

DS #: 4538

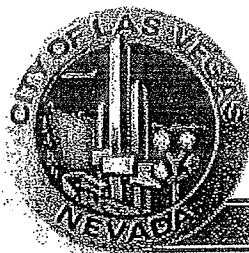
APN: 125-20-216-006

PROJECT: Steinberg Diagnostic Medical Imaging (SDMI)

SUBMITTAL: Supplemental

SCANNED BY/DATE: _____

CHECKED BY/DATE: _____



CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		March 21, 2012
TO: Land Development Services Department of Public Works		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	COPIES TO:	
Drainage Study for:	CivilWorks Inc.	
Steinberg Diagnostic Medical Imaging (SDMI)		
Cross Streets:	SWQ of Durango Dr. & Hitt Center Court	SDMI Centennial Hills LLC
File Number:	F:\Depot\DSMemos\DS4538C.doc	Bart Anderson, P.E., DevCo
Parcel Number:	125-20-216-006	
Zoning Action:	SDR-44327	
FEMA Flood Zone	YES	NO X
Proposed Storm Drain	YES	NO X

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	11/23/2011	11/29/2011	Not Approved	\$400.00	267144: \$400
2 nd Submittal	2/27/2012	3/12/2012	Not Approved	\$400.00	275599: \$400
Supplemental	3/15/2012	3/21/2012	See Comments Below	N/C	N/C
TOTAL FEES (LDDRS):				\$800.00	----

REMARKS:

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

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

In an effort to increase administrative efficiency, the City of Las Vegas Public Works Department requires all soil reports, drainage studies and traffic impact analysis submittals to be accompanied by an electronic copy of the submittal. Electronic documents must be submitted with one original hard copy of the study. Electronic documents should be on a universal computer-readable digital output replicating your submittal to be used for archival or display purposes. This may be more than one file if necessary. An Indexed Portable Document Format (PDF) or Print Ready CAD file formats with a minimum of 300dpi are the desired formats, but provided it is a high quality digitized replication of the submittal, other formats may be acceptable. If figures are in color, they must be scanned in color and saved as a separate file. The new submittal requirement is effective on **July 1, 2011**. If there are any questions regarding these new requirements, please contact Albert Sung in the Flood Section at (702) 229-2001 or Rick Schroder in Traffic Engineering at (702) 229-6327.

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

NOTE: Please be advised that all land surface area disturbances over 1 acre or any area adjacent to a water way must submit to the *Nevada Division of Environmental Protection* a "Notice of Intent"

to discharge that certifies a stormwater pollution prevention plan has been developed and is maintained on site; for inclusion in the Stormwater General Permit No. NVR100000. A phased construction unit in a contiguous subdivision is considered under construction until all stripped or disturbed surface areas have been covered by paving, building construction or planting. For more information, including forms and applications see <http://ndep.nv.gov/bwpc/storm01.htm> or call (775) 687-9429.

NOTE: This drainage study assumes that the project will be constructed in one phase. If improvement plans are submitted to break the project into separate phases, a drainage study update will be required for each phase addressing the interim condition.

END OF REMARKS

ays

T/R/S: T19S/R60E/20
AREA G-20

**SUPPLEMENT #1 TO ADDENDUM #1 OF THE
UPDATE TO THE TECHNICAL DRAINAGE
STUDY FOR
STEINBERG DIAGNOSTIC
MEDICAL IMAGING
(SDMI)
AT
DURANGO DR. & HITT FAMILY CT.**

Project No. 104011013.00

March 2012

Rec'd: 3/15/12

DS 4538

G-20

N/C

Supp. Info.

Prepared for:

TKC Design, PC
9225 W. Flamingo Road, Suite #100
Las Vegas, NV 89147
Contact: John Darin
PHONE: (702) 228-9551

Prepared by:

CivilWorks Inc
Engineering with "sensible" solutions tailored to your "specific" needs.

4945 W. Patrick Lane Las Vegas, NV 89118
Office: (702) 534-7555 Fax: (702) 534-1825

HYDROLOGIC CRITERIA AND DRAINAGE MANUAL
DRAINAGE STUDY INFORMATION FORM

Name of Development: STEINBERG DIAGNOSTIC MEDICAL IMAGING (SDMI) Date: 15~~th~~ MARCH · 2012

Location of Development: a) Descriptive (Cross Streets) North/South: DURANGO DRIVE

East/West: HITT CENTER COURT

b) Section: 20 Township: 19S Range: 60E

c) APN: 125-20-216-006

Name of Owner: SDMI CENTENNIAL HILLS LLC

Telephone No.: _____ Fax No.: _____ E-Mail Address: _____

Address: 6925 N. DURANGO DRIVE, LAS VEGAS, NV 89149

Contact Person-Name: JENNIFER NUESCA Telephone No.: 534-1827

* E-Mail Address: JKN@CIVILWORKSONLINE.COM Fax No.: 534-1825

Firm: CIVILWORKS, INC.

Address: 4445 W. PATRICK LANE 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: 1.48 Being Developed/Disturbed: 1.48

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

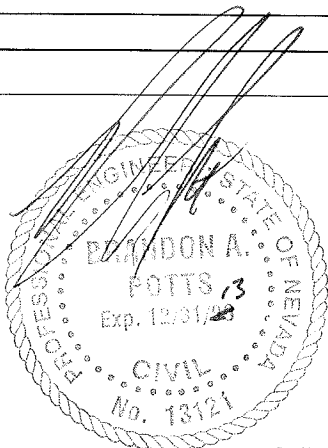
4. Proposed type of development (Residential, Commercial, Etc.): COMMERCIAL

5. Approximate upstream land area which drains to the subject site: +/- 1.25-ACRES

6. Has the site drainage been evaluated in the past? ☒ YES ☐ NO If yes, please identify documentation: CLV DS 4352

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

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



Engineer's Seal

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

*New Required Field

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

Revision	Date

Local Entity File No. _____

REFERENCE:

STANDARD FORM 1

March 15, 2012

Albert Sung, P.E.

City of Las Vegas Public Works Department – Flood Control Section
333 N. Rancho Drive
Las Vegas, NV 89106

Re: Supplement #1 to Addendum #1 to the Update for Steinberg Diagnostic Medical Imaging @ Durango Dr. & Hitt Family Ct.

Dear Mr. Albert Sung,

This letter is in response to the drainage study review comments for the Technical Drainage Study Update for Steinberg Diagnostic Medical Imaging dated February 27, 2012. The comments have been reiterated below along with the corresponding responses.

Comment 1: Per the hydraulic calculations provided, the 100-year flow depth in the proposed concrete valley gutter along the west boundary wall is 0.21'. With reference to Section C/C7, during a major storm event, the flow will not be contained in the concrete gutter and will spill over into the adjacent parking spaces. Revise the valley gutter to a U-channel which will contain the 100-year flow. Revise the hydraulic calculations accordingly.

Response 1: The 2' valley gutter has been replaced with a 2' U-channel. The Grading Plan and Detail Sheet have been revised to reflect this change. In addition, the hydraulic calculations have been revised accordingly. See Appendix for FlowMaster models.

Comment 2: Label the existing public drainage easement (privately maintained) with recorded document or map number on the grading plan.

Response 2: The existing public drainage easement has been labeled accordingly.

Comment 3: Label an existing storm drain system in Hitt Center Court with City of Las Vegas recorded drawing number on the Grading Plan.

Response 3: The existing storm drain system in Hitt Center Court has been labeled accordingly.

Comment 4: Firestone is constructing their development adjacent to the subject site to the east, show the proposed design of Firestone on the subject grading plan.

Response 4: The Firestone improvements have been shown on the Grading Plan.

CivilWorks Inc
Engineering with "sensible" solutions tailored to your "specific" needs.

4945 W. Patrick Lane Las Vegas, NV 89118
Office: (702) 534-7555 Fax: (702) 534-1825

Comment 5: A proposed retaining wall to the north of the north parking stall appears to be frozen on the grading plan in the last submittal. Show the proposed retaining wall in the next submittal.

Response 5: The northern retaining wall has been shown on the Grading Plan.

Comment 6: Sheet C7: Revise Typical Sections C and D per Comment #1 accordingly.

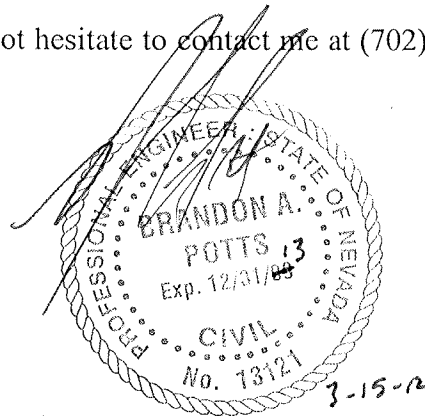
Response 6: Details for Sections C and D have been revised to reflect the changes per Comment #1.

If you have any questions or concerns, please do not hesitate to contact me at (702) 534-1827.

Sincerely,



Jennifer K. Nuesca, E.I.
Civil EIT



Brandon A. Potts, P.E.
Principal Engineer

CivilWorksInc
Engineering with "sensible" solutions tailored to your "specific" needs.

4945 W. Patrick Lane Las Vegas, NV 89118
Office: (702) 534-7555 Fax: (702) 534-1825

APPENDIX

COMMENT LETTER

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM		DATE: March 12, 2012
TO: Land Development Services Department of Public Works		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for:	
	Steinberg Diagnostic Medical Imaging (SDMI)	
Cross Streets:	SWQ of Durango Dr. & Hitt Center Court	COPIES TO: CivilWorks Inc.
File Number:	F:\Depot\DSMemos\DS4538B.doc	SDMI Centennial Hills LLC
Parcel Number:	125-20-216-006	Bart Anderson, P.E., DevCo
Zoning Action:	SDR-44327	
FEMA Flood Zone	YES	NO X
Proposed Storm Drain	YES	NO X

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TOTAL FEES (LDDRS):					----

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- Label the existing public drainage easement (privately maintained) with recorded document or map number on the grading plan.
- Second request: Label an existing storm drain system in *Hitt Center Court* with *City of Las Vegas* recorded drawing number on the grading plan.
- Second request: *Firestone* is constructing their development adjacent to the subject site to the east, show the proposed design of *Firestone* on the subject grading plan.
- A proposed retaining wall to the north of the north parking stall appears to be frozen on the grading plan in the last submittal. Show the proposed retaining wall in the next submittal.
- Sheet C7:** Revise Typical Sections C and D per Comment #1 accordingly.

In an effort to increase administrative efficiency, the City of Las Vegas Public Works Department requires all soil reports, drainage studies and traffic impact analysis submittals to be accompanied by an electronic copy of the

submittal. Electronic documents must be submitted with one original hard copy of the study. Electronic documents should be on a universal computer-readable digital output replicating your submittal to be used for archival or display purposes. This may be more than one file if necessary. An Indexed Portable Document Format (PDF) or Print Ready CAD file formats with a minimum of 300dpi are the desired formats, but provided it is a high quality digitized replication of the submittal, other formats may be acceptable. If figures are in color, they must be scanned in color and saved as a separate file. The new submittal requirement is effective on **July 1, 2011**. If there are any questions regarding these new requirements, please contact Albert Sung in the Flood Section at (702) 229-2001 or Rick Schroder in Traffic Engineering at (702) 229-6327.

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END OF REMARKS
ays

T/R/S: T19S/R60E/20
AREA G-20

HYDRAULIC ANALYSES

FlowMaster Cross Sections

2' U-CHANNEL

Worksheet for Irregular Channel

Project Description	
Project File	x:\2011 projects\104011013.00 sdmi building @ durango & hitt\08 - phase 2\supp to up
Worksheet	2' U-CHANNEL
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Input Data				
Channel Slope		0.024000 ft/ft		
Elevation range: -0.04 ft to 0.50 ft.				
Station (ft)	Elevation (ft)	Start Station	End Station	Roughness
0.00	0.50	0.00	2.00	0.013
0.00	0.00			
1.00	-0.04			
2.00	0.00			
2.00	0.50			
Discharge	2.00	cfs		

Results		
Wtd. Mannings Coefficient	0.013	
Water Surface Elevation	0.17	ft
Flow Area	0.38	ft ²
Wetted Perimeter	2.34	ft
Top Width	2.00	ft
Height	0.21	ft
Critical Depth	0.29	ft
Critical Slope	0.005113	ft/ft
Velocity	5.27	ft/s
Velocity Head	0.43	ft
Specific Energy	0.60	ft
Froude Number	2.13	
Flow is supercritical.		

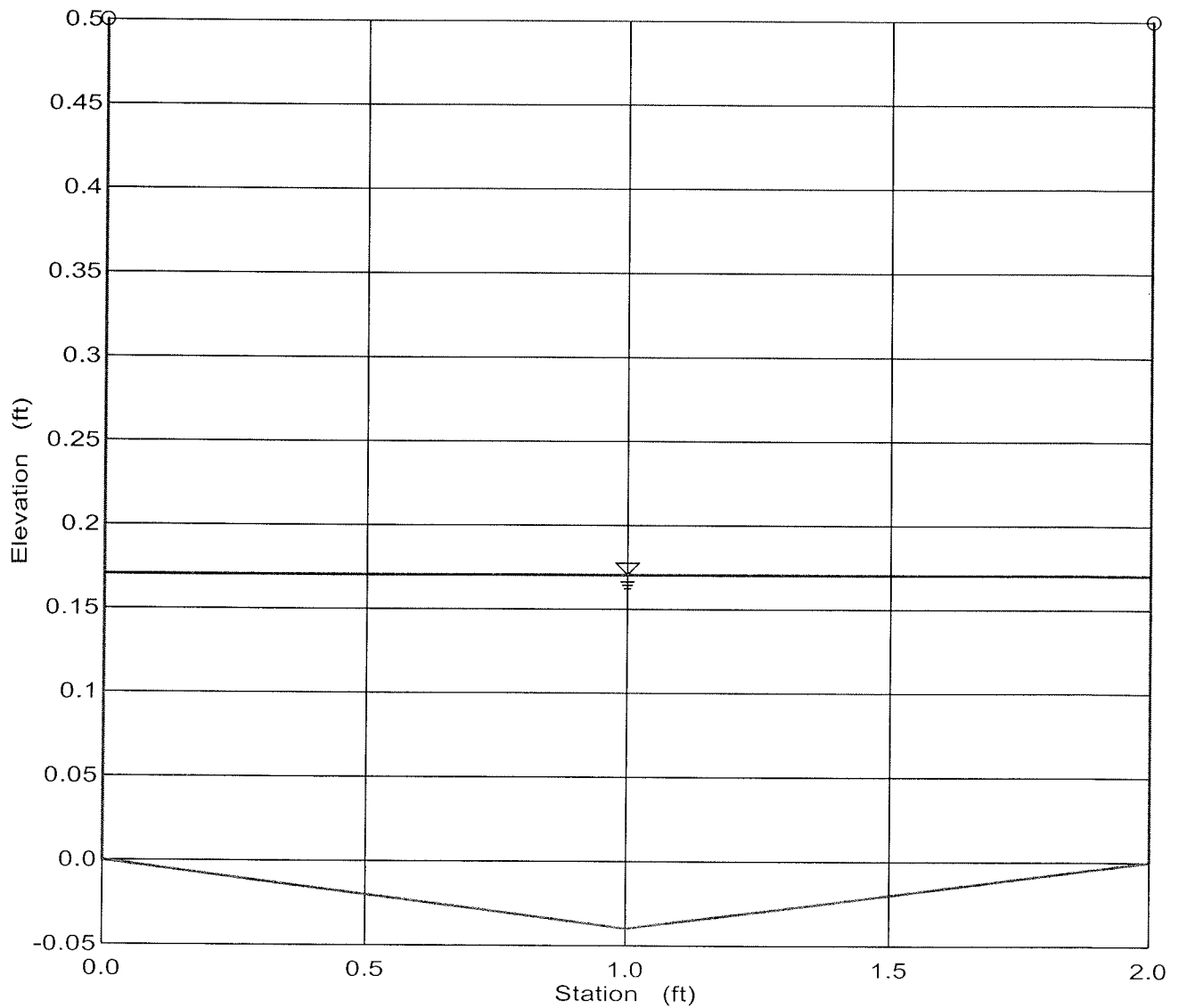
2' U-CHANNEL
Cross Section for Irregular Channel

Project Description

Project File	x:\2011 projects\104011013.00 sdmi building @ durango & hitt\08 - phase 2\supp to up
Worksheet	2' U-CHANNEL
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Section Data

Wtd. Mannings Coefficient	0.013
Channel Slope	0.024000 ft/ft
Water Surface Elevation	0.17 ft
Discharge	2.00 cfs

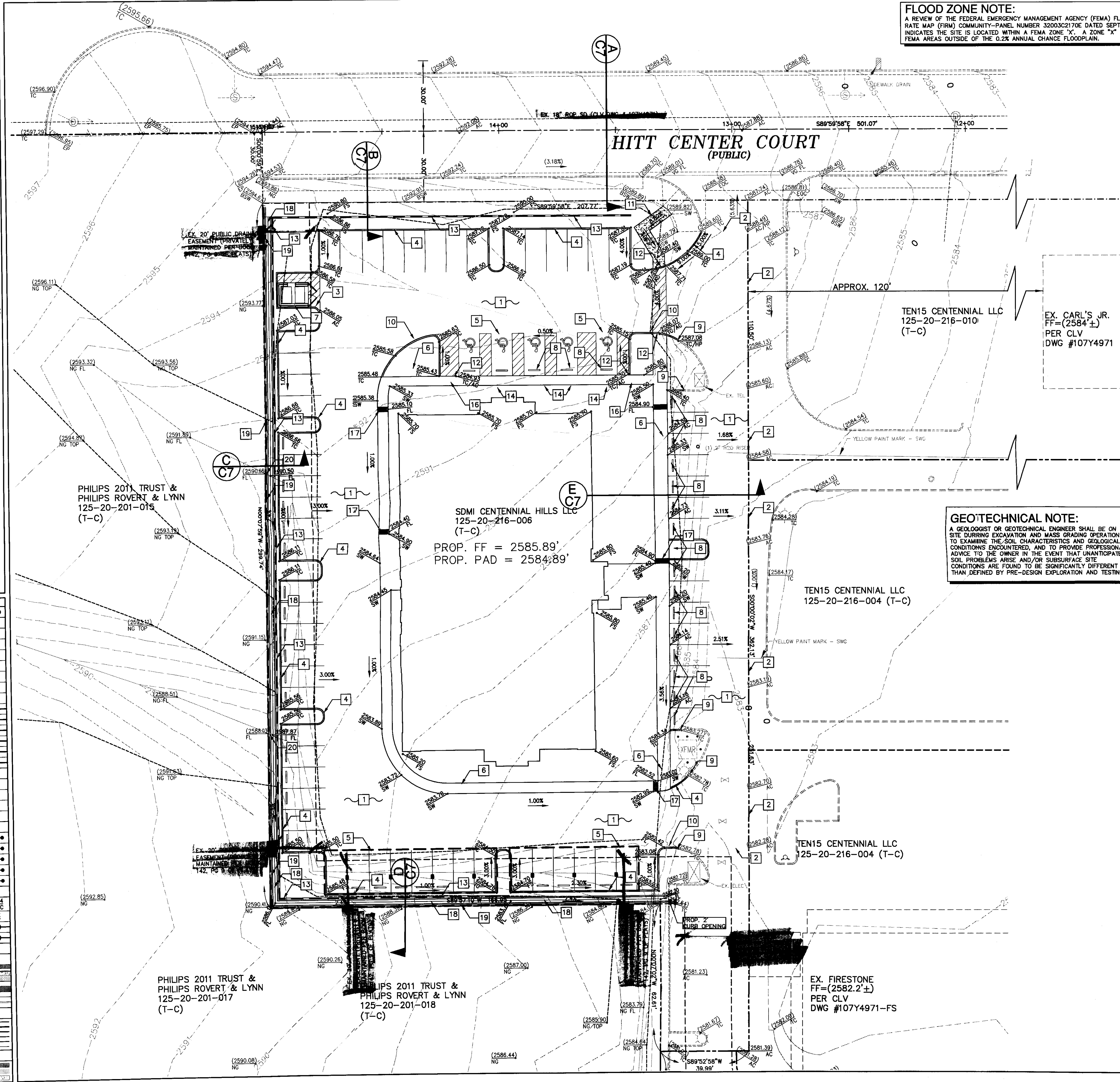


PLANS

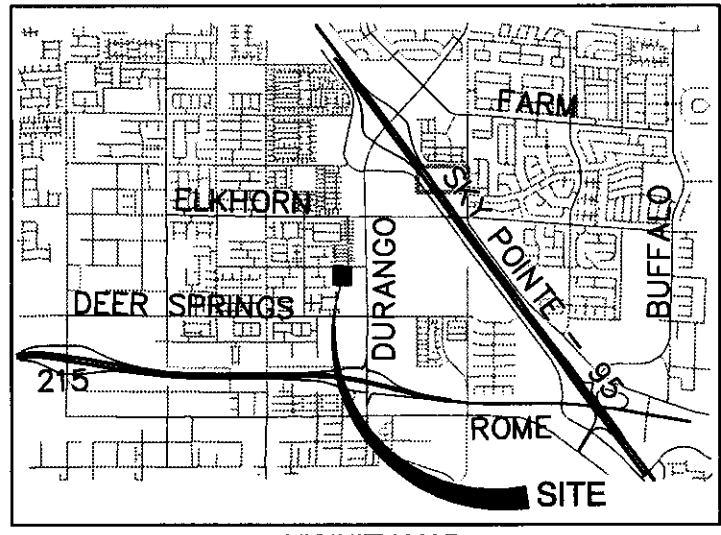
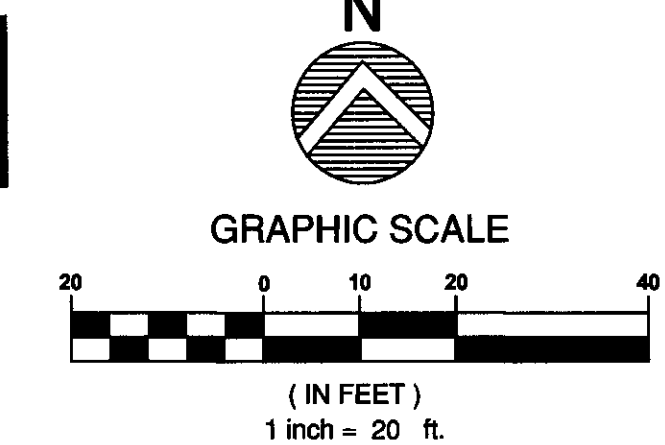
Grading Plan
Detail Sheet

ABBREVIATIONS
(SEE CIV. SHT. FOR COMPLETE LIST)
AC ASPHALTIC CONCRETE
ADJ ADJUST
AGG AGGREGATE
BCR BEGINNING OF CURB RETURN
BEG BEGINNING OF SIDEWALK
BSW BACK OF SIDEWALK
BVC BEGINNING OF VERTICAL CURVE
CATV CABLE TV
CCAUSD CLARK COUNTY AREA
UNIFORM STANDARD DRAWING
CCRFCD CLARK COUNTY REGIONAL
FLOOD CONTROL DISTRICT
CL CENTERLINE
CLV CITY OF LAS VEGAS
CMU CONCRETE MASONRY UNIT
CO CLEAN CUT
COMM COMMUNICATIONS
CONC CONCRETE
COND CONDUIT
CULV CULVERT
DC DEPRESSURED CURB
DI DROP INLET
DIP DUCTILE IRON PIPE
DOM DOMESTIC
ELEC ELECTRIC
EAC EDGE OF AC
EC END OF CURVE
EOR END OF CURB RETURN
ELEV ELEVATION
EP EDGE OF PAVEMENT
EX EXISTING
FAST FREEMAN & ARTERIAL
SYSTEM OF TRANSPORTATION
FF FINISH FLOOR
FG FINISH GRADE
FH FIRE HYDRANT
FL FLOW LINE
FO FIBER OPTICS
FS FINISHED SURFACE
GB GRADE BREAK
HDPE HIGH DENSITY POLYETHYLENE
HGL HEADWALL GRADE LINE
HP HIGH POINT
INV INVERT
IRR IRRIGATION
LAT LATERAL
LF LINEAL FEET
LS LANDSCAPE
LT LEFT
LVWD LAS VEGAS VALLEY WATER
DISTRICT
MAX MAXIMUM
MH MANHOLE
MIN MINIMUM
MTR METER
NDOT NEVADA DEPARTMENT OF
TRANSPORTATION
PB PULL BOX
PL PROPERTY LINE
PP POWER POLE
PROP PROPOSED
PVC POLY VINYL CHLORIDE PIPE
PVMT PAVEMENT
RT RIGHT
ROW RIGHT-OF-WAY
SD SANITARY SEWER
SKWA SOUTHERN NEVADA WATER
AUTHORITY
STA STATION
STLT STREET LIGHT
SVZ SIGHT VISIBILITY ZONE
SIDEWALK
TEL TELEPHONE
TC TOP OF CURB
TF TOP OF FOOTING
TW TOP OF WALL
TYP TYPICAL
UDACS UNIFORM DESIGN AND
CONSTRUCTION STANDARDS
VG VALLEY GUTTER
WL WATER LINE

LEGEND		
DESCRIPTION	EXISTING	PROPOSED
UTILITIES		
B.O. VALVE		
FIRE HYDRANTS		
CLEAN OUT		
GATE VALVE		
METER		
REDUCER		
CAP		
11.25' ELBOW		
22.5' ELBOW		
45' ELBOW		
90' ELBOW		
CROSS		
TEE		
MANHOLES		
ELECTRICAL		
SANITARY SEWER		
STORM DRAIN		
TELEPHONE		
STREET LIGHTS		
100W HPS STL.		
150W HPS STL.		
200W HPS STL.		
250W HPS STL.		
400W HPS STL.		
GRADING		
SPOT ELEV.	(12.34)	12.34
SLOPE	(1.2%)	1.2%
5' CONT.	(2005)	2005
1' CONT.	(2007)	2007
SITE		
SIGN		
"L" CURB		
"A" CURB		
EDGE OF PAVT.		
WALL		
LINE TYPES		
CL OR SECTION LINE		
PROPERTY LINE		
RIGHT OF WAY LINE		
EASEMENT LINE		
SAWTOOTH LINE		
FLOW LINE		
SHADES		
HEAVY AC PAVEMENT		
LIGHT AC PAVEMENT		
CONCRETE PAVEMENT		



FLOOD ZONE NOTE:
A REVIEW OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) COMMUNITY-PANEL NUMBER 32003C2170E DATED SEPTEMBER 27, 2002 INDICATES THE SITE IS LOCATED WITHIN A FEMA ZONE "X". A ZONE "X" IS DESCRIBED AS FEMA AREAS OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN.



- CONSTRUCTION NOTES:
- ALL CONSTRUCTION TO BE DONE IN ACCORDANCE WITH CLARK COUNTY AREA UNIFORM STANDARD DRAWINGS (C.C.A.U.S.D.) LATEST EDITION AND/OR REGULATING ENTITY HAVING JURISDICTION.
 - NOT ALL NOTES USED ON THIS SHEET -
 - INSTALL AC PAVEMENT PER DETAIL ON SHEET C7.
 - SAWTOOTH AND MATCH EXISTING AC.
 - INSTALL CONCRETE PAVEMENT DETAIL ON SHEET C7.
 - INSTALL "A" TYPE CURB PER C.C.A.U.S.D. No. 219.
 - INSTALL 3" VALLEY GUTTER PER DETAIL ON SHEET C7.
 - INSTALL CONCRETE SIDEWALK PER C.C.A.U.S.D. No. 234 (MIN 2.0% CROSS SLOPE).
 - INSTALL TRASH ENCLOSURE. SEE ARCHITECTURAL PLANS.
 - INSTALL BUMPER BLOCK PER C.C.A.U.S.D. No. 238.
 - MATCH EXISTING CURB
 - INSTALL "L" TYPE CURB PER C.C.A.U.S.D. No. 219.
 - INSTALL RAMP AND HANDRAIL PER ADA STANDARDS.
 - INSTALL "O" FACE CURB PER C.C.A.U.S.D. No. 219.
 - INSTALL RETAINING WALL PER STRUCTURAL DETAILS.
 - INSTALL RESERVED PARKING SIGN PER DETAIL ON SHEET C7.
 - MATCH EXISTING GRADES.
 - INSTALL SIDEWALK RAMP PER DETAIL ON SHEET C7.
 - INSTALL SIDEWALK DRAIN PER C.C.A.U.S.D. No. 236.
 - INSTALL 2" U-CHANNEL PER DETAIL ON SHEET C7.
 - INSTALL BLOCK WALL PER DETAIL ON SHEET C7.
 - INSTALL BLOCK WALL OPENING PER DETAIL ON SHEET C7.

GEO/TECHNICAL NOTE:
A GEOLOGIST OR GEOTECHNICAL ENGINEER SHALL BE ON SITE DURING EXCAVATION AND MASS GRADING OPERATIONS TO EXAMINE THE SOIL CHARACTERISTICS AND GEOLOGICAL CONDITIONS ENCOUNTERED, AND TO PROVIDE PROFESSIONAL ADVICE TO THE OWNER IN THE EVENT THAT UNANTICIPATED SOIL PROBLEMS ARISE AND/OR SUBSURFACE SITE CONDITIONS ARE FOUND TO BE SIGNIFICANTLY DIFFERENT THAN DEFINED BY PRE-DESIGN EXPLORATION AND TESTING.

GRADING PLAN CERTIFICATION
NAME: BRANDON POTTS PE #13121 DATE:
CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH APPROVED DRAINAGE STUDY D54442 FOR THIS SITE ON FILE AT CITY OF LAS VEGAS FOR THIS PROJECT.

- GRADING NOTES:
- SLOPES 4:1 OR STEEPER AND FINE-GRAINED MATERIALS THAT HAVE BEEN DISTURBED (SANDY OR SILTY MATERIALS) SHOULD BE PROTECTED WITH BURLAP OR OTHER EROSION CONTROL FABRIC/MATERIAL UNLESS OTHERWISE SPECIFIED BY LANDSCAPE DRAWINGS AND SPECIFICATIONS OR THE SOILS REPORT.
 - CONTRACTOR SHALL DETERMINE HIS OWN FOOTING OR BASEMENT EXCAVATION QUANTITIES, EVEN THOUGH SHOWN ON ROUGH GRADING PLANS. ADDITIONALLY, STRUCTURE BACKFILL COSTS SHOULD BE INCLUDED IN THE COST OF THE STRUCTURE, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.
 - CONTRACTOR SHALL NOTIFY CIVILWORKS INC WITHIN 24 HOURS OF OMISSIONS AND ERRORS DISCOVERED ON PLANS. CIVILWORKS INC WILL NOT BE RESPONSIBLE FOR ANY "CORRECTIVE" WORK DONE BY OTHERS.

BASIS OF BEARING
SOUTH 89°54'17" WEST, BEING THE SOUTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 20, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN BOOK 122, PAGE 9 IN THE CLARK COUNTY RECORDER'S OFFICE, CLARK COUNTY, NEVADA.
BENCHMARK
CITY OF LAS VEGAS BENCHMARK: SLV2001
RIVET AND PLATE IN TOP OF CURB @ SW CORNER OF DURANGO DR. & DEER SPRINGS.
ELEV. = 784.5688 (METRIC)
2574.03 (US SURVEY FEET)

Call before you Dig
Call 811
CLARK COUNTY PUBLIC UTILITIES
1-702-593-6111
LAS VEGAS AREA, COMPARTMENTED TRAFFIC SIGNS

CivilWorks Inc
Engineering with "Sensibig" solutions tailored to your "specific" needs.
Las Vegas, NV 89118
4945 W. Patrick Lane
Office#: (702)534-7555
Fax#: (702)534-1825

STEINBERG IMAGING CENTER
AT DURANGO & HITT
STEINBERG DIAGNOSTIC MEDICAL IMAGING
7301 PEAK DRIVE
LAS VEGAS, NV 89128
PHONE: 702-240-1232
CONTACT: DAVID STEINBERG

GRADING PLAN
SHEET # C5
5 OF 7

ABBREVIATIONS
(SEE C.V.R. SHEET FOR COMPLETE LIST)

AC

ADJ

AGG

BC

BCR

BEG

BSW

BVC

CATV

CCAU

CCO

CCOR

CL

CLV

CMU

CO

COMM

CONC

COND

CULV

DC

DIP

DOM

ELEC

EAC

EC

ECR

ELEV

EP

EVC

EX

FAST

FF

FG

FH

FL

FO

FS

GB

HOPE

HDWL

HGL

HP

INV

IRR

IRR

LAT

LS

LT

LVWD

MAX

MH

MIN

MTR

NDOT

PB

PL

PP

PROP

PVC

PVMT

RT

ROW

SS

SD

SNWA

STA

STLT

SVZ

SW

TEL

TC

TF

TP

UDACS

VG

WL

ASPHALTIC CONCRETE

ADJUST

AGGREGATE

BACK OF CURB

BEGINNING OF CURB RETURN

BEGIN

BACK OF SIDEWALK

BEGINNING OF VERTICAL CURVE

CABLE TV

CLARK COUNTY AREA

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT

CENTERLINE

CITY OF LAS VEGAS

CONCRETE MASONRY UNIT

CLEAN OUT

COMMUNICATIONS

CONCRETE

CONDUIT

CULVERT

DEPRESSED CURB

DROP INLET

DUCTILE IRON PIPE

DOMESTIC

ELECTRIC

EDGE OF AC

END OF CURVE

END OF CURB RETURN

ELEVATION

EDGE OF PAVEMENT

END OF VERTICAL CURVE

EXISTING

FREEWAY & ARTERIAL

SYSTEM OF TRANSPORTATION

FINISH FLOOR

FINISH GRADE

FIRE HYDRANT

FLOW LINE

FIBER OPTICS

FINISHED SURFACE

GRADE BREAK

HIGH DENSITY POLYETHYLENE

HEADWALL

HYDRAULIC GRADE LINE

HIGH POINT

INVERT

IRRIGATION

LATERAL

LINEAL FEET

LANDSCAPE

LEFT

LAS VEGAS VALLEY WATER DISTRICT

MAXIMUM

MANHOLE

MINIMUM

METER

NEVADA DEPARTMENT OF TRANSPORTATION

PULL BOX

PROPERTY LINE

POWER POLE

PROPOSED

POLY VINYL CHLORIDE PIPE

PAVEMENT

RIGHT

RIGHT-OF-WAY

SANITARY SEWER

STORM DRAIN

SOUTHERN NEVADA WATER AUTHORITY

STATION

STREET LIGHT

SIGHT VISIBILITY ZONE

SIDEWALK

TELEPHONE

TOP OF CURB

TOP OF FOOTING

TOP OF WALL

TYPICAL

UNIFORM DESIGN AND CONSTRUCTION STANDARDS

VALLEY GUTTER

WATER LINE

LEGEND

DESCRIPTION

EXISTING

PROPOSED

UTILITIES

B.O. VALVE

FIRE HYDRANTS

CLEAN OUT

GATE VALVE

METER

REDUCER

CAP

11.25' ELBOW

22.5' ELBOW

45' ELBOW

90' ELBOW

CROSS

TEE

MANHOLES

ELECTRICAL

SANITARY SEWER

STORM DRAIN

TELEPHONE

STREET LIGHTS

100W HPS S.L.T.

150W HPS S.L.T.

200W HPS S.L.T.

250W HPS S.L.T.

400W HPS S.L.T.

GRADING

SPOT ELEV.

SLOPE

5' CONT.

1' CONT.

SITE

SIGN

"L" CURB

"A" CURB

EDGE OF PAVT

WALL

LINE TYPES

CL OR SECTION LINE

PROPERTY LINE

RIGHT OF WAY LINE

EASEMENT LINE

SAWCUT LINE

FLOW LINE

SHADES

HEAVY AC PAVEMENT

LIGHT AC PAVEMENT

CONCRETE PAVEMENT

ONSITE AC PAVEMENT DETAIL

SCALE N.T.S.

TRASH ENCLOSURE PAVEMENT DETAIL

SCALE N.T.S.

2' U-CHANNEL DETAIL

SCALE N.T.S.

RESERVED PARKING SIGN

SCALE N.T.S.

SEAL COAT

A.C. PAVEMENT

PRIME COAT

TACK COAT AT ALL EXPOSED SURFACE (TYP.)

TYPE II AGGREGATE BASE MATERIAL COMPACTED TO 95%

PROCESS NATIVE MATERIAL COMPACTED TO MINIMUM 90% OF MAXIMUM DRY DENSITY

NOTES:

2" AC; 4" TYPE II FOR PARKING AREAS

3" AC; 4" TYPE II FOR MAIN CORRIDORS

1 - #4 REBAR

TOP W/BOND BEAM UNIT

(V) REBAR

(V) REBAR W/MIN LAP 24"

BENT

FOOTING REBAR

EXISTING FG

FOOTING WIDTH

WALL SCHEDULE

WALL HEIGHT (FT)	4'	6'	6'	8'
CMU THICKNESS	6"	6"	8"	8"
(V) REBAR, #4 @	48" OC	16" OC	48" OC	16" OC
FTG. REBAR	1-#4	2-#4	2-#4	3-#4
FOOTING (W)	1'-10"	2'-9"	2'-9"	4'-0"

*FOOTING WIDTH BASED ON WALL HEIGHT TO MATCH EXISTING

REFER TO SOUTHERN NEVADA BUILDING OFFICIALS REGIONAL STANDARDS "MASONRY FENCES (NON-RETAINING)" DWG B-100-1

4' RETAINING WALL DETAIL

SCALE N.T.S.

CMU WALL DETAIL

SCALE N.T.S.

3' VALLEY GUTTER DETAIL

SCALE N.T.S.

SIDEWALK RAMP DETAIL

SCALE N.T.S.

16"x48" WALL OPENING

SCALE N.T.S.

6" PORTLAND CEMENT CONCRETE

No. 4 REBAR @ 16" O.C. EACH WAY

4" TYPE II AGGREGATE BASE MATERIAL COMPACTED TO 95% OF ASTM D1557

SCARIFY EXISTING SUBGRADE AND RECOMPACT TO 95%

CLASS "B" CONCRETE

FS

1/2"

10" TYPE II AGGREGATE BASE COMPACTED TO 95% RELATIVE DENSITY

NATIVE MATERIAL COMPACTED TO 90%

#4 BARS AT CONTINUOUS

CLASS "B" CONCRETE

1 1/2" (TYP)

6"

3"

1 1/2"

CLR

10" TYPE II AGGREGATE BASE COMPACTED TO 95% RELATIVE DENSITY

NATIVE MATERIAL COMPACTED TO 90%

#4 BARS AT CONTINUOUS

1'-0"

RADIUS CORNERS-TYP.

12" X 18" GALV. STEEL OR ALUMINUM SIGN NEVADA STANDARD, WHITE ON BLUE

TEXT: "MINIMUM FINE \$250.00 IF USED BY OTHERS"

WHERE OCCURS: "VAN ACCESSIBLE" ON SEPARATE SIGN

2" O.D. OR SQUARE SCH. 40 GALV. STL. PIPE OR SIGN POST

THRU BOLT & NUT TACK WELD

2" I.D. OR SQUARE PIPE SLEEVE

MIN 8" x 18" DP. CONC. FOOTING SLOPE OR COPE TOP TO DRAIN

FINISHED GRADE

TYPICAL SECTION

SCALE N.T.S.

TYPICAL SECTION

SCALE N.T.S.

TYPICAL SECTION

SCALE N.T.S.

TYPICAL SECTION

SCALE N.T.S.

TYPICAL SECTION

SCALE N.T.S.

TYPICAL SECTION

SCALE N.T.S.

RETAINING WALL SHALL NOT BE SUBJECT TO ANY SURCHARGE LOAD FROM ADJACENT FOOTING OR SURCHARGE LOAD OVER HEEL.

CENTER OF WALL

SEE CMU WALL DETAIL THIS SHEET

FG

1 - #4 CONT.

8" CMU SOLID GROUT W/ #4@8"OC.

2-1/2" CLEAR

3" MIN COVER FOR ALL REBARS

FG

2-#4 CONT. (T&B)

4'9"

#4@32"OC (T&B)

REFER TO SOUTHERN NEVADA BUILDING OFFICIALS REGIONAL STANDARDS "MASONRY FENCES (RETAINING)" DWG B-100-2

4' RETAINING WALL DETAIL

SCALE N.T.S.

CLASS "B" CONCRETE

1 1/2" (TYP)

6"

3"

1 1/2"

CLR

10" TYPE II AGGREGATE BASE COMPACTED TO 95% RELATIVE DENSITY

NATIVE MATERIAL COMPACTED TO 90%

#4 BARS AT CONTINUOUS

CLASS "B" CONCRETE

1.5'

3'

1.5'

2"

CLR

10" TYPE II AGGREGATE BASE COMPACTED TO 95% RELATIVE DENSITY

NATIVE MATERIAL COMPACTED TO 90%

#4 BARS AT CONTINUOUS

5.0' LANDING MIN.

1:12 MAX

1:10 MIN

5.0' LANDING MIN.

16"x48" WALL OPENING

SCALE N.T.S.

TYPICAL SECTION

SCALE N.T.S.

TYPICAL SECTION

SCALE N.T.S.

TYPICAL SECTION

SCALE N.T.S.

TYPICAL SECTION

SCALE N.T.S.

TYPICAL SECTION

SCALE N.T.S.

TYPICAL SECTION

SCALE N.T.S.

EX. HITT CENTER COURT

EX. LANDSCAPE

EX. SIDEWALK

EX. HITT CENTER COURT

EX. LANDSCAPE

EX. SIDEWALK

PROP. LANDSCAPE (3:1 MAX)

PROP. RETAINING WALL

PROP. LANDSCAPE

PROP. PARKING

PROP. A-CURB

PROP. 8' CMU WALL. SEE DETAIL THIS SHEET.

NG

PROP. OPENING

FL

PROP. 2' U-CHANNEL GUTTER

PROP. RETAINING WALL. SEE DETAIL THIS SHEET.

3%

PROP. PARKING

PROP. A-CURB

NOTE: RETAINING WALL GRADUAL STEP 4' TO 2'. MAINTAIN SAME BLOCK WALL HEIGHT (8.0')

PROP. 8' CMU WALL. SEE DETAIL THIS SHEET.

NG

PROP. OPENING

FL

PROP. 2' U-CHANNEL GUTTER

PROP. RETAINING WALL. SEE DETAIL THIS SHEET.

VARIES FROM 4' TO 2'

3%

PROP. PARKING

PROP. A-CURB

FF = 2585.67'

26.81'

6.0'

35.0'

MATCH EXISTING

VARIES

PROP. LANDSCAPE

PROP. SIDEWALK

PROP. DRIVE AISLE & PARKING

EX. DRIVE AISLE

part of drainage study

#4538 which was reviewed on 3/15/12 and 3/20/12. Page 2 of 2

STEINBERG IMAGING CENTER

AT DURANGO & HITT

DEVELOPER:

TKC DESIGN, PC

9225 W. FLAMINGO ROAD, SUITE #100

LAS VEGAS, NV 89147

PHONE: 702-228-9551

CONTACT: GREG KORTE

CONSULTANT LIST:

STEINBERG IMAGING CENTER

AT DURANGO & HITT

DEVELOPER:

TKC DESIGN, PC

9225 W. FLAMINGO ROAD, SUITE #100

LAS VEGAS, NV 89147

PHONE: 702-228-9551

CONTACT: GREG KORTE

DETAIL SHEET

C7

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Office #: (702)534-1825

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C7

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