

DS #:

4740

APN:

140-31-501-021

PROJECT:

Lamb Pines - Update #1

SUBMITTAL:

3rd

SCANNED BY/DATE:

CHECKED BY/DATE:



CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		September 23, 2015
TO: Land Development Services Department of Building & Safety		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for:	
	Lamb Pines – Update #1	
Cross Streets:	SWQ of Lamb Boulevard & Bonanza Road	
File Number:	F:\Depot\DSMemos\DS4740C.doc	
Parcel Number:	140-31-501-021	
Zoning Action:	SDR-58124; VAR-58121 to VAR-58123; GPA-57254 & ZON-57255	
FEMA Flood Zone	YES	NO X
Proposed Storm Drain	YES	NO X
COPIES TO:		L. R. Nelson Consulting Engineers Nevada H.A.N.D. Bart Anderson, P.E., DevCo CCRFCD

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal & Supplement	6/25/2015 & 7/14/2015	7/14/2015	Not Approved	\$400.00	403454: \$400
2 nd Submittal & Supplement	7/21/2015 & 8/4/2015	8/5/2015	Conditional Approval	\$400.00	406791: \$400
3 rd Submittal	9/16/2015	9/23/2015	See Comments Below	\$100.00	414838: \$100
TOTAL FEES (LDDRS):				\$900.00	----

REMARKS:

3rd Submittal: Update #1 to split the project into two parcels due to financial obligations

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

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

- This drainage study is acceptable in concept;** however, *City of Las Vegas* will not formally accept the study until the *Clark County Regional Flood Control District* (CCRFCD) has issued a letter of concurrence. The engineer should contact the CCRFCD to confirm that they have begun their review.
- Provide documentation between the engineer/developer and the adjacent property owner to the west to verify due diligence has been exercised by the subject project to mitigate any drainage issues between the two properties.
- Replace the blanket drainage easement in the proposed parcel map with the following note:
ALL SUBDIVIDED PARCELS COMPRISING THIS COMMERCIAL SUBDIVISION SHALL PROVIDE PERPETUAL INTERSITE COMMON DRAINAGE RIGHTS ACROSS ALL EXISTING AND FUTURE PARCEL LIMITS.

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

END OF REMARKS

ays

T/R/S: T20S/R62E/31
AREA N-31

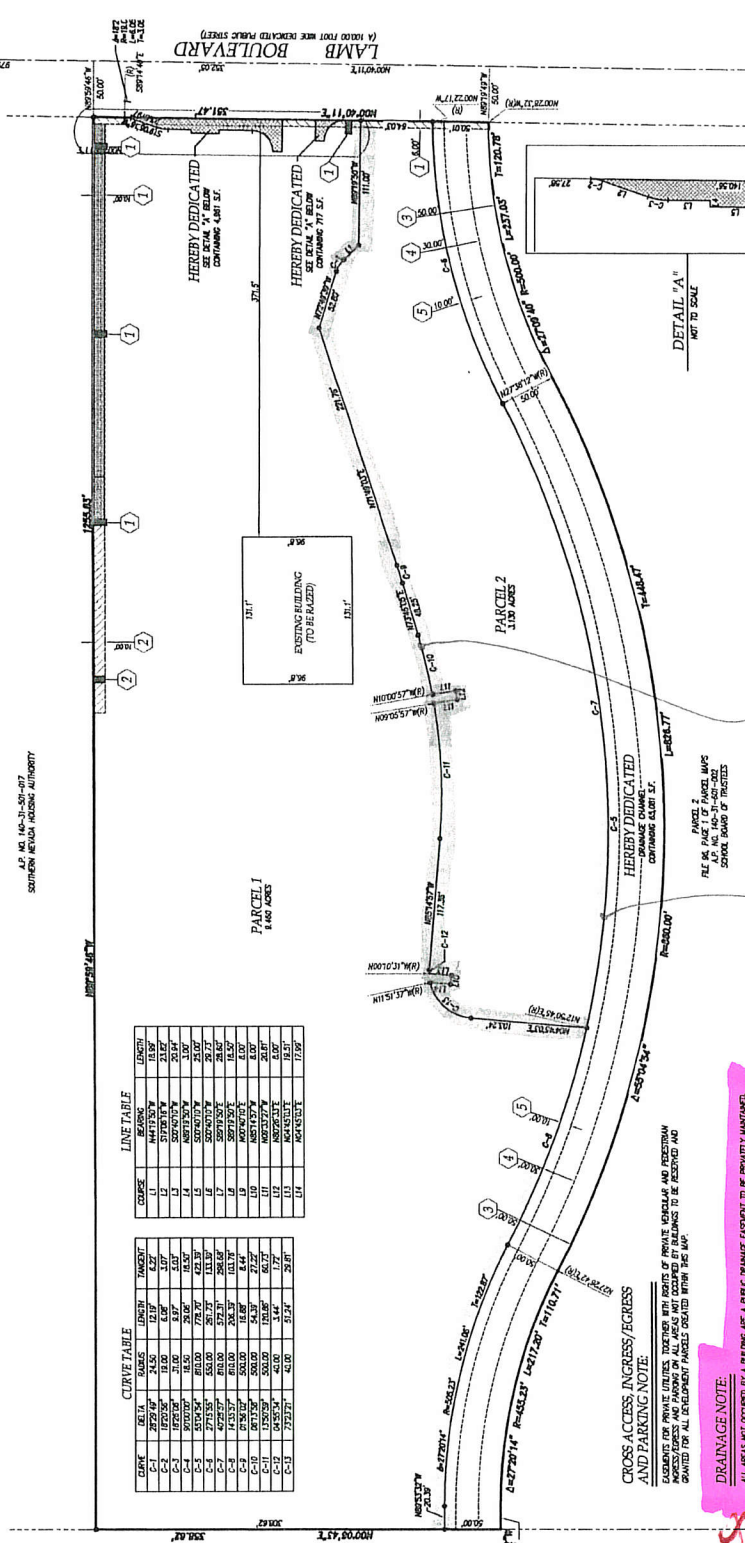
PARCEL MAP

A SUBDIVISION OF PARCEL 1 OF FILE 96, PAGE 1 OF PARCEL MAPS
SITUATE WITHIN THE EAST HALF (E 1/2) OF THE NORTHEAST QUARTER (NE 1/4) OF
SECTION 31, TOWNSHIP 20 SOUTH, RANGE 60 EAST, M.D.M.,
CITY OF LAS VEGAS, CLARK COUNTY, NEVADA

A.P. NO. 140-31-501-007
SOUTHERN NEVADA HOUSING AUTHORITY

CURVE TABLE			
CURVE	DELTA	CHORDS	LENGTH
C-1	27°25'00"	24.50	12.19
C-2	18°00'00"	15.00	7.50
C-3	18°00'00"	15.00	7.50
C-4	18°00'00"	15.00	7.50
C-5	18°00'00"	15.00	7.50
C-6	18°00'00"	15.00	7.50
C-7	18°00'00"	15.00	7.50
C-8	18°00'00"	15.00	7.50
C-9	18°00'00"	15.00	7.50
C-10	18°00'00"	15.00	7.50
C-11	18°00'00"	15.00	7.50
C-12	18°00'00"	15.00	7.50
C-13	18°00'00"	15.00	7.50

LINE TABLE			
COURSE	BEARING	LENGTH	MARKET
1-1	N44°15'00"W	11.50	
1-2	S89°45'00"W	20.14	
1-3	S89°45'00"W	20.14	
1-4	N00°00'00"W	11.50	
1-5	S89°45'00"W	20.14	
1-6	S89°45'00"W	20.14	
1-7	S89°45'00"W	20.14	
1-8	S89°45'00"W	20.14	
1-9	S89°45'00"W	20.14	
1-10	S89°45'00"W	20.14	
1-11	S89°45'00"W	20.14	
1-12	S89°45'00"W	20.14	
1-13	S89°45'00"W	20.14	
1-14	S89°45'00"W	20.14	



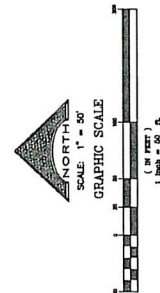
PARCEL LINE BEING CREATED
WITH THIS MAP THAT WOULD
REQUIRE THE LANDSCAPING
HAWER, TO ALLOW 0'-0" IS
SETBACK WHERE 6'-0" IS
REQUIRED.

PARCEL LINE BEING CREATED WITH THIS
MAP, DOES NOT REQUIRE HAWER FOR
LANDSCAPING.

DRAINAGE NOTE:
ALL AREAS NOT OCCUPIED BY A BUILDING ARE A PUBLIC DRAINAGE EASEMENT TO BE PRIVATELY MAINTAINED.

CROSS ACCESS, INGRESS/EGRESS
AND PARKING NOTE:
EASEMENTS FOR PRIVATE UTILITIES, TOGETHER WITH RIGHTS OF PRIVATE VEHICULAR AND PEDESTRIAN
TRAVEL, ARE SHOWN ON THIS MAP. EASEMENTS FOR ALL UTILITIES ARE TO BE RESERVED FOR
THE CITY OF LAS VEGAS. EASEMENTS FOR ALL UTILITIES ARE TO BE RESERVED FOR THE CITY OF LAS VEGAS.

- LEGEND
- SITE BOUNDARY
- STREET CENTERLINE
- PARCEL LINE
- EASEMENT LINE
- ADJACENT PROPERTY LINES
- ADJACENT PROPERTY ONLY
- ADJACENT ON THE GROUND EASEMENT
- ADJACENT ON THE GROUND EASEMENT FOR PEDESTRIAN ACCESS AND A BUS TURNOUT
- FOUND MONUMENT AS SHOWN
- FILE REPORT EXCEPTION NO.
- TITLE REPORT EXCEPTION NO.
- ASSESSOR'S PARCEL NUMBER
- SQUARE FEET
- CURVE NUMBER
- LINE NUMBER
- SET 5/97 REBAR & ALUMINUM CAP P.L.S. 9815



Replace with
Inter-lot
Drainage right
Note.



PREPARED BY: J. L. NELSON, CONSULTING ENGINEER
DESIGNED BY: J. L. NELSON, CONSULTING ENGINEER
CHECKED BY: J. L. NELSON, CONSULTING ENGINEER
DATE: 10/10/00
SHEET 2 OF 2

Albert Sung

From: Abigail Mayrena <AMayrena@regionalflood.org>
Sent: Wednesday, September 23, 2015 8:11 AM
To: Albert Sung
Subject: FW: LAMB PINES
Attachments: Lamb Pines_Grading Sheet 11_09232015.pdf; Lamb Pines_Gradng Sheet 10_09232015.pdf; Lamb Pines_Grading Sheet 9_09232015.pdf

Albert,
FYI. Thanks.

From: Thomas Kelley [mailto:Thomas.Kelley@lrneng.com]
Sent: Wednesday, September 23, 2015 7:55 AM
To: Abigail Mayrena <AMayrena@regionalflood.org>
Subject: RE: LAMB PINES

Abby,

Attached with this email are the three grading sheets with the revised elevation for the HEC-RAS Sections. Let me know if you need anything else.

Thanks,

Thomas Kelley, P.E.
LR Nelson Consulting Engineers, Inc,
(702) 798-7978

From: Abigail Mayrena [mailto:AMayrena@regionalflood.org]
Sent: Tuesday, September 22, 2015 4:44 PM
To: Thomas Kelley
Subject: RE: LAMB PINES

I need the revised plan to process the concurrence. What is the status?

From: Abigail Mayrena
Sent: Thursday, September 17, 2015 10:40 AM
To: 'Thomas Kelley' <Thomas.Kelley@lrneng.com>
Subject: RE: LAMB PINES

Verify the WSE elevations. They are in the 1900. Revise and e-mail me new sheets.

From: Thomas Kelley [mailto:Thomas.Kelley@lrneng.com]
Sent: Wednesday, September 16, 2015 9:25 AM
To: Abigail Mayrena <AMayrena@regionalflood.org>
Subject: RE: LAMB PINES

Abby,

There is no need to put a HGL or flow on the profiles because the system is designed to be overtopped during the 100 year event. The HGL for the system is based off of the HGL established as part of the HEC-RAS modeling. All flood waters regardless of storm event will go into the channel. Either by the storm drain or by the emergency overflow provided at each storm grate. Due to the flood levels provide for in the HEC-RAS modeling and the flat slope of the site it is impossible to design a storm drain system that meets HGL requirements. The City of Las Vegas approved this scenario and it is addressed in the report narratives.

Thanks,

Thomas Kelley, P.E.
LR Nelson Consulting Engineers, Inc,
(702) 798-7978

From: Abigail Mayrena [<mailto:AMayrena@regionalflood.org>]
Sent: Wednesday, September 16, 2015 9:07 AM
To: Thomas Kelley
Cc: Abigail Mayrena
Subject: LAMB PINES

Subject: LAMB PINES

We have received your submittal for the TECHNICAL Drainage Study.

***Title: LAMB PINES
***Entity #: DS4740B

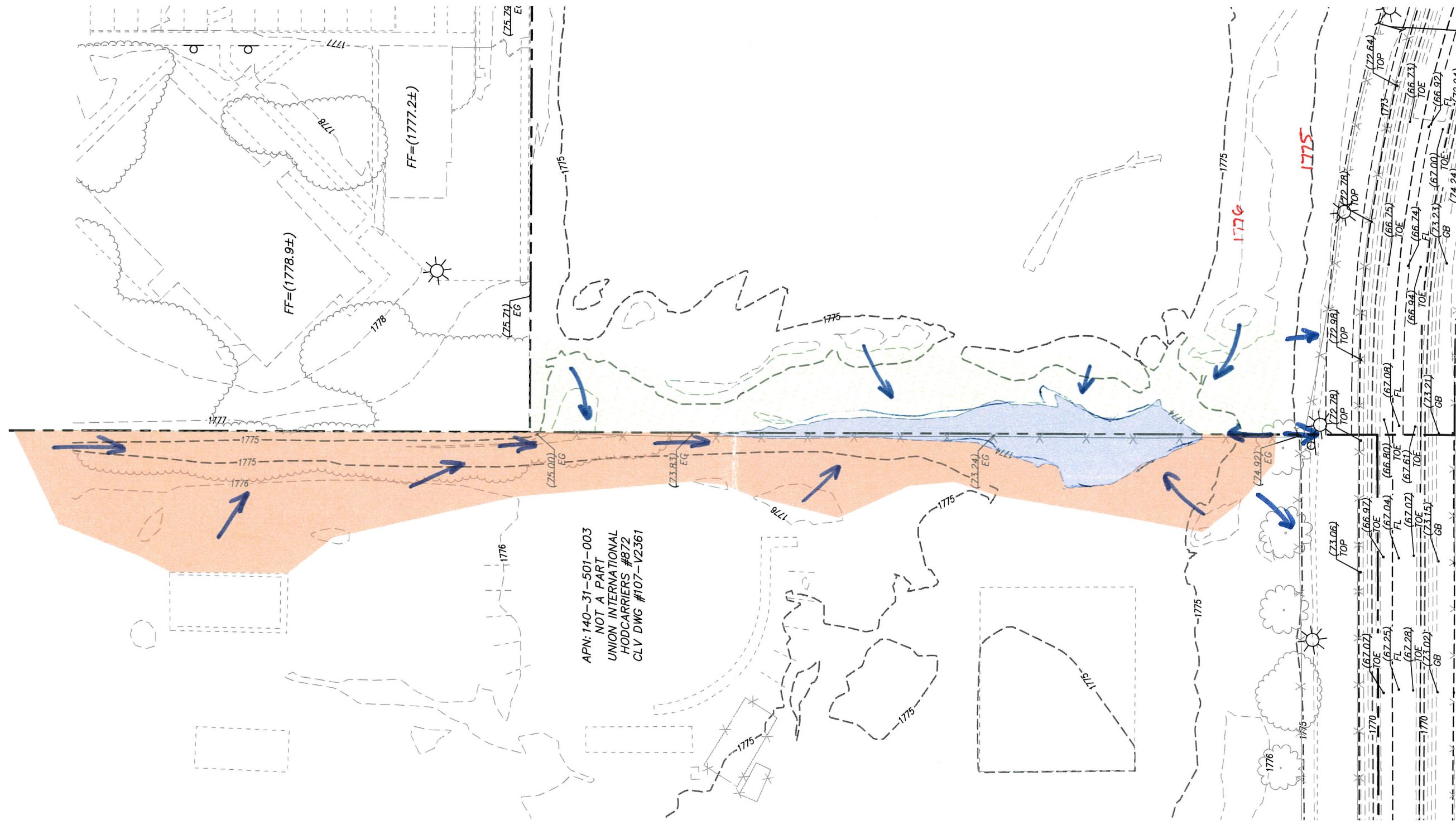
Please note that we did not receive the following item(s):

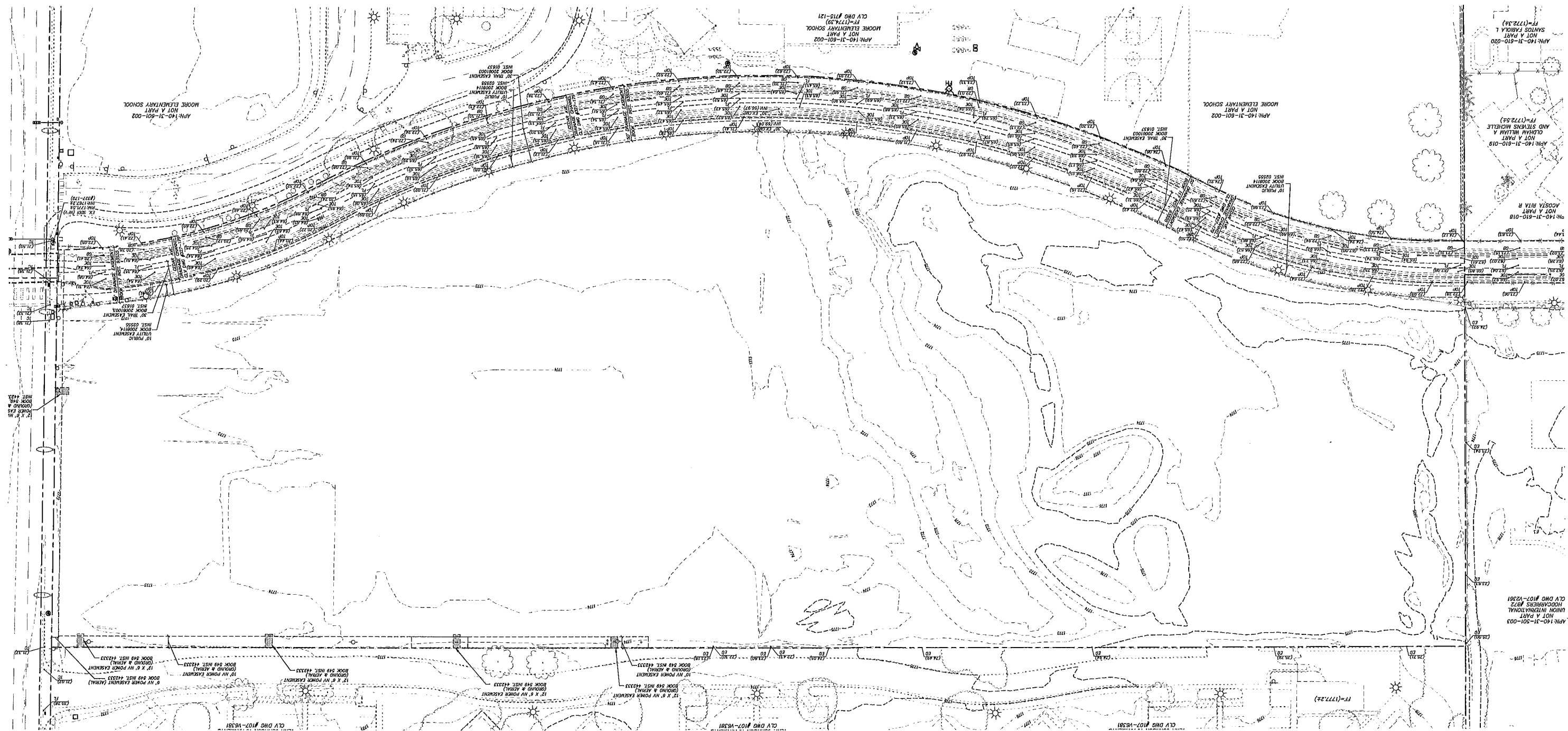
Notes: Show the Q and HGL on the storm drain profile. Consider grated manhole covers if HGL does not meet 1' below finished grade requirement. Send updated sheet(s).

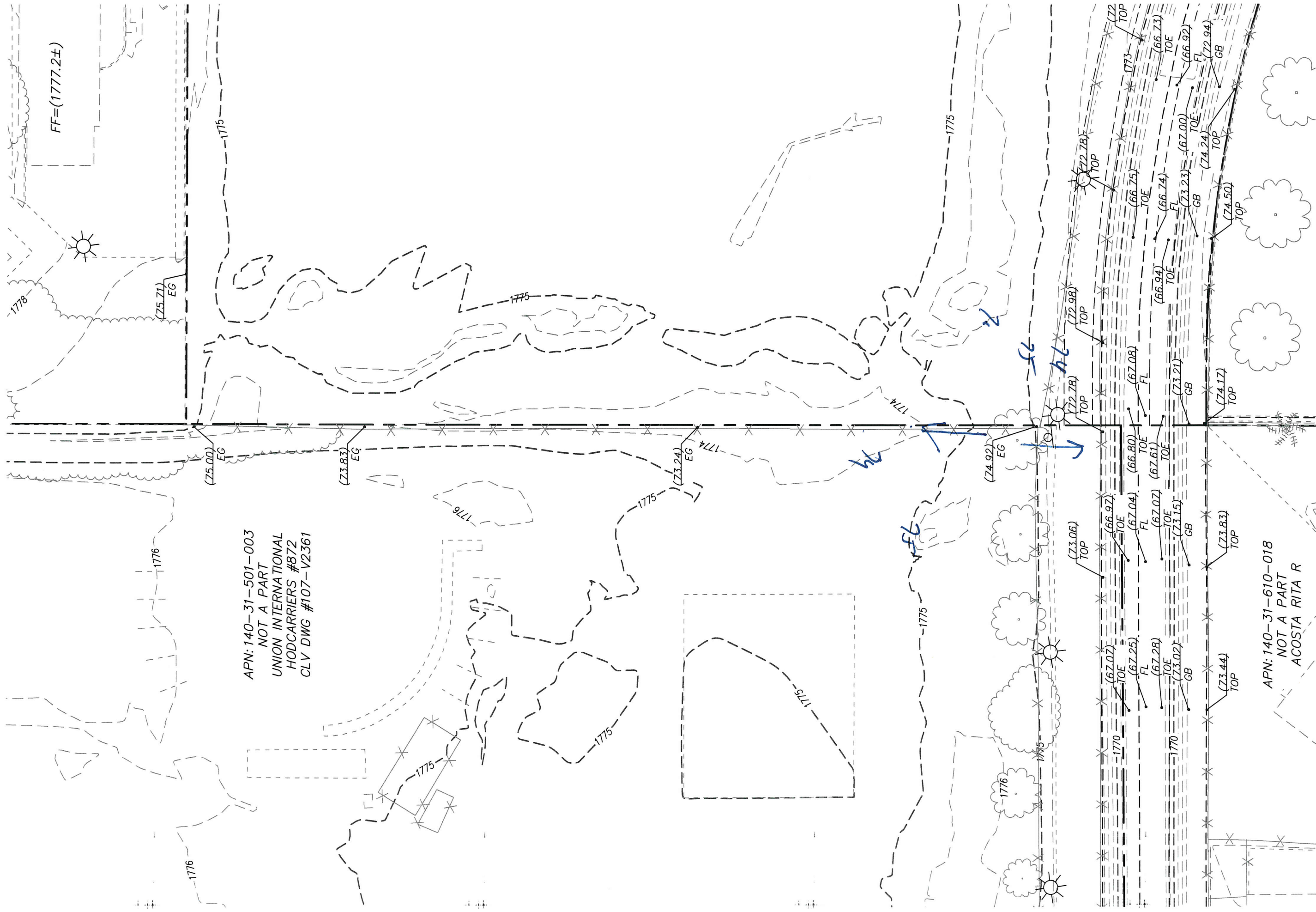
In order to begin review of the study, please submit the above item(s). If the above item(s) are not received within 60 days, this submittal will be discarded.

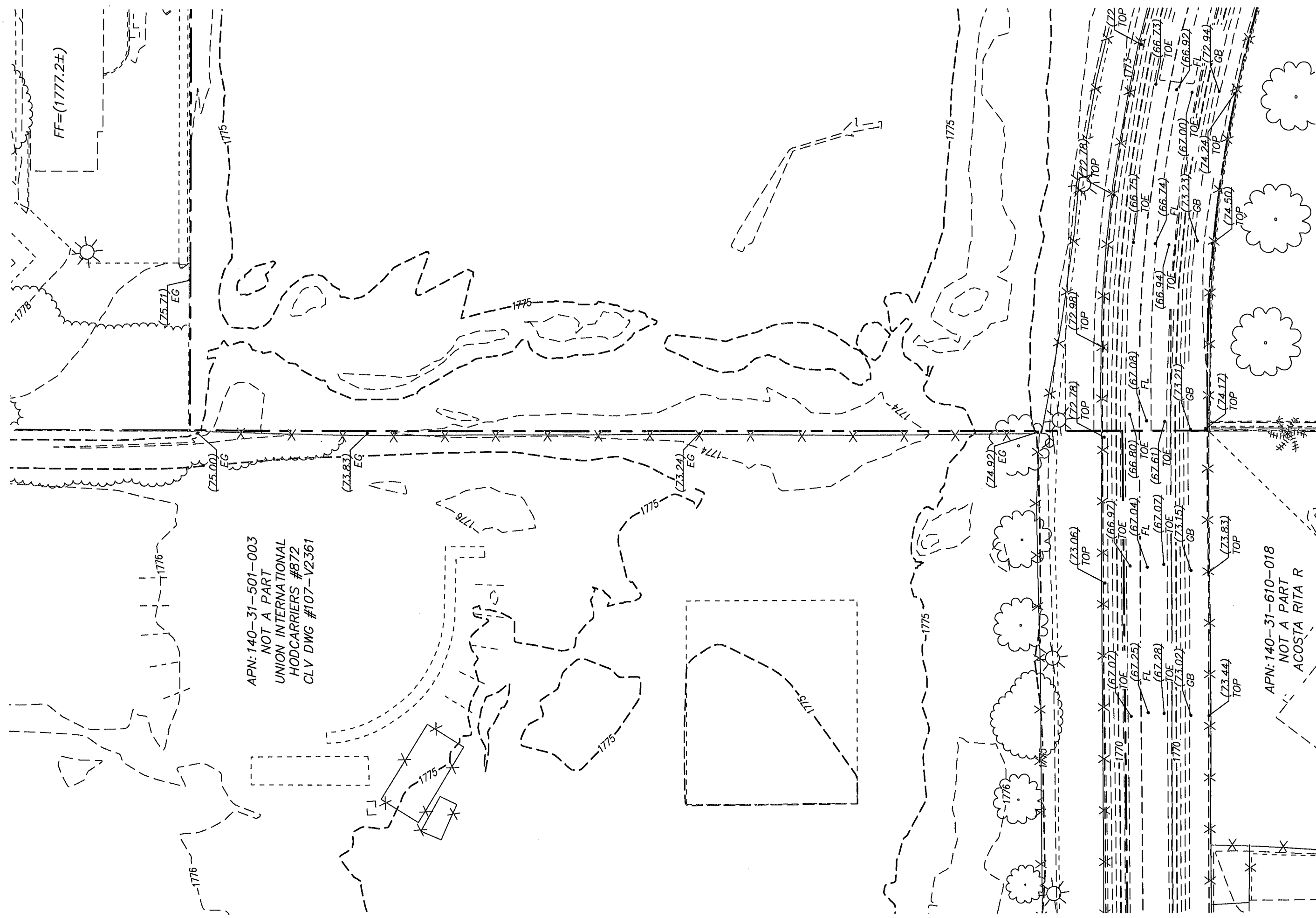
Regional Flood Control District
600 S Grand Central PKWY Suite 300

Phone: 702-685-0000
Fax: 702-685-0001

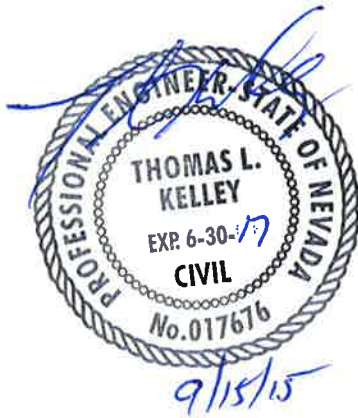








UPDATE NO. 1 TO THE TECHNICAL DRAINAGE STUDY FOR LAMB PINES



**CITY OF LAS VEGAS, NEVADA
DS4740UP
Project Number: 818-030-152
September 2015**

Prepared For: Nevada H.A.N.D, Inc.
295 E. Warm Springs, #101
Las Vegas, NV 89119
(702) 410-2730

Prepared By: L.R. Nelson Consulting Engineers
6765 W. Russell Rd., Suite 200
Las Vegas, Nevada 89118
(702) 798-7978

HYDROLOGIC CRITERIA AND DRAINAGE MANUAL
DRAINAGE STUDY INFORMATION FORM

Name of Development: Lamb Pines Update No. 1 Date: Sep 15, 2015

Location of Development: a) Descriptive (Cross Streets) North/South: Lamb Boulevard
East/West: Diamond Head Drive

b) Section: 31 Township: 20S Range: 62E

c) APN : 140-31-501-021

Name of Owner: Nevada H.A.N.D.

Telephone No.: (702) 410-2730 Fax No.: _____ E-Mail Address: _____

Address: 295 E. Warm Springs Road, #101, Las Vegas, NV 89119

Contact Person-Name: Thomas Kelley, P.E. Telephone No.: (702) 798-7978

* E-Mail Address: Thomas.Kelley@lrneng.com Fax No.: (702) 451-2296

Firm: LR Nelson

Address: 6765 West Russell Road, Suite 200, Las Vegas, NV 89118

Type of Land Development/Land Disturbance Process:

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

1. Total Owned Land Area: At Site: 12.6+/- acres Being Developed/Disturbed: 12.6+/- 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

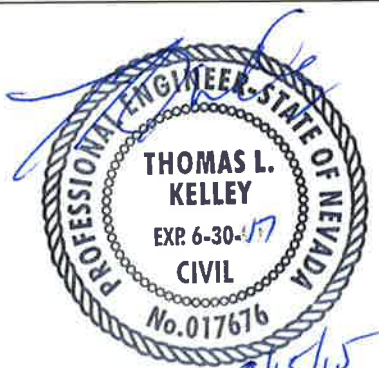
4. Proposed type of development (Residential, Commercial, Etc.): Residential Mult Unit

5. Approximate upstream land area which drains to the subject site: 0.36 acres +/- drains towards the site

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: Most of the site discharges into the Cedar Avenue Channel. The remaining portions discharge into Lamb Boulevard

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



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.**

DS4740 Local Entity File No.	Revision	Date

REFERENCE:

STANDARD FORM 1

September 15, 2015

Mr. Albert Sung, P.E.
Flood Control
City of Las Vegas Public Works
333 N. Rancho Drive
Las Vegas, NV 89106

Subject: Update No. 1 to the TDS for Lamb Pines - DS4740UP

Dear Mr. Sung:

Submitted herewith for your review and approval is one (1) hard copy and one (1) digital copy (on CD-ROM) of Update No. 1 to the Technical Drainage Study (TDS) for **Lamb Pines (DS4740)** project within the City of Las Vegas, Nevada. This update is being provided due to a revision to the plan set based upon the needed to split the project site into two difference parcels.

Due to financial obligations for the property, the existing single parcel will be required to be split into two separate parcels. The portion of the proposed development containing buildings One through Seven will be under one parcel and the portion of the development containing buildings Eight, Nine and Ten will be in another parcel. A parcel map has been prepared and submitted to the City of Las Vegas that proposes the two new parcels.

The proposed drainage for the site will remain unchanged as previously designed and all infrastructures will be built along both parcels at the same time as if it were one development. Because all the drainage from the northern proposed parcel will be directed through the southern proposed parcel, a blanket easement will be recorded with the site that provides the fact that any areas not specifically occupied by a building will be considered a private drainage easement to be privately maintained.

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 L.R. Nelson Consulting Engineers shall be without liability to L.R. Nelson Consulting Engineers.

If you have any questions regarding this Study, please contact our office at (702) 798-7978.

Sincerely,



Thomas Kelley, P.E.
Project Manager

CC: Nevada HAND

LIST OF APPENDICES

Appendix A: Improvement Plans

Appendix A: Improvement Plans

H:\Land Projects\1818030 Lamb-Diamond\DWG\Improv\01-1818030 - COVER.dwg (JM SHUMAKER) 9/15/2015 (3:34:43 PM)

SHEET INDEX

- 1
- COVER SHEET
- 2
- GENERAL NOTES
- 3
- DEMOLITION PLAN 1
- 4
- DEMOLITION PLAN 2
- 5
- DEMOLITION PLAN 3
- 6
- HORIZONTAL CONTROL PLAN 1
- 7
- HORIZONTAL CONTROL PLAN 2
- 8
- HORIZONTAL CONTROL PLAN 3
- 9
- GRADING PLAN 1
- 10
- GRADING PLAN 2
- 11
- GRADING PLAN 3
- 12
- UTILITY PLAN 1
- 13
- UTILITY PLAN 2
- 14
- UTILITY PLAN 3
- 15
- PLAN & PROFILE SHEET 1
- 16
- TRAFFIC & SIGNAGE PLAN 1
- 17
- TRAFFIC & SIGNAGE PLAN 2
- 18
- TRAFFIC & SIGNAGE PLAN 3
- 19
- FIRE ACCESS PLAN 1
- 20
- FIRE ACCESS PLAN 2
- 21
- FIRE ACCESS PLAN 3
- 22
- DETAIL SHEET 1
- 23
- DETAIL SHEET 2
- 24
- DETAIL SHEET 3

LAMB PINES
IMPROVEMENT PLANS

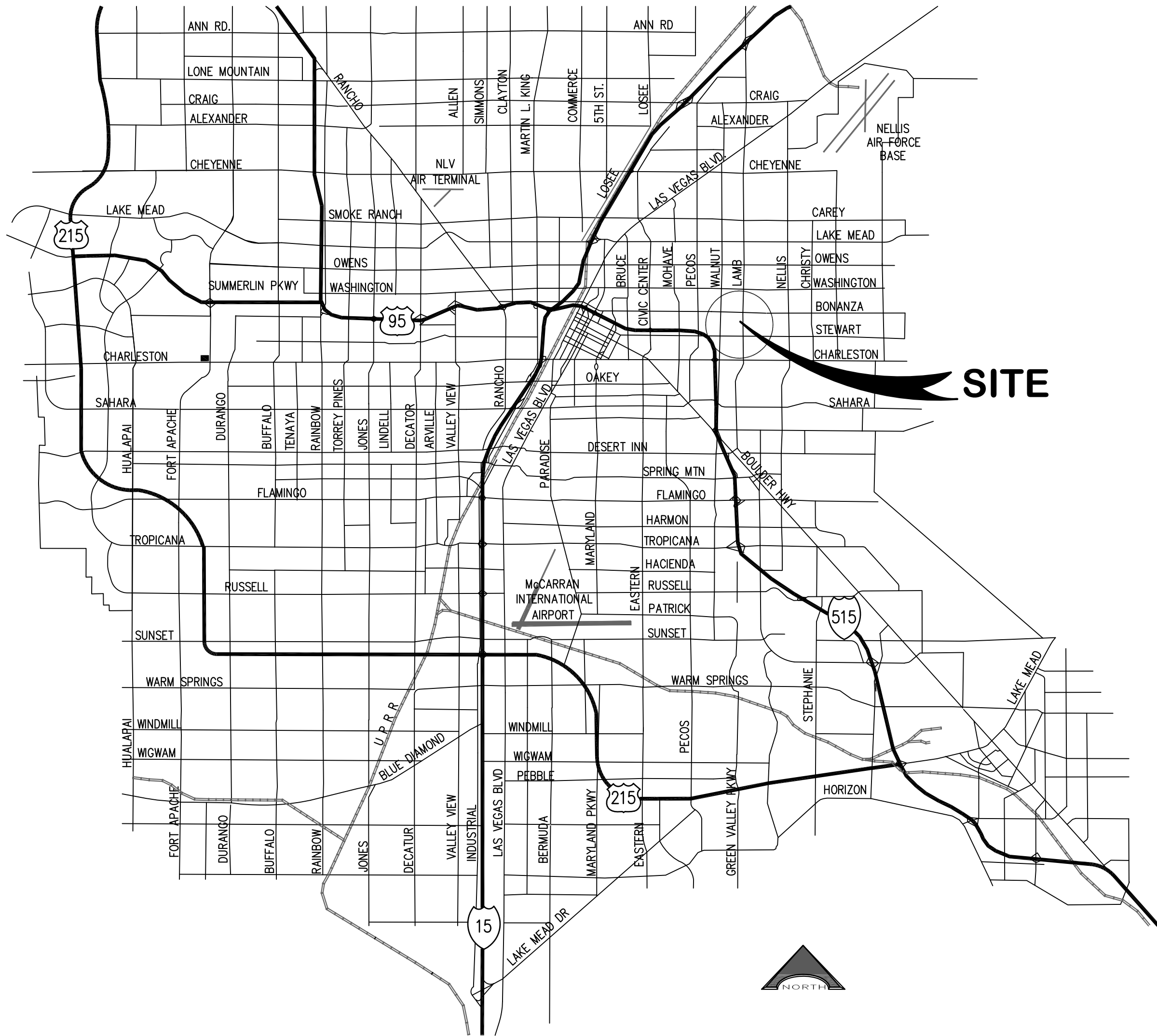
501 NORTH LAMB BOULEVARD

CITY OF LAS VEGAS
STATE OF NEVADA
APN #140-31-501-021
12.59 GROSS/NET ACRES

NEVADA HAND

295 EAST WARM SPRINGS ROAD, #101
LAS VEGAS, NV 89119-4212
(702) 410-2730

CONTACT: ROBERT FEIBLEMAN



LOCATION MAP

NO SCALE



VICINITY MAP

APPROVALS

ALLEN PAVELKA, PE No. 9029
CITY OF LAS VEGAS CITY ENGINEER

DATE

APPROVAL OF THESE PLANS IS LIMITED TO THOSE IMPROVEMENTS CONSTRUCTED IN THE DEDICATED RIGHT-OF-WAY AND/OR DEDICATED EASEMENTS. THIS APPROVAL DOES NOT AUTHORIZE THE CONSTRUCTION OF ANY IMPROVEMENTS THAT DEVIATE FROM ADOPTED STANDARDS AND/OR SPECIFICATIONS, EXCEPT THOSE SPECIFICALLY LISTED UNDER DEVIATIONS FROM STANDARD. THE ENGINEER SHALL RESOLVE ANY DEVIATION OTHER THAN THOSE LISTED IN DEVIATIONS FROM STANDARD IN FAVOR OF THE UNIFORM STANDARD DRAWINGS AND SPECIFICATIONS CLARK COUNTY AREA NEVADA.

CITY FIRE DEPARTMENT

DATE

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
MANAGER PROJECT No. 123960 (SHEETS 1, 2, 5, 12-15, 24)

DATE

NEVADA POWER d.b.a. NV ENERGY

DATE

NEVADA POWER d.b.a. NV ENERGY ACKNOWLEDGES THAT WE HAVE RECEIVED YOUR PLANS AND WILL PROVIDE SERVICE TO ALL ELECTRICAL NEEDS ASSOCIATED WITH THIS PROJECT. NEVADA POWER d.b.a. 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.

CENTRAL TELEPHONE CO. d.b.a. CENTURYLINK

DATE

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

COX COMMUNICATIONS LAS VEGAS, INC.

DATE

SOUTHWEST GAS CORPORATION

DATE

CHRIS KNIGHT, DIRECTOR OF BUILDING & SAFETY

DATE

THIS PLAN MEETS THE APPLICABLE STANDARDS OF THE PLANNING DEPARTMENT.

DISCLAIMER NOTE

UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.



H# 60588

DEVELOPER \ OWNER

HAND PROPERTY HOLDING COMPANY
295 E WARM SPRINGS RD #101
LAS VEGAS NV 89119-4212

ENGINEER

L.R. NELSON CONSULTING ENGINEERS, INC.
6765 WEST RUSSELL ROAD, SUITE 200
LAS VEGAS, NEVADA 89118-1811
CONTACT: THOMAS L. KELLEY, PE
PHONE : (702) 798-7978

LEGAL DESCRIPTION

THAT PORTION OF THE EAST HALF (E 1/2) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 31, TOWNSHIP 20 SOUTH, RANGE 62 EAST, M.D.M., CLARK COUNTY, NEVADA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

PARCEL 1 AS SHOWN ON PARCEL MAP IN FILE 96, PAGE 01, RECORDED SEPTEMBER 7, 1999 IN BOOK 990907 AS INSTRUMENT NO. 00470 OF OFFICIAL RECORDS.

BENCHMARK

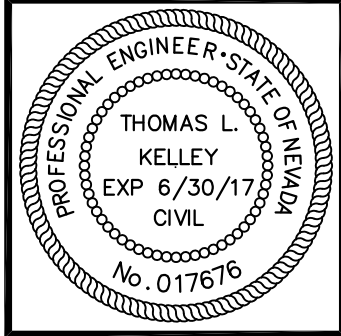
CITY OF LAS VEGAS BENCHMARK 1LV02 31C4

A RIVET AND PLATE IN THE TOP OF CURB AT THE SOUTHWEST CORNER OF STEWART AND SANDHILL.

ELEVATION = 539.670 METERS (1770.57 FEET) NAVD 1988

BASIS OF BEARING

NORTH 89°43'16" WEST, BEING THE BEARING OF THE NORTH LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 31, TOWNSHIP 20 SOUTH, RANGE 62 EAST, M.D.M., AS SHOWN ON A MAP ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE AS FILE 15, PAGE 32 OF SURVEYS.



DESIGNED BY:	MR	DRAWN BY:	MR	CHKD BY:	TLK
JOB NUMBER:	818-030-152	DATE:	September 2015	APPL	
NO.		REVISION		DATE	

L. R. NELSON CONSULTING ENGINEERS, INC.

6765 West Russell Road, Suite 200
Las Vegas, Nevada 89118
(702) 798-7978
(702) 451-2296 FAX



COVER SHEET
LAMB PINES
IMPROVEMENT PLANS
CITY OF LAS VEGAS

SHEET NUMBER

1

OF 24 SHEETS

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H:\Land Projects\1818030 - Lamb-Diamond DWG\Improv\01-1818030 - COVER.dwg (JMI SHUMAKER) 9/15/2015 (3:35:47 PM)

CITY OF LAS VEGAS GENERAL NOTES

- 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 REVISION; 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".
- THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. EXISTING UTILITIES AS SHOWN FROM CLV PLANS LIBRARY ARE APPROXIMATE AND FOR RECORD PURPOSES. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. EXISTING UTILITY SERVICE LATERALS MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND AND OVERHEAD INTERFERENCE'S WHICH MAY AFFECT HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE. TO SAME, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH. 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.
- ALL CONSTRUCTION DETAILS BE AS SHOWN ON THESE PLANS, ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.
- 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.
- PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.
- EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300' IN EXTRUDED-TYPE CURB.
- AC PAVEMENT TO BE ONE-HALF INCH (1/2") ABOVE UP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMP AND CROSS GUTTERS.
- CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED WITHIN 24 HOURS.
- SIDEWALK RAMP SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMP MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR. THE CONTRACTOR SHALL PROVIDE SUFFICIENT 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.
- ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY THE (GEOIEK, INC. REPORT #10251-VL6, DATE, FEBRUARY 3, 2011) UPDATED MARCH 12, 2012. APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.
- 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 RELOCATION.
- 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 AND CITY OF LAS VEGAS TITLE 18, APPENDIX D.
- 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.

WALL NOTES:

- ALL WALLS, NEW OR EXISTING, ARE ONLY SHOWN ON CIVIL PLANS FOR THE PURPOSE OF REVIEWING GRADING RELATIONSHIPS; FLOOD CONTROL AND SIGHT DISTANCE AT INTERSECTIONS. NEW WALLS REQUIRE A SEPARATE PERMIT AND INSPECTION BY THE BUILDING DEPARTMENT.
 - ASPHALT PATCH DETAILS SHOWN HEREON AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT OF WAY.
 - CONTRACTOR SHALL ADJUST ALL NEW AND EXISTING INLETS, VALVE BOXES, MANHOLE RIMS, AND SEWER CLEAN OUTS, ETC. TO FINISH GRADE AS APPLICABLE WHETHER OR NOT THEY ARE SHOWN ON THE PLANS.
 - 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.
 - 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.
 - SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S) SHALL BE PROVIDED TO THE OFFSITE INSPECTION AND TESTING SECTION PRIOR TO PROJECT ACCEPTANCE. THE MAP(S) SHALL INCLUDE THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND THE CONNECTION TO A DROP INLET, AND THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS EXITS THE PUBLIC RIGHT-OF-WAY. THE LOCATION SHALL BE DESCRIBED BY STATE PLANE COORDINATES WHICH SHALL BE BASED ON THE NAD83 COORDINATE SYSTEM OF 1983, EAST ZONE, AS DEFINED BY THE NEVADA REVISED STATUTES CHAPTER 327, AND TIED TO THE CITY OF LAS VEGAS VERTICAL CONTROL BENCHMARK NETWORK. COORDINATES MUST BE CERTIFIED BY A NEVADA PROFESSIONAL LAND SURVEYOR TO HAVE POSITIONAL CERTAINITIES +/- 0.1 METER (+/- 0.3 FEET). A SEPARATE ELECTRONIC COMMA DELIMITED FILE FOR THE SANITARY SEWER AND STORM DRAIN COORDINATES SHALL ALSO accompany the SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S).
 - OR
SANITARY SEWER SERVICE LATERALS REQUIRE THE INSTALLATION OF A MARKER BALL AT THE CONNECTION OF THE SEWER SERVICE LATERAL TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERAL EXITS THE PUBLIC RIGHT-OF-WAY. STORM DRAIN LATERALS REQUIRE THE INSTALLATION OF A MARKER BALL AT THE CONNECTION OF THE STORM DRAIN LATERAL TO THE STORM DRAIN MAIN AND WHERE THE STORM DRAIN LATERAL EXITS THE PUBLIC RIGHT-OF-WAY OR WHERE THE STORM DRAIN LATERAL CONNECTS TO A DROP INLET.
 - CITY VIDEO INSPECTION IS REQUIRED FOR ALL SEWER AND STORM DRAINS. THE CCTV VIDEO INSPECTIONS NEED TO BE PERFORMED PER THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS LATEST ADDITION.
 - A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.
- REVISED 02/03/15

CITY OF LAS VEGAS GRADING NOTES

- 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. 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.
- 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.
- 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.
- 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.
- CONTRACTOR SHALL GRADE TO THE LINES AND ELEVATIONS SHOWN ON THE PLANS WITH 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 AND HIS REPRESENTATIVE.
- ALL CUT AND FILL SLOPES SHALL BE PROTECTED UNTIL EFFECTIVE EROSION CONTROL HAS BEEN ESTABLISHED.
- 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.
- THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWALKS AND ALL OTHER PUBLIC RIGHT-OF-WAY IN A CLEAN, SAFE AND USABLE CONDITION. ALL SPILLS OF SOILS, 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.
- 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. THE CONTRACTOR SHALL FOLLOW THE DIRECTION OF THE CITY ENGINEER. TEMPORARY CONSTRUCTION INCLUDES DITCHES, BERMS, ROAD SIGNS AND BARRICADES, ETC.

DEVIATION FROM STANDARDS

NONE

CITY OF LAS VEGAS SEWER NOTES

- 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 CONTENT OF THE ABOVE SPECIFICATIONS.
- 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.
- CHISEL OR CUT IN CURBS OR GAS LATERALS PASS UNDER THE CURB.
- POLYVINYL (PVC) SEWER PIPE SHALL MEET ASTM D-3034 SDR 35 SPECIFICATIONS, INSTALLED WITH SAND BEDDING AND BACKFILL OF TYPE II AGGREGATE BASE.
- ALL MANHOLES PAVED IN STREETS EIGHTY (80') FOOT R/W AND LARGER SHALL HAVE CONCRETE COLLARS. STREET LEVELS OF LATERALS MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL CONFORM TO CITY STANDARDS AT THE MANHOLE.
- 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") AND ABOVE. 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 INCHES (18") UNDER A WATER MAIN.
- 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.
- 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 CONSTRUCTIONS 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.
- INSTALLATION OF CURVED SEWER REQUIRES THE USE OF C-900 PVC PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.

CITY OF LAS VEGAS STREET LIGHT NOTES

- ALL STREET LIGHTING INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE STREET LIGHTING PLANS, THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST REVISION; AND THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST REVISION, AND ANY ADOPTED SPECIAL AREA STANDARD.
- NO DEVIATION OF STREETLIGHT, PULL BOX, CONDUITS (ETC.) LOCATIONS SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE CITY ENGINEER.
- ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION.
- ALL STREET LIGHTING CONDUITS STUB SHALL AT LEAST ONE GREEN #8 THW WIRE INSTALLED, A GROUND WIRE, WHEN "GUTTY" CONDUIT IS COMPLETELY INSTALLED FROM PD TO PB, IT SHALL HAVE MINIMUM OF 2 #4 AND 1 #8 THW WIRE WITH THE ENDS TAPED OR "SAFE OFF" PRIOR TO FINAL INSPECTION.
- ANY STRUCTURE SUCH AS BLOCK WALLS, CHAIN LINK FENCES, RETAINING WALLS, ETC., SHALL LEAVE A MINIMUM CLEARANCE IN ACCORDANCE WITH THE USD NO. 320A.
- AS-BUILT DRAWINGS SHALL BE SUPPLIED TO THE TEF0 PRIOR TO ANY PRE-FINAL INSPECTION. THE AS-BUILT DRAWING NEEDS TO BE STAMPED AS-BUILT AND SIGNED BY THE PREPARER.
- SERVICE POINT SHALL BE COORDINATED WITH NV ENERGY COMPANY, AND WHEREVER POSSIBLE, BE LOCATED NEAR THE CENTER OF THE CIRCUIT. SERVICE POINTS SHALL BE SHOWN ON THE CIVIL PLANS.
- IT SHALL BE ASSUMED THAT IN THE ABSENCE OF AN EXISTING, WORKABLE CIRCUIT TO ATTACH TO, ALL INSTALLATION FOR REPAIR OR RELOCATION OF THE NEW SEWER CIRCUIT.
- WHEREVER THERE IS AN OVERHEAD UTILITY THAT MAY CONFLICT WITH THE INSTALLATION OF STREET LIGHTING CIRCUITS AND/OR POLES, THESE CONFLICTS MUST BE RESOLVED BETWEEN THE DEVELOPER AND THE UTILITIES INVOLVED, AT NO EXPENSE TO THE CITY OF LAS VEGAS, BEFORE STREETLIGHT BASE ARE INSTALLED.
- THE CONTRACTOR SHALL FURNISH COMPLETE SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON PLANS.
- THE DEVELOPER/OWNER WILL BE REQUIRED TO SUPPLY POWER TO ALL NEW PUBLIC STREET LIGHTS INSTALLED UNDER THIS DESIGN PRIOR TO BOND RELEASE OR PROJECT COMPLETION. THE DEVELOPER/OWNER WILL BE RESPONSIBLE FOR ALL ITEMS ASSOCIATED WITH THE INSTALLATION, CONSTRUCTION, ENERGIZING, MAINTENANCE AND OPERATIONAL COST OF SAID STREET LIGHTS PRIOR TO PROJECT COMPLETION. REFER TO THE PLAN OF ANY NEW SERVICE REQUIREMENTS. THE TRANSFER OF OWNERSHIP FROM THE DEVELOPER/OWNER TO THE CITY OF LAS VEGAS FOR ALL NEW PUBLIC STREET LIGHT/S AND/OR SERVICE/S INSTALLED UNDER THIS PLAN DESIGN WILL BE IN CONJUNCTION WITH THIS PROJECT COMPLETION. COORDINATE ALL MAINTENANCE AND OPERATIONAL TRANSFERS WITH THE CITY OF LAS VEGAS TRAFFIC ENGINEERING DEPARTMENT (TEFO) AT (702) 229-6331.

CITY OF LAS VEGAS TRAFFIC NOTES

- ALL CONSTRUCTION SIGNING, BARRICADING, AND TRAFFIC DELINEATION SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.
- THE STREET SIGN CONTRACTOR SHALL OBTAIN STREET NAMES AND BLOCK NUMBERING FROM THE PLANNING DEPARTMENT PRIOR TO CONSTRUCTION.
- BEFORE ANY WORK IS STARTED IN THE RIGHT-OF-WAY, THE CONTRACTOR SHALL INSTALL ALL ADVANCE WARNING SIGNS FOR THE CONSTRUCTION ZONE. THE CONTRACTOR SHALL INSTALL TEMPORARY STOP SIGNS AT ALL NEW STREET ENCROACHMENTS INTO EXISTING CITY STREETS WHERE WARRANTED. ADVANCE WARNING SIGNS ARE REQUIRED AFTER THE CONSTRUCTION ZONE IS ACCOMPLISHED, AND SHALL MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED.
- WHEN A DESIGNATED "SAFE ROUTE TO SCHOOL" IS ENCLOSED UPON BY A CONSTRUCTION WORK ZONE AND PUBLIC WORKS STAFF IDENTIFIES A NEED FOR STUDENTS TO BE ASSISTED IN THE SAFE CROSSING THROUGH THAT WORK ZONE, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE A QUALIFIED "CROSSING GUARD". THE GUARD SHALL BE PRESENT FOR THE FULL DURATION OF TIME THAT CHILDREN ARE LIKELY TO BE PRESENT.
- IF THE IMPROVEMENTS NECESSITATE THE OBLITERATION, TEMPORARY OBSTRUCTION, TEMPORARY REMOVAL OR RELOCATION OF ANY EXISTING TRAFFIC PAVEMENT MARKINGS, SUCH PAVEMENT MARKING SHALL BE RESTORED OR REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE CITY TRAFFIC ENGINEER.
- WHEN THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL PERMANENT SIGNS SHOWN ON THE PLANS. ALL NEW TRAFFIC SIGNS SHALL BE FABRICATED WITH DIAMOND GRADE VIP CLASS 6 REFLECTIVE SHEETING OR APPROVED EQUAL. ALL NEW TRAFFIC SIGNS, EXCEPT STREET NAME AND SCHOOL SPEED LIMIT SIGNS, SHALL HAVE A 3M SERIES 1160 OR APPROVED EQUIVALENT ANTI-GRAFFITI PROTECTIVE OVERLAY FILM. SCHOOL ZONE SIGNS SHALL HAVE 3M SERIES 1150 ANTI-GRAFFITI PROTECTIVE OVERLAY FILM. STREET NAMES SIGNS SHALL CONFORM IN THEIR ENTIRETY TO CURRENT CITY STANDARDS. ALL OTHER SIGNS SHALL BE STANDARD SIZE UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL SIGN POSTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT CITY STANDARD.
- WHEN A PROPOSED STREET LIGHT STANDARD IS LOCATED WITHIN FIVE (5') FEET OF ANY PROPOSED SIGN SHOWN ON THE PLANS TO BE MOUNTED ON A SIGNPOST, THE SIGN SHALL BE MOUNTED ON THE STREETLIGHT STANDARD AND THE SIGNPOST SHALL BE ELIMINATED.
- ALL PERMANENT TRAFFIC CONTROL DEVICES CALLED FOR HEREON SHALL BE IN PLACE AND IN FINAL POSITION PRIOR TO ALLOWING ANY PUBLIC TRAFFIC ONTO THE PORTIONS OF THE ROAD(S) BEING IMPROVED HERE UNDER. REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.
- STREET SIGNS AND STOPS SIGNS SHALL BE INSTALLED PER CITY STANDARD SPECIFICATIONS FOR PLACEMENT OF STREET NAME SIGNS.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL DEVICES AND FLAGGERS TO INSURE THE SAFETY OF THE PUBLIC IN OR AROUND THE WORK AREA. THE CONTRACTOR SHALL HAVE A CERTIFIED ATSSA TRAFFIC CONTROL TECHNICIAN OR IMSA WORK ZONE SAFETY SPECIALIST SET UP, MAINTAIN AND/OR REMOVE ALL TRAFFIC CONTROL DEVICES IN THE CITY OF LAS VEGAS RIGHT OF WAY. WORK IN PUBLIC RIGHT-OF-WAY SHALL BE EXPEDITED TO COMPLETION SO AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE FLOWING PUBLIC.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING CITIZENS AREA TRANSIT (C.A.T.) IF THE CONSTRUCTION INTERRUPTS OR RELOCATES A BUS STOP OR HAS AN ADVERSE EFFECT ON BUS SERVICE ON THAT STREET TO ARRANGE FOR TEMPORARY RELOCATION OF STOP.
- GUARDS SHALL BE OBTAINED BY CONTACTING THE METROPOLITAN POLICE DEPARTMENT SPECIAL EVENTS UNIT (PHONE # 828-3442) WHO WILL PROVIDE OFFICERS PROPERLY TRAINED IN TRAFFIC CONTROL. FEES FOR THE USE OF THESE OFFICERS SHALL BE SET BY METRO AND WILL BE PAID BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR ALL ARRANGEMENTS WITH METRO.
- ANY WORK WITHIN 300' OF A SIGNALIZED INTERSECTION WILL BE NIGHT WORK, UNLESS OTHERWISE DIRECTED BY THE CITY OF LAS VEGAS TRAFFIC ENGINEER.
- THE CONTRACTOR SHALL CONTACT THE TRAFFIC ENGINEERING DIVISION (TRANSPORTATION SECTION) THROUGH THE PROJECT'S OFFSITE INSPECTOR PRIOR TO INITIATING PAVING TO RECEIVE DIRECTION FOR ANY PERMANENT OR TEMPORARY MODIFICATIONS TO THE APPROVED DRAWINGS REGARDING FINAL PAVEMENT TRANSITIONS, MARKINGS AND SIGNING THAT ARE REQUIRED TO MATCH ADJACENT ROADWAY SEGMENTS. THE CONTRACTOR SHALL PROVIDE DRAINAGE AND TRAFFIC ENGINEERING DIVISION WITH ANY ADJUSTMENTS TO THE FINAL PAVEMENT MARKINGS AND SIGNAGE, WHICH MAY INCLUDE OMITTING, ADDING OR MODIFYING PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS SUCH THAT ADJACENT TRANSITIONS AND LANE TERMINATIONS BETWEEN ADJACENT ROADWAY SEGMENTS ARE CONSTRUCTED.

LEGEND AND ABBREVIATIONS

	PROPOSED ELEVATION		PROPOSED GRADE
	EXISTING ELEVATION		EXISTING GRADE
	EXISTING CONTOUR		RIGHT-OF-WAY/PROPERTY LINE
	CONSTRUCTION NOTE		CENTERLINE
	EXISTING STREETLIGHT		GRADE BREAK
	EXISTING SIGN		EXISTING EDGE OF PAVEMENT
	EXISTING "L" CURB & GUTTER		EXISTING WALL
	PROPOSED "L" CURB & GUTTER		CONCRETE
	EXISTING BLOCK PROPERTY WALL		PROPOSED RETAINING WALL
	DIRECTION OF FLOW		MATCHLINE
	PROPOSED SWALE		

LAS VEGAS FIRE AND RESCUE GENERAL NOTES

- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LAS VEGAS FIRE AND RESCUE ADOPTED FIRE CODE ORDINANCE #6325 FOR HYDRANT SPECIFICATIONS AND HYDRANT INSTALLATION SPECIFICATIONS.
- AUTHORIZED FIRE HYDRANTS ARE AS FOLLOWS:
 - KENNEDY - GUARDIAN MODELS K81A AND K81D
 - MUELLER - SUPER CENTURION 250, MODEL A-423
 - CLOW - MEDALLION MODELS F-2546LVD
 - U.S. PIPE - METROFLOW/M-03
- 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 FROM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER BEFORE COMMENCEMENT OF WORK. **[FC 105.7.12]**
- 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. **[FC 3310, 3312]**
- 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. **[FC 507.5.7.3]**
- ALL UNDERGROUND INSPECTIONS, PRESSURE AND FLUSH VERIFICATIONS OF ALL FIRE HYDRANTS AND FIRE LINES, SHALL BE CONDUCTED BEFORE COVERING THE LINES. CENTER LOADING IS ACCEPTABLE FOR THE HYDRO TEST WITH PRIOR FIRE PREVENTION APPROVAL. **[FC 106.3]**
- 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. **[FC 507.2.1, NFPA 24]**
- PAINTING OF CURBS, FIRE HYDRANTS, PADS, PROTECTION OF FIRE HYDRANTS FROM PHYSICAL DAMAGE, AND ALL OTHER WORK NECESSARY PER PLANS SHALL BE COMPLETED BEFORE APPROVAL BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION. **[FC 507]**
- PRIVATE HYDRANTS SHALL BE PAINTED RED. **[FC 507.5.7.1]**
- PRIOR TO THE FINAL OCCUPANCY, A FIRE FLOW TEST SHALL BE WITNESSED BY THE LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW. **[FC 507]**
- FIRE HYDRANT SPACING SHALL BE AS FOLLOWS: **[FC c102]**
 - RESIDENTIAL - 500 FT UNSPRINKLERED; 600 FT SPRINKLERED.
 - COMMERCIAL - 300 FT UNSPRINKLERED; 400 FT SPRINKLERED.
- WHERE THE WATER MAINS ARE EXTENDED ALONG STREETS OR NEW STREETS ARE INSTALLED WHERE FIRE HYDRANTS ARE NOT NEEDED FOR PROTECTION OF THE STRUCTURES, FIRE HYDRANTS SHALL BE INSTALLED AT A MAXIMUM OF 1000 FT SPACING, TO PROVIDE FOR TRANSPORTATION HAZARDS. WHERE STREETS ARE PROVIDED WITH MEDIAN DIVIDERS OR HAVE FOUR (4) OR MORE TRAFFIC LANES AND HAVE A TRAFFIC COUNT OF MORE THAN 30,000 PER DAY, HYDRANTS ARE REQUIRED ON EACH SIDE OF THE STREET SPACED AT 500 FT ON AN ALTERNATING BASIS. **[FC c102.6]**
- NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE RADIUS OF A CUL-DE-SAC OR WITHIN 20 FT OF THE PERIMETER OF THE RADIUS OF THE CUL-DE-SAC.
- NO FIRE HYDRANTS SHALL BE LOCATED WITHIN 6 FT OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREETLIGHT OR ANY OTHER OBSTRUCTION. **[FC c102.12]**
- A MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A ONE-TWO FAMILY DWELLING SHALL NOT EXCEED 300 FT, AS MEASURED BY AN APPROVED ROUTE. **[FC c102.4]**
- THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A FIRE DEPARTMENT CONNECTION (FDC) SHALL NOT EXCEED 100 FT, AS MEASURED BY AN APPROVED ROUTE. **[FC c102.7]**
- THE MAXIMUM DISTANCE FROM A HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. **[FC c102.6]**
- TWO (2) SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE IS 4 OR MORE FIRE HYDRANTS/SPRINKLER LEAD-INS ARE INSTALLED ON A SINGLE SYSTEM. SECTIONAL CONTROL VALVE SHALL BE INSTALLED SO THAT NO MORE THAN 2 FIRE HYDRANTS CAN BE OUT OF SERVICE DUE TO A BREAK IN A WATER MAIN. **[FC c104]**
- 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. **[FC 503.2.3]**
- 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%. **[FC 503.2.7, 503.2.8]**
- THE TURNING RADIUS OF THE FIRE APPARATUS ACCESS ROADS SHALL BE NO LESS THAN 52 FT OUTSIDE AND 28 FT INSIDE TURNING RADIUS. **[FC 503.2.4]**
- VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL NOT BE LESS THAN 13 FT 6 IN. **[FC 503.2.1]**
- FIRE DEPARTMENT ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF NOT LESS THAN 40 FT FLOW LINE TO FLOW LINE WITH PARALLEL PARKING PERMITTED ON BOTH SIDES, NOT LESS THAN 32 FT WIDE, FLOW-LINE TO FLOW-LINE, WHERE PARKING IS PERMITTED ONLY ON ONE SIDE OF THE FIRE APPARATUS ACCESS ROAD, NOT LESS THAN 24 FT WIDE, FLOW-LINE TO FLOW-LINE, WHERE NO PARKING IS PERMITTED ON EITHER SIDE. FIRE LANES THROUGH PARKING LOTS SHALL BE NOT LESS THAN 24 FT. **[FC 503.2.1.1]**
- A FIRE APPARATUS ACCESS ROAD SHALL BE REQUIRED WHEN ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY IS LOCATED MORE THAN 150 FT FROM A FIRE DEPARTMENT VEHICLE ACCESS. THIS DISTANCE COULD BE INCREASED TO 250 FT IF THE BUILDING IS SPRINKLERED. **[FC 503.1.1]**
- APPROVED SECONDARY FIRE APPARATUS ACCESS SHALL BE PROVIDED FOR 100 OR MORE DWELLING UNITS, ROAD(S) WITH DEAD-ENDS OR WITH A SINGLE POINT OF ACCESS IN EXCESS OF 600 FT, COMMERCIAL AND INDUSTRIAL DEVELOPMENTS WHERE BUILDINGS EXCEED 2 STORIES OR 30 FEET IN HEIGHT, OR EXCEEDING 62,000 SQUARE FEET IN AREA. **[FC 503.1.2]**
- 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. **[FC 503.2.5]**
- ALL FIRES 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. **[FC 503.3]**
- ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH **IFC 503.6** AND **IFC APPENDIX M**.

STORM WATER POLLUTION PREVENTION PLAN (S.W.P.P.) NOTES

- THE OWNER, SITE DEVELOPER, CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATE IN, THE PUBLIC RIGHTS OF WAYS OF THE CITY OF LAS VEGAS AS A RESULT OF CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.
- 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 PRELIMINARY DESIGN STANDARDS SPECIFIED IN THE CITY OF LAS VEGAS AND THE LAS VEGAS VALLEY CONSTRUCTION SITE BEST MANAGEMENT PRACTICES MANUAL.
- TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVRI00000, SECTION III.A.4.5.
- AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT, AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS AND ALL BMPs WEEKLY, AND WITHIN 24 HOURS AFTER ANY ACTUAL RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVRI00000, SECTION III.A.12.
- 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.

LAS VEGAS VALLEY WATER DISTRICT STANDARD NOTES

- LVVWD PROJECT NO. 123960
- NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN APPROVED FOR CONSTRUCTION BY THE LVVWD. FOLLOWING WATER PLAN APPROVAL, NOTICE SHALL BE GIVEN TO THE LVVWD COMMUNICATION SUPPORT CENTER (258-7171) TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. FOR FUTURE INSPECTIONS, NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO THE REQUESTED LVVWD INSPECTION. **WHEN REQUESTING INSPECTIONS, PLEASE REFER TO THE PROJECT # IDENTIFIED ABOVE.**
 - ALL WORK SHALL CONFORM TO LVVWD STANDARD PLATES, DRAWINGS, AND SPECIFICATIONS, AND TO THE 2010 EDITION OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS). **THE LATEST EDITION OF UDACS SHALL SUPERSEDE ANY CONFLICTS CONTAINED IN THE APPROVED DRAWINGS AND/OR SPECIFICATIONS.**
 - ALL WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2 ABOVE, SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT DRAFT OR EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENT, CLARK COUNTY AREA.
 - A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVVWD.
 - ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING WITH LVVWD APPROVED SERVICE SADDLES.
 - ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
 - ALL VALVES SHALL BE LOCATED OUTSIDE DRIVEWAYS, VALLEY AND CURB GUTTERS.
 - ALL WATER AND STORM DRAIN OR SANITARY SEWER CROSSINGS SHALL CONFORM TO SECTION 2.22 OF THE **2010** EDITION OF THE UDACS.
 - ALL WATER FACILITIES SHALL BE FILLED, DISINFECTED, PRESSURE TESTED, FLUSHED, FILLED, AND AN ACCEPTABLE WATER SAMPLE OBTAINED, PRIOR TO CONNECTION TO THE LVVWD DISTRIBUTION SYSTEM.
 - THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 OR 258-3802, TWO (2) WORKING DAYS PRIOR TO METER PICKUP.
 - ANY INTERRUPTION OF SERVICE MUST BE PERFORMED IN ACCORDANCE WITH UDACS SECTION 3.14.01, AND APPROVED BY THE LVVWD INSPECTION DIVISION PRIOR TO SHUTDOWN. PROPER WRITTEN NOTIFICATION MUST BE GIVEN TO ALL AFFECTED CUSTOMERS.
 - ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE AS LISTED ON THE LVVWD PRE-APPROVED MATERIALS AND MANUFACTURER'S LISTING FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS.
 - TELEPHONE "CALL BEFORE YOU DIG" AT "811" OR 1-800-227-2600.
 - THE INSTALLATION OF LAS VEGAS VALLEY WATER DISTRICT (LVVWD) MUNICIPAL WATER FACILITIES WITHIN ALL STREETS IS ASSUMED TO BE IN COMPLIANCE WITH THE UNIFORM STANDARDS, INCLUDING THE PLACEMENT OF ASPHALT PAVING STREET SURFACES. ANY REPAIR WORK DONE BY THE LVVWD TO THE MUNICIPAL WATER FACILITIES WILL INCLUDE THE PLACEMENT OF ANY APPROPRIATELY SIZED ASPHALT REPAIR PATCH ON STREET SURFACE.

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

ESTIMATED QUANTITIES

ROADWAY		
DESCRIPTION	PUBLIC	PRIVATE
4" AC	1066 SY	0 SY
TYPE I GRAVEL	266 CY	0 CY
TYPE II GRAVEL	274 CY	0 CY
EXCAVATION AND ENBANKMENT	120 CY	0 CY
CURB AND GUTTER (24")	633 LF	0 LF
CONCRETE VALLEY CUTTER	127 LF	0 LF
4" CONCRETE SIDEWALK	1427 SF	0 SF
COMMERCIAL DRIVEWAY	920 SF	0 SF
ADA RAMPS W/ TRUNCATED DOMES	2 EA	0 EA
BUS STOP SHELTER	1 EA	0 EA
BUS TURNOUT	1118 SF	0 SF

TRAFFIC

SEE SHEET 18 FOR TRAFFIC QUANTITIES

WATER AND SEWER

SEE SHEET 12 FOR WATER AND SEWER QUANTITIES

CONTRACTOR QUANTITIES NOTE:

1. QUANTITIES SHOWN ARE APPROXIMATIONS BASED ON BOND ESTIMATE CALCULATIONS. THE CONTRACTOR IS RESPONSIBLE FOR CALCULATING THE EXACT QUANTITIES NECESSARY TO CONSTRUCT THE PROJECT BASED ON THE IMPROVEMENT PLANS PROVIDED FOR THE PROPOSED PROJECT. THE CONTRACTOR SHALL BE THE RESPONSIBLE PERSON IN CHARGE PRIOR TO SUBMITTAL OF BID FOR CLARIFICATION ON ANY POSSIBLE DISCREPANCIES WITHIN THE PROVIDED IMPROVEMENT PLANS. CHANGE ORDERS PLACED DURING CONSTRUCTION THAT WERE NOT SUBMITTED FOR CLARIFICATION AND WERE BASED SOLELY ON CONTRACTOR'S ASSUMPTION WILL NOT BE AWARDED, AND SHALL BE THE CONTRACTORS FINANCIAL RESPONSIBILITY TO CORRECT IN THE FIELD.

LEGAL DESCRIPTION

PARCEL CC AS SHOWN ON THE FINAL MAP OF SUMMERLIN VALLEY 23B UNIT NO. 2, A COMMON-INTEREST COMMUNITY, FILE IN BOOK 145 OF PLATS, PAGE 83, AND WITHIN SECTION 27, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA

BENCHMARK

CITY OF LAS VEGAS BENCHMARK 7LV09 27566
A RIVET AND PLATE IN THE TOP OF CURB AT THE NORTHEAST CORNER OF MOUNTAINSHADOW ROAD AND DESERT FOOTHILLS.

ELEVATION = 1013.556 METERS (3325.31 FEET) NAVD 1988

BASIS OF BEARING

15°02'07" EAST, BEING THE BEARING OF THE CENTERLINE OF DESERT FOOTHILLS DRIVE AS SHOWN ON THE PLAT OF SUMMERLIN VALLEY 23B UNIT NO. 2, ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE AS BOOK 145, PAGE 83 OF PLATS.

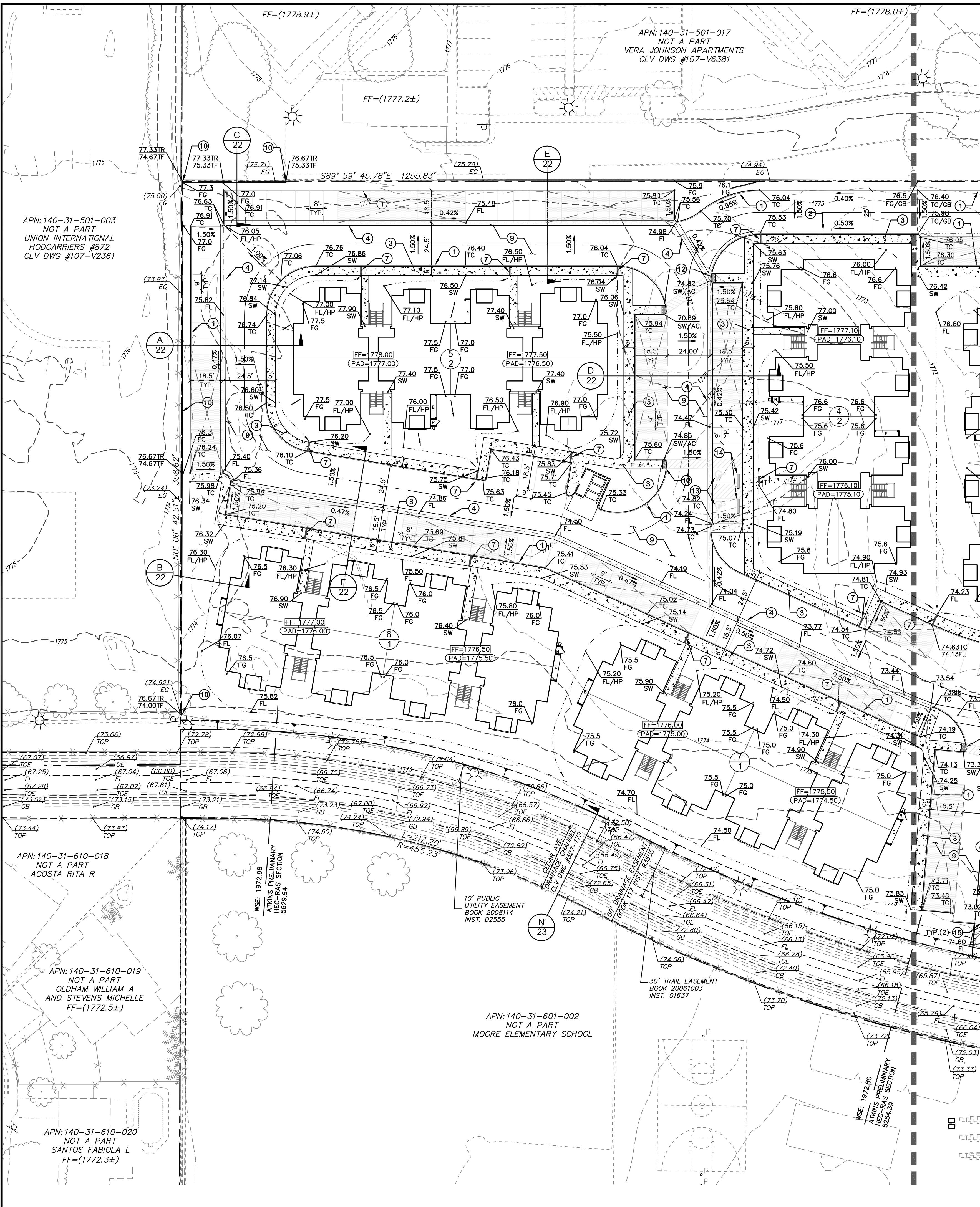
APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICE MANAGER
DATE _____ PROJECT NO. 123960

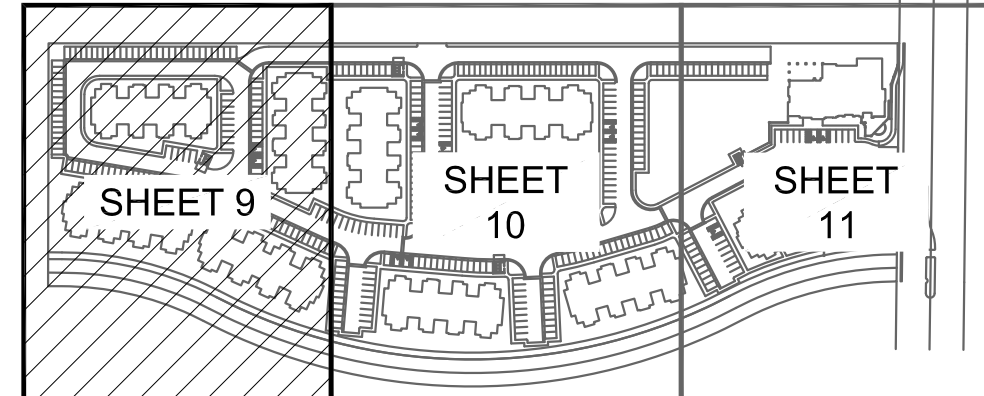
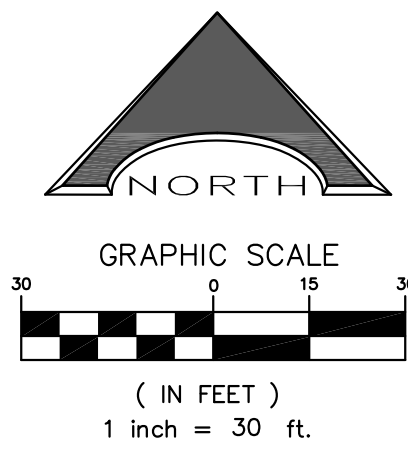
DISCLAIMER NOTE

UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL

H:\Land Projects\1818030 Lamb-Diamond DWG\Improv\04-818030 - GRADING.dwg (JM SHUMAKER) 9/15/2015 (4:03:45 PM)



MATCHLINE - SEE SHEET 10 FOR CONTINUATION



SHEET INDEX

GRADING CONSTRUCTION NOTES

1. CONSTRUCT "A" TYPE CURB (CCAUSSD #219)
2. CONSTRUCT "L" TYPE CURB & GUTTER (CCAUSSD #216)
3. CONSTRUCT 4" CONCRETE SIDEWALK (CCAUSSD #234)
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16. SAWCUT AND REPLACE EXISTING ASPHALT PAVEMENT FOR TRENCHING (CCAUSSD #500.3, 500.5, 500.4 & 503) (STD. DWG. SD-15 & SD-17). CONTRACTOR SHALL REPLACE ALL DISTURBED PAVEMENT MARKINGS. (SEE SHEET 14 FOR UTILITY LOCATIONS AND SHEET 18 FOR TRAFFIC PAVEMENT MARKINGS)

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1. INSTALL PRECAST JENSEN DROP INLET (OR EQUIVALENT) SEE PLANS FOR INLET SIZE
2. INSTALL TYPE I MANHOLE WITH LOCKABLE/WATER TIGHT COVER (CCAUSSD #403) SEE PLANS FOR SIZE
3. INSTALL 18" CLASS III RCP PIPE
4. INSTALL 30" CLASS III RCP PIPE
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NOTES:

1. ALL WORK PERFORMED UNDER THE GRADING PERMIT REQUIRES SPECIAL INSPECTION PER SECTION 1704. (APPENDIX SECTION J105.2).
2. THE GRADING PERMIT DOES NOT INCLUDE THE CONSTRUCTION OF RETAINING WALLS AND OTHER STRUCTURES. SEPARATE PERMITS AND APPLICATIONS ARE REQUIRED FOR THESE. (APPENDIX SECTION J103.1 AS AMENDED)"

FEMA FLOOD PLAIN INFORMATION

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) COMMUNITY-PANEL NUMBER 32003C 2187F, REVISED NOVEMBER 16, 2011, THE SITE IS LOCATED WITHIN A ZONE "X". A ZONE "X" IS DESCRIBED BY FEMA AS AN AREA OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.

ESTIMATED EARTHWORK QUANTITIES

CUT: XX,XXX CY
FILL: XX,XXX CY
NET FILL: XX,XXX CY

THESE QUANTITIES ARE FOR ESTIMATING PURPOSE ONLY. THE FILL FIGURE INCLUDES A 15% AVERAGE SHRINKAGE FACTOR. OTHER CONSIDERATIONS SUCH AS OVEREXCAVATION, CALICHE, BOULDERS, ETC. WILL LIKELY AFFECT THE ACTUAL FIELD FILL AND CUT QUANTITIES. IT IS RECOMMENDED THAT THE CONTRACTOR CONSULT WITH THE SOILS ENGINEER AND PROVIDE HIS OWN FINAL QUANTITIES PRIOR TO BIDDING THE PROJECT. THE CIVIL ENGINEER ACCEPTS NO LIABILITY FOR VARIATIONS IN THE ACTUAL EARTHWORK QUANTITIES.

DRAINAGE STUDY

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT 054740.

THOMAS L. KELLEY, PE #17676

DISCLAIMER NOTE

UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.



SOILS REPORT

GEOTEK, INC.
DATED: NOVEMBER 26, 2014
PROJECT NO. 12108-LV6

LEGAL DESCRIPTION

THAT PORTION OF THE EAST HALF (E 1/2) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 31, TOWNSHIP 20 SOUTH, RANGE 62 EAST, M.D.M., CLARK COUNTY, NEVADA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

PARCEL 1 AS SHOWN ON PARCEL MAP IN FILE 98, PAGE 01, RECORDED SEPTEMBER 7, 1999 IN BOOK 990907 AS INSTRUMENT NO. 00470 OF OFFICIAL RECORDS.

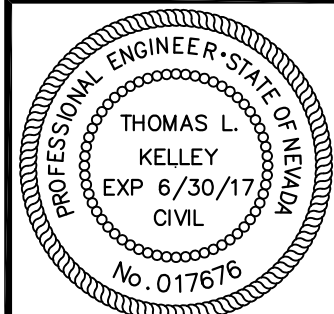
BASIS OF BEARINGS

NORTH 89°43'16" WEST, BEING THE BEARING OF THE NORTH LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 31, TOWNSHIP 20 SOUTH, RANGE 62 EAST, M.D.M., AS SHOWN ON A MAP ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE AS FILE 15, PAGE 32 OF SURVEYS.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK 1LV02 3104 - RIVET AND PLATE IN TOP OF CURB AT SOUTHWEST CORNER OF STEWART AND SANDHILL.

ELEVATION=539.670 (1770.57 FEET) NAVD 1988 DATUM.



DESIGNED BY:	CHKD BY:	DATE:	REVISION:
MF	TLK	September 2015	
JOB NUMBER:	DRAWN BY:	DATE:	APPL
818-030-152	MF		
NO.	REVISION	DATE	APPL

L. R. NELSON CONSULTING ENGINEERS, INC.	6765 West Russell Road, Suite 200 Las Vegas, Nevada 89118
• STRUCTURAL	• CIVIL
• PLANNING	• SURVEY

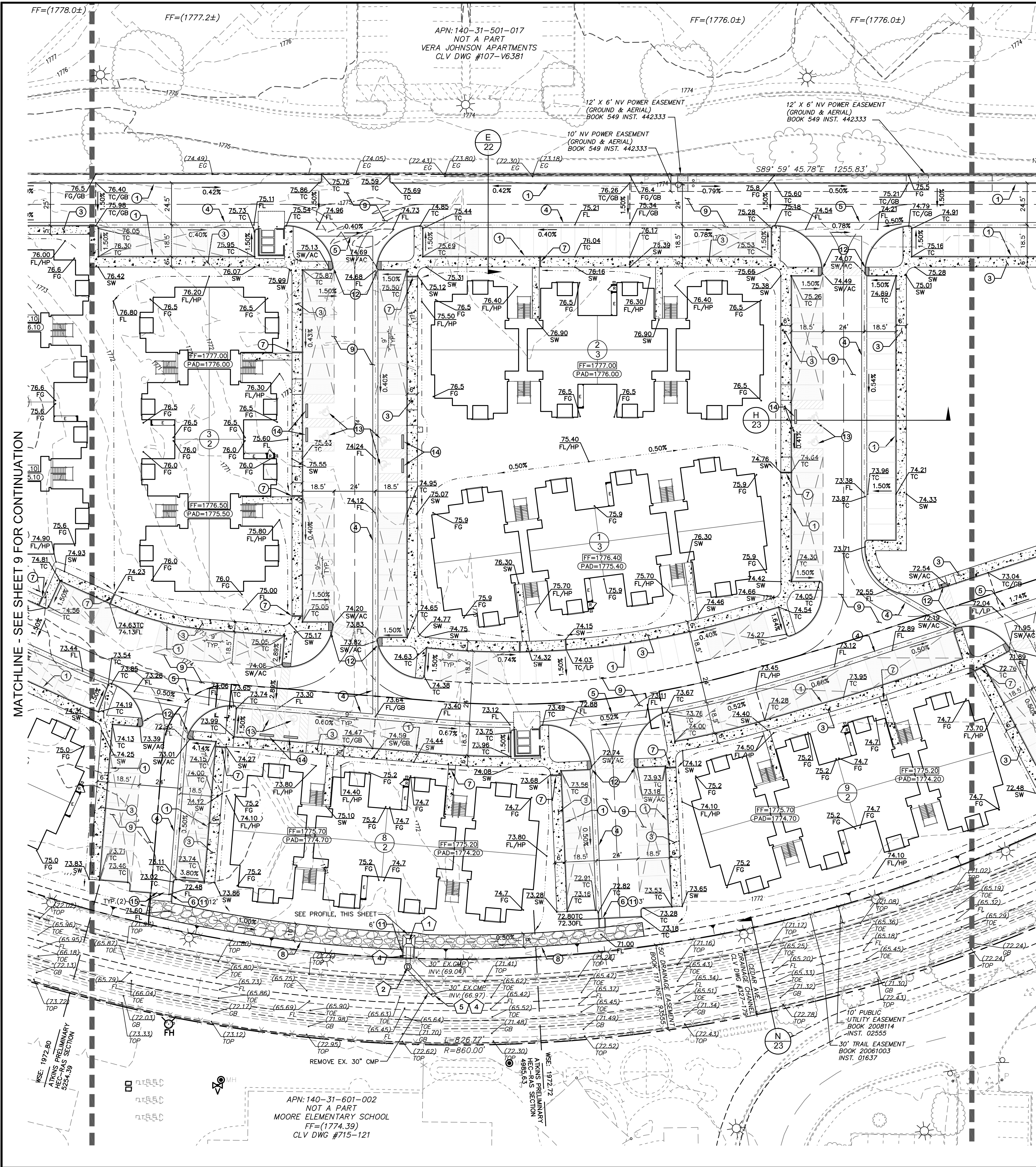


GRADING PLAN 1
LAMB PINES
IMPROVEMENT PLANS
CITY OF LAS VEGAS

SHEET NUMBER
9
OF 24 SHEETS

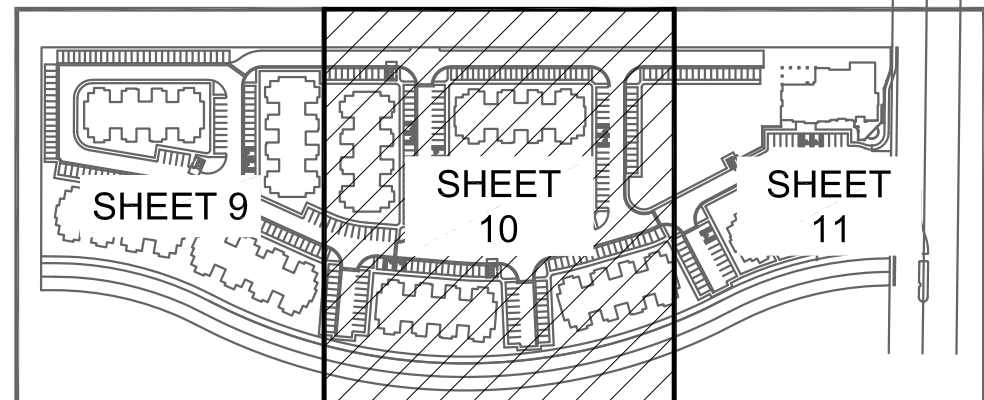
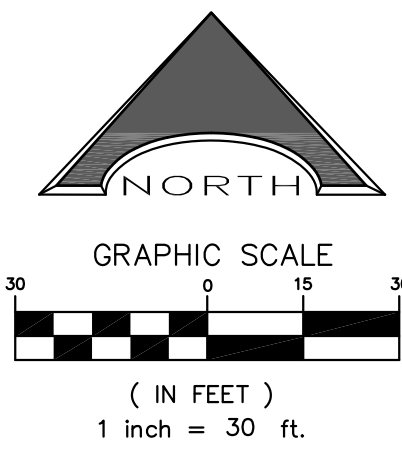
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MATCHLINE - SEE SHEET 11 FOR CONTINUATION

MATCHLINE - SEE SHEET 9 FOR CONTINUATION



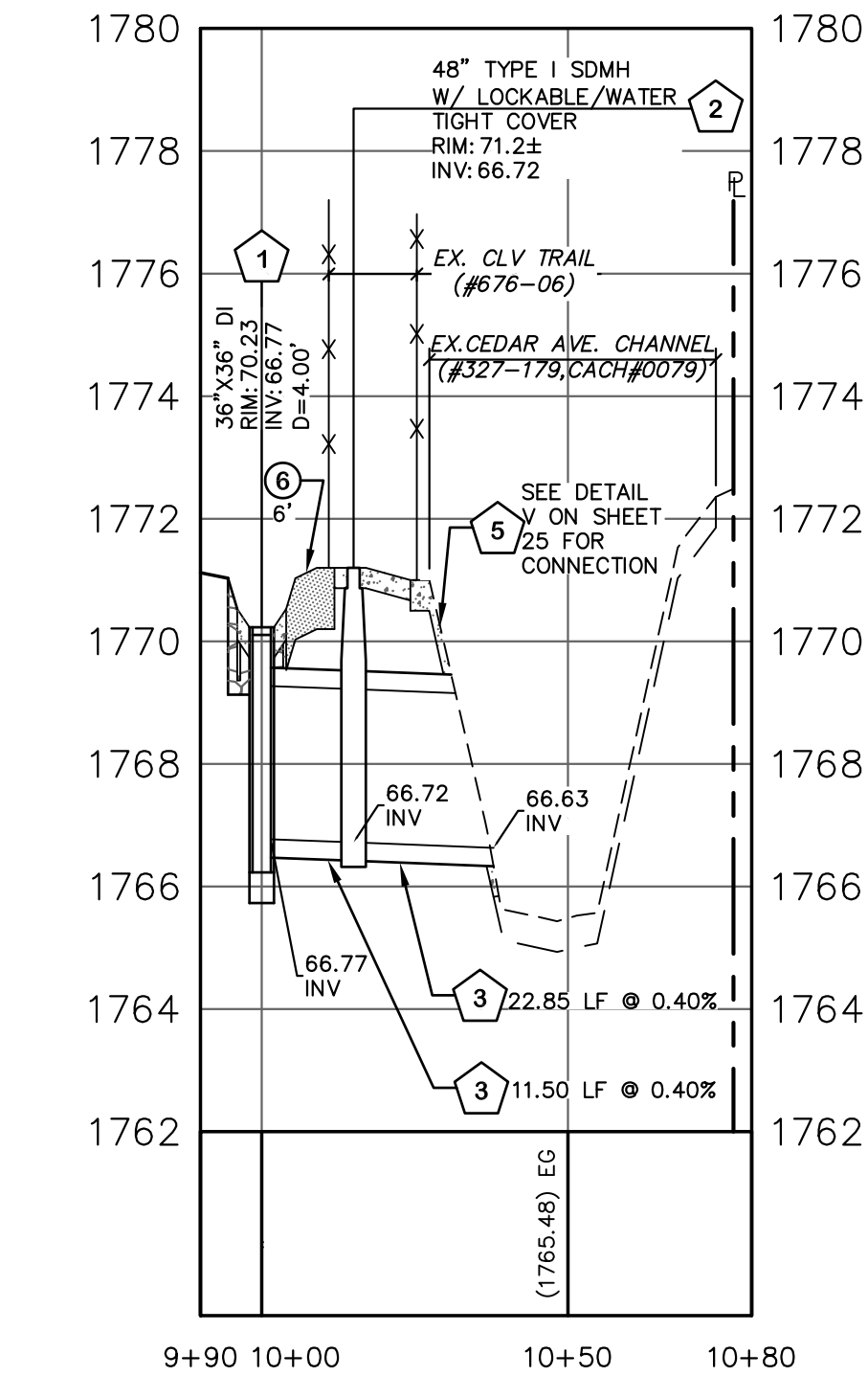
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36" X 36" DI TO CHANNEL - PROFILE VIEW

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

NOTES:

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DRAINAGE STUDY

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT 054740.

THOMAS L. KELLEY, PE #17676

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GEOTEK, INC.
DATED: NOVEMBER 26, 2014
PROJECT NO. 12108-LV6

LEGAL DESCRIPTION

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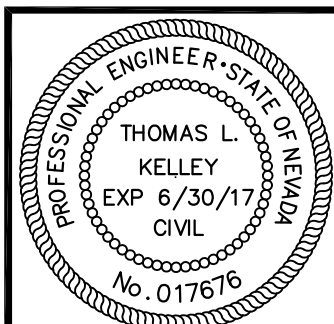
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DESIGNED BY:	CHKD BY:	DATE:
ML	TK	September 2015
DRAWN BY:	DATE:	APPL
ML	TK	DATE
REVISION	NO.	DATE

L. R. NELSON CONSULTING ENGINEERS, INC.
6765 West Russell Road, Suite 200
Las Vegas, Nevada 89118
(702) 798-7978
(702) 451-2296 FAX

• STRUCTURAL
• CIVIL
• PLANNING
• SURVEY



GRADING PLAN 2

LAMB PINES

IMPROVEMENT PLANS

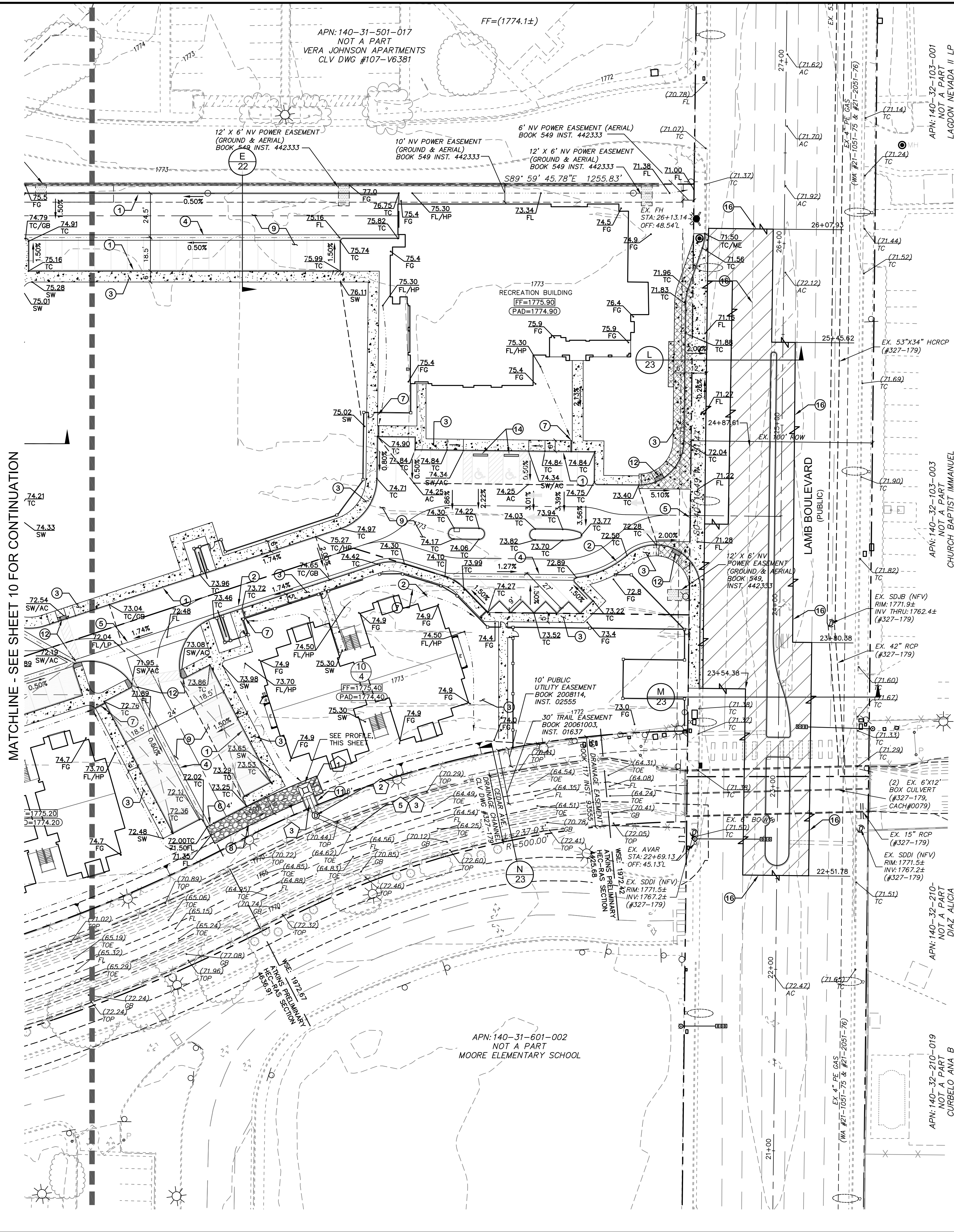
NEVADA

CITY OF LAS VEGAS

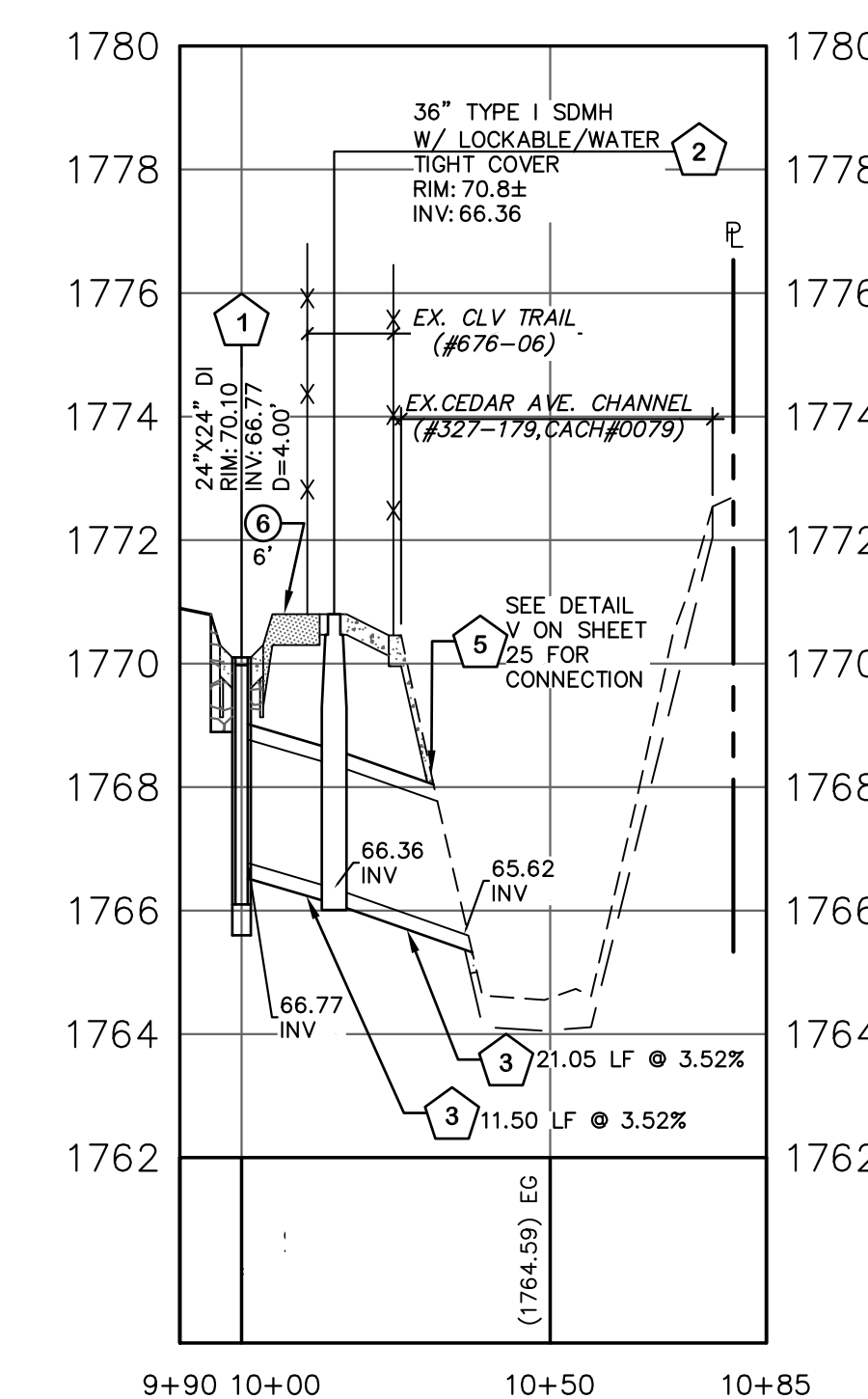
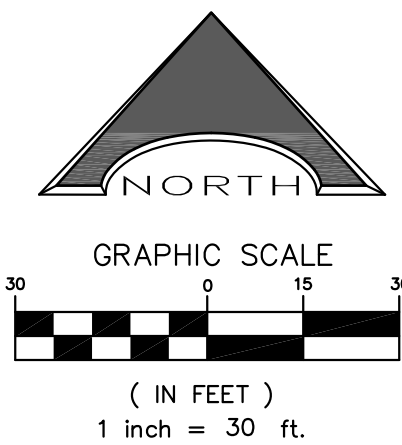
SHEET NUMBER
10
OF 24 SHEETS



H# 60588



MATCHLINE - SEE SHEET 10 FOR CONTINUATION



24" X 24" DI TO CHANNEL - PROFILE VIEW

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

SOILS REPORT

GEOTEK, INC.
DATED: NOVEMBER 26, 2014
PROJECT NO. 12108-LV6

LEGAL DESCRIPTION

THAT PORTION OF THE EAST HALF (E 1/2) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 31, TOWNSHIP 20 SOUTH, RANGE 62 EAST, M.D.M., CLARK COUNTY, NEVADA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

PARCEL 1 AS SHOWN ON PARCEL MAP IN FILE 98, PAGE 01, RECORDED SEPTEMBER 7, 1999 IN BOOK 990907 AS INSTRUMENT NO. 00470 OF OFFICIAL RECORDS.

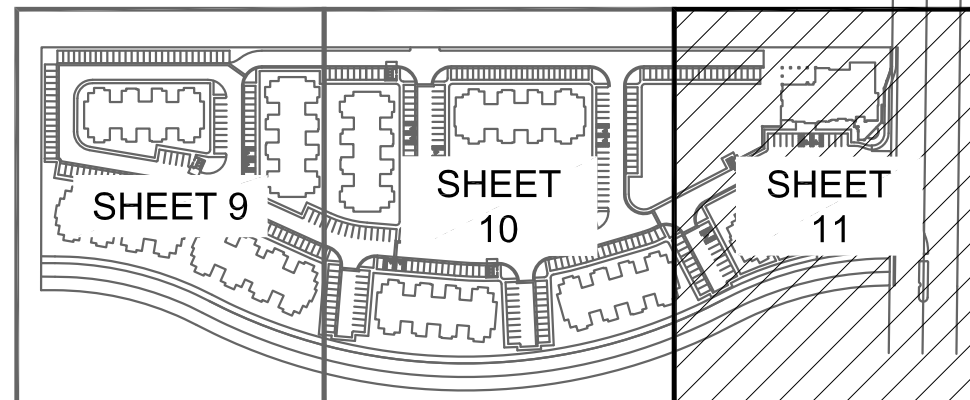
BASIS OF BEARINGS

NORTH 89°43'16" WEST, BEING THE BEARING OF THE NORTH LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 31, TOWNSHIP 20 SOUTH, RANGE 62 EAST, M.D.M., AS SHOWN ON A MAP ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE AS FILE 15, PAGE 32 OF SURVEYS.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK 1LV02 3104 - RIVET AND PLATE IN TOP OF CURB AT SOUTHWEST CORNER OF STEWART AND SANDHILL

ELEVATION=539.670 (1770.57 FEET) NAVD 1988 DATUM.



SHEET INDEX

GRADING CONSTRUCTION NOTES

1. CONSTRUCT "A" TYPE CURB (CCAUSSD #219)
2. CONSTRUCT "L" TYPE CURB & GUTTER (CCAUSSD #216)
3. CONSTRUCT 4" CONCRETE SIDEWALK (CCAUSSD #234)
4. CONSTRUCT 3' WIDE VALLEY GUTTER (DETAIL Q, SHEET 23)
5. CONSTRUCT 8" WIDE CROSS GUTTER (CCAUSSD #228)
6. CONSTRUCT CURB OPENING FOR DRAINAGE (DETAIL R, SHEET 23)
7. CONSTRUCT 4" SIDEWALK UNDERDRAIN (DETAIL P, SHEET 23)
8. INSTALL RIP-RAP (D₅₀= 6", THICKNESS= 12")
9. CONSTRUCT 2.5" AC PAVEMENT WITH 9" TYPE II AGGREGATE BASE
10. CONSTRUCT 4" MAX. RETAINING WALL WITH 6" SCREEN WALL PER CITY BUILDING DEPARTMENT STANDARDS
11. CONSTRUCT CONCRETE FLUME (DETAIL S, SHEET 24) SEE PLANS FOR SIZE
12. CONSTRUCT SIDEWALK RAMPS, CASE III, USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT (CCAUSSD #235)
13. CONSTRUCT HANDICAP PARKING AREA (DETAIL T, SHEET 24)
14. INSTALL PRECAST BUMPER BLOCK (CCAUSSD #238)
15. INSTALL VEHICULAR PROTECTION BOLLARD (UDACS PLATE NO. 75) 4" O.C.
16. SAWCUT AND REPLACE EXISTING ASPHALT PAVEMENT FOR TRENCHING (CCAUSSD #500.3, 500.5, 500.4 & 503) (STD. DWG. SD-15 & SD-17). CONTRACTOR SHALL REPLACE ALL DISTURBED PAVEMENT MARKINGS. (SEE SHEET 14 FOR UTILITY LOCATIONS AND SHEET 18 FOR TRAFFIC PAVEMENT MARKINGS)

STORM DRAIN CONSTRUCTION NOTES

1. INSTALL PRECAST JENSEN DROP INLET (OR EQUIVALENT) SEE PLANS FOR INLET SIZE
2. INSTALL TYPE I MANHOLE WITH LOCKABLE/WATER TIGHT COVER (CCAUSSD #403) SEE PLANS FOR SIZE
3. INSTALL 18" CLASS III RCP PIPE
4. INSTALL 30" CLASS III RCP PIPE
5. SAWCUT, REMOVE & REPLACE EXISTING CHANNEL SECTION. INSTALL 6" CONCRETE COLLAR, CUT END OF PIPE FLUSH WITH CHANNEL GROUT AROUND PERIMETER OF PIPE AND EXPOSED FACE. (SEE DETAIL V, SHEET 24)

NOTES:

1. ALL WORK PERFORMED UNDER THE GRADING PERMIT REQUIRES SPECIAL INSPECTION PER SECTION 1704, (APPENDIX SECTION J105.2).
2. THE GRADING PERMIT DOES NOT INCLUDE THE CONSTRUCTION OF RETAINING WALLS AND OTHER STRUCTURES. SEPARATE PERMITS AND APPLICATIONS ARE REQUIRED FOR THESE. (APPENDIX SECTION J103.1 AS AMENDED)"

FEMA FLOOD PLAIN INFORMATION

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) COMMUNITY-PANEL NUMBER 32003C 2187F, REVISED NOVEMBER 16, 2011, THE SITE IS LOCATED WITHIN A ZONE "X". A ZONE "X" IS DESCRIBED BY FEMA AS AN AREA OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.

ESTIMATED EARTHWORK QUANTITIES

CUT: XX,XXX CY
FILL: XX,XXX CY
NET FILL: XX,XXX CY

THESE QUANTITIES ARE FOR ESTIMATING PURPOSE ONLY. THE FILL FIGURE INCLUDES A 15% AVERAGE SHRINKAGE FACTOR. OTHER CONSIDERATIONS SUCH AS OVEREXCAVATION, CALICHE, BOULDERS, ETC. WILL LIKELY AFFECT THE ACTUAL FIELD FILL AND CUT QUANTITIES. IT IS RECOMMENDED THAT THE CONTRACTOR CONSULT WITH THE SOILS ENGINEER AND PROVIDE HIS OWN FINAL QUANTITIES PRIOR TO BIDDING THE PROJECT. THE CIVIL ENGINEER ACCEPTS NO LIABILITY FOR VARIATIONS IN THE ACTUAL EARTHWORK QUANTITIES.

DRAINAGE STUDY

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT 054740.

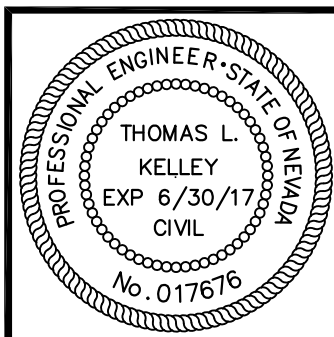
THOMAS L. KELLEY, PE #17676

DISCLAIMER NOTE

UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.



H# 60588



DESIGNED BY:	TLK	CHD BY:	TLK
DRAWN BY:	MH	DATE:	September 2015
JOB NUMBER:	818-030-152	REVISION	
NO.		DATE	

L. R. NELSON CONSULTING ENGINEERS, INC.
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GRADING PLAN 3

LAMB PINES

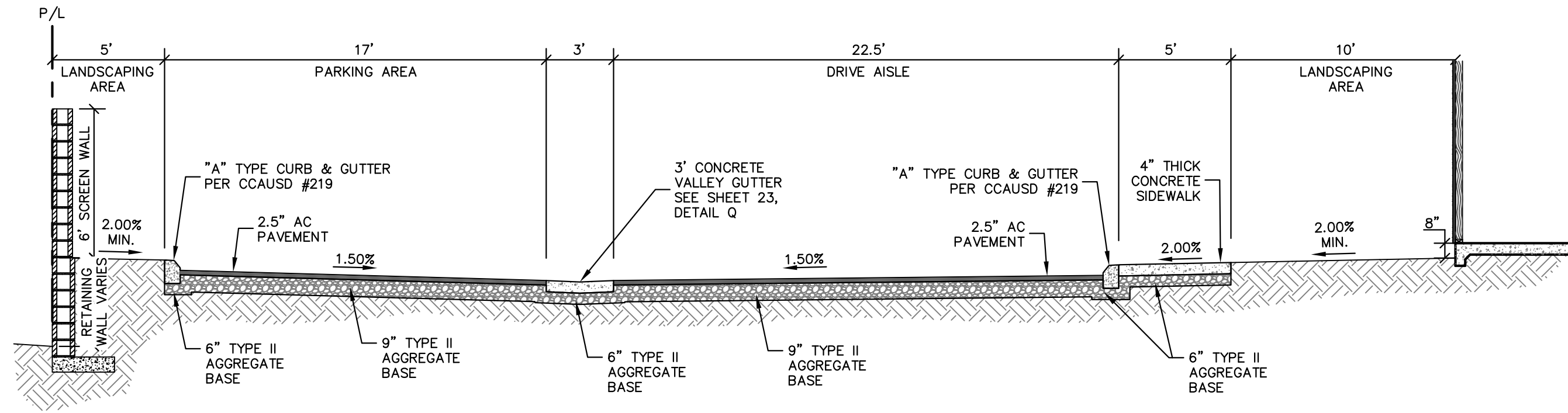
IMPROVEMENT PLANS

NEVADA

CITY OF LAS VEGAS

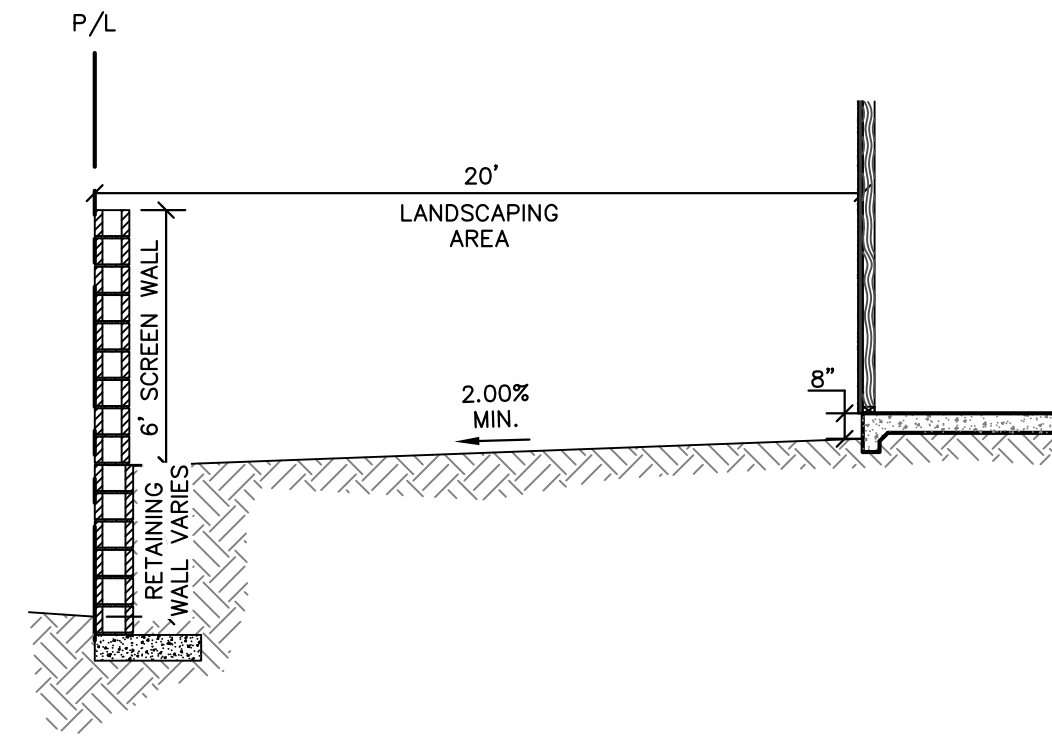
SHEET NUMBER
11
OF 24 SHEETS

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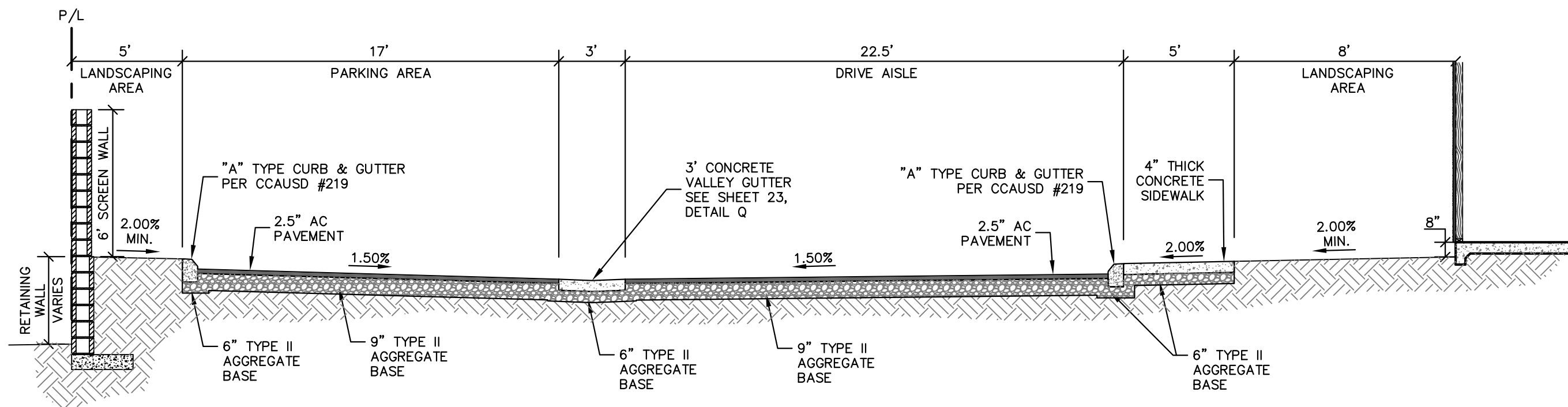
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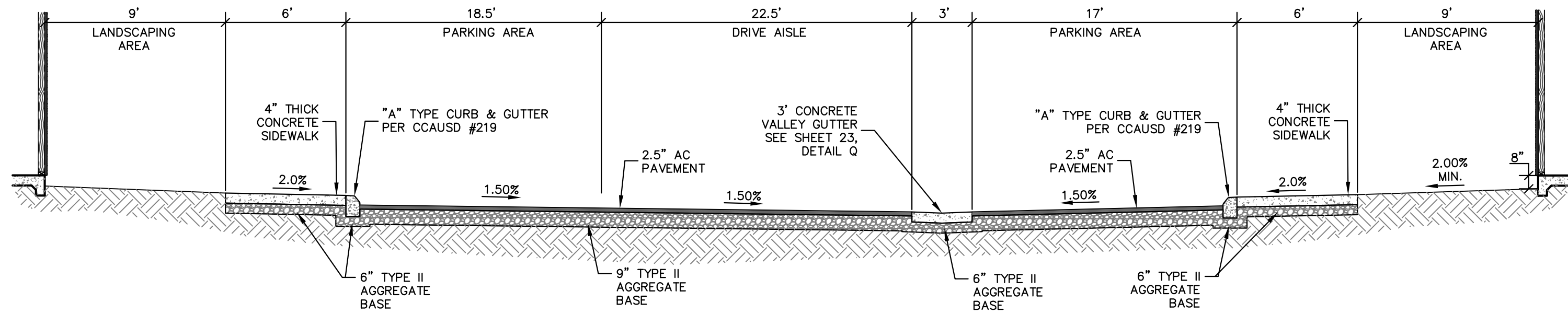
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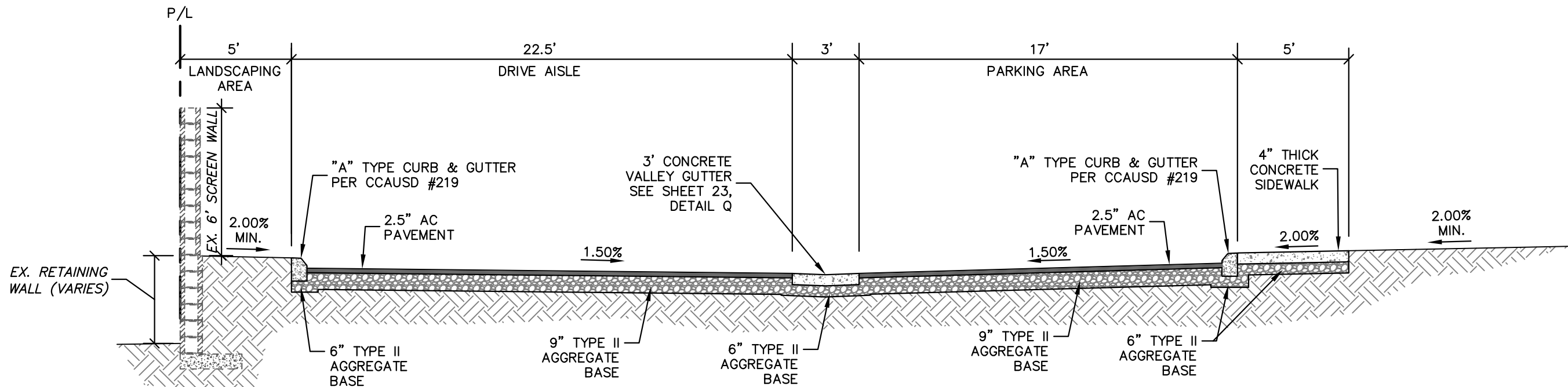
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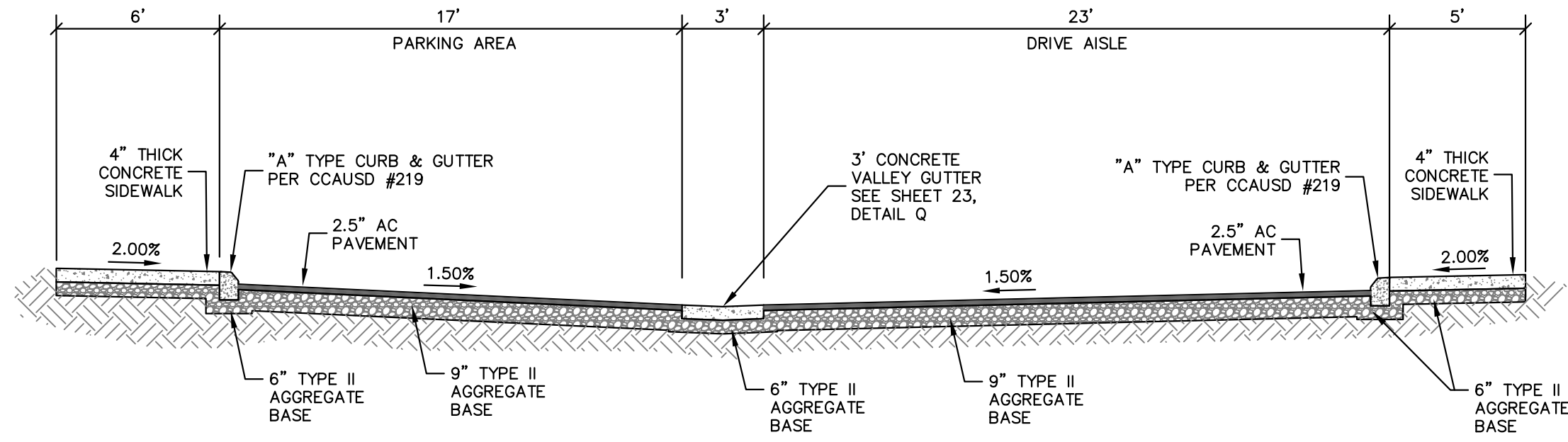
D SECTION

SCALE: NTS



E SECTION

SCALE: NTS



F SECTION

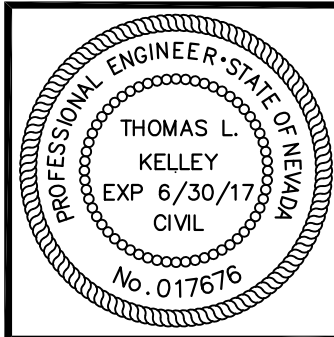
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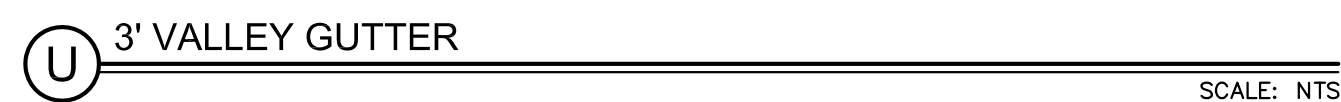
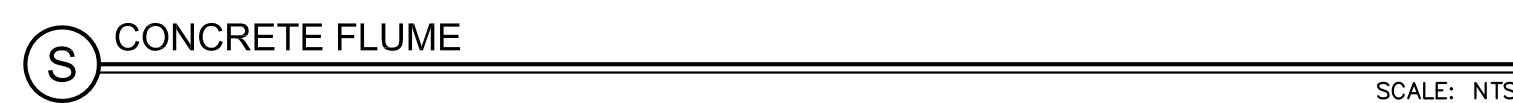
DESIGNED BY:	MH	DRAWN BY:	MH	CHKD BY:	TLK
JOB NUMBER:	818-030-152	DATE:	August 2015	REVISION:	
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DETAIL SHEET 1
LAMB PINES
IMPROVEMENT PLANS
CITY OF LAS VEGAS NEVADA

SHEET NUMBER
22
OF 24 SHEETS



SCALE: NTS

H# 60588

SHEET NUMBER
24
OF 24 SHEETS

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