depth	0.68	ft
Critical Slope	0.63	%

Worksheet for MS1 10-YR

Results	
Velocity	2.05 ft/s
Velocity Head	0.07 ft
Specific Energy	0.81 ft
Froude Number	0.707
Flow Type	Subcritical

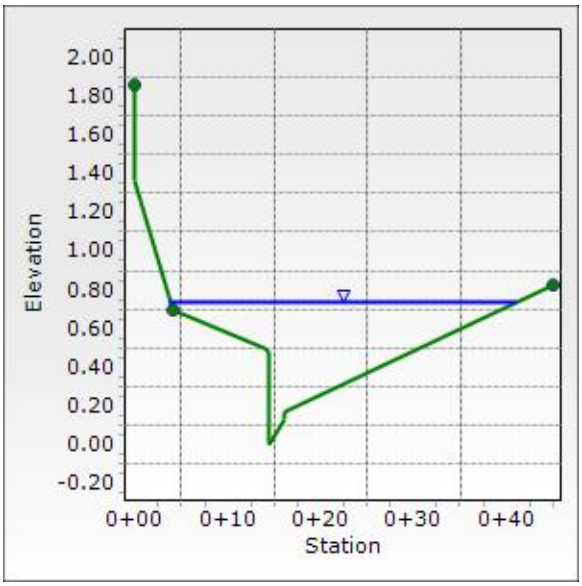
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	0.74 ft
Critical Depth	0.68 ft
Channel Slope	0.30 %
Critical Slope	0.63 %

Cross Section for MS1 10-YR

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.30 %
Normal Depth	0.74 ft
Discharge	20.00 cfs



Worksheet for MS1 100-YR

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data		
Channel Slope	0.30	%
Discharge	41.50	cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	1.86
0+00.00	1.36
0+04.00	0.70
0+14.00	0.50
0+14.50	0.48
0+14.50	0.00
0+16.00	0.13
0+16.00	0.17
0+45.00	0.83

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 1.86)	(0+04.00, 0.70)	0.025
(0+04.00, 0.70)	(0+45.00, 0.83)	0.016

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

Results		
Normal Depth	0.90	ft
Roughness Coefficient	0.016	
Elevation	0.90	ft
Elevation Range	0.00 to 1.86	ft
Flow Area	16.0	ft²
Wetted Perimeter	42.81	ft
Hydraulic Radius	0.37	ft
Top Width	42.19	ft
Normal Depth	0.90	ft
Critical Depth	0.83	ft
Critical Slope	0.58	%

Worksheet for MS1 100-YR

Results	
Velocity	2.59 ft/s
Velocity Head	0.10 ft
Specific Energy	1.00 ft
Froude Number	0.740
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	N/A
Profile Headloss	0.00 ft
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	0.90 ft
Critical Depth	0.83 ft
Channel Slope	0.30 %
Critical Slope	0.58 %

Worksheet for MS1 100-YR

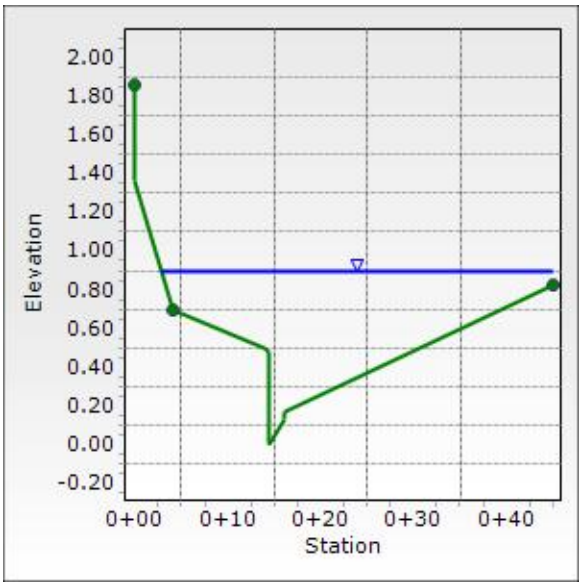
Messages:

Water Surface Elevation exceeds lowest end station by 0.0664922586803072ft.

Cross Section for MS1 100-YR

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.30 %
Normal Depth	0.90 ft
Discharge	41.50 cfs



Worksheet for MS-2 10-YR

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data		
Channel Slope	0.30	%
Discharge	2.00	cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.60
0+05.00	0.50
0+05.50	0.48
0+05.50	0.00
0+07.00	0.13
0+07.00	0.17
0+30.00	0.63

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.60)	(0+30.00, 0.63)	0.016

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

Results		
Normal Depth	0.38	ft
Roughness Coefficient	0.016	
Elevation	0.38	ft
Elevation Range	0.00 to 0.63	ft
Flow Area	1.6	ft²
Wetted Perimeter	12.37	ft
Hydraulic Radius	0.13	ft
Top Width	11.95	ft
Normal Depth	0.38	ft
Critical Depth	0.33	ft
Critical Slope	0.82	%
Velocity	1.28	ft/s
Velocity Head	0.03	ft
Specific Energy	0.40	ft

Worksheet for MS-2 10-YR

Results	
Froude Number	0.624
Flow Type	Subcritical

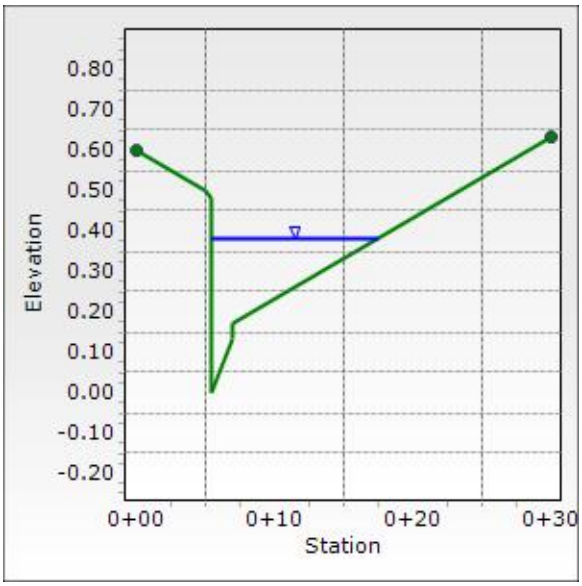
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	0.38 ft
Critical Depth	0.33 ft
Channel Slope	0.30 %
Critical Slope	0.82 %

Cross Section for MS-2 10-YR

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.30 %
Normal Depth	0.38 ft
Discharge	2.00 cfs



Worksheet for MS-2 100-YR

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data		
Channel Slope	0.30	%
Discharge	4.00	cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.60
0+05.00	0.50
0+05.50	0.48
0+05.50	0.00
0+07.00	0.13
0+07.00	0.17
0+30.00	0.63

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.60)	(0+30.00, 0.63)	0.016

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

Results		
Normal Depth	0.46	ft
Roughness Coefficient	0.016	
Elevation	0.46	ft
Elevation Range	0.00 to 0.63	ft
Flow Area	2.6	ft^2
Wetted Perimeter	16.36	ft
Hydraulic Radius	0.16	ft
Top Width	15.86	ft
Normal Depth	0.46	ft
Critical Depth	0.40	ft
Critical Slope	0.75	%
Velocity	1.51	ft/s
Velocity Head	0.04	ft
Specific Energy	0.49	ft

Worksheet for MS-2 100-YR

Results	
Froude Number	0.651
Flow Type	Subcritical

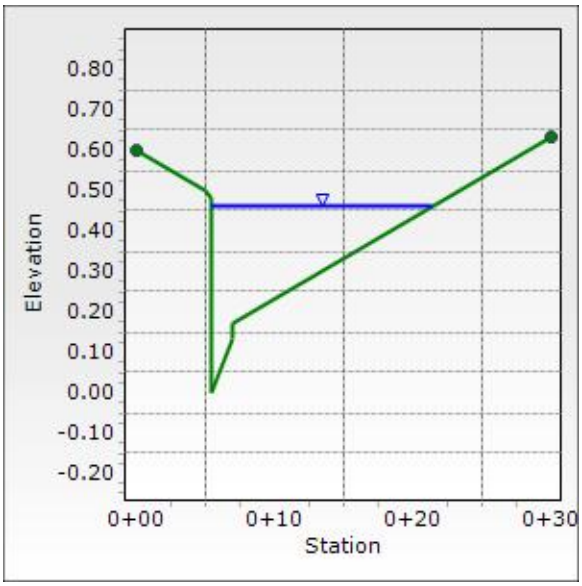
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	0.46 ft
Critical Depth	0.40 ft
Channel Slope	0.30 %
Critical Slope	0.75 %

Cross Section for MS-2 100-YR

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.30 %
Normal Depth	0.46 ft
Discharge	4.00 cfs



Worksheet for ON1-J 100-YR

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data		
Channel Slope	0.50	%
Discharge	3.00	cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	1.25
0+31.00	0.17
0+31.00	0.13
0+32.50	0.00
0+32.50	0.48
0+33.00	0.50

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 1.25)	(0+33.00, 0.50)	0.016

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

Results		
Normal Depth	0.43	ft
Roughness Coefficient	0.016	
Elevation	0.43	ft
Elevation Range	0.00 to 1.25	ft
Flow Area	1.5	ft²
Wetted Perimeter	9.52	ft
Hydraulic Radius	0.16	ft
Top Width	9.03	ft
Normal Depth	0.43	ft
Critical Depth	0.41	ft
Critical Slope	0.74	%
Velocity	1.95	ft/s
Velocity Head	0.06	ft
Specific Energy	0.49	ft
Froude Number	0.832	

Worksheet for ON1-J 100-YR

Results	
Flow Type	Subcritical

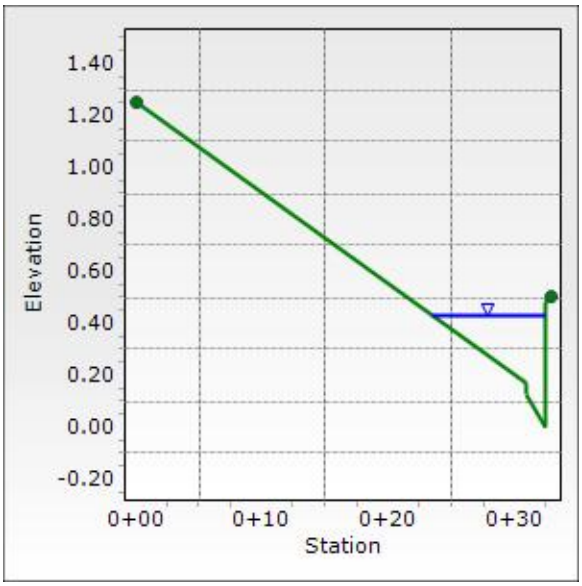
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	0.43 ft
Critical Depth	0.41 ft
Channel Slope	0.50 %
Critical Slope	0.74 %

Cross Section for ON1-J 100-YR

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.50 %
Normal Depth	0.43 ft
Discharge	3.00 cfs



Worksheet for SW-1

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.035
Channel Slope	0.50 %
Left Side Slope	4.000 H:V
Right Side Slope	4.000 H:V
Discharge	1.00 cfs

Results	
Normal Depth	0.47 ft
Flow Area	0.9 ft²
Wetted Perimeter	3.89 ft
Hydraulic Radius	0.23 ft
Top Width	3.77 ft
Critical Depth	0.33 ft
Critical Slope	3.39 %
Velocity	1.12 ft/s
Velocity Head	0.02 ft
Specific Energy	0.49 ft
Froude Number	0.408
Flow Type	Subcritical

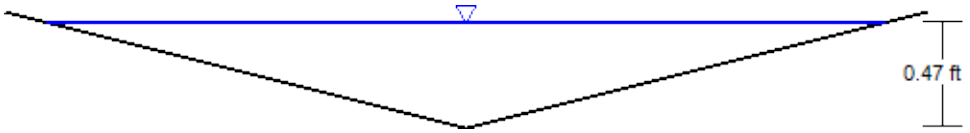
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

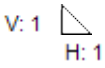
GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	0.47 ft
Critical Depth	0.33 ft
Channel Slope	0.50 %
Critical Slope	3.39 %

Cross Section for SW-1

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.035
Channel Slope	0.50 %
Normal Depth	0.47 ft
Left Side Slope	4.000 H:V
Right Side Slope	4.000 H:V
Discharge	1.00 cfs





Worksheet for SW-2

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.035
Channel Slope	0.31 %
Left Side Slope	4.000 H:V
Right Side Slope	4.000 H:V
Discharge	1.50 cfs

Results	
Normal Depth	0.60 ft
Flow Area	1.4 ft²
Wetted Perimeter	4.95 ft
Hydraulic Radius	0.29 ft
Top Width	4.81 ft
Critical Depth	0.39 ft
Critical Slope	3.21 %
Velocity	1.04 ft/s
Velocity Head	0.02 ft
Specific Energy	0.62 ft
Froude Number	0.334
Flow Type	Subcritical

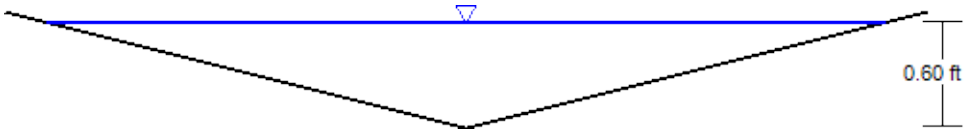
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

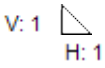
GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	0.60 ft
Critical Depth	0.39 ft
Channel Slope	0.31 %
Critical Slope	3.21 %

Cross Section for SW-2

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data		
Roughness Coefficient	0.035	
Channel Slope	0.31	%
Normal Depth	0.60	ft
Left Side Slope	4.000	H:V
Right Side Slope	4.000	H:V
Discharge	1.50	cfs





Worksheet for SW-3

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.035
Channel Slope	1.19 %
Left Side Slope	4.000 H:V
Right Side Slope	4.000 H:V
Discharge	1.50 cfs

Results	
Normal Depth	0.47 ft
Flow Area	0.9 ft²
Wetted Perimeter	3.85 ft
Hydraulic Radius	0.23 ft
Top Width	3.73 ft
Critical Depth	0.39 ft
Critical Slope	3.21 %
Velocity	1.72 ft/s
Velocity Head	0.05 ft
Specific Energy	0.51 ft
Froude Number	0.628
Flow Type	Subcritical

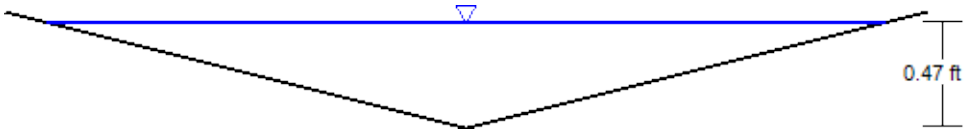
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

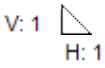
GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	0.47 ft
Critical Depth	0.39 ft
Channel Slope	1.19 %
Critical Slope	3.21 %

Cross Section for SW-3

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.035
Channel Slope	1.19 %
Normal Depth	0.47 ft
Left Side Slope	4.000 H:V
Right Side Slope	4.000 H:V
Discharge	1.50 cfs





Worksheet for SW-4

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.035
Channel Slope	0.50 %
Left Side Slope	4.000 H:V
Right Side Slope	4.000 H:V
Discharge	1.00 cfs

Results	
Normal Depth	0.47 ft
Flow Area	0.9 ft²
Wetted Perimeter	3.89 ft
Hydraulic Radius	0.23 ft
Top Width	3.77 ft
Critical Depth	0.33 ft
Critical Slope	3.39 %
Velocity	1.12 ft/s
Velocity Head	0.02 ft
Specific Energy	0.49 ft
Froude Number	0.408
Flow Type	Subcritical

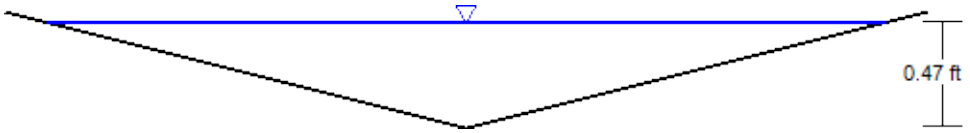
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

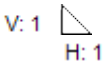
GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	0.47 ft
Critical Depth	0.33 ft
Channel Slope	0.50 %
Critical Slope	3.39 %

Cross Section for SW-4

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.035
Channel Slope	0.50 %
Normal Depth	0.47 ft
Left Side Slope	4.000 H:V
Right Side Slope	4.000 H:V
Discharge	1.00 cfs





Worksheet for SW-5

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.035
Channel Slope	0.75 %
Left Side Slope	4.000 H:V
Right Side Slope	4.000 H:V
Discharge	3.00 cfs

Results	
Normal Depth	0.66 ft
Flow Area	1.7 ft²
Wetted Perimeter	5.44 ft
Hydraulic Radius	0.32 ft
Top Width	5.28 ft
Critical Depth	0.51 ft
Critical Slope	2.93 %
Velocity	1.72 ft/s
Velocity Head	0.05 ft
Specific Energy	0.71 ft
Froude Number	0.528
Flow Type	Subcritical

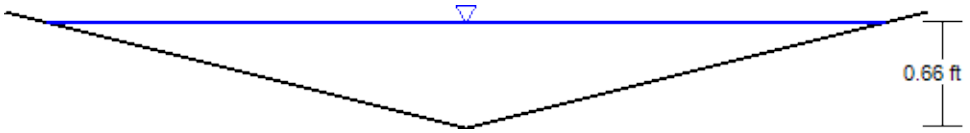
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

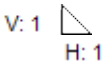
GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	0.66 ft
Critical Depth	0.51 ft
Channel Slope	0.75 %
Critical Slope	2.93 %

Cross Section for SW-5

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.035
Channel Slope	0.75 %
Normal Depth	0.66 ft
Left Side Slope	4.000 H:V
Right Side Slope	4.000 H:V
Discharge	3.00 cfs





Worksheet for 24" RCP Philadelphia SD

Project Description	
Friction Method	Manning Formula
Solve For	Full Flow Capacity

Input Data	
Roughness Coefficient	0.013
Channel Slope	0.50 %
Normal Depth	2.00 ft
Diameter	24.0 in
Discharge	16.00 cfs

Results	
Discharge	16.00 cfs
Normal Depth	2.00 ft
Flow Area	3.1 ft²
Wetted Perimeter	6.28 ft
Hydraulic Radius	0.50 ft
Top Width	0.00 ft
Critical Depth	1.44 ft
Percent Full	100.0 %
Critical Slope	0.66 %
Velocity	5.09 ft/s
Velocity Head	0.40 ft
Specific Energy	2.40 ft
Froude Number	(N/A)
Maximum Discharge	17.21 cfs
Discharge Full	16.00 cfs
Slope Full	0.50 %
Flow Type	Undefined

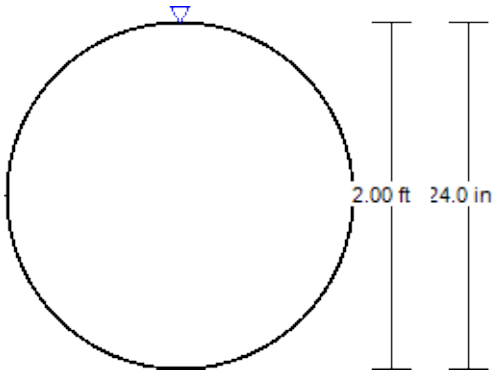
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

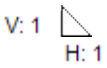
GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.0 %
Normal Depth Over Rise	100.0 %
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	2.00 ft
Critical Depth	1.44 ft
Channel Slope	0.50 %
Critical Slope	0.66 %

Cross Section for 24" RCP Philadelphia SD

Project Description	
Friction Method	Manning Formula
Solve For	Full Flow Capacity

Input Data	
Roughness Coefficient	0.013
Channel Slope	0.50 %
Normal Depth	2.00 ft
Diameter	24.0 in
Discharge	16.00 cfs





Type CM Drop Inlet Sizing in Sump

CP6 Q100 DI#1

Known:

D_p=	Ponding Depth at Inlet	0.5	ft
W=	Gutter Width	1.5	ft
L_g=	Length of Grate	17.5	ft
L_c=	Length of Curb Opening	19.5	ft
H_c=	Curb Opening Height	0.5	ft
C_{wc}=	Weir coefficient for curb opening	2.3	
C_{wg}=	Weir coefficient for grate	3.0	
C_o=	Orifice coefficient	0.67	
R_o=	Grate opening factor	0.60	
C_{fg}=	Clogging Factor for Grate	50	%
C_{fc}=	Clogging Factor for Curb Opening	50	%

Grate Capacity Calculations:

P_g=	Active grate weir length (agwl) = 2*W+Lg	20.50	ft
P_{agl}	Adjusted agwl = 2*(1-Cfg/100)*W+Lg	19.00	ft
A_g=	Grate area = W*L_g	26.25	ft^2
A_{aga}=	Adjusted open grate area = Ag*Ro*(1-Cfg/100)	7.88	ft^2
	check - If Dp<1.792*Aaga/Pagl; weir; else orifice	weir	
Q_{ig}=	Flow intercepted by grate If "weir" controls Qig=Cwg*Pagl*$Dp^{1.5}$ If "orifice" controls Qig=Co*Aaga*$(64.4*Dp)^{0.5}$	20.2	cfs

Curb Opening Capacity Calculations

Pc =	Active curb opening weir length (acowl) = Lc+1.8*W	22.20	ft
Pacl :	Adjusted acowl = Lc+1.8*(1-Cfc/100)*W	20.85	ft
Ac=	curb opening area (coa) = Lc*Hc	9.75	ft^2
A_{aca}=	Adjusted coa = Ac*(1-Cfc/100)	4.88	ft^2
	check - If Dp<Hc; weir; else orifice	orifice	
Qic=	Flow intercepted by curb opening If "weir" controls Qic=Cwc*Pacl*Dp1.5 If "orifice" controls Qic=Co*Aaca*(64.4*Dp-Hc/2)0.5	18.5	cfs

Total Inlet Calculations

Qti =	Total flow intercepted = Qig+Qic	38.6	cfs
q =	Interception per unit ratio = Q_{ti}/L_g	1.98	cfs/ft

Type CM Drop Inlet Sizing in Sump

CP4 Q100 DI#2

Known:

D_p=	Ponding Depth at Inlet	0.5	ft
W=	Gutter Width	1.5	ft
L_g=	Length of Grate	12.5	ft
L_c=	Length of Curb Opening	14.5	ft
H_c=	Curb Opening Height	0.5	ft
C_{wc}=	Weir coefficient for curb opening	2.3	
C_{wg}=	Weir coefficient for grate	3.0	
C_o=	Orifice coefficient	0.67	
R_o=	Grate opening factor	0.60	
C_{fg}=	Clogging Factor for Grate	50	%
C_{fc}=	Clogging Factor for Curb Opening	50	%

Grate Capacity Calculations:

P_g=	Active grate weir length (agwl) = 2*W+Lg	15.50	ft
P_{agl}	Adjusted agwl = 2*(1-Cfg/100)*W+Lg	14.00	ft
A_g=	Grate area = W*L_g	18.75	ft^2
A_{aga}=	Adjusted open grate area = Ag*Ro*(1-Cfg/100)	5.63	ft^2
	check - If Dp<1.792*Aaga/Pagl; weir; else orifice	weir	
Q_{ig}=	Flow intercepted by grate If "weir" controls Qig=Cwg*Pagl*$Dp^{1.5}$ If "orifice" controls Qig=Co*Aaga*$(64.4*Dp)^{0.5}$	14.8	cfs

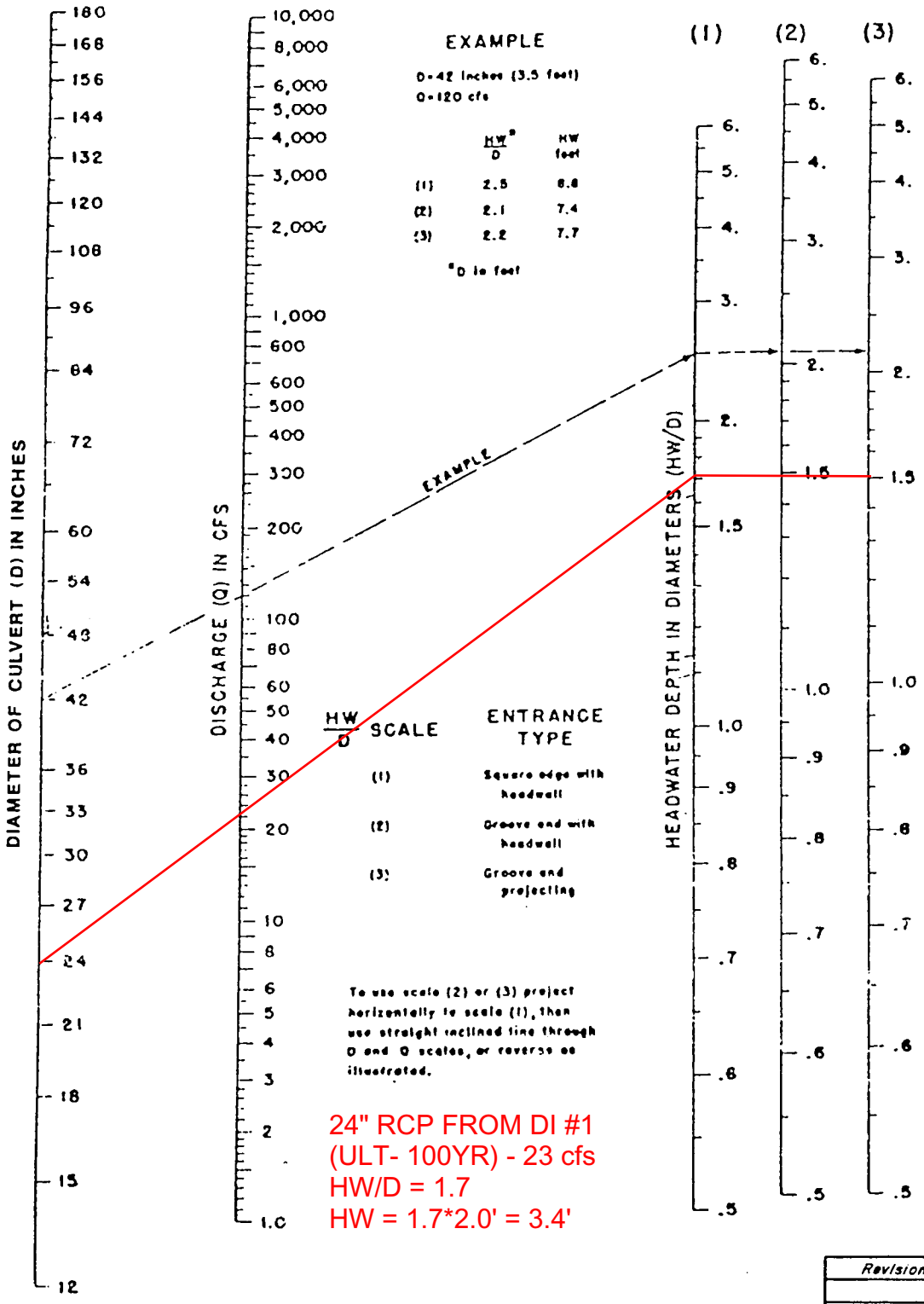
Curb Opening Capacity Calculations

Pc =	Active curb opening weir length (acowl) = Lc+1.8*W	17.20	ft
Pacl :	Adjusted acowl = Lc+1.8*(1-Cfc/100)*W	15.85	ft
Ac=	curb opening area (coa) = Lc*Hc	7.25	ft^2
A_{aca}=	Adjusted coa = Ac*(1-Cfc/100)	3.63	ft^2
	check - If Dp<Hc; weir; else orifice	orifice	
Qic=	Flow intercepted by curb opening If "weir" controls Qic=Cwc*Pacl*Dp1.5 If "orifice" controls Qic=Co*Aaca*(64.4*Dp-Hc/2)0.5	13.7	cfs

Total Inlet Calculations

Qti =	Total flow intercepted = Qig+Qic	28.6	cfs
q =	Interception per unit ratio = Q_{ti}/L_g	1.97	cfs/ft

NOMOGRAPH – INLET CONTROL RCP



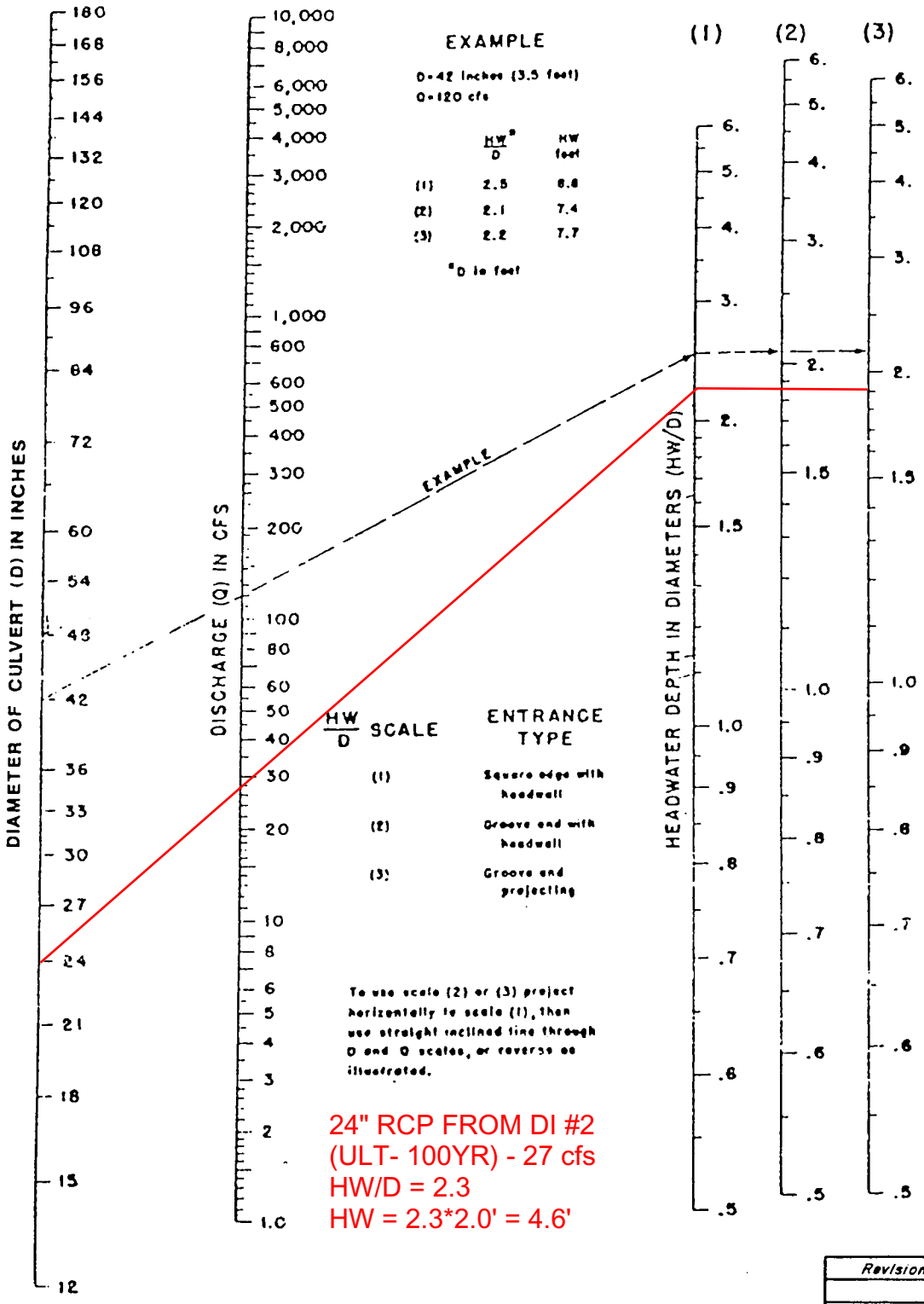
Revision	Date

WRC ENGINEERING

REFERENCE:
USDOT, FHWA, HDS, No. 5, 1985

FIGURE 1005

NOMOGRAPH – INLET CONTROL RCP



Revision	Date

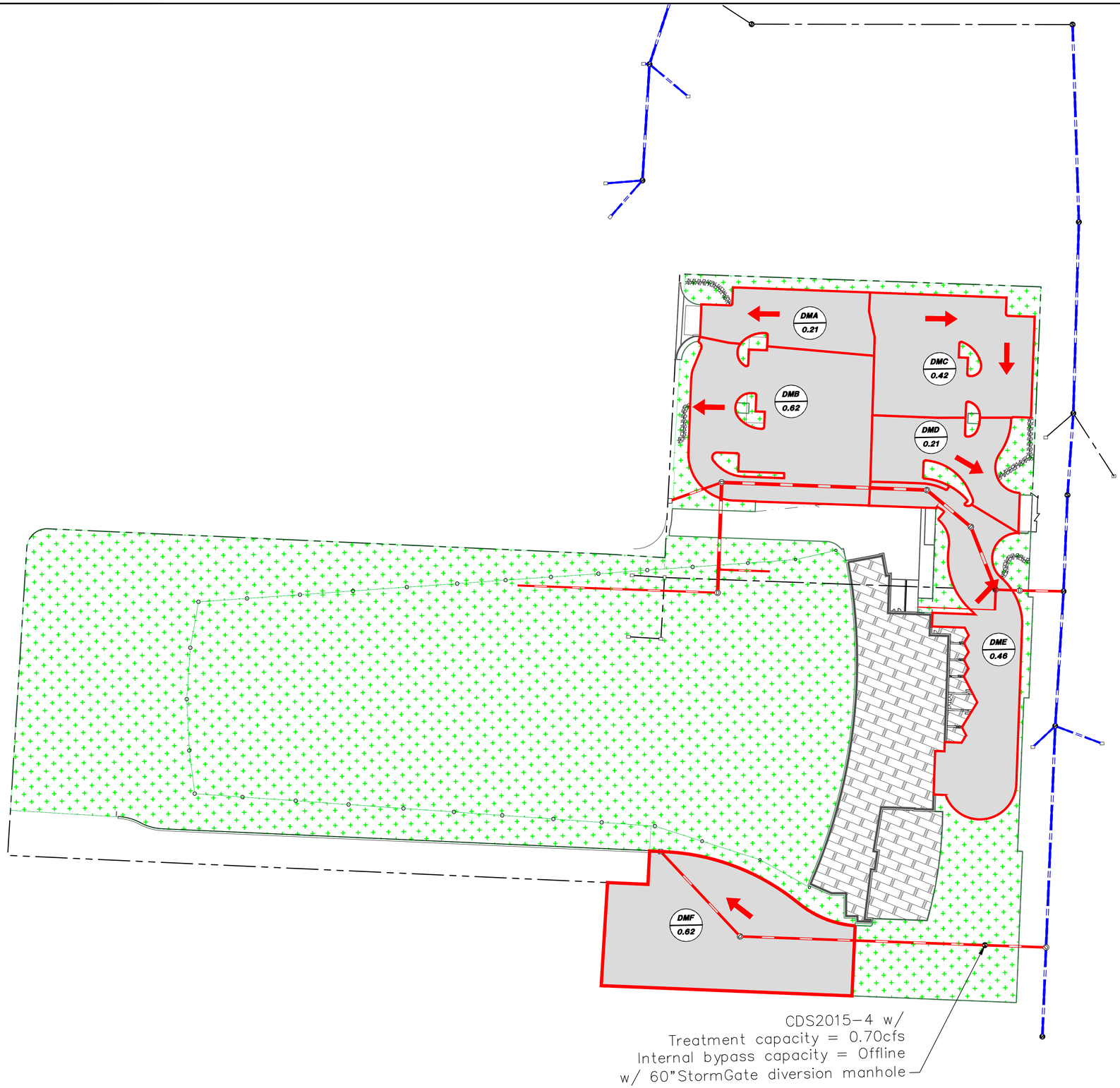
WRC ENGINEERING

REFERENCE:
USDOT, FHWA, HDS, No. 5, 1985

FIGURE 1005

Appendix C – Parking Lot LID Calculations

- LID Parking Lot LID Map & Calculations



NORTH

GRAPHIC SCALE IN FEET
0 25 50 100

SCALE: 1" =50

LEGEND

- DMA-1 / 0.98 — DRAINAGE MANAGEMENT AREA AREA
- ON-SITE FLOW ARROW
- TREATED IMPERVIOUS AREA
- PERVIOUS AREA
- BUILDING AREA
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN

PARKING LOT DATA CALCULATIONS

Note: Stormwater Quality Design Volume calculated using steps from Section 1500 Figures 1501-1503 of the CCRFCD HCDDM, Revised 2013

GIVEN:

Project Description:	Main Street Entertainment Venue		
Parking Lot Data		Acreage	
Property Size (PS)	=	10.73	
Building Area (BA)	=	0.74	
Total Pervious Area (TPA)	=	6.67	
Parking Lot Area (PLA) = (PLA = PS-BA-TPA)	=	3.32	
Minimum PLA to be treated = (PLA * 0.75)	=	**2.49**	acres
Area to be treated by the proposed LID BMPs			
Drainage Area A	=	0.21	
Drainage Area B	=	0.62	
Drainage Area C	=	0.42	
Drainage Area D	=	0.21	
Drainage Area E	=	0.46	
Drainage Area F	=	0.62	
Total	=	**2.54**	acres

Since 2.54 ac >= 2.49 ac then site satisfies Parking Lot LID criteria

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2022 KIMLEY-HORN AND ASSOCIATES, INC.
6671 LAS VEGAS BOULEVARD S., SUITE 320, LAS VEGAS, NV 89119
PHONE: 702-862-3600
WWW.KIMLEY-HORN.COM

KHA PROJECT	192197000
DATE	7/12/2022
SCALE	AS SHOWN
DESIGNED BY	DH
DRAWN BY	SS
CHECKED BY	MS

LID BASIN MAP

MAIN STREET
ENTERTAINMENT VENUE
PREPARED FOR
THE 361 VENTURE, LLC

CITY OF LAS VEGAS NEVADA

LID

PROJECT NAME: Main Street Entertainment Venue

CALC'D BY: SS CHECKED BY: MS

DATE: 7/12/22 KH No. 192197000

PARKING LOT DATA CALCULATIONS

Note: Stormwater Quality Design Volume calculated using steps from Section 1500 Figures 1501-1503 of the CCRFCD HCDDM, Revised 2013

GIVEN:

Project Description: Main Street Entertainment Venue

Parking Lot Data		Acreage	
Property Size (PS)	=	10.73	
Building Area (BA)	=	0.74	
Total Pervious Area (TPA)	=	6.67	
Parking Lot Area (PLA) = (PLA = PS-BA-TPA)	=	3.32	
Minimum PLA to be treated = (PLA * 0.75)	=	**2.49**	acres

Area to be treated by the proposed LID BMPs

Drainage Area	A	=	0.21	
Drainage Area	B	=	0.62	
Drainage Area	C	=	0.42	
Drainage Area	D	=	0.21	
Drainage Area	E	=	0.46	
Drainage Area	F	=	0.62	
	Total	=	**2.54**	acres

Since 2.54 ac >= 2.49 ac then site satisfies Parking Lot LID criteria

PROJECT NAME: Main Street Entertainment Venue

CALC'D BY: SS CHECKED BY: MS

DATE: 7/12/22 KH No. 192197000

PARKING LOT LID CALCULATIONS - Peak QBMP FOR DRAINAGE AREA "A"

Note: Stormwater Quality Design Volume calculated using steps from Section 1502.3 of the CCRFCD HCDDM, Revised 2013

GIVEN:

Project Description: Main Street Entertainment Venue

Drainage Area = **0.21** acres

Avg % Impervious = **98** %

Determine BMP Design Precipitation - 85th Percentile Rainfall Depth

Is site located within McCarran Airport Rainfall Area? (Yes/No?) **YES**

If yes, use Table 505 to obtain 2-year 6-hour rainfall depth; this is your **D2**

If no, use Figure 501 to obtain 2-year 6-hour rainfall depth; this is your **D2**

D2 = **0.72**

Compute ratio of D2 of site to D2 for the McCarran Area

$\mathbf{D2_{,site}/D2_{,\ McCarran}}$ = **1.00**

Compute 85th Percentile Rainfal depth $\mathbf{D_{85}}$ using following equation

0.32

Calculate BMP Design Peak Discharge, **QBMP**

Page 1 of 2 Use the following regression equation to calculate the unit discharge (**Qp/A**) for the 90 percent average percent impervious area condition based on $\mathbf{D_{85}}$ value

Y = 1.5042**X** - 0.0066

where, **Y** = Average **Qp/A** in cfs/ac

X = $\mathbf{D_{85}}$ in inches

Qp/A = **0.47** cfs/ac

Adjust the **Qp/A** for site based on actual percent impervious using the following regression equation

Y = 0.0059**X** +0.4688

where, **Y** = Ratio **Qp/A** to 90% Impervious Value (unitless)

X = Percent Impervious

Y = **1.05**

Qp/A (adjusted) = **0.50** cfs/ac

QBMP = **Qp/A (adjusted) * Area**

= **0.10 cfs**

PROJECT NAME: Main Street Entertainment Venue

CALC'D BY: SS CHECKED BY: MS

DATE: 7/12/22 KH No. 192197000

PARKING LOT LID CALCULATIONS - Peak QBMP FOR DRAINAGE AREA "B"

Note: Stormwater Quality Design Volume calculated using steps from Section 1502.3 of the CCRFCD HCDDM, Revised 2013

GIVEN:

Project Description: Main Street Entertainment Venue

Drainage Area = **0.62** acres

Avg % Impervious = **98** %

Determine BMP Design Precipitation - 85th Percentile Rainfall Depth

Is site located within McCarran Airport Rainfall Area? (Yes/No?) **YES**

If yes, use Table 505 to obtain 2-year 6-hour rainfall depth; this is your **D2**

If no, use Figure 501 to obtain 2-year 6-hour rainfall depth; this is your **D2**

D2 = **0.72**

Compute ratio of D2 of site to D2 for the McCarran Area

$\mathbf{D2_{,site}/D2_{,\ McCarran}}$ = **1.00**

Compute 85th Percentile Rainfal depth $\mathbf{D_{85}}$ using following equation

0.32

Calculate BMP Design Peak Discharge, **QBMP**

Page 1 of 2 Use the following regression equation to calculate the unit discharge (**Qp/A**) for the 90 percent average percent impervious area condition based on $\mathbf{D_{85}}$ value

Y = 1.5042**X** - 0.0066

where, **Y** = Average **Qp/A** in cfs/ac

X = $\mathbf{D_{85}}$ in inches

Qp/A = **0.47** cfs/ac

Adjust the **Qp/A** for site based on actual percent impervious using the following regression equation

Y = 0.0059**X** +0.4688

where, **Y** = Ratio **Qp/A** to 90% Impervious Value (unitless)

X = Percent Impervious

Y = **1.05**

Qp/A (adjusted) = **0.50** cfs/ac

QBMP = **Qp/A (adjusted) * Area**

= **0.31 cfs**

PROJECT NAME: Main Street Entertainment Venue

CALC'D BY: SS CHECKED BY: MS

DATE: 7/12/22 KH No. 192197000

PARKING LOT LID CALCULATIONS - Peak QBMP FOR DRAINAGE AREA "C"

Note: Stormwater Quality Design Volume calculated using steps from Section 1502.3 of the CCRFCD HCDDM, Revised 2013

GIVEN:

Project Description: Main Street Entertainment Venue

Drainage Area = **0.42** acres

Avg % Impervious = **98** %

Determine BMP Design Precipitation - 85th Percentile Rainfall Depth

Is site located within McCarran Airport Rainfall Area? (Yes/No?) **YES**

If yes, use Table 505 to obtain 2-year 6-hour rainfall depth; this is your **D2**

If no, use Figure 501 to obtain 2-year 6-hour rainfall depth; this is your **D2**

D2 = **0.72**

Compute ratio of D2 of site to D2 for the McCarran Area

$\mathbf{D2_{,site}/D2_{,\ McCarran}}$ = **1.00**

Compute 85th Percentile Rainfal depth $\mathbf{D_{85}}$ using following equation

0.32

Calculate BMP Design Peak Discharge, **QBMP**

Page 1 of 2 Use the following regression equation to calculate the unit discharge (**Qp/A**) for the 90 percent average percent impervious area condition based on $\mathbf{D_{85}}$ value

Y = 1.5042**X** - 0.0066

where, **Y** = Average **Qp/A** in cfs/ac

X = $\mathbf{D_{85}}$ in inches

Qp/A = **0.47** cfs/ac

Adjust the **Qp/A** for site based on actual percent impervious using the following regression equation

Y = 0.0059**X** +0.4688

where, **Y** = Ratio **Qp/A** to 90% Impervious Value (unitless)

X = Percent Impervious

Y = **1.05**

Qp/A (adjusted) = **0.50** cfs/ac

QBMP = **Qp/A (adjusted) * Area**

= **0.21 cfs**

PROJECT NAME: Main Street Entertainment Venue
CALC'D BY: SS CHECKED BY: MS
DATE: 7/12/22 KH No. 192197000

PARKING LOT LID CALCULATIONS - Peak QBMP FOR DRAINAGE AREA "D"

Note: Stormwater Quality Design Volume calculated using steps from Section 1502.3 of the CCRFCD HCDDM, Revised 2013

GIVEN:

Project Description: Main Street Entertainment Venue
Drainage Area = **0.21** acres
Avg % Impervious = **98** %

Determine BMP Design Precipitation - 85th Percentile Rainfall Depth

Is site located within McCarran Airport Rainfall Area? (Yes/No?) **YES**

If yes, use Table 505 to obtain 2-year 6-hour rainfall depth; this is your **D2**
If no, use Figure 501 to obtain 2-year 6-hour rainfall depth; this is your **D2**

D2 = **0.72**

Compute ratio of D2 of site to D2 for the McCarran Area

$D2_{,site}/D2_{,McCarran}$ = **1.00**

Compute 85th Percentile Rainfal depth D_{85} using following equation

0.32

Calculate BMP Design Peak Discharge, **QBMP**

Page 1 of 2 Use the following regression equation to calculate the unit discharge (**Qp/A**) for the 90 percent average percent impervious area condition based on D_{85} value

Y = 1.5042**X** - 0.0066

where, **Y** = Average **Qp/A** in cfs/ac
X = D_{85} in inches

Qp/A = **0.47** cfs/ac

Adjust the **Qp/A** for site based on actual percent impervious using the following regression equation

Y = 0.0059**X** +0.4688

where, **Y** = Ratio **Qp/A** to 90% Impervious Value (unitless)
X = Percent Impervious

Y = **1.05**

Qp/A (adjusted) = **0.50** cfs/ac

QBMP = **Qp/A (adjusted) * Area**
= **0.10 cfs**

PROJECT NAME: Main Street Entertainment Venue

CALC'D BY: SS CHECKED BY: MS

DATE: 7/12/22 KH No. 192197000

PARKING LOT LID CALCULATIONS - Peak QBMP FOR DRAINAGE AREA "E"

Note: Stormwater Quality Design Volume calculated using steps from Section 1502.3 of the CCRFCD HCDDM, Revised 2013

GIVEN:

Project Description: Main Street Entertainment Venue

Drainage Area = **0.46** acres

Avg % Impervious = **98** %

Determine BMP Design Precipitation - 85th Percentile Rainfall Depth

Is site located within McCarran Airport Rainfall Area? (Yes/No?) **YES**

If yes, use Table 505 to obtain 2-year 6-hour rainfall depth; this is your **D2**

If no, use Figure 501 to obtain 2-year 6-hour rainfall depth; this is your **D2**

D2 = **0.72**

Compute ratio of D2 of site to D2 for the McCarran Area

$D2_{site}/D2_{McCarran}$ = **1.00**

Compute 85th Percentile Rainfal depth D_{85} using following equation

0.32

Calculate BMP Design Peak Discharge, **QBMP**

Use the following regression equation to calculate the unit discharge (**Qp/A**) for the 90 percent average percent impervious area condition based on D_{85} value

Y = 1.5042**X** - 0.0066

where, **Y** = Average **Qp/A** in cfs/ac

X = D_{85} in inches

Qp/A = **0.47** cfs/ac

Adjust the **Qp/A** for site based on actual percent impervious using the following regression equation

Y = 0.0059**X** +0.4688

where, **Y** = Ratio **Qp/A** to 90% Impervious Value (unitless)

X = Percent Impervious

Y = **1.05**

Qp/A (adjusted) = **0.50** cfs/ac

QBMP = **Qp/A (adjusted) * Area**

= **0.23 cfs**

PROJECT NAME: Main Street Entertainment Venue
CALC'D BY: SS CHECKED BY: MS
DATE: 7/12/22 KH No. 192197000

PARKING LOT LID CALCULATIONS - Peak QBMP FOR DRAINAGE AREA "F"

Note: Stormwater Quality Design Volume calculated using steps from Section 1502.3 of the CCRFCD HCDDM, Revised 2013

GIVEN:

Project Description: Main Street Entertainment Venue
Drainage Area = **0.62** acres
Avg % Impervious = **98** %

Determine BMP Design Precipitation - 85th Percentile Rainfall Depth

Is site located within McCarran Airport Rainfall Area? (Yes/No?) **YES**

If yes, use Table 505 to obtain 2-year 6-hour rainfall depth; this is your **D2**
If no, use Figure 501 to obtain 2-year 6-hour rainfall depth; this is your **D2**

D2 = **0.72**

Compute ratio of D2 of site to D2 for the McCarran Area

$D2_{,site}/D2_{,McCarran}$ = **1.00**

Compute 85th Percentile Rainfal depth D_{85} using following equation

0.32

Calculate BMP Design Peak Discharge, **QBMP**

Page 1 of 2 Use the following regression equation to calculate the unit discharge (**Qp/A**) for the 90 percent average percent impervious area condition based on D_{85} value

Y = 1.5042**X** - 0.0066

where, **Y** = Average **Qp/A** in cfs/ac
X = D_{85} in inches

Qp/A = **0.47** cfs/ac

Adjust the **Qp/A** for site based on actual percent impervious using the following regression equation

Y = 0.0059**X** +0.4688

where, **Y** = Ratio **Qp/A** to 90% Impervious Value (unitless)
X = Percent Impervious

Y = **1.05**

Qp/A (adjusted) = **0.50** cfs/ac

QBMP = **Qp/A (adjusted) * Area**
= **0.31 cfs**

Appendix D – Improvement Plans

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

ONSITE CIVIL IMPROVEMENT PLANS

FOR

MAIN STREET ENTERTAINMENT VENUE

APN: 162-03-301-001, 162-03-301-002, 162-03-301-003, 162-03-301-005, 162-03-301-004, 162-03-301-006, 162-03-301-008, 162-03-301-009, 162-03-301-007, 162-03-301-011, 162-03-301-010, 162-03-301-013, 162-03-301-012, 162-03-301-015, 162-04-710-040, 162-04-710-039, 162-04-710-038, 162-04-710-037, 162-04-710-036, 162-04-710-035, 162-04-710-056, 162-04-710-057, 162-04-710-058, 162-04-710-059, 162-04-710-034, 162-04-710-033, 162-04-710-032, 162-04-710-031, 162-04-710-030, 162-04-710-029, 162-04-710-028, 162-04-710-027, 162-04-710-026

CITY OF LAS VEGAS, NEVADA

PROJECT CONTACTS

DEVELOPER
THE 361 VENTURE, LLC.
426 SOUTH STAPLES STREET
CORPUS CHRISTI, TEXAS 78401

CONTACT: BOBAK MOSTAGHASI
(361) 549-7818

CIVIL ENGINEER
KIMLEY-HORN AND ASSOCIATES, INC.
6671 LAS VEGAS BOULEVARD SOUTH, SUITE 320
LAS VEGAS, NEVADA 89119

CONTACT: SCOTT MARTIN
(702) 862-3630

PROJECT SURVEYOR
HERITAGE SURVEYING
1895 VILLAGE CENTER CIRCLE
LAS VEGAS, NEVADA 89134

CONTACT: DENNIS LAYTON
(702) 474-6277

PROJECT ARCHITECT
OPEN STUDIO ARCHITECTURE
6122 DE ZAVALA ROAD
SAN ANTONIO, TX 78249

CONTACT: JAIME HERNANDEZ
(210) 417-4307

PROJECT INFORMATION

NUMBER OF LOTS: 1

ACREAGE: ±7.5 ACRES

ZONING: APARTMENT RESIDENTIAL (R-4),
COMMERCIAL INDUSTRIAL (C-M)
GENERAL COMMERCIAL (C-2)

FLOOD ZONE NOTE

THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) INDICATES THAT THE SITE IS LOCATED IN ZONE "X" OF THE FLOOD INSURANCE RATE MAP (FIRM) No. 32003C2170F AS SHOWN ON THE FIRM INDEX, REVISED NOVEMBER 16, 2011. ZONE "X" IS DEFINED BY FEMA AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN."

BENCHMARK

CITY OF LAS VEGAS VERTICAL CONTROL BENCHMARK NO. "8LV113W6"

RIVET PLATE IN TOP OF CURB AT SOUTHEAST CORNER OAKEY BOULEVARD AND LAS VEGAS BOULEVARD

ELEVATION = 618.927 METERS
2030.60 FEET

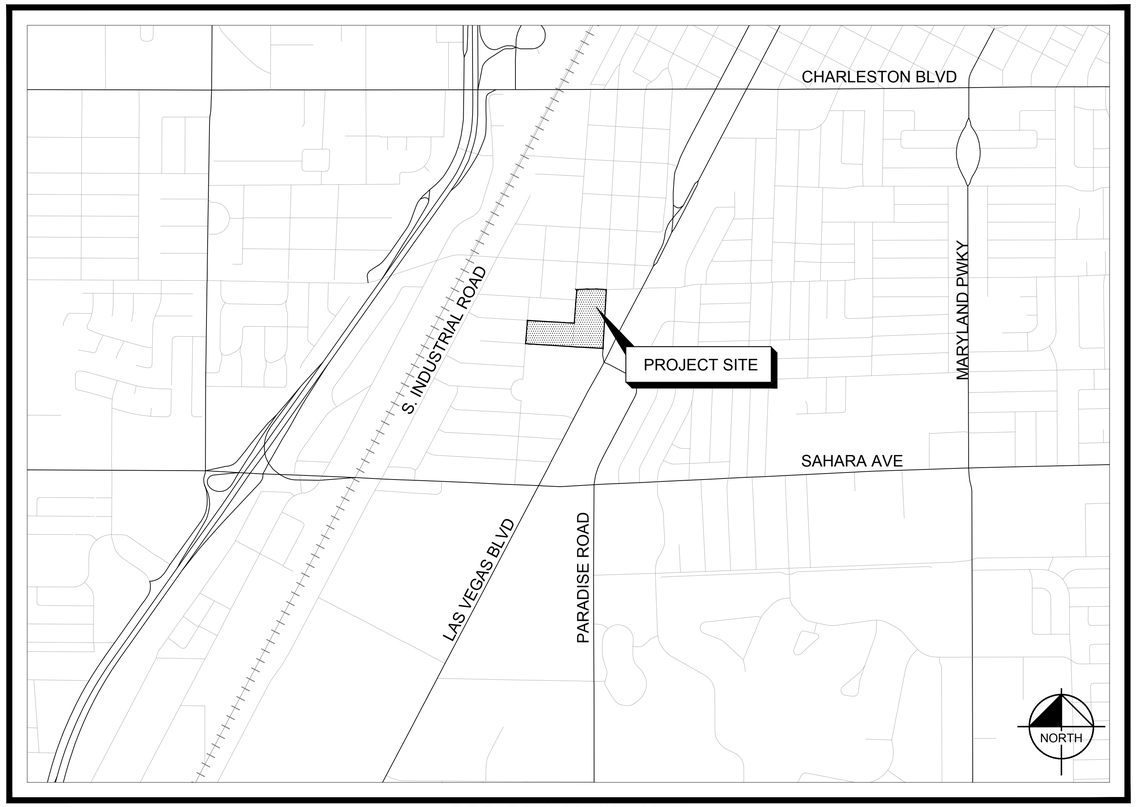
CITY OF LAS VEGAS VERTICAL CONTROL DATUM BASED UPON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88)

BASIS OF BEARING

NORTH 04°44'58" EAST, BEING THE CENTER OF THE WEST LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 3, TOWNSHIP 21 SOUTH, RANGE 61 EAST, M.D.M., AS SHOWN IN FILE 193, PAGE 94 OF SURVEYS ON FILE AT THE CLARK COUNTY, NEVADA RECORDER'S OFFICE.

UTILITY NOTE

KIMLEY-HORN AND ASSOCIATES TAKES NO RESPONSIBILITY FOR EXISTING UTILITIES SHOWN HEREIN. THE EXISTING UTILITIES SHOWN ARE BASED ON INFORMATION PROVIDED BY-OTHER PARTIES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND VERIFY THE LOCATIONS AND INVERTS OF THE EXISTING WITHIN THE VICINITY OF CONSTRUCTION ACTIVITIES. IF A CONFLICT IS FOUND TO EXIST, THE CONTRACTOR SHALL COORDINATE THE PROJECT ENGINEER, PROJECT ARCHITECT, AND THE OWNER IMMEDIATELY.



PROJECT VICINITY MAP
NTS

APPROVALS

CITY OF LAS VEGAS DEPARTMENT OF PLANNING — DATE

CLV FIRE AND RESCUE — DATE

CENTRAL TELEPHONE COMPANY, D/B/A CENTURYLINK — DATE

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

NV ENERGY - DISTRIBUTION — DATE

NV ENERGY ACKNOWLEDGES THAT WE HAVE RECEIVED YOUR PLANS AND WILL PROVIDE SERVICE TO ALL ELECTRICAL NEEDS ASSOCIATED WITH THIS PROJECT. NV ENERGY RESERVES THE RIGHT TO ADDRESS ANY EXISTING OR FUTURE CONFLICTS ONCE THE FINAL DESIGN IS COMPLETED. THE NEW SERVICE AND THE RESOLUTION OF ANY CONFLICTS WILL BE ACCOMPLISHED PURSUANT TO THE NEVADA PUBLIC UTILITY COMMISSION'S RULES AND REGULATIONS.

SOUTHWEST GAS CORPORATION — SWG UID — DATE

COX COMMUNICATIONS LAS VEGAS, INC. — DATE

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT No. XXXXXX FIRST APPROVED DATE:
LVVWD APPROVED FIRE FLOW: TOTAL X,XXX GPM / ONSITE X,XXX GPM
SHEETS:







No.	REVISIONS	DATE	BY

Kimley»Horn
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SCOTT M. MARTIN
Exp. 12/31/23
CIVIL
No. 25820
STATE OF NEVADA
7/13/2022

KHA PROJECT	192197000
DATE	07/08/2022
SCALE	AS SHOWN
DESIGNED BY	SMM
DRAWN BY	DLB
CHECKED BY	SMM

COVER SHEET

MAIN STREET ENTERTAINMENT VENUE
PREPARED FOR
THE 361 VENTURE, LLC
CITY OF LAS VEGAS NEVADA

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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 INFORMATIONAL PURPOSES. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. EXISTING UTILITY SERVICE LATERALS MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND AND OVERHEAD INTERFERENCES WHICH MAY AFFECT HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL USE EXTREMECAUTION WHEN WORKING NEAR OVERHEAD UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH.
3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING UTILITY LINES, STRUCTURES AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED SATISFACTORY TO THE CITY ENGINEER AND OWNING UTILITY COMPANY AT THE EXPENSE OF THE CONTRACTOR.
4. ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE PLANS, ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.
5. TYPE V CEMENT SHALL BE USED IN ALL OFF-SITE CONCRETE WORK. CONCRETE TO BE 3000 P.S.I. MINIMUM @ 28 DAYS. MIX DESIGNS TO BE APPROVED BY THE CITY, PRIOR TO THE USE ON THE PROJECT.
6. PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.
7. EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300' IN EXTRUDED-TYPE CURB.
8. AC PAVEMENT TO BE ONE-HALF INCH (½") ABOVE LIP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS AND CROSS GUTTERS.
9. CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED PER STANDARD DRAWING 216.
10. SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.
11. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF THE TRANSITIONS TO BE AS SHOWN ON PLANS.
12. ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY ENGINEER: UNIVERSAL ENGINEERING SCIENCES, DATED: 09/21/2021, PROJECT NO.:4030.2100194.0000, APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.
13. EXACT LOCATION OF ALL SAWCUT LINES MAY BE ADJUSTED OR DETERMINED IN THE FIELD BY A CITY OF LAS VEGAS ENGINEER IF LOCATION ON PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES RELOCATIONS.
13. 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.
14. UTILITY COMPANY METER BOXES, MANHOLE LIDS, VALVE COVERS, ETC., SHALL BE LOCATED OUT OF DRIVEWAYS, DRIVEWAY APRONS, FLOWLINES, AND CROSS GUTTERS UNLESS WRITTEN APPROVAL IS GRANTED BY THE UTILITY COMPANY AND THE CITY ENGINEER.

WET UTILITIES NOTES:

15. ALL WALLS, NEW OR EXISTING, ARE ONLY SHOWN ON CIVIL PLANS FOR THE PURPOSE OF REVIEWING GRADING RELATIONSHIPS, SIGHT DISTANCE AT INTERSECTIONS. NEW WALLS REQUIRE A SEPARATE PERMIT AND INSPECTION BY THE BUILDING DEPARTMENT.
16. ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT OF WAY.
17. CONTRACTOR SHALL ADJUST ALL NEW AND EXISTING INLETS, VALVE BOXES, MANHOLE RIMS, AND SEWER CLEAN OUTS, ETC. TO FINISH GRADE AS APPROPRIATE WHETHER OR NOT THEY ARE SHOWN ON THE PLANS.
18. 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.
19. 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.
20. AFTER HAUNCHING AND PRIOR TO BACKFILL OPERATIONS WHICH WOULD COVER SANITARY SEWER AND STORM DRAIN FACILITIES, CONTRACTOR TO SCHEDULE CLV OPEN-TRENCH UTILITY SURVEY INSPECTION FOR DETERMINATION OF FINAL LOCATION COORDINATES. FACILITIES TO BE LOCATED BY CLV SHALL INCLUDE AT A MINIMUM 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, SEWER AND STORM DRAIN MAIN ALIGNMENT, INCLUDING DEFLECTION POINTS. THE LOCATION SHALL BE DESCRIBED BY COORDINATES WHICH SHALL BE BASED ON THE OFFICIAL HORIZONTAL AND VERTICAL CONTROL NETWORKS OF THE CITY OF LAS VEGAS. FINAL LOCATION MAPS MUST BE SEALED AND CERTIFIED BY A NEVADA PROFESSIONAL LAND SURVEYOR TO HAVE POSITIONAL CERTAINTIES OF ± 0.09 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).
21. 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
22. A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.

REVISED 06/04/2018

CITY OF LAS VEGAS STREETLIGHT NOTES

1. ALL STREET LIGHTING INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE STREET LIGHTING PLANS, THE "UNIFORM STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST REVISION (USS), AND THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA" (USD), LATEST REVISION.
2. DESIGN PROFESSIONAL AND CONTRACTOR SHALL VERIFY CITY'S LATEST LED FIXTURE SPECIFICATIONS AND APPROVED FIXTURES PER CLV WEBSITE, UNDER BUILDING AND SAFETY FORMS, PRIOR TO ORDERING MATERIALS.
3. LUMINAIRES SHALL BE MARKED TO INDICATE INSTALLATION ORIENTATION, AND SHALL HAVE EXTERNAL LABELS PER ANSI C136 THAT INDICATE WATTAGE AND ARE CLEARLY VISIBLE FROM STREET LEVEL.
4. NO DEVIATION OF STREET LIGHT, PULL BOX, CONDUITS, ETC., LOCATIONS SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE TRAFFIC AND CITY ENGINEER. ANY DEVIATION FROM THE PLAN LOCATION WILL REQUIRE COMPLIANCE WITH SECTION 623 OF THE USS.
5. ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION IN ACCORDANCE WITH SECTION 623 G.03.01 OF THE USS.
6. ALL EMPTY CONDUIT SHALL HAVE AT LEAST ONE GREEN No. #8 AWG WIRE INSTALLED AS TRACER WIRE IN ACCORDANCE WITH SECTION 623 G.02.01 OF THE USS PRIOR TO BACKFILLING AND FINAL INSPECTION.
7. ANY STRUCTURE SUCH AS BLOCK WALLS, CHAIN LINK FENCES, RETAINING WALLS, ETC., SHALL LEAVE A MINIMUM CLEARANCE IN COMPLIANCE WITH USD NO. 320A WHEN POLE IS INSTALLED BEHIND SIDEWALK, AND SHALL AT NO TIME COMPLETELY ENCLOSE THE STREET LIGHTING POLE.
8. AS-BUILT DRAWINGS SHALL BE SUPPLIED TO THE TRAFFIC ENGINEERING DIVISION PRIOR TO ANY PRE-FINAL INSPECTION. THE AS-BUILT DRAWING NEEDS TO BE STAMPED AS-BUILT AND SIGNED BY THE PREPARER.
9. SERVICE POINTS SHALL BE COORDINATED WITH NV ENERGY, AND WHEREVER POSSIBLE, BE LOCATED NEAR THE CENTER OF THE CIRCUIT. SERVICEPOINTS SHALL BE SHOWN ON THE PLANS.
10. NEW STREELIGHT SERVICES SHALL BE 200 AMP PADMOUNT AND SHALL PROVIDE CAPACITY FOR 20 OR 24 AVAILABLE CIRCUITS.
11. WHEREVER THERE IS AN OVERHEAD UTILITY THAT MAY CONFLICT WITH THE INSTALLATION OF STREETLIGHTING CIRCUITS AND/OR POLES, THESE CONFLICTS MUST BE RESOLVED BETWEEN THE DEVELOPER AND THE UTILITIES
12. (CONTINUED) INVOLVED BEFORE STREETLIGHT BASES ARE INSTALLED, AT NO EXPENSE TO THE CITY OF LAS VEGAS.
13. THE CONTRACTOR SHALL FURNISH COMPLETE CONDUIT, WIRE, ETC. FROM SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON THE PLANS.

REVISED MAY 19,2020 (LD VERSION).

CITY OF LAS VEGAS SEWER NOTES

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

CITY OF LAS VEGAS SEWER NOTES (CONTINUED)

9. THE CITY OF LAS VEGAS WILL NOT ACCEPT ANY SEWER MAINS WHICH HAVE A VERTICAL DEFLECTION OF MORE THAN ONE TENTH (0.1) OF A FOOT FROM THE APPROVED CONSTRUCTION PLANS AT ANY LOCATION. SEWER MAINS FOUND TO EXCEED THIS TOLERANCE WILL HAVE TO BE REPAIRED OR REMOVED OR REPLACED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO ACCEPTANCE BY THE CITY OF LAS VEGAS.
10. INSTALLATION OF CURVED SEWER REQUIRES THE USE OF C-900 PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.
11. SEWER SERVICES AS APPROVED ON THIS PLAN, ARE INTENDED SPECIFICALLY FOR THE LOT AND USE SHOWN, AND ARE NOT INTENDED TO SERVE ADDITIONAL PARCELS OR STRUCTURES WHICH MAY BE CREATED IN THE FUTURE. IN THE EVENT THAT THE PARCEL AND/OR LOTS SHOWN ON THIS PLAN ARE FURTHER DIVIDED TO CREATE ADDITIONAL PARCELS OR LOTS, THE OWNER IS REQUIRE TO PROVIDE SEPARATE SEWER SERVICES TO EACH.

REVISED 09/16/20

LAS VEGAS FIRE & RESCUE - GENERAL NOTES

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LAS VEGAS FIRE AND RESCUE ADOPTED FIRE CODE ORDINANCE # 6631 FOR HYDRANT SPECIFICATIONS AND HYDRANT INSTALLATION SPECIFICATIONS.
2. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LAS VEGAS FIRE AND RESCUE ADOPTED FIRE CODE ORDINANCE # 6631 FOR HYDRANT SPECIFICATIONS AND HYDRANT INSTALLATION SPECIFICATIONS.
3. ONLY FIRE HYDRANTS THAT ARE ON THE LAS VEGAS VALLEY WATER DISTRICT'S – APPROVED PRODUCTS LIST ARE ALLOWED TO BE INSTALLED.
4. A PERMIT IS REQUIRED FROM LAS VEGAS FIRE AND RESCUE FOR THE INSTALLATION OF ON-SITE WATER LINES AND FIRE HYDRANTS. THE PERMIT AND CONTRACTORS MATERIAL TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER BEFORE COMMENCEMENT OF WORK. IFC § 105.6.15
5. 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
6. 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
7. ALL UNDERGROUND PIPELINES, 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
8. 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
9. PAINTING OF CURBS, FIRE HYDRANTS, PADS, DIRECTION 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
10. PRIVATE HYDRANTS SHALL BE PAINTED RED. IFC § 507.5.7.1
11. 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
12. FIRE HYDRANT SPACING SHALL BE AS FOLLOWS: IFC § C102 RESIDENTIAL – 500 FT UNSPRINKLERED; 600 FT SPRINKLERED. COMMERCIAL – 300 FT UNSPRINKLERED.
13. WHERE THE WATER MAINS ARE EXTENDED ALONG STREETS OR NEW SECTIONS 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
14. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE RADIUS OF A CUL-DE-SAC OR WITHIN 20 FT OF THE PERIMETER OF THE RADIUS FOR THE CUL-DE-SAC.
15. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN 6 FT OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREETLIGHT OR ANY OTHER OBSTRUCTION. IFC § C102.10
16. 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
17. 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
18. THE MAXIMUM DISTANCE FROM A HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. IFC § C102.6
19. TWO (2) SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE IS 4 OR MORE FIRE HYDRANTS/SPRINKLER LEAD-INS ARE INSTALLED ON A SINGLE SYSTEM. FOR SYSTEMS REQUIRED TO HAVE TWO (2) SOURCES OF WATER SUPPLY, SECTIONAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 2 FIRE HYDRANTS AND/OR FIRE SPRINKLER LEAD-INS CAN BE OUT OF SERVICE DUE TO A SERVICE INTERRUPTION. FOR SYSTEMS PERMITTED TO HAVE ONE SOURCE OF WATER SUPPLY, SECTIONAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 3 FIRE HYDRANTS AND/OR FIRE SPRINKLER LEAD-INS CAN BE OUT OF SERVICE DUE TO A SERVICE INTERRUPTION. IFC § C104
20. 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
21. 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
22. 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
23. VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL NOT BE LESS THAN 13FT 6 INS. IFC § 503.2.1
24. FIRE DEPARTMENT ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF NOT LESS THAN 33 FT WITH PARKING ON BOTH SIDES MEASURED TO FACE OF CURB. NOT LESS THAN 28 FT WIDE WITH PARKING RESTRICTED TO ONE SIDE MEASURED TO FACE OF CURB. NOT LESS THAN 24 FT WIDE WITH NO PARKING ON EITHER SIDE MEASURED TO FACE OF CURB. FIRE LANES THROUGH PARKING LOTS SHALL BE NOT LESS THAN 24 FT. IFC § 503.2.1.1
25. A FIRE APPARATUS ACCESS ROAD SHALL BE REQUIRED WHEN ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY IS LOCATED MORE THAN 150 FT FROM A FIRE DEPARTMENT VEHICLE ACCESS. IFC § 503.1.1
26. APPROVED SECONDARY FIRE APPARATUS ACCESS SHALL BE PROVIDED FOR 200 OR MORE DWELLING UNITS, ROAD(S) WITH DEAD-ENDS OR A SINGLE POINT OF ACCESS IN EXCESS OF 600 FT. CLV REGULATION AND MOU
27. 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. CLV REGULATION
28. 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
29. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. IFC § 503.6
30. ALL FIRE APPARATUS ACCESS ROADS SHALL BE MARKED WITH PROPER STRIPING, SIGNAGE AND A TRAFFIC COUNT OF MORE THAN 30,000 VEHICLES PER DAY, ALL HYDRANTS BEING UTILIZED TO DELIVER FIRE FLOW TO THE PROPOSED LOCATION SHALL BE LOCATED ON THE SAME SIDE OF THE STREET AS THE PROPOSED DEVELOPMENT. CLV REGULATION

REVISED: FEBRUARY 4, 2019

CITY OF LAS VEGAS GRADING NOTES

1. IN THE EVENT THAT ANY UNFORESEEN CONDITIONS NOT COVERED BY THESE NOTES ARE ENCOUNTERED DURING GRADING OPERATIONS, THE OWNER/ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTION.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL NECESSARY CUTS AND FILLS WITHIN THE LIMITS OF THIS PROJECT AND THE RELATED OFF-SITE WORK, SO AS TO GENERATE THE DESIRED SUBGRADE, FINISH GRADES AND SLOPES SHOWN.
3. CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ALL EXCAVATION. ADEQUATE SHORING SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR TO PREVENT UNDERMINING OF ANY ADJACENT FEATURES OR FACILITIES AND/OR CAVING OF THE EXCAVATION.
4. THE CONTRACTOR IS WARNED THAT AN EARTHWORK BALANCE WAS NOT NECESSARILY THE INTENT OF THIS PROJECT. ANY ADDITIONAL MATERIAL REQUIRED OR LEFTOVER MATERIAL FOLLOWING EARTHWORK OPERATIONS BECOMES THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE GRADING CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE OWNER TO PROVIDE FOR THE REQUIREMENTS OF THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND ASSOCIATED PERMIT.
6. CONTRACTOR SHALL GRADE TO THE LINES AND ELEVATIONS SHOWN ON THE PLANS WITHIN THE FOLLOWING HORIZONTAL AND VERTICAL TOLERANCES AND DEGREES OF COMPACTION, IN THE AREAS INDICATED:
   HORIZONTAL VERTICAL COMPACTION
   A. PAVEMENT AREA SUBGRADE 0.1'+ +0.0' TO -0.1' SEE SOILS REPORT
   B. ENGINEERED FILL 0.5'+ +0.1' TO -0.1' SEE SOILS REPORT COMPACTION TESTING WILL BE PERFORMED BY THE OWNER OR HIS REPRESENTATIVE.
7. ALL CUT AND FILL SLOPES SHALL BE PROTECTED UNTIL EFFECTIVE EROSION CONTROL HAS BEEN ESTABLISHED.
8. THE USE OF POTABLE WATER WITHOUT A SPECIAL PERMIT FOR BUILDING OR CONSTRUCTION PURPOSES INCLUDING CONSOLIDATION OF BACKFILL OR DUST CONTROL IS PROHIBITED. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION WATER.
9. THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWALKS AND ALL OTHER PUBLIC RIGHT-OF-WAY IN A CLEAN, SAFE AND USABLE CONDITION. ALL SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE PUBLICLY OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC SHALL BE MAINTAINED IN A CLEAN, SAFE AND USABLE CONDITION.
10. IN THE EVENT THAT ANY TEMPORARY CONSTRUCTION ITEM IS REQUIRED THAT IS NOT SHOWN ON THESE DRAWINGS, THE OWNER AGREES TO PROVIDE AND INSTALL SUCH ITEM AT HIS OWN EXPENSE AND AT THE DIRECTION OF THE CITY ENGINEER. TEMPORARY CONSTRUCTION INCLUDES DITCHES, BERMS, ROAD SIGNS AND BARRICADES, ETC.

REVISED 04/15/10

CITY OF LAS VEGAS TRAFFIC SIGNAL NOTES

1. ALL WORK PERFORMED ON ANY TRAFFIC SIGNAL COMPONENT MUST BE UNDER THE DIRECT ON-SITE SUPERVISION OF AN IMSA CERTIFIED TECHNICIAN. THE LEVEL OF CERTIFICATION REQUIRED SHALL BE LEVEL II.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ALL EXISTING UTILITIES. THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES TO VERIFY IN THE FIELD THE LOCATIONS OF THEIR INSTALLATIONS 72 HOURS PRIOR TO CONSTRUCTION.
   CALL-BEFORE-YOU-OVERHEAD 1-702-227-2929
   CALL-BEFORE-YOU-DIG 1-800-227-2600
   STREETLIGHTS 1-702-229-6331
   F.A.S.T. 1-702-432-5300
3. ALL TRAFFIC SIGNAL INSTALLATIONS SHALL CONFORM TO THE UNIFORM STANDARD DRAWINGS SPECIFICATIONS AND SPECIAL PROVISIONS FOR PUBLIC WORKS' CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA, VOLUMES I AND II, ADOPTED BY THE REGIONAL TRANSPORTATION COMMISSION APRIL 8, 1992 WITH ALL SUBSEQUENT REVISIONS. BRACKET MOUNTED (SIDE-MOUNTED) VEHICLE SIGNAL ASSEMBLIES WITH 2 OR MORE SIGNAL HEADS SHALL HAVE AN ADDITIONAL ELBOW AS SHOWN IN UNIFORM STANDARD DRAWING NUMBER 863 AND SHOWN AS OPTION B IN UNIFORM STANDARD DRAWING NUMBER 844, AND SHALL HAVE A MENERALLIC SUPPORT AS SHOWN IN UNIFORM STANDARD DRAWING NUMBER 863 IF ONE OF THE SIGNAL HEADS CONTAINS 4 OR MORE SIGNAL MODULES.
4. SERVICE SHALL HAVE 1-60 AMP SINGLE POLE BREAKER FOR SIGNAL, AND ONE 40 AMP SINGLE POLE BREAKERS FOR STREET LIGHTS. SERVICE SHALL BE 200 AMP PADMOUNT AND SHALL HAVE A CAPACITY OF 20 OR 24 CIRCUITS.
5. LINE SIDE OF METER TO BE WIRED WITH THREE #3/0 AWG THW. LOAD SIDE SHALL BE WIRED WITH FOUR #4 AWG THW (2 BLACK, 2 WHITE) AND ONE #8 AWG THW (GREEN).
6. LUMINAIRES ON ALL SIGNAL POLES SHALL BE L.E.D. AS APPROVED BY THE CITY OF LAS VEGAS (CLV). DESIGN PROFESSIONAL AND CONTRACTOR SHALL VERIFY CITY'S LATEST LED FIXTURE SPECIFICATIONS AND APPROVED FIXTURES PER CLV WEBSITE, UNDER BUILDING AND SAFETY FORMS, PRIOR TO ORDERING MATERIALS. INTERSECTION LIGHTING SHALL MEET THE REQUIREMENTS OF UNIFORM STANDARD DRAWING NUMBER 300.53. EACH LUMINAIRE SHALL HAVE AN INDIVIDUAL 1000 WATT P.E. CONTROL FOR LUMINAIRES THERE SHALL BE 2(TWO) – #4 AWG THW CONDUCTORS FROM THE SERVICE TO THE CABINET. IN THE CABINET, THE #4 AWG THW CONDUCTORS SHALL BRANCH OFF INTO #10 AWG THW CONDUCTORS INDIVIDUALLY FUSED WITH 10 AMP FUSES. THERE SHALL BE NO SPLICES BETWEEN THE CABINET AND LUMINAIRE FIXTURES.
7. LUMINAIRES SHALL BE MARKED TO INDICATE INSTALLATION ORIENTAT

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ABBREVIATIONS

@	AT
AB	AGGREGATE BASE
AC	ASPHALTIC CONCRETE
AVE	AVENUE
BC	BACK OF CURB
BCR	BEGIN CURB RETURN
BLVD	BOULEVARD
BM	BENCHMARK
BVC	BEGIN VERTICAL CURVE
BW	BOTTOM OF WALL
B/S	BACKSIDE
CALC	CALCULATED
CC	CLARK COUNTY
CCAUSD	CLARK COUNTY AREA UNIFORM STANDARD DRAWING
CL	CENTERLINE
CONN	CONNECTION
CTV	CABLE TELEVISION
CY	CUBIC YARD
Δ	DELTA (DIFFERENCE) / ANGLE
D	DEPTH
DG	DECOMPOSED GRANITE
DI	DUCTILE IRON
E	EAST
EA	EACH
ECR	END CURB RETURN
ELEV	ELEVATION
ELEC	ELECTRICAL
EOP	EDGE OF PAVEMENT
EVC	END VERTICAL CURVE
EX.	EXISTING
E/W	EAST/WEST or EACH WAY
F-F	FACE OF CURB TO FACE OF CURB
FG	FINISHED GROUND
FH	FIRE HYDRANT
FS	FINISHED SURFACE
FL	FLOWLINE
FT	FOOT or FEET
GB	GRADE BREAK
H	HEIGHT
HDPE	HIGH-DENSITY POLYETHYLENE
HP	HIGH POINT
INT	INTERSECTION
INV	INVERT
L	LENGTH
LA	LANDSCAPE ARCHITECT
LF	LINEAR FEET
LT	LEFT
LVVWD	LAS VEGAS VALLEY WATER DISTRICT
MAX	MAXIMUM
MEP	MECHANICAL, ELECTRICAL AND PLUMBING
MH	MANHOLE
MIN	MINIMUM
N	NORTH
NTS	NOT TO SCALE
N/S	NORTH/SOUTH
OC	ON CENTER
P.A.E.	PUBLIC ACCESS EASEMENT
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PR	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INFLECTION
R	RADIUS
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RT	RIGHT
R/W	RIGHT OF WAY
S	SOUTH
SD	STORM DRAIN
SF	SQUARE FOOT OR FEET
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
ST	STREET
STL	STEEL
STD	STANDARD
SY	SQUARE YARDS
TC	TOP OF CURB
TG	TOP OF GRATE
TYP	TYPICAL
TW	TOP OF WALL
UDACS	UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS
VERT	VERTICAL
W	WEST OR WATER
WL	WATERLINE
WTR	WATER
±	PLUS OR MINUS

LEGEND

GRADE BREAK

LIMITS OF CONSTRUCTION/SAWCUT LINE

RIGHT OF WAY LINE

CENTERLINE

EXISTING	PROPOSED	DESCRIPTION
– – – – – – – –	– – – – – – – –	EASEMENT
– – – 2000 – – –	——— 2000 ———	CONTOUR MAJOR
– – – 2000 – – –	——— 2000 ———	CONTOUR MINOR

EX. R/W TO BE VACATED







No.	REVISIONS	DATE	BY

Kimley»Horn
6671 LAS VEGAS BOULEVARD S., SUITE 320, LAS VEGAS, NV 89119
PHONE: 702-862-3600
WWW.KIMLEY-HORN.COM

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KHA PROJECT	19219200
DATE	07/08/2022
SCALE	AS SHOWN
DESIGNED BY	SMM
DRAWN BY	DLB
CHECKED BY	SMM

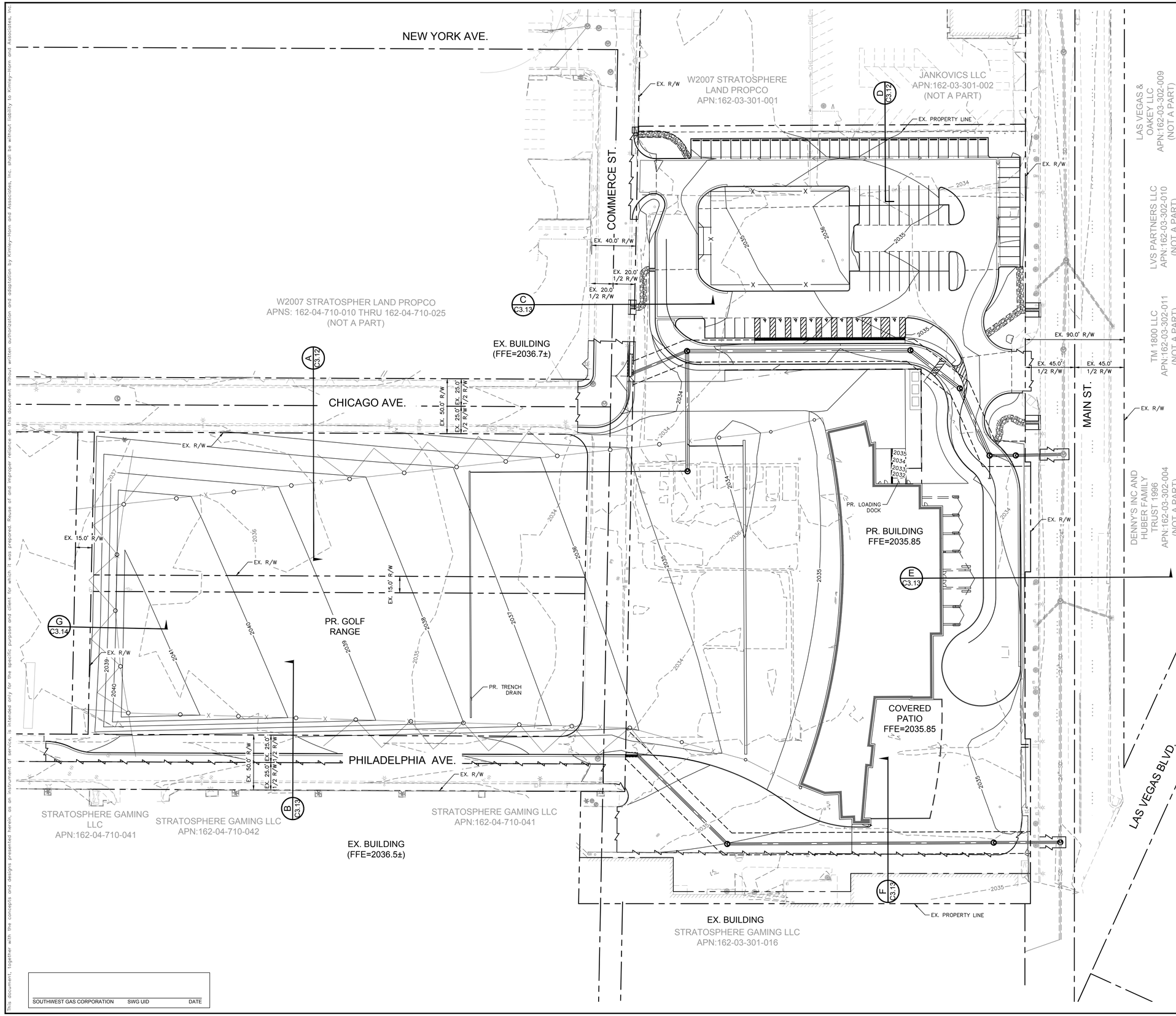
LEGEND & ABBREVIATIONS

MAIN STREET
ENTERTAINMENT VENUE
PREPARED FOR
THE 361 VENTURE, LLC

CITY OF LAS VEGAS NEVADA

03 OF 20

C0.03



GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY THE EX. GRADES PRIOR TO CONSTRUCTION. IF A CONFLICT EXISTS BETWEEN THESE PLANS AND THE FIELD CONDITION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
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3. THE CONTRACTOR SHALL PROTECT IN PLACE EX. IMPROVEMENTS, THAT ARE NOTED TO REMAIN, DURING DEMOLITION AND CONSTRUCTION.
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6. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE IS MAINTAINED.
7. ADD 2000.00 FEET TO ALL TRUNCATED ELEVATIONS.
8. REFER TO SHEET C0.02 FOR LEGEND AND ABBREVIATIONS.

GEOTECHNICAL REPORT

ENGINEER: UNIVERSAL ENGINEERING SCIENCES
DATED: 09/21/2021
PROJECT NO.: 4030.2100194.0000

FLOOD ZONE NOTE

THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) INDICATES THAT THE SUBJECT SITE LIES WITHIN ZONE "X" OF FLOOD INSURANCE RATE MAP (FIRM) No. 32003C2170F AS SHOWN ON THE FIRM INDEX, REVISED NOVEMBER 16, 2011. ZONE "X" IS DEFINED BY FEMA AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD FLOODPLAIN".

STORMWATER COMPLIANCE NOTES

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 CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.
2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN THE LVMC 14.18.130 AND CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICTS HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL SECTION 1500 AND THE LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL..
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.5.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS, AND ALL BMPS WEEKLY, AND WITHIN 24 HOURS AFTER 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 TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12.
5. ACCUMULATED SEDIMENT IN BMPS SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

EARTHWORK QUANTITIES

CUT VOLUME: 1,120 CY
FILL VOLUME: 18,850 CY
NET VOLUME: 17,730 CY (FILL)

* – BASED ON A SURFACE TO SURFACE, UNADJUSTED ANALYSIS

POST CONSTRUCTION BMP NOTE

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

GRAPHIC SCALE IN FEET
0 20 40 80
SCALE: 1" = 40'

NORTH

SOUTHWEST GAS CORPORATION SWG UID DATE

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PHONE: 702-862-3600
WWW.KIMLEY-HORN.COM

PROFESSIONAL ENGINEER STATE OF NEVADA
SCOTT M. MARTIN
Exp. 12/31/23
CIVIL
No. 25820
7/13/2022

KHA PROJECT	192197000
DATE	07/08/2022
SCALE	AS SHOWN
DESIGNED BY	SMM
DRAWN BY	DLB
CHECKED BY	SMM

OVERALL GRADING PLAN

MAIN STREET ENTERTAINMENT VENUE

PREPARED FOR
THE 361 VENTURE, LLC

CITY OF LAS VEGAS NEVADA

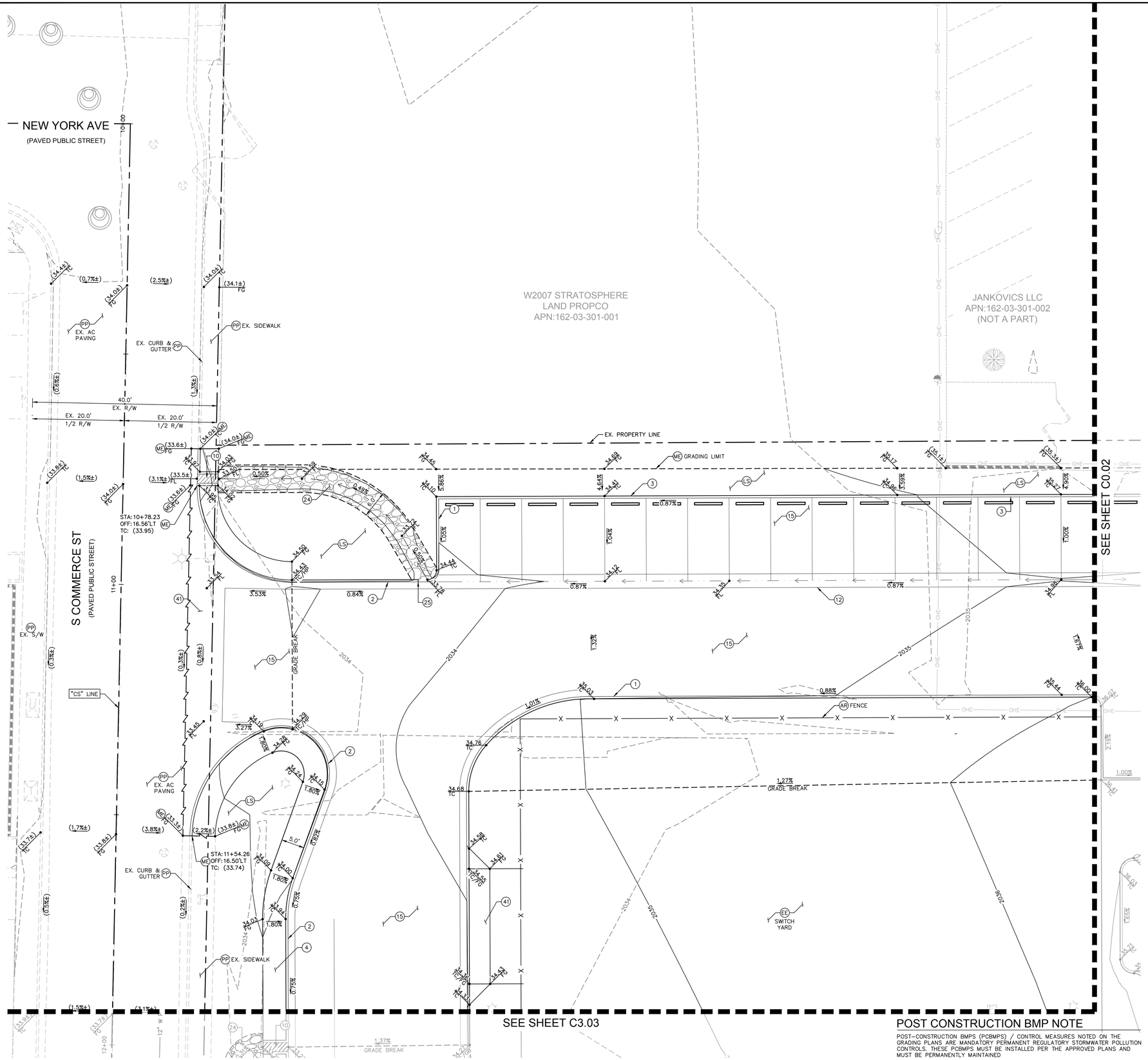
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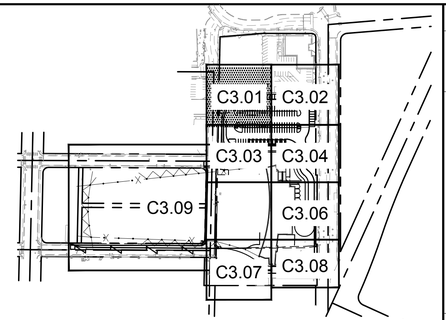
Call before you DIG
Avoid cutting underground utility lines. It's costly.
CALL 811 OR 1-800-227-2600

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

Call before you UnderGround
1-702-432-5300
FREEWAY AND INTERNAL SYSTEM OF TRANSPORTATION (FAST)

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KEY MAP

GENERAL NOTES

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7. ADD 2000.00 FEET TO ALL TRUNCATED ELEVATIONS.
8. REFER TO SHEET C0.02 FOR LEGEND AND ABBREVIATIONS.

GEOTECHNICAL REPORT

ENGINEER: UNIVERSAL ENGINEERING SCIENCES
DATED: 09/21/2021
PROJECT NO.: 4030.2100194.0000

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THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) INDICATES THAT THE SUBJECT SITE LIES WITHIN ZONE "X" OF FLOOD INSURANCE RATE MAP (FIRM) No. 32003C2170F AS SHOWN ON THE FIRM INDEX, REVISED NOVEMBER 16, 2011. ZONE "X" IS DEFINED BY FEMA AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD FLOODPLAIN".

STORMWATER COMPLIANCE NOTES

REFER TO SHEET C3.00 FOR STORM WATER COMPLIANCE NOTES.

CONSTRUCTION NOTES

1. INSTALL MODIFIED TYPE 'A' CONCRETE CURB PER DETAIL 1 ON SHEET C3.15.
2. INSTALL TYPE 'L' CONCRETE CURB AND GUTTER PER CCAUSD No. 216.
3. INSTALL 0" FACE CURB PER DETAIL 2 ON SHEET C3.15.
4. INSTALL CONCRETE SIDEWALK PER CCAUSD No. 234, WIDTH AS NOTED ON PLANS.
10. INSTALL 2' WIDE SIDEWALK UNDERDRAIN PER CCAUSD No. 236.
12. INSTALL 3' WIDE VALLEY GUTTER PER DETAIL 3 ON SHEET C3.15.
15. INSTALL 2.0" AC PAVEMENT OVER 8.0" TYPE II AGGREGATE BASE PER GEOTECHNICAL REPORT RECOMMENDATIONS.
24. INSTALL RIP-RAP SWALE, PER DETAIL 4 ON SHEET C3.15, WIDTH AS NOTED ON PLAN.
25. INSTALL 2' WIDE CURB CUT PER DETAIL 5 ON SHEET C3.15.
41. INSTALL COMMERCIAL DRIVEWAY PER CCAUSD No. 225.
AR. REFER TO ARCHITECTURAL PLANS FOR DETAILS.
EE. REFER TO ELECTRICAL PLANS FOR DETAILS.
LS. REFER TO LANDSCAPE PLANS FOR DETAILS.
ME. MATCH EXISTING
PP. PROTECT IN PLACE

STORM DRAIN NOTES

NO STORM DRAIN CONSTRUCTION ON THIS SHEET.

BENCHMARK

CITY OF LAS VEGAS VERTICAL CONTROL BENCHMARK NO. "8LV113W6"

RIVET PLATE IN TOP OF CURB AT SOUTHEAST CORNER OAKEY BOULEVARD AND LAS VEGAS BOULEVARD

ELEVATION = 618.927 METERS
2030.60 FEET

CITY OF LAS VEGAS VERTICAL CONTROL DATUM BASED UPON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88)

BASIS OF BEARING

NORTH 04°44'58" EAST, BEING THE CENTER OF THE WEST LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 3, TOWNSHIP 21 SOUTH, RANGE 61 EAST, M.D.M., AS SHOWN IN FILE 193, PAGE 94 OF SURVEYS ON FILE AT THE CLARK COUNTY, NEVADA RECORDER'S OFFICE.

GRAPHIC SCALE IN FEET
0 5 10 20
SCALE: 1" = 10'

NORTH

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL SYSTEMS AND STREET LIGHTING SYSTEM CONDUITS
CALL BEFORE YOU DIG UNDERGROUND
Call before you UnderGround 1-702-432-5300
Call 811 or 1-800-227-2600
Call Before You Overhead 1-702-227-2929
Avoid overhead power line contact. It's costly.
Call before you Dig
Avoid cutting underground utility lines. It's costly.

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KHA PROJECT	192197000		
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SCALE	AS SHOWN	DESIGNED BY	SMM
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GRADING PLAN - SHEET 1

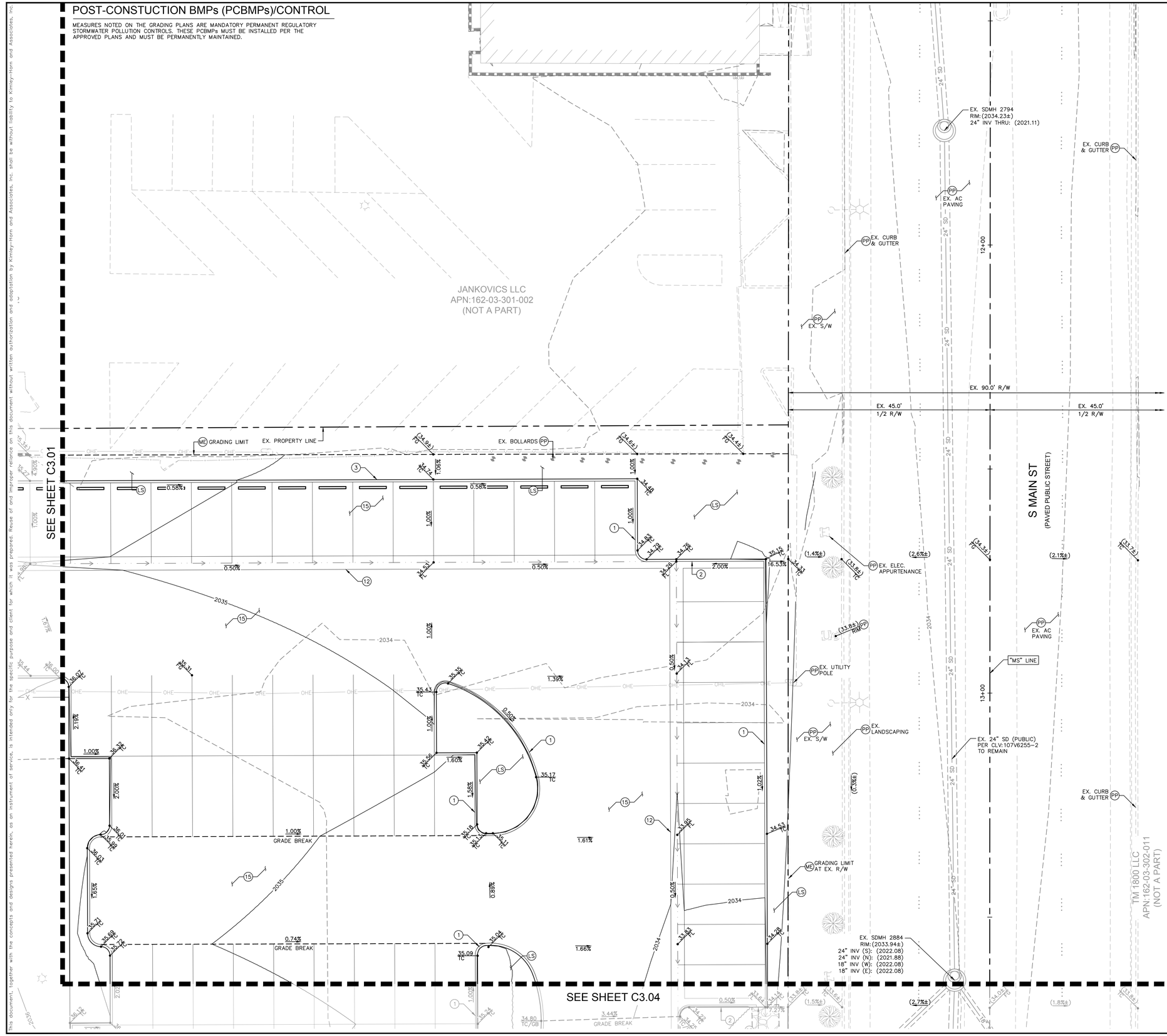
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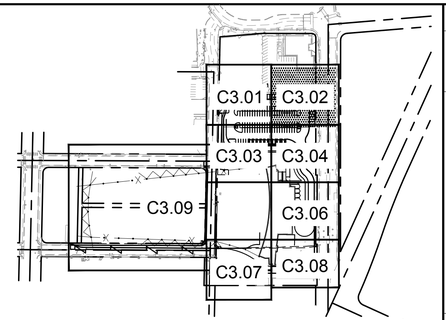
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C3.01

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POST-CONSTUCTION 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.





KEY MAP

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GEOTECHNICAL REPORT

ENGINEER: UNIVERSAL ENGINEERING SCIENCES
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- LS REFER TO LANDSCAPE PLANS FOR DETAILS.
- ME MATCH EXISTING
- PP PROTECT IN PLACE

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PHONE: 702-862-3600
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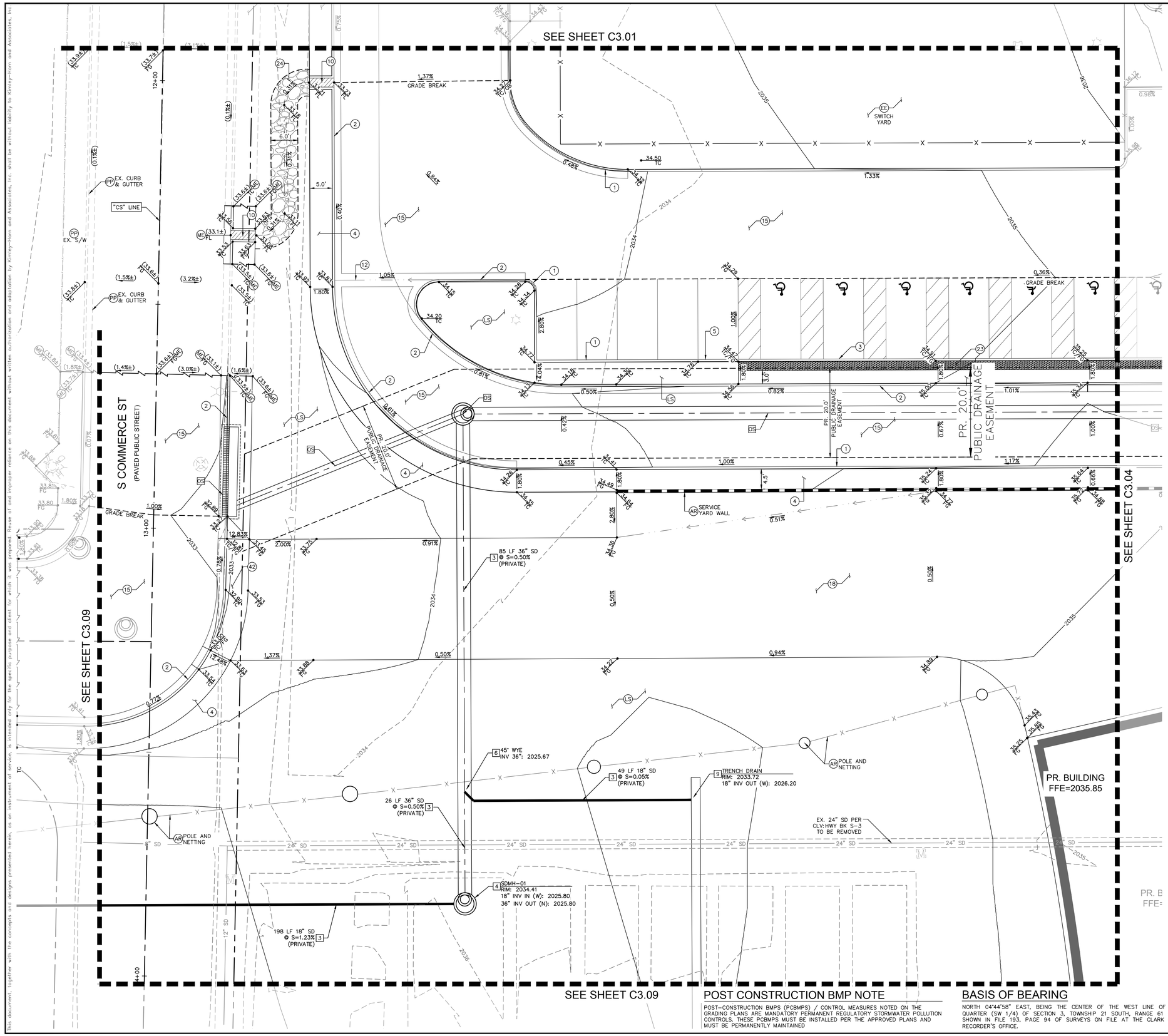
SCOTT M. MARTIN
Exp. 12/31/23
CIVIL
No. 25820
STATE OF NEVADA
7/13/2022

KHA PROJECT	
192197000	
DATE	07/08/2022
SCALE	AS SHOWN
DESIGNED BY	SMM
DRAWN BY	DLB
CHECKED BY	SMM

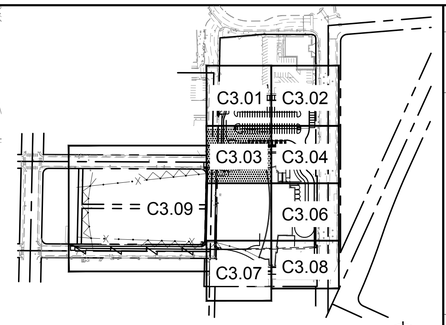
GRADING PLAN - SHEET 2

MAIN STREET ENTERTAINMENT VENUE
PREPARED FOR
THE 361 VENTURE, LLC
CITY OF LAS VEGAS NEVADA

6 OF 20
C3.02



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KEY MAP

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY THE EX. GRADES PRIOR TO CONSTRUCTION. IF A CONFLICT EXISTS BETWEEN THESE PLANS AND THE FIELD CONDITION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
2. THE CONTRACTOR SHALL VERIFY EX. IMPROVEMENTS SHOWN ON THE PLAN, AND NOTIFY ENGINEER IMMEDIATELY IF DISCREPANCIES EXIST.
3. THE CONTRACTOR SHALL PROTECT IN PLACE EX. IMPROVEMENTS, THAT ARE NOTED TO REMAIN, DURING DEMOLITION AND CONSTRUCTION.
4. THE CONTRACTOR SHALL VERIFY AND LOCATE ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION AND PROTECT IN PLACE UNLESS OTHERWISE NOTED ON THE PLANS.
5. ANY EXISTING STRUCTURE(S), IMPROVEMENT(S), OR APPURTENANCE(S) TO REMAIN, WHICH ARE DAMAGED DURING DEMOLITION OR CONSTRUCTION, SHALL BE IMMEDIATELY REPAIRED OR REPLACED BY THE CONTRACTOR AT THE THEIR EXPENSE.
6. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE IS MAINTAINED.
7. ADD 2000.00 FEET TO ALL TRUNCATED ELEVATIONS.
8. REFER TO SHEET C0.02 FOR LEGEND AND ABBREVIATIONS.

GEOTECHNICAL REPORT

ENGINEER: UNIVERSAL ENGINEERING SCIENCES
DATED: 09/21/2021
PROJECT NO.: 4030.2100194.0000

FLOOD ZONE NOTE

THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) INDICATES THAT THE SUBJECT SITE LIES WITHIN ZONE "X" OF FLOOD INSURANCE RATE MAP (FIRM) No. 32003C2170F AS SHOWN ON THE FIRM INDEX, REVISED NOVEMBER 16, 2011. ZONE "X" IS DEFINED BY FEMA AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD FLOODPLAIN".

STORMWATER COMPLIANCE NOTES

REFER TO SHEET C3.00 FOR STORM WATER COMPLIANCE NOTES.

CONSTRUCTION NOTES

1. INSTALL MODIFIED TYPE 'A' CONCRETE CURB PER DETAIL 1 ON SHEET C3.15.
2. INSTALL TYPE 'L' CONCRETE CURB AND GUTTER PER CCAUSD No. 216.
3. INSTALL 0" FACE CURB PER DETAIL 2 ON SHEET C3.15.
4. INSTALL CONCRETE SIDEWALK PER CCAUSD No. 234, WIDTH AS NOTED ON PLANS.
5. INSTALL TRANSITION FROM MODIFIED TYPE 'A' CURB TO 0" FACE CURB.
10. INSTALL 2' WIDE SIDEWALK UNDERDRAIN PER CCAUSD No. 236.
12. INSTALL 3' WIDE VALLEY GUTTER PER DETAIL 3 ON SHEET C3.15.
15. INSTALL 2.0" AC PAVEMENT OVER 8.0" TYPE II AGGREGATE BASE PER GEOTECHNICAL REPORT RECOMMENDATIONS.
18. INSTALL HEAVY DUTY CONCRETE PAVEMENT PER GEOTECHNICAL REPORT RECOMMENDATIONS.
23. INSTALL DETECTABLE WARNING SURFACE WITH TRUNCATED DOMES (2' WIDTH) PER CCAUSD No. 235, COLOR PER LANDSCAPE/ARCHITECTUAL REQUIREMENTS.
24. INSTALL RIP-RAP SWALE, PER DETAIL 4 ON SHEET C3.15, WIDTH AS NOTED ON PLAN.
42. INSTALL COMMERCIAL DUSTPAN DRIVEWAY PER CCAUSD No. 224.
AR. REFER TO ARCHITECTURAL PLANS FOR DETAILS.
EE. REFER TO ELECTRICAL PLANS FOR DETAILS.
LS. REFER TO LANDSCAPE PLANS FOR DETAILS.
ME. MATCH EXISTING
PP. PROTECT IN PLACE

STORM DRAIN NOTES

3. INSTALL HDPE STORM DRAIN PIPE WITH EXCAVATION, BACKFILL AND TYPE 2 BEDDING PER CCAUSD No. 503.1. SIZE, LENGTH AND SLOPE AS NOTED ON PLAN.
4. INSTALL TYPE I STORM DRAIN MANHOLE PER CCAUSD No. 403, COLLAR PER CCAUSD No. 408, SLOTTED LOCKING LID COVER PER CCAUSD No. 409, 410, AND DETAIL 7 ON SHEET C3.15. INSIDE DIAMETER (I.D.) AS NOTED ON PLAN.
6. INSTALL HDPE FITTING, SIZE PER PIPE. TYPE AS NOTED ON PLAN.
9. INSTALL JAY R. SMITH 9940 12" WIDE ZIP TRENCH DRAIN (GRATE 9870-478) PER DETAIL 7 ON SHEET C3.15, LENGTH AS NOTED ON PLAN (**OR APPROVED EQUAL).
OS. REFER TO SHEETS C3.10-C3.11 FOR OFFSITE STORM DRAIN PLAN & PROFILE.

BENCHMARK

CITY OF LAS VEGAS VERTICAL CONTROL BENCHMARK NO. "8LV113W6"

RIVET PLATE IN TOP OF CURB AT SOUTHEAST CORNER OAKEY BOULEVARD AND LAS VEGAS BOULEVARD

ELEVATION = 618.927 METERS
2030.60 FEET

CITY OF LAS VEGAS VERTICAL CONTROL DATUM BASED UPON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88)

POST CONSTRUCTION BMP NOTE

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

BASIS OF BEARING

NORTH 04°44'58" EAST, BEING THE CENTER OF THE WEST LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 3, TOWNSHIP 21 SOUTH, RANGE 61 EAST, M.D.M., AS SHOWN IN FILE 193, PAGE 94 OF SURVEYS ON FILE AT THE CLARK COUNTY, NEVADA RECORDER'S OFFICE.

GRAPHIC SCALE IN FEET
0 5 10 20
SCALE: 1" = 10'

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Avoid cutting underground utility lines. It's costly.

Avoid overhead power line contact. It's costly.

CALL BEFORE YOU DIG UNDERGROUND
Call before you UnderGround 1-702-432-5300
CALL 811 OR 1-800-227-2600
Call Before You Overhead 1-702-227-2929

No.	REVISIONS	DATE	BY

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PHONE: 702-862-3600
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STATE OF NEVADA
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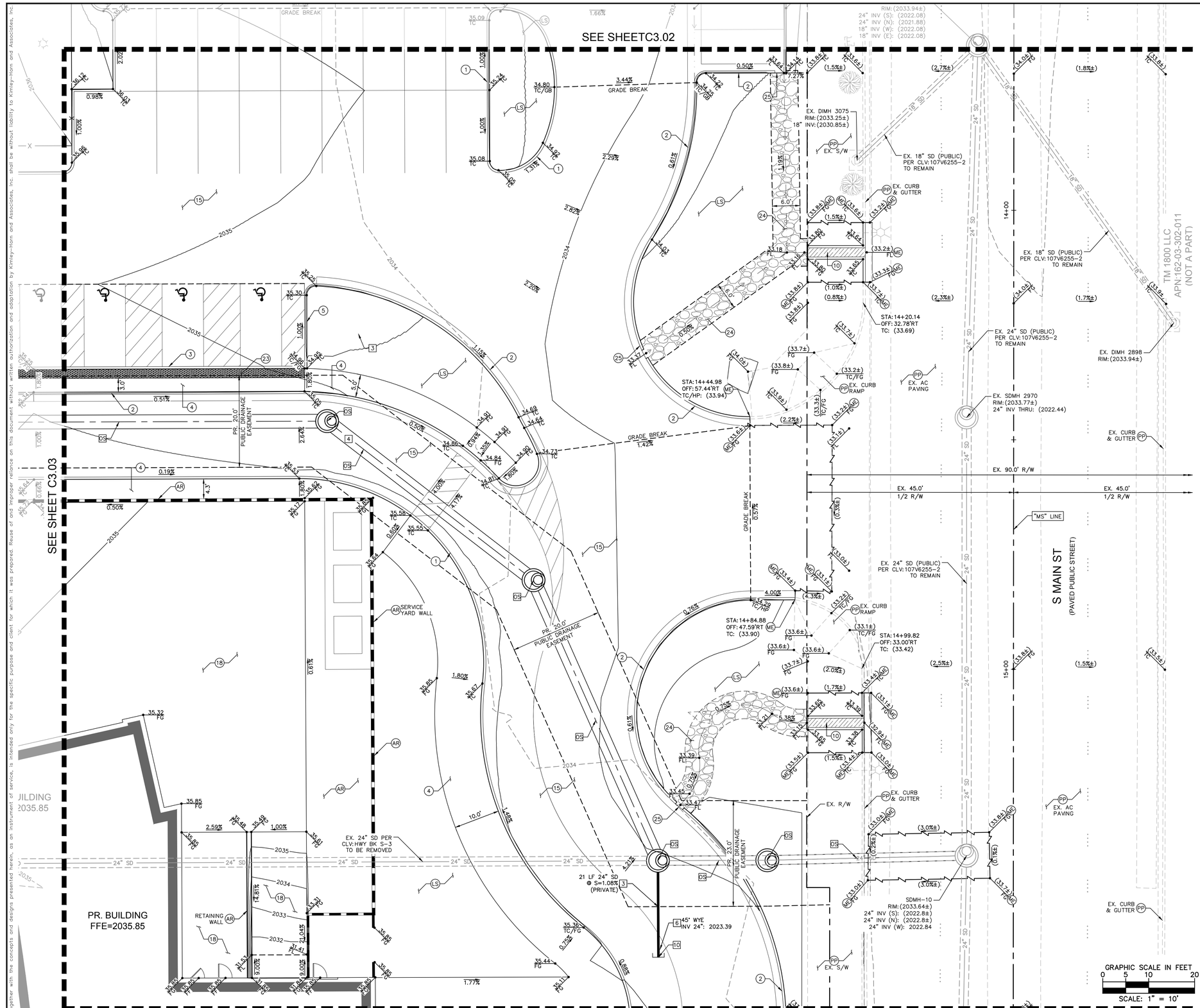
KHA PROJECT	19219700	SCALE	AS SHOWN	DESIGNED BY	SMM	DLB
DATE	07/08/2022			DRAWN BY	SMM	
				CHECKED BY	SMM	

GRADING PLAN - SHEET 3

MAIN STREET ENTERTAINMENT VENUE
PREPARED FOR
THE 361 VENTURE, LLC
CITY OF LAS VEGAS NEVADA

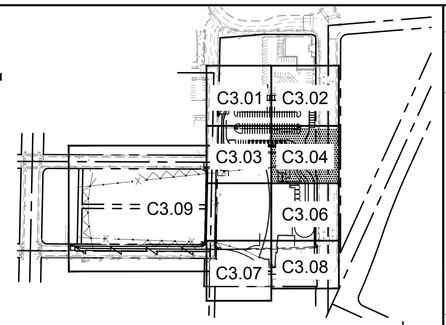
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C3.03

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POST CONSTRUCTION BMP NOTE

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



KEY MAP

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY THE EX. GRADES PRIOR TO CONSTRUCTION. IF A CONFLICT EXISTS BETWEEN THESE PLANS AND THE FIELD CONDITION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
2. THE CONTRACTOR SHALL VERIFY EX. IMPROVEMENTS SHOWN ON THE PLAN, AND NOTIFY ENGINEER IMMEDIATELY IF DISCREPANCIES EXIST.
3. THE CONTRACTOR SHALL PROTECT IN PLACE EX. IMPROVEMENTS, THAT ARE NOTED TO REMAIN, DURING DEMOLITION AND CONSTRUCTION.
4. THE CONTRACTOR SHALL VERIFY AND LOCATE ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION AND PROTECT IN PLACE UNLESS OTHERWISE NOTED ON THE PLANS.
5. ANY EXISTING STRUCTURE(S), IMPROVEMENT(S), OR APPURTENANCE(S) TO REMAIN, WHICH ARE DAMAGED DURING DEMOLITION OR CONSTRUCTION, SHALL BE IMMEDIATELY REPAIRED OR REPLACED BY THE CONTRACTOR AT THE THEIR EXPENSE.
6. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE IS MAINTAINED.
7. ADD 2000.00 FEET TO ALL TRUNCATED ELEVATIONS.
8. REFER TO SHEET C0.02 FOR LEGEND AND ABBREVIATIONS.

GEOTECHNICAL REPORT

ENGINEER: UNIVERSAL ENGINEERING SCIENCES
DATED: 09/21/2021
PROJECT NO.: 4030.2100194.0000

FLOOD ZONE NOTE

THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) INDICATES THAT THE SUBJECT SITE LIES WITHIN ZONE "X" OF FLOOD INSURANCE RATE MAP (FIRM) No. 32003C2170F AS SHOWN ON THE FIRM INDEX, REVISED NOVEMBER 16, 2011. ZONE "X" IS DEFINED BY FEMA AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD FLOODPLAIN".

STORMWATER COMPLIANCE NOTES

REFER TO SHEET C3.00 FOR STORM WATER COMPLIANCE NOTES.

CONSTRUCTION NOTES

1. INSTALL MODIFIED TYPE 'A' CONCRETE CURB PER DETAIL 1 ON SHEET C3.15.
2. INSTALL TYPE 'L' CONCRETE CURB AND GUTTER PER CCAUSD No. 216.
3. INSTALL 0" FACE CURB PER DETAIL 2 ON SHEET C3.15.
4. INSTALL CONCRETE SIDEWALK PER CCAUSD No. 234, WIDTH AS NOTED ON PLANS.
5. INSTALL TRANSITION FROM MODIFIED TYPE 'A' CURB TO 0" FACE CURB.
10. INSTALL 2' WIDE SIDEWALK UNDERDRAIN PER CCAUSD No. 236.
15. INSTALL 2.0" AC PAVEMENT OVER 8.0" TYPE II AGGREGATE BASE PER GEOTECHNICAL REPORT RECOMMENDATIONS.
18. INSTALL HEAVY DUTY CONCRETE PAVEMENT PER GEOTECHNICAL REPORT RECOMMENDATIONS.
23. INSTALL DETECTABLE WARNING SURFACE WITH TRUNCATED DOMES (2' WIDTH) PER CCAUSD No. 235, COLOR PER LANDSCAPE/ARCHITECTUAL REQUIREMENTS.
24. INSTALL RIP-RAP SWALE, PER DETAIL 4 ON SHEET C3.15, WIDTH AS NOTED ON PLAN.
25. INSTALL 2' WIDE CURB CUT PER DETAIL 5 ON SHEET C3.15.
AR. REFER TO ARCHITECTURAL PLANS FOR DETAILS.
LS. REFER TO LANDSCAPE PLANS FOR DETAILS.
ME. MATCH EXISTING
PP. PROTECT IN PLACE

STORM DRAIN NOTES

3. INSTALL HDPE STORM DRAIN PIPE WITH EXCAVATION, BACKFILL AND TYPE 2 BEDDING PER CCAUSD No. 503.1. SIZE, LENGTH AND SLOPE AS NOTED ON PLAN.
4. INSTALL TYPE I STORM DRAIN MANHOLE PER CCAUSD No. 403, COLLAR PER CCAUSD No. 408, SLOTTED LOCKING LID COVER PER CCAUSD No. 409, 410, AND DETAIL 7 ON SHEET C3.15. INSIDE DIAMETER (I.D.) AS NOTED ON PLAN.
6. INSTALL HDPE FITTING, SIZE PER PIPE. TYPE AS NOTED ON PLAN.
10. STUB & CAP STORM DRAIN FOR FUTURE CONNECTION.
OS. REFER TO SHEETS C3.10-C3.11 FOR OFFSITE STORM DRAIN PLAN & PROFILE.

BENCHMARK

CITY OF LAS VEGAS VERTICAL CONTROL BENCHMARK NO. "8LV113W6"

RIVET PLATE IN TOP OF CURB AT SOUTHEAST CORNER OAKEY BOULEVARD AND LAS VEGAS BOULEVARD

ELEVATION = 618.927 METERS
2030.60 FEET

CITY OF LAS VEGAS VERTICAL CONTROL DATUM BASED UPON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88)

BASIS OF BEARING

NORTH 04°44'58" EAST, BEING THE CENTER OF THE WEST LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 3, TOWNSHIP 21 SOUTH, RANGE 61 EAST, M.D.M., AS SHOWN IN FILE 193, PAGE 94 OF SURVEYS ON FILE AT THE CLARK COUNTY, NEVADA RECORDER'S OFFICE.

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Avoid cutting underground utility lines. It's costly.
Avoid overhead power line contact. It's costly.
CALL BEFORE YOU DO UNDERGROUND
Call before you UnderGround
1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION (FAST)
CALL 811 OR 1-800-227-2600
Call Before You Overhead
1-702-227-2929

No.	REVISIONS	DATE	BY

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6671 LAS VEGAS BOULEVARD S., SUITE 320, LAS VEGAS, NV 89119
PHONE: 702-862-3600
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SCOTT M. MARTIN
Exp. 12/31/23
CIVIL
No. 25820
STATE OF NEVADA
7/13/2022

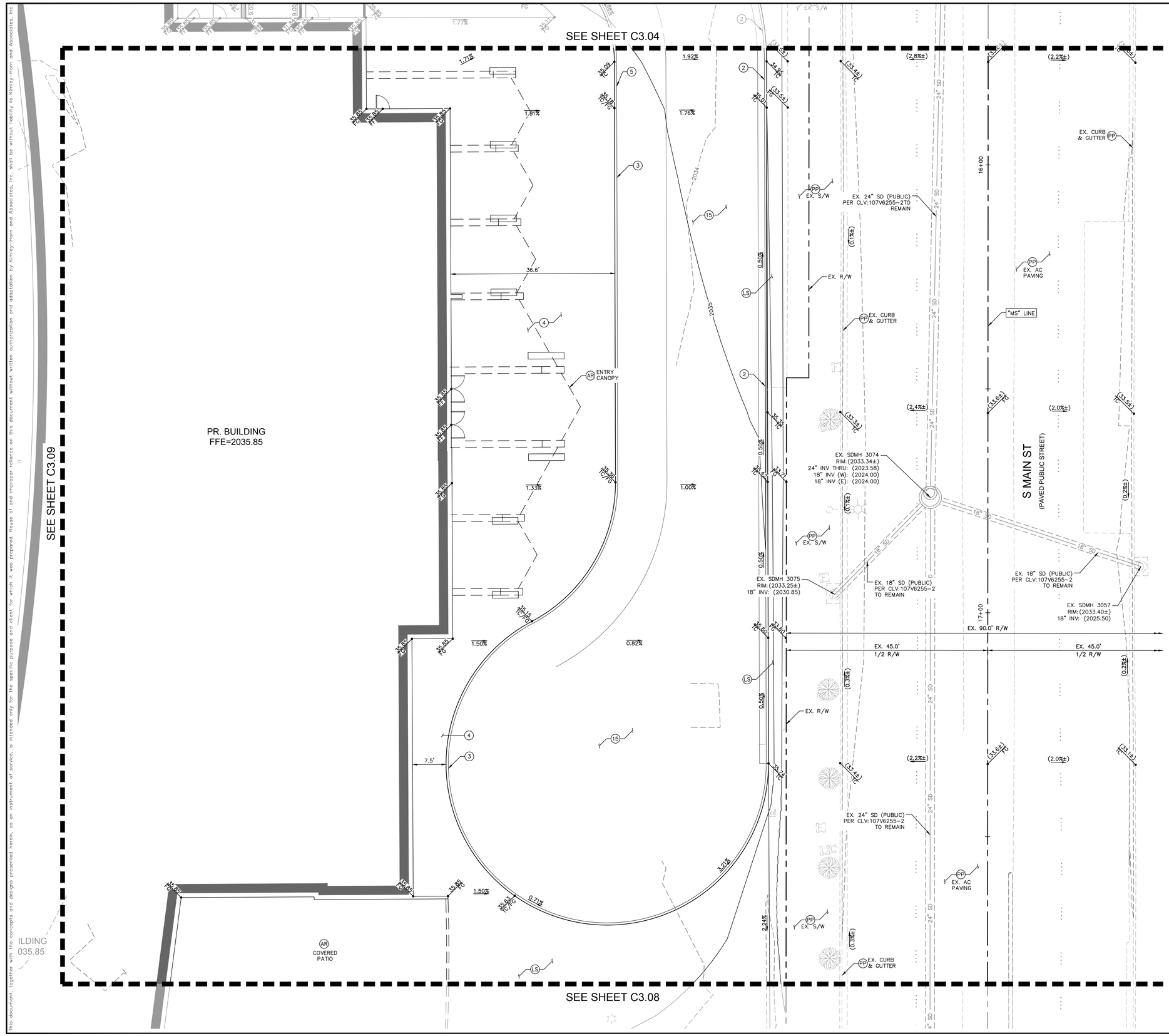
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DATE	07/08/2022		
SCALE	AS SHOWN	DESIGNED BY	SMM
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		CHECKED BY	SMM

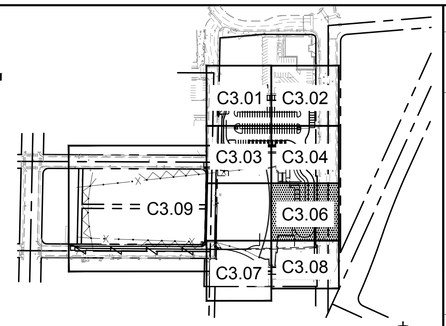
GRADING PLAN - SHEET 4

MAIN STREET ENTERTAINMENT VENUE
PREPARED FOR
THE 361 VENTURE, LLC
CITY OF LAS VEGAS NEVADA

8 OF 20
C3.04

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KEY MAP

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY THE EX. GRADES PRIOR TO CONSTRUCTION. IF A CONFLICT EXISTS BETWEEN THESE PLANS AND THE FIELD CONDITION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
2. THE CONTRACTOR SHALL VERIFY EX. IMPROVEMENTS SHOWN ON THE PLAN, AND NOTIFY ENGINEER IMMEDIATELY IF DISCREPANCIES EXIST.
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6. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE IS MAINTAINED.
7. ADD 2000.00 FEET TO ALL TRUNCATED ELEVATIONS.
8. REFER TO SHEET C0.02 FOR LEGEND AND ABBREVIATIONS.

GEOTECHNICAL REPORT

ENGINEER: UNIVERSAL ENGINEERING SCIENCES
DATED: 09/21/2021
PROJECT NO.: 4030.2100194.0000

FLOOD ZONE NOTE

THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) INDICATES THAT THE SUBJECT SITE LIES WITHIN ZONE "X" OF FLOOD INSURANCE RATE MAP (FIRM) No. 32003C2170F AS SHOWN ON THE FIRM INDEX, REVISED NOVEMBER 16, 2011. ZONE "X" IS DEFINED BY FEMA AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD FLOODPLAIN".

STORMWATER COMPLIANCE NOTES

REFER TO SHEET C3.00 FOR STORM WATER COMPLIANCE NOTES.

CONSTRUCTION NOTES

(2) INSTALL TYPE 'L' CONCRETE CURB AND GUTTER PER CCAUSD No. 216.
(3) INSTALL 0" FACE CURB PER DETAIL 2 ON SHEET C3.15.
(4) INSTALL CONCRETE SIDEWALK PER CCAUSD No. 234, WIDTH AS NOTED ON PLANS.
(5) INSTALL TRANSITION FROM MODIFIED TYPE 'A' CURB TO 0" FACE CURB.
(15) INSTALL 2.0" AC PAVEMENT OVER 8.0" TYPE II AGGREGATE BASE PER GEOTECHNICAL REPORT RECOMMENDATIONS.
(AR) REFER TO ARCHITECTURAL PLANS FOR DETAILS.
(LS) REFER TO LANDSCAPE PLANS FOR DETAILS.
(PP) PROTECT IN PLACE

STORM DRAIN NOTES

NO STORM DRAIN CONSTRUCTION ON THIS SHEET.

POST CONSTRUCTION BMP NOTE

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

BENCHMARK

CITY OF LAS VEGAS VERTICAL CONTROL BENCHMARK NO. "8LV113W6"

RIVET PLATE IN TOP OF CURB AT SOUTHEAST CORNER OAKEY BOULEVARD AND LAS VEGAS BOULEVARD

ELEVATION = 618.927 METERS
2030.60 FEET

CITY OF LAS VEGAS VERTICAL CONTROL DATUM BASED UPON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88)

BASIS OF BEARING

NORTH 04°44'58" EAST, BEING THE CENTER OF THE WEST LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 3, TOWNSHIP 21 SOUTH, RANGE 61 EAST, M.D.M., AS SHOWN IN FILE 193, PAGE 94 OF SURVEYS ON FILE AT THE CLARK COUNTY, NEVADA RECORDER'S OFFICE.

GRAPHIC SCALE IN FEET
0 5 10 20
SCALE: 1" = 10'

NORTH

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL SYSTEMS AND STREET LIGHT SYSTEM CONDUITS IT'S COSTLY
CALL BEFORE YOU DIG UNDERGROUND
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FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION (FAST)
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No.	REVISIONS	DATE	BY

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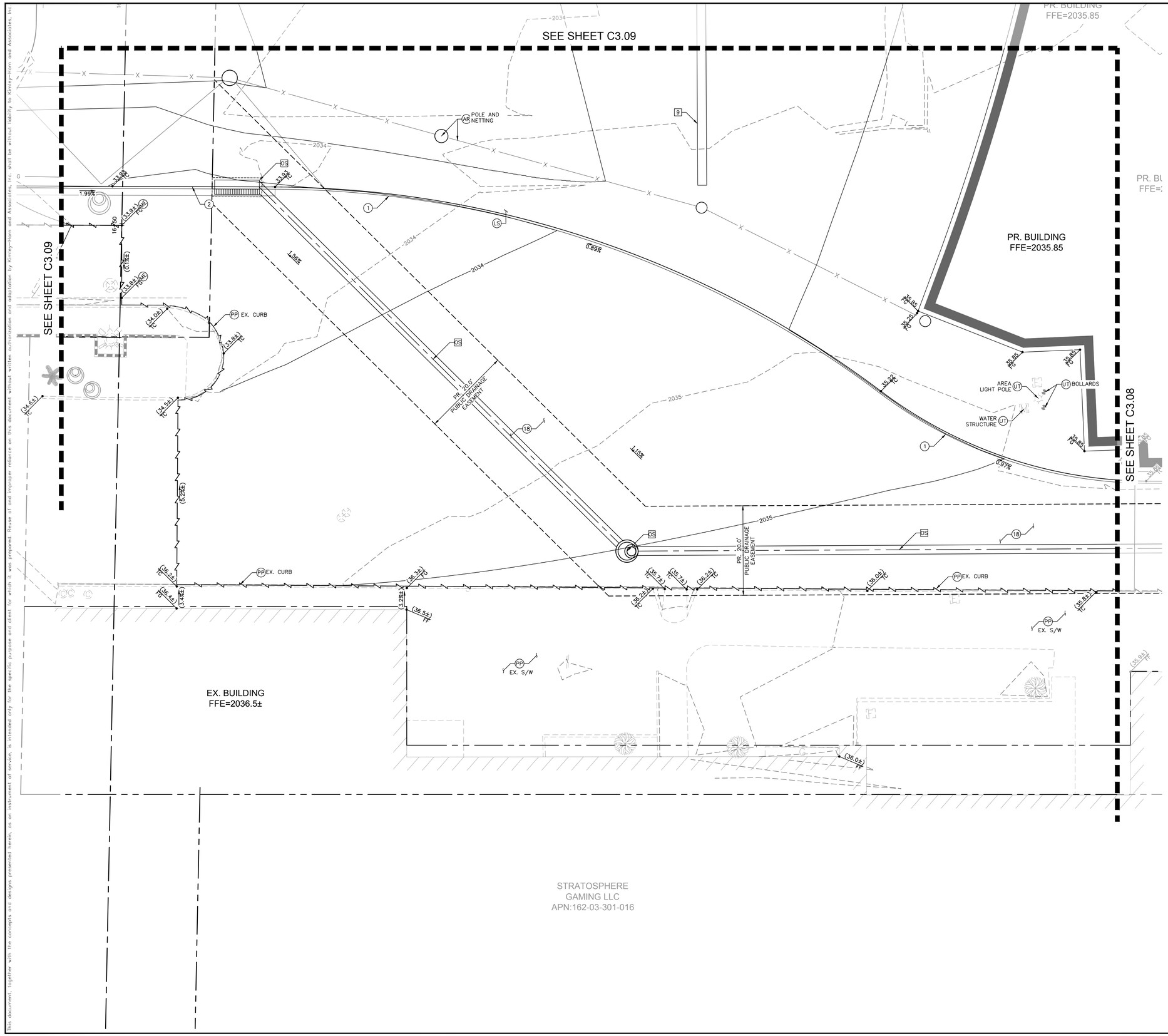
SCOTT M. MARTIN
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STATE OF NEVADA
7/13/2022

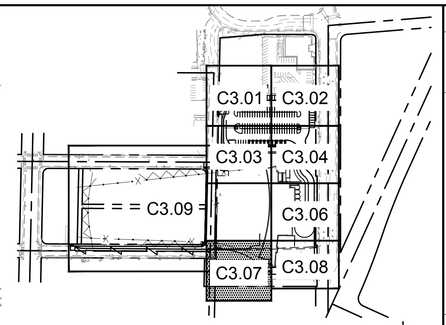
KHA PROJECT	192187000		
DATE	07/08/2022		
SCALE	AS SHOWN		
DESIGNED BY	SMM	DLB	
DRAWN BY	DLB	SMM	
CHECKED BY	SMM		

GRADING PLAN - SHEET 6

MAIN STREET ENTERTAINMENT VENUE
PREPARED FOR
THE 361 VENTURE, LLC
CITY OF LAS VEGAS NEVADA

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6. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE IS MAINTAINED.
7. ADD 2000.00 FEET TO ALL TRUNCATED ELEVATIONS.
8. REFER TO SHEET C0.02 FOR LEGEND AND ABBREVIATIONS.

GEOTECHNICAL REPORT

ENGINEER: UNIVERSAL ENGINEERING SCIENCES
DATED: 09/21/2021
PROJECT NO.: 4030.2100194.0000

FLOOD ZONE NOTE

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STORMWATER COMPLIANCE NOTES

REFER TO SHEET C3.00 FOR STORM WATER COMPLIANCE NOTES.

CONSTRUCTION NOTES

(1) INSTALL MODIFIED TYPE 'A' CONCRETE CURB PER DETAIL 1 ON SHEET C3.15.
(2) INSTALL TYPE 'L' CONCRETE CURB AND GUTTER PER CCAUSD No. 216.
(18) INSTALL HEAVY DUTY CONCRETE PAVEMENT PER GEOTECHNICAL REPORT RECOMMENDATIONS.
(AR) REFER TO ARCHITECTURAL PLANS FOR DETAILS.
(LS) REFER TO LANDSCAPE PLANS FOR DETAILS.
(ME) MATCH EXISTING
(PP) PROTECT IN PLACE
(UT) ADJUST UTILITY APPURTENANCE TO GRADE/ RELOCATE UTILITY PER UTILITY PLANS.

STORM DRAIN NOTES

9 INSTALL JAY R. SMITH 9940 12" WIDE ZIP TRENCH DRAIN (GRATE 9870-478) PER DETAIL 7 ON SHEET C3.15, LENGTH AS NOTED ON PLAN (**OR APPROVED EQUAL).
OS REFER TO SHEETS C3.10-C3.11 FOR OFFSITE STORM DRAIN PLAN & PROFILE.

POST CONSTRUCTION BMP NOTE

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

BENCHMARK

CITY OF LAS VEGAS VERTICAL CONTROL BENCHMARK NO. "BLV113W6"

RIVET PLATE IN TOP OF CURB AT SOUTHEAST CORNER OAKEY BOULEVARD AND LAS VEGAS BOULEVARD

ELEVATION = 618.927 METERS
2030.60 FEET

CITY OF LAS VEGAS VERTICAL CONTROL DATUM BASED UPON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88)

BASIS OF BEARING

NORTH 04°44'58" EAST, BEING THE CENTER OF THE WEST LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 3, TOWNSHIP 21 SOUTH, RANGE 61 EAST, M.D.M., AS SHOWN IN FILE 193, PAGE 94 OF SURVEYS ON FILE AT THE CLARK COUNTY, NEVADA RECORDER'S OFFICE.

GRAPHIC SCALE IN FEET
0 5 10 20
SCALE: 1" = 10'

NORTH

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Call 811 OR 1-800-227-2600
Call Before You Overhead 1-702-227-2929

No.	REVISIONS	DATE	BY

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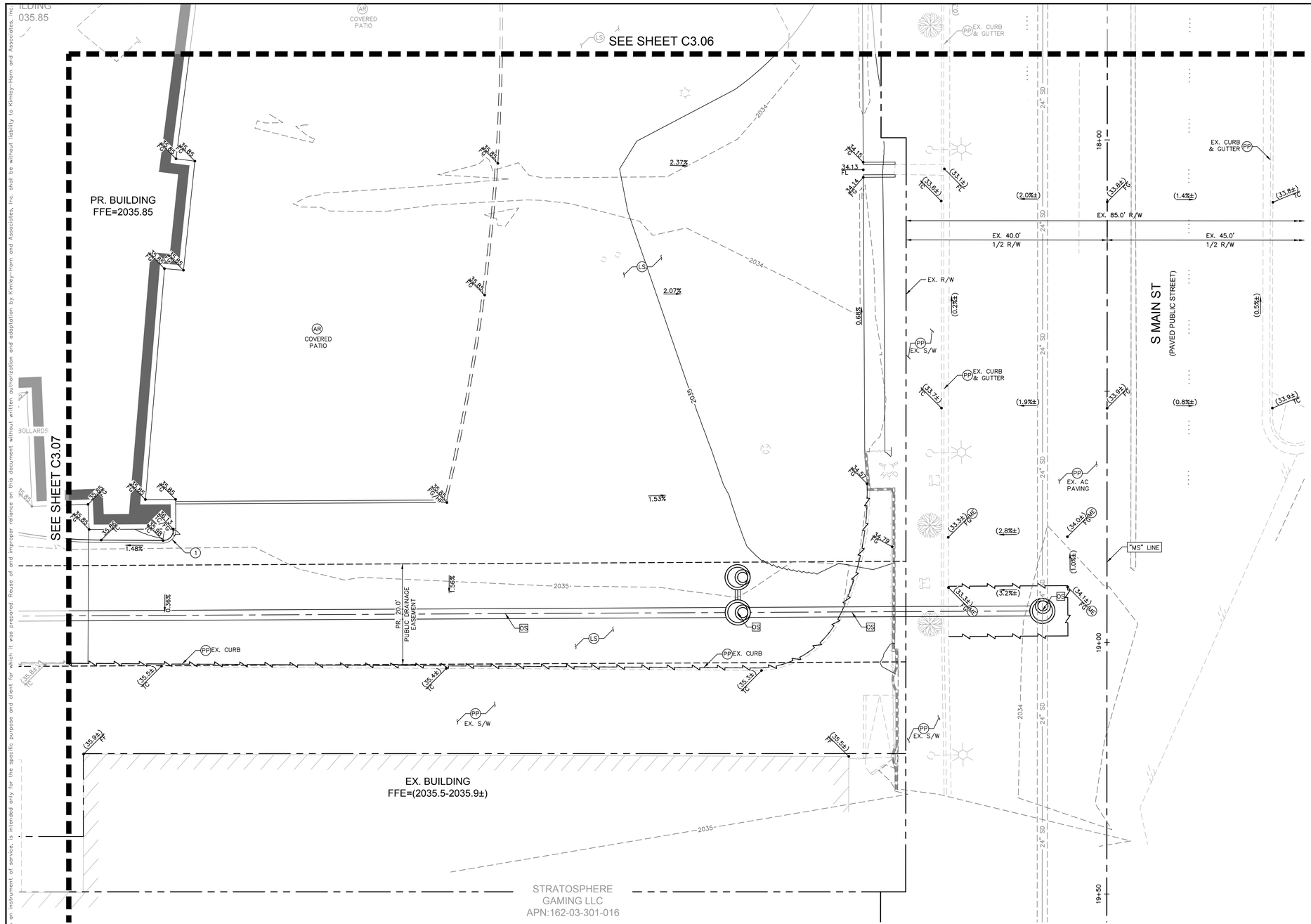
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Exp. 12/31/23
CIVIL
No. 25820
STATE OF NEVADA
7/13/2022

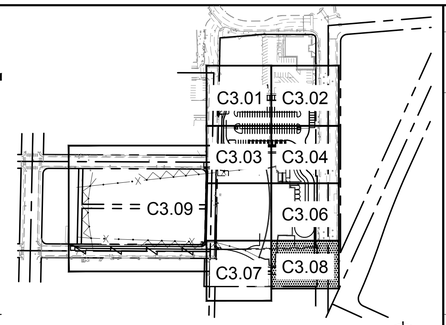
KHA PROJECT	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY
192197.000	AS SHOWN	SMM	DLB	SMM
DATE: 07/08/2022				

GRADING PLAN - SHEET 7

MAIN STREET ENTERTAINMENT VENUE
PREPARED FOR
THE 361 VENTURE, LLC
CITY OF LAS VEGAS NEVADA

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KEY MAP

NORTH

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY THE EX. GRADES PRIOR TO CONSTRUCTION. IF A CONFLICT EXISTS BETWEEN THESE PLANS AND THE FIELD CONDITION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
2. THE CONTRACTOR SHALL VERIFY EX. IMPROVEMENTS SHOWN ON THE PLAN, AND NOTIFY ENGINEER IMMEDIATELY IF DISCREPANCIES EXIST.
3. THE CONTRACTOR SHALL PROTECT IN PLACE EX. IMPROVEMENTS, THAT ARE NOTED TO REMAIN, DURING DEMOLITION AND CONSTRUCTION.
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6. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE IS MAINTAINED.
7. ADD 2000.00 FEET TO ALL TRUNCATED ELEVATIONS.
8. REFER TO SHEET C0.02 FOR LEGEND AND ABBREVIATIONS.

GEOTECHNICAL REPORT

ENGINEER: UNIVERSAL ENGINEERING SCIENCES
DATED: 09/21/2021
PROJECT NO.: 4030.2100194.0000

FLOOD ZONE NOTE

THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) INDICATES THAT THE SUBJECT SITE LIES WITHIN ZONE "X" OF FLOOD INSURANCE RATE MAP (FIRM) No. 32003C2170F AS SHOWN ON THE FIRM INDEX, REVISED NOVEMBER 16, 2011. ZONE "X" IS DEFINED BY FEMA AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD FLOODPLAIN".

STORMWATER COMPLIANCE NOTES

REFER TO SHEET C3.00 FOR STORM WATER COMPLIANCE NOTES.

CONSTRUCTION NOTES

(1) INSTALL MODIFIED TYPE 'A' CONCRETE CURB PER DETAIL 1 ON SHEET C3.15.
(AR) REFER TO ARCHITECTURAL PLANS FOR DETAILS.
(LS) REFER TO LANDSCAPE PLANS FOR DETAILS.
(ME) MATCH EXISTING
(PP) PROTECT IN PLACE

STORM DRAIN NOTES

(OS) REFER TO SHEETS C3.10–C3.11 FOR OFFSITE STORM DRAIN PLAN & PROFILE.

POST CONSTRUCTION BMP NOTE

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

BENCHMARK

CITY OF LAS VEGAS VERTICAL CONTROL BENCHMARK NO. "BLV113W6"

RIVET PLATE IN TOP OF CURB AT SOUTHEAST CORNER OAKEY BOULEVARD AND LAS VEGAS BOULEVARD

ELEVATION = 618.927 METERS
2030.60 FEET

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GRAPHIC SCALE IN FEET
0 5 10 20
SCALE: 1" = 10'

NORTH



No.	REVISIONS	DATE	BY

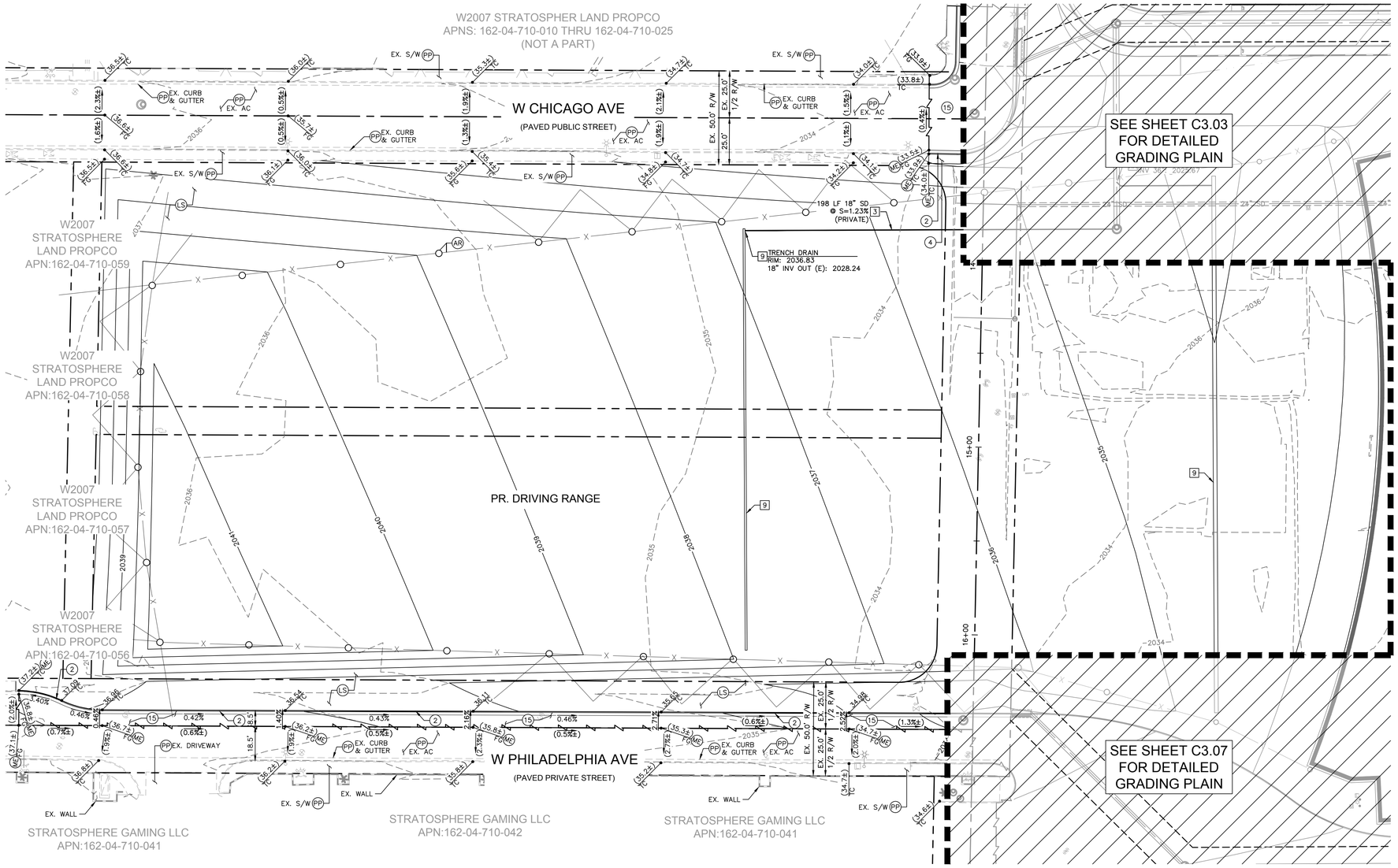
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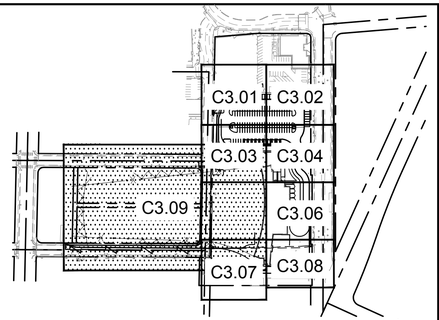
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Exp. 12/31/23
CIVIL
No. 25820
7/13/2022

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19219700	
DATE	
07/08/2022	
SCALE	AS SHOWN
DESIGNED BY	SMM
DRAWN BY	DLB
CHECKED BY	SMM

GRADING PLAN - SHEET 8

MAIN STREET ENTERTAINMENT VENUE
PREPARED FOR
THE 361 VENTURE, LLC
CITY OF LAS VEGAS NEVADA





KEY MAP

GENERAL NOTES

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2. THE CONTRACTOR SHALL VERIFY EX. IMPROVEMENTS SHOWN ON THE PLAN, AND NOTIFY ENGINEER IMMEDIATELY IF DISCREPANCIES EXIST.
3. THE CONTRACTOR SHALL PROTECT IN PLACE EX. IMPROVEMENTS, THAT ARE NOTED TO REMAIN, DURING DEMOLITION AND CONSTRUCTION.
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7. ADD 2000.00 FEET TO ALL TRUNCATED ELEVATIONS.
8. REFER TO SHEET C0.02 FOR LEGEND AND ABBREVIATIONS.

GEOTECHNICAL REPORT

ENGINEER: UNIVERSAL ENGINEERING SCIENCES
DATED: 09/21/2021
PROJECT NO.: 4030.2100194.0000

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THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) INDICATES THAT THE SUBJECT SITE LIES WITHIN ZONE "X" OF FLOOD INSURANCE RATE MAP (FIRM) No. 32003C2170F AS SHOWN ON THE FIRM INDEX, REVISED NOVEMBER 16, 2011. ZONE "X" IS DEFINED BY FEMA AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD FLOODPLAIN".

STORMWATER COMPLIANCE NOTES

REFER TO SHEET C3.00 FOR STORM WATER COMPLIANCE NOTES.

CONSTRUCTION NOTES

(2) INSTALL TYPE 'L' CONCRETE CURB AND GUTTER PER CCAUSD No. 216.
(4) INSTALL CONCRETE SIDEWALK PER CCAUSD No. 234, WIDTH AS NOTED ON PLANS.
(15) INSTALL 2.0" AC PAVEMENT OVER 8.0" TYPE II AGGREGATE BASE PER GEOTECHNICAL REPORT RECOMMENDATIONS.
(AR) REFER TO ARCHITECTURAL PLANS FOR DETAILS.
(LS) REFER TO LANDSCAPE PLANS FOR DETAILS.
(ME) MATCH EXISTING
(PP) PROTECT IN PLACE

STORM DRAIN NOTES

[3] INSTALL HDPE STORM DRAIN PIPE WITH EXCAVATION, BACKFILL AND TYPE 2 BEDDING PER CCAUSD No. 503.1. SIZE, LENGTH AND SLOPE AS NOTED ON PLAN.
[9] INSTALL JAY R. SMITH 9940 12" WIDE ZIP TRENCH DRAIN (GRATE 9870-478) PER DETAIL 7 ON SHEET C3.15, LENGTH AS NOTED ON PLAN (**OR APPROVED EQUAL).

POST CONSTRUCTION BMP NOTE

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

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CITY OF LAS VEGAS VERTICAL CONTROL BENCHMARK NO. "8LV113W6"

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GRAPHIC SCALE IN FEET
0 15 30 60
SCALE: 1" = 30'

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CALL BEFORE YOU DO UNDERGROUND
Call before you UnderGround 1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION (FAST)

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

Avoid overhead power line contact. It's costly.
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No.	REVISIONS	DATE	BY

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SCOTT M. MARTIN
Exp. 12/31/23
CIVIL
No. 25820
STATE OF NEVADA
7/13/2022

KHA PROJECT	192197000
DATE	07/08/2022
SCALE	AS SHOWN
DESIGNED BY	SMM
DRAWN BY	DLB
CHECKED BY	SMM

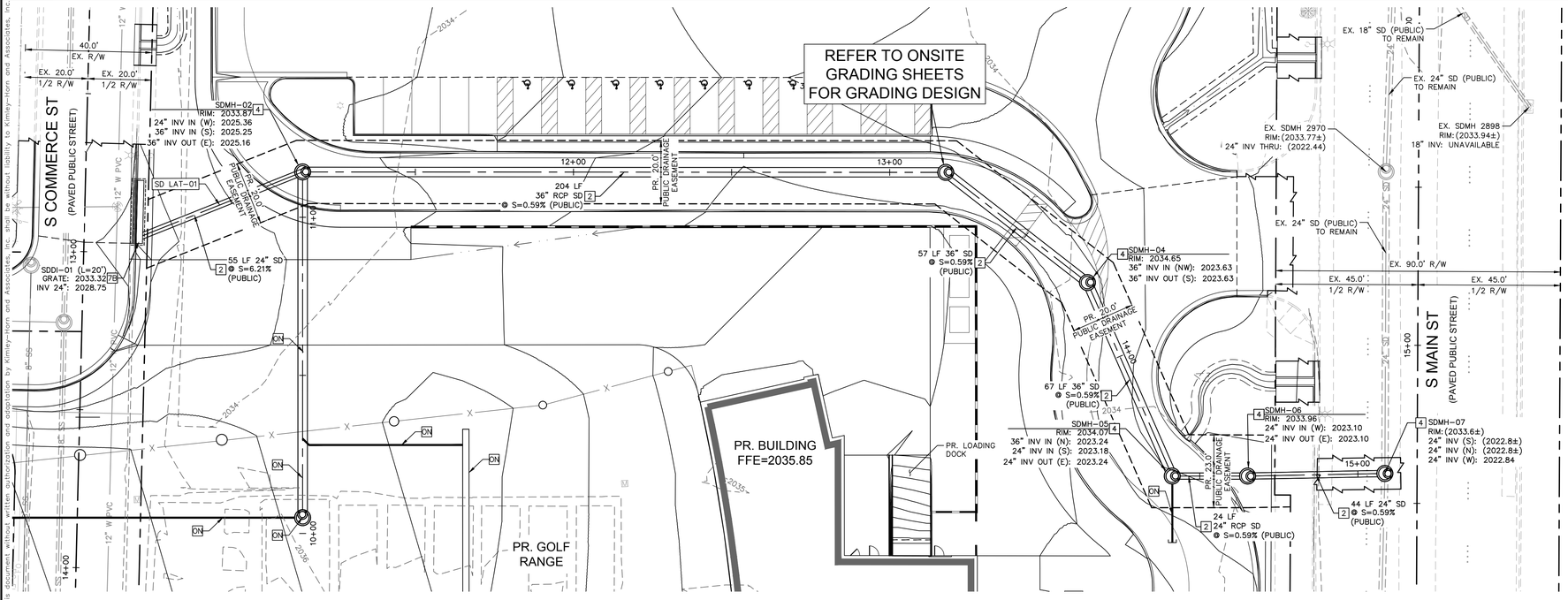
GRADING PLAN - SHEET 9

MAIN STREET ENTERTAINMENT VENUE
PREPARED FOR
THE 361 VENTURE, LLC
CITY OF LAS VEGAS NEVADA

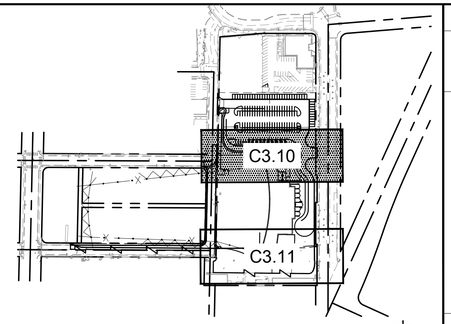
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GEOTECHNICAL REPORT

ENGINEER: UNIVERSAL ENGINEERING SCIENCES
DATED: 09/21/2021
PROJECT NO.: 4030.2100194.0000

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STORMWATER COMPLIANCE NOTES

REFER TO SHEET C3.00 FOR STORM WATER COMPLIANCE NOTES.

STORM DRAIN NOTES

2 INSTALL RCP STORM DRAIN PIPE WITH EXCAVATION, BACKFILL AND TYPE 2 BEDDING PER CCAUSD No. 503.2. CLASS, SIZE, LENGTH AND SLOPE AS NOTED ON PLAN.

4 INSTALL TYPE I STORM DRAIN MANHOLE PER CCAUSD No. 403, COLLAR PER CCAUSD No. 408, SLOTTED LOCKING LID COVER PER CCAUSD No. 409, 410, AND DETAIL 7 ON SHEET C3.15. INSIDE DIAMETER (I.D.) AS NOTED ON PLAN.

7B INSTALL 'TYPE CM2' DROP INLET PER CCAUSD No. 422 WITH STORMWATER QUALITY STAMP PER CCAUSD No. 421. INLET SIZE AS NOTED ON PLAN.

ON REFER TO SHEETS C3.01–C3.09 FOR ONSITE STORM DRAIN.

BENCHMARK

CITY OF LAS VEGAS VERTICAL CONTROL BENCHMARK NO. "BLV113W6"

RIVET PLATE IN TOP OF CURB AT SOUTHEAST CORNER OAKEY BOULEVARD AND LAS VEGAS BOULEVARD

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HORIZONTAL

0 1 2 4
VERTICAL

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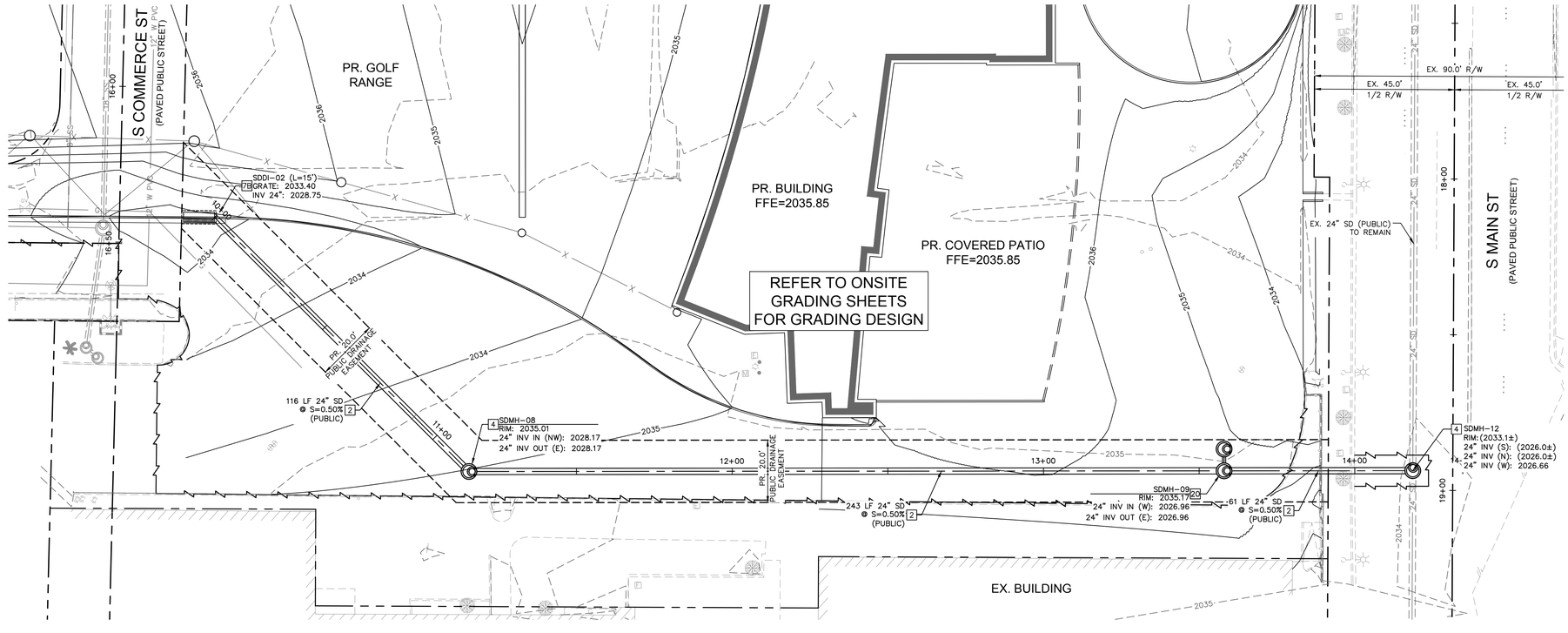
KHA PROJECT	192197000		
DATE	07/08/2022		
SCALE	AS SHOWN	DESIGNED BY	SMM
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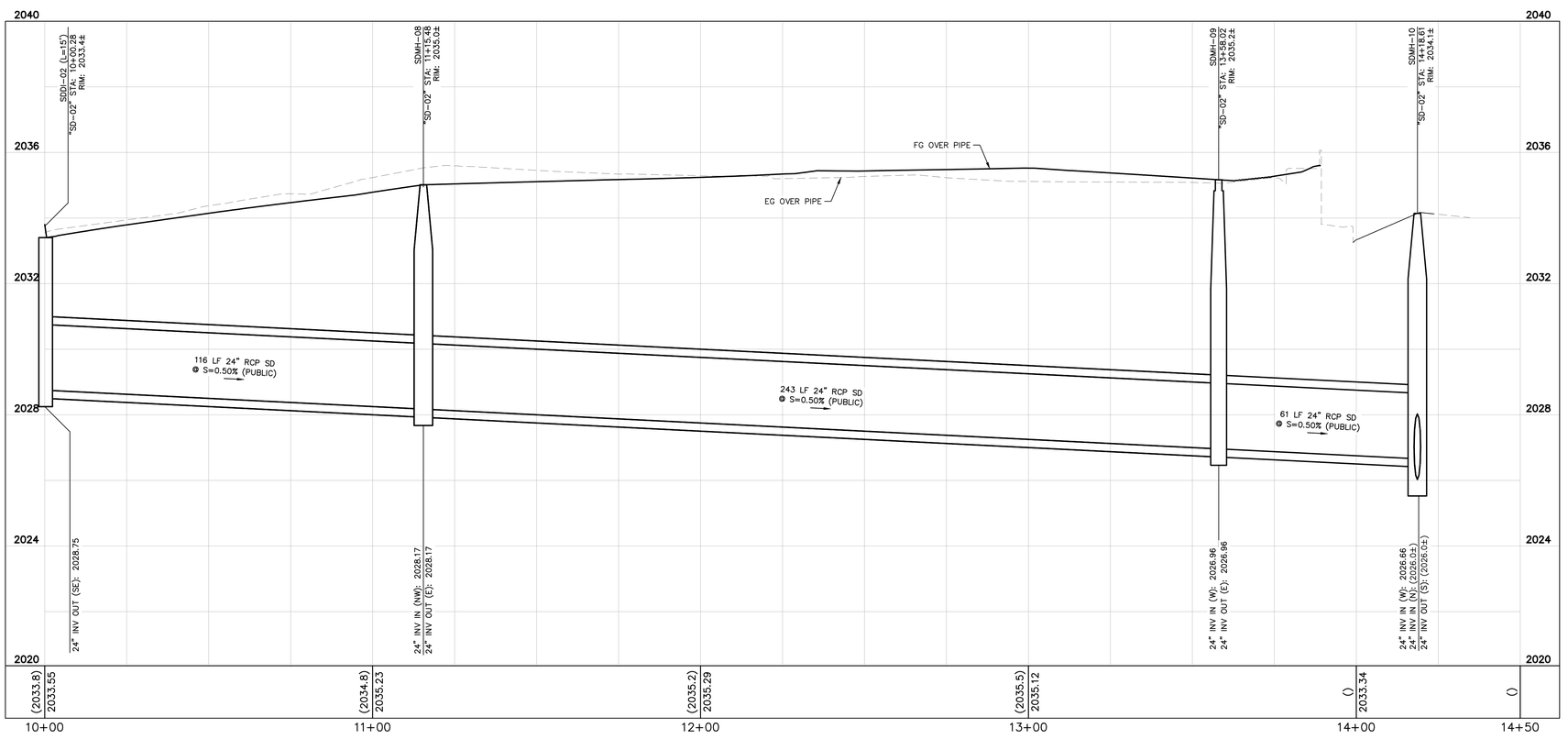
STORM DRAIN PLAN & PROFILE - SHEET 1

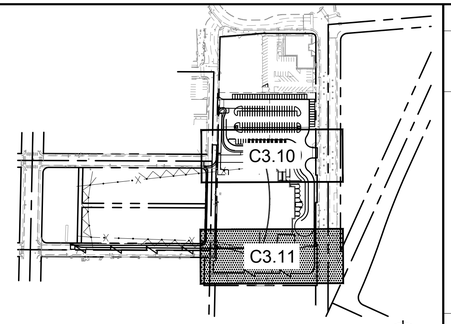
MAIN STREET ENTERTAINMENT VENUE
PREPARED FOR
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C3.10

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20 INSTALL CDS STORMCEPTOR (**OR APPROVED EQUAL) PER DETAIL 9 ON SHEET C3.17.

BENCHMARK

CITY OF LAS VEGAS VERTICAL CONTROL BENCHMARK NO. "8LV113W6"

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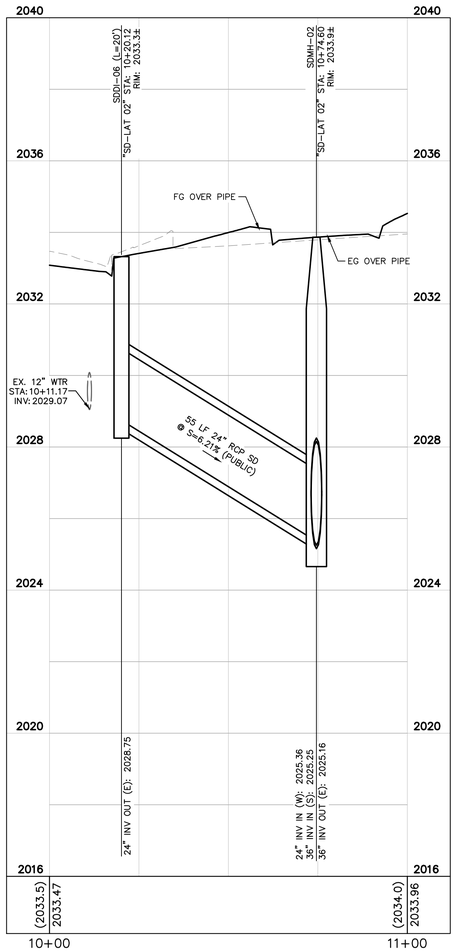
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KHA PROJECT	192197000
DATE	07/08/2022
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STORM DRAIN PLAN & PROFILE - SHEET 1

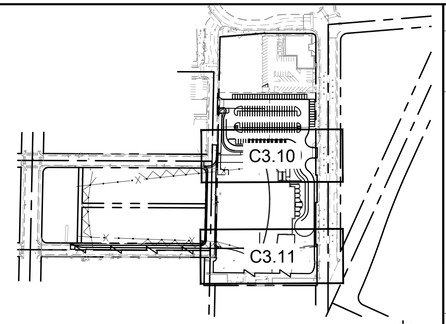
MAIN STREET ENTERTAINMENT VENUE
PREPARED FOR
THE 361 VENTURE, LLC
CITY OF LAS VEGAS NEVADA

13 OF 20
C3.11



"SD-01" LATERAL PROFILE VIEW

SCALE (H): 1" = 20'
SCALE (V): 1" = 2'



KEY MAP

NORTH

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY THE EX. GRADES PRIOR TO CONSTRUCTION. IF A CONFLICT EXISTS BETWEEN THESE PLANS AND THE FIELD CONDITION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
2. THE CONTRACTOR SHALL VERIFY EX. IMPROVEMENTS SHOWN ON THE PLAN, AND NOTIFY ENGINEER IMMEDIATELY IF DISCREPANCIES EXIST.
3. THE CONTRACTOR SHALL PROTECT IN PLACE EX. IMPROVEMENTS, THAT ARE NOTED TO REMAIN, DURING DEMOLITION AND CONSTRUCTION.
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6. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE IS MAINTAINED.
7. ADD 2000.00 FEET TO ALL TRUNCATED ELEVATIONS.
8. REFER TO SHEET C0.02 FOR LEGEND AND ABBREVIATIONS.

GEOTECHNICAL REPORT

ENGINEER: UNIVERSAL ENGINEERING SCIENCES
DATED: 09/21/2021
PROJECT NO.: 4030.2100194.0000

FLOOD ZONE NOTE

THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) INDICATES THAT THE SUBJECT SITE LIES WITHIN ZONE "X" OF FLOOD INSURANCE RATE MAP (FIRM) No. 32003C2170F AS SHOWN ON THE FIRM INDEX, REVISED NOVEMBER 16, 2011. ZONE "X" IS DEFINED BY FEMA AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD FLOODPLAIN".

STORMWATER COMPLIANCE NOTES

REFER TO SHEET C3.00 FOR STORM WATER COMPLIANCE NOTES.

STORM DRAIN NOTES

BENCHMARK

CITY OF LAS VEGAS VERTICAL CONTROL BENCHMARK NO. "BLV113W6"

RIVET PLATE IN TOP OF CURB AT SOUTHEAST CORNER OAKEY BOULEVARD AND LAS VEGAS BOULEVARD

ELEVATION = 618.927 METERS
2030.60 FEET

CITY OF LAS VEGAS VERTICAL CONTROL DATUM BASED UPON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88)

BASIS OF BEARING

NORTH 04°44'58" EAST, BEING THE CENTER OF THE WEST LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 3, TOWNSHIP 21 SOUTH, RANGE 61 EAST, M.D.M., AS SHOWN IN FILE 193, PAGE 94 OF SURVEYS ON FILE AT THE CLARK COUNTY, NEVADA RECORDER'S OFFICE.

GRAPHIC SCALE IN FEET
0 10 20 40
HORIZONTAL

0 1 2 4
VERTICAL







No.	REVISIONS	DATE	BY

Kimley»Horn
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6671 LAS VEGAS BOULEVARD S., SUITE 320, LAS VEGAS, NV 89119
PHONE: 702-862-3600
WWW.KIMLEY-HORN.COM

SCOTT M. MARTIN
Exp. 12/31/23
CIVIL
No. 25820
STATE OF NEVADA
7/13/2022

KHA PROJECT 192187000	SCALE	AS SHOWN	
DATE 07/08/2022	DESIGNED BY	SMM	DLB
	DRAWN BY	DLB	SMM
	CHECKED BY	SMM	

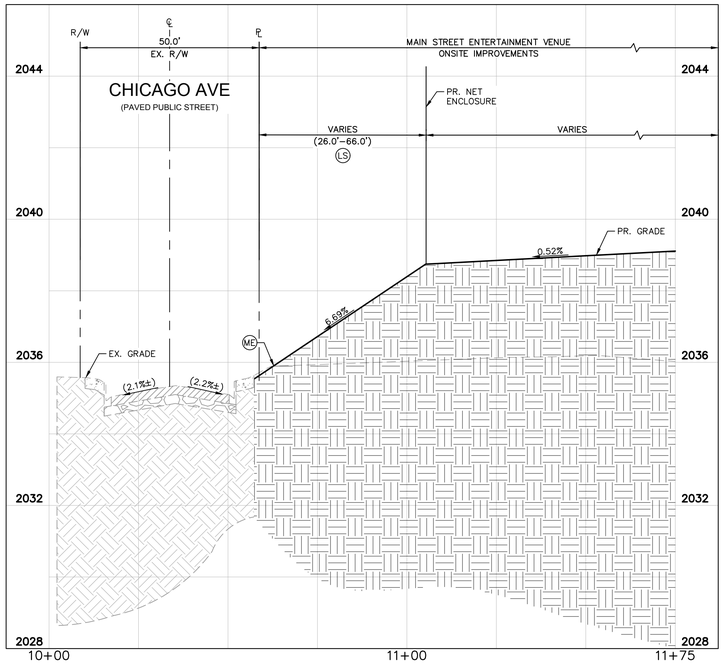
STORM DRAIN PLAN & PROFILE - SHEET 2

MAIN STREET ENTERTAINMENT VENUE
PREPARED FOR
THE 361 VENTURE, LLC
CITY OF LAS VEGAS NEVADA

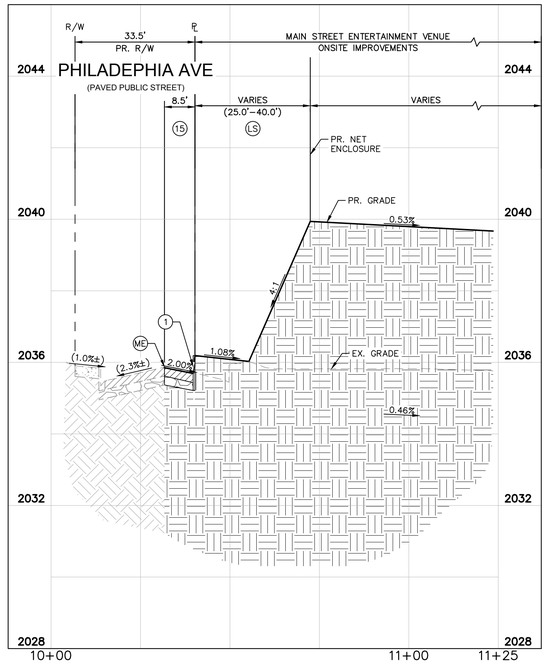
14 OF 20
C3.12

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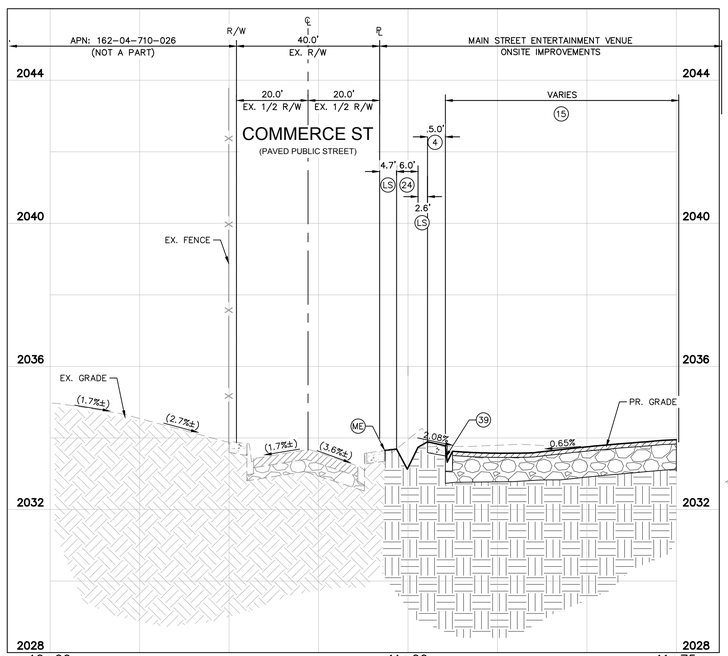
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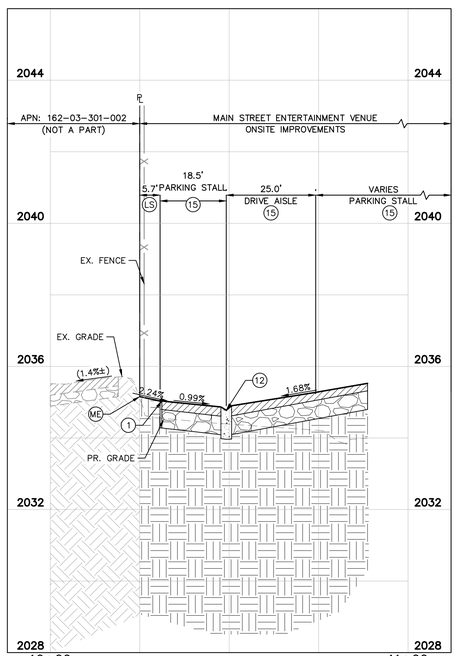
A C3.00 SECTION A



B C3.00 SECTION B



C C3.00 SECTION C



D C3.00 SECTION D

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8. REFER TO SHEET C0.02 FOR LEGEND AND ABBREVIATIONS.

GEOTECHNICAL REPORT

ENGINEER: UNIVERSAL ENGINEERING SCIENCES
DATED: 09/21/2021
PROJECT NO.: 4030.2100194.0000

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CONSTRUCTION NOTES

(1) INSTALL MODIFIED TYPE 'A' CONCRETE CURB PER DETAIL 1 ON SHEET C3.15.
(4) INSTALL CONCRETE SIDEWALK PER CCAUSD No. 234, WIDTH AS NOTED ON PLANS.
(12) INSTALL 3' WIDE VALLEY GUTTER PER DETAIL 3 ON SHEET C3.15.
(15) INSTALL 2.0" AC PAVEMENT OVER 8.0" TYPE II AGGREGATE BASE PER GEOTECHNICAL REPORT RECOMMENDATIONS.
(24) INSTALL RIP-RAP SWALE, PER DETAIL 4 ON SHEET C3.15, WIDTH AS NOTED ON PLAN.
(39) INSTALL MODIFIED 'L' CURB WITH SPILL GUTTER PAN PER DETAIL 4 ON SHEET C3.15.
(LS) REFER TO LANDSCAPE PLANS FOR DETAILS.
(ME) MATCH EXISTING

No.	REVISIONS	DATE	BY

Kimley»Horn
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SCOTT M. MARTIN
Exp. 12/31/23
CIVIL
STATE OF NEVADA
No. 25820
7/13/2022

KHA PROJECT	
19219.000	
DATE	
07/08/2022	
SCALE	AS SHOWN
DESIGNED BY	SMM
DRAWN BY	DLB
CHECKED BY	SMM

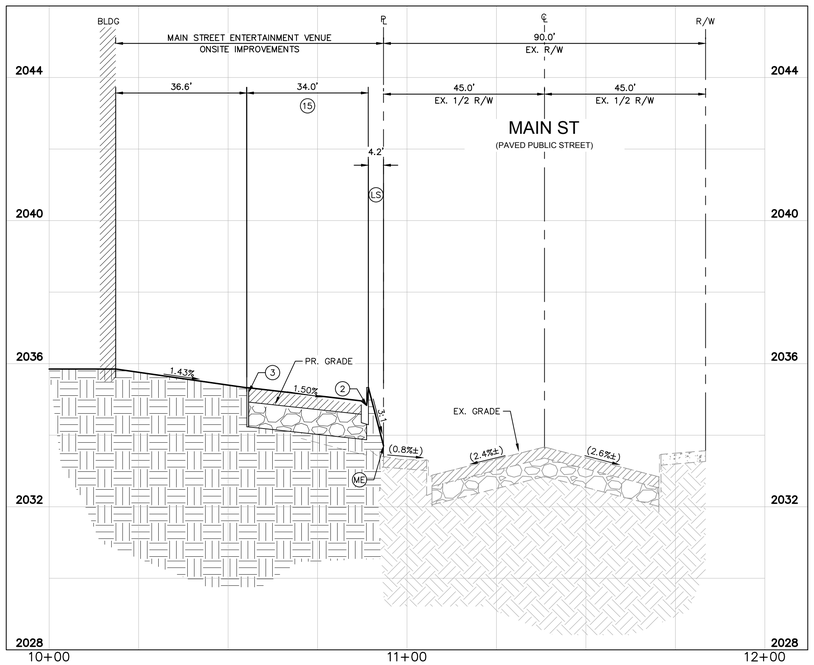
GRADING SECTIONS - SHEET 1

MAIN STREET ENTERTAINMENT VENUE
PREPARED FOR
THE 361 VENTURE, LLC
CITY OF LAS VEGAS NEVADA

GRAPHIC SCALE IN FEET
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HORIZONTAL

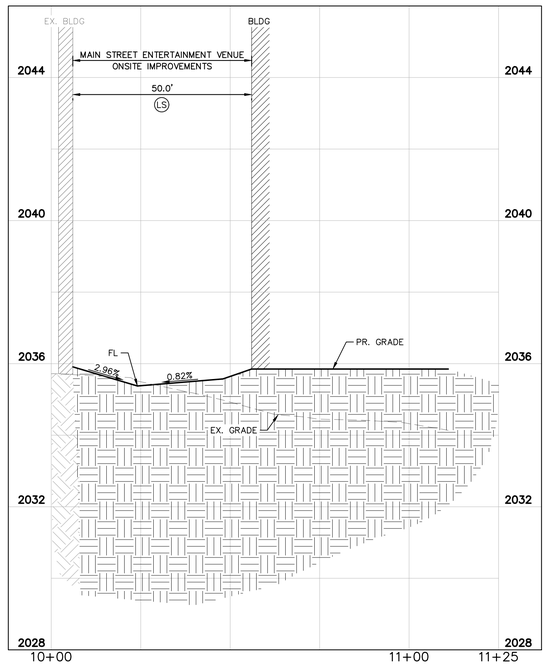
0 1 2 4
VERTICAL

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL SYSTEMS AND STREET LIGHT SYSTEM CONDUITS IT'S COSTLY
CALL BEFORE YOU DIG UNDERGROUND
Call before you UnderGround 1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION (FAST)
Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811 or
1-800-227-2600
Avoid overhead power line contact. It's costly.
Call Before You Overhead
1-702-227-2929



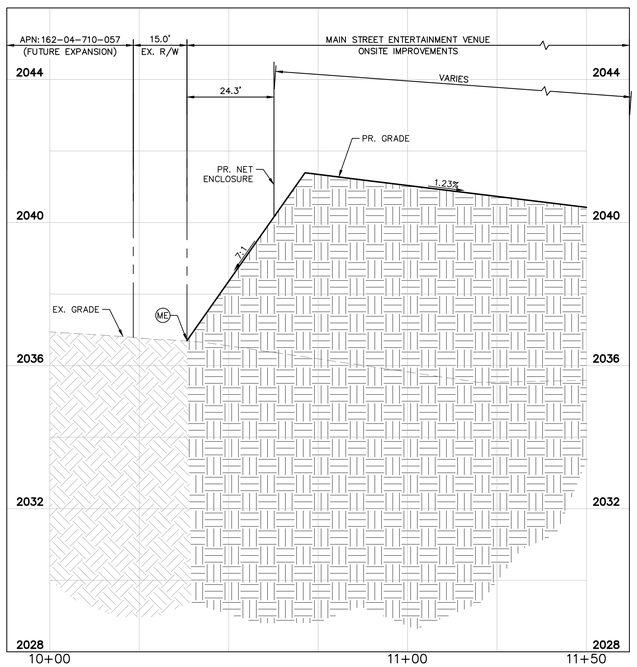
E
C3.00

SECTION E



F
C3.00

SECTION F



G
C3.00

SECTION G

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GEOTECHNICAL REPORT

ENGINEER: UNIVERSAL ENGINEERING SCIENCES
DATED: 09/21/2021
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CONSTRUCTION NOTES

(2) INSTALL TYPE 'L' CONCRETE CURB AND GUTTER PER CCAUSD No. 216.

(3) INSTALL 0" FACE CURB PER DETAIL 2 ON SHEET C3.15.

(15) INSTALL 2.0" AC PAVEMENT OVER 8.0" TYPE II AGGREGATE BASE PER GEOTECHNICAL REPORT RECOMMENDATIONS.

(LS) REFER TO LANDSCAPE PLANS FOR DETAILS.

(ME) MATCH EXISTING

No.	REVISIONS	DATE	BY

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SCOTT M. MARTIN
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No. 25820
STATE OF NEVADA
7/13/2022

KHA PROJECT	192197000
DATE	07/08/2022
SCALE	AS SHOWN
DESIGNED BY	SMM
DRAWN BY	DLB
CHECKED BY	SMM

GRAPHIC SCALE IN FEET
0 10 20 40
HORIZONTAL

0 1 2 4
VERTICAL

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CALL BEFORE YOU DO UNDERGROUND
Call before you UnderGround
1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION (FAST)

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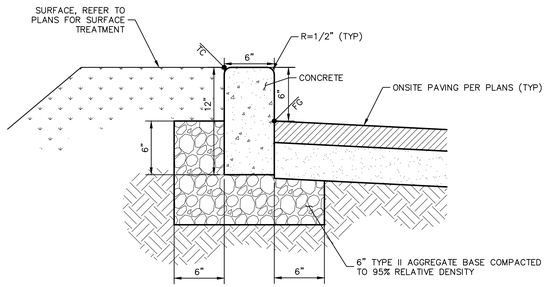
GRADING SECTIONS - SHEET 2

MAIN STREET ENTERTAINMENT VENUE
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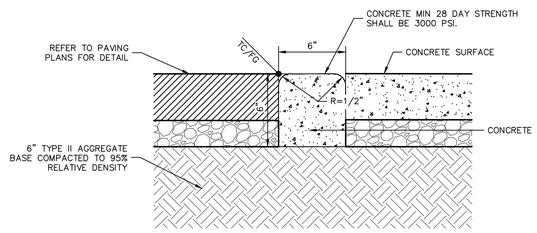
17 OF 20
C3.14

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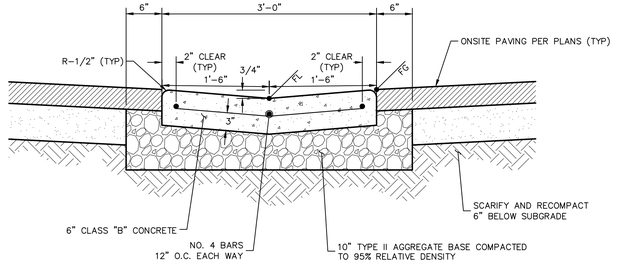
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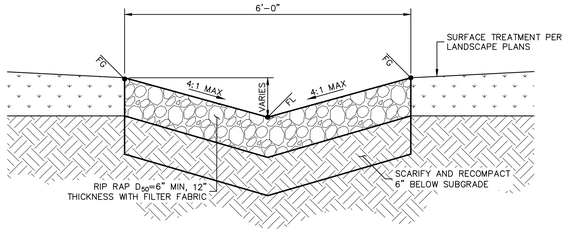
1 — ONSITE MODIFIED TYPE "A" CURB DETAIL — NTS



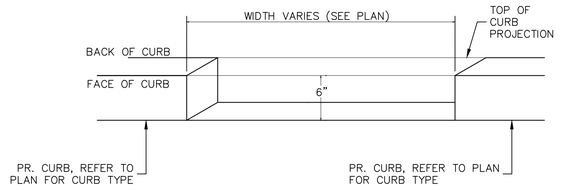
2 — ONSITE MODIFIED FLUSH 0" CURB DETAIL — NTS



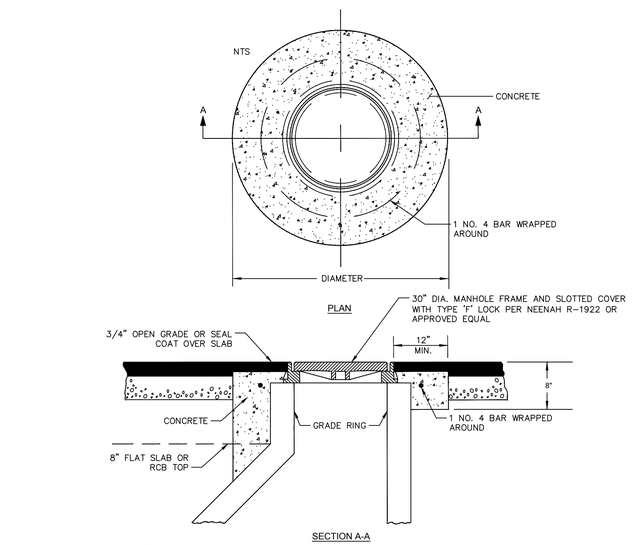
3 — ONSITE 3' VALLEY GUTTER DETAIL



4 — LID RIP-RAP DRAINAGE SWALE DETAIL — NTS



5 — CURB CUT - 6" DEPTH DETAIL — NTS



NOTES

1. CONCRETE COLLAR TO BE CONSTRUCTED 1/8" BELOW SURFACE OF DENSE GRADE WHERE OPEN GRADE IS NOT USED.
2. CONCRETE COLLAR NOT REQUIRED IN UNINCORPORATED CLARK COUNTY RESIDENTIAL STREETS LESS THAN 80' R/W WIDTH.
3. WHEN INSTALLED WITHIN PEDESTRIAN ACCESS ROUTES, TOP OF MANHOLE COVERS SHALL HAVE NO VERTICAL SURFACE DISCONTINUITIES GREATER THAN 1/4" WITH ADJACENT SURFACE, HAVE NO GAPS GREATER THAN 1/2" REGARDLESS OF CONSTRUCTION TOLERANCES, AND BE FIRM, STABLE, AND SLIP RESISTANT.

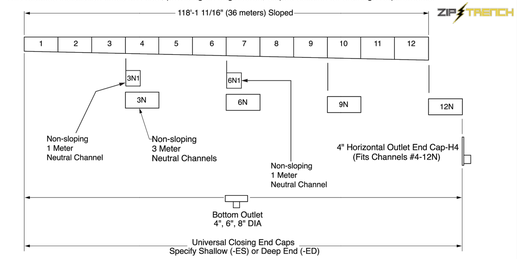
6 — STORM DRAIN MANHOLE CONCRETE COLLAR DETAIL — NTS

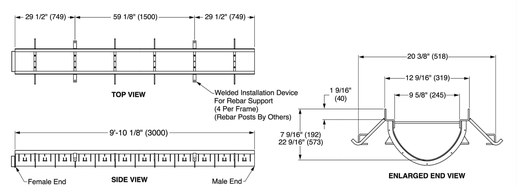
SMITH® JAY R. SMITH MFG. CO.®
MEMBER OF MORRIS GROUP INTERNATIONAL
POST OFFICE BOX 3207
MONTGOMERY, ALABAMA 36109-0207 (USA)
TEL: 334-277-8020 FAX: 888-377-7818 www.jrsmith.com
MEMBER OF: ASPE

LOCATION

12" WIDE 9960 ZIP TRENCH™

FUNCTION: Used in all surface drainage applications. May be assembled in any length utilizing self aligning channel ends. This reduces installation times and cost, providing an engineered, sloped solution for drainage requirements.





REGULARLY FURNISHED:
12 9/16" (319) wide, 3 meters (9.84') long,100% Polypropylene Channel with UV Inhibitors and Coated Steel Frame. Channels connect with 2" Overlap Joint. Design has a Built In Slope of 1.07% with Radiused Bottom. Supplied with Secured Grate per Specification.

VARIATIONS:
- Grate Specifications (See Back)
- Closing End Cap Shallow -ES
- Closing End Cap Deep -ED
- Horizontal Outlet 4", 6", 8" -H468
- 4"/6"/8" NO-HUB Bottom Outlet -V468

OPTIONAL RAIL MATERIAL:
- Galvanized Steel
- Type 304 Stainless Steel

Note: Dimensions in parentheses are in mm.
Note: This Trench Drain System is Designed for "On Grade Applications Only" as There are No Provisions for a Flashing Flange or Flashing Clamp.

REV.	DATE	DESCRIPTION	BY	CKD. BY
C	7-8-21	Corrected Dim. on Top View	KK	PJ
B	2-28-20	Added 3N1 & 6N1	MW	PJ
A	4-5-16	Revised Title	TBW	PJ

DRAWING NUMBER: 9960 | SIZE: A | SCALE: NONE | DATE: 3-8-16 | APPROVED BY: PJ | CHECKED BY: PJ | DRAWN BY: TBW | FIGURE NUMBER: 9960

WE CAN ASSUME NO RESPONSIBILITY FOR USE OF SUPERSEDED OR VOID DATA
DIMENSIONS ARE SUBJECT TO MANUFACTURES TOLERANCE AND CHANGE WITHOUT NOTICE

WEIGHT POUNDS | VOLUME CUBIC FEET | FIGURE NUMBER 9960

WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

SMITH® JAY R. SMITH MFG. CO.®
MEMBER OF MORRIS GROUP INTERNATIONAL
POST OFFICE BOX 3207
MONTGOMERY, ALABAMA 36109-0207 (USA)
TEL: 334-277-8020 FAX: 888-377-7818 www.jrsmith.com
MEMBER OF: ASPE

LOCATION

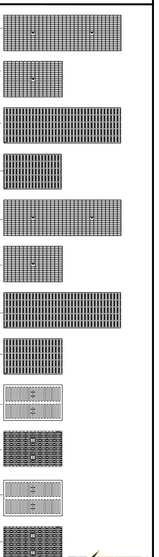
9960 ZIP TRENCH™

Heavy Duty DIN 19580 Load Class C: 56,000 lbs - 1,162 psi. For commercial pneumatic tire traffic patterns, forklifts (pneumatic tire) and tractor trailers (pneumatic tire).

- **9960-GM1-** Galv. steel mesh grate (309.56 sq. in.) 1 meter
- **9960-GM5-**Galv. steel mesh grate (157.62 sq. in.) 1/2 meter
- **9960-GP1-**Perforated galv. steel grate (78.00 sq. in.) 1 meter
- **9960-GP5-**Perforated galv. steel grate (39.00 sq. in.) 1/2 meter
- **9960-SSM1-**Stainless steel mesh grate (309.56 sq. in.) 1 meter
- **9960-SSM5-**Stainless steel mesh grate (157.62 sq. in.) 1/2 meter
- **9960-SSP1-**Perforated stainless steel grate (78.00 sq. in.) 1 meter
- **9960-SSP5-**Perforated stainless steel grate (39.00 sq. in.) 1/2 meter
- **9960-MC-**Ductile iron slotted grate (87.87 sq. in.) 1/2 meter
- **9960-MADAC-**Ductile iron ADA slotted grate (58.00 sq. in.) 1/2 meter

Extra Heavy Duty, DIN 19580 Class E: 135,000 lbs - 2,788 psi. For commercial solid tire traffic patterns, forklifts and impacts from steel struts or metal wheels.

- **9960-M-**Ductile iron slotted grate (87.87 sq. in.) 1/2 meter
- **9960-MADA-**Ductile iron ADA slotted grate (58.00 sq. in.) 1/2 meter



HYDRAULIC CAPACITY AND DEEP END DEPTHS 9960 SYSTEM

Channel Number	Shallow End Invert Inch	Shallow End Invert mm	Slope	Deep End Invert Inch	Deep End Invert mm	Slope	Single Channel Est. CFS	Single Channel Est. GPM	Weight Lbs.
9960-1	7.56	192	1.07%	8.81	224	1.07%	1.85	830	76.00
9960-2	8.81	224	1.07%	10.06	256	1.07%	2.68	1205	79.00
9960-3	10.06	256	1.07%	11.31	287	1.07%	3.13	1407	81.00
9960-3N1	11.31	287	0.0%	11.31	287	0.0%	1.04	469	30.00
9960-3N	11.31	287	0.0%	11.31	287	0.0%	3.13	1407	81.00
9960-4	11.31	287	1.07%	12.56	319	1.07%	3.92	1760	83.00
9960-5	12.56	319	1.07%	13.81	351	1.07%	4.43	1990	86.00
9960-6	13.81	351	1.07%	15.06	383	1.07%	4.94	2220	89.00
9960-6N1	15.06	383	0.0%	15.06	383	0.0%	1.65	740	31.00
9960-6N	15.06	383	0.0%	15.06	383	0.0%	4.94	2220	89.00
9960-7	15.06	383	1.07%	16.31	414	1.07%	5.46	2450	92.00
9960-8	16.31	414	1.07%	17.56	446	1.07%	5.97	2680	94.00
9960-9	17.56	446	1.07%	18.81	478	1.07%	6.48	2910	97.00
9960-9N	18.81	478	0.0%	18.81	478	0.0%	6.48	2910	97.00
9960-10	18.81	478	1.07%	20.06	510	1.07%	7.00	3140	99.00
9960-11	20.06	510	1.07%	21.31	541	1.07%	7.51	3370	103.00
9960-12	21.31	541	1.07%	22.56	573	1.07%	8.00	3600	106.00
9960-12N	22.56	573	0.0%	22.56	573	0.0%	8.00	3600	106.00

Note: Channel flow rates based on channels less grates and open ended.

ZIP TRENCH

REV.	DATE	DESCRIPTION	BY	CKD. BY
H	1-28-	Revised Table	KK	PJ
G	2-28-	Revised Table	MW	PJ
F	3-28-	Revised Load Class C	MW	PJ
E	6-12-	Added Grates	TBW	PJ

DRAWING NUMBER: 9960-BS | SIZE: A | SCALE: NONE | DATE: 3-8-16 | APPROVED BY: PJ | CHECKED BY: PJ | DRAWN BY: TBW | FIGURE NUMBER: 9960-BS

WE CAN ASSUME NO RESPONSIBILITY FOR USE OF SUPERSEDED OR VOID DATA
DIMENSIONS ARE SUBJECT TO MANUFACTURES TOLERANCE AND CHANGE WITHOUT NOTICE

WEIGHT POUNDS | VOLUME CUBIC FEET | FIGURE NUMBER 9960-BS

WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

7 — 12" TRENCH DRAIN DETAIL — NTS

REV.	DATE	DESCRIPTION	BY

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SCOTT M. MARTIN
Exp. 12/31/23
CIVIL
STATE OF NEVADA
No. 25820
7/13/2022

KHA PROJECT 192197000
DATE 07/08/2022
SCALE AS SHOWN | DESIGNED BY SMM | DRAWN BY DLB | CHECKED BY SMM

GRADING & STORM DRAIN DETAIL - SHEET 1

MAIN STREET ENTERTAINMENT VENUE
PREPARED FOR
THE 361 VENTURE, LLC
CITY OF LAS VEGAS NEVADA

18 OF 20
C3.15

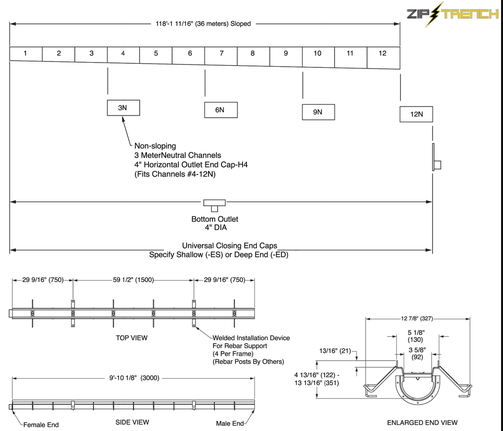
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SMITH® JAY R. SMITH MFG. CO.®
MEMBER OF MORRIS GROUP INTERNATIONAL
POST OFFICE BOX 3037
MONTGOMERY, ALABAMA 36109-0237 (USA)
TEL: 334-277-8520 FAX: 334-273-7396 www.jrsmith.com
CUSTOMER SERVICE SINCE 1954 — MEMBER OF: ASPE, NPDA

LOCATION

9940 6" WIDE ZIP TRENCH™

FUNCTION: Used in all surface drainage applications. May be assembled in any length utilizing interlocking tongue and groove ends. This reduces installation times and cost, providing an engineered, sloped solution for drainage requirements.



REGULARLY FURNISHED:
3 meter (9.84') 100% Polypropylene with UV Inhibitors Assembled to Coated Steel Frame with Channels Connect with 1 1/4" Overlap Joint. Design has a Built In Slope of 0.6% with Radiused Bottom. Supplied with Secured Grate Per Specification.

VARIATIONS:
- ☐ Grate Specifications (See Back)
- ☐ Closing End Cap Shallow -ES
- ☐ Closing End Cap Deep -ED
- ☐ Horizontal Outlet 4" -H4
- ☐ 4" NO-HUB Bottom Outlet -V4

OPTIONAL RAIL MATERIAL:
- ☐ Galvanized Steel
- ☐ Type 304 Stainless Steel

NOTE: Dimensions shown in parentheses are in millimeters.

Note: This Trench Drain System is Designed for **"On Grate Applications Only"** as There are No Provisions for a Flashing Flange or Flashing Clamp

FIGURE NUMBER	DRAWN BY: TBW	CHECKED BY: PJ	APPROVED BY: PJ	DATE: 3-23-18	SCALE: NONE	SIZE: A	DRAWING NUMBER: 9940

DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCE AND CHANGE WITHOUT NOTICE — WE CAN ASSUME NO RESPONSIBILITY FOR USE OF SUPERSEDED OR VOID DATA

REV.	DATE	DESCRIPTION	BY	CKD. BY

WEIGHT POUNDS | VOLUME CUBIC FEET | **FIGURE NUMBER 9940**

⚠ **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov

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LOCATION

9940 6" WIDE ZIP TRENCH™

HYDRAULIC CAPACITY SHALLOW / DEEP END DEPTHS 9940 SYSTEM

Channel Number	Shallow End Invert Inch	Shallow End Invert mm	Deep End Invert Inch	Deep End Invert mm	Slope	Single Channel Est. CFS	Single Channel Est. GPM	Weight Lbs. Frame + Channel
9940-1	4.81	122	5.56	141	0.6%	.29	130	38.00
9940-2	5.56	141	6.31	160	0.6%	.31	139	39.00
9940-3	6.31	160	7.06	179	0.6%	.34	153	40.00
9940-3N	7.06	179	7.06	179	0.0%	.47	211	40.00
9940-4	7.06	179	7.81	198	0.6%	.36	162	41.00
9940-5	7.81	198	8.56	267	0.6%	.39	175	42.00
9940-6	8.56	267	9.31	236	0.6%	.42	189	44.00
9940-6N	9.31	236	9.31	236	0.0%	.47	211	44.00
9940-7	9.31	236	10.06	256	0.6%	.45	202	45.00
9940-8	10.06	256	10.81	275	0.6%	.47	211	47.00
9940-9	10.81	275	11.56	294	0.6%	.49	220	49.00
9940-9N	11.56	294	11.56	294	0.0%	.49	220	51.00
9940-10	11.56	294	12.31	313	0.6%	.53	238	51.50
9940-11	12.31	313	13.06	332	0.6%	.56	251	51.00
9940-12	13.06	332	13.81	351	0.6%	.58	261	51.00
9940-12N	13.81	351	13.81	351	0.0%	.58	261	51.00

Note: Channel flow rates based on channels less grates and open ended.

Light Duty DIN 19580 Load Class A:
3500 lbs - 70 psi. For pedestrian, wheelchair and bicycle traffic.

- ☐ * **9870-410-GP - 1/4 dia perforated galv. steel grate (28.30 sq. in.)**
- ☐ * **9870-420-G - 3 1/4 x 3/8 slotted galv. steel grate (35.20 sq. in.)**
- ☐ * **9870-451-SSPA - 1/4 dia perforated stainless steel grate (28.30 sq. in.)**
- ☐ * **9870-494-PADAB - 1 3/4 x 5/16 longitudinal slot black polypropylene grate (27.40 sq. in.)**
- ☐ * **9870-494-PADAG - 1 3/4 x 5/16 longitudinal slot gray polypropylene grate (27.40 sq. in.)**

Medium Duty DIN 19580 Load Class B:
28100 lbs - 581 psi. For light vehicle traffic.

- ☐ * **9870-447-SSADA** - 13/16 x 3/16 longitudinal stainless steel slot bar grate (58.40 sq. in.)

*Supplied with Quick-lok® securing device regularly furnished

Heavy Duty DIN 19580 Load Class C:
56,000 lbs - 1,162 psi. For commercial pneumatic tire traffic patterns, forklifts (pneumatic tire) and tractor trailers (pneumatic tire).

- ☐ * **9870-405-GM - 13/16 x 1/2 longitudinal galv. steel slot bar grate (121.10 sq. in.)**
- ☐ * **9870-411-GPHD - 1/4 dia perforated galv. steel grate (28.30 sq. in.)**
- ☐ * **9870-425-GHD- 3 1/4 x 3/8 slotted galv. steel grate (35.20 sq. in.)**
- ☐ * **9870-430-SSM - 13/16 x 1/2 longitudinal stainless steel slot bar grate (121.10 sq. in.)**
- ☐ * **9870-455-SSHD - 3 1/4 x 3/8 slotted stainless steel grate (42.60 sq. in.)**
- ☐ * **9870-462-DGC - 3 15/16 x 3/8 ductile iron slotted grate (24.00 sq. in)**
- ☐ * **9870-465-SSP- 1/4 dia perforated stainless steel grate (28.30 sq. in.)**
- ☐ * **9870-487-MADAC - 1 3/4 x 5/16 longitudinal ductile iron slotted grate (23.00 sq. in)**
- ☐ * **9870-479-MD - Mosaic pattern ductile iron grate (19.50 sq. in.)**
- ☐ * **9870-481-ID - Iron Decorative pattern ductile iron grate (19.00 sq. in.)**
- ☐ * **9870-492-RC - 1 1/2 x 13/16 slotted resin composite grate (16.30 sq. in.)**

Extra Heavy Duty, DIN 19580 Class E:
135,000 lbs - 2,768 psi. For commercial solid tire traffic patterns, forklifts and impacts from steel struts or metal wheels.

- ☐ * **9870-435-GHDE - 3 1/4 x 3/8** slotted galv. steel grate (42.60 sq. in.)
- ☐ * **9870-461-M - 3 15/16 x 3/8** ductile iron slotted grate (21.00 sq. in.)
- ☐ * **9870-478-MADA - 1 3/4 x 5/16** longitudinal ductile iron slotted grate (14.30 sq. in.)
- ☐ * **9870-490-SSHDE - 1 3/4 x 3/8** slotted stainless steel grate (42.60 sq. in.)

FIGURE NUMBER	DRAWN BY: TBW	CHECKED BY: PJ	APPROVED BY: PJ	DATE: 3-23-18	SCALE: NONE	SIZE: A	DRAWING NUMBER: 9940BS

DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCE AND CHANGE WITHOUT NOTICE — WE CAN ASSUME NO RESPONSIBILITY FOR USE OF SUPERSEDED OR VOID DATA

REV.	DATE	DESCRIPTION	BY	CKD. BY
B	3-20-19	Revised Load Class C	MW	PJ
A	6-21-18	Added Grates	TBW	PJ

WEIGHT POUNDS | VOLUME CUBIC FEET | **FIGURE NUMBER 9940BS**

⚠ **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov

8/- 6" TRENCH DRAIN DETAIL

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SCOTT M. MARTIN — Exp. 12/31/23 — CIVIL — No. 25820 — STATE OF NEVADA — PROFESSIONAL ENGINEER
7/13/2022

No.	REVISIONS	DATE	BY

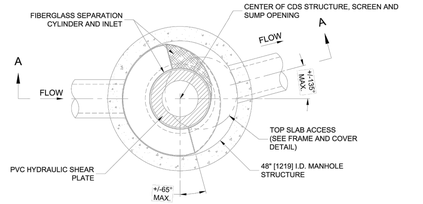
KHA PROJECT 19219700
DATE 07/08/2022
SCALE AS SHOWN
DESIGNED BY SMM
DRAWN BY DLB
CHECKED BY SMM

GRADING & STORM DRAIN DETAIL - SHEET 2

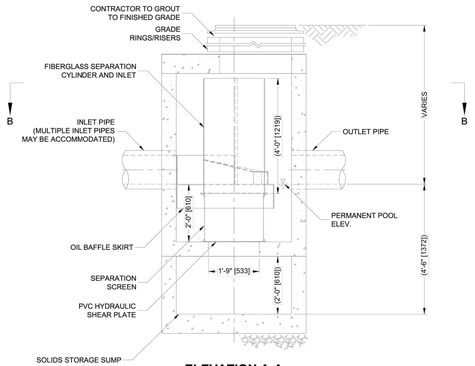
MAIN STREET ENTERTAINMENT VENUE
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CITY OF LAS VEGAS NEVADA

19 OF 20
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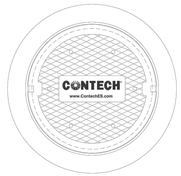
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PLAN VIEW B-B
NOT TO SCALE.



ELEVATION A-A
NOT TO SCALE.



FRAME AND COVER
(DIAMETER VARIES)
NOT TO SCALE

CDS2015-4-C DESIGN NOTES

CDS2015-4-C STANDARD CONFIGURATION IS SHOWN.

FOR NJDEP PROJECTS, PLEASE CONTACT YOUR LOCAL CONTECH REPRESENTATIVE FOR APPROVED CONFIGURATIONS.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	
WATER QUALITY FLOW RATE (CFS OR L/s)	*
PEAK FLOW RATE (CFS OR L/s)	*
RETURN PERIOD OF PEAK FLOW (YRS)	*
SCREEN APERTURE (2400 OR 4700)	*

PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	*	*	*
INLET PIPE 2	*	*	*
OUTLET PIPE	*	*	*

RIM ELEVATION	*

ANTI-FLOTATION BALLAST	WIDTH	HEIGHT
	*	*

NOTES/SPECIAL REQUIREMENTS:

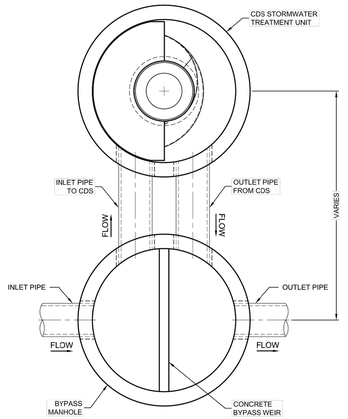
* PER ENGINEER OF RECORD

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
6. CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CDS2015-4-C
ONLINE CDS
STANDARD DETAIL



THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: 5,766,840; 6,641,720; 6,511,595; 6,361,783; RELATED FOREIGN PATENTS; OR OTHER PATENTS PENDING.

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9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CDS STORMWATER TREATMENT SYSTEM
TYPICAL OFFLINE LAYOUT
WITH BYPASS MANHOLE STRUCTURE

DATE:03/12/13	SCALE: NONE	PROJECT No.: N/A	SEQ. No.: N/A	DRAWN: N/A	CHECKED: N/A

10 CDS STORMCEPTOR DETAIL
NTS

No.	REVISIONS	DATE	BY

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No. 25820
7/13/2022

KHA PROJECT	192197000		
DATE	07/08/2022		
SCALE	AS SHOWN	DESIGNED BY	SMM
		DRAWN BY	DLB
		CHECKED BY	SMM

GRADING & STORM DRAIN DETAIL - SHEET 3

MAIN STREET ENTERTAINMENT VENUE
PREPARED FOR
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Appendix E - Data CD