

DS #: 4823

APN: 125-22-501-001

PROJECT: Elkhorn 40-Residential Development

SUBMITTAL: 3rd Submittal

SCANNED BY/DATE:

CHECKED BY/DATE:



CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		February 1, 2017
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:	
	Elkhorn 40 – Residential Development	
Cross Streets:	SEC of Elkhorn Road & Tenaya Way	
File Number:	F:\Depot\DSMemos\DS4823C.doc	
Parcel Number:	125-22-501-001	
Zoning Action:	TMP-65275; ZON-63488; WVR-65331; WVR-65593 & Variances	
FEMA Flood Zone	YES	NO X
Proposed Storm Drain	YES	NO X
COPIES TO:		
		Triton Engineering
		D.R. Horton, Inc.
		Bart Anderson, P.E., DevCo
		CCPW

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	9/7/2016	9/20/2016	Not Approved	\$400.00	457451: \$400
2 nd Submittal	12/1/2016	12/19/2016	Not Approved	\$400.00	467394: \$400
3 rd Submittal	1/11/2017	1/31/2017	See Comments Below	\$400.00	471544: \$400
TOTAL FEES (LDDRS):				\$1,200.00	----

REMARKS:

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

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

- The last submittal (**Addendum #2**) stated that the developer revised the project into two phases: the northern portion as **Phase 1** and the southern portion as **Phase 2** versus the east/west division as proposed originally. However the revised grading plans (Sheets 3 to 6) did not distinguish the phasing construction intention. In the next submittal, present two sets of grading plans, **Phase 1** will show improved lots in the northern portion with **Phase 2**, the southern portion rough graded. **Phase 2** plans will show **Phase 1** as existing and the southern portion to be improved.
- A note on all the grading plans stated that "THIS PROJECT WILL BE CONSTRUCTED WITH CONTINUOUS R-TYPE CURB ON THE FRONTAGE OF ALL LOTS". However, the detail sheet (Sheet 7 of 26) shows L-curb to be constructed instead. Review and revise accordingly in the next submittal.
- The site is adjacent to the jurisdiction of Clark County. The engineer must coordinate with *Clark County Department of Public Works* (CCPW) and incorporate any concerns for boundary conditions along the east border. CCPW concurrence is required prior to final acceptance of the drainage study.

4. All drainage easements must be public drainage easements to be privately maintained and common lots to be labeled on the grading plans and to be dedicated as such in the final map.
5. The engineer must provide a table on the grading plans that shows a quantity estimate of all drainage improvements within Public Drainage Easements. All drainage improvements within Public Drainage Easements must be bonded and inspected.
6. Add a note in all pertinent sheets for the construction of all storm drain drop inlets per a newly adopted USDCCA Drawing No. 421 (*Stormwater Quality Management Stamp and Sign Detail*).
7. The rough graded onsite without any permanent cover such as paving, building construction or planting, is considered ongoing project under construction whereas a *Stormwater Pollution Prevention Plan* must be kept active under the NDEP Permit. In order to close out the permit, the developer must install permanent cover to the site to stabilize and control stormwater pollution to the satisfaction of NDEP.

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: T19S/R60E/22
AREA G-22

 *** FAX TX REPORT ***

TRANSMISSION OK

JOB NO. 3101
 DESTINATION ADDRESS 7022543062
 PSWD/SUBADDRESS
 DESTINATION ID
 ST. TIME 02/01 17:03
 USAGE T 00' 54
 PGS. 2
 RESULT OK

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM

DATE:

February 1, 2017

TO:

Land Development Services
 Department of Building & Safety

FROM:

Albert Sung, P.E.
 Flood Control Project Engineer
 Department of Public Works

SUBJECT:

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Elkhorn 40 – Residential Development

COPIES TO:

Triton Engineering

Cross Streets:

SEC of Elkhorn Road & Tenaya Way

D.R. Horton, Inc.

File Number:

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Bart Anderson, P.E., DevCo

Parcel Number:

125-22-501-001

CCPW

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TMP-65275; ZON-63488; WVR-65331;
 WVR-65593 & Variances

FEMA Flood Zone

YES

NO

X

Proposed Storm Drain

YES

NO

X

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ADDENDUM #2
TO THE
TECHNICAL DRAINAGE STUDY
FOR
Elkhorn 40
Residential Development

City of Las Vegas, Nevada

Prepared for:

DR Horton

1081 Whitney Ranch Drive, #141
Henderson, NV 89014

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

Prepared by:

Triton Engineering

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

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

APN 125-22-501-001

January 2017

HYDROLOGIC CRITERIA AND DRAINAGE MANUAL
DRAINAGE STUDY INFORMATION FORM

Name of Development: Addendum # 2 to the Technical Drainage Study for Elkhorn 40 Date: January 2017

Location of Development: a) Descriptive (Cross Streets) North/South: Tenaya
East/West: Elkhorn

b) Section: 22 Township: 19S Range: 60E

c) APN : 125-22-501-001

Name of Owner: Greengale Properties, LLC, Owners, - DR Horton, Developers

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

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

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

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

Firm: Triton Engineering, LLC

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

Type of Land Development/Land Disturbance Process:

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

1. Total Owned Land Area: At Site: 37.35 ac Being Developed/Disturbed: 37.35 ac.

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

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

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

5. Approximate upstream land area which drains to the subject site: 160 acres + / -

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

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: _____
Discharge to the east to Rio Vista Street

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



Engineer's Seal

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

*New Required Field

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

Local Entity File No.	Revision	Date

REFERENCE:

STANDARD FORM 1



January 9, 2017

Albert Sung, P.E.
Land Development Services
333 North Rancho Drive
Las Vegas, NV 89106

**Subject: Addendum #2 to the Technical Drainage Study for
Elkhorn 40 Residential Development
DS4823**

Mr. Sung:

Triton Engineering has received the City's review comments for the above-referenced study, dated December 20, 2016 by the City.

Since the submittal of Addendum #1, the construction of the subject project has been divided into two phases which are different than those shown in Addendum #1. In general, the north side of the site will be constructed in Phase 1, before the south portion of the site is constructed in Phase 2. Referring to the revised Figure "Phases" of this submittal, lots 13-46, lots 51-61, and lots 86-95 will be constructed with Phase 1 (a total of 52 of the planned 95 lots). A full boundary wall will be constructed, including along the alignments of the private pathways of Wittig Avenue on the south, and Rio Vista Street on the east. Two openings in the wall will be constructed, so that runoff flow can exit the site as it develops, in the same method that it exits under existing conditions. The northern area of the site will drain to Elkhorn Road as proposed under Phase 1 construction. Referring to that exhibit, the peak flow rates and discharge points are shown, using prorated average 10-yr/100-yr peak flow rates from the included hydrologic analyses of 0.8 cfs/1.9 cfs per acre developed, and 0.8 cfs/1.9 cfs per acre for existing conditions. Runoff flow discharging from the proposed streets of phase 1 is discharged into permeable riprap pads 5'x5' in order to collect nuisance flow. Runoff flow continues overland in a sheet flow regime, discharging to historical low points and flow paths which cross the existing Rio Vista Street pathway toward properties to the

east. The onsite areas which are undeveloped will be privately maintained when precipitation events occur. Therefore no adverse effects are expected by phasing of the proposed development.

The purpose of this addendum submittal is to provide a response to all of the comments, as follows:

- 1. The site is adjacent to the jurisdiction of Clark County. The engineer must coordinate with Clark County Department of Public Works (CCPW) and incorporate any concerns or boundary conditions along the east border. CCPW Concurrence is required prior to final acceptance of the drainage study.**

We respectfully request conditional acceptance of this drainage study based on subsequent CCPW concurrence.

- 2. The Addendum #1 stated that the subject project had been divided into two phases. However, a Phase 1 Development plan was not provided in the last submittal for the construction of Phase 1 (west half) while Phase 2 (east half) will stay undeveloped or rough-graded to perpetuate the interim flows. Provide a Phase 1 development plan in the next submittal with a sub-chapter in the next addendum to address the interim drainage conditions.**

Revised drawings are included in this submittal package.

- 3. Sheet 3 of 25 (Grading Plan 1): Identify existing drop inlets in Elkhorn Road to the west of the intersection of Tenaya Way. Show the pertinent connection of the inlets with laterals to the storm drain manhole in the street intersection.**

The revisions requested have been shown on the drawings in this submittal.

- 4. Private streets must be public drainage easements. Provide a note on the grading plans, "All private streets are P.U.E., Public Sewer Easements and Public Drainage Easements to be privately maintained by the HOA".**

The revisions requested have been shown on the drawings in this submittal.

- 5. All drainage easements must be public drainage easements to be privately maintained and common lots to be labeled on the grading plans and to be dedicated as such in the final map.**

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The revisions requested have been shown on the drawings in this submittal.

7. Add a note in all pertinent sheets for the construction of all storm drain drop inlets per a newly adopted USDCCA Drawing No. 421 (Stormwater Quality Management Stamp and Sign Detail)..

The revisions requested have been shown on the drawings in this submittal.

We hope that this response satisfies all your issues concerning the project. If you have any questions, please contact me at 702-376-8801, email Momentum1@cox.net.

Sincerely,



Momentum Engineers, Ltd.
Barbara M. Brown, P. E.
Subcontractor for
Triton Engineering, LLC

COPY OF COMMENT LETTER

CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		December 20, 2016
TO: Land Development Services Department of Building & Safety		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
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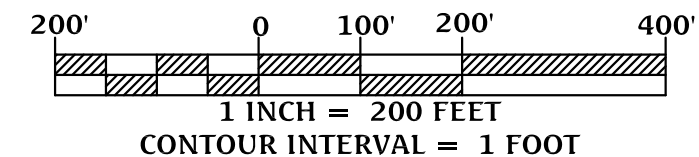
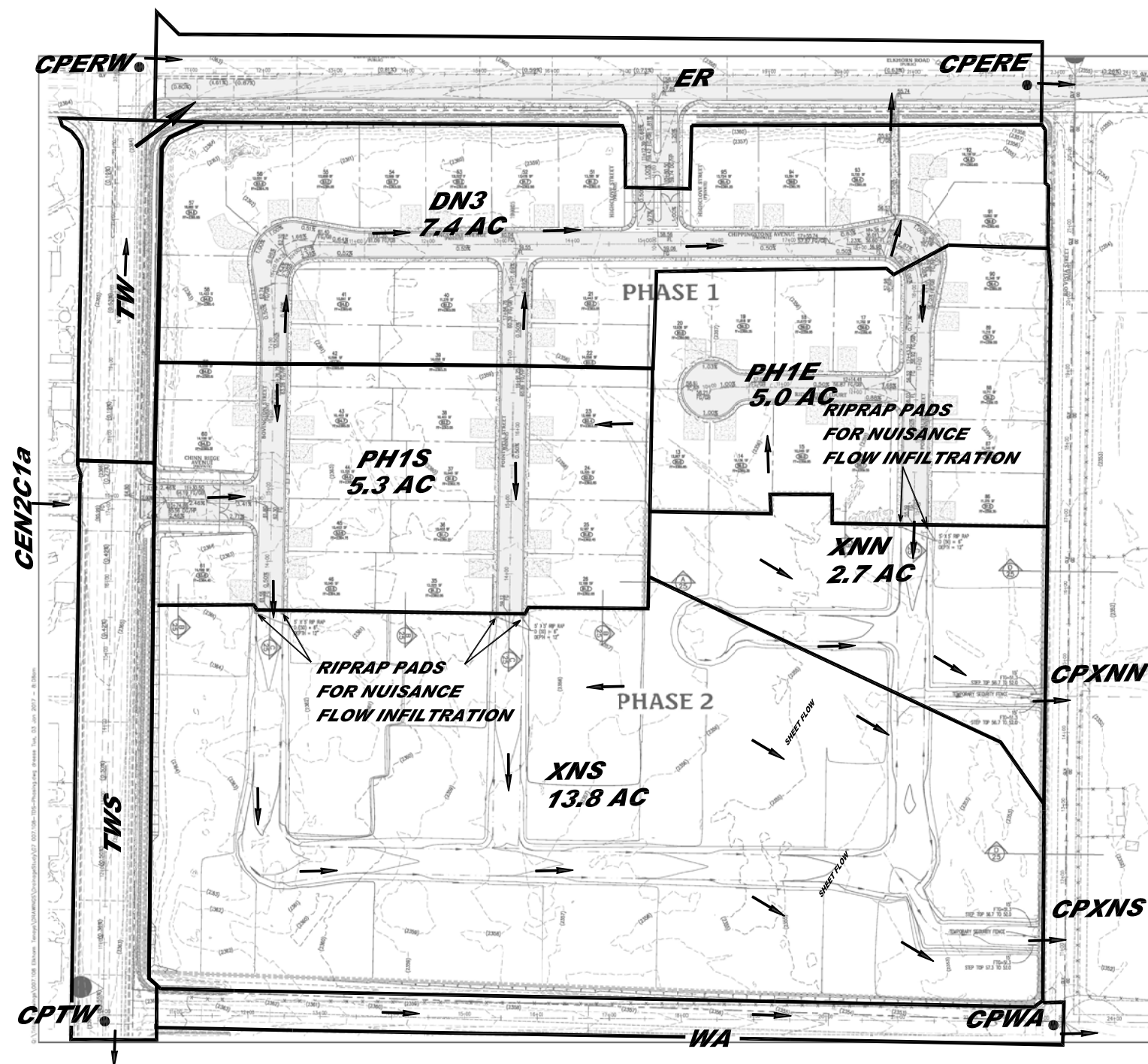
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END OF REMARKS

ays

T/R/S: T19S/R60E/22
AREA G-22

REVISED EXHIBITS



DRAINAGE LEGEND	
<i>XT32</i>	BASIN IDENTIFICATION
	BASIN BOUNDARY
<i>CPT4</i>	CONCENTRATION POINT
	FLOW PATH

SUMMARY OF PEAK FLOW RATES				
CONC. POINT/ DRAINAGE AREA	AREA,	PEAK FLOW, CFS		NOTE
	ACRES	10-YR	100-YR	
CPEREW		107	233	1
TW	1.24	2	4	
ER	3.54	6	10	
DN3	7.40	6	15	
CPERE		120	261	2
TWS	1.88	3	5	
EN2C1A		7	24	3
CPTW		9	29	4
PH1S	5.30	4	10	5
PH1E	5.00	4	10	5
XNN	2.70	2	5	5
CPXNN		6	15	
XNS	13.80	11	26	5
CPXNS		15	36	
WA	1.63	3	5	
CPWA		3	5	

Notes:	1/8/2017
1. Referenced from <i>City of Las Vegas, Northwest Neighborhood Study</i> , by PBS & J, Revised September 1999, Existing Conditions	
2. Includes flow from CPERW (107/233 + 13/28(HEC1) = 120/261)	
3. Referenced from <i>Tenaya Way Improvements PreDesign Report, Washington Infrastructure Services</i> , April 2003.	
4. A small amount of flow is expected to be flowing underground in the existing 18-inch storm drain pipe at this location.	
5. Estimate based on prorated avg. discharge of 0.8 cfs / 1.9 cfs per acre in the 10-yr / 100-yr storms respectively.	

FIGURE "PHASES"

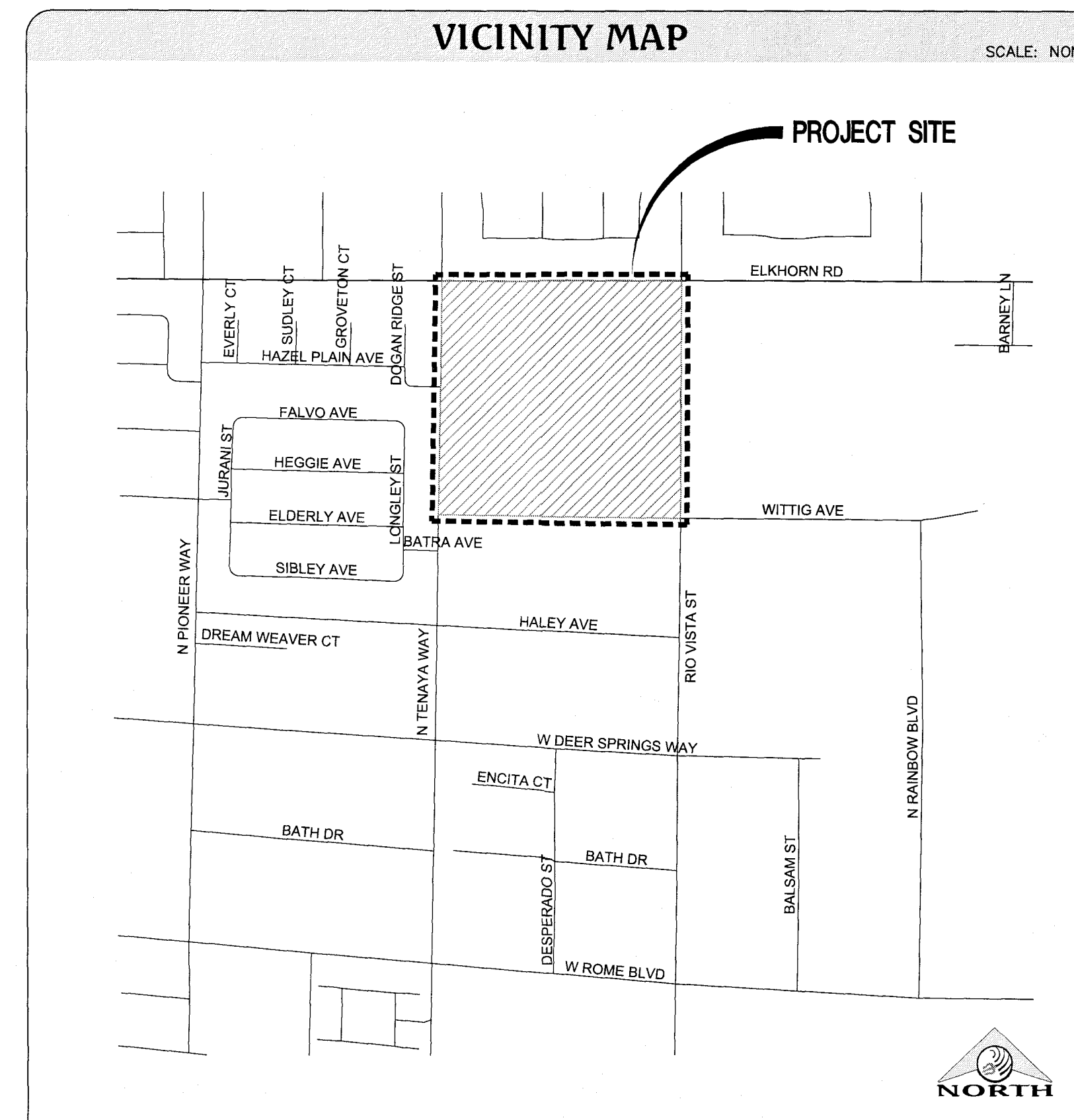
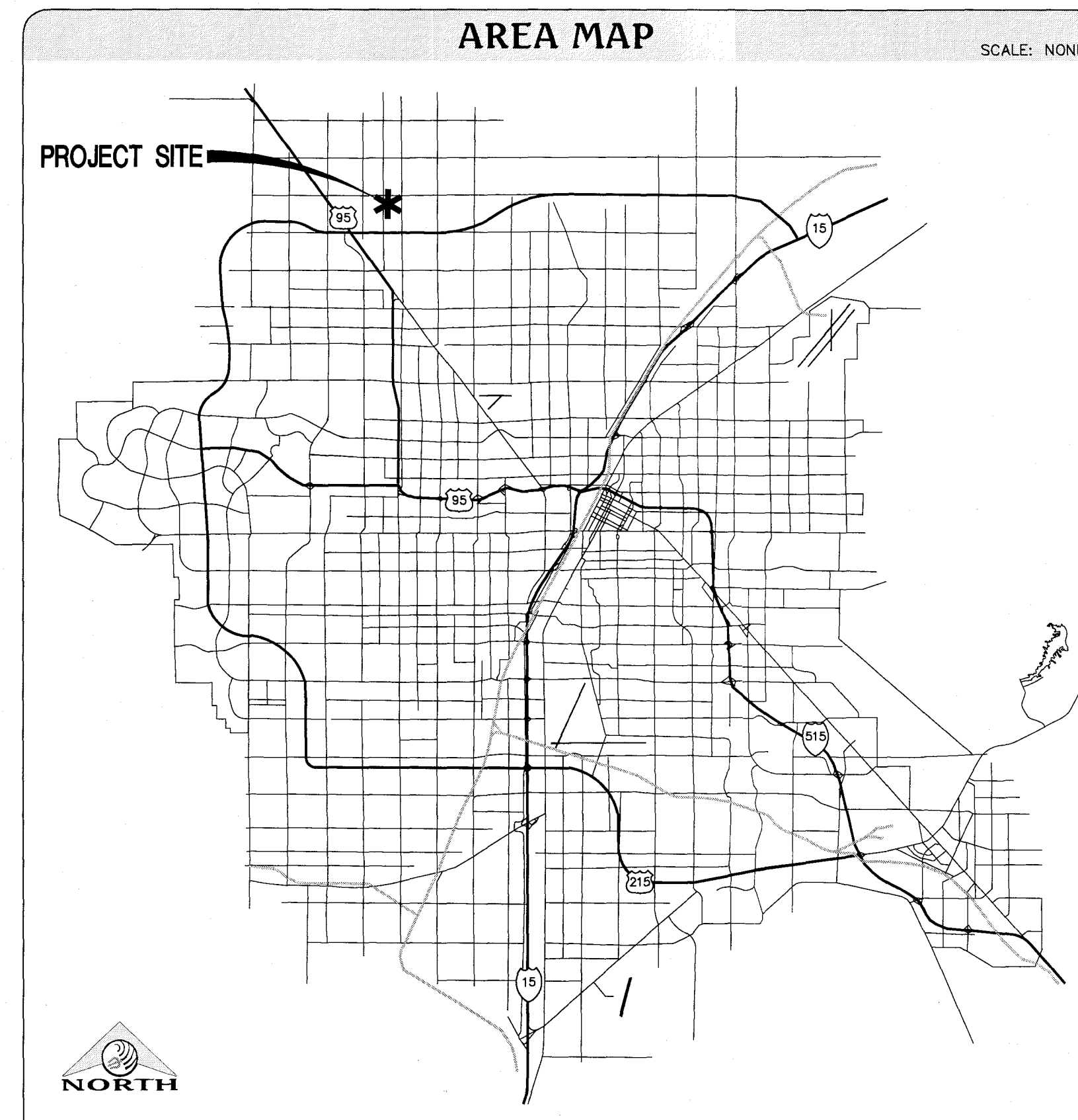
REVISED GRADING PLANS

ELKHORN 40

A RESIDENTIAL SUBDIVISION

TECHNICAL DRAINAGE STUDY

APN: 125-22-501-001
36.53 ACRES



ASSESSOR'S PARCEL NUMBER

125-22-501-001

OWNER

GREENGALE PROPERTIES, LLC
7092 NORTH TENAYA WAY
LAS VEGAS, NEVADA 89131

DEVELOPER

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

ENGINEER

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

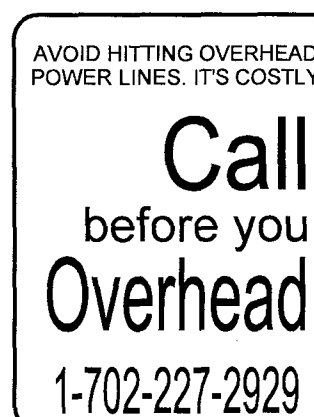
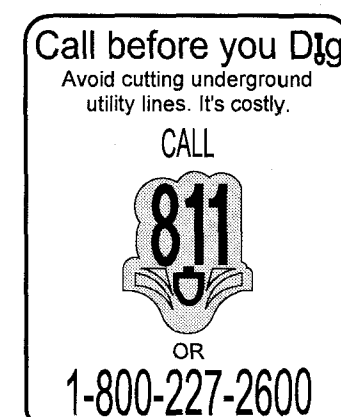
SURVEYOR

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

SITE DESCRIPTION

LAND USE DESIGNATION
EXISTING CLV ZONING U
PROPOSED CLV ZONING R-D
MINIMUM LOT SIZE (SF) 10,000 SF

SITE SUMMARY
TOTAL UNITS 95 UNITS
NET ACREAGE 36.53 ACRES
GROSS DENSITY 2.60 UNITS/ACRE
OPEN SPACE REQUIRED NONE



DEVELOPER

DR HORTON
1081 WHITNEY RANCH DRIVE #141
HENDERSON, NEVADA 89014
CONTACT: MARK JONES
OFFICE: (702) 672-1939
FAX: (800) 538-0735

BY

Triton
Engineering

6757 West Charleston Boulevard
Suite B
Las Vegas, Nevada 89146

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

LEGAL DESCRIPTION

THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M. & M.
EXCEPTING THEREFROM THAT PORTION CONVEYED TO CITY OF LAS VEGAS BY GRANT DEED RECORDED AUGUST 20, 2003 IN BOOK 20030820 AS INSTRUMENT NO. 01 778 OF OFFICIAL RECORDS.

BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M. & M. CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15SSE6
RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.
ELEVATION = 717.800 METERS (NAVD'88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)

SHEET INDEX

1. COVER SHEET
2. GENERAL NOTES AND LEGEND
3. GRADING PLAN I
4. GRADING PLAN II
5. GRADING PLAN III
6. GRADING PLAN IV
7. GRADING DETAILS I
8. GRADING DETAILS II
9. STORM DRAIN PIPE

PLAN AND PROFILE SHEETS:

10. TENAYA WAY I (9+00 - 16+00)
11. TENAYA WAY II (16+00 - 24+00)
12. ELKHORN ROAD I (9+00 - 16+00)
13. ELKHORN ROAD II (16+00 - 24+00)
14. WITTIG AVENUE I (9+50 - 16+00)
15. WITTIG AVENUE II (16+00 - 24+00)
16. RIO VISTA STREET I (9+50 - 17+00)
17. RIO VISTA STREET II (17+00 - 24+00)
18. CHINN RIDGE AVENUE (9+50 - 12+50)
19. HIGHCLOVE STREET (9+50 - 13+00)
20. BOVINGTON STREET (10+00 - 18+25.87)
21. CHIPPINGSTONE AVE. (10+00 - 18+81.01)
22. TURNPIN AVENUE (10+00 - 18+55.83)
23. POINTWELL STREET (9+50 - 19+00)
24. PORTESBURY ST. (10+00 - 18+40.39)
25. RIDGEWOOD COURT (9+50 - 13+50)
26. REDBOURNE COURT (9+50 - 13+50)

25. PHASING EXHIBIT
26. CLARK COUNTY GENERAL NOTES

APPROVALS

ALLEN PAVELKA, P.E. (PE# 9029) DATE

CITY ENGINEER -- CITY OF LAS VEGAS
APPROVAL OF THESE PLANS BY THE CITY ENGINEER IS LIMITED TO THOSE IMPROVEMENTS CONSTRUCTED IN THE DEDICATED RIGHT-OF-WAY, AND/OR DEDICATED EASEMENTS. THIS APPROVAL DOES NOT AUTHORIZE CONSTRUCTION OF ANY IMPROVEMENTS THAT DEVIATE FROM ADOPTED STANDARDS AND/OR SPECIFICATIONS EXCEPT THOSE SPECIFICALLY LISTED UNDER DEVIATIONS FROM STANDARDS. 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.

CHRIS KNIGHT, DIRECTOR, BUILDING AND SAFETY DATE
THIS PLAN CONFORMS TO THE APPLICABLE STANDARDS OF THE PLANNING DEPARTMENT

LAS VEGAS FIRE AND RESCUE DATE

LAS VEGAS VALLEY WATER DISTRICT, ENGINEERING SERVICES MANAGER DATE
PROJ# SHEETS:

SOUTHWEST GAS CORPORATION DATE

NV ENERGY DATE

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

COX COMMUNICATIONS LAS VEGAS, INC. DATE

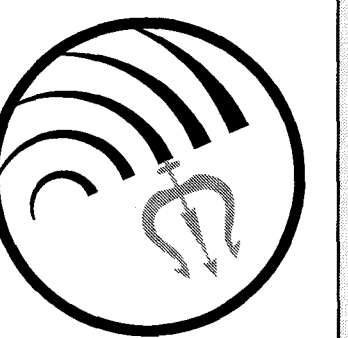
CENTRAL TELEPHONE COMPANY dba CENTURYLINK DATE

"THE AFFIXED CENTURYLINK 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"

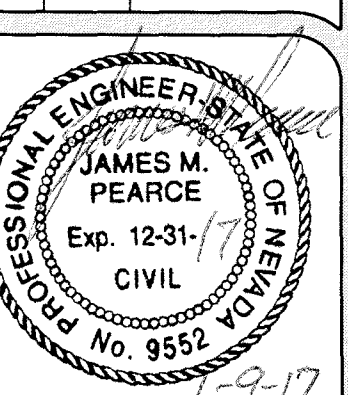
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DR HORTON
ELKHORN 40
COVER SHEET

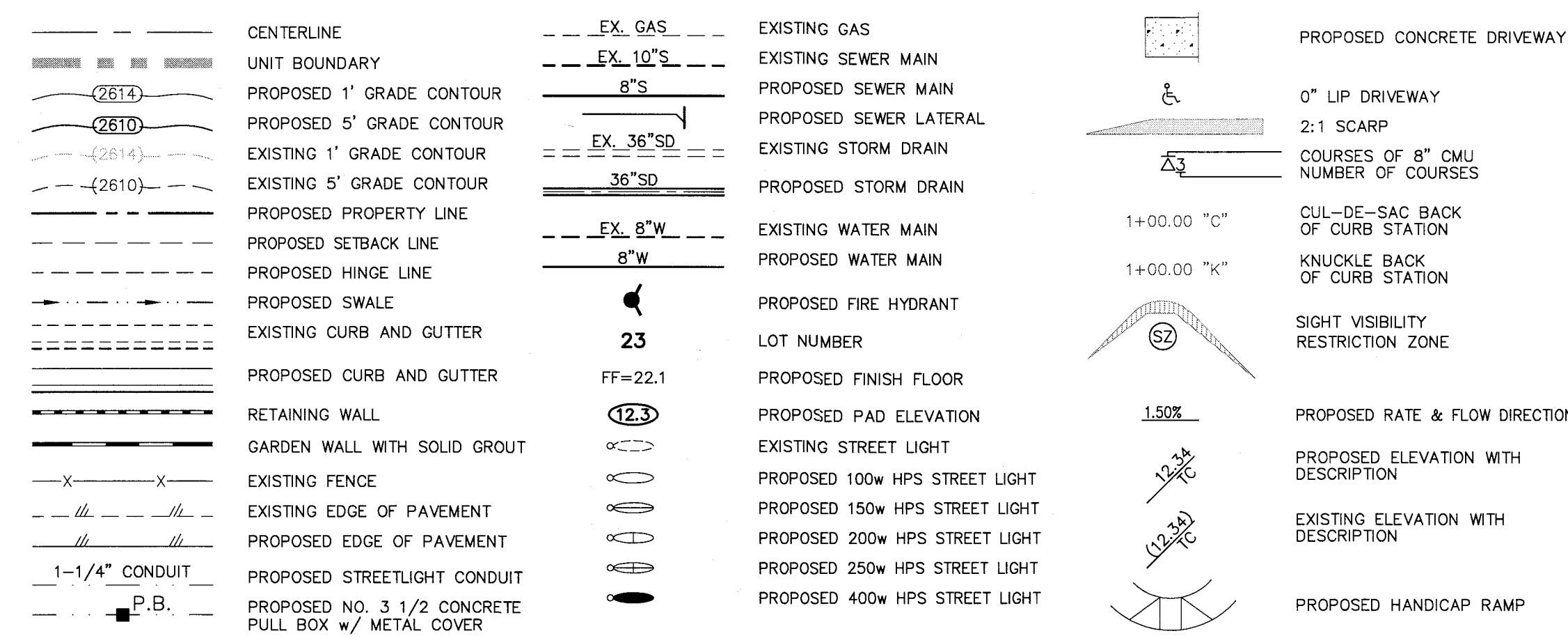


SHEET 1 OF 26
C.L.V. DWG.#

ABBREVIATIONS

ABAN - ABANDON	IN - INCH	S - SOUTH/SLOPE
AC - ASPHALTIC CONCRETE	INT - INSTALL	S/C - SAW CUT
AGR - AGGREGATE	INTERIOR	SCCP - STEEL CYLINDER CONCRETE
& - AND	INV - INVERT	
APN - ASSESSOR PARCEL NUMBER	IRR - IRRIGATION	
APPROX - APPROXIMATE		
ASST - ASSEMBLY		
AVE - AVENUE		
BC - BACK OF CURB	LB OR # - POUND	
BR - BACK OF CURVE RETURN	LEN OR L - LENGTH OF CURVATURE	
BK - BOOK/BACK	LF - LINEAR FOOT	
BLD - BUILDING	LN - LINE	
BLK - BLOCK	LT - LEFT/LIGHT	
BLM - BUREAU OF LAND MANAGEMENT	LWMD - LAS VEGAS VALLEY	
	LR - WATER DISTRICT	
	LWR - LOWER	
BLVD - BOULEVARD	M - METER	
BM - BENCHMARK	MATL - MATERIAL	
BO - BLOW OFF ASSEMBLY	MAX - MAXIMUM	
BOC - BACK OF CURB	MECH - MECHANICAL	
BOT - BOTTOM	MFR - MANUFACTURER	
BOW - BACK OF WALK	MG - MILLION GALLONS	
BRG - BEARING	MGO - MILLION GALLONS PER DAY	
BVC - BEGIN VERTICAL CURVE	MM - MANHOLE	
BW - BACK OF WALK	MN - MANHOLE	
BWV - BACK WATER VALVE	MISC - MISCELLANEOUS	
	MJ - MECHANICAL JOINT	
C/C - CENTER TO CENTER	MKR - MARKER	
C&G - CURB & GUTTER	ML - MORTAR LINED	
CC - CLARK COUNTY	MLC - MORTAR LINED & COATED	
CE - COMMON ELEMENT	MVC - MIDDLE OF VERTICAL CURVE	
C - CAST IRON	N - NORTH	
CP - CAST IRON PIPE/	N/A - NOT APPLICABLE	
OR - CIRCLE	NAP - NOT A PART	
CL OR C - CENTERLINE	OF TRANSPORTATION	
CLV - CITY OF LAS VEGAS	NE - NORTHEAST	
ONLY - CITY OF NOTRTH	NF - NORTH FACE	
	NG - NATURAL GROUND	
CO - COUNTY	NO, OR # - NUMBER	
COH - CITY OF HENDERSON	NTS - NOT TO SCALE	
CONC - CONCRETE	NW - NORTHWEST	
CONT - CONTINUOUS		
COORD - COORDINATE		
CTR - CENTER	O/O - OUT TO OUT	
CV - CONTROL VALVE	OC - ON CENTER	
	OD - OUTSIDE DIAMETER	
4- DELTA ANGLE	OF - OUTSIDE FACE	
D/W OR DW - DRIVEWAY	OHP - OVER HEAD POWER	
DEPT - DEPARTMENT	OTR - OVER HEAD TELEPHONE	
DET - DETAIL	ORIG - ORIGINAL	
DEV - DEVELOPMENT	OVL - OVERFLOW	
DC - DESIGN GRADE		
DI - DROP INLET/DUCTILE IRON	O/O - OUT TO OUT	
DIA OR # - DIAMETER	OC - ON CENTER	
DM - DIMENSION	OF - OUTSIDE DIAMETER	
DI - DUCTILE IRON PIPE	OHP - OVER HEAD POWER	
DIR - DIRECTION	OTR - OVER HEAD TELEPHONE	
DIST - DISTANCE	ORIG - ORIGINAL	
DWH - DROP MANHOLE	OVL - OVERFLOW	
DN - DOWN		
DR - DRIVE		
DWG - DRAWING		
E - EAST/EDGE	PL OR P - PROPERTY LINE	
EA - EACH	PAYMT - PAVEMENT	
EG - EXISTING GROUND	PB - PULL BOX	
ELEV - ELEVATION	PC - POINT OF CURVE	
ESP - EDGE OF PAVEMENT	PCC - POINT OF COMPOUND CURVE	
ES - EDGE OF SHOULDER	PE - POLYETHYLENE	
EQ SP - EQUALLY SPACED	PERD - PERDESTAL	
ESMT - EASEMENT	PERM - PERMANENT	
EST - ESTIMATE	PERP - PERPENDICULAR	
EVG - END OF VERTICAL CURVE	PH - PHASE	
EW - EASH WAY	PI - POINT OF INTERSECTION	
EXIST - EXISTING	PKG - PACKAGE	
	PKWY - PARKWAY	
F/F - FACE TO FACE	PL - PLACE/PLATE/PARCEL LINE	
FC - FACE OF CURB	PLT - PLATE (DRAWING)	
FF - FINISHED FLOOR	POLY - POLYETHYLENE	
FG - FINISHED GRADE	PP - POWER POLE	
FI - FIRE HYDRANT	PR - PAIR	
FL - FIGURE	PRC - POINT OF REVERSE CURVE/	
FL OR F - FLOW LINE	PRECAST REINFORCED CONCRETE	
FLR - FLOOR	PRELIM - PRELIMINARY	
FN - FENCE	PROP - PROPOSED	
FND - FOUND	PRV - PRESSURE REGULATING VALVE	
FPC - FACE OF CURB	PSF - PUMP STATION	
FW - FACE OF WALL	PSF - POUNDS PER SQUARE FOOT	
FW - FEET PER MINUTE	PSI - POUNDS PER SQUARE INCH	
PPS - FEET PER SECOND	PT - POINT/POINT OF TANGENT	
FT - FOOT OR FEET	PUE - PUBLIC UTILITY EASEMENT	
FTG - FOOTING	PT - POINT OF VERTICAL	
FUT - FUTURE	INTERSECTION	
	PVC - POLYVINYL CHLORIDE PIPE	
G/B - GRADE BREAK	QTY - QUANTITY	
GALV - GALVANIZED		
GB - GRADE BREAK	R - RADIUS	
GND - GROUND	(R) - RADIAL	
GPD - GALLONS PER DAY	R/W - RIGHT OF WAY	
GPH - GALLONS PER HOUR	RCB - REINFORCED CONCRETE BOX	
GPM - GALLONS PER MINUTE	RED - REINFORCED CONCRETE PIPE	
GR - GRADE	RD - ROAD	
GRT - GRATE	RED - REDUCER	
GV - GATE VALVE	REQ - REQUIRED	
	RET - RETURN	
HORIZ - HORIZONTAL	REV - REVISION OR REVERSE	
HP - HIGH POINT	ROW - RIGHT OF WAY	
HPC - HIGH PRESSURE GAS	RPPA - REDUCED PRESSURE	
HT - HEIGHT	PRINCIPLE ASSEMBLY	
HWY - HIGHWAY	RR - RAILROAD	
	RT - RIGHT	

GENERAL LEGEND



LAS VEGAS VALLEY WATER DISTRICT (LVVWD) STANDARD NOTES

- LVVWD PROJECT #
- 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 OF 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 APPROPRIATELY SIZED ASPHALT REPAIR PATCH ON THE STREET SURFACE.

ANY DECORATIVE PAVING SURFACE WITHIN THE STREET IS THE 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 10 FOOT EASEMENT ABUTTING A PUBLIC OR PRIVATE STREET, IF DISTURBED BY THE LVVWD DURING THE REPAIR OR OPERATION OF ITS FACILITIES, WILL BE PLACED BY LVVWD WITH AN APPROPRIATELY SIZED PLAIN FINISH CONCRETE PATCH. THE LVVWD WILL NOT RESTORE, AND WILL NOT BE RESPONSIBLE FOR THE RESTORATION OF ANY DECORATIVE PAVING SURFACE WITHIN THE STREET. THE LVVWD WILL NOT ATTEMPT TO MATCH COLOR OR FINISH OF ANY ADJACENT MATERIALS.

REVISED 04/19/12

STORMWATER RUNOFF MANAGEMENT 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 WAY OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.
- ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN CLARK COUNTY TITLE 24.40 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 NVR100000, SECTION III.A.5.
- AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS AND ALL BMP'S WEEKLY, AND WITHIN 24 HOURS AFTER AND 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 MAY APPLY, SUCH AS SUPERSESION OF LAND DISTURBANCE ACTIVITIES. REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12.
- ACCUMULATED SEDIMENT IN BMP'S 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.

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 CONTENTS 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 "S" OR "G" IN CURBS WHERE SEWER 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. STREETS LESS THAN EIGHTY (80') FOOT R/W WILL REQUIRE RETROFIT IF PAVING DOES NOT 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") OR 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 INCH (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 CONSTRUCTION PLANS AT ANY LOCATION. SEWER MAINS FOUND TO EXCEED THIS TOLERANCE WILL HAVE TO BE REPAIRED OR REMOVED OR REPLACED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO ACCEPTANCE BY THE CITY OF LAS VEGAS.
- INSTALLATION OF CURVED SEWER REQUIRES THE USE OF C-900 PVC PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.

REVISED 04/15/10

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 REVISED EDITION; THE SUMMERLIN IMPROVEMENT STANDARDS FOR WORK IN THE SUMMERLIN AREA; AND OTHER APPLICABLE APPROVED STANDARDS ISSUED BY THE CONTROLLING AGENCY; THE UNIFORM BUILDING CODE; AND ALL LOCAL CITY CODES AND ORDINANCES APPLICABLE, EXCEPT AS NOTED ON THIS SHEET AS "DEVIATIONS FROM STANDARDS".
- 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 CIVIL 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 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 SHALL 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 LIP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS AND CROSS GUTTERS.
- CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED PER STANDARD DRAWING 216.
- SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF THE TRANSITIONS TO BE AS SHOWN ON PLANS.
- ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY THE (COMPANY, _ REPORT #, DATE) APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.
- EXACT LOCATION OF ALL SAWCUT LINES MAY BE ADJUSTED OR DETERMINED IN THE FIELD BY A CITY OF LAS VEGAS ENGINEER IF LOCATION ON PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES RELOCATIONS.
- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEY MONUMENTS. ANY MONUMENTS DISTURBED SHALL BE REPLACED AND ADJUSTED PER AVAILABLE RECORDS IN ACCORDANCE WITH N.R.S. STATUTE NO. 625.380 & CITY OF LAS VEGAS TITLE 18, APPENDIX D.
- 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 INTERSECTION WALLS REQUIRE A SEPARATE PERMIT AND INSPECTION BY THE BUILDING DEPARTMENT.
- ASPHALT MIX DESIGN MUST BE SUBMITTED 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 NOTOT 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 CITY AND APPROVED PRIOR TO ACCEPTANCE OF FACILITY VIDEO INSPECTION. THE MAP(S) SHALL INCLUDE THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES AND TRANSITION STRUCTURES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND AT THE CONNECTION TO A DROP INLET, AND THE LOCATION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS EXIT THE PUBLIC RIGHT-OF-WAY. ANY DEVIATIONS FROM THE INFORMATION SHOWN SHALL BE NOTED AND SUBMITTED AS A REVISION TO THE PLANS AND APPROVED PRIOR TO ACCEPTANCE OF FACILITY VIDEO INSPECTION.
- CCTV VIDEO INSPECTION IS REQUIRED FOR ALL SEWER AND STORM DRAINS. THE CCTV VIDEO INSPECTIONS NEED TO BE PERFORMED PER THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS LATEST EDITION.
- A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.

REVISED 02/03/15

CITY OF LAS VEGAS FIRE DEPARTMENT NOTES

- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LAS VEGAS FIRE AND RESCUE ADOPTED FIRE CODE ORDINANCE # 6325 FOR LAS VEGAS VALLEY SPECIFICATIONS AND HYDRANT INSTALLATION SPECIFICATIONS.
- ONLY FIRE HYDRANTS THAT ARE ON THE LAS VEGAS VALLEY WATER DISTRICT'S - APPROVED PRODUCTS LIST ARE ALLOWED TO BE INSTALLED.
- A PERMIT IS REQUIRED FROM LAS VEGAS FIRE AND RESCUE FOR THE INSTALLATION OF ON-SITE WATER LINES AND FIRE HYDRANTS. THE PERMIT AND CONTRACTORS MATERIAL TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER BEFORE COMMENCEMENT OF WORK. [IFC § 105.7.12]
- 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 ORDE AND SHALL BE CAPABLE OF DELIVERING THE REQUIRED FIRE FLOW. [IFC § 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. [IFC § 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 TESTS WITH PRIOR FIRE PREVENTION APPROVAL. [IFC 106.3]
- ALL ON-SITE UNDERGROUND WATER MAINS AND MATERIALS SHALL BE U.L. LISTED, A.W.A. APPROVED, AND SHALL BE RATED FOR THE APPROPRIATE WORKING PRESSURE. [IFC § 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. [IFC § 507]
- PRIVATE HYDRANTS SHALL BE PAINTED RED. [IFC § 507.5.7.1]
- PRIOR TO THE FINAL OCCUPANCY, A FIRE FLOW TEST SHALL BE WITNESSED BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW. [IFC § 507]
- FIRE HYDRANT SPACING SHALL BE AS FOLLOWS: [IFC § 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. [IFC § C102.8]
- 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. [IFC § 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. [IFC § 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. [IFC § C102.7]
- THE MAXIMUM DISTANCE FROM A HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. [IFC § 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 VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 2 FIRE HYDRANTS CAN BE OUT OF SERVICE DUE TO A BREAK IN A WATER MAIN. [IFC § C104]
- ALL FIRE APPARATUS ACCESS ROADS SHALL BE PAVED TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES, AND SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF THE FIRE APPARATUS. [IFC § 503.2.3]
- THE GRADIENT FOR THE FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 12% ANGLES OF APPROACH AND ANGLES OF DEPARTURE SHALL NOT EXCEED 6% FOR 25 FT PRIOR TO OR AFTER THE GRADE CHANGE. ADJACENT TO THE STRUCTURES GRADIENT SHALL NOT EXCEED 6%. [IFC § 503.2.7, § 503.2.8]
- THE TURNING RADIUS OF THE FIRE APPARATUS ACCESS ROADS SHALL BE NO LESS THAN 52 FT OUTSIDE AND 28 FT INSIDE TURNING RADIUS. IFC § 503.2.4]
- VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL NOT BE LESS THAN 13FT 6 INS. [IFC § 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. [IFC § 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. [IFC § 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. [IFC § 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. [IFC § 503.2.5]
- ALL FIRE APPARATUS ACCESS ROADS SHALL BE MARKED BY PLACING APPROVED SIGNS AT THE START OF THE DESIGNATED FIRE LANE. ONE SIGN AT THE START OF THE FIRE LANE AND WITH SIGNS AT INTERSECTIONS OF 100 FT ALONG THE DESIGNATED FIRE LANES. SIGNS TO BE PLACED ON BOTH SIDES OF AN ACCESS ROADWAY IF NEEDED TO PREVENT PARKING ON EITHER SIDE. SIGNS TO BE INSTALLED NO HIGHER THAN 10 FT OR LESS THAN 6 FT FROM THE ROADWAY LEVEL. THE CURB ALONG OR ON THE PAVEMENT OR CEMENT (IF NO CURB IS PROVIDED) SHALL BE PAINTED WITH A RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS. [IFC § 503.3]
- ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE IFC § 503.6 AND IFC APPENDIX M.
- EFFECTIVE DATE: MARCH 1ST, 2016

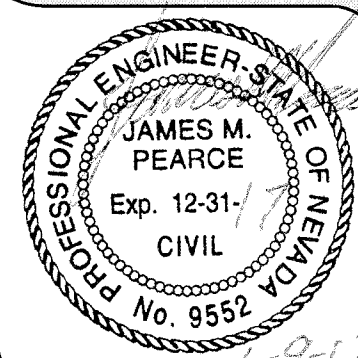
Call before you Dig
Avoid cutting underground utility lines. It's costly.



OR
1-800-227-2600

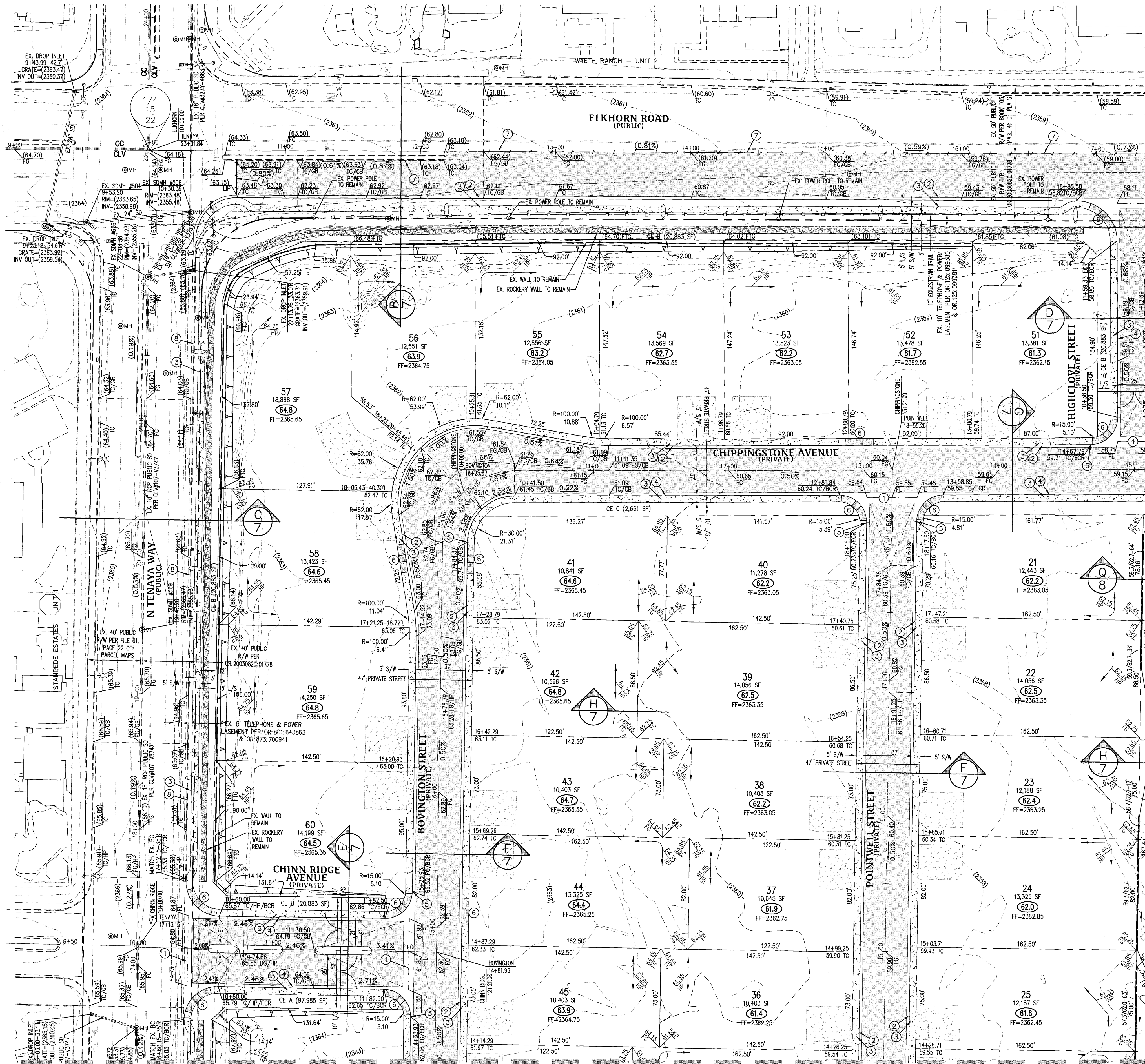
FAST
Call before you Dig
Underground
1-702-432-5300
FIREWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
Call before you Overhead
1-702-227-2929



SHEET **2** OF 26
C.L.V. DWG.#

DR HORTON
ELKHORN 40
GENERAL NOTES AND LEGEND



SEE SHEET 5

SEE SHEET 4

GRADING NOTES

1. ALL PROPOSED PAD ELEVATIONS AND SWALE ELEVATIONS ARE ROUGH GRADES. ALL OTHER PROPOSED ELEVATIONS ARE FINISHED GRADES.
2. THE GRADING PLANS SHALL BE AT THE PROJECT SITE THROUGHOUT THE COURSE OF CONSTRUCTION.
3. ALL GRADING SHALL BE PERFORMED IN CONFORMANCE WITH THE LINES, GRADES AND DETAILS AS SHOWN ON THESE PLANS. ANY DEVIATION FROM THESE PLANS WILL ONLY BE PERMITTED UPON WRITTEN APPROVAL FROM THE ENGINEER.
4. ALL PADS ARE TO BE GRADED WITHIN $\pm 0.3'$ OF THE ELEVATIONS AS SHOWN ON THE PLANS. GRADING IS NOT COMPLETE UNTIL THE ENGINEER HAS CERTIFIED THAT THE PADS HAVE BEEN GRADED IN SUBSTANTIAL CONFORMANCE TO THE PLANS.
5. ALL PLACEMENT OF OVERSIZED MATERIALS AND/OR FILL MATERIALS SHALL BE PER THE SOILS REPORT REFERENCED ON THIS PLAN.

FLOODZONE NOTE

THIS SITE IS LOCATED COMPLETELY WITHIN ZONE X PER FEMA MAP #32003C1765F, PANEL 1765F, DATED NOVEMBER 16, 2011. ZONE X IS DETERMINED TO BE OUTSIDE THE 100-YEAR FLOODPLAIN.

SOILS INFORMATION

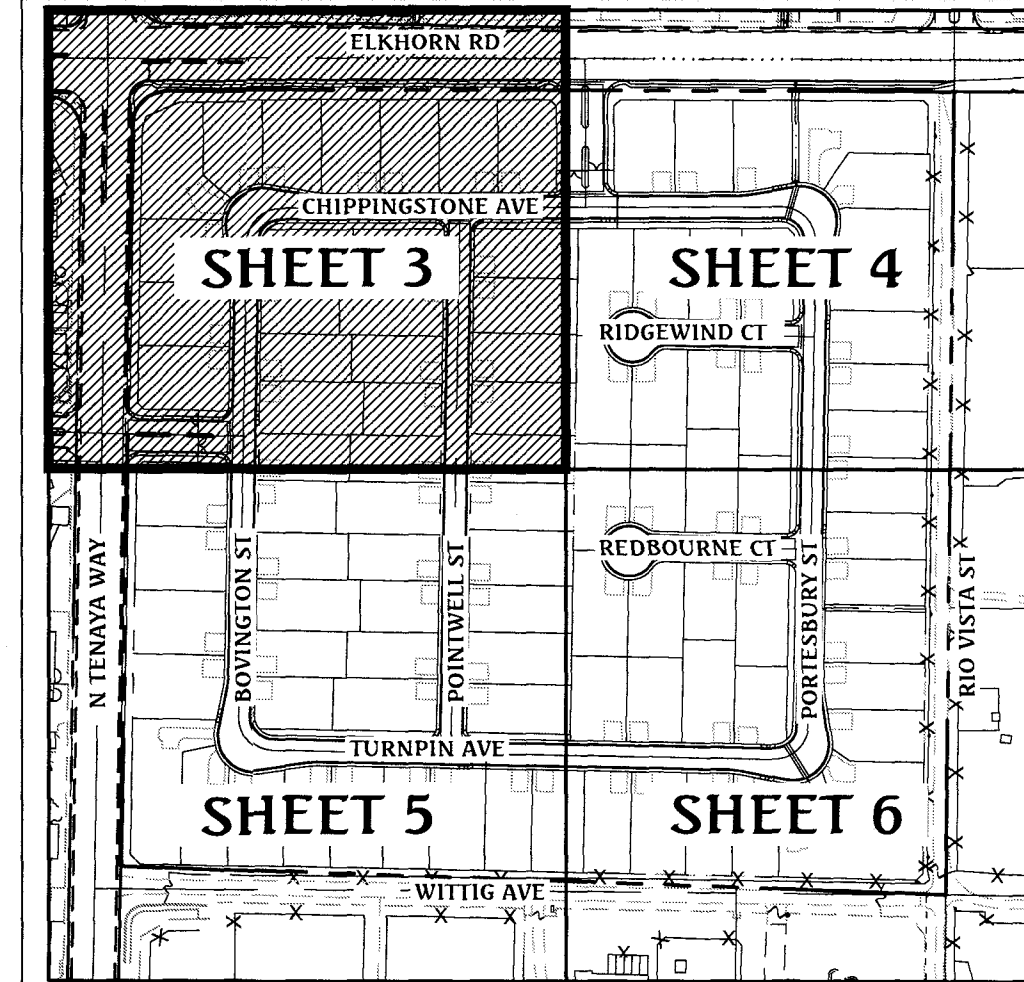
SOILS REPORT DATA
REPORT BY: GEOTEK RESIDENTIAL, LLC
PROJECT NO.: 12902-LVR
DATED: APRIL 27, 2016

CUT AND FILL DATA
CUT TOTAL: 31,623 CY
FILL TOTAL: 99,820 CY
NET (FILL): 68,197 CY

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

KEY MAP

SCALE: 1" = 300'



Call before you Dig
Avoid cutting underground utility lines. It's costly.

CALL
811
OR
1-800-227-2600

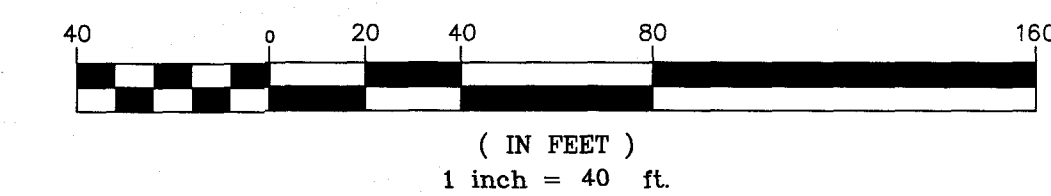
FAST
Call before you Underground
1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY

Call before you Overhead
1-702-227-2929



GRAPHIC SCALE



GRADING LEGEND

	EX. MAJOR CONTOUR
	EX. MINOR CONTOUR
	BOUNDARY LINE
	STREET CENTERLINE
	EDGE OF PAVEMENT
	EXISTING CURB, GUTTER, & SIDEWALK
	PROPOSED CURB, GUTTER, & SIDEWALK
	PROPOSED AC PAVING
	CLARK COUNTY/CITY OF LAS VEGAS BOUNDARY LINE
	EX. FENCE
	EX. BLOCK WALL
	PROPOSED RETAINING WALL
	TOP OF FOOTING
	APPROX. WALL LENGTH
	TOP OF RETAINING WALL
	PROPOSED SCARP

PUBLIC DRAINAGE EASEMENT

DRAINAGE IMPROVEMENTS:	PUBLIC	PRIVATE
18" STORM DRAIN	32 LF	
2.5" TYPE OM2 DROP INLET	1 EA	
DRAINAGE EASEMENT CONCRETE	8,175 SF	
DRAINAGE EASEMENT BOLLARD	9 EA	
DRAINAGE EASEMENT WROUGHT IRON	330 SF	

BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15SS66
RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.
ELEVATION = 717.800 METERS (NAVD88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD88 V.2003)

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.

JAMES M. PEARCE, PE No. 9552

DATE:

CONSTRUCTION NOTES

1. CONSTRUCT 8" WIDE CROSS GUTTER, PER CCAUSD No. 228
2. CONSTRUCT "R" TYPE CURB AND GUTTER, PER CCAUSD No. 217.S2
3. CONSTRUCT 5" WIDE SIDEWALK, PER CCAUSD No. 234
4. CONSTRUCT "L" TYPE CURB AND GUTTER, PER CCAUSD No. 216
5. TRANSITION FROM L-TYPE CURB/SPANDREL TO R-TYPE CURB
6. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE 1
7. SAWCUT AND MATCH EXISTING ASPHALT
8. EXISTING CURB AND GUTTER TO REMAIN AND PROTECT IN PLACE
9. INSTALL REMOVABLE LOCKING BOLLARDS @ 5' O.C., PER DETAIL R, SHEET 8
10. CONSTRUCT SIDEWALK DRAIN, PER CCAUSD No. 236
11. CONSTRUCT TYPE OM2 DROP INLET, PER CCAUSD #412.1. SEE PROFILE AND DETAIL ON SHEET 9
12. STORM WATER STAMP TO BE LOCATED ADJACENT TO DROP INLET, PER CCAUSD #421.

THIS PROJECT WILL BE CONSTRUCTED WITH CONTINUOUS R-TYPE CURB ON THE FRONTAGE OF ALL LOTS

DATE: 07/09/17

PM: J. PEARCE

DRAWN BY:

DESIGNED BY:

CHECKED BY:

JOB NO.: 007.108

SCALE: 1"=40'

APP'D

NO.

DESCRIPTION

DATE

DR HORTON

ELKHORN 40

GRADING PLAN 1

PROFESSIONAL ENGINEER STATE OF NEVADA

JAMES M. PEARCE

Exp. 12-31-

CIVIL

No. 9552

SEE SHEET 3

OF 26

C.L.V. DWG.#



NORTH

GRAPHIC SCALE

0 20 40 80

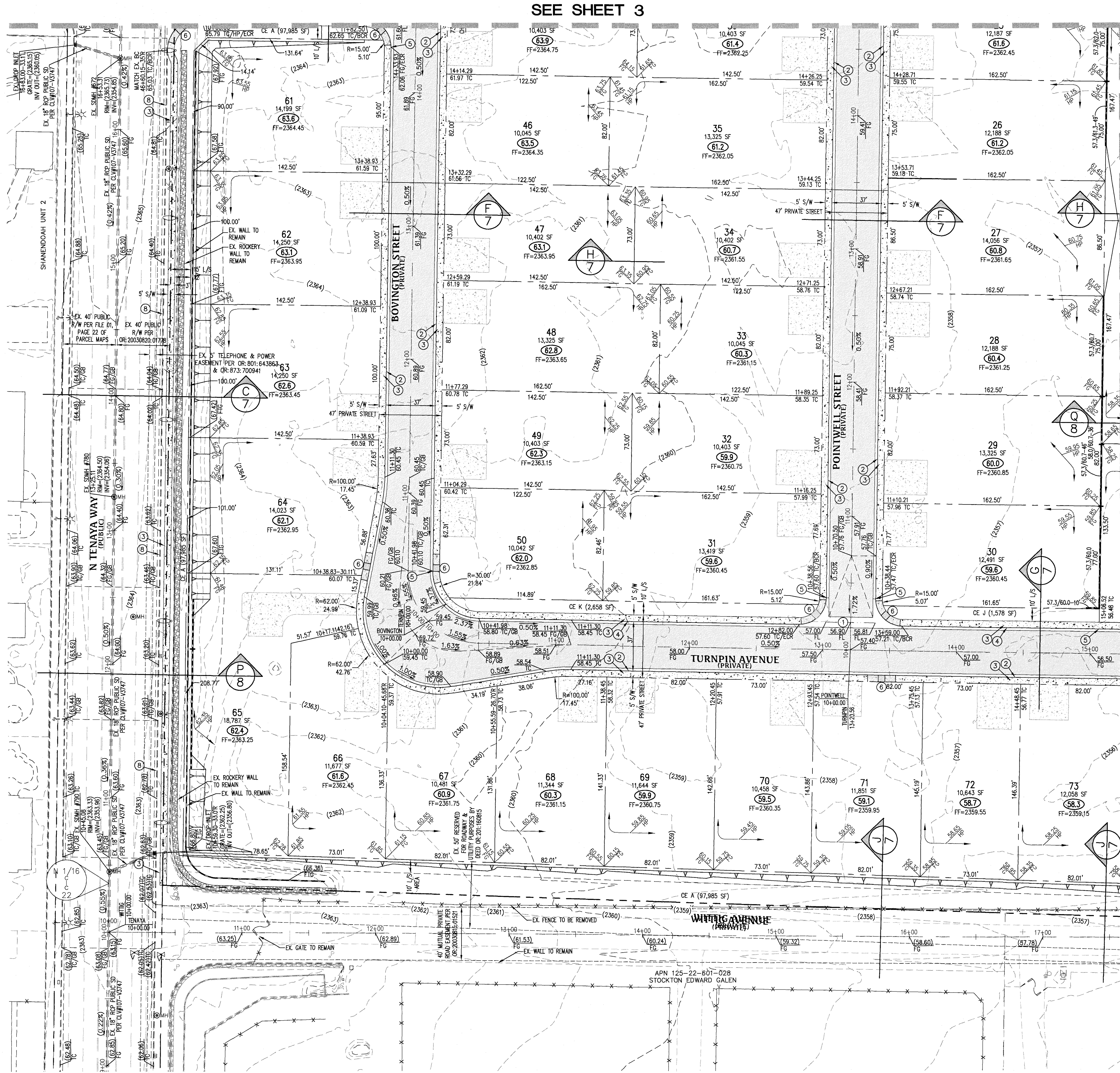
(IN FEET)

1 inch = 40 ft.

AVOID HITTING OVERHEAD
POWER LINES. IT'S COSTLY

Call
before you
Overhead
1-702-227-2929

SHEET **4** OF 26
C.L.V. DWG.#



GRADING NOTES

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5. ALL PLACEMENT OF OVERSIZED MATERIALS AND/OR FILL MATERIALS SHALL BE PER THE SOILS REPORT REFERENCED ON THIS PLAN.

FLOODZONE NOTE

THIS SITE IS LOCATED COMPLETELY WITHIN ZONE X PER FEMA MAP #52003C1765F, PANEL 1765F, DATED NOVEMBER 16, 2011. ZONE X IS DETERMINED TO BE OUTSIDE THE 100-YEAR FLOODPLAIN.

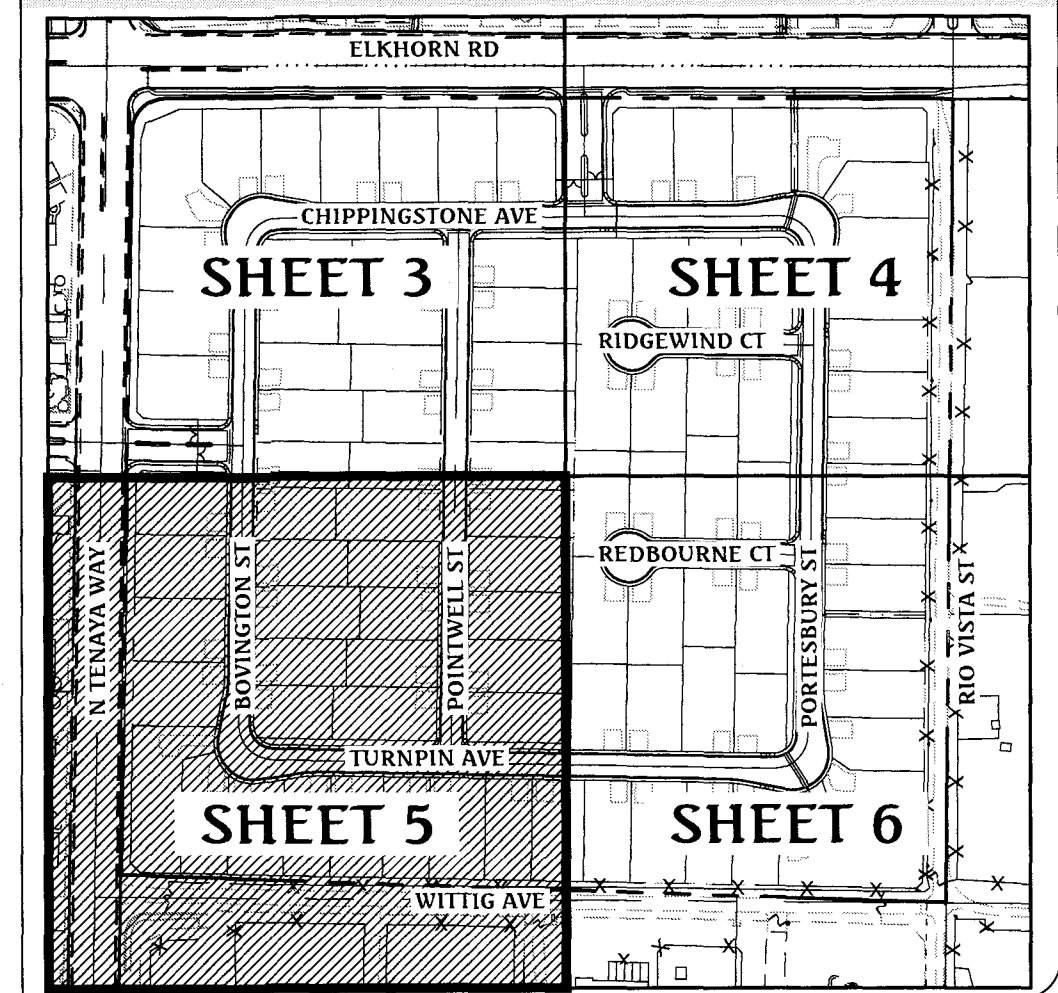
SOILS INFORMATION

SOILS REPORT DATA
 REPORT BY: GEOTEK RESIDENTIAL, LLC
 PROJECT No.: 22902-LVR
 DATED: APRIL 27, 2016
 CUT AND FILL DATA
 CUT TOTAL: 31,623 CY
 FILL TOTAL: 99,820 CY
 NET (FILL): 68,197 CY

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

KEY MAP

SCALE: 1" = 300'



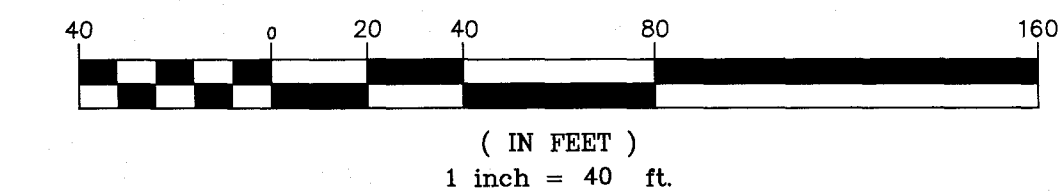
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 FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

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 1-702-227-2929



GRAPHIC SCALE



GRADING LEGEND

- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- BOUNDARY LINE
- STREET CENTERLINE
- EDGE OF PAVEMENT
- EXISTING CURB, GUTTER, & SIDEWALK
- PROPOSED CURB, GUTTER, & SIDEWALK
- PROPOSED AC PAVING
- CLARK COUNTY/CITY OF LAS VEGAS BOUNDARY LINE
- EX. FENCE
- EX. BLOCK WALL
- PROPOSED RETAINING WALL
- TOP OF FOOTING
- APPROX. WALL LENGTH
- TOP OF RETAINING WALL
- PROPOSED SCARP

PUBLIC DRAINAGE EASEMENT

DRAINAGE IMPROVEMENTS:	PUBLIC	PRIVATE
18" STORM DRAIN	32 LF	
2.5" TYPE CM2 DROP INLET	1 EA	
DRAINAGE EASEMENT CONCRETE	8,175 SF	
DRAINAGE EASEMENT BOLLARD	9 EA	
DRAINAGE EASEMENT WROUGHT IRON	330 SF	

BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15S566
 RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.
 ELEVATION = 717.800 METERS (NAV'D'88 V.2003)
 ELEVATION = 2354.98 US SURVEY FEET (NAV'D'88 V.2003)

CONSTRUCTION NOTES

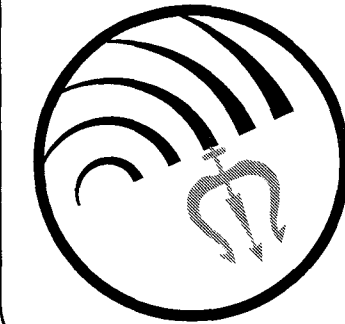
1. CONSTRUCT 8" WIDE CROSS GUTTER, PER CCAUSD No. 228
2. CONSTRUCT "R" TYPE CURB AND GUTTER, PER CCAUSD No. 217.52
3. CONSTRUCT 5" WIDE SIDEWALK, PER CCAUSD No. 234
4. CONSTRUCT "L" TYPE CURB AND GUTTER, PER CCAUSD No. 216
5. 5" TRANSITION FROM L-TYPE CURB/SPANDREL TO R-TYPE CURB
6. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOWNS OR EQUIVALENT, PER CCAUSD No. 235, CASE 1
7. SAWCUT AND MATCH EXISTING ASPHALT
8. EXISTING CURB AND GUTTER TO REMAIN AND PROTECT IN PLACE
9. INSTALL REMOVABLE LOCKING BOLLARDS @ 5' O.C., PER DETAIL R, SHEET 8
10. CONSTRUCT SIDEWALK DRAIN, PER CCAUSD No. 236
11. CONSTRUCT TYPE CM2 DROP INLET, PER CCAUSD #412.1. SEE PROFILE AND DETAIL ON SHEET 9
12. STORM WATER STAMP TO BE LOCATED ADJACENT TO DROP INLET, PER CCAUSD #421.

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.

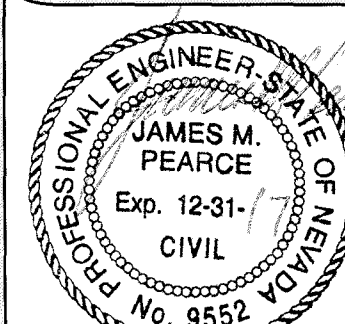
JAMES M. PEARCE, PE No. 9552

DATE:

Triton
 Engineering



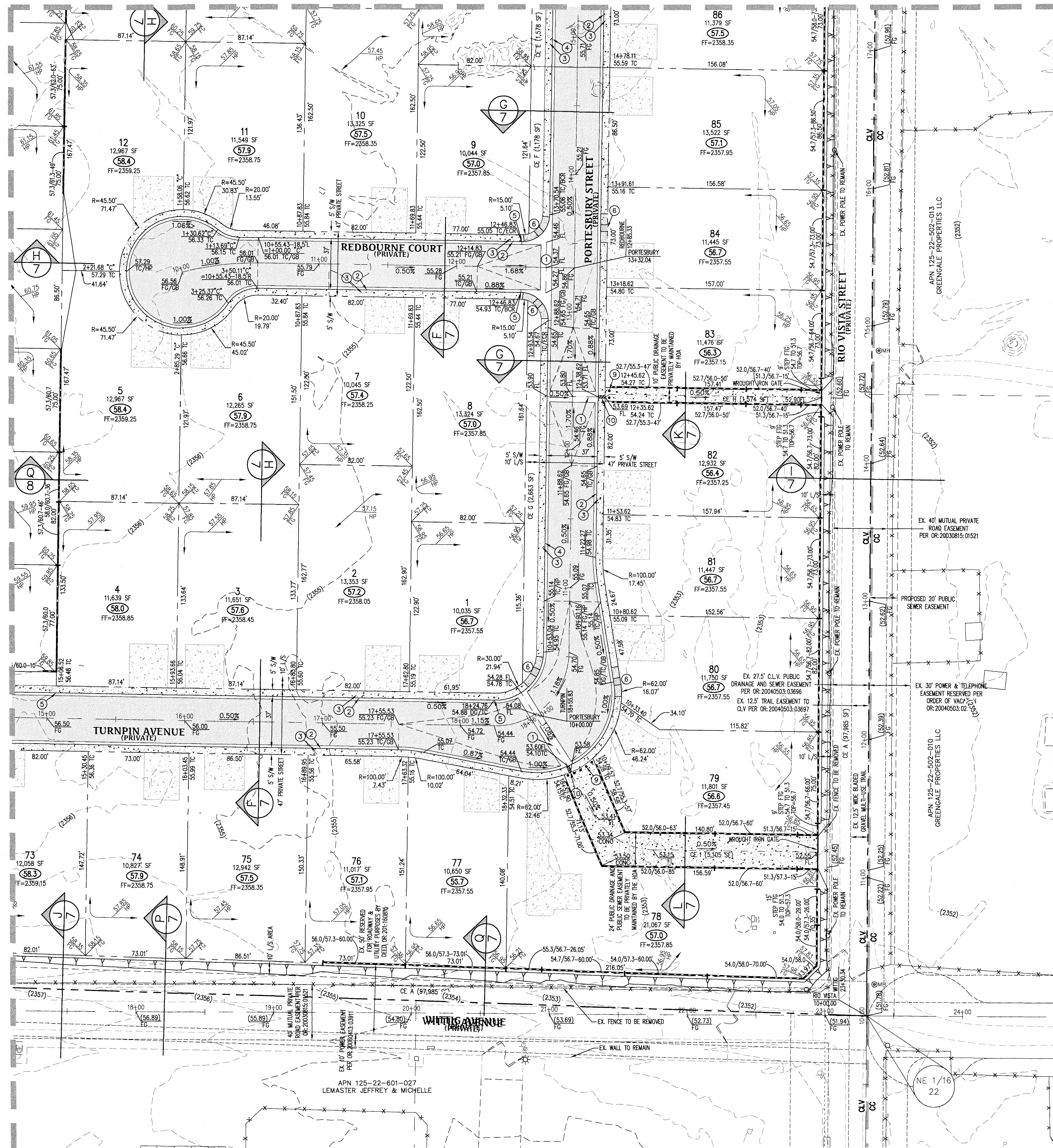
DR HORTON
 ELKHORN 40



SHEET **5** OF 26
 C.L.V. DWG.#

SEE SHEET 4

SEE SHEET 5



GRADING NOTES

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FLOODZONE NOTE

THIS SITE IS LOCATED COMPLETELY WITHIN ZONE X PER FEMA MAP #32003C1765F, PANEL 1765F, DATED NOVEMBER 16, 2011. ZONE X IS DETERMINED TO BE OUTSIDE THE 100-YEAR FLOODPLAIN.

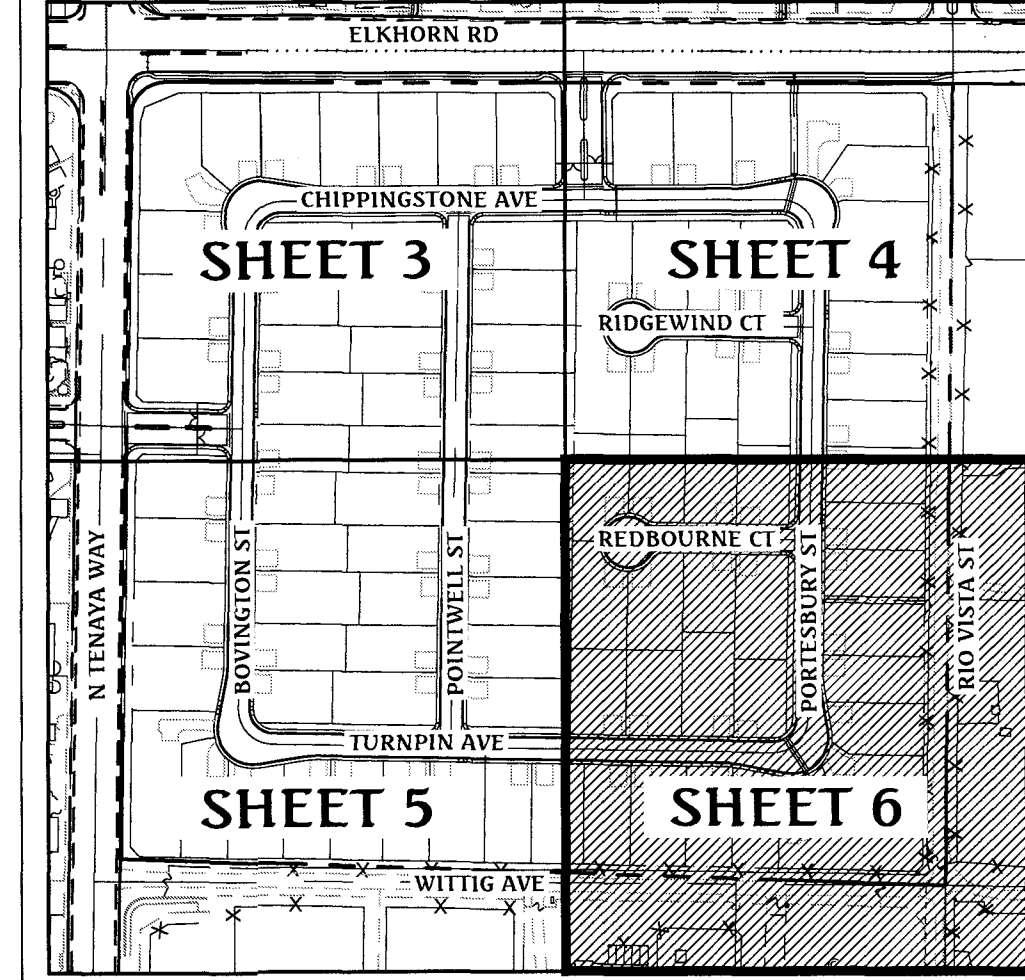
SOILS INFORMATION

SOILS REPORT DATA
REPORT BY: GEOTEK RESIDENTIAL, LLC
PROJECT NO.: 12902-LVR
DATE: APRIL 27, 2016
CUT AND FILL DATA
CUT TOTAL: 31,823 CY
FILL TOTAL: 99,820 CY
NET (FILL): 68,197 CY

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

KEY MAP

SCALE: 1" = 300'



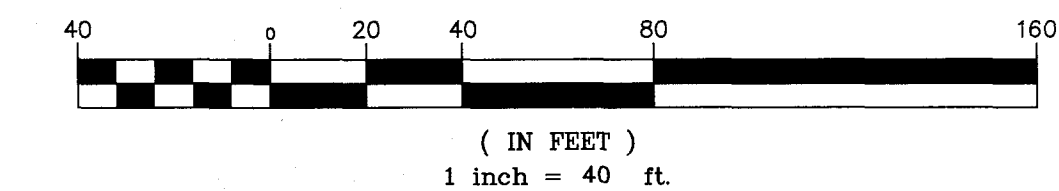
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FAST
Call before you Dig
Underground
1-702-432-5300
FREEMAN AND ARTERIAL SYSTEM OF TRANSPORTATION

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
Call before you Overhead
1-702-227-2929



GRAPHIC SCALE



GRADING LEGEND

- (1395) EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- BOUNDARY LINE
- STREET CENTERLINE
- EDGE OF PAVEMENT
- EXISTING CURB, GUTTER, & SIDEWALK
- PROPOSED CURB, GUTTER, & SIDEWALK
- PROPOSED AC PAVING
- CLARK COUNTY/CITY OF LAS VEGAS BOUNDARY LINE
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- TOP OF RETAINING WALL
- PROPOSED SCARP

PUBLIC DRAINAGE EASEMENT

DRAINAGE IMPROVEMENTS:	PUBLIC	PRIVATE
18" STORM DRAIN	32 LF	
2.5" TYPE CM2 DROP INLET	1 EA	
DRAINAGE EASEMENT CONCRETE	8,175 SF	
DRAINAGE EASEMENT BOLLARD	9 EA	
DRAINAGE EASEMENT WROUGHT IRON	330 SF	

BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15S566
RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.
ELEVATION = 717.800 METERS (NAVD'88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)

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.

JAMES M. PEARCE, PE No. 9552

DATE:

CONSTRUCTION NOTES

1. CONSTRUCT 8" WIDE CROSS GUTTER, PER CCAUSD No. 228
2. CONSTRUCT "R" TYPE CURB AND GUTTER, PER CCAUSD No. 217-S2
3. CONSTRUCT 5" WIDE SIDEWALK, PER CCAUSD No. 234
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8. EXISTING CURB AND GUTTER TO REMAIN AND PROTECT IN PLACE
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10. CONSTRUCT SIDEWALK DRAIN, PER CCAUSD No. 236
11. CONSTRUCT TYPE CM2 DROP INLET, PER CCAUSD #421.1. SEE PROFILE AND DETAIL ON SHEET 9
12. STORM WATER STAMP TO BE LOCATED ADJACENT TO DROP INLET, PER CCAUSD #421.

THIS PROJECT WILL BE CONSTRUCTED WITH CONTINUOUS R-TYPE CURB ON THE FRONTAGE OF ALL LOTS

DATE: 01/09/17

FW: J. PEARCE

DRAWN BY:

DESIGNED BY:

CHECKED BY:

ADVA CHECKED:

JOB NO.: 007108

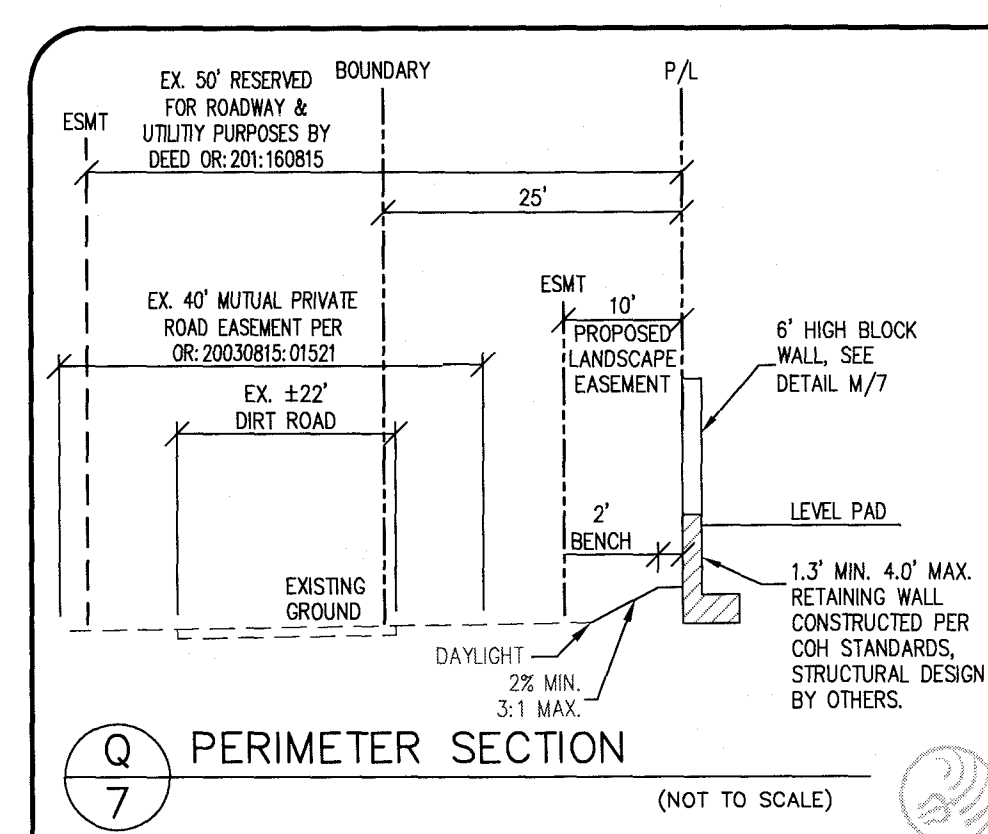
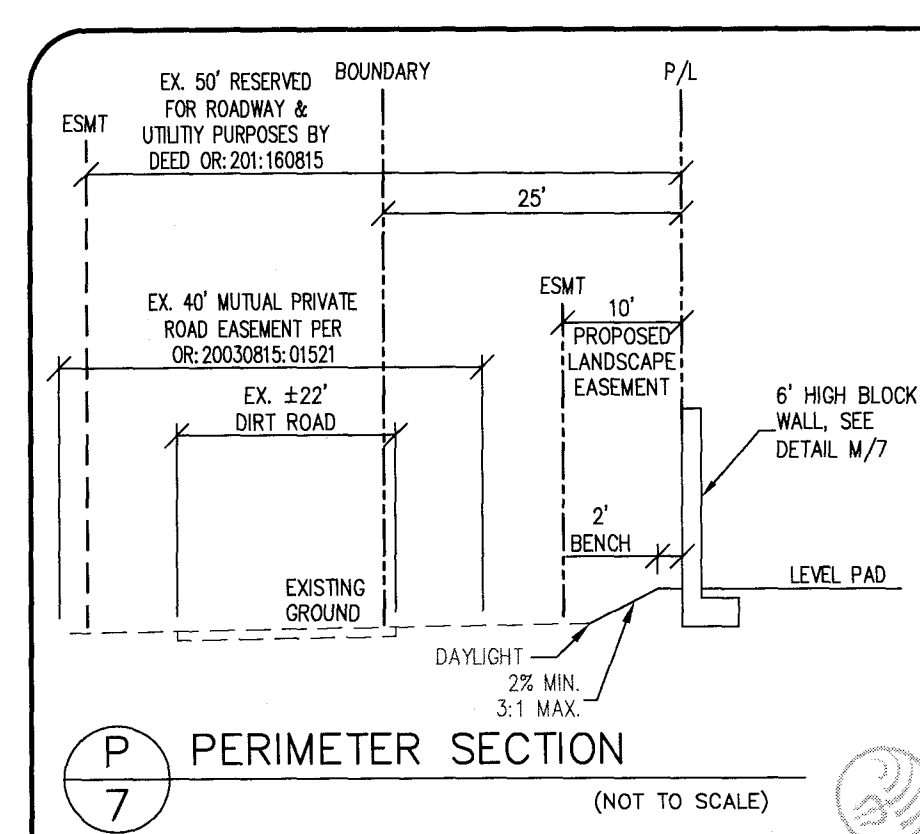
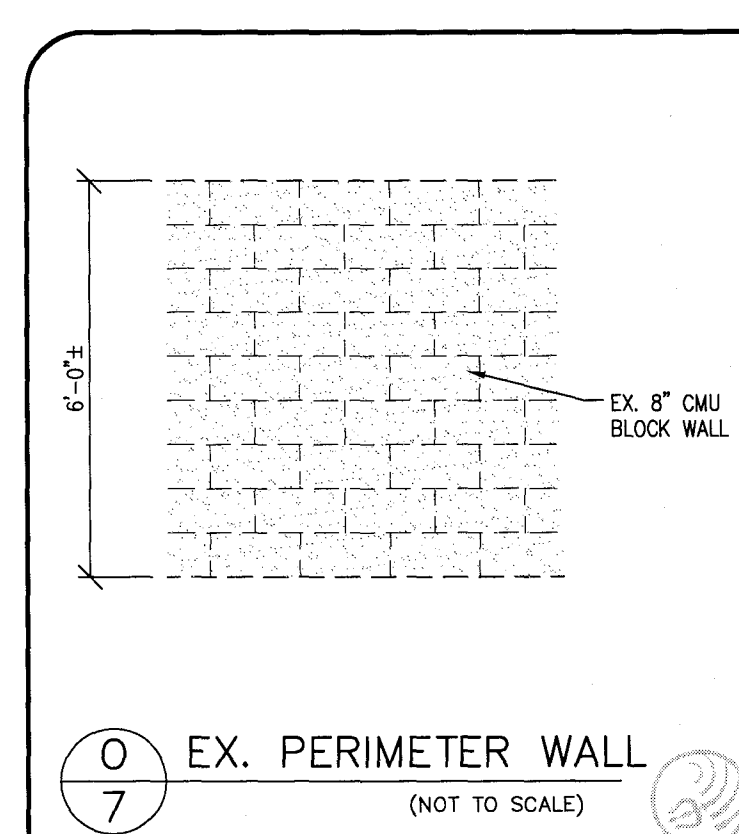
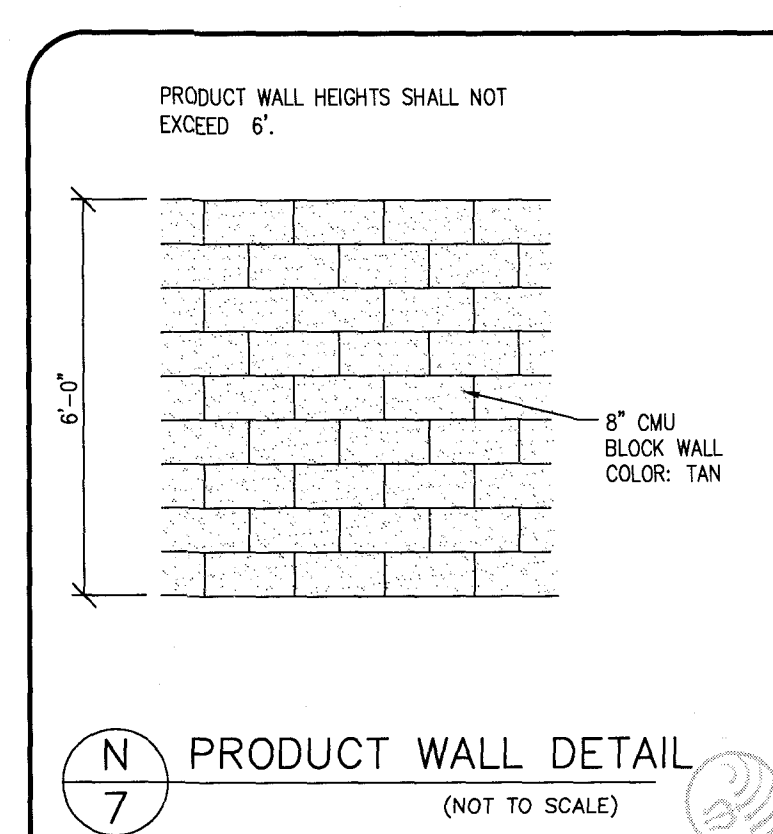
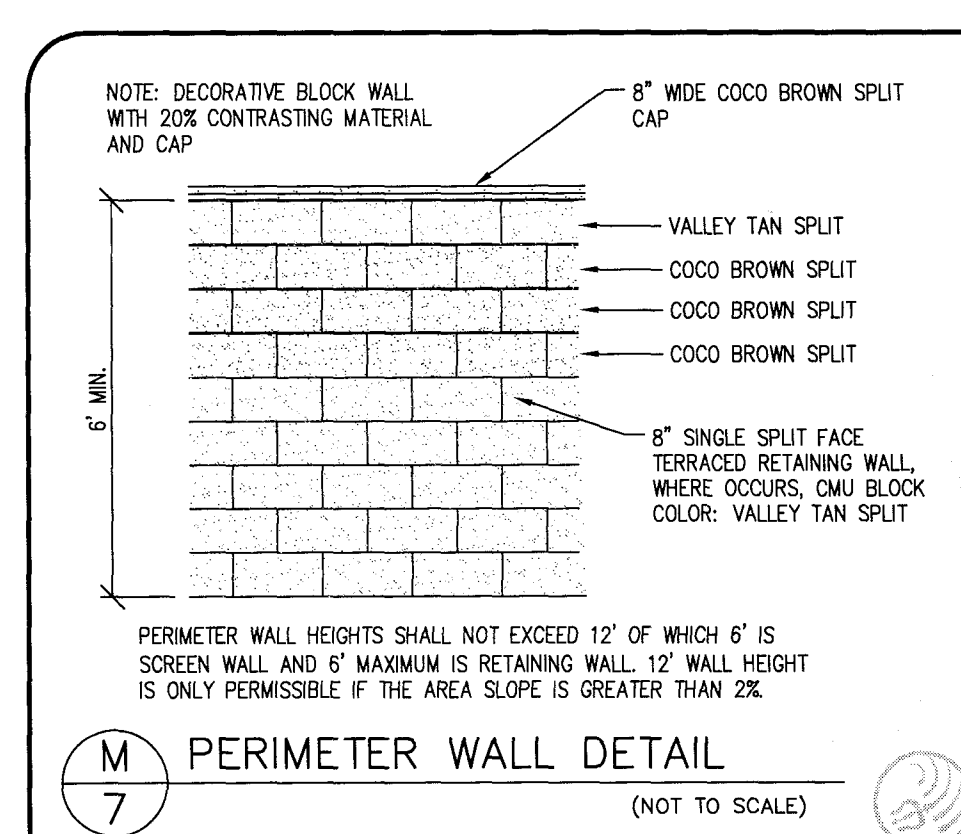
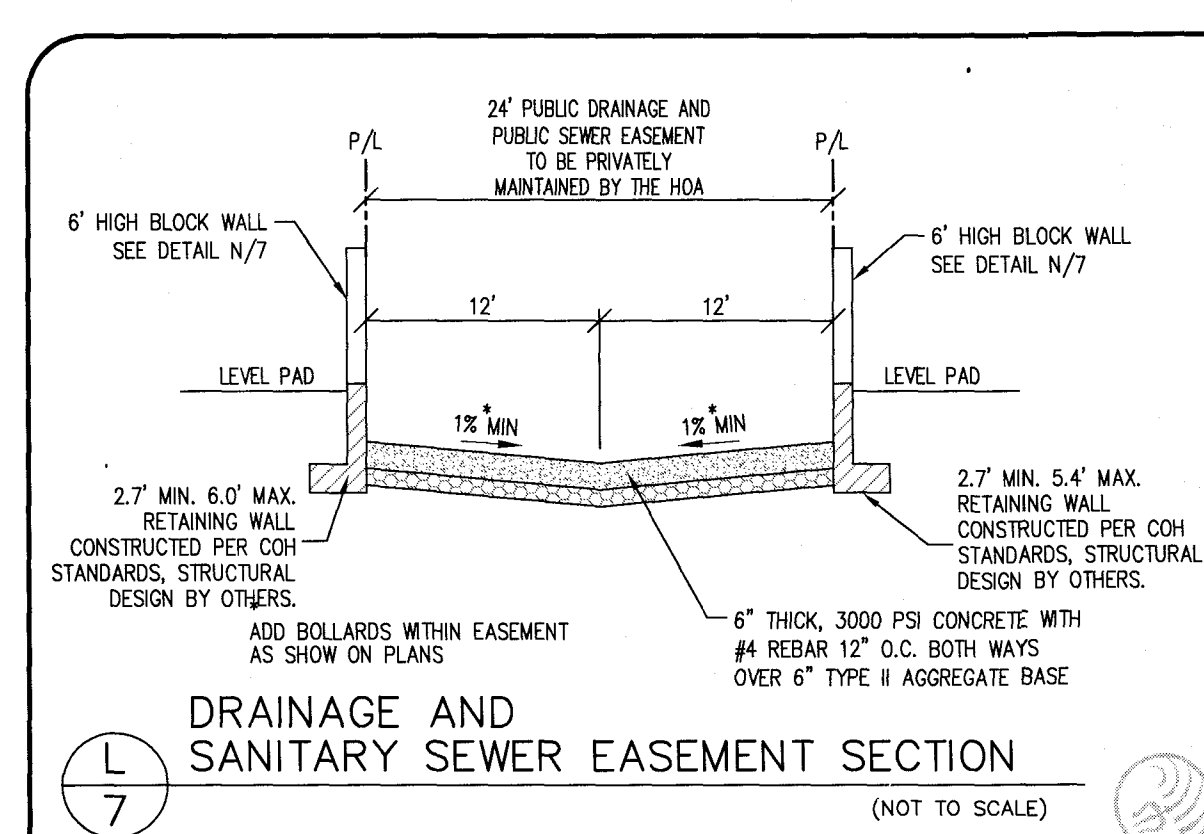
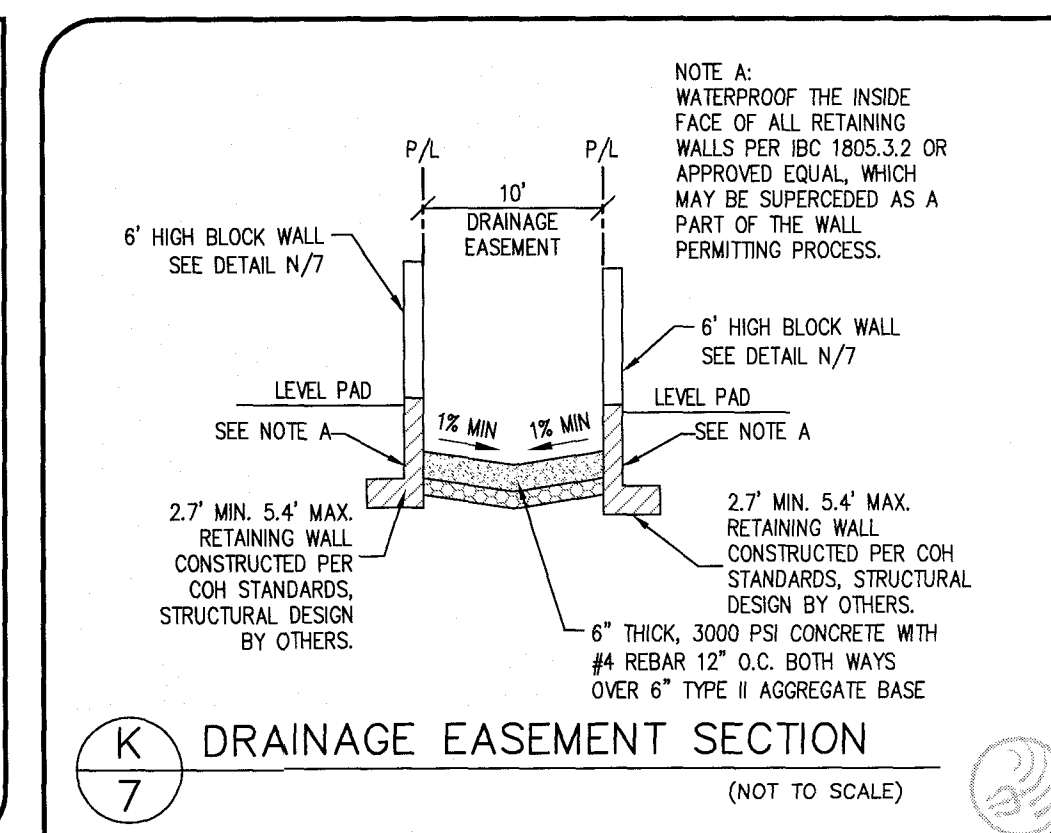
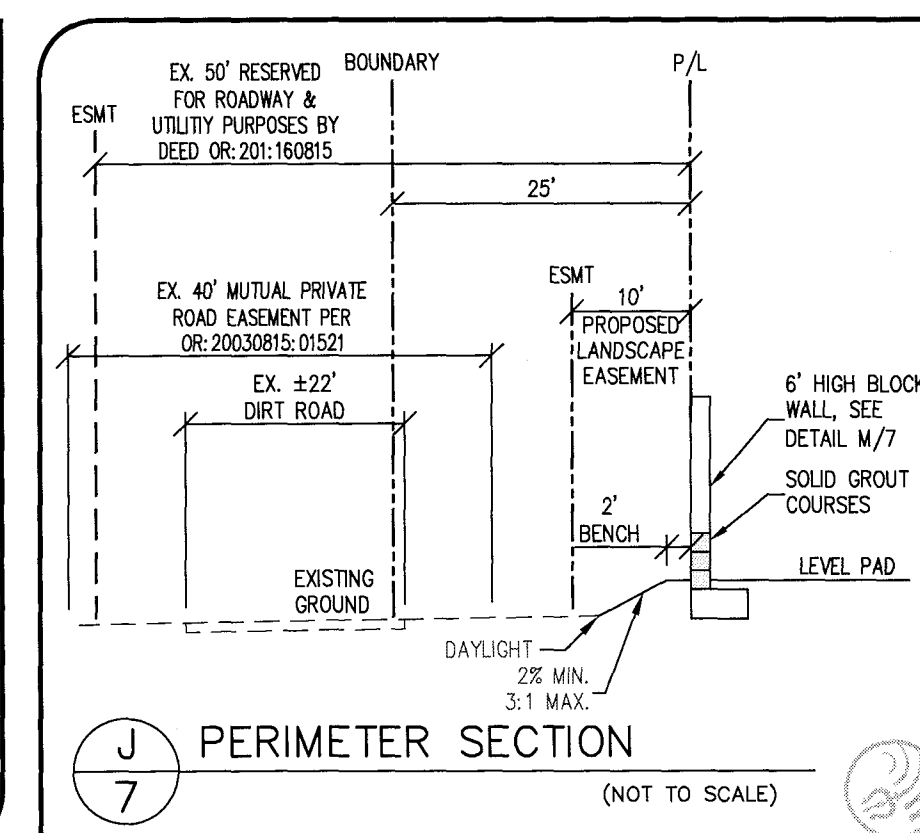
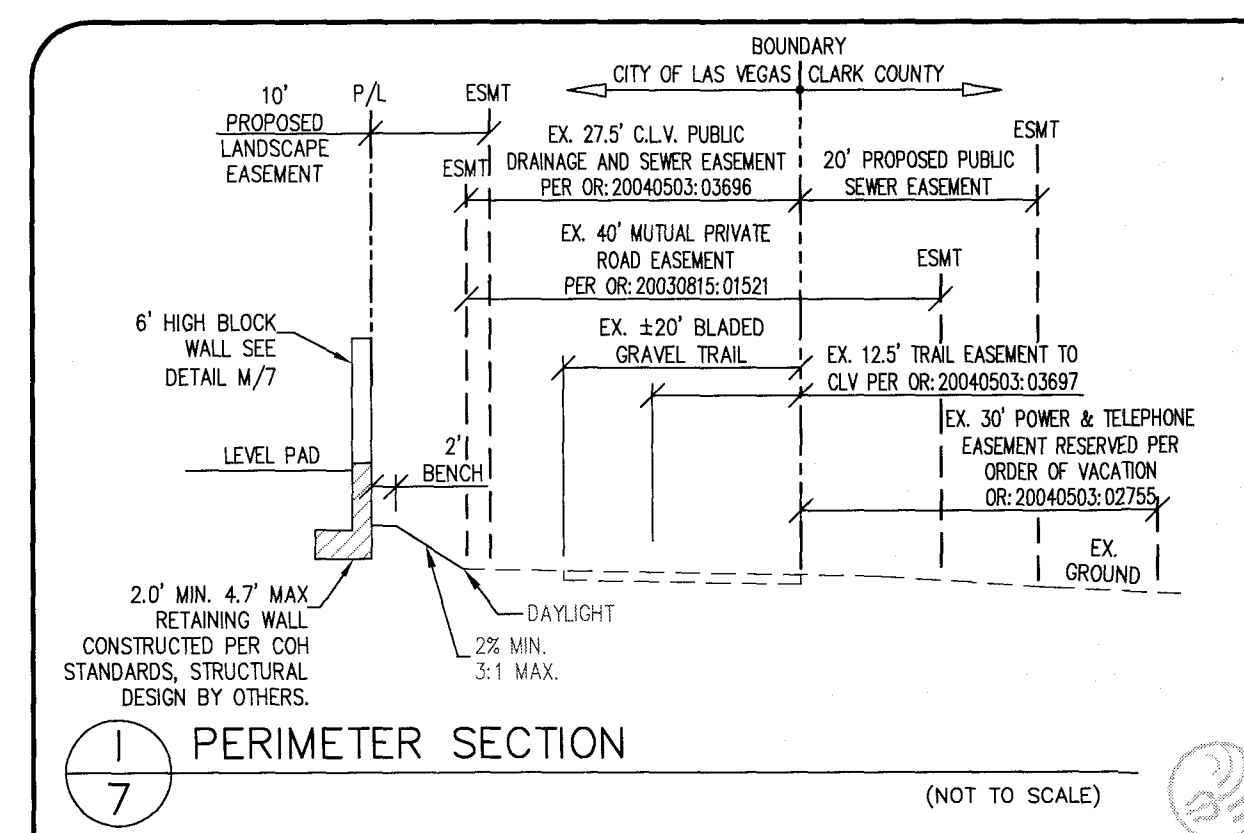
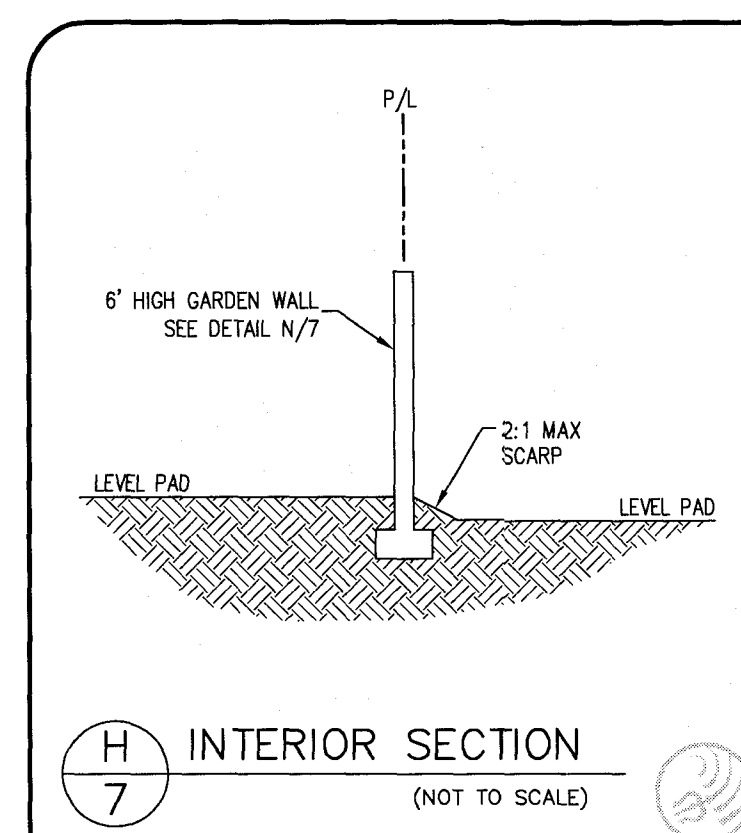
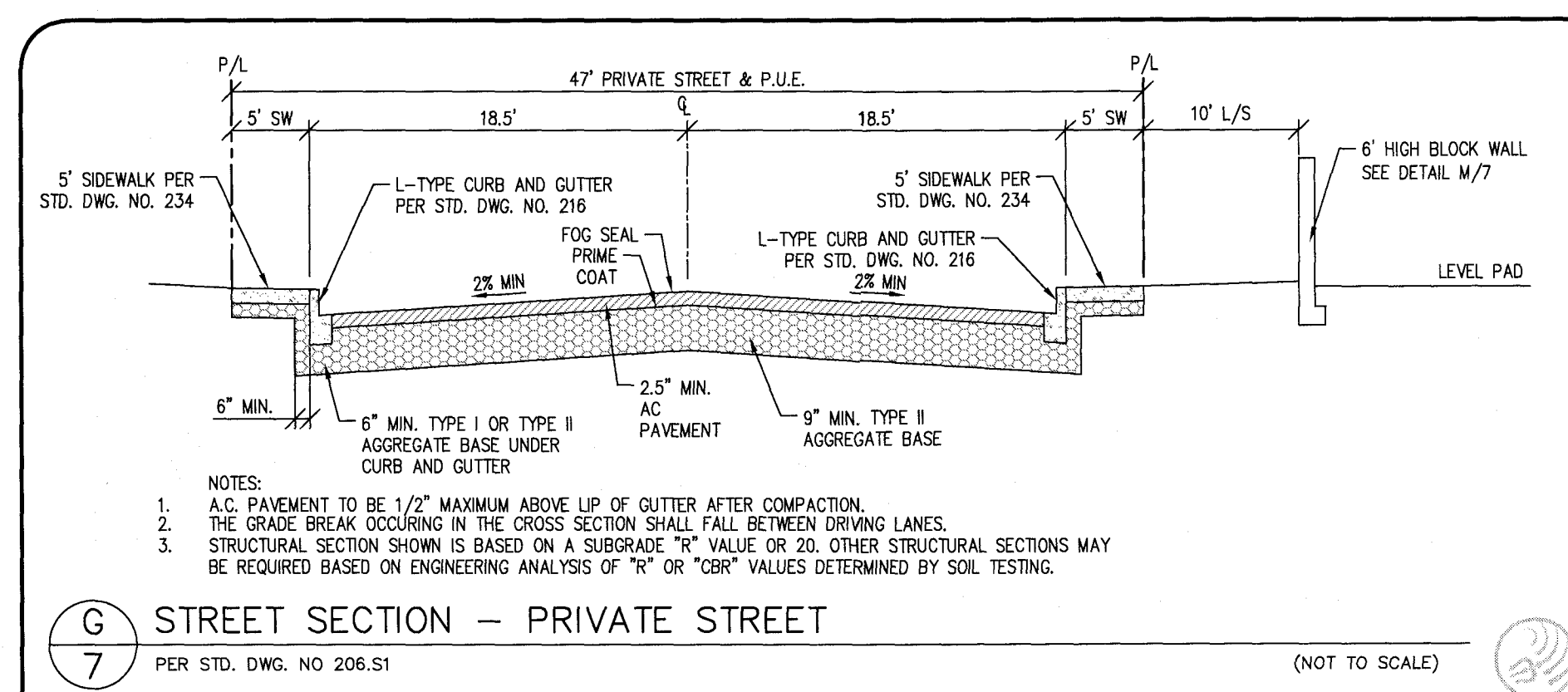
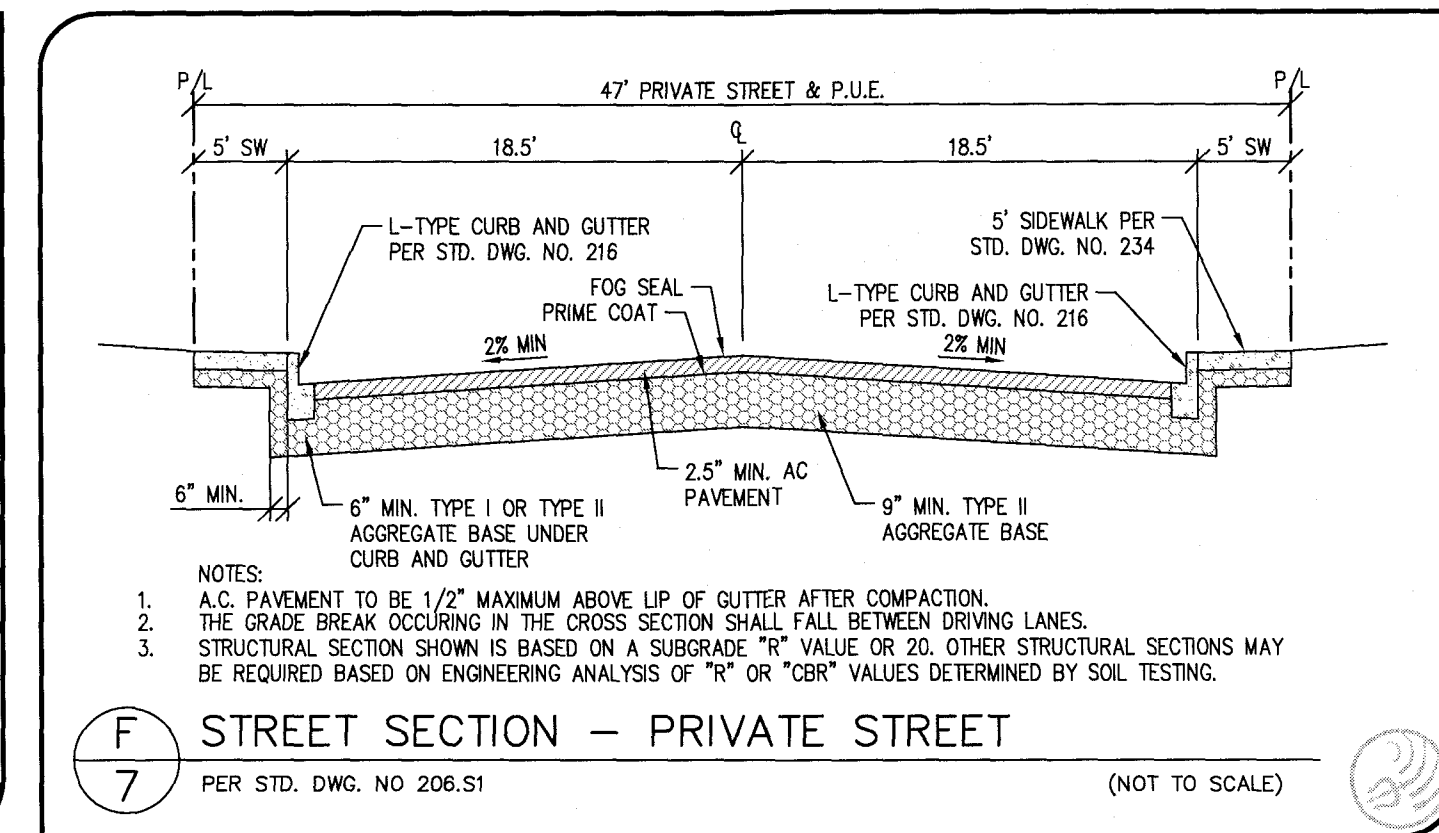
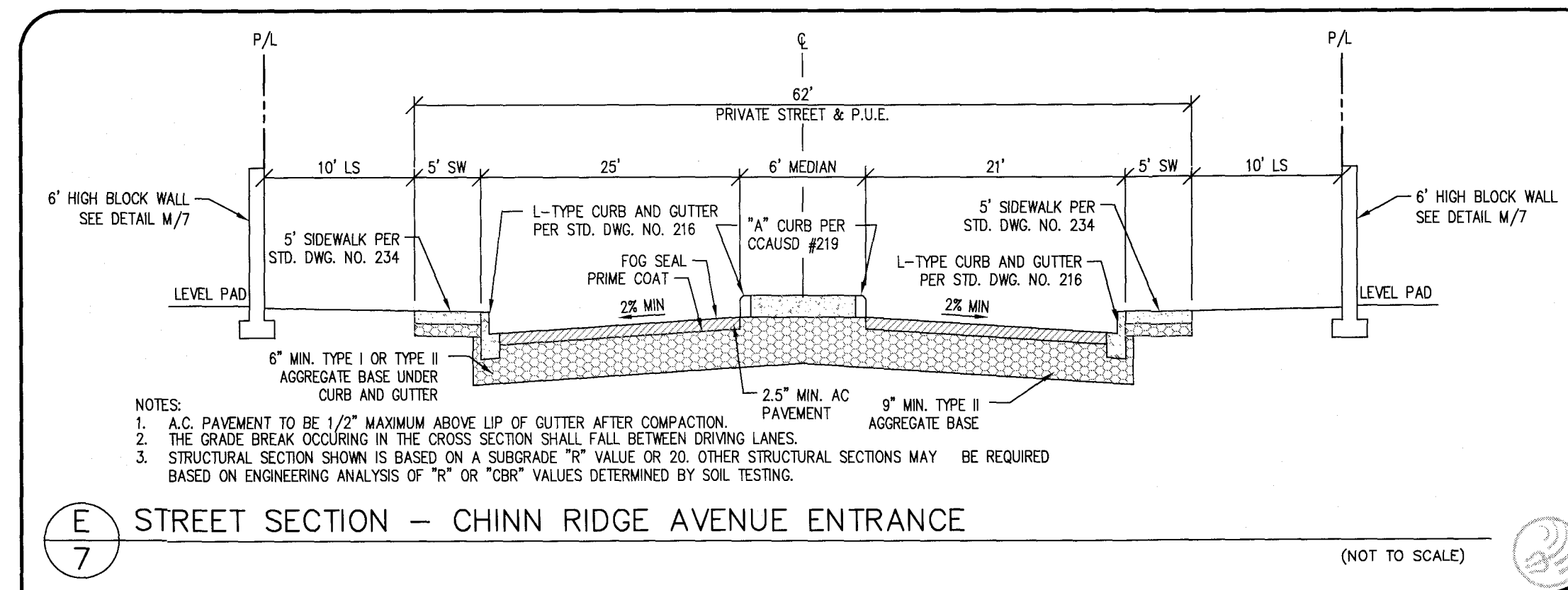
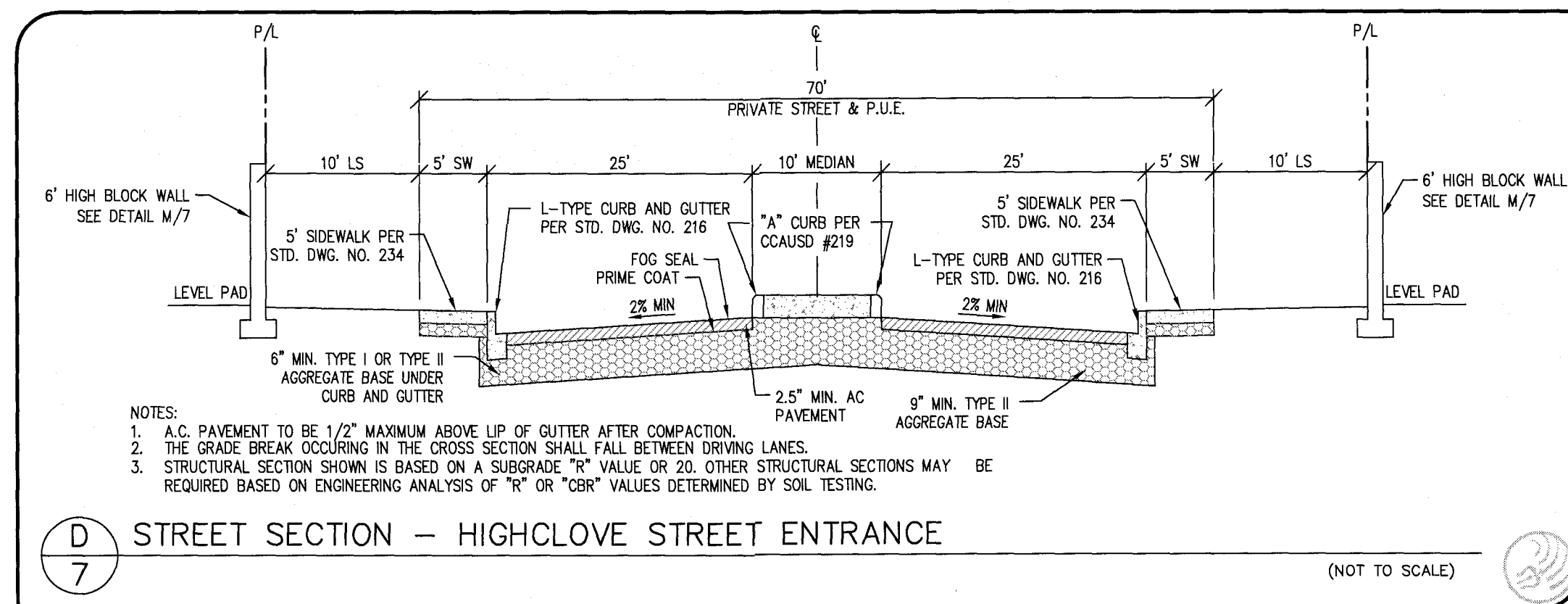
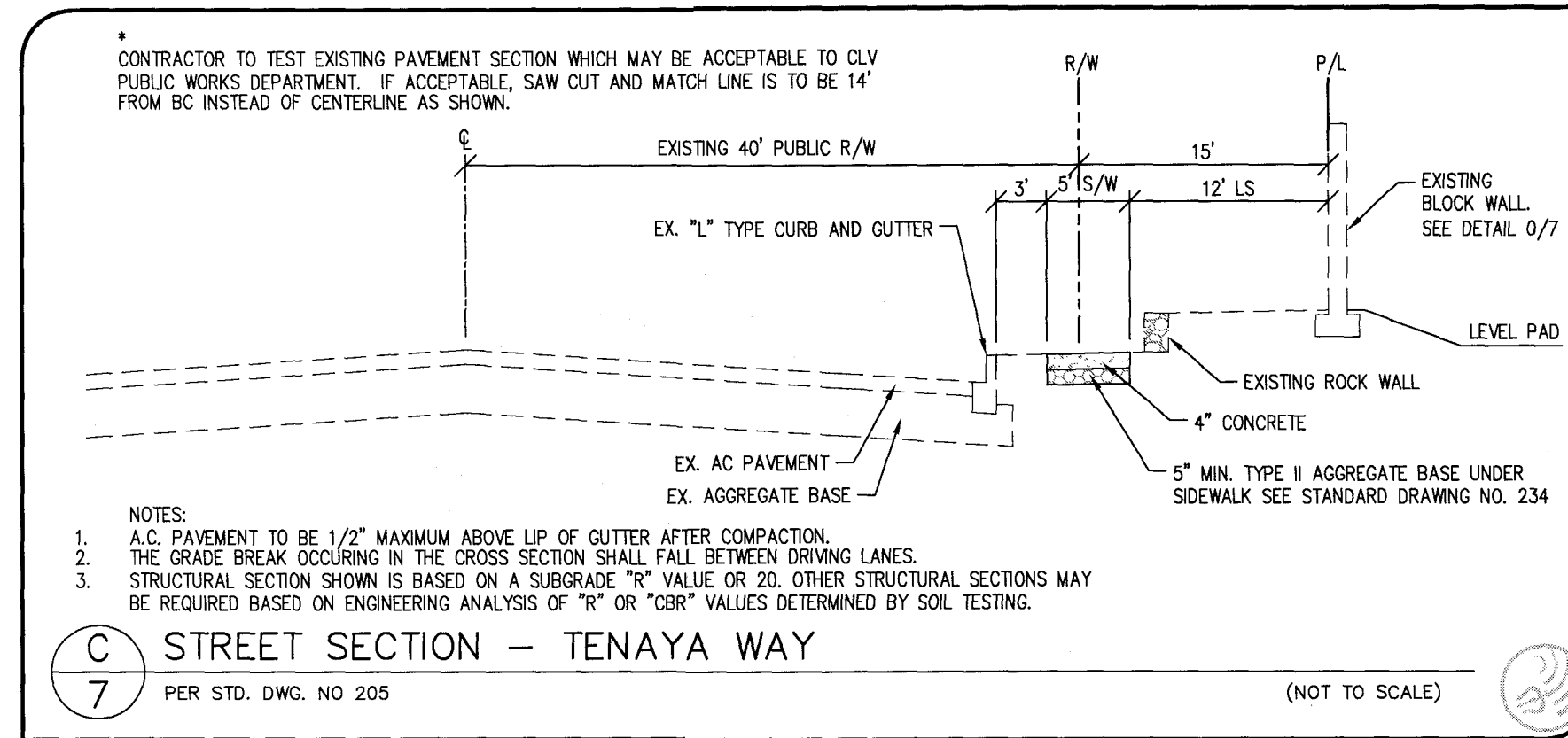
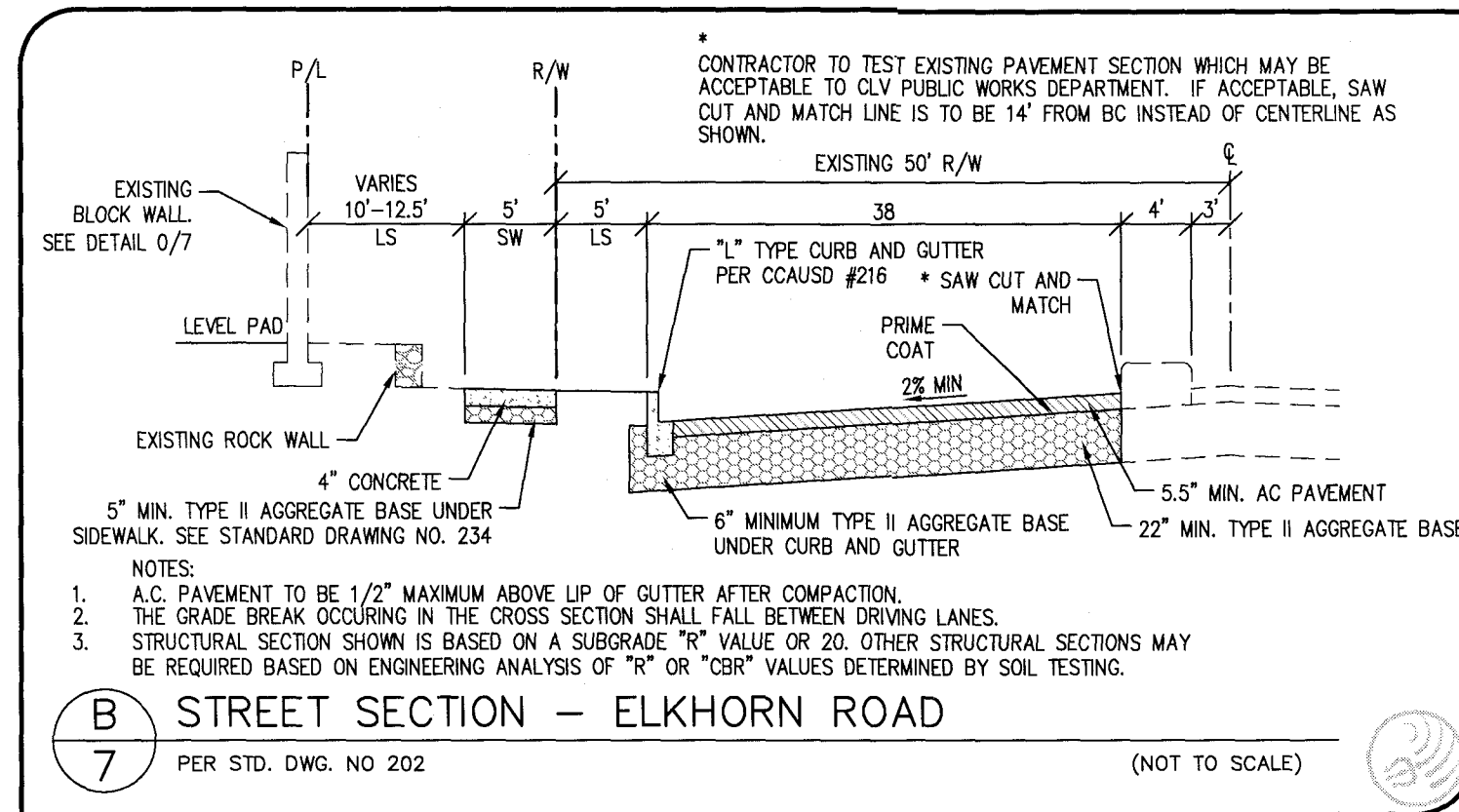
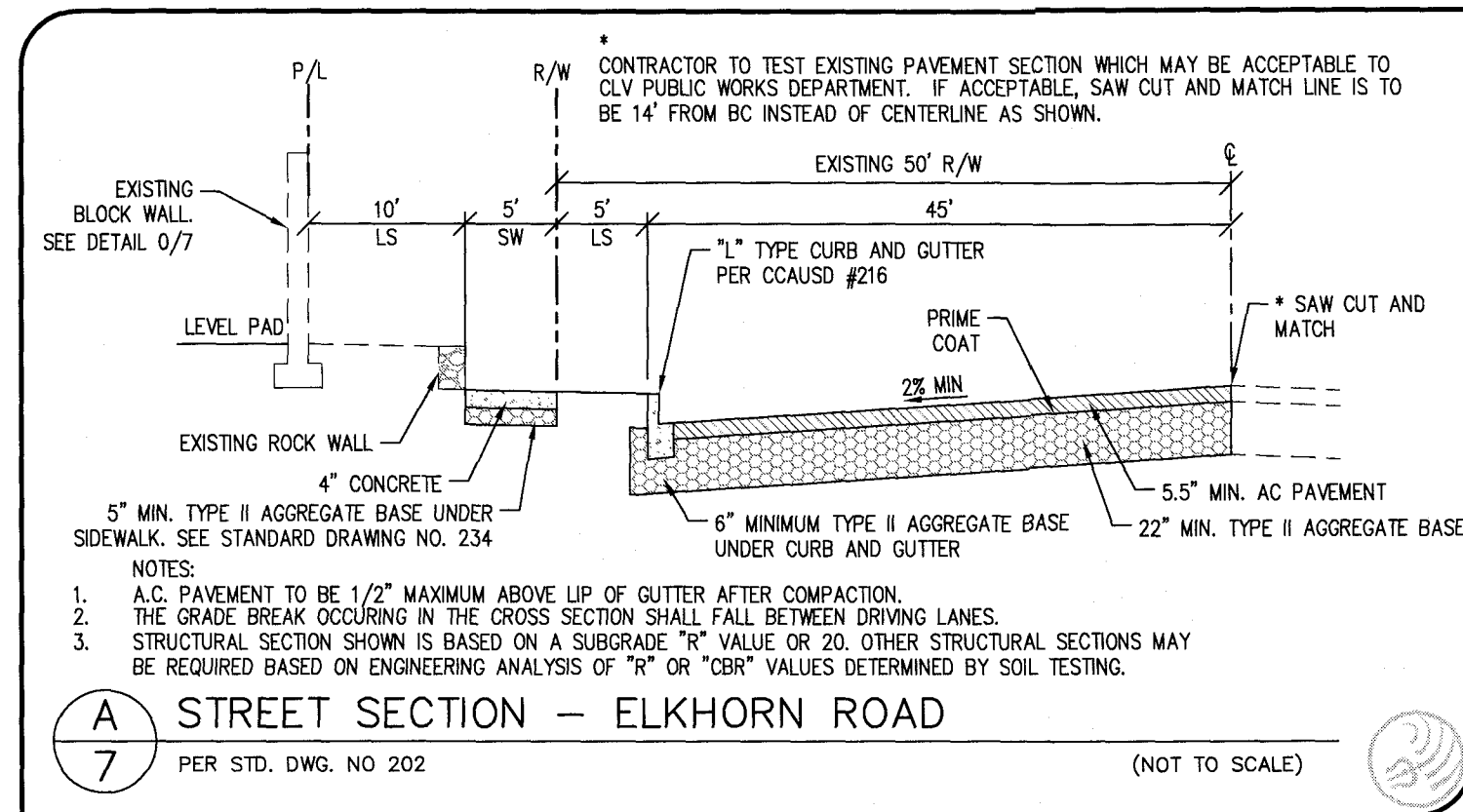
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NO. DESCRIPTION

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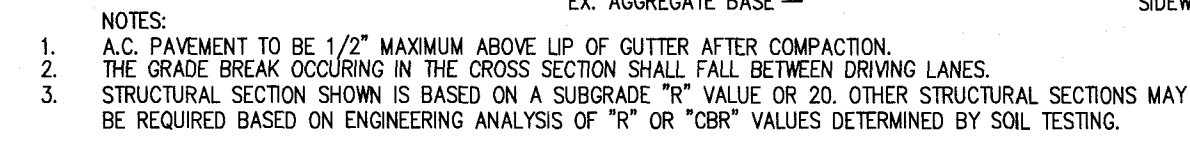
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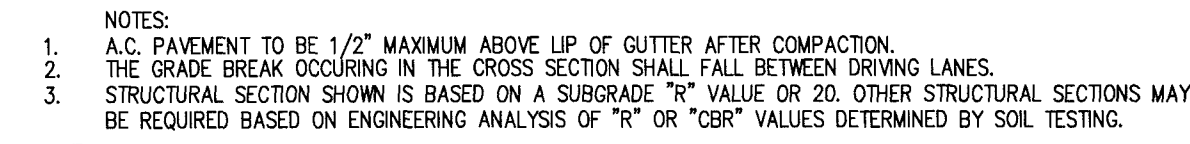
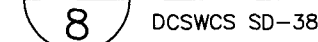
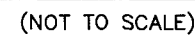
DETAILS 1

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SHEET 7 OF 26
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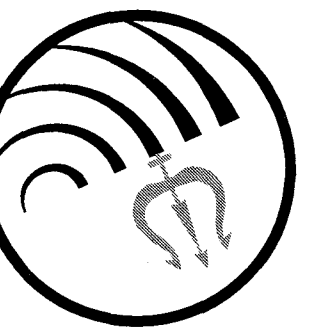


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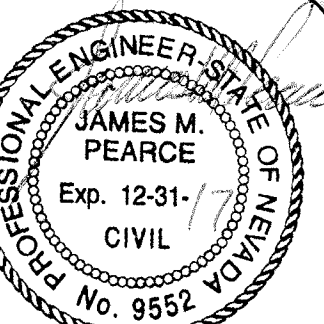


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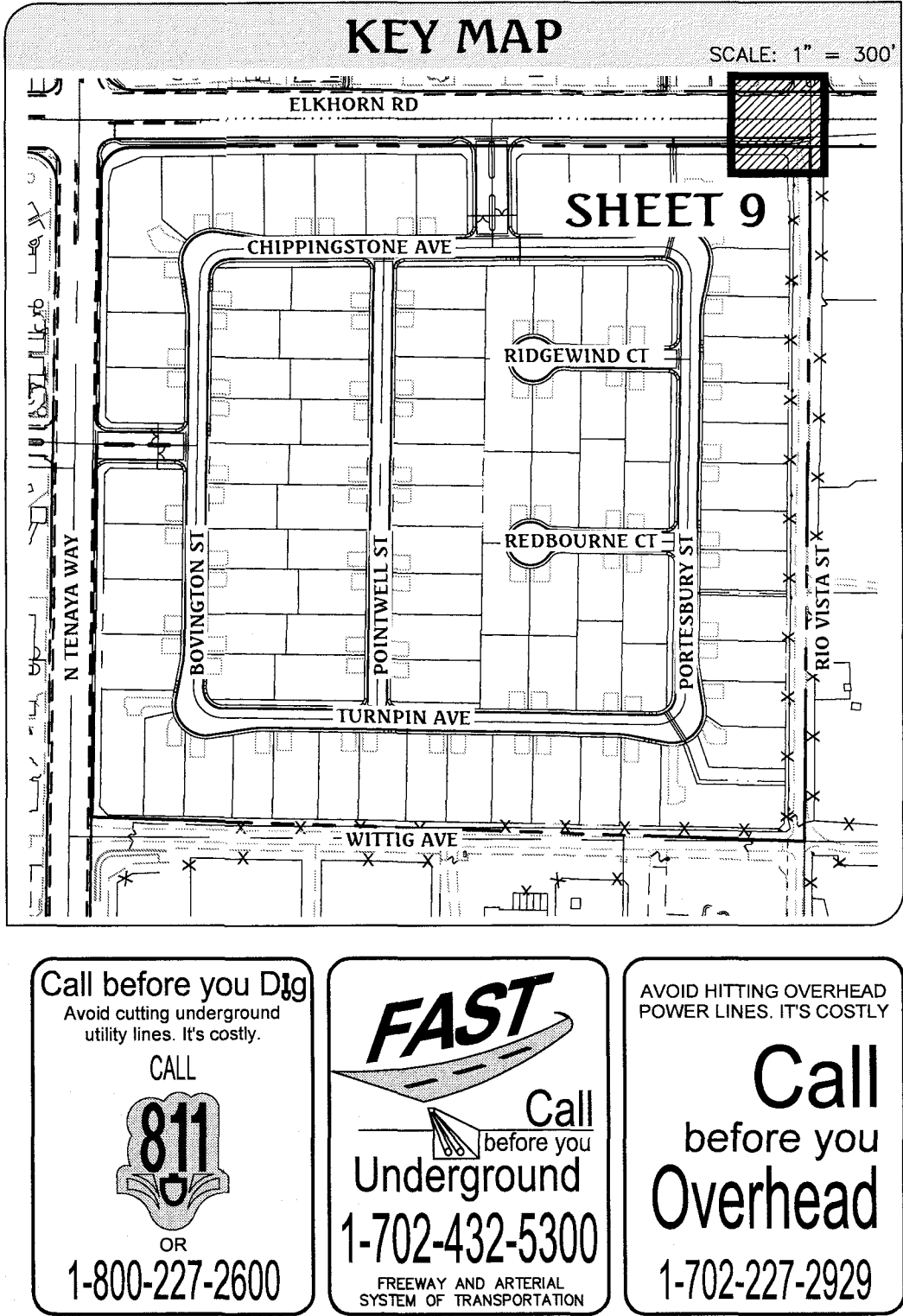
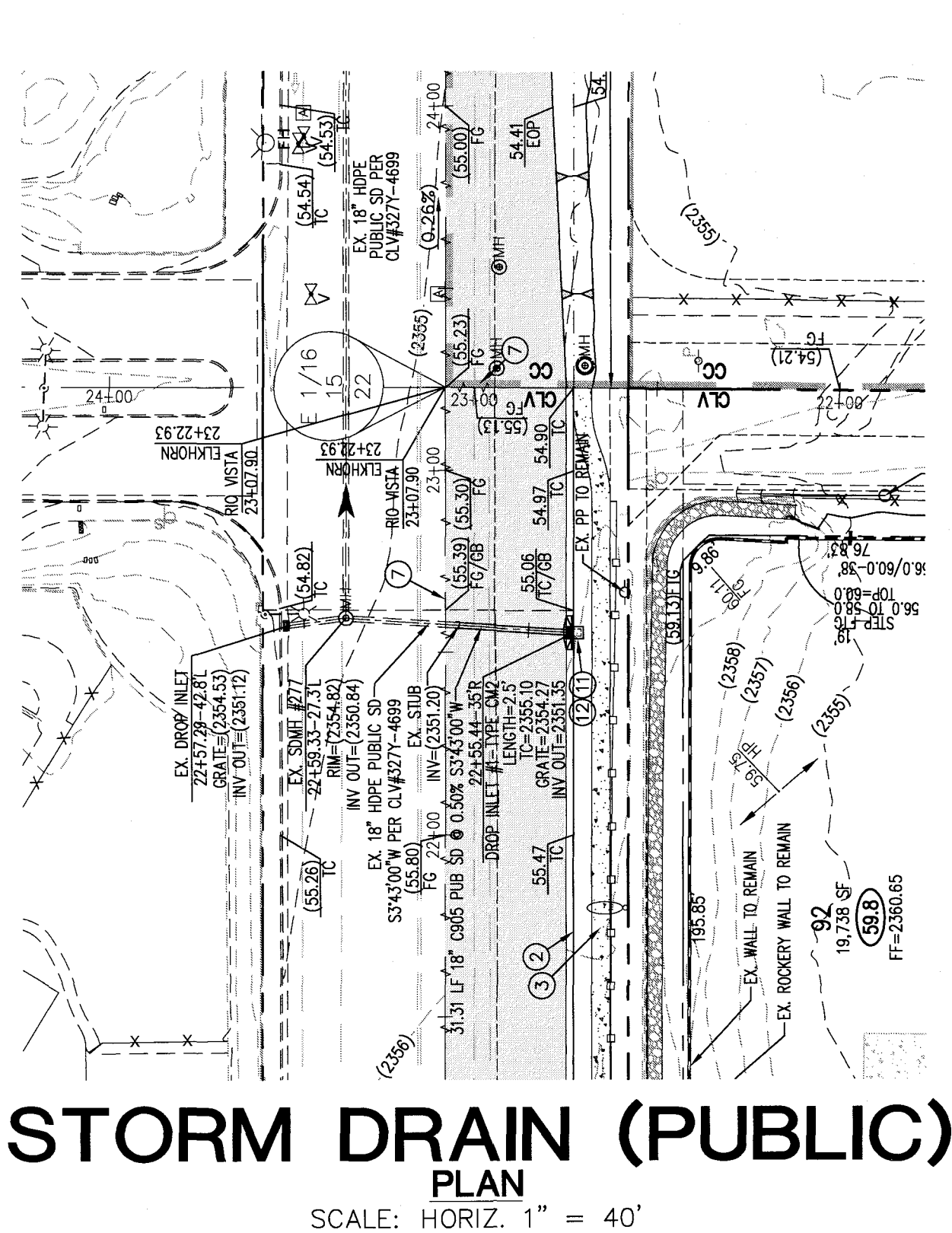
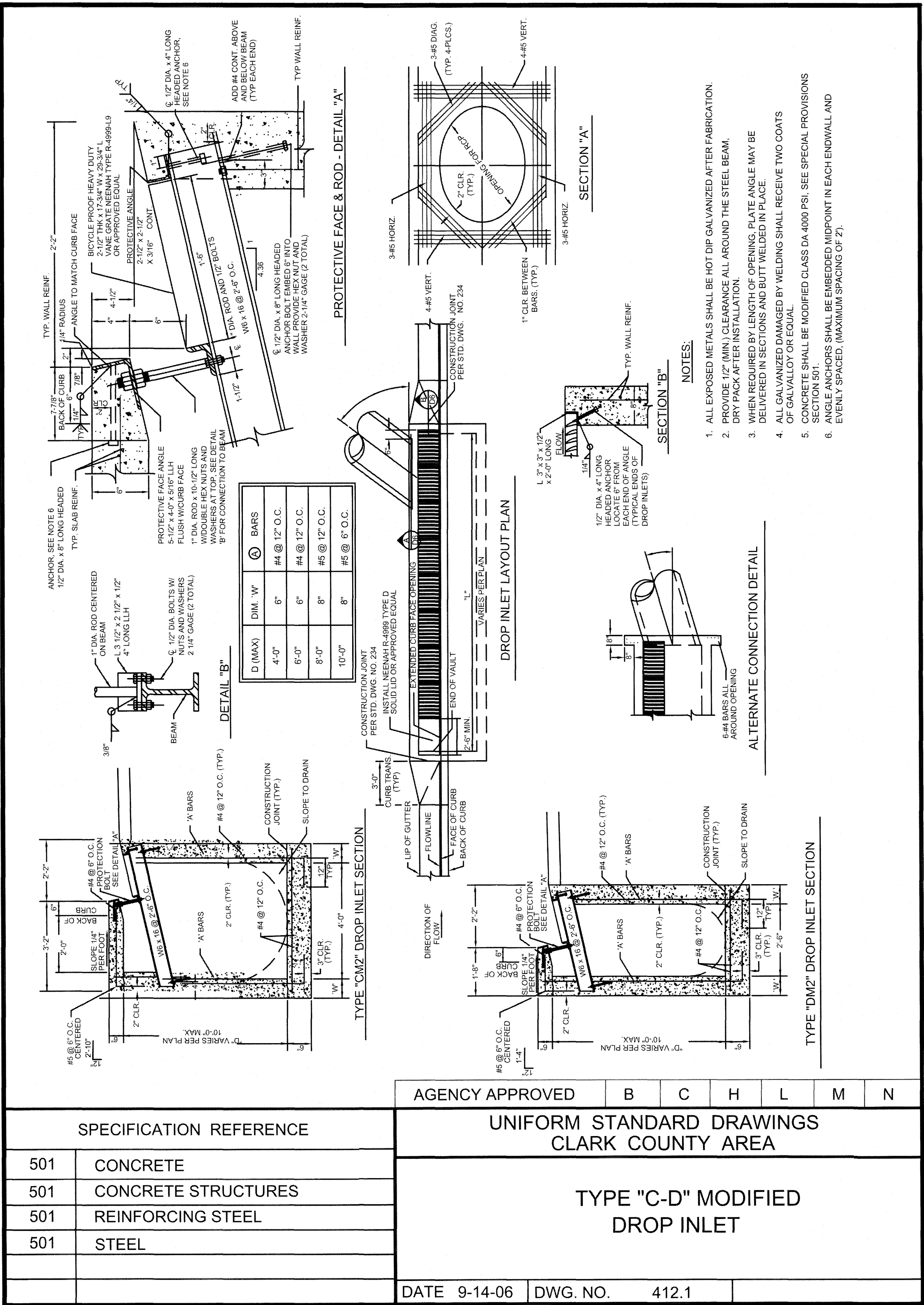


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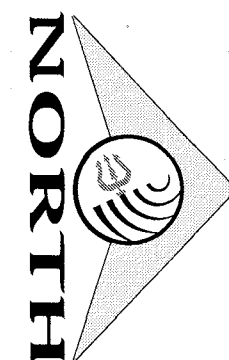
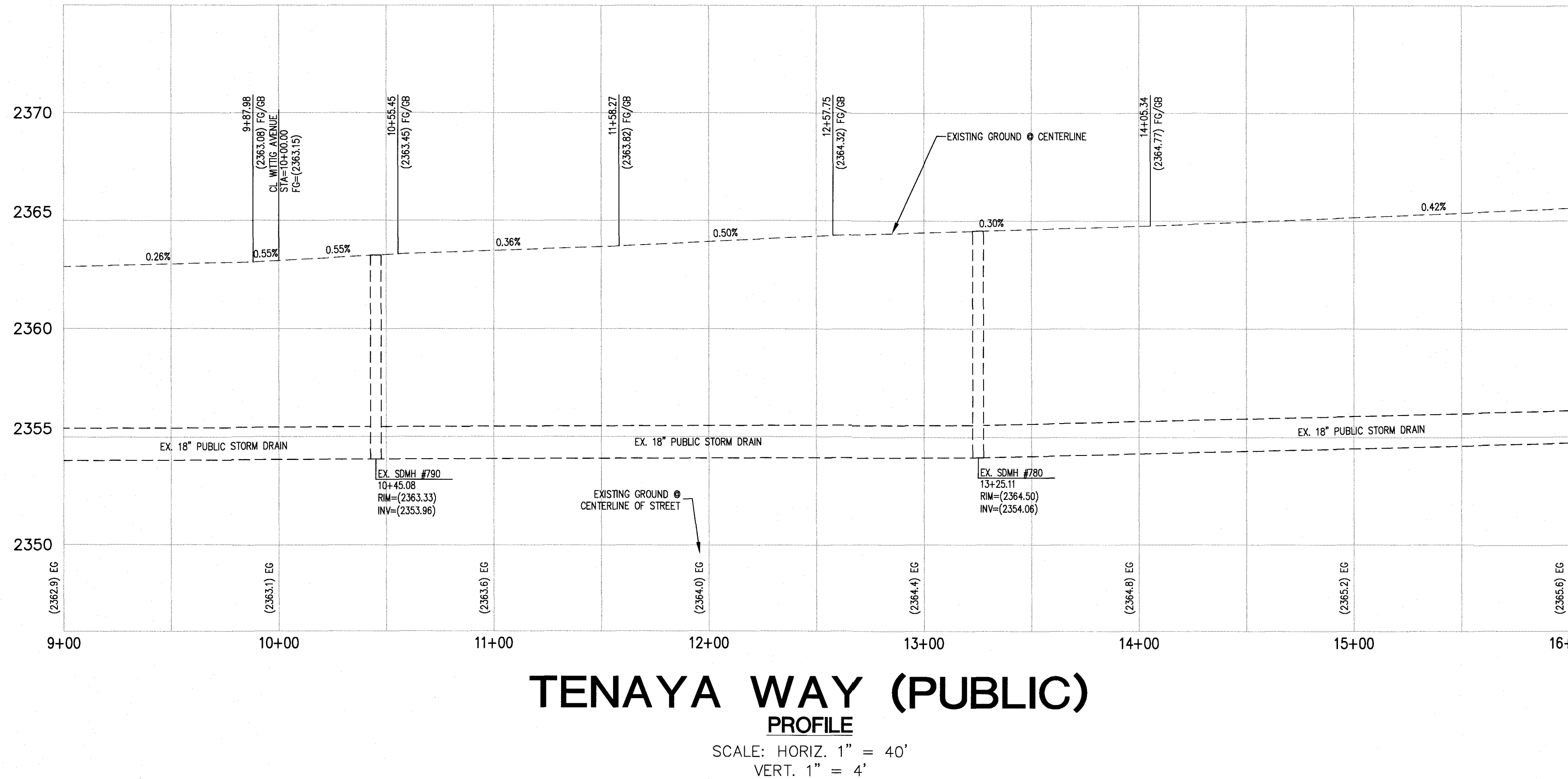
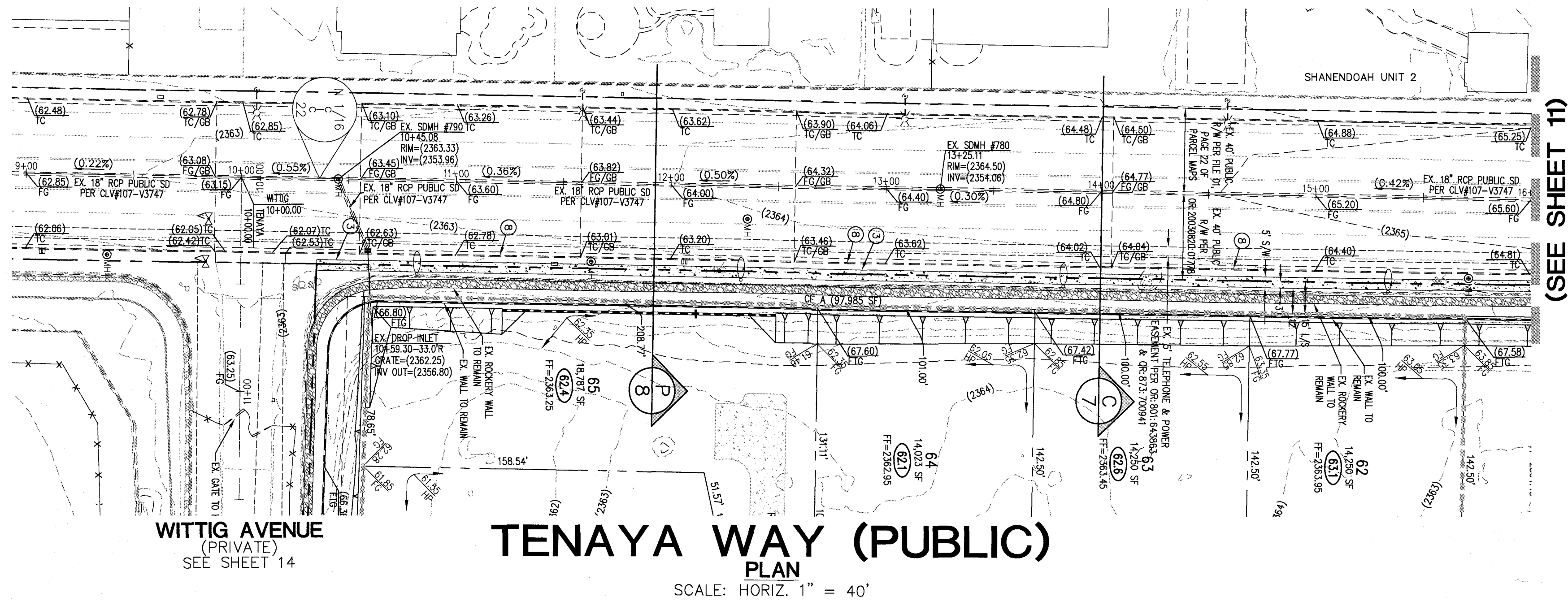
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ELKHORN 40
STORM DRAIN

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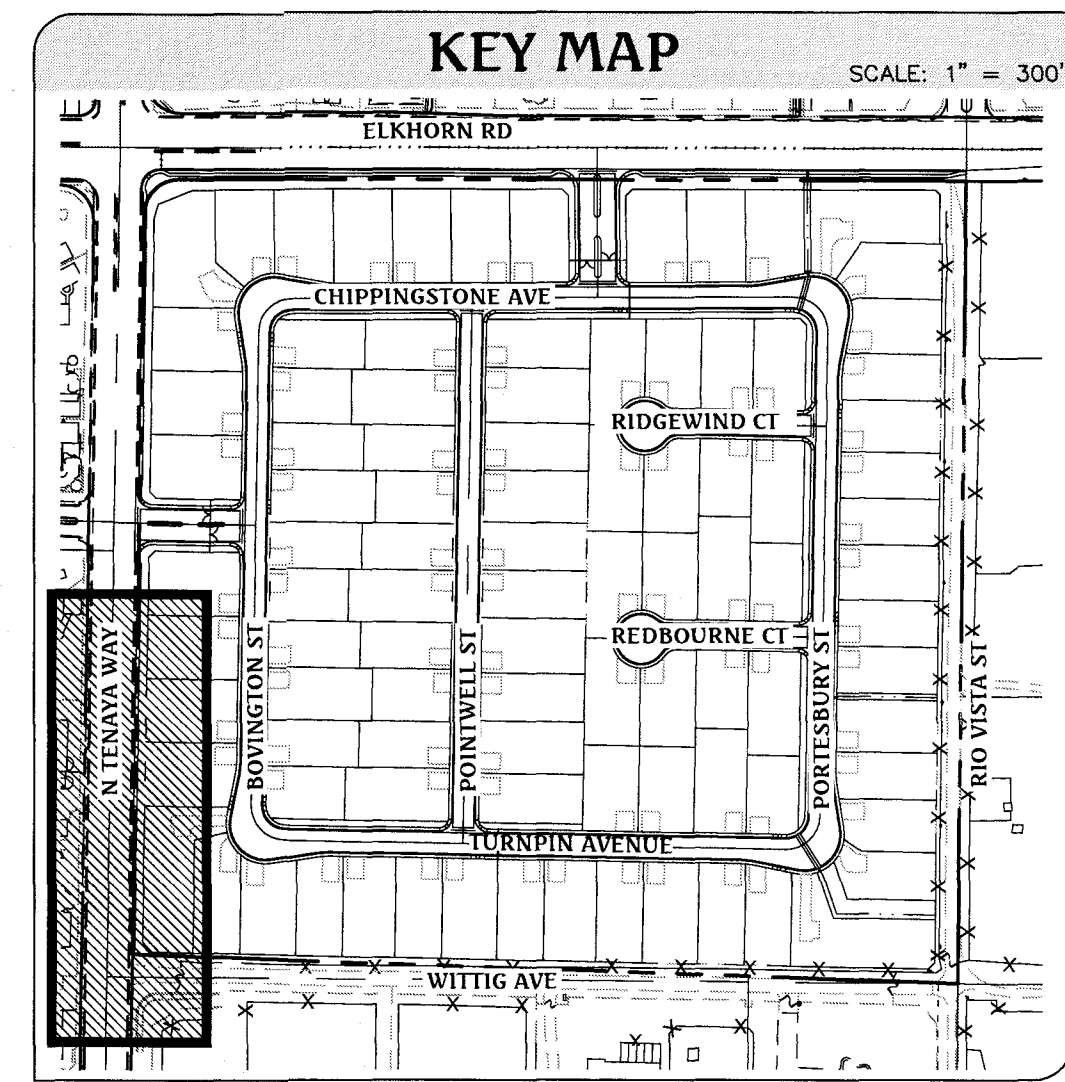
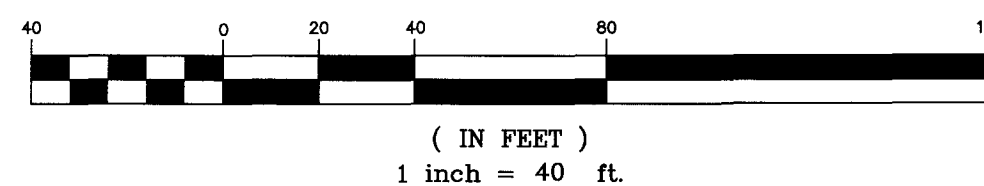
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SHEET 9 OF 26
C.I.V. DWG.#

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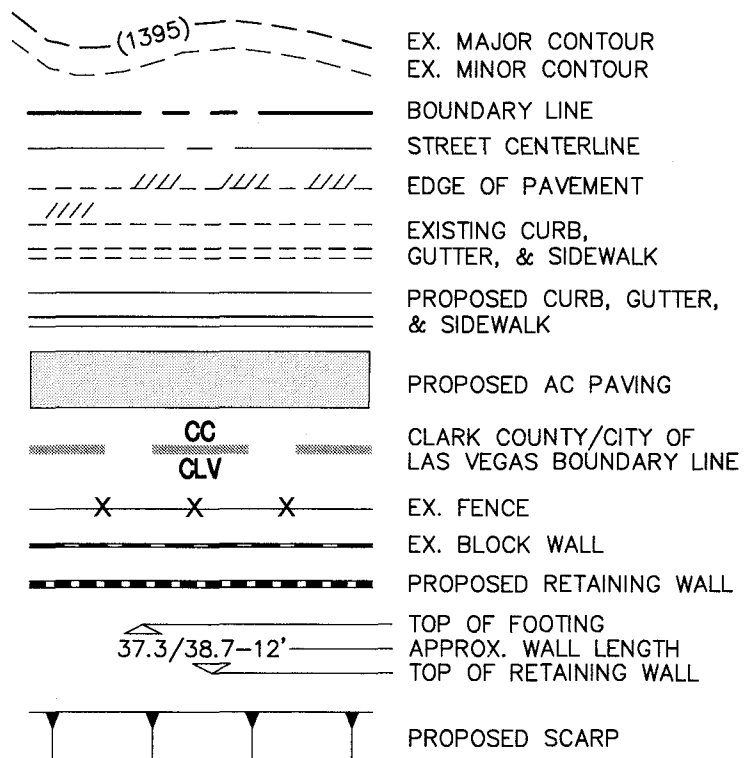
GRAPHIC SCALE



CONSTRUCTION NOTES

1. CONSTRUCT 8" WIDE CROSS GUTTER, PER CCAUSD No. 228
2. CONSTRUCT "R" TYPE CURB AND GUTTER, PER CCAUSD No. 217.52
3. CONSTRUCT 5" WIDE SIDEWALK, PER CCAUSD No. 234
4. CONSTRUCT "L" TYPE CURB AND GUTTER, PER CCAUSD No. 216
5. 5' TRANSITION FROM L-TYPE CURB/SPANDREL TO R-TYPE CURB
6. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE 1
7. SAWCUT AND MATCH EXISTING ASPHALT
8. EXISTING CURB AND GUTTER TO REMAIN AND PROTECT IN PLACE
9. INSTALL REMOVABLE LOCKING BOLLARDS @ 5' O.C., PER DETAIL R, SHEET 8
10. CONSTRUCT SIDEWALK DRAIN, PER CCAUSD No. 236
11. CONSTRUCT TYPE CWD DROP INLET, PER CCAUSD #412.1. SEE PROFILE AND DETAIL ON SHEET 9
12. STORM WATER STAMP TO BE LOCATED ADJACENT TO DROP INLET, PER CCAUSD #421.

GRADING LEGEND



BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

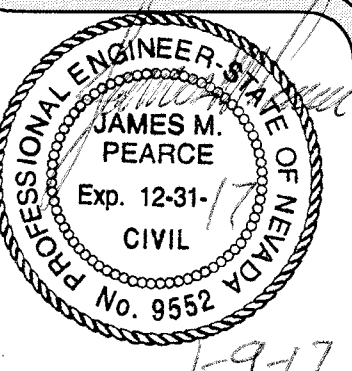
CLARK COUNTY BENCHMARK STATION: 6LV90 15S5E6
RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.
ELEVATION = 717.800 METERS (NAVD'88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)

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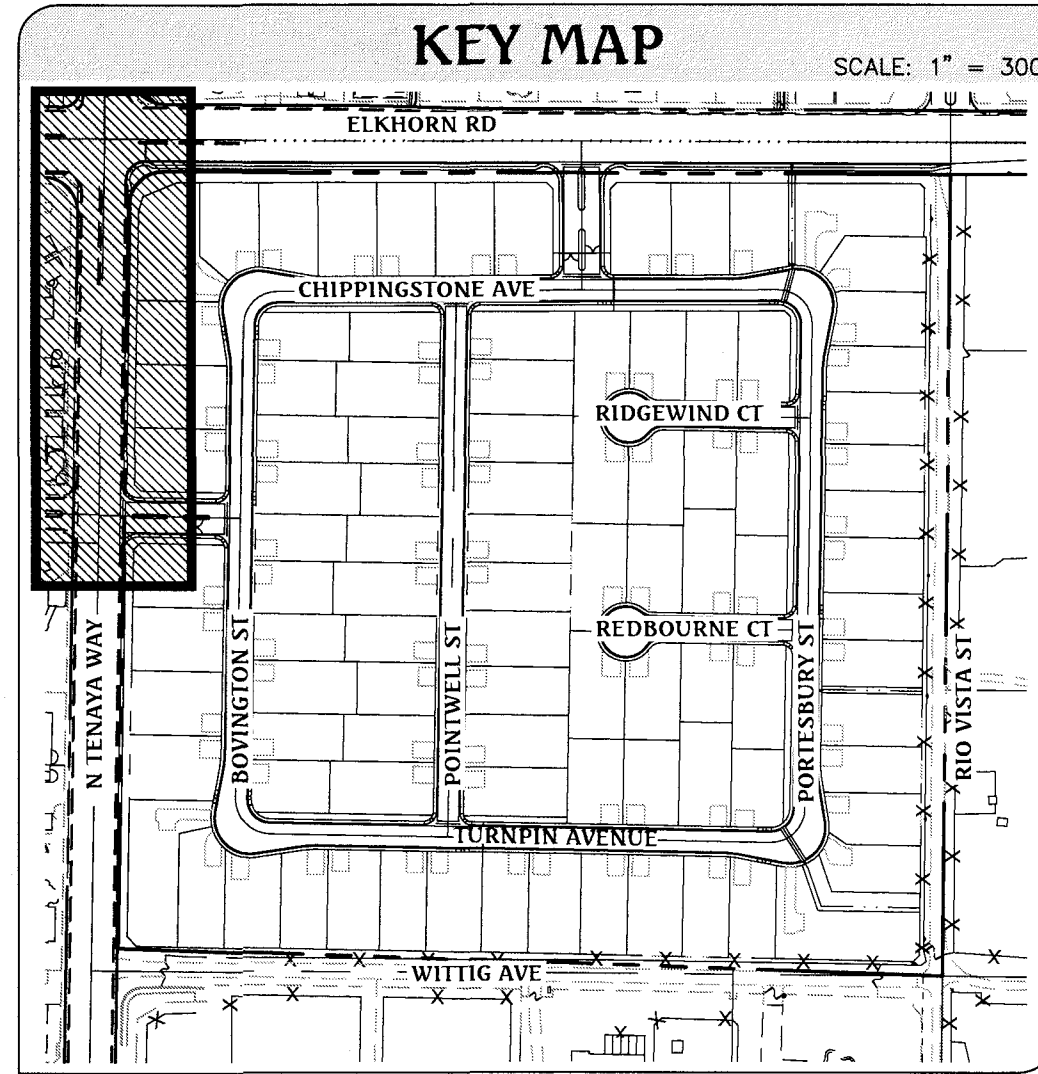
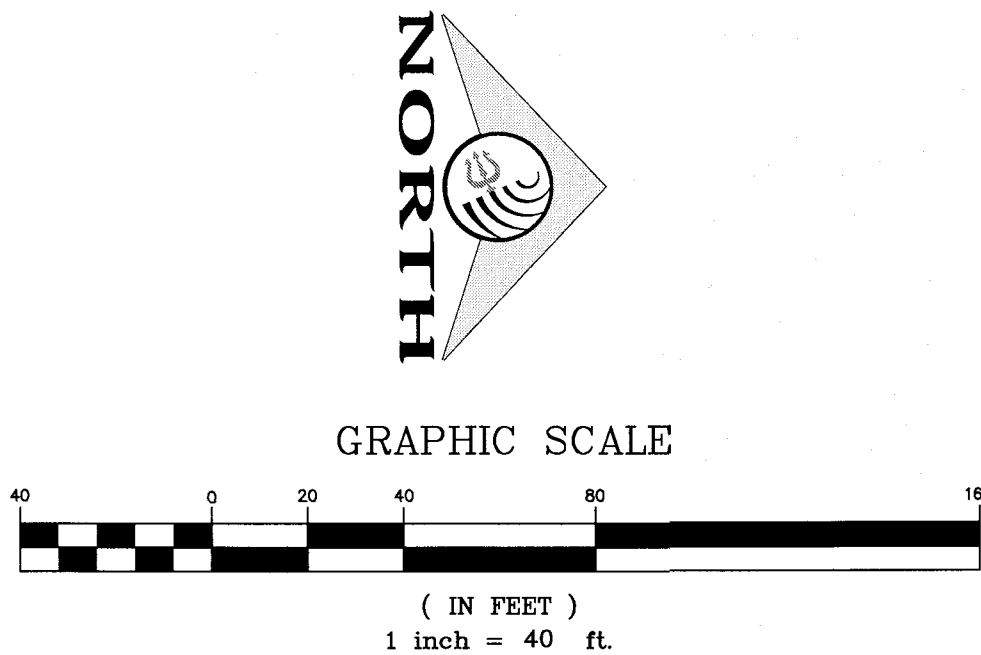
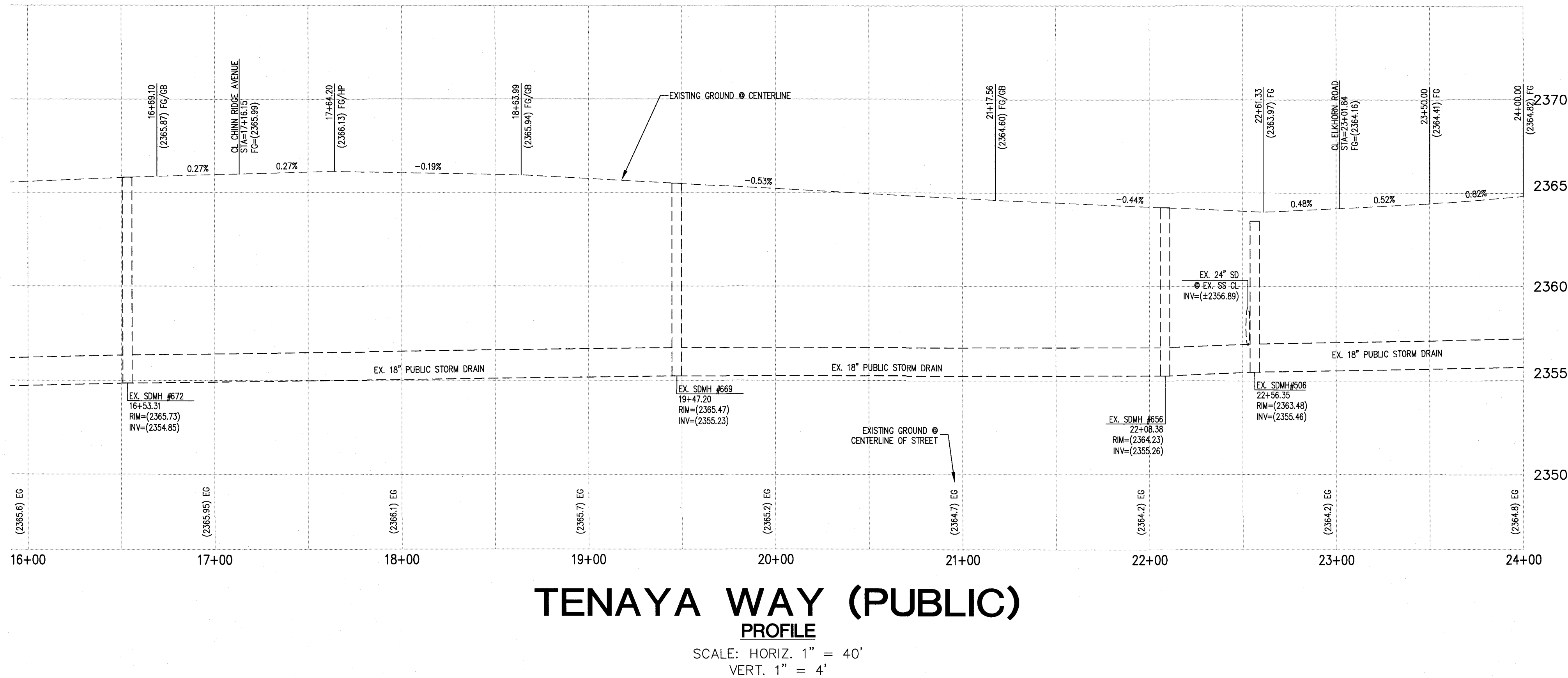
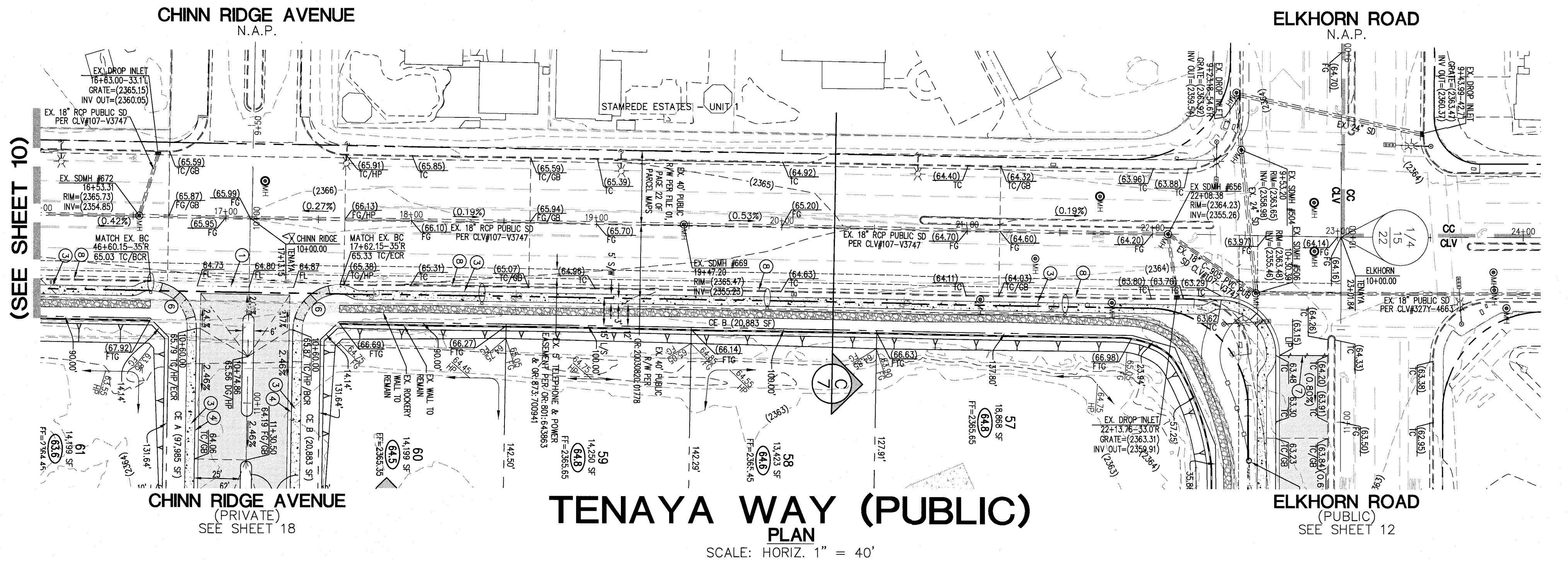


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TENAYA WAY 1
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CONSTRUCTION NOTES

1. CONSTRUCT 8" WIDE CROSS GUTTER, PER CCAUSD No. 228
2. CONSTRUCT "R" TYPE CURB AND GUTTER, PER CCAUSD No. 217.52
3. CONSTRUCT 5' WIDE SIDEWALK, PER CCAUSD No. 234
4. CONSTRUCT "L" TYPE CURB AND GUTTER, PER CCAUSD No. 216
5. 5' TRANSITION FROM L-TYPE CURB/SPANDREL TO R-TYPE CURB
6. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE I
7. SAWCUT AND MATCH EXISTING ASPHALT
8. EXISTING CURB AND GUTTER TO REMAIN AND PROTECT IN PLACE
9. INSTALL REMOVABLE LOCKING BOLLARDS @ 5' O.C., PER DETAIL R, SHEET 8
10. CONSTRUCT SIDEWALK DRAIN, PER CCAUSD No. 236
11. CONSTRUCT TYPE CM2 DROP INLET, PER CCAUSD #412.1. SEE PROFILE AND DETAIL ON SHEET 9
12. STORM WATER STAMP TO BE LOCATED ADJACENT TO DROP INLET, PER CCAUSD #421.

GRADING LEGEND

- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- BOUNDARY LINE
- STREET CENTERLINE
- EDGE OF PAVEMENT
- EXISTING CURB, GUTTER, & SIDEWALK
- PROPOSED CURB, GUTTER, & SIDEWALK
- PROPOSED AC PAVING
- CLARK COUNTY/CITY OF LAS VEGAS BOUNDARY LINE
- EX. FENCE
- EX. BLOCK WALL
- PROPOSED RETAINING WALL
- TOP OF FOOTING
- APPROX. WALL LENGTH
- TOP OF RETAINING WALL
- PROPOSED SCARP

BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15S5E6
RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.
ELEVATION = 717.800 METERS (NAVD'88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)

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DESIGNED BY :				
CHECKED BY :				
ADA CHECKED :				
JOB NO. : 007108				
SCALE : 1" = 40'				

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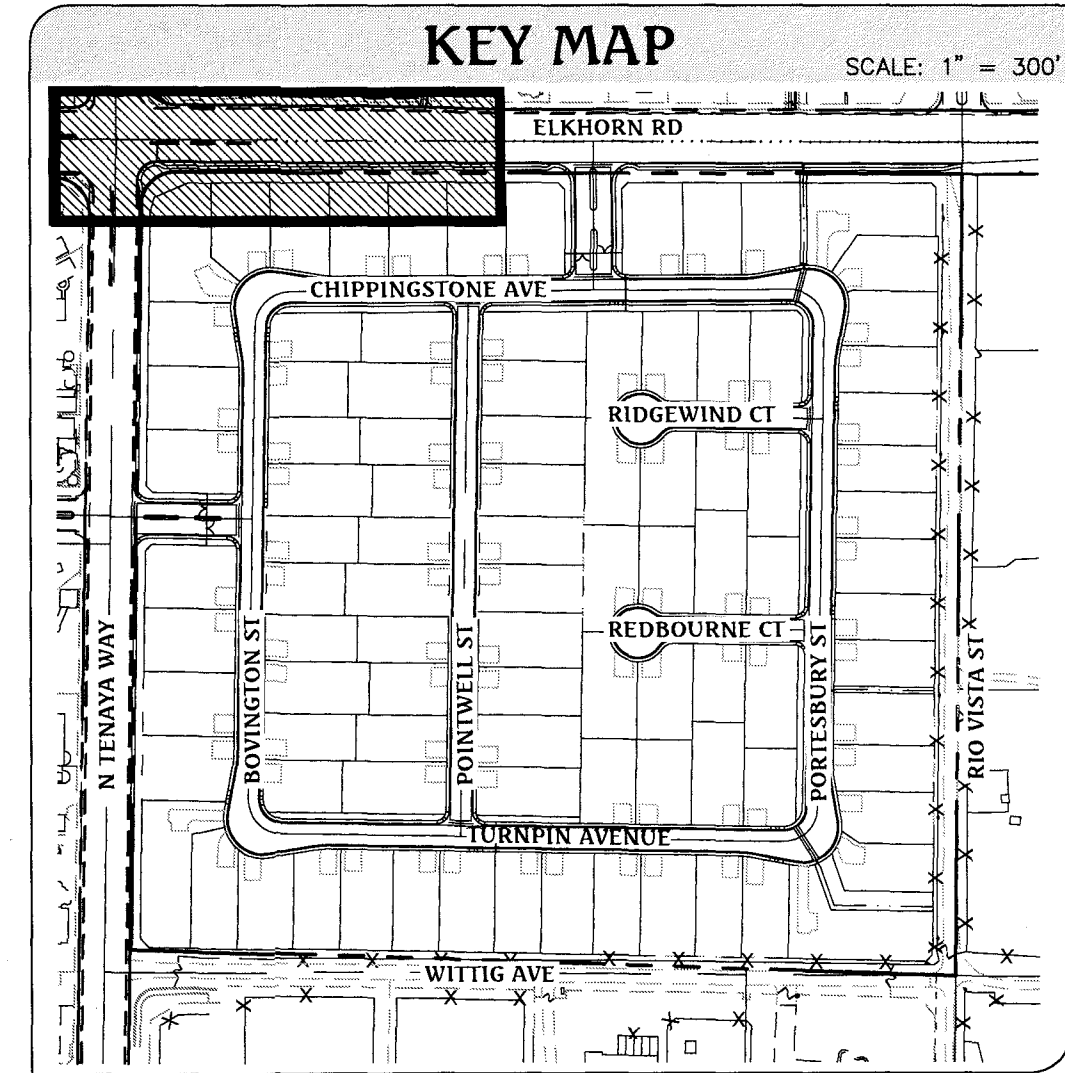
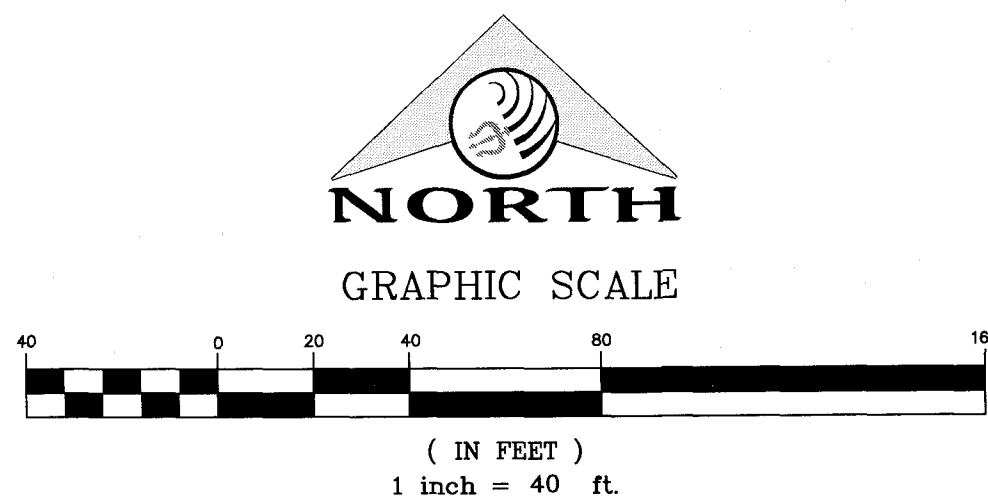
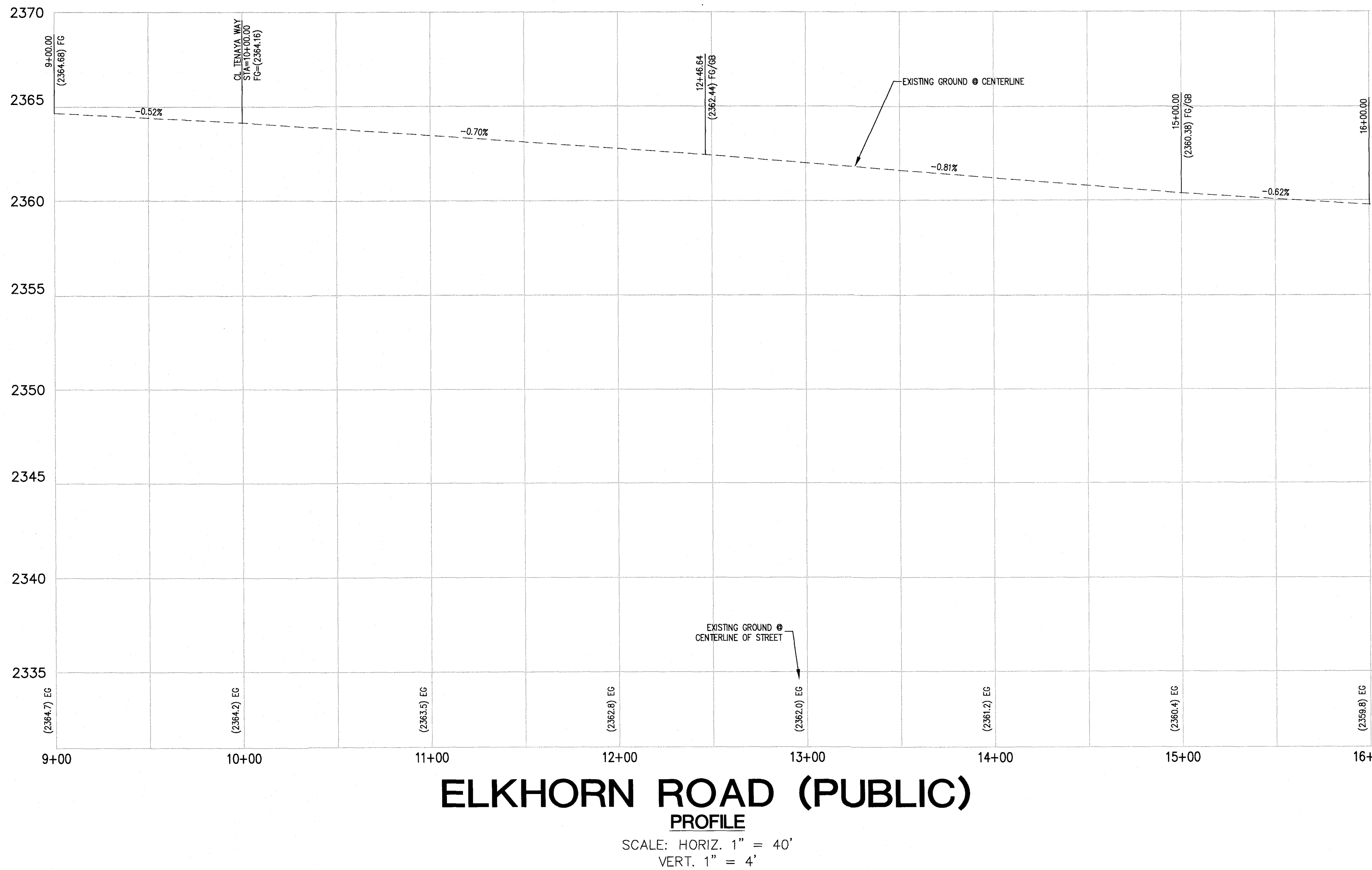
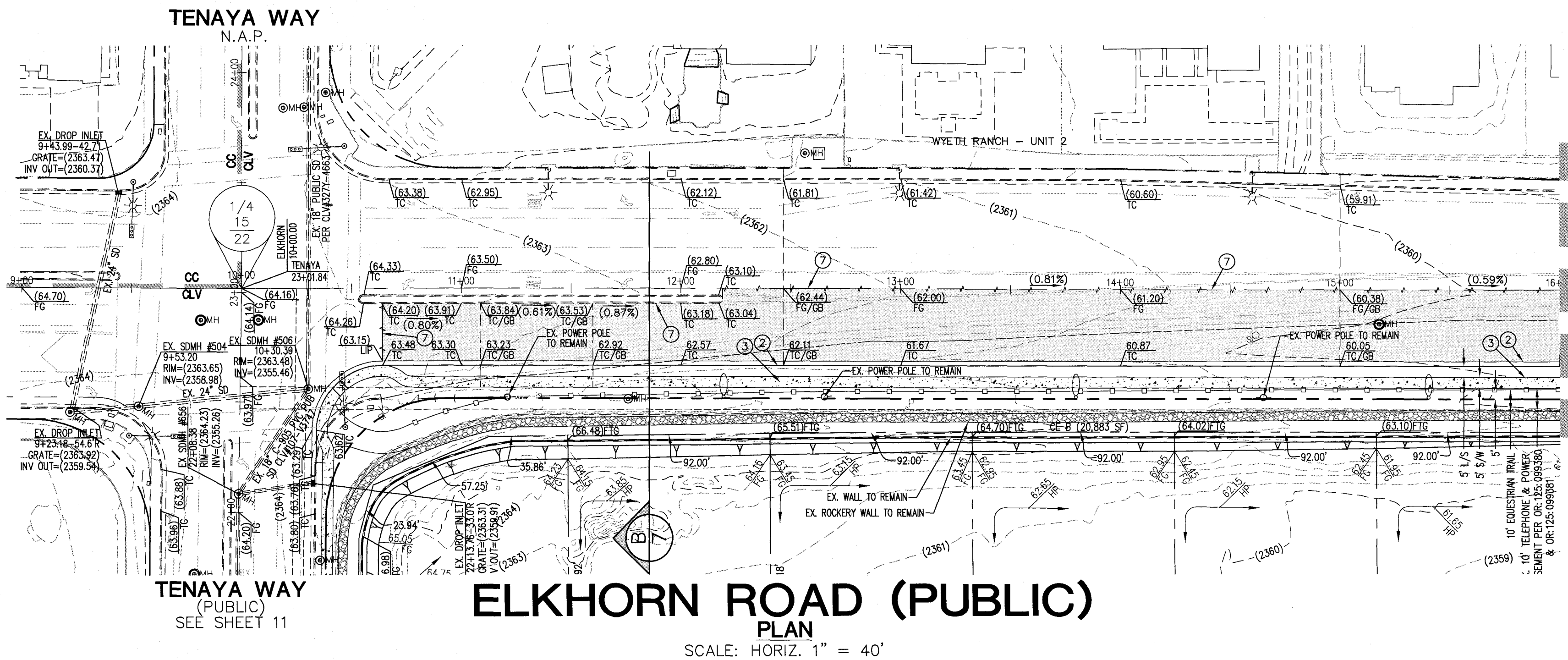
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JAMES M PEARCE
Exp. 12-31-17
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No. 9552

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 2. CONSTRUCT "R" TYPE CURB AND GUTTER, PER CCAUSD No. 217.S2
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 4. CONSTRUCT "L" TYPE CURB AND GUTTER, PER CCAUSD No. 216
 5. 5' TRANSITION FROM L-TYPE CURB/SPANDREL TO R-TYPE CURB
 6. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE 1
 7. SAWCUT AND MATCH EXISTING ASPHALT
 8. EXISTING CURB AND GUTTER TO REMAIN AND PROTECT IN PLACE
 9. INSTALL REMOVABLE LOCKING BOLLARDS @ 5' O.C., PER DETAIL R, SHEET 8
 10. CONSTRUCT SIDEWALK DRAIN, PER CCAUSD No. 236
 11. CONSTRUCT TYPE CM2 DROP INLET, PER CCAUSD #412.1. SEE PROFILE AND DETAIL ON SHEET 9
 12. STORM WATER STAMP TO BE LOCATED ADJACENT TO DROP INLET, PER CCAUSD #421.

- GRADING LEGEND**
- EX. MAJOR CONTOUR
 - EX. MINOR CONTOUR
 - BOUNDARY LINE
 - STREET CENTERLINE
 - EDGE OF PAVEMENT
 - EXISTING CURB, GUTTER, & SIDEWALK
 - PROPOSED CURB, GUTTER, & SIDEWALK
 - PROPOSED AC PAVING
 - CLARK COUNTY/CITY OF LAS VEGAS BOUNDARY LINE
 - EX. FENCE
 - EX. BLOCK WALL
 - PROPOSED RETAINING WALL
 - TOP OF FOOTING
 - APPROX. WALL LENGTH
 - TOP OF RETAINING WALL
 - PROPOSED SCARP

BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15SSSE6

RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.

ELEVATION = 717.800 METERS (NAVD'88 V.2003)

ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)

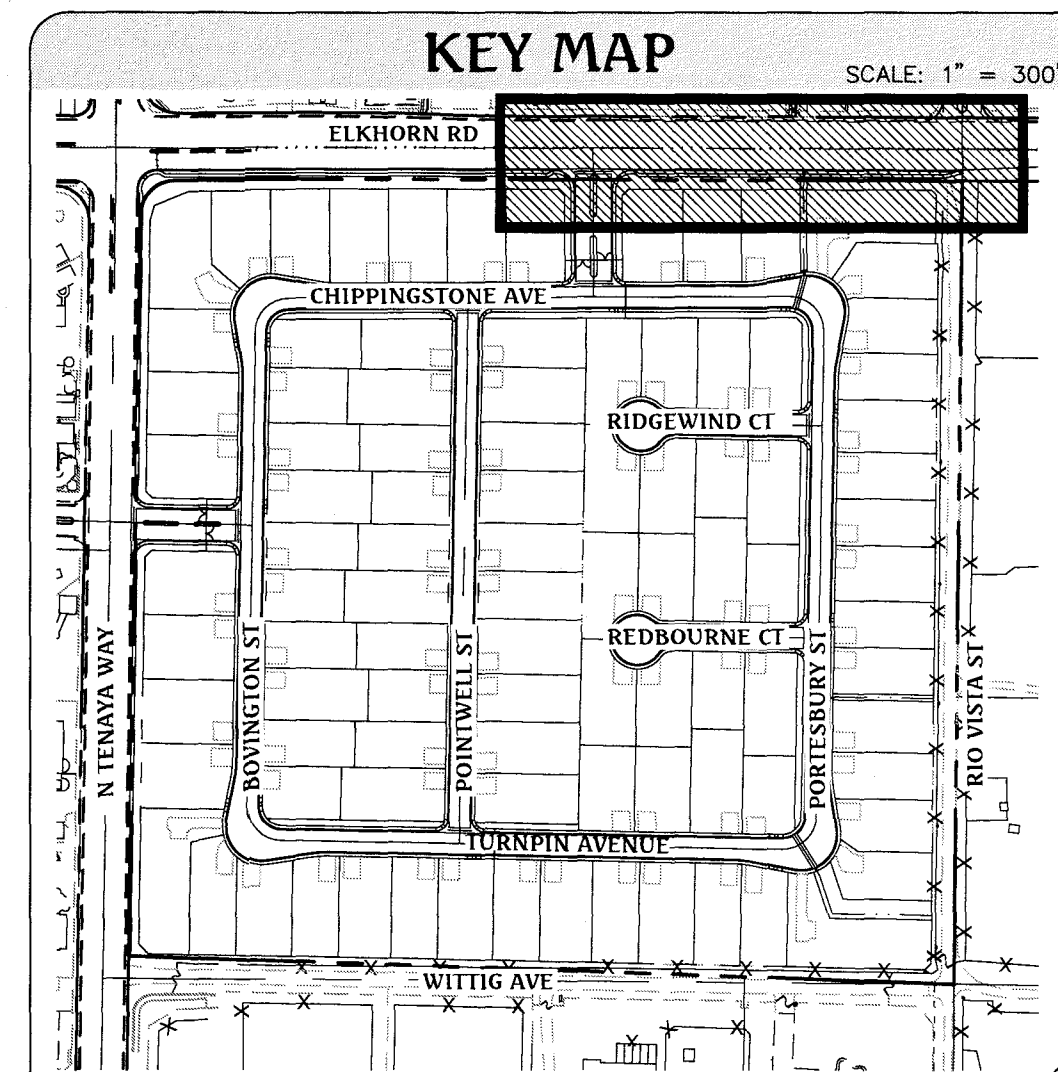
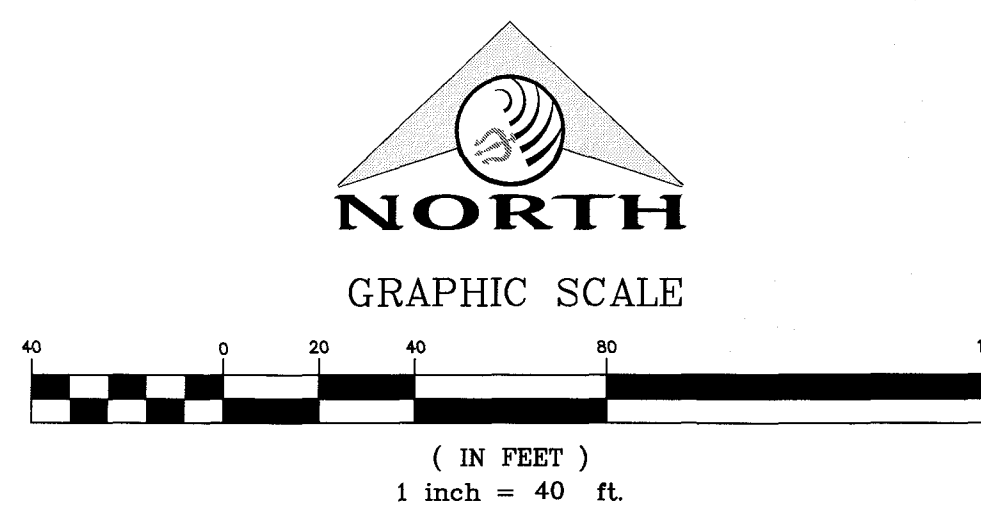
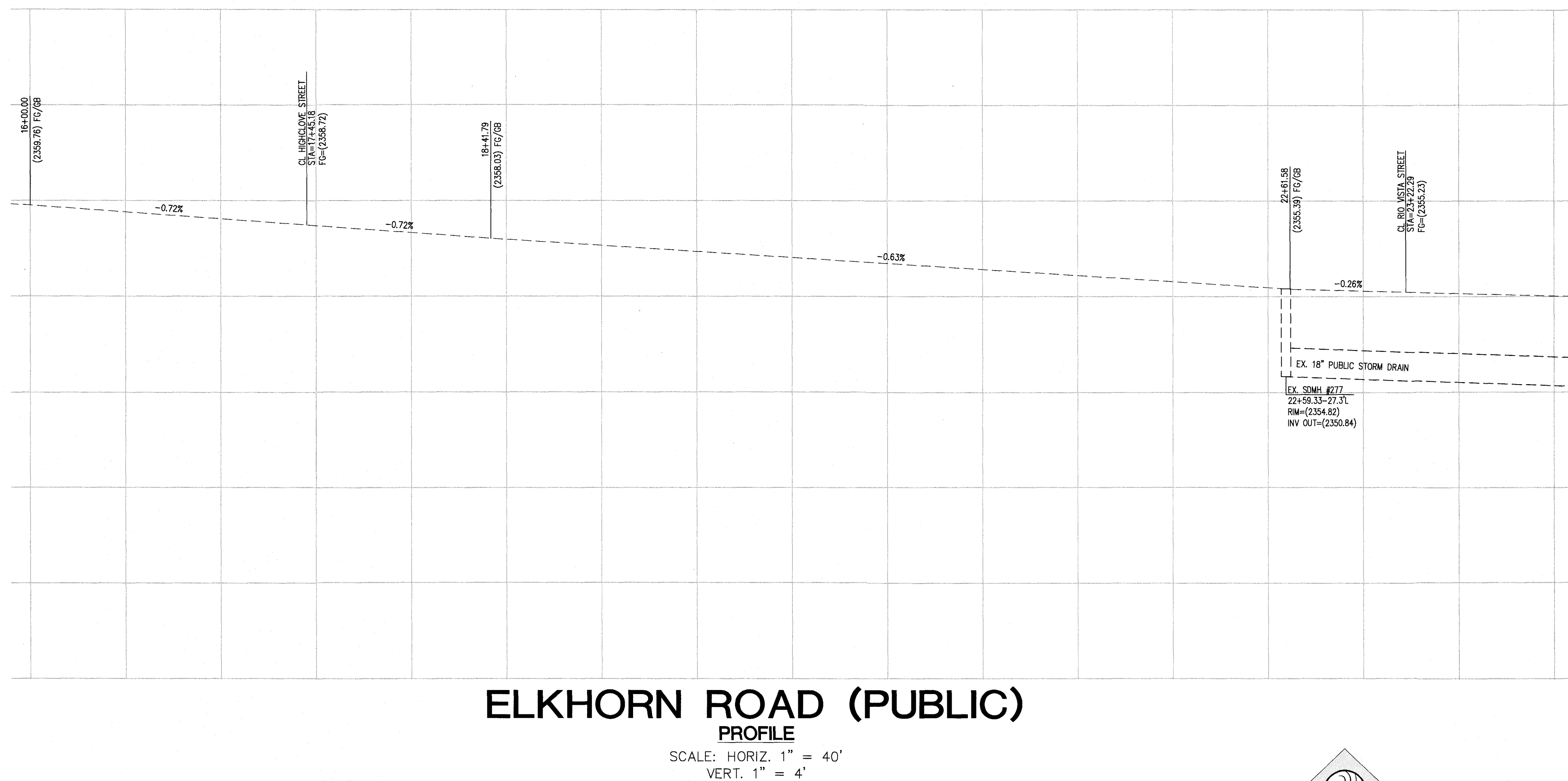
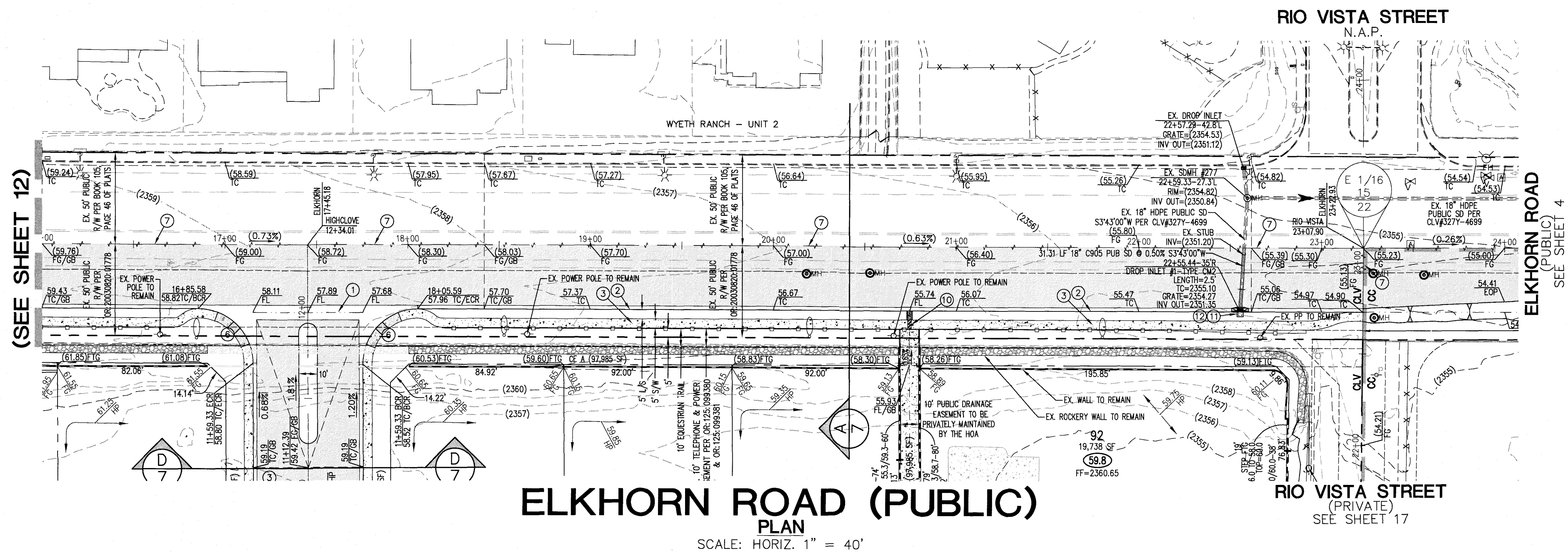
DATE: 07/09/17
DRAWN BY: J. PEARCE
DESIGNED BY:
CHECKED BY:
ADA CHECKED:
JOB NO.: 007108
SCALE: 1" = 40'

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PLAN AND PROFILE

PROFESSIONAL ENGINEER-STATE OF NEVADA
JAMES M. PEARCE
Exp. 12-31-17
CIVIL
No. 9552

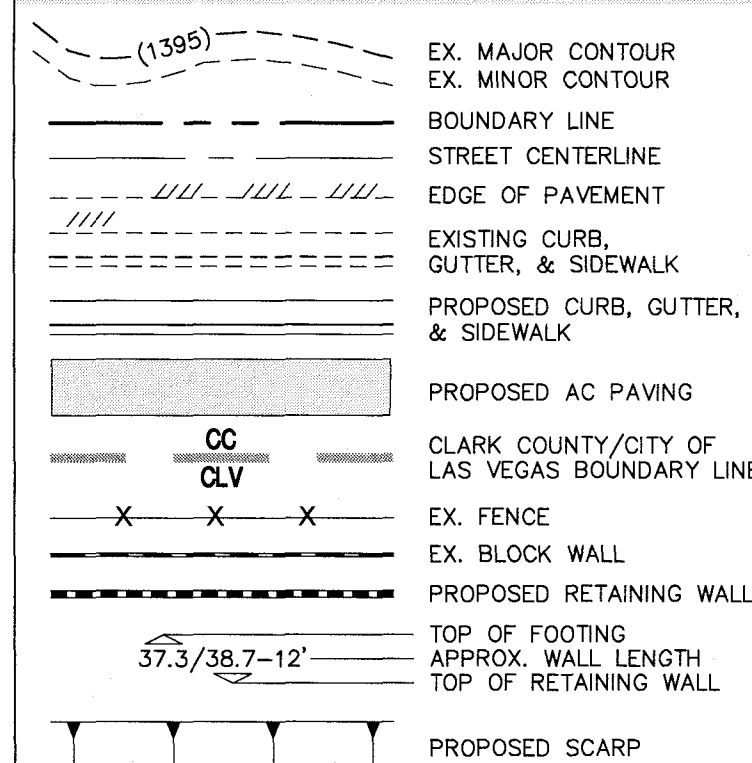
SHEET 12 OF 26
C.L.V. DWG.#



CONSTRUCTION NOTES

- CONSTRUCT 8" WIDE CROSS GUTTER, PER CCAUSD No. 228
- CONSTRUCT "RT" TYPE CURB AND GUTTER, PER CCAUSD No. 217.52
- CONSTRUCT 5" WIDE SIDEWALK, PER CCAUSD No. 234
- CONSTRUCT "LT" TYPE CURB AND GUTTER, PER CCAUSD No. 216
- 5" TRANSITION FROM L-TYPE CURB/SPANDREL TO R-TYPE CURB
- CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE 1
- SAWCUT AND MATCH EXISTING ASPHALT
- EXISTING CURB AND GUTTER TO REMAIN AND PROTECT IN PLACE
- INSTALL REMOVABLE LOCKING BOLLARDS @ 5' O.C., PER DETAIL R, SHEET 8
- CONSTRUCT SIDEWALK DRAIN, PER CCAUSD No. 236
- CONSTRUCT TYPE CM2 DROP INLET, PER CCAUSD #412.1. SEE PROFILE AND DETAIL ON SHEET 9
- STORM WATER STAMP TO BE LOCATED ADJACENT TO DROP INLET, PER CCAUSD #421.

GRADING LEGEND



BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15SSE6
RIVET AND PLATE IN TOP OF CURB AT THE NORTHEAST CORNER OF RIO VISTA AND ELKHORN ROAD.
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PW: J. PEARCE
DRAWN BY:
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ADA CHECKED:
JOB NO.: 007108
SCALE: 1"=40'

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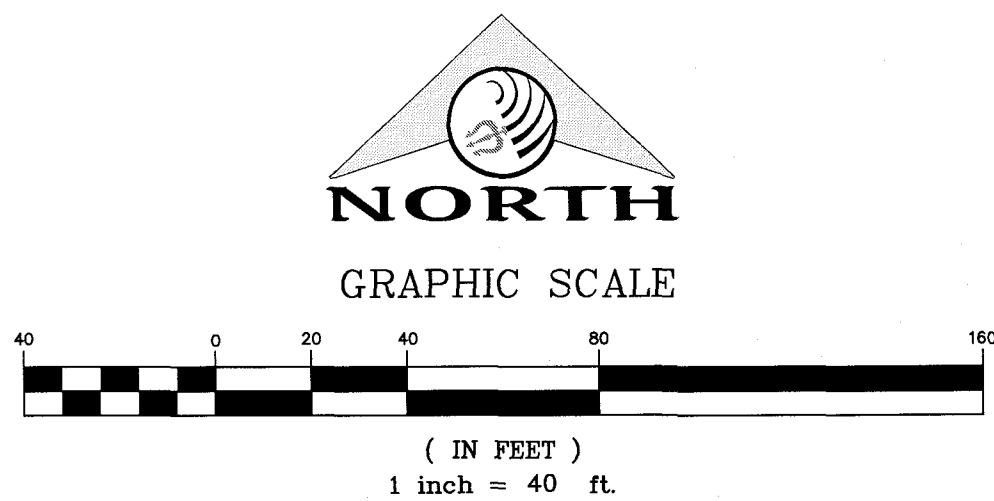
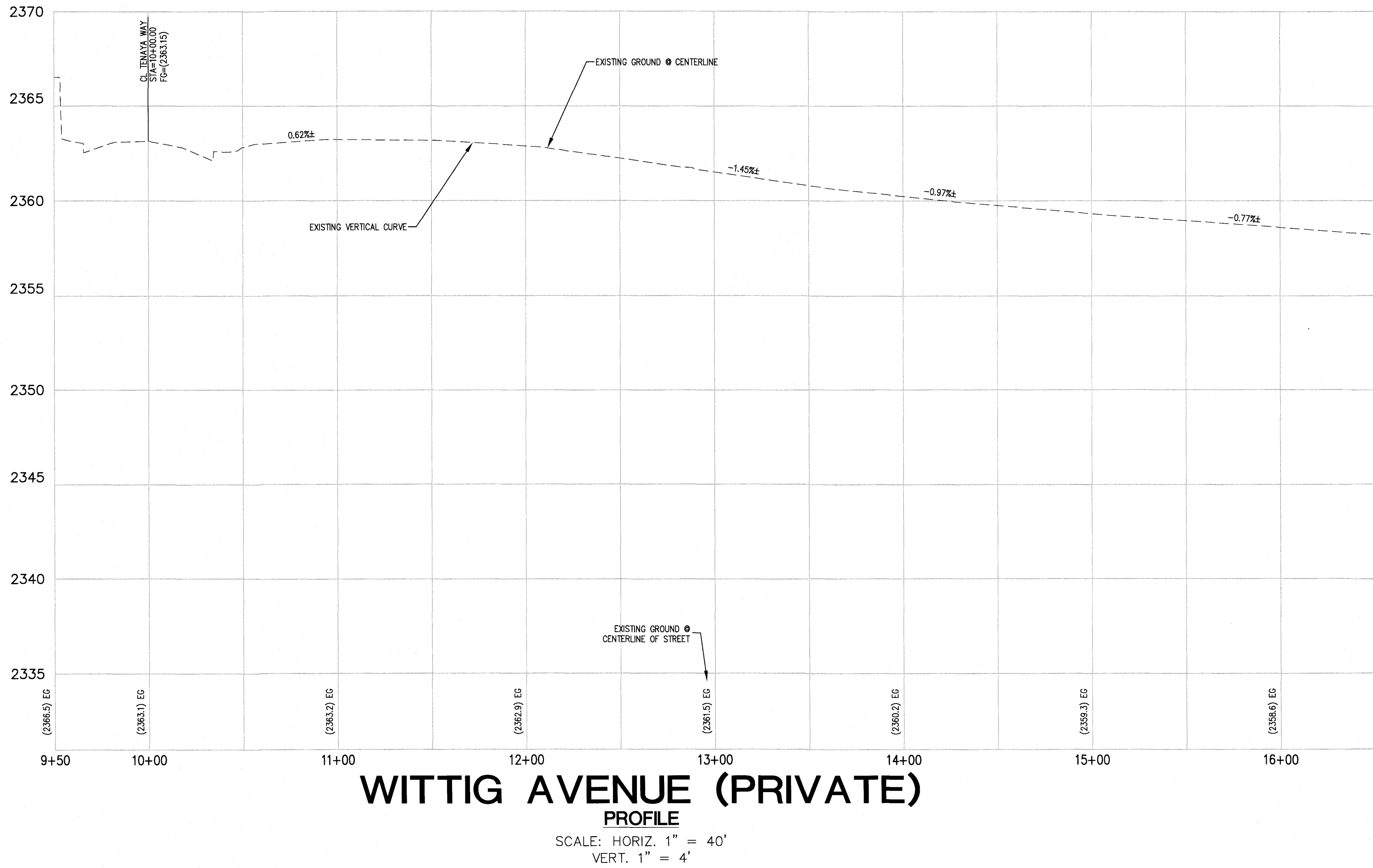
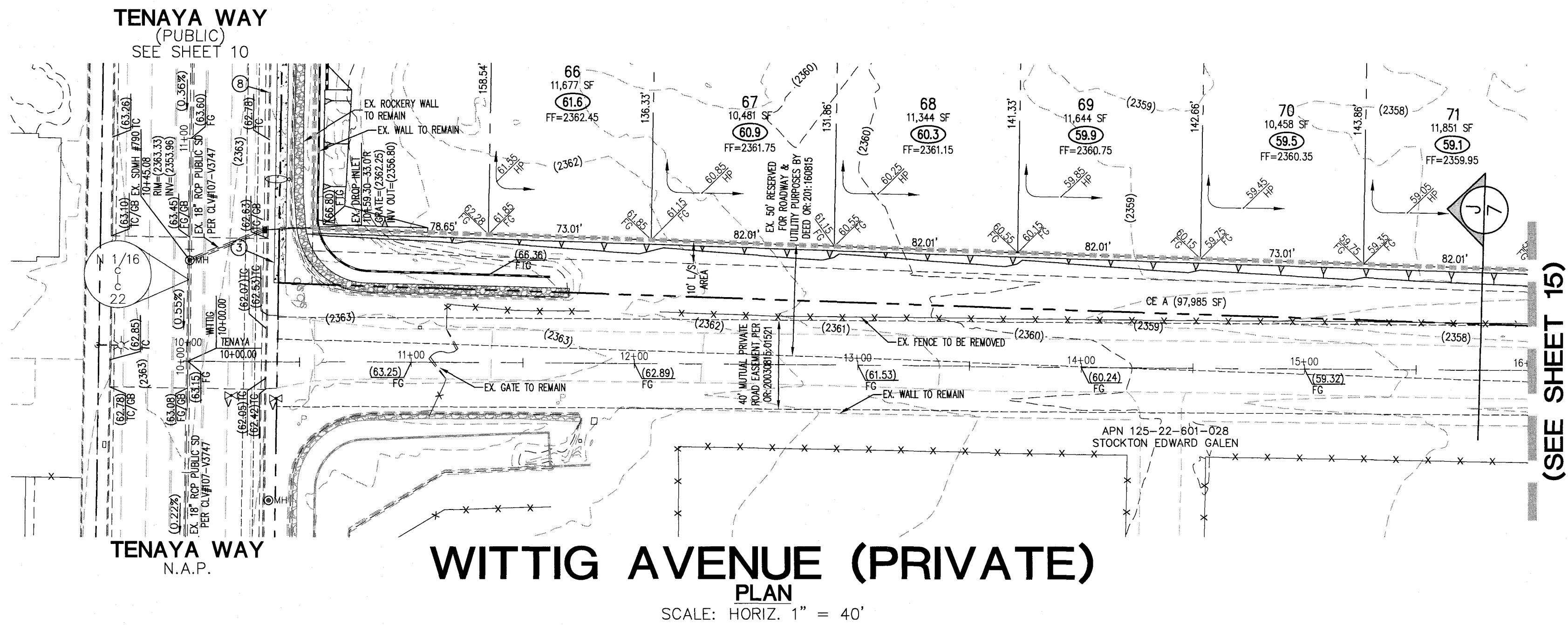


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PLAN AND PROFILE

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NOTES

SHEET 13 OF 26
C.L.V. DWG.#

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SYSTEM OF TRANSPORTATION

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POWER LINES. IT'S COSTLY
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Overhead
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- CONSTRUCTION NOTES**
1. CONSTRUCT 6" WIDE CROSS GUTTER, PER CCAUSD No. 228
 2. CONSTRUCT "R" TYPE CURB AND GUTTER, PER CCAUSD No. 217.52
 3. CONSTRUCT 5" WIDE SIDEWALK, PER CCAUSD No. 234
 4. CONSTRUCT "L" TYPE CURB AND GUTTER, PER CCAUSD No. 216
 5. 5' TRANSITION FROM L-TYPE CURB/SPANDREL TO R-TYPE CURB
 6. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE 1
 7. SAWCUT AND MATCH EXISTING ASPHALT
 8. EXISTING CURB AND GUTTER TO REMAIN AND PROTECT IN PLACE
 9. INSTALL REMOVABLE LOCKING BOLLARDS @ 5' O.C., PER DETAIL R, SHEET 8
 10. CONSTRUCT SIDEWALK DRAIN, PER CCAUSD No. 236
 11. CONSTRUCT TYPE CM2 DROP INLET, PER CCAUSD #412.1. SEE PROFILE AND DETAIL ON SHEET 9
 12. STORM WATER STAMP TO BE LOCATED ADJACENT TO DROP INLET, PER CCAUSD #421.

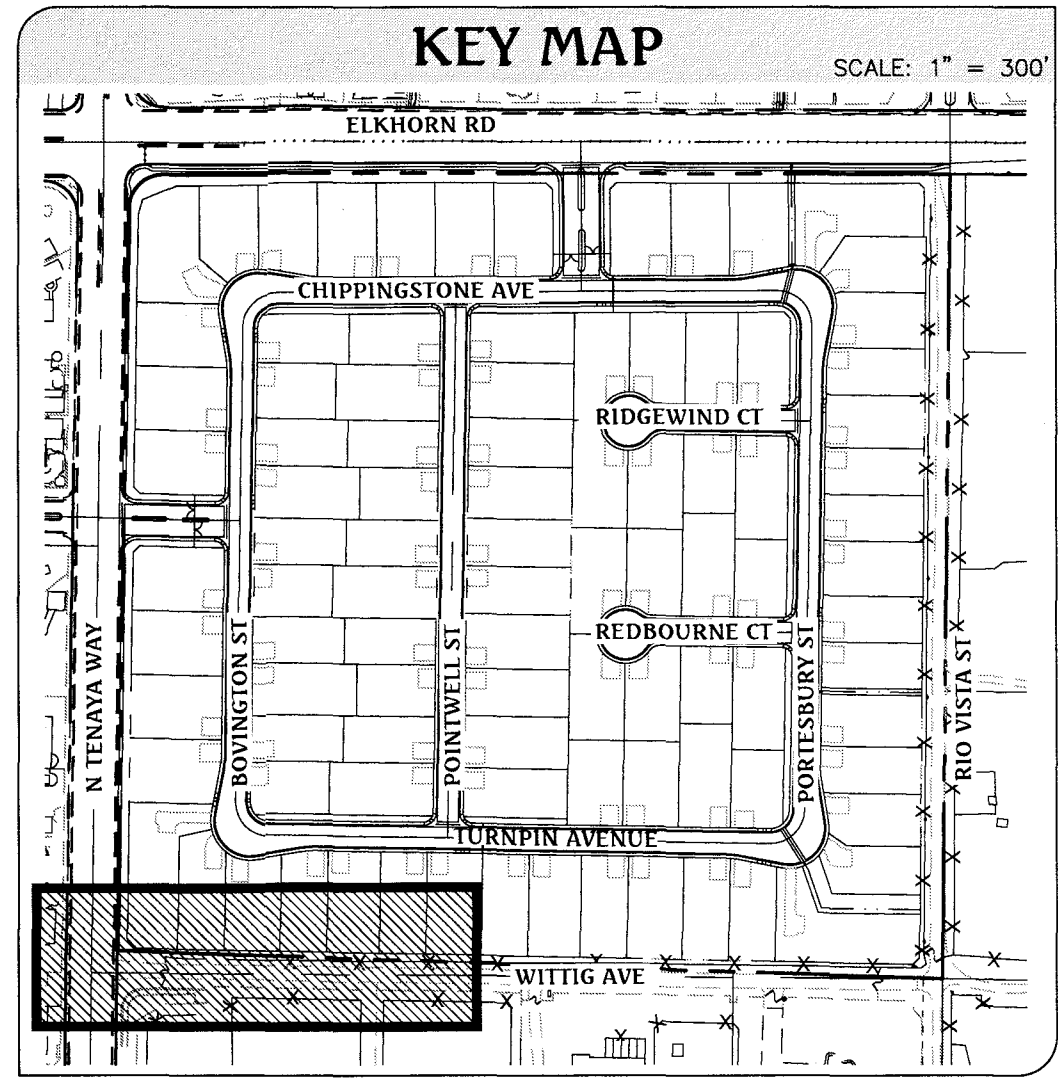
- GRADING LEGEND**
- EX. MAJOR CONTOUR
 - EX. MINOR CONTOUR
 - BOUNDARY LINE
 - STREET CENTERLINE
 - EDGE OF PAVEMENT
 - EXISTING CURB, GUTTER, & SIDEWALK
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 - PROPOSED RETAINING WALL
 - TOP OF FOOTING
 - APPROX. WALL LENGTH
 - TOP OF RETAINING WALL
 - PROPOSED SCARP

BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15SSE6
RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.
ELEVATION = 717.800 METERS (NAVD'88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)



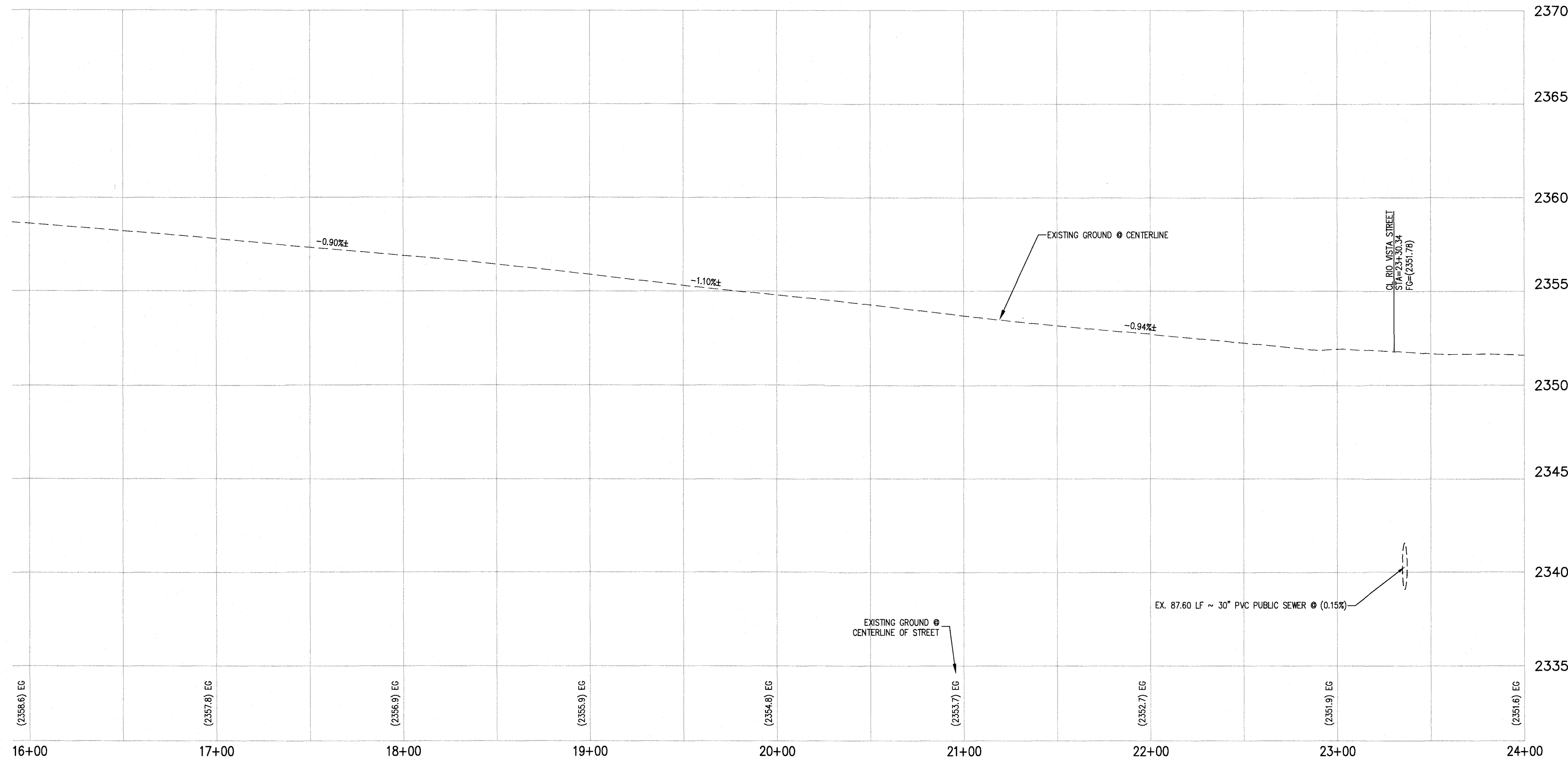
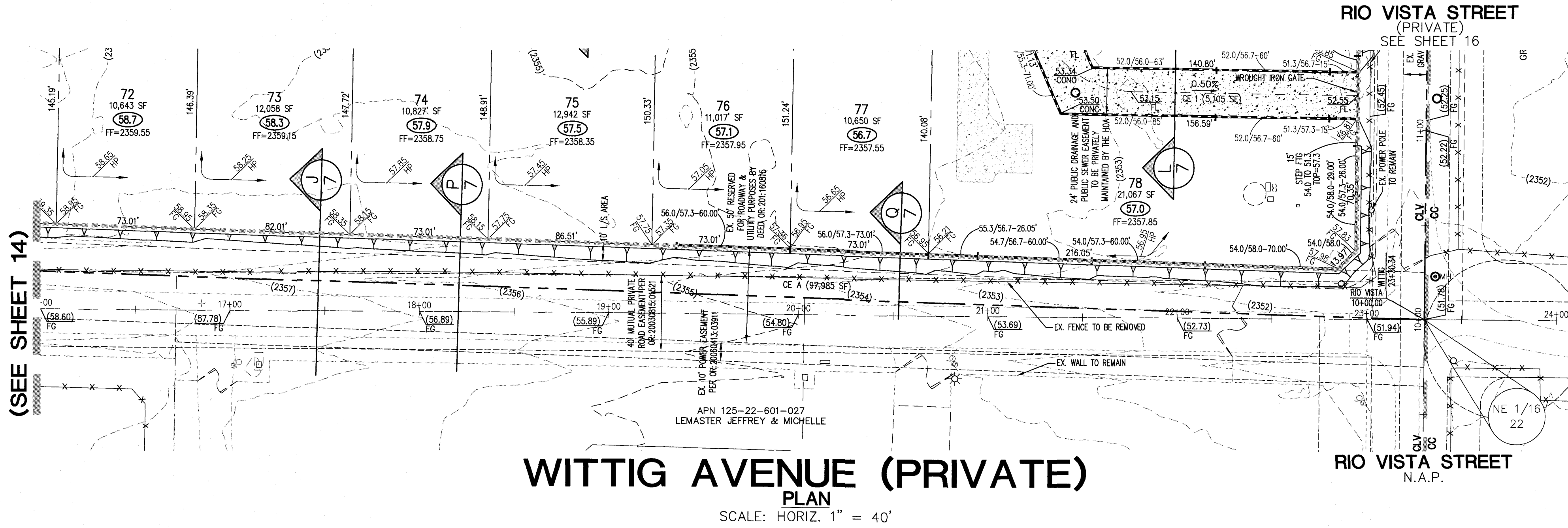
DATE: 01/09/17	NO. DESCRIPTION	DATE	APP'D
PM: J. PEARCE			
DRAWN BY:			
DESIGNED BY:			
CHECKED BY:			
ADA CHECKED:			
JOB NO.: 007108			
SCALE: 1"=40'			

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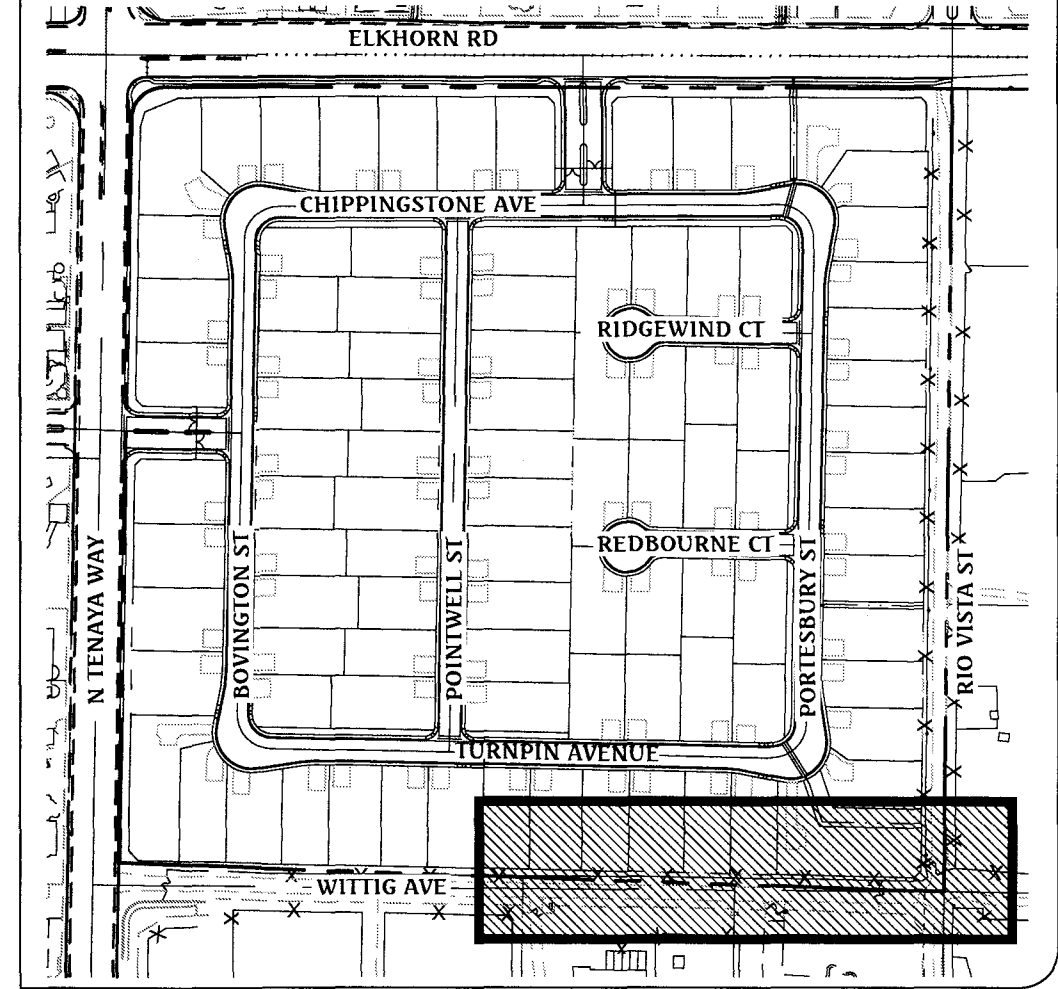
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Exp. 12-31-17
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No. 9552

SHEET **14** OF 26
C.L.V. DWG.#



KEY MAP

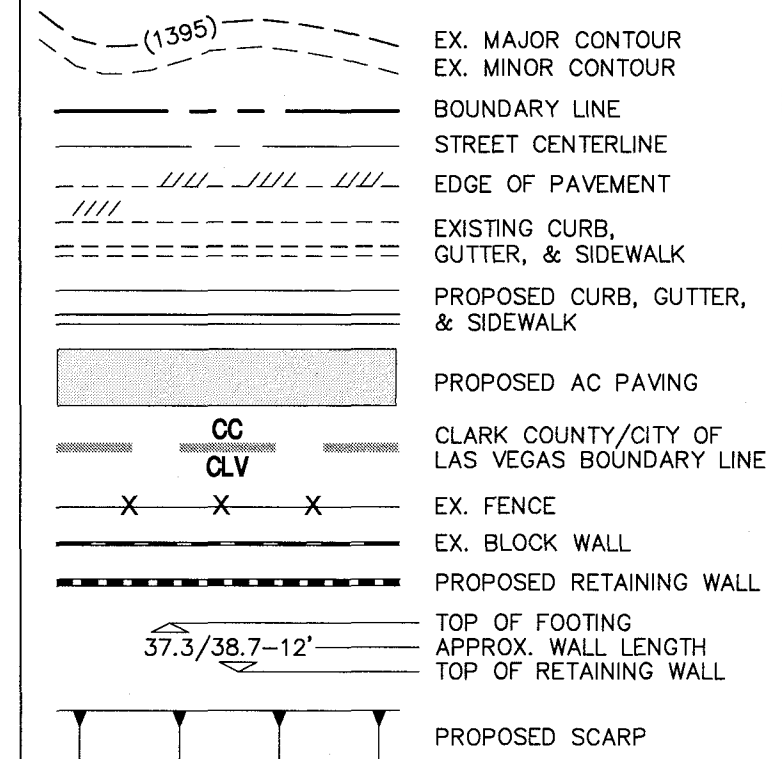
SCALE: 1" = 300'



CONSTRUCTION NOTES

1. CONSTRUCT 8" WIDE CROSS GUTTER, PER CCAUSD No. 228
2. CONSTRUCT "R" TYPE CURB AND GUTTER, PER CCAUSD No. 217.52
3. CONSTRUCT 5" WIDE SIDEWALK, PER CCAUSD No. 234
4. CONSTRUCT "L" TYPE CURB AND GUTTER, PER CCAUSD No. 216
5. 5' TRANSITION FROM L-TYPE CURB/SPANDREL TO R-TYPE CURB
6. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE 1
7. SAWCUT AND MATCH EXISTING ASPHALT
8. EXISTING CURB AND GUTTER TO REMAIN AND PROTECT IN PLACE
9. INSTALL REMOVABLE LOCKING BOLLARDS @ 5' O.C., PER DETAIL R, SHEET 8
10. CONSTRUCT SIDEWALK DRAIN, PER CCAUSD No. 236
11. CONSTRUCT TYPE CM2 DROP INLET, PER CCAUSD #412.1. SEE PROFILE AND DETAIL ON SHEET 9
12. STORM WATER STAMP TO BE LOCATED ADJACENT TO DROP INLET, PER CCAUSD #421.

GRADING LEGEND



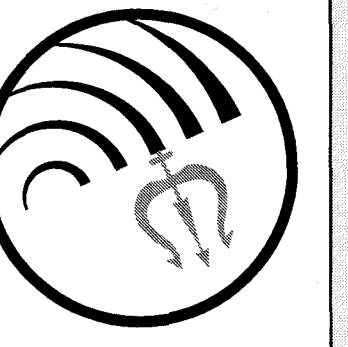
BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

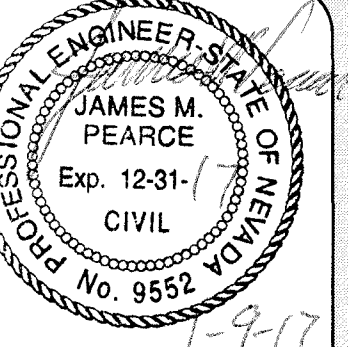
BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15S5E6
RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.
ELEVATION = 717.800 METERS (NAVD'88 V.2003)
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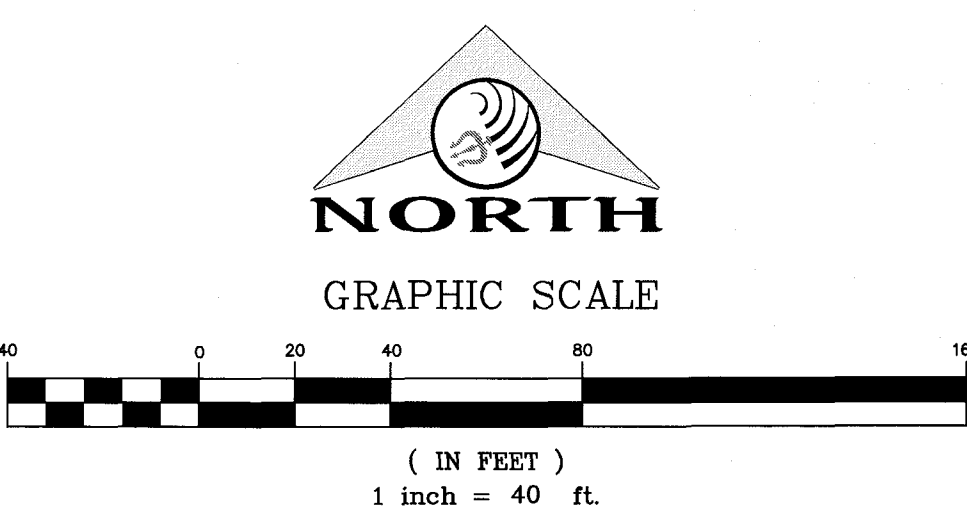


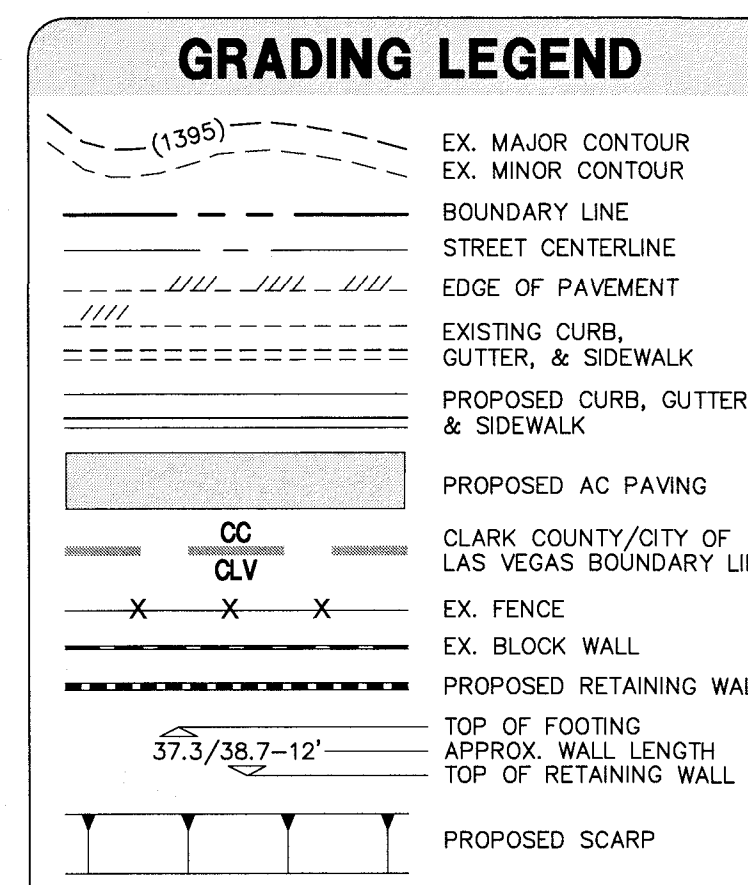
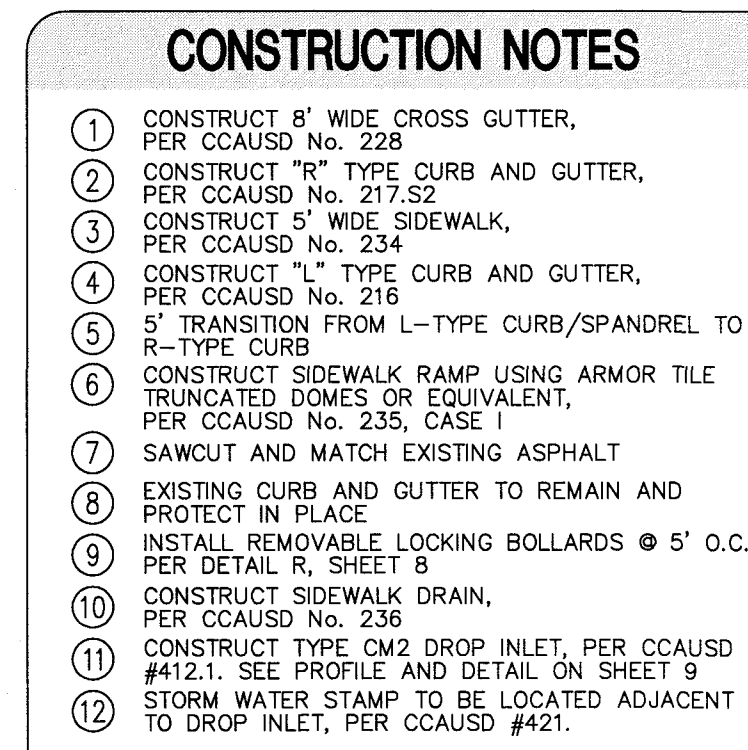
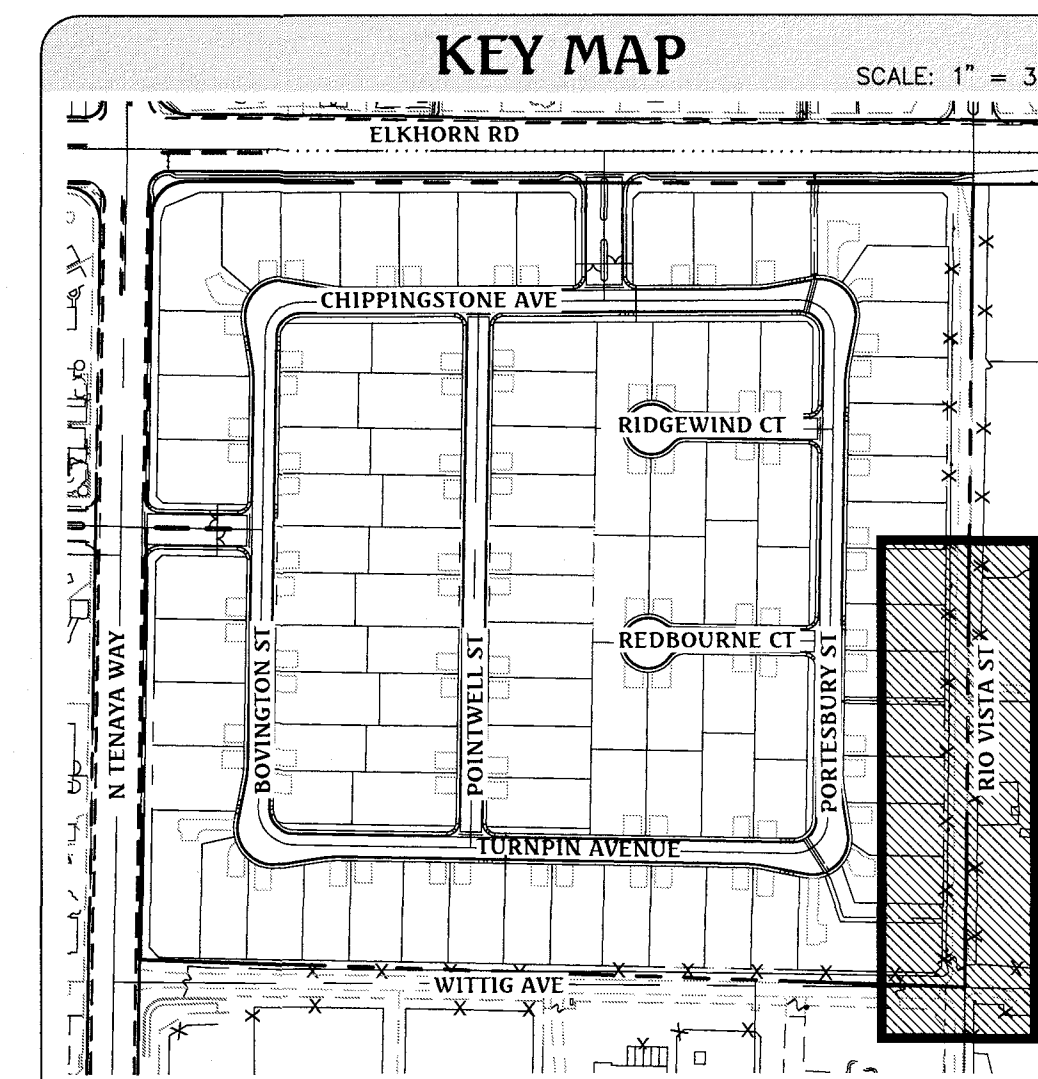
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BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST
LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION
22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK
COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN
THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE
26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 1SSSE6
RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST
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ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)

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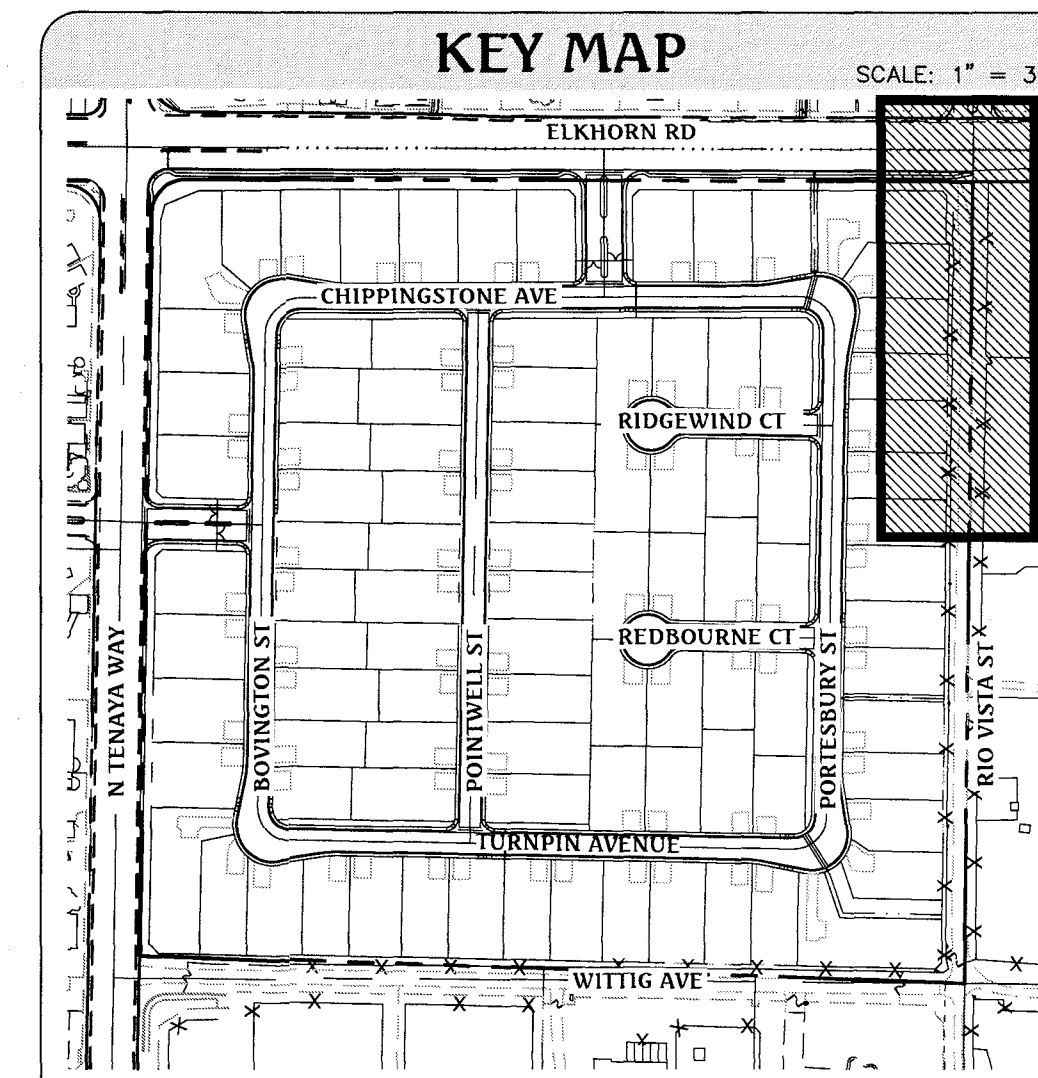
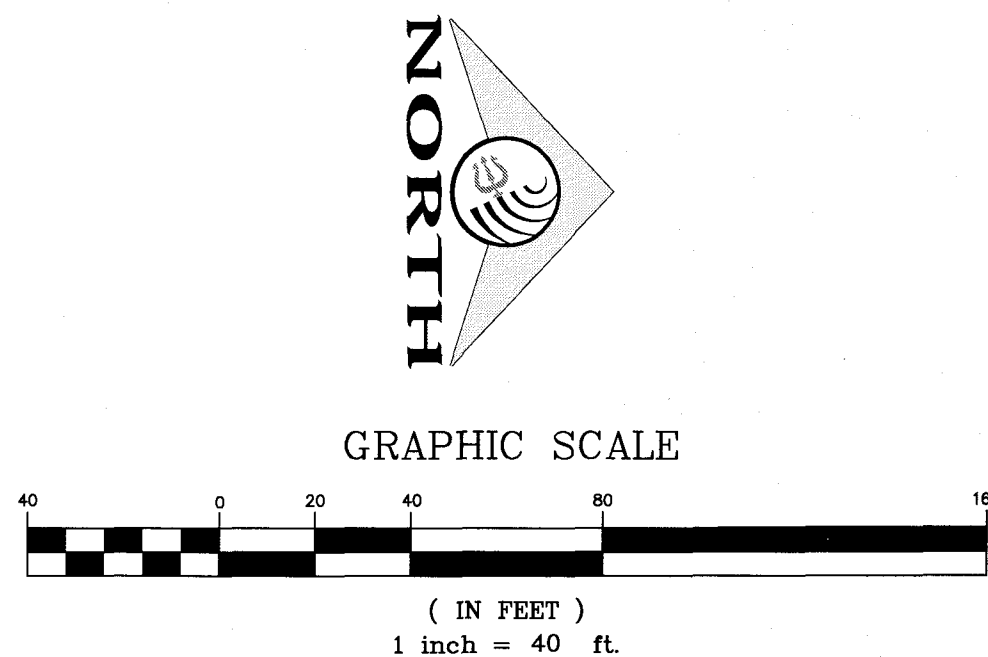
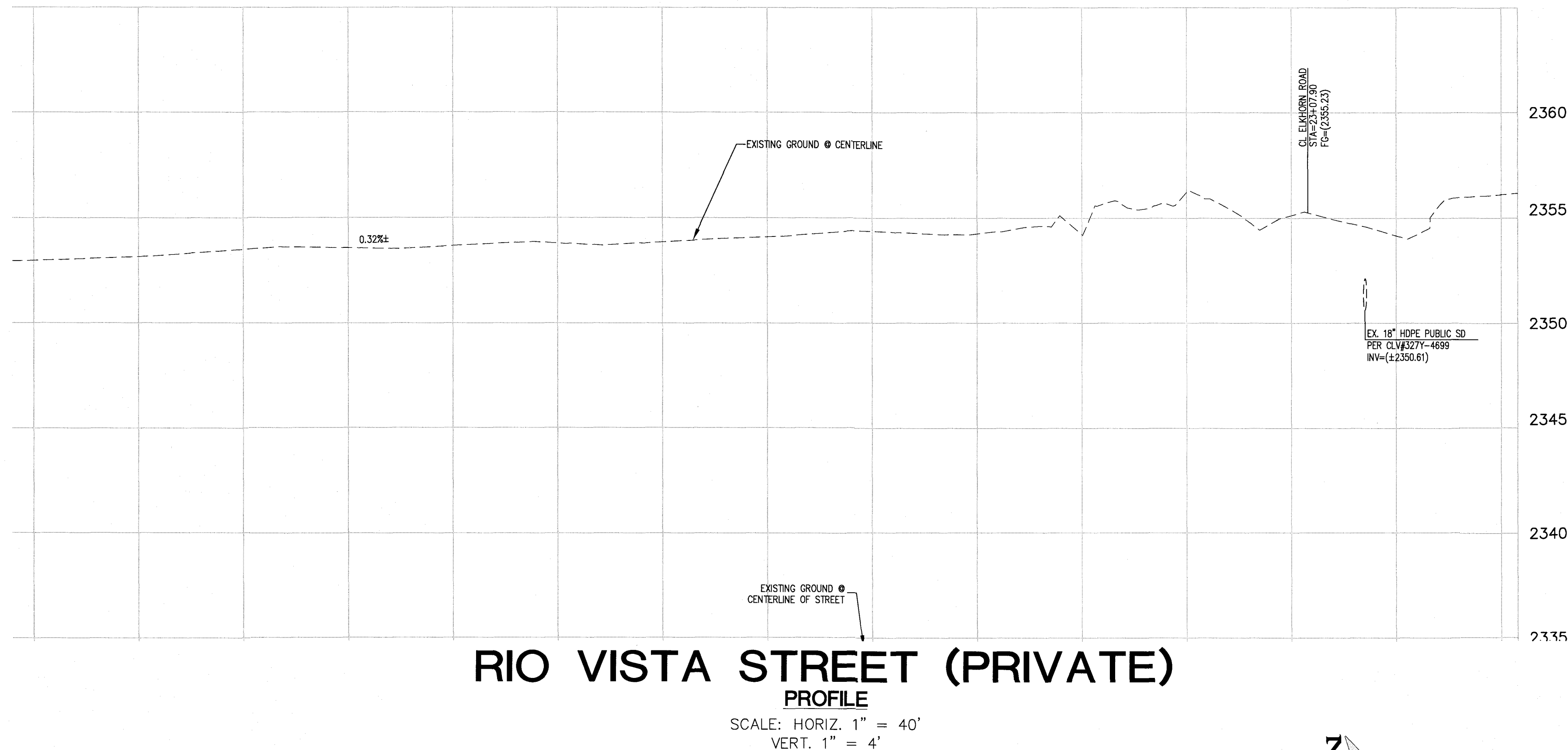
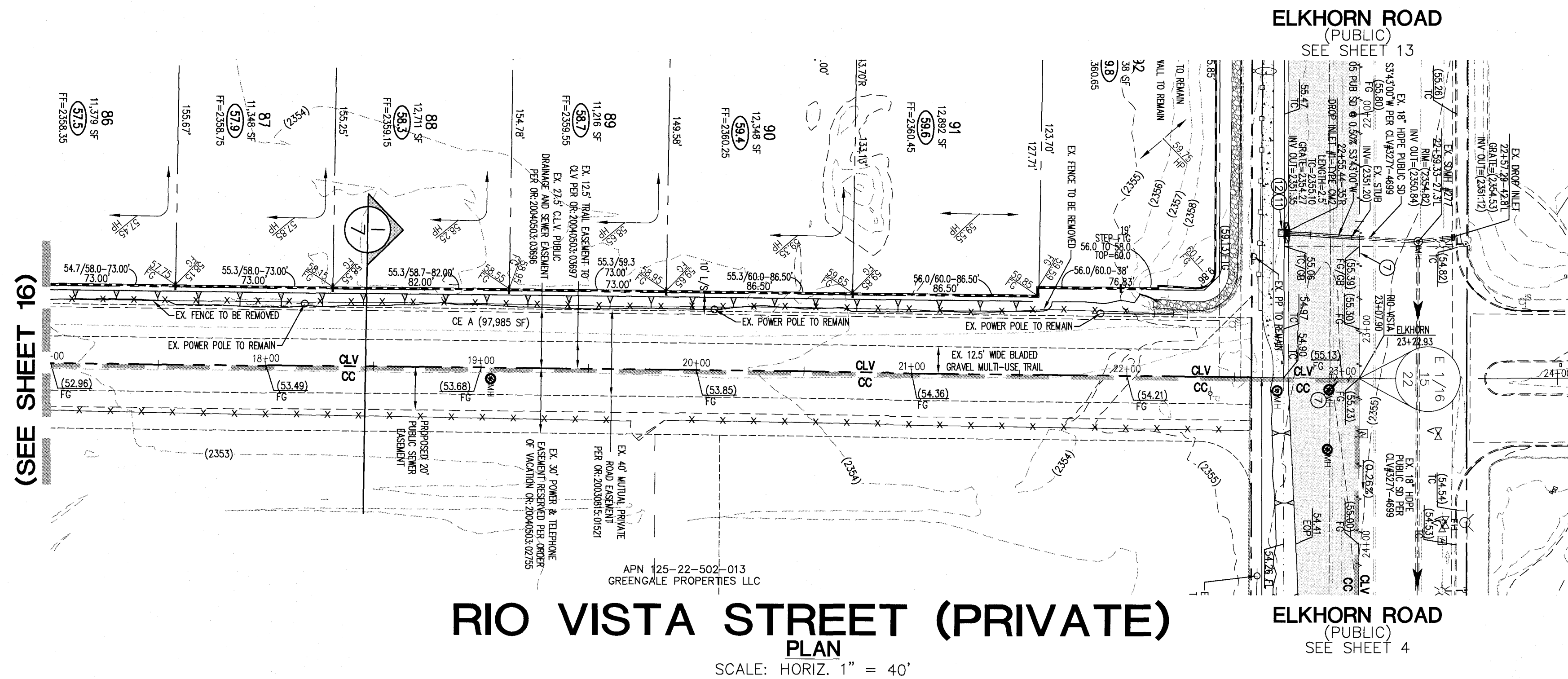
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- CONSTRUCTION NOTES**
1. CONSTRUCT 8" WIDE CROSS GUTTER, PER CCAUSD No. 228
 2. CONSTRUCT "R" TYPE CURB AND GUTTER, PER CCAUSD No. 217.S2
 3. CONSTRUCT 5" WIDE SIDEWALK, PER CCAUSD No. 234
 4. CONSTRUCT "L" TYPE CURB AND GUTTER, PER CCAUSD No. 216
 5. S' TRANSITION FROM L-TYPE CURB/SPANDREL TO R-TYPE CURB
 6. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE 1
 7. SAWCUT AND MATCH EXISTING ASPHALT
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- GRADING LEGEND**
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ADA CHECKED:
JOB NO.: 007.108
SCALE: 1"=40'

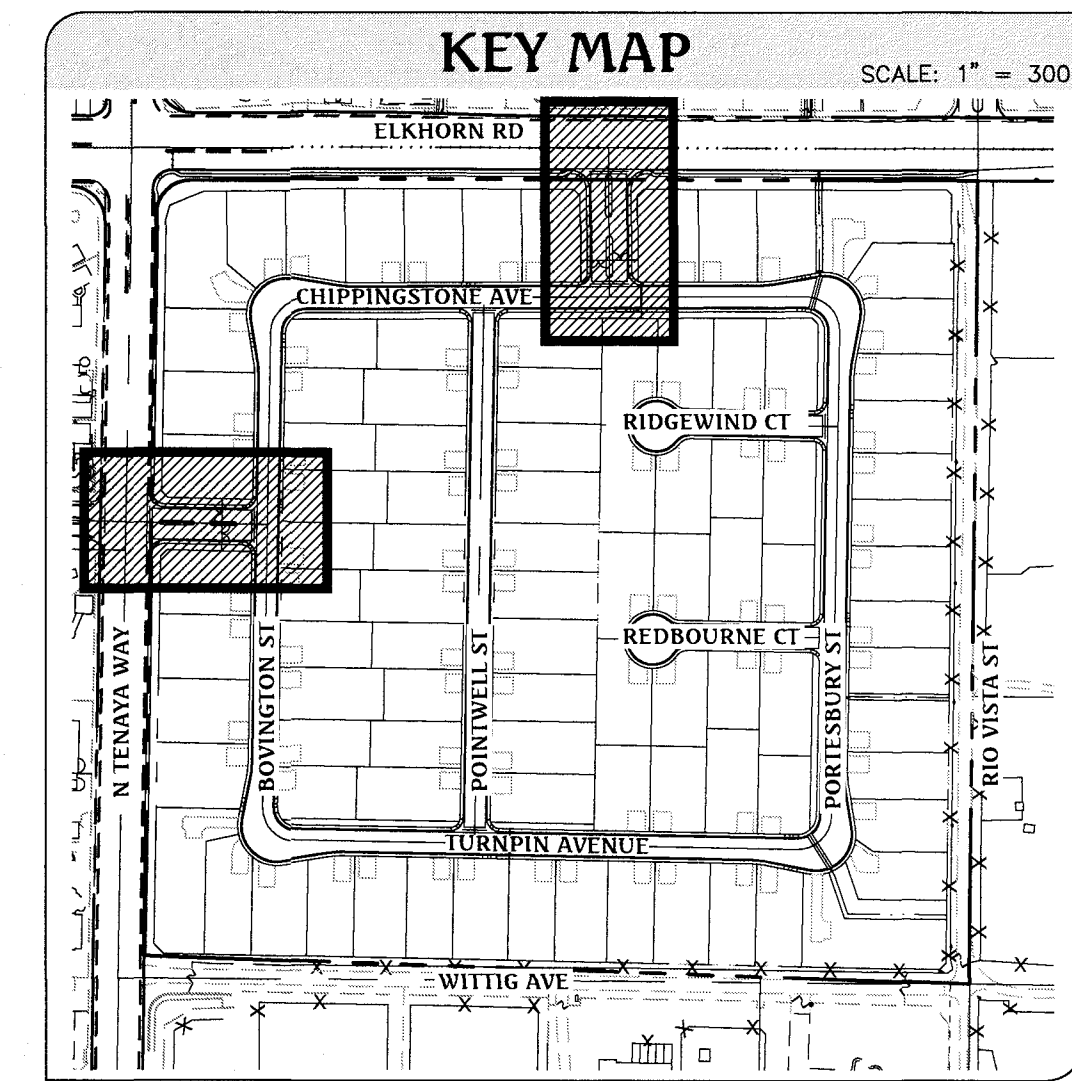
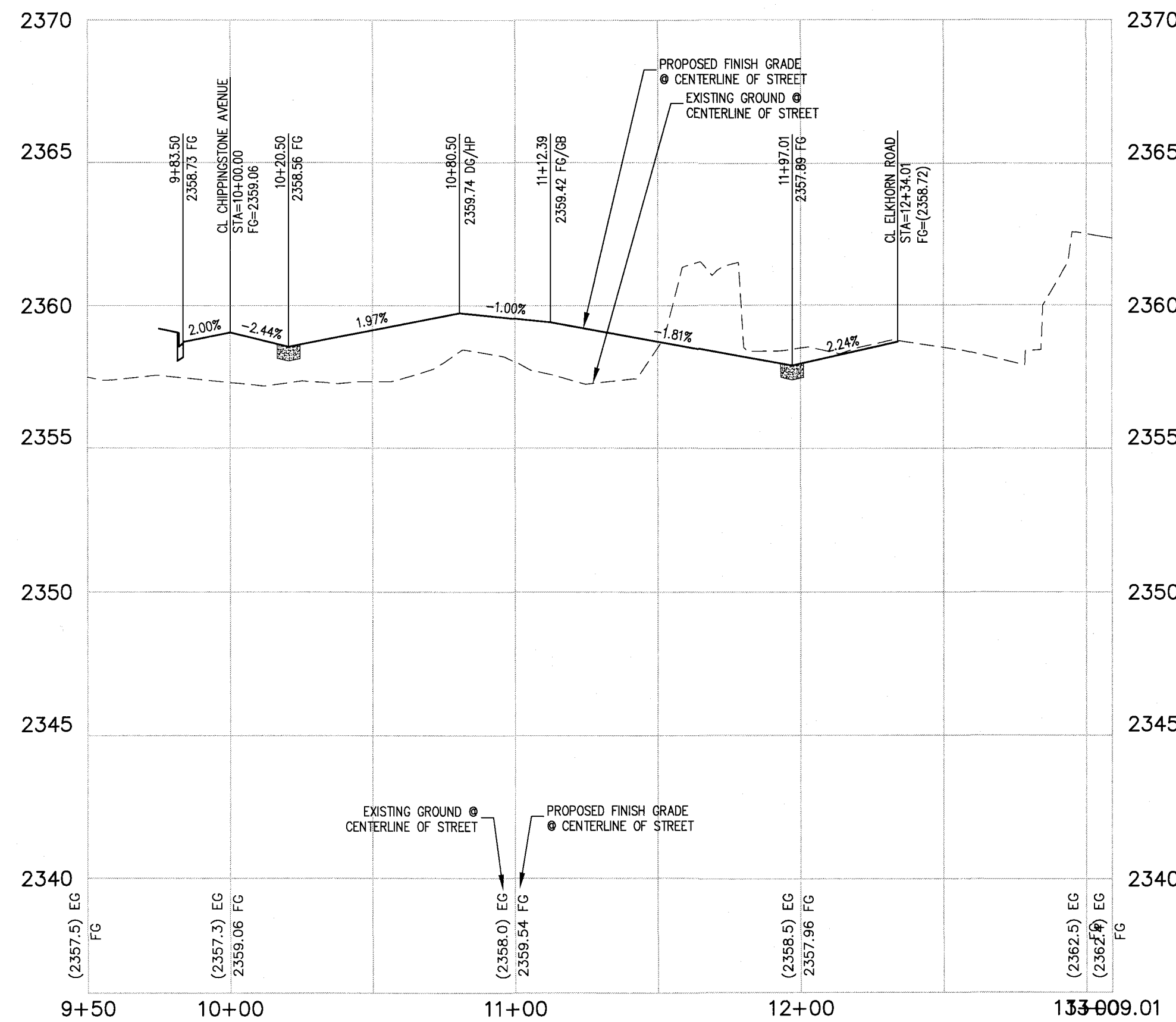
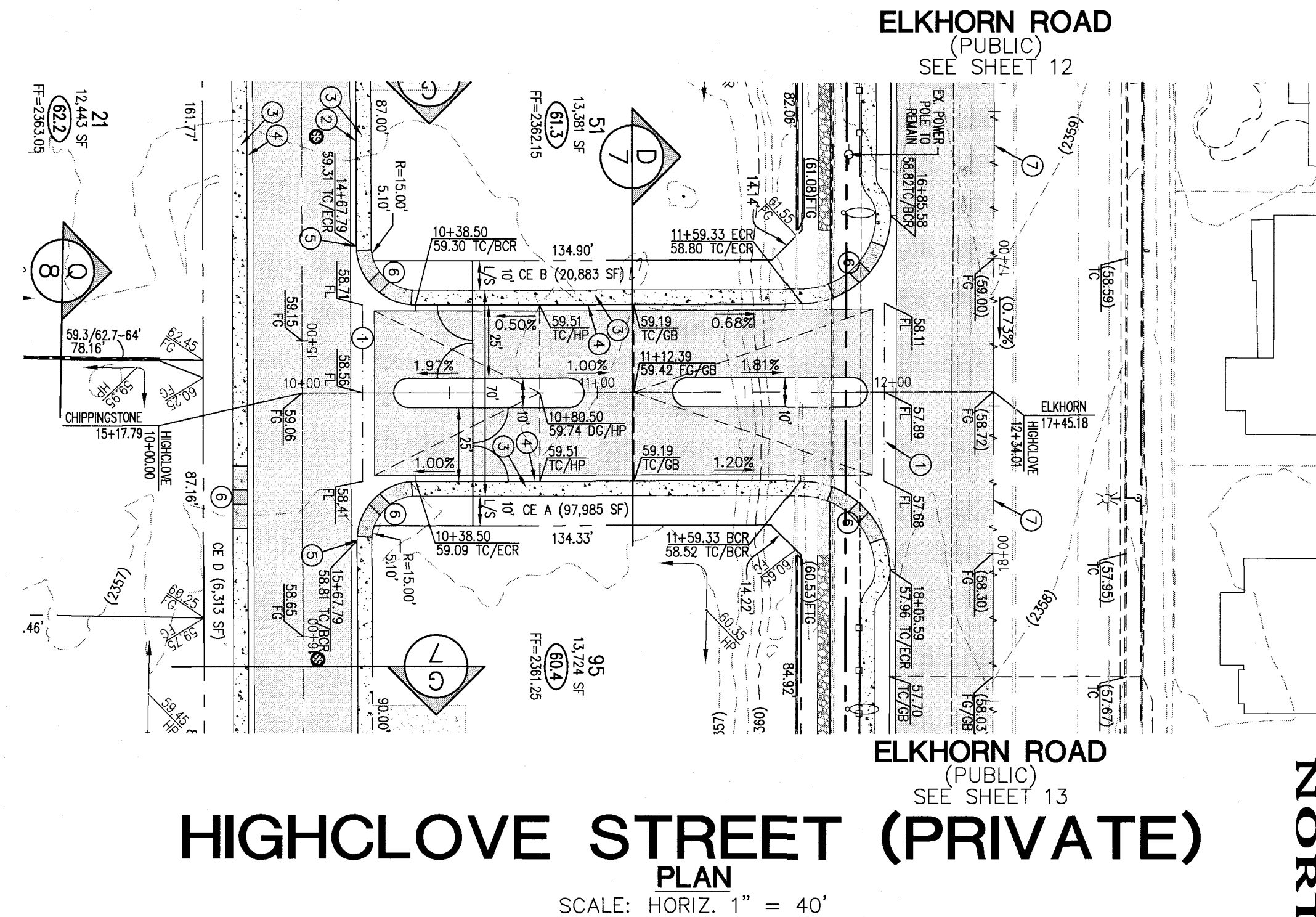
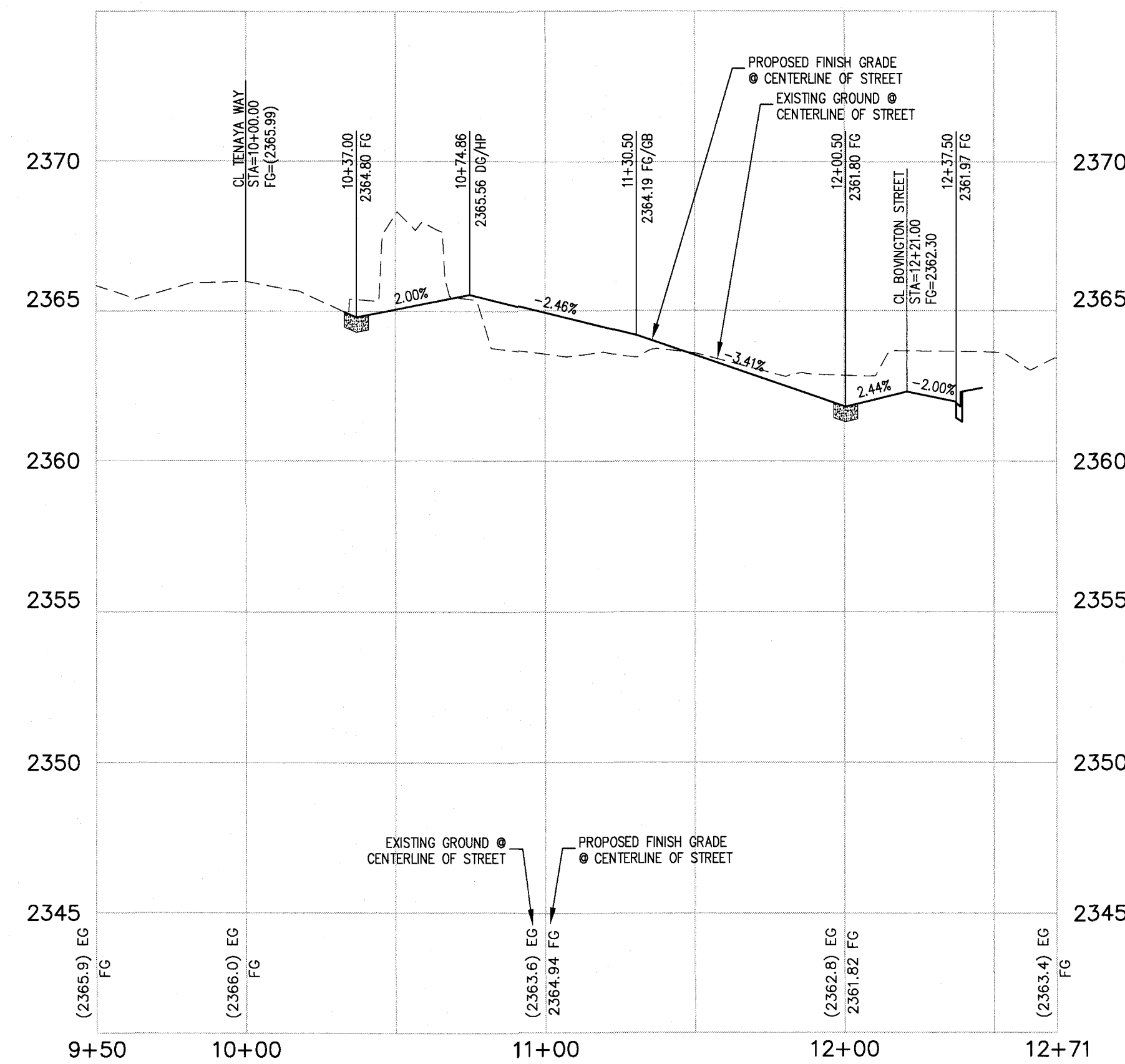
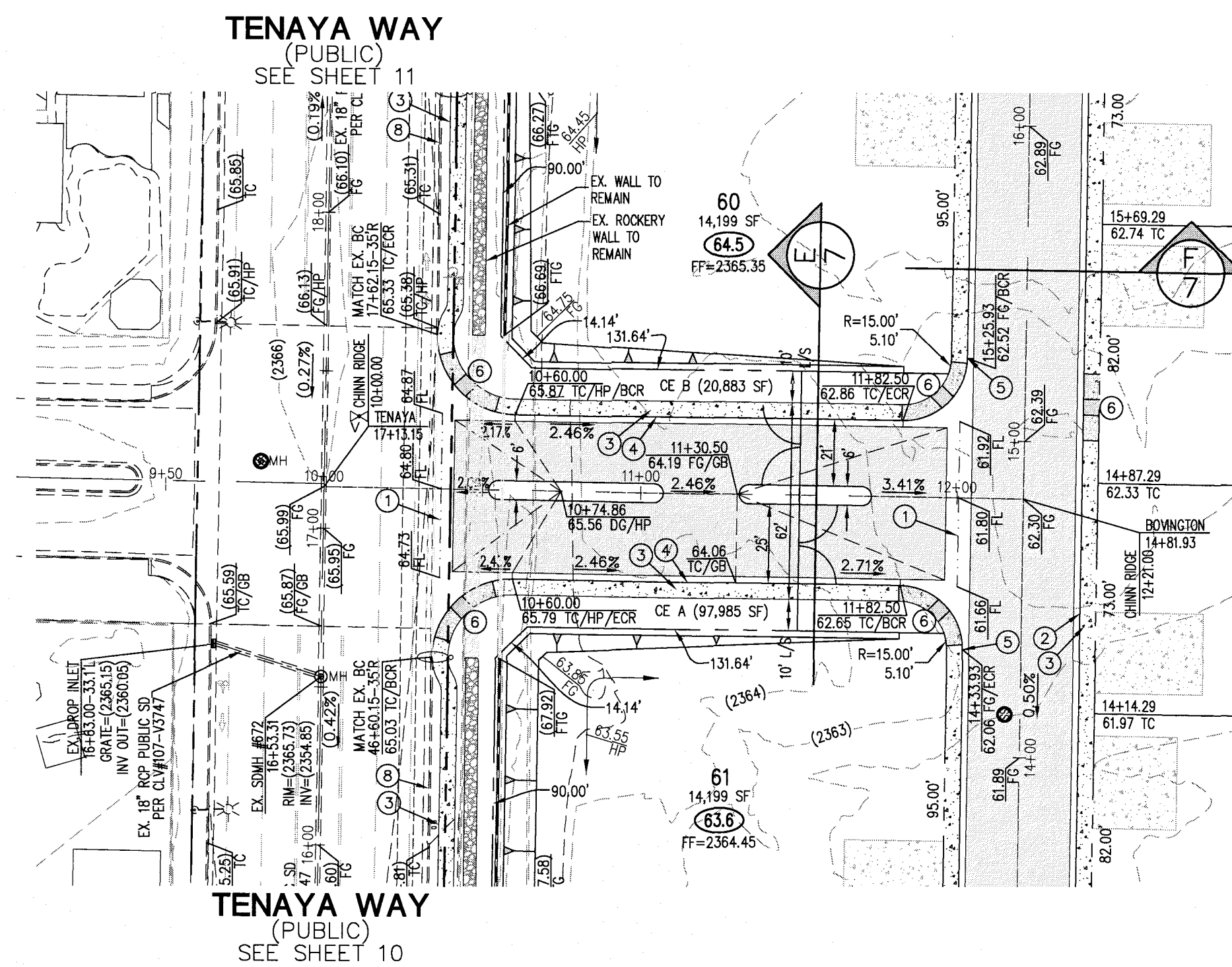
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PLAN AND PROFILE

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JAMES M. PEARCE
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No. 8552

SHEET 17 OF 26
C.I.V. DWG.#

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- CONSTRUCTION NOTES**
1. CONSTRUCT 8" WIDE CROSS GUTTER, PER CAUSD No. 228
 2. CONSTRUCT "R" TYPE CURB AND GUTTER, PER CAUSD No. 217.52
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 - PROPOSED SCARP

BASIS OF BEARING

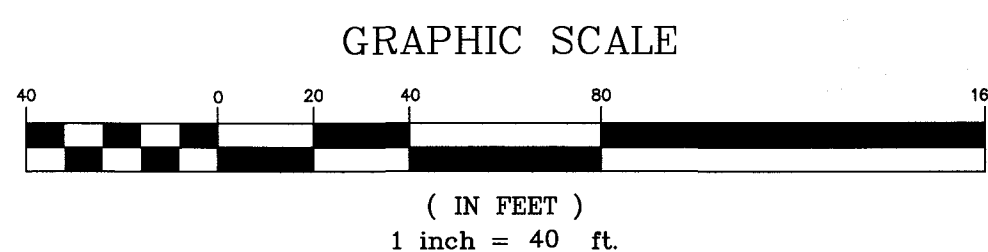
NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M. CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15SSE6

RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.

ELEVATION = 717.800 METERS (NAVD'88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)



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DATE: 01/09/17
PM - J. PEARCE
DRAWN BY:
DESIGNED BY:
CHECKED BY:
ADA CHECKED:
JOB NO.: 007108
SCALE: 1"=40'

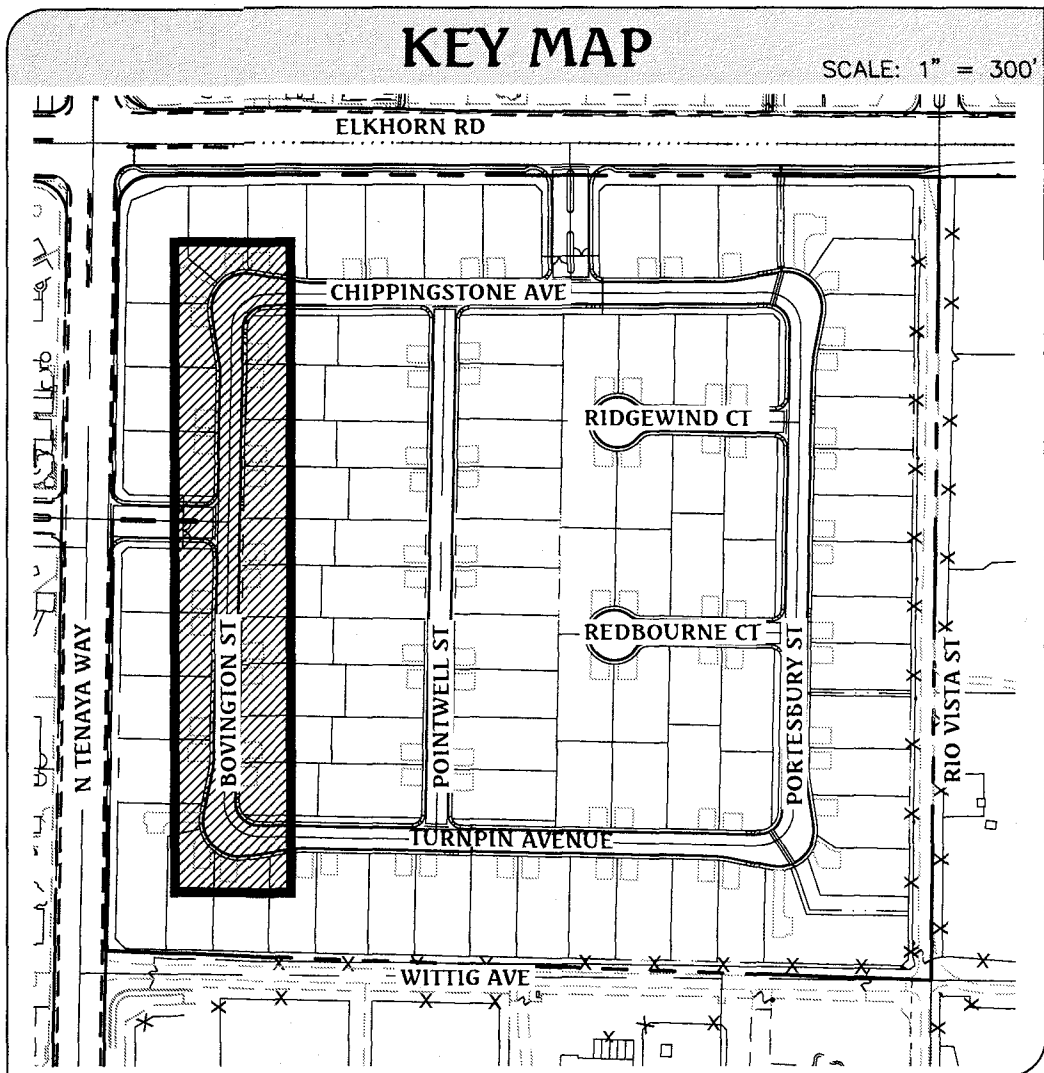
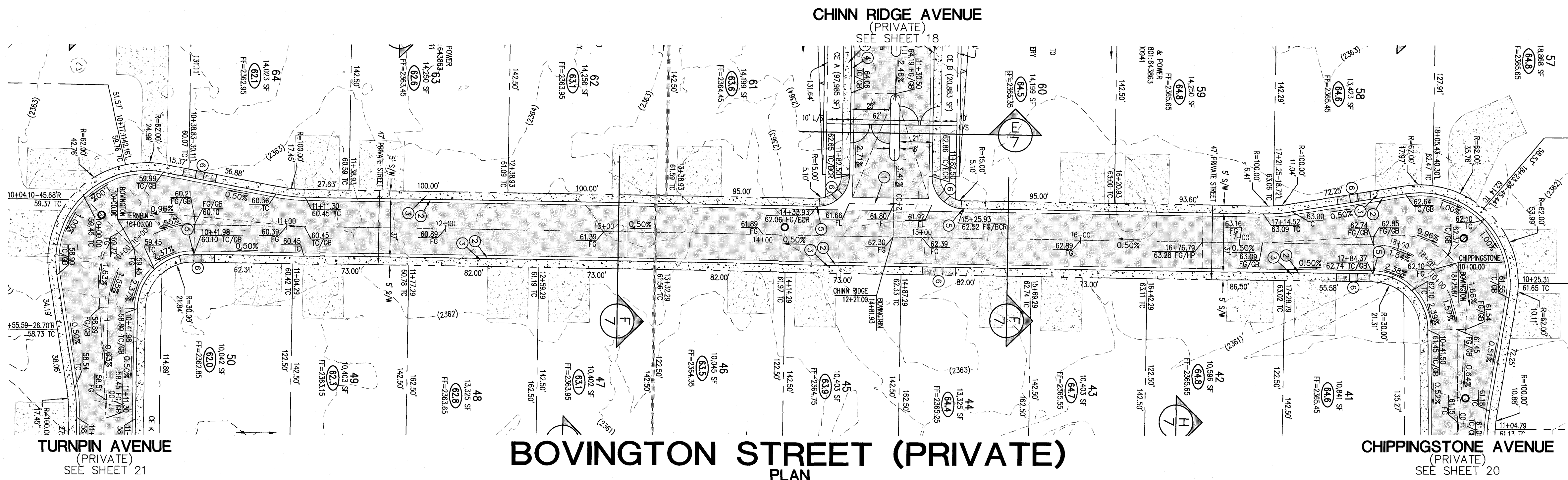
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SHEET
18
OF 26
C.I.V. DWG.#

Q:\Triton Drawings\007-108 Elk Horn\Tenoja\Drawings\Drainage\Study\06 007-108-TDS-Profile-on-site.dwg dresse Mon 09 Jan 2017 - 12:10pm



DATE	NO.	DESCRIPTION	SCALE	DATE	APPRO.
01/09/17			1"=40'		
FM: J. PEARCE					
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JOB NO.:	007-108				



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PLAN AND PROFILE

PROFESSIONAL ENGINEER - STATE OF NEVADA

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Exp. 12-31-2020

CIVIL

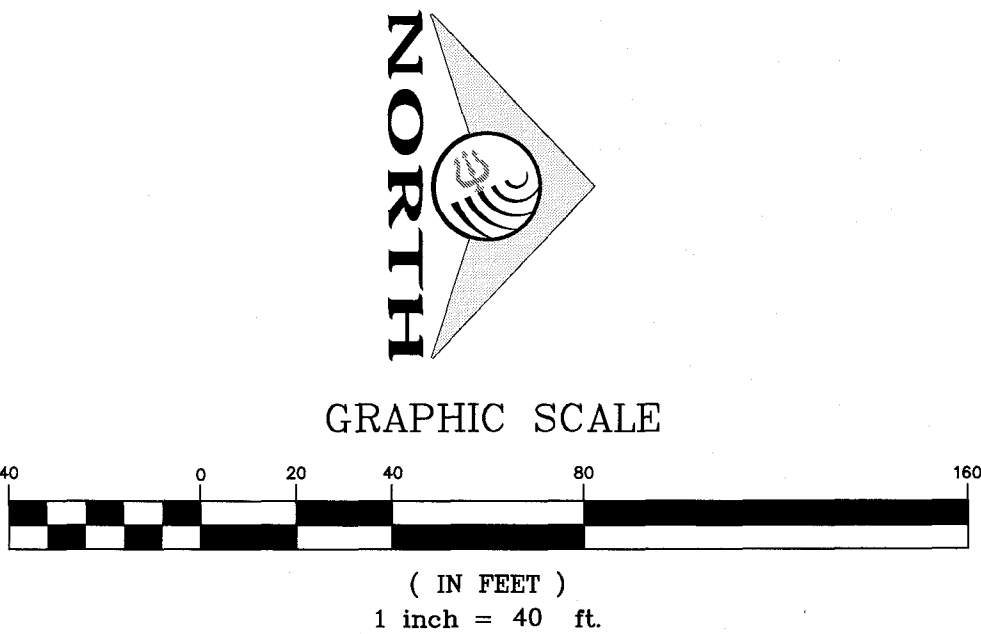
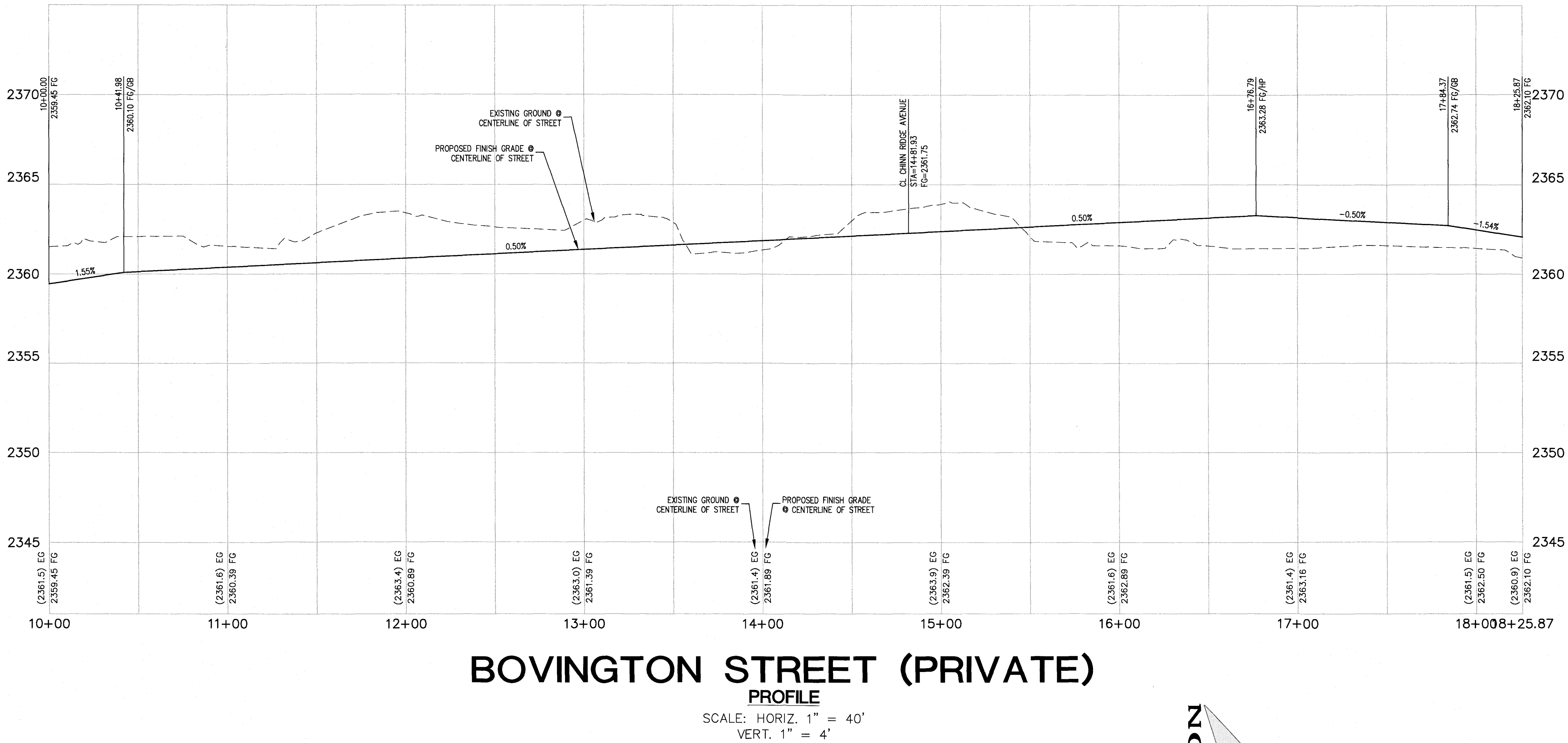
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SHEET

19

OF 26

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- ### CONSTRUCTION NOTES
- CONSTRUCT 8' WIDE CROSS GUTTER, PER CCAUSD No. 228
 - CONSTRUCT "T" TYPE CURB AND GUTTER, PER CCAUSD No. 217.52
 - CONSTRUCT 5' WIDE SIDEWALK, PER CCAUSD No. 234
 - CONSTRUCT "L" TYPE CURB AND GUTTER, PER CCAUSD No. 216
 - 5' TRANSITION FROM L-TYPE CURB/SPANDREL TO R-TYPE CURB
 - CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE 1
 - SAWCUT AND MATCH EXISTING ASPHALT
 - EXISTING CURB AND GUTTER TO REMAIN AND PROTECT IN PLACE
 - INSTALL REMOVABLE LOOKING BOLLARDS @ 5' O.C., PER DETAIL R, SHEET B
 - CONSTRUCT SIDEWALK DRAIN, PER CCAUSD No. 236
 - CONSTRUCT TYPE CM2 DROP INLET, PER CCAUSD #421; SEE PROFILE AND DETAIL ON SHEET 9
 - STORM WATER STAMP TO BE LOCATED ADJACENT TO DROP INLET, PER CCAUSD #421.

GRADING LEGEND

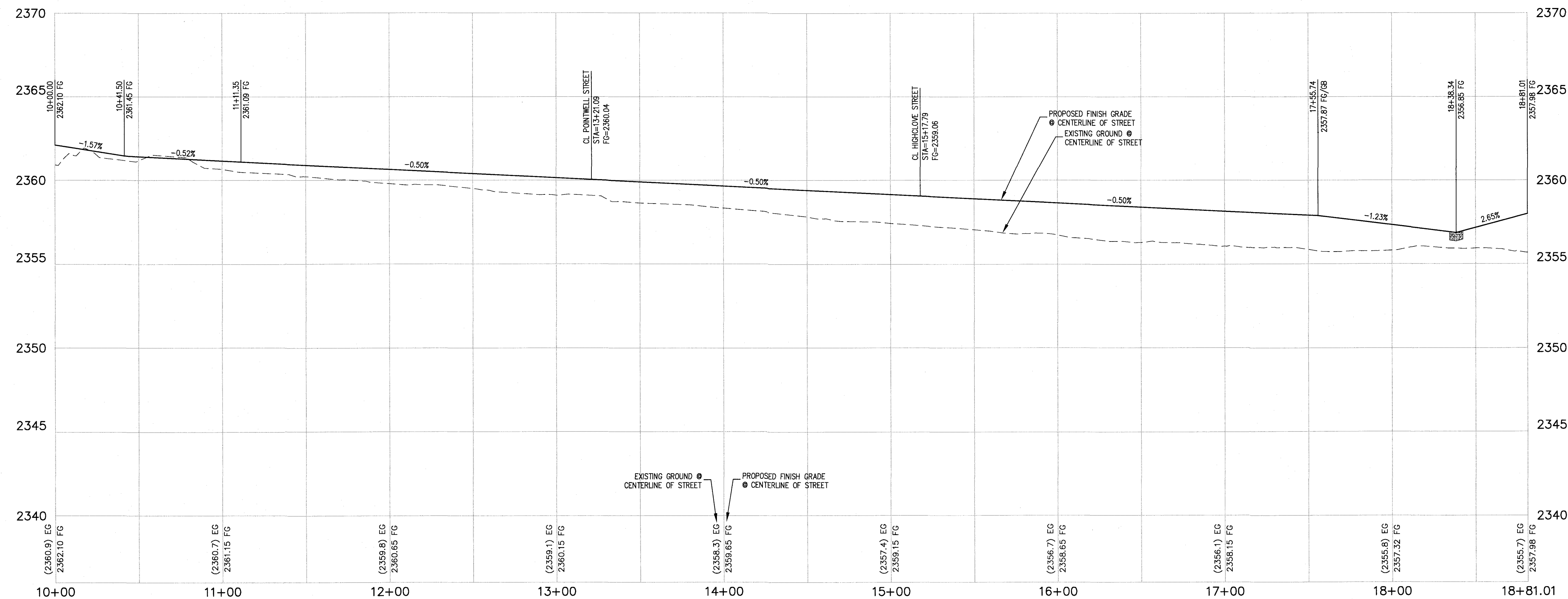
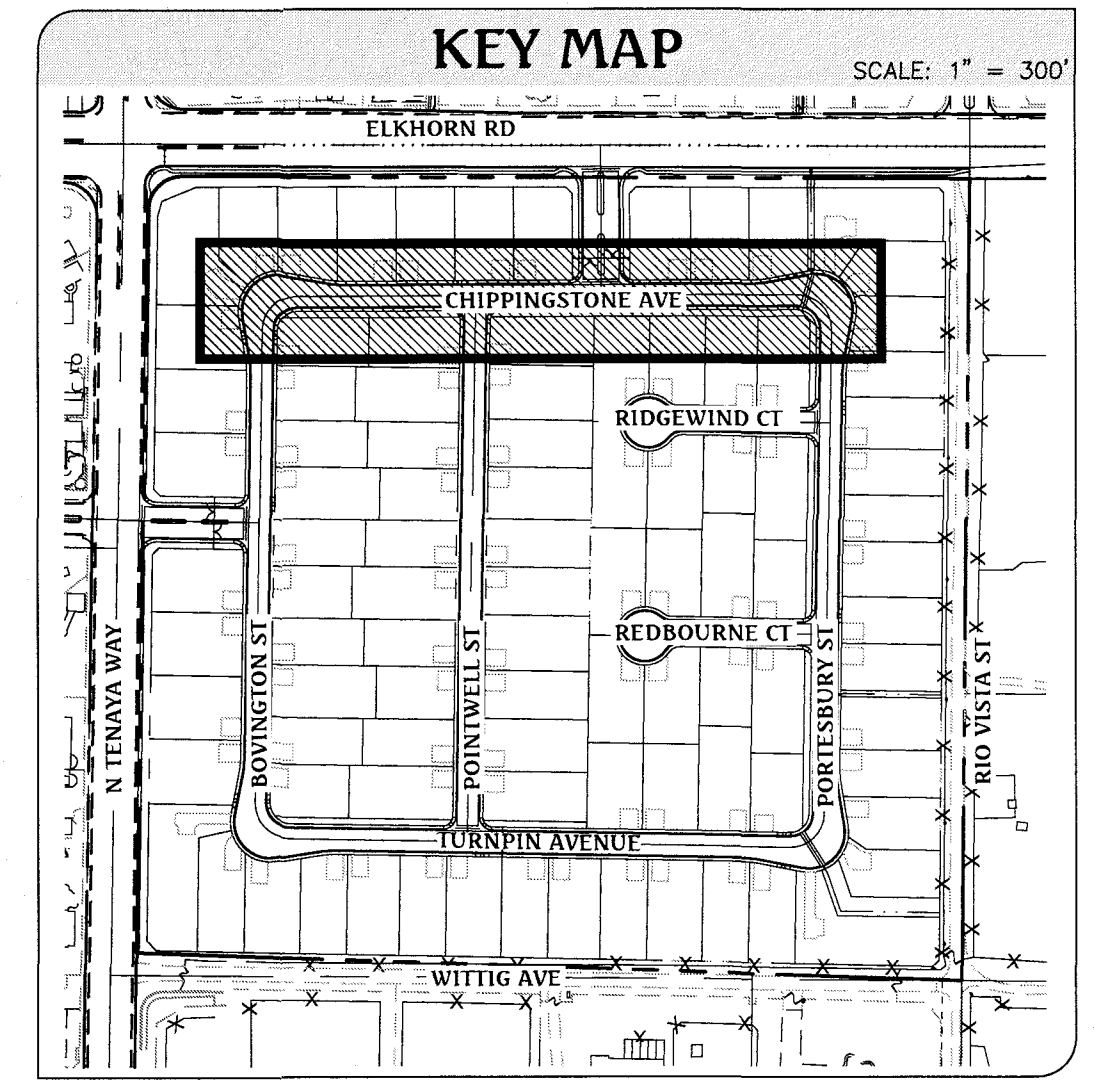
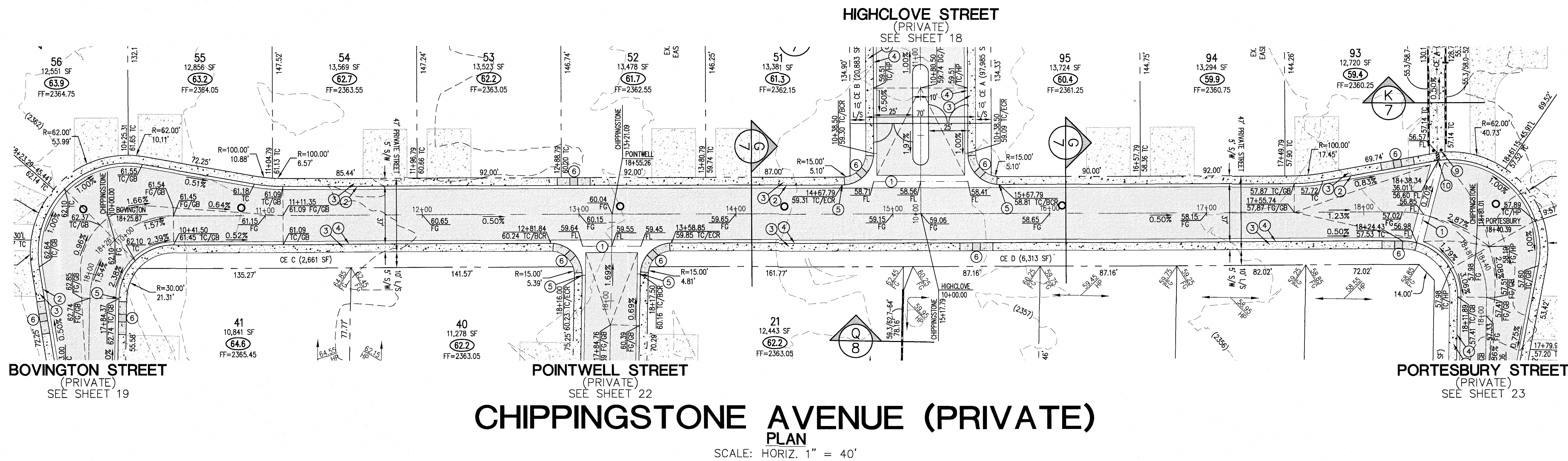
(1395)	EX. MAJOR CONTOUR
---	EX. MINOR CONTOUR
---	BOUNDARY LINE
---	STREET CENTERLINE
---	EDGE OF PAVEMENT
---	EXISTING CURB, GUTTER, & SIDEWALK
---	PROPOSED CURB, GUTTER, & SIDEWALK
---	PROPOSED AC PAVING
CC	CLARK COUNTY/CITY OF LAS VEGAS BOUNDARY LINE
CLV	EX. FENCE
X X X	EX. BLOCK WALL
---	PROPOSED RETAINING WALL
---	TOP OF FOOTING
---	APPROX. WALL LENGTH
---	TOP OF RETAINING WALL
---	PROPOSED SCARP

BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15S5E6
RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.
ELEVATION = 717.800 METERS (NAVD'88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)



- CONSTRUCTION NOTES**
1. CONSTRUCT 8" WIDE CROSS GUTTER, PER CCAUSD No. 228
 2. CONSTRUCT "R" TYPE CURB AND GUTTER, PER CCAUSD No. 217.52
 3. CONSTRUCT 5' WIDE SIDEWALK, PER CCAUSD No. 234
 4. CONSTRUCT "L" TYPE CURB AND GUTTER, PER CCAUSD No. 215
 5. 5' TRANSITION FROM L-TYPE CURB/SPANDREL TO R-TYPE CURB
 6. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOWNS OR EQUIVALENT, PER CCAUSD No. 235, CASE 1
 7. SAWCUT AND MATCH EXISTING ASPHALT
 8. EXISTING CURB AND GUTTER TO REMAIN AND PROTECT IN PLACE
 9. INSTALL REMOVABLE LOCKING BOLLARDS @ 5' O.C., PER DETAIL R, SHEET 8
 10. CONSTRUCT SIDEWALK DRAIN, PER CCAUSD No. 236
 11. CONSTRUCT TYPE CM2 DROP INLET, PER CCAUSD #412.1. SEE PROFILE AND DETAIL ON SHEET 9
 12. STORM WATER STAMP TO BE LOCATED ADJACENT TO DROP INLET, PER CCAUSD #421.

- GRADING LEGEND**
- EX. MAJOR CONTOUR
 - EX. MINOR CONTOUR
 - BOUNDARY LINE
 - STREET CENTERLINE
 - EDGE OF PAVEMENT
 - EXISTING CURB, GUTTER, & SIDEWALK
 - PROPOSED CURB, GUTTER, & SIDEWALK
 - PROPOSED AC PAVING
 - CLARK COUNTY/CITY OF LAS VEGAS BOUNDARY LINE
 - EX. FENCE
 - EX. BLOCK WALL
 - PROPOSED RETAINING WALL
 - TOP OF FOOTING
 - APPROX. WALL LENGTH
 - TOP OF RETAINING WALL
 - PROPOSED SCARP

BASIS OF BEARING

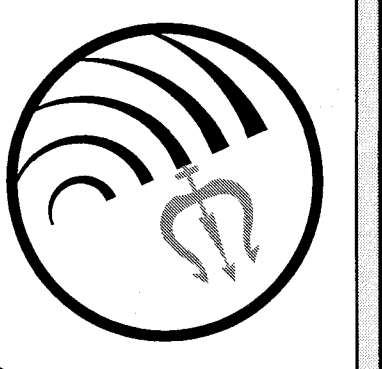
NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15SSE6
RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.
ELEVATION = 717.800 METERS (NAVD'88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)

DATE: 01/09/17
PM: J. PEARCE
DRAWN BY:
DESIGNED BY:
CHECKED BY:
ADA CHECKED:
JOB NO.: 007108
SCALE: 1"=40'

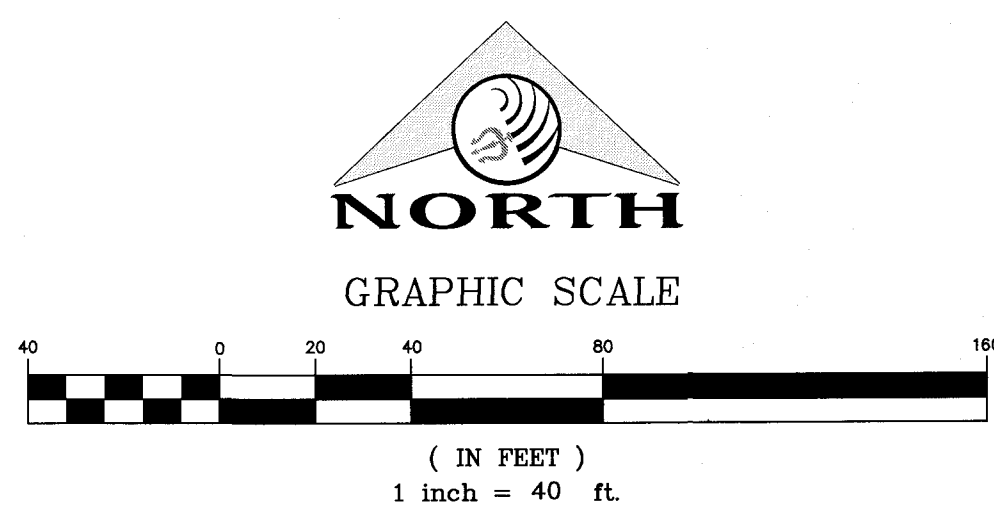
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Exp. 12-31-2017
No. 9552

SHEET 20 OF 26
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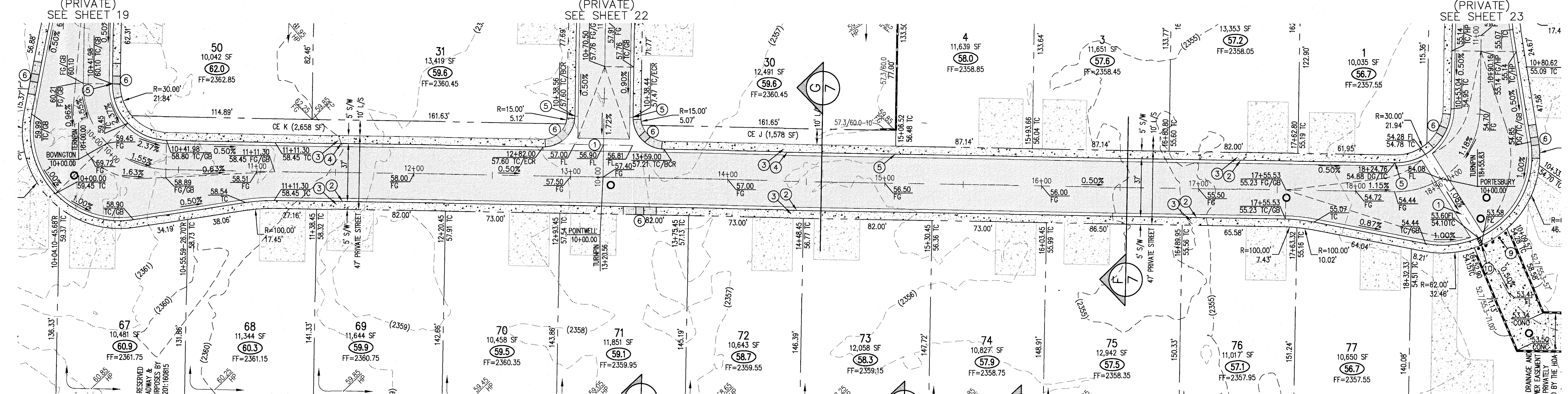
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BOVINGTON STREET

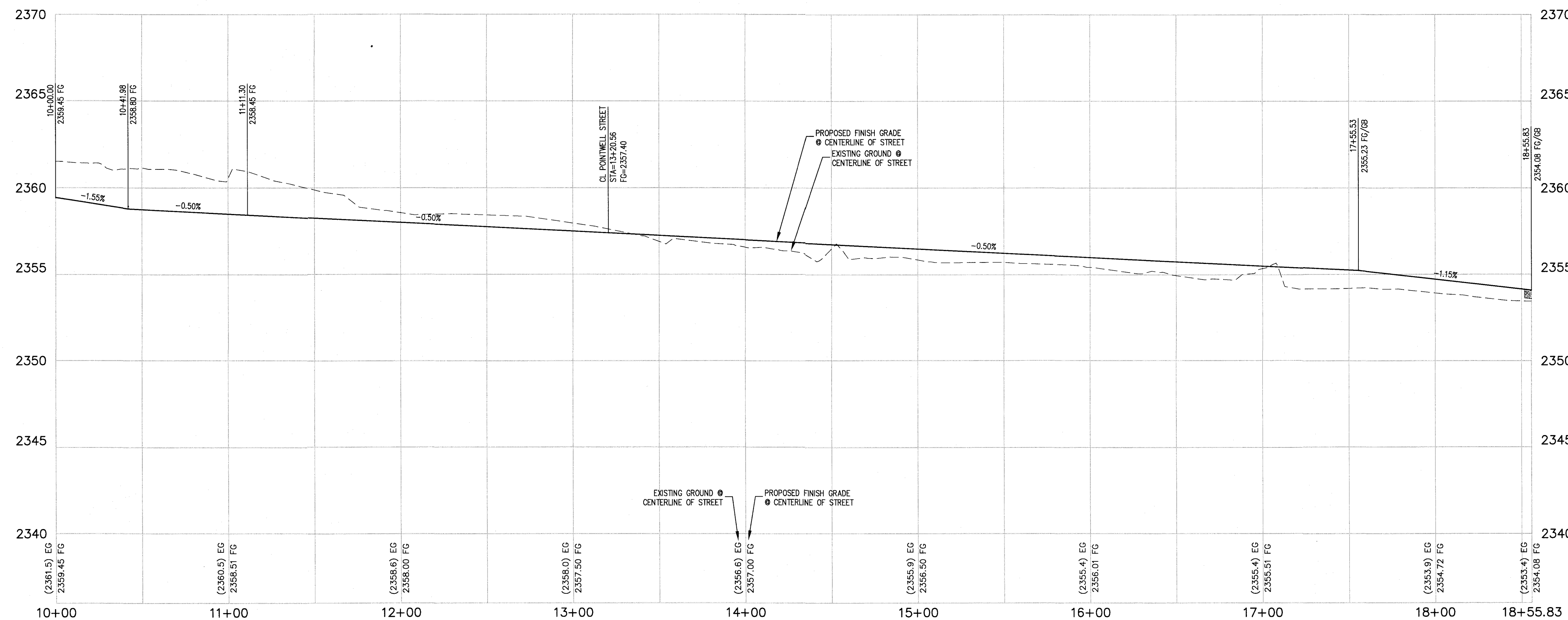
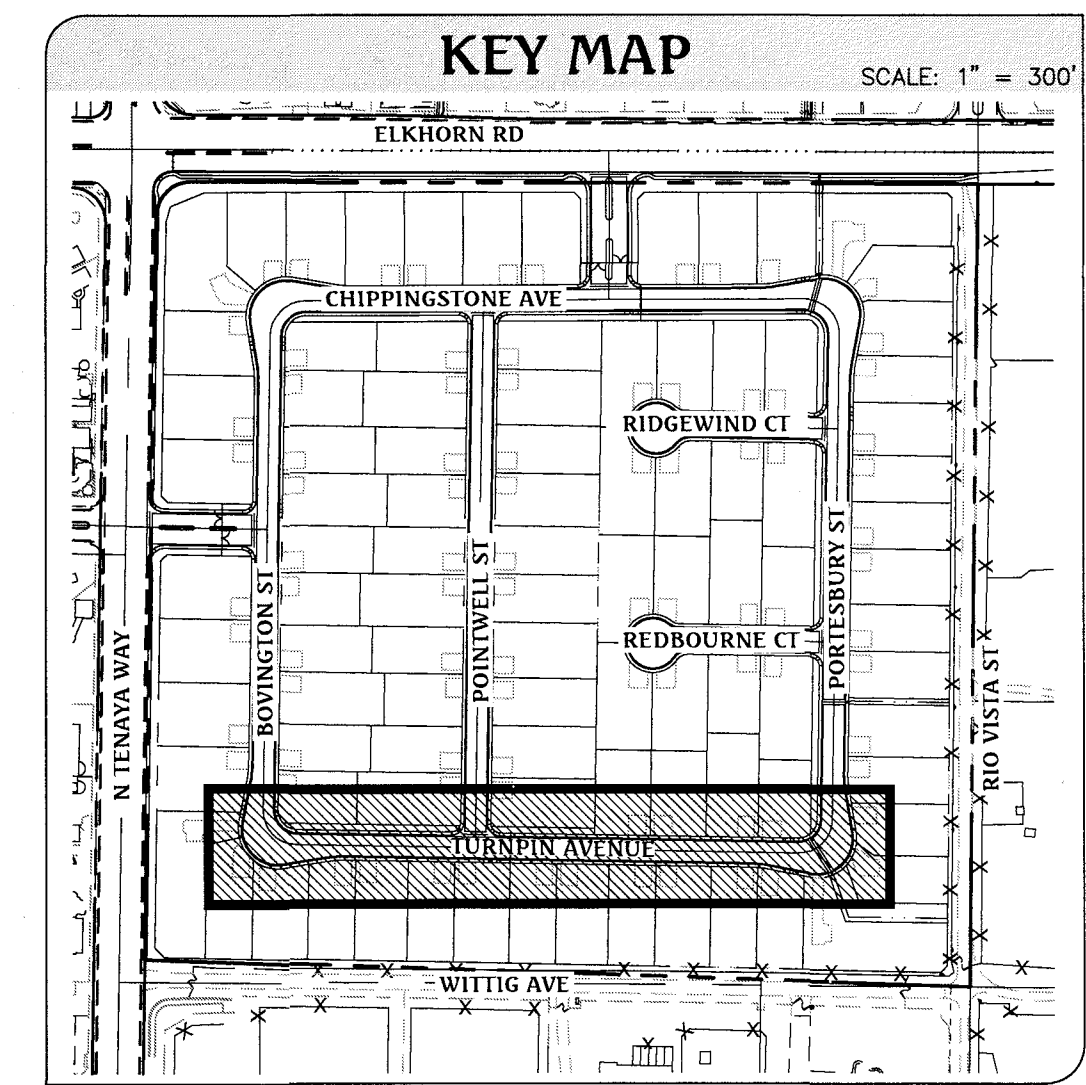
POINTWELL STREET

PORTESBURY STREET



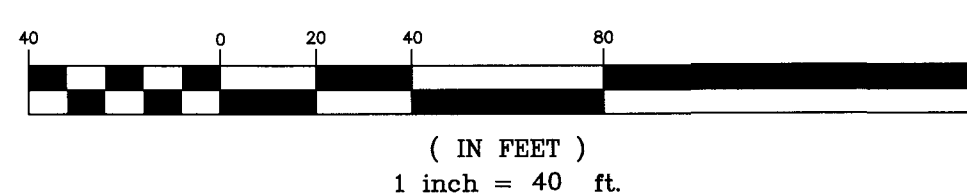
TURNPIN AVENUE (PRIVATE)

SCALE: HORIZ. 1" = 40'



TURNPIN AVENUE (PRIVATE)

PROFILE

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

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CONSTRUCTION NOTES

1. CONSTRUCT 8" WIDE CROSS GUTTER, PER CCAUSD No. 228
2. CONSTRUCT "R" TYPE CURB AND GUTTER, PER CCAUSD No. 217.52
3. CONSTRUCT 5" WIDE SIDEWALK, PER CCAUSD No. 234
4. CONSTRUCT "L" TYPE CURB AND GUTTER, PER CCAUSD No. 216
5. TRANSITION FROM L-TYPE CURB/SPANDREL TO R-TYPE CURB
6. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE I
7. SAWCUT AND MATCH EXISTING ASPHALT
8. EXISTING CURB AND GUTTER TO REMAIN AND PROTECT IN PLACE
9. INSTALL REMOVABLE LOCKING BOLLARDS @ 5' O.C., PER DETAIL R, SHEET 8
10. CONSTRUCT SIDEWALK DRAIN, PER CCAUSD No. 236
11. CONSTRUCT TYPE CM2 DROP INLET, PER CCAUSD #412.1. SEE PROFILE AND DETAIL ON SHEET 9
12. STORM WATER STAMP TO BE LOCATED ADJACENT TO DROP INLET, PER CCAUSD #421.

GRADING LEGEND

- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- BOUNDARY LINE
- STREET CENTERLINE
- EDGE OF PAVEMENT
- EXISTING CURB, GUTTER, & SIDEWALK
- PROPOSED CURB, GUTTER, & SIDEWALK
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- CLARK COUNTY/CITY OF LAS VEGAS BOUNDARY LINE
- EX. FENCE
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- TOP OF RETAINING WALL
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BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 80 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15SS66
RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.
ELEVATION = 717.820 METERS (NAVD'88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)

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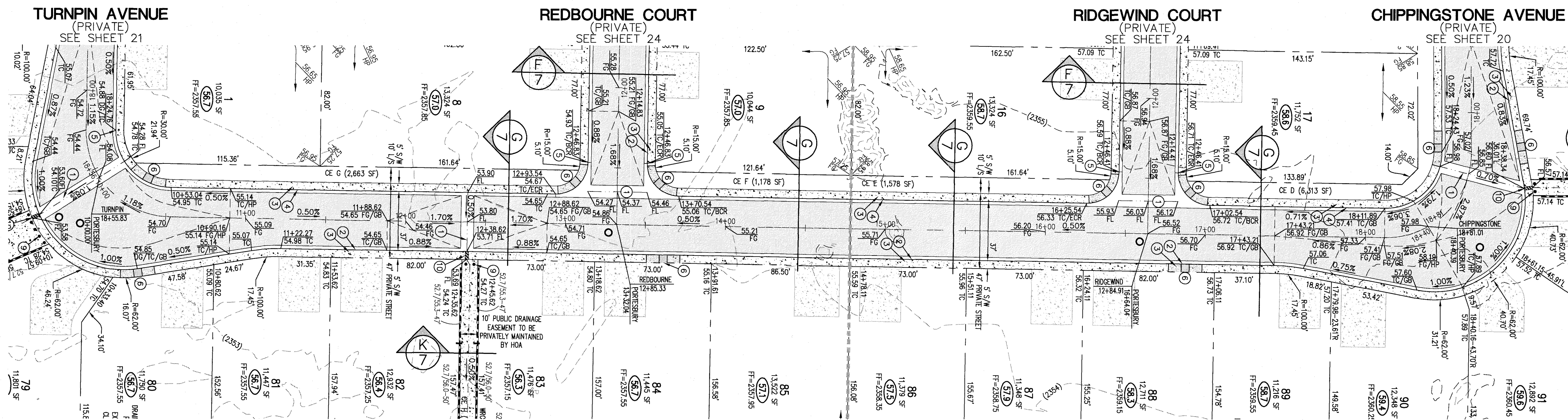
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PROFESSIONAL ENGINEER STATE OF NEVADA
JAMES M. PEARCE
Exp. 12-31-17
CIVIL
No. 9552

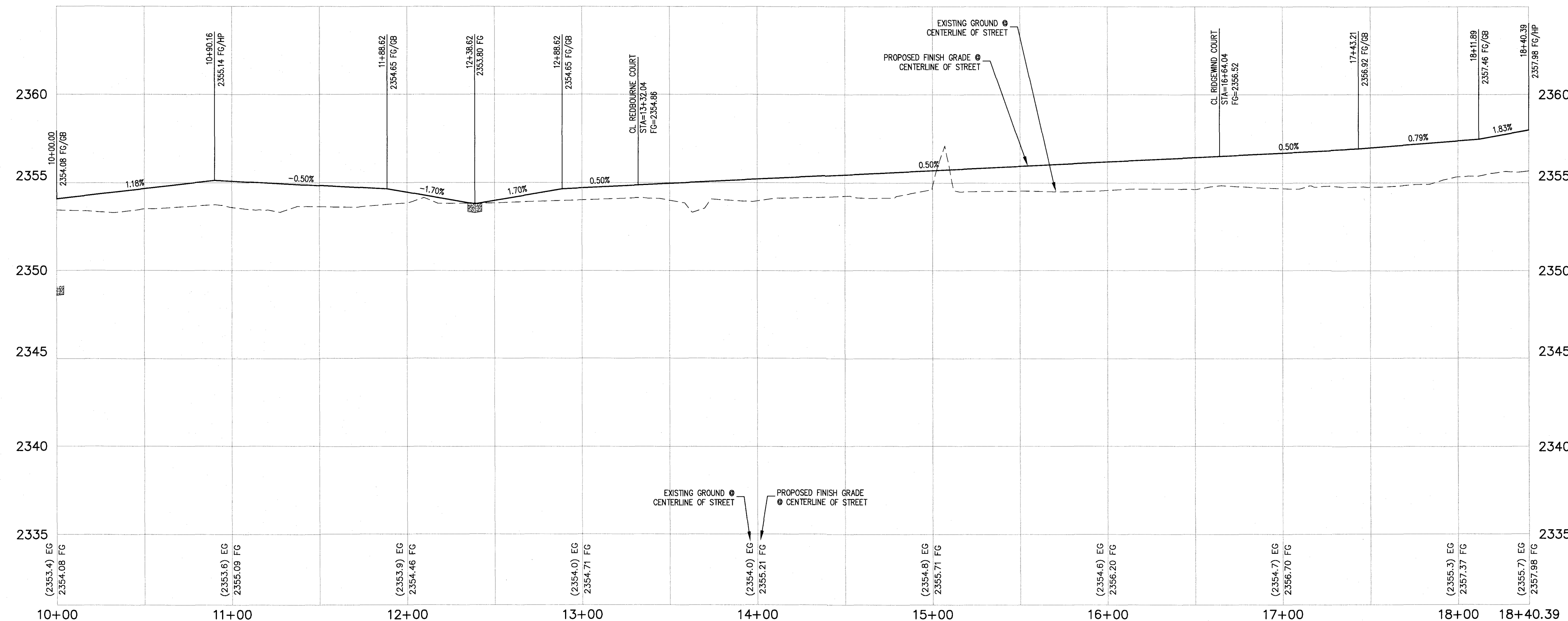
SHEET
21
OF 26
C.L.V. DWG.#

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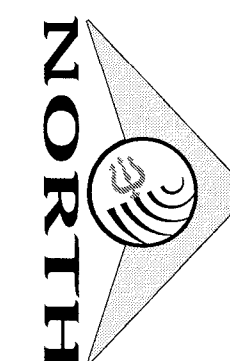
PORTESBURY STREET (PRIVATE) PLAN

SCALE: HORIZ. 1" = 40'

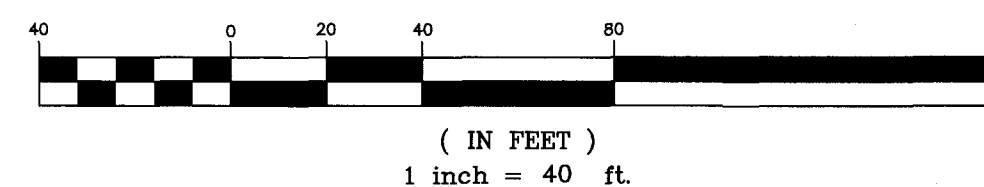


PORTESBURY STREET (PRIVATE) PROFILE

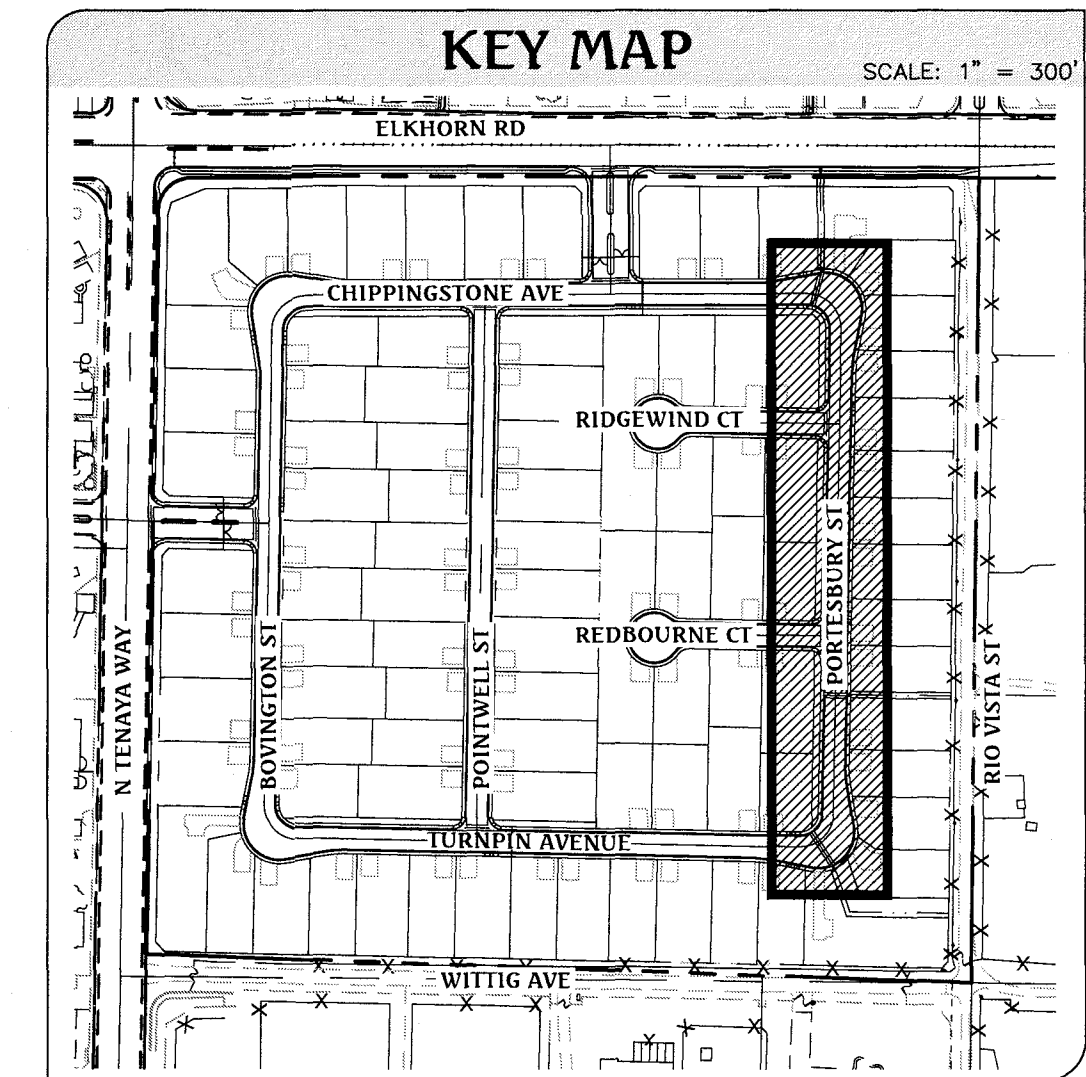
SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'



GRAPHIC SCALE



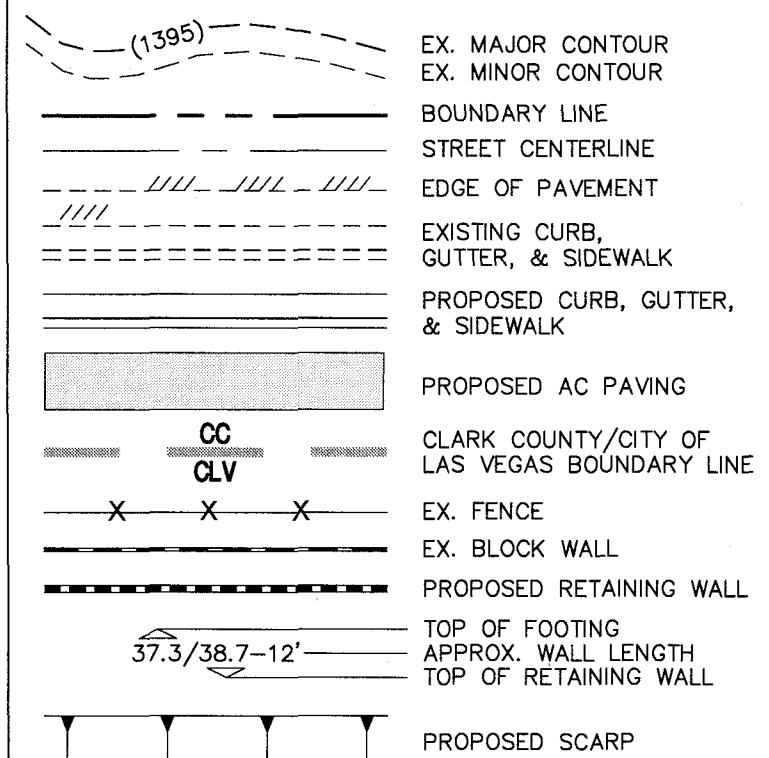
(IN FEET)
1 inch = 40 ft.



CONSTRUCTION NOTES

1. CONSTRUCT 8" WIDE CROSS GUTTER, PER CCAUSD No. 228
2. CONSTRUCT "R" TYPE CURB AND GUTTER, PER CCAUSD No. 217.S2
3. CONSTRUCT 5" WIDE SIDEWALK, PER CCAUSD No. 234
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5. TRANSITION FROM L-TYPE CURB/SPANDREL TO R-TYPE CURB
6. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE 1
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10. CONSTRUCT SIDEWALK DRAIN, PER CCAUSD No. 236
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12. STORM WATER STAMP TO BE LOCATED ADJACENT TO DROP INLET, PER CCAUSD #421.

GRADING LEGEND



BASIS OF BEARING

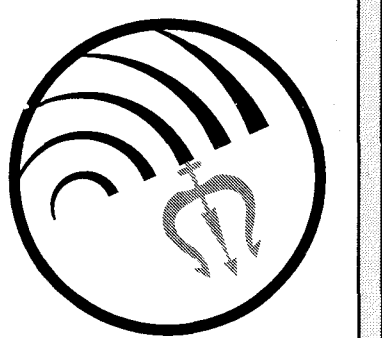
NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

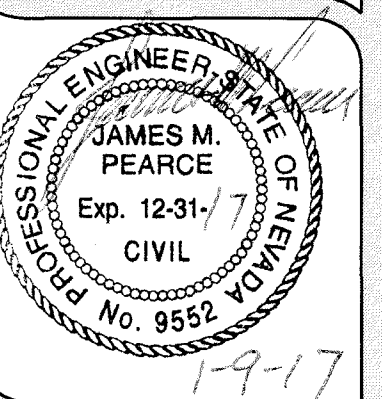
CLARK COUNTY BENCHMARK STATION: 6LV90 15SSE6
RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.
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DATE	NO.	DESCRIPTION	DATE	APP'D
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DRAWN BY:				
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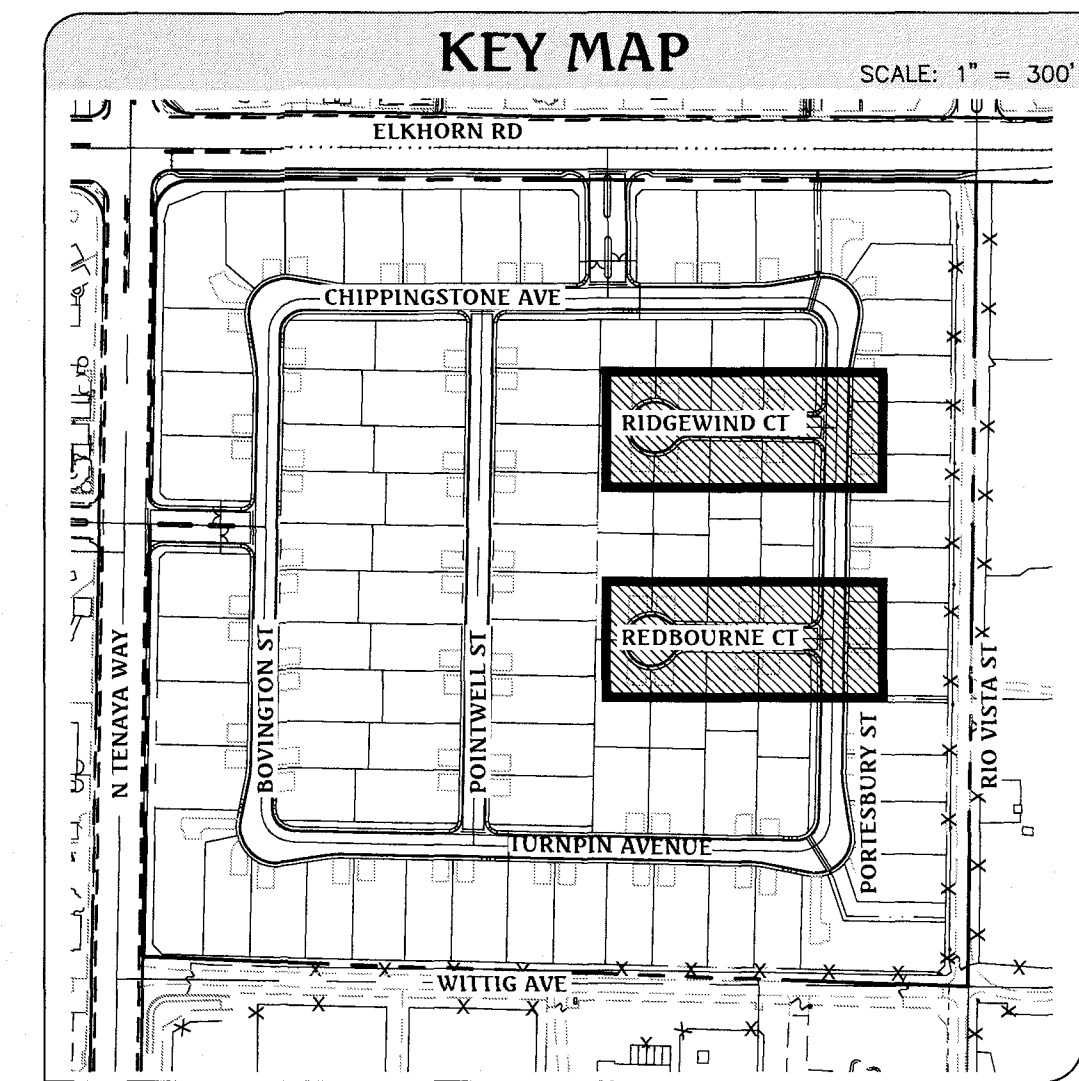
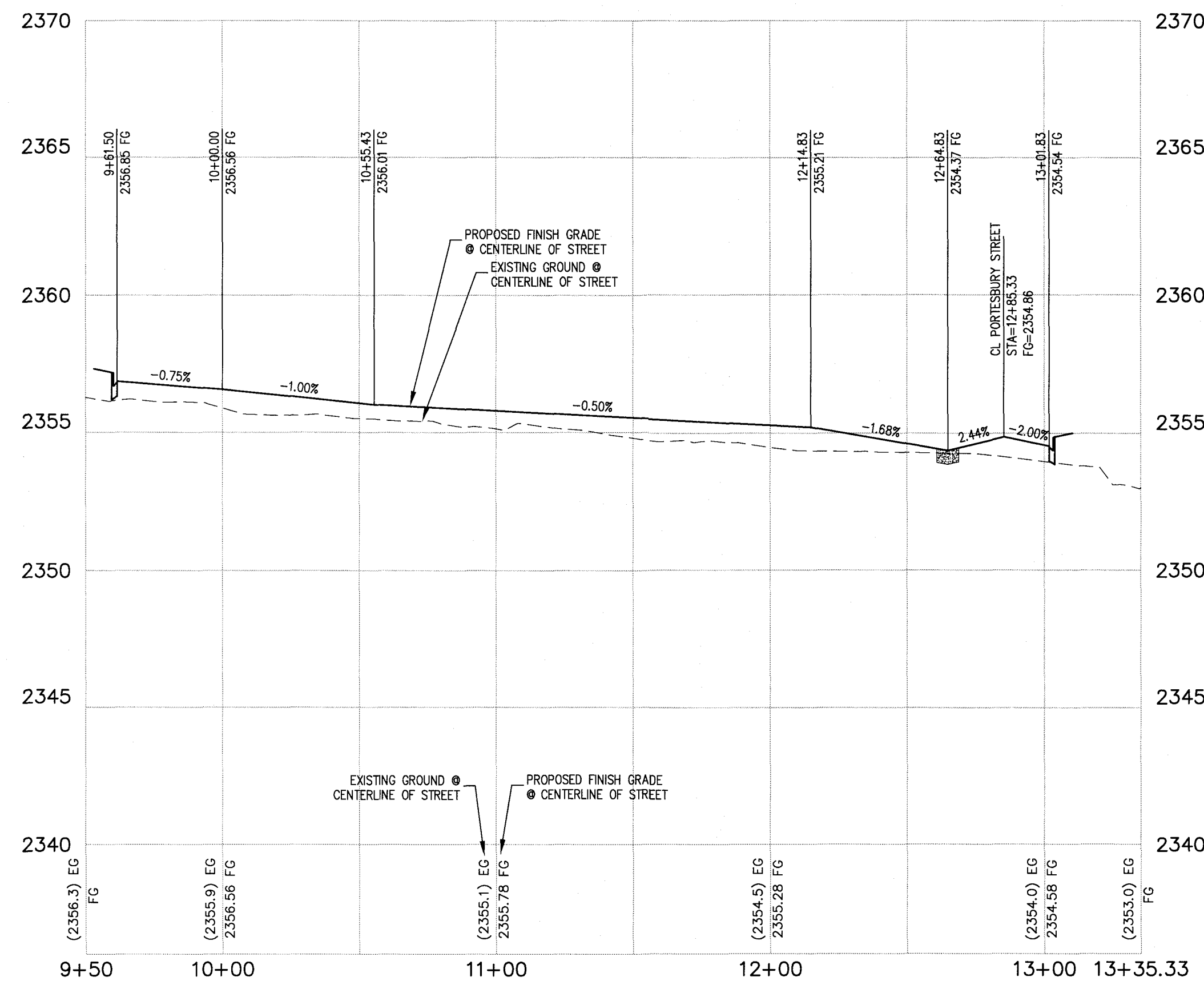
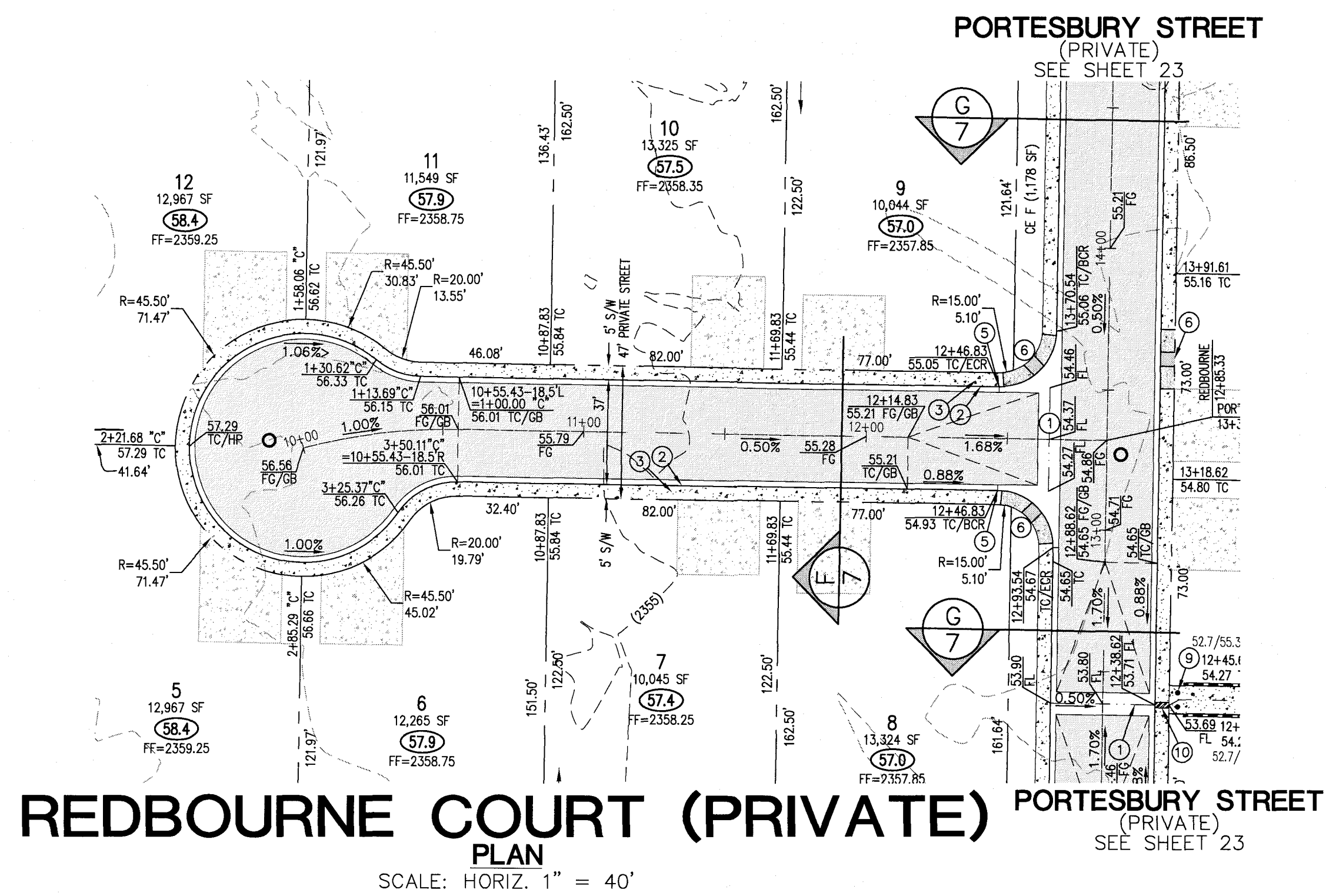
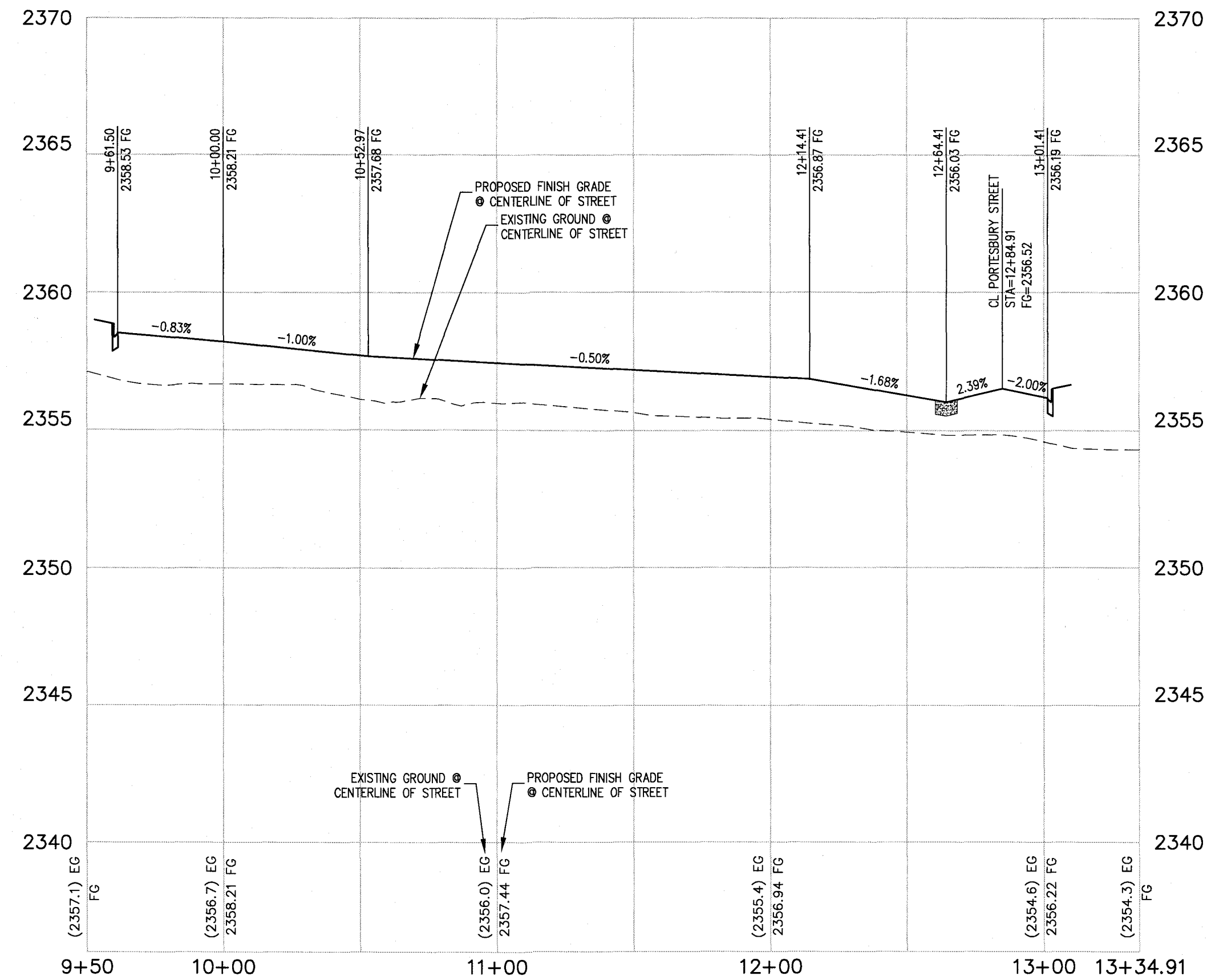
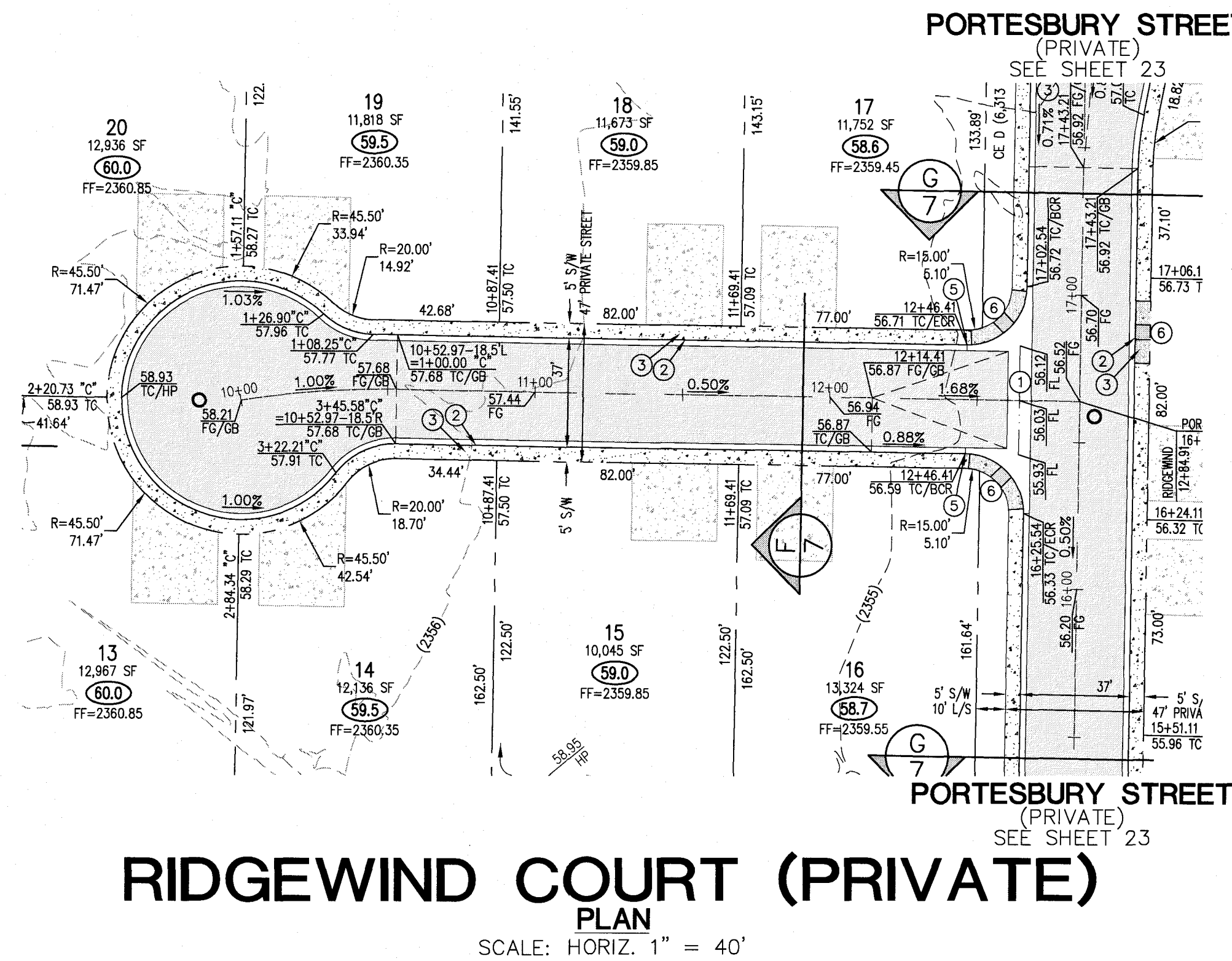


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SHEET **23** OF 26
C.L.V. DWG.#

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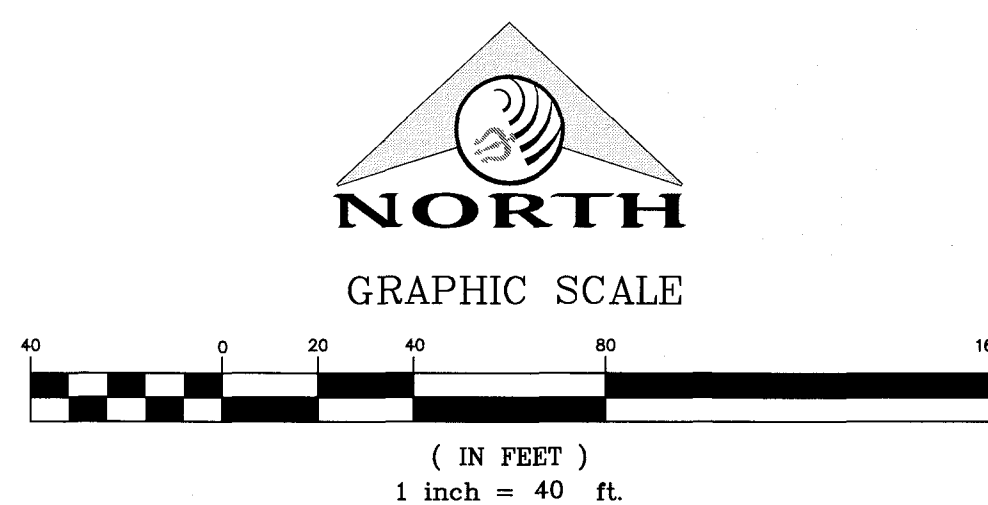
- ### CONSTRUCTION NOTES
- CONSTRUCT 8' WIDE CROSS GUTTER, PER CCAUSD No. 228
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- ### GRADING LEGEND
- (1395) EX. MAJOR CONTOUR
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 - EX. FENCE
 - EX. BLOCK WALL
 - PROPOSED RETAINING WALL
 - TOP OF FOOTING
 - APPROX. WALL LENGTH
 - TOP OF RETAINING WALL
 - PROPOSED SCARP

BASIS OF BEARING

NORTH 00°58'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

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DATE: 01/09/17	DRAWN BY: J. PEARCE	DESIGNED BY:	CHECKED BY:	ADA CHECKED:	JOB NO.: 007108	SCALE: 1" = 40'
NO. DESCRIPTION						
DATE						
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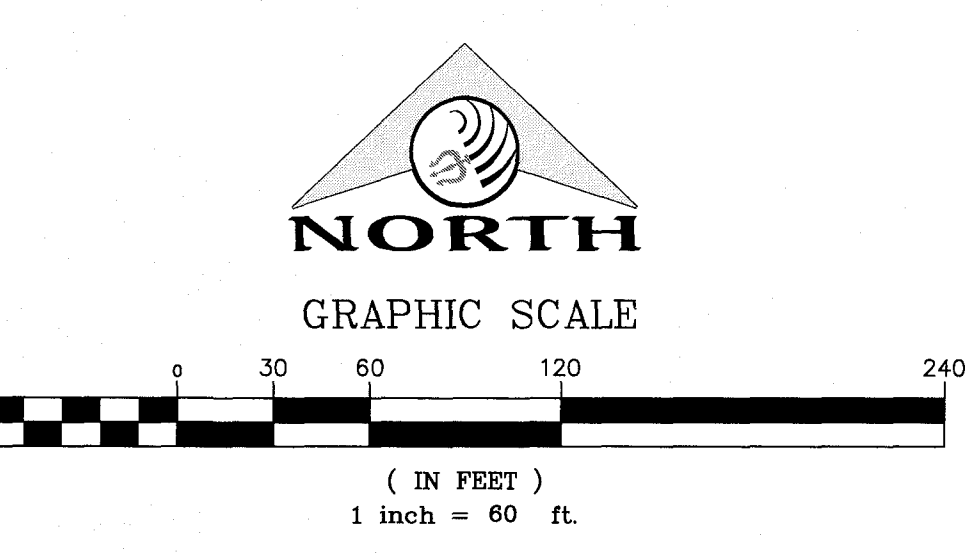
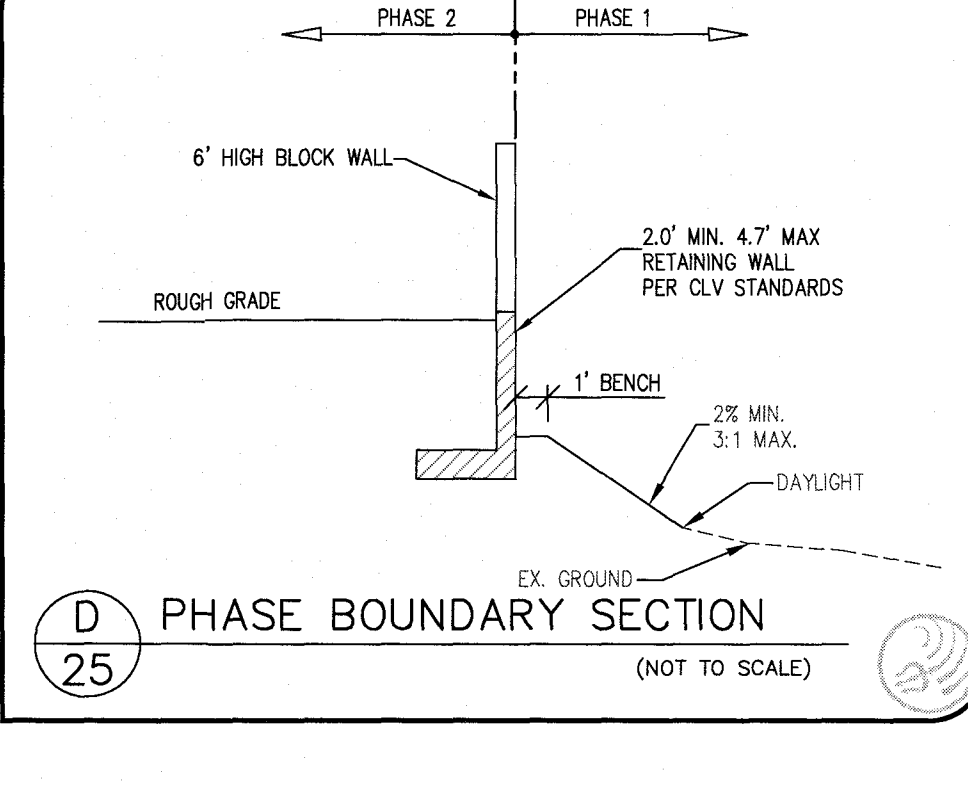
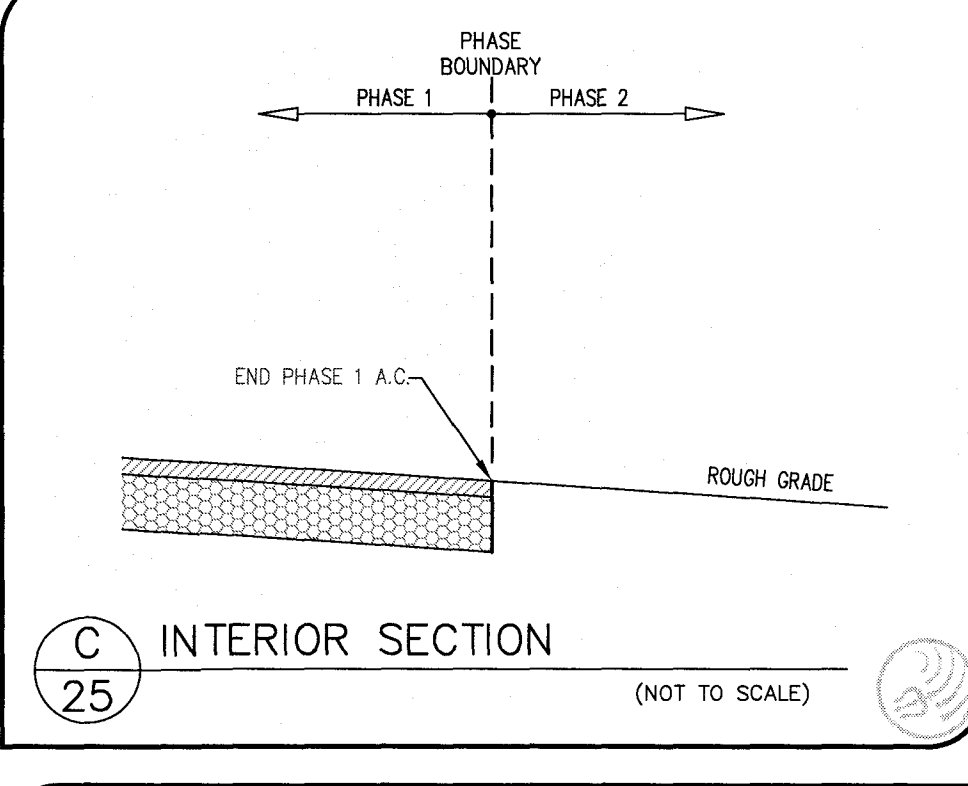
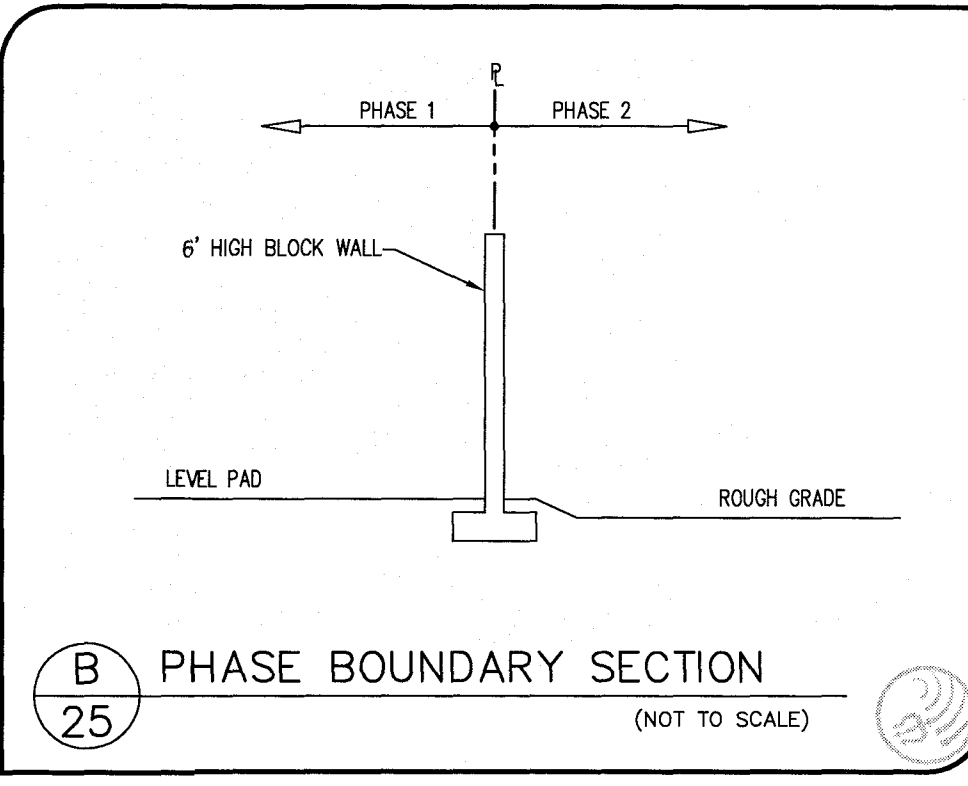
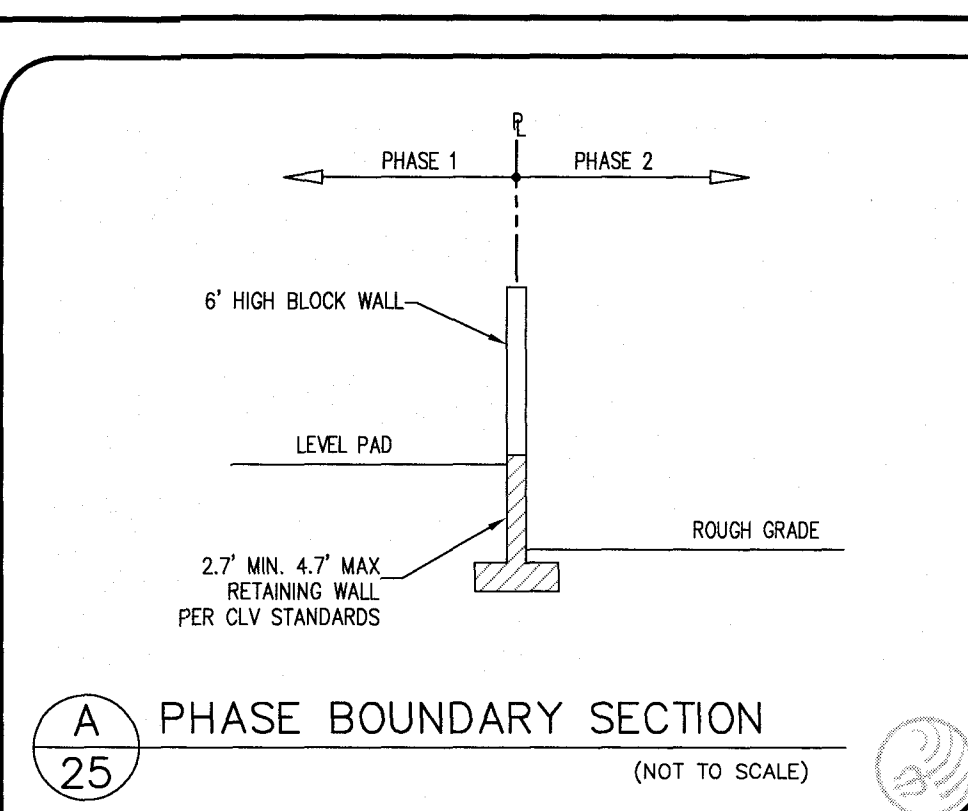
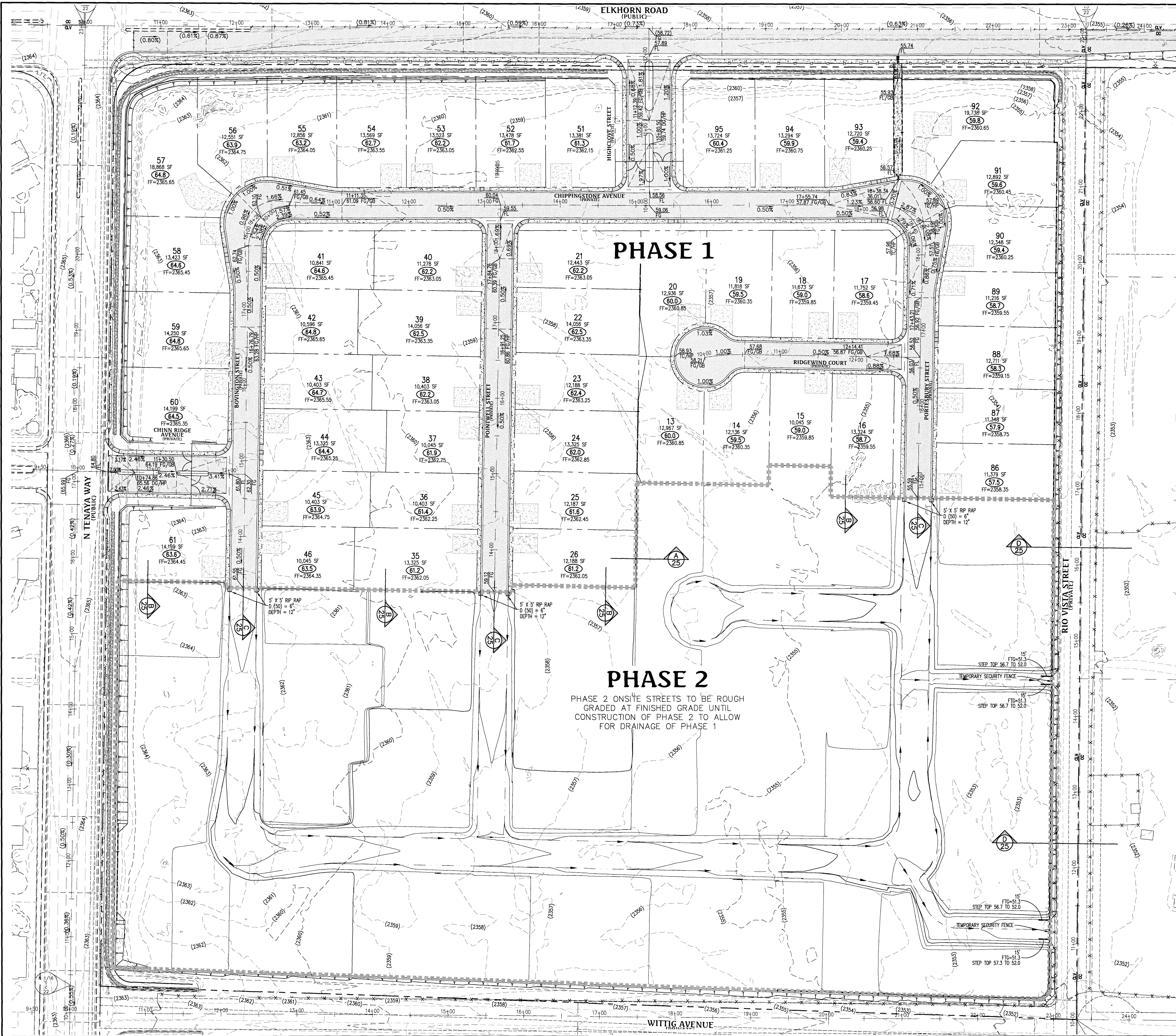
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PROFESSIONAL ENGINEER - STATE OF NEVADA
JAMES M. PEARCE
Exp. 12-31-17
No. 9552
CIVIL

SHEET **24** OF 26
C.L.V. DWG.#

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PHASING EXHIBIT

PROFESSIONAL ENGINEER - STATE OF NEVADA
JAMES M. PEARCE
Exp. 12-31-2017
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SHEET **25** OF 26
C.L.V. DWG.#

ABBREVIATIONS

AN - ANBANDON
 AC - ASPHALTIC CONCRETE
 AGGR - AGGREGATE
 & - AND
 APN - ASSESSOR PARCEL NUMBER
 APPROX - APPROXIMATE
 ASSY - ASSEMBLY
 AVE - AVENUE
 BC - BACK OF CURB
 BCR - BACK OF CURVE RETURN
 BK - BLOCK/BACK
 BLDG - BUILDING
 BLK - BLOCK
 BLU - BUREAU OF LAND MANAGEMENT
 BLVD - BOULEVARD
 BM - BENCHMARK
 BO - BLOW OFF ASSEMBLY
 BOC - BACK OF CURB
 BOT - BOTTOM
 BOW - BACK OF WALK
 BRC - BACK OF CURB
 BVC - BEGIN VERTICAL CURVE
 BW - BEGIN OF WALK
 BWV - BACK OF WALK
 C/C - CENTER TO CENTER
 C&C - CURB & GUTTER
 CC - CLARK COUNTY
 COMRD - CLARK COUNTY WATER RECLAMATION DISTRICT
 CE - COMMON ELEMENT
 CI - CAST IRON
 CIP - CAST IRON PIPE/CAST IN PLACE
 CIR - CIRCLE
 CL OR C - CENTERLINE
 CNLY - CITY OF NORTH LAS VEGAS
 CO - COUNTY
 COH - CITY OF HENDERSON
 CONC - CONCRETE
 CONT - CONTINUOUS
 COORD - COORDINATE
 CV - CONTROL VALVE
 D - DETAILED
 D/A OR DWY - DRIVEWAY
 DEPT - DEPARTMENT
 DEV - DEVELOPMENT
 DD - DESIGN GRADE
 DI - DROP INLET/DUCTILE IRON DIA OR Ø - DIAMETER
 DIM - DIMENSION
 DIP - DUCTILE IRON PIPE
 DIR - DIRECTION
 DIST - DISTANCE
 DMH - DROP MANHOLE
 DN - DOWN
 DR - DRIVE
 DWG - DRAWING
 E - EAST/EDGE
 EA - EACH
 EC - END OF CURVE RETURN
 EG - EXISTING CURVE
 ELEV - ELEVATION
 EOS - EDGE OF SHOULDER
 EP - EDGE OF PAVEMENT
 EQ - EQUAL OF EQUATION
 EQ SP - EQUALLY SPACED
 EST - EASMENT
 EST - ESTIMATE
 EV - END OF VERTICAL CURVE
 EXIST - EXISTING
 F.A.S.T. - FREWAY AND ARTERIAL SYSTEM OF TRANSPORTATION
 F/F - FACE TO FACE
 FC - FACE OF CURB
 FG - FINISHED GRADE
 FG - FINISHED GRADE
 FIG - FIGURE
 FL OR F - FLOW LINE
 FLR - FLOOR
 FN - FACE OF WALL
 FO - FOUND
 FOC - FACE OF CURB
 FOS - FACE OF WALL
 FPS - FEET PER MINUTE
 FPM - FEET PER SECOND
 FT - FOOT OR FEET
 FTG - FOOTING
 FT - FOOT OR FEET
 G/B - GRADE BREAK
 GALV - GALVANIZED
 GR - GRADE BREAK
 GND - GROUND
 GPD - GALLONS PER DAY
 GPH - GALLONS PER HOUR
 GPM - GALLONS PER MINUTE
 GRD - GRADE
 GRT - GATE
 GV - GATE VALVE
 HORIZ - HORIZONTAL
 HP - HIGH POINT
 HPG - HIGH PRESSURE GAS
 HT - HEIGHT
 HWY - HIGHWAY
 IN - INCH
 INST - INSTALL
 INT - INTERIOR
 INV - INVERT
 IR - IRRIGATION
 LB OR # - POUND
 LEN OR L - LENGTH OF CURVATURE
 LF - LINEAR FOOT
 LG - LONG
 LN - LANE
 LT - LEFT/LIGHT
 LVWMD - LAS VEGAS VALLEY SPECIAL WATER DISTRICT
 LWR - LOWER
 M - METER
 MAT - MATERIAL
 MAX - MAXIMUM
 MCH - MECHANICAL
 MFG - MANUFACTURER
 MG - MILLION GALLONS
 MM - MILLION GALLONS PER DAY
 MH - MANHOLE
 MN - MINIMUM
 MSC - MISCELLANEOUS
 MJ - MECHANICAL JOINT
 MKR - MARKER
 ML - MORTAR LINED
 MLC - MORTAR LINED & COATED
 MVD - MIDDLE OF VERTICAL CURVE
 N - NORTH
 N/A - NOT APPLICABLE
 N/A - NOT A PART
 NDOT - NEVADA DEPARTMENT OF TRANSPORTATION
 NE - NORTHWEST
 NF - NORTH FACE
 NG - NATURAL GROUND
 NO. OR # - NUMBER
 NTS - NOT TO SCALE
 NW - NORTHWEST
 O/O - OUT TO OUT
 OC - ON CENTER
 OD - OUTSIDE DIAMETER
 OF - OUTSIDE FACE
 OHP - OVER HEAD POWER
 OTEL - OVER HEAD TELEPHONE
 ORIG - ORIGINAL
 OVL - OVERFLOW
 O/O - OUT TO OUT
 OC - ON CENTER
 OD - OUTSIDE DIAMETER
 OF - OUTSIDE FACE
 OHP - OVER HEAD POWER
 OTEL - OVER HEAD TELEPHONE
 ORIG - ORIGINAL
 OVL - OVERFLOW
 PL - PLACE PLATE/PARCEL LINE
 PAVT - PAVEMENT
 PB - PULL BOX
 PC - POINT OF CURVE
 POC - POINT OF COMPOUND CURVE
 PE - POLYETHYLENE
 PED - PEDESTAL
 PERM - PERMANENT
 PERP - PERPENDICULAR
 PH - PHASE
 PI - POINT OF INTERSECTION
 PKG - PACKAGE
 PKWY - PARKWAY
 PL - PLAGE PLATE/PARCEL LINE
 PLT - PLATE (DRAWING)
 POLY - POLYETHYLENE
 PP - POWER POLE
 PR - PAIR
 PCP - POINT OF REVERSE CURVE/
 PRECAST REINFORCED CONCRETE
 PRELIM - PRELIMINARY
 PROP - PROPOSED
 PRV - PRESSURE REGULATING VALVE
 PS - PUMP STATION
 PSF - POUNDS PER SQUARE FOOT
 PPS - POUNDS PER SQUARE INCH
 PT - POINT/POINT OF TANGENT
 PUE - PUBLIC UTILITY EASEMENT
 PVI - POINT OF VERTICAL INTERSECTION
 PVC - POLYVINYL CHLORIDE PIPE
 QTR - QUARTER
 QTY - QUANTITY
 R - RADIUS
 (R) - RADIAL
 R/W - RIGHT OF WAY
 RCR - REINFORCED CONCRETE BOX
 RCP - REINFORCED CONCRETE PIPE
 RD - ROAD
 RED - REDUCER
 REQD - REQUIRED
 RET - RETURN
 REV - REVISION OR REVERSE
 ROW - RIGHT OF WAY
 RPPA - REDUCED PRESSURE PRINCIPLE ASSEMBLY
 RR - RAILROAD
 RT - RIGHT
 S - SOUTH/SLOPE
 S/C - SAW CUT
 SOD - STEEL CYLINDER CONCRETE PIPE
 SCH - SCHEDULE
 SD - STORM DRAIN
 SD - STORM DRAIN MANHOLE
 SDWK - SIDEWALK
 SEC - SECTION
 SEC - SOUTH/EAST/SECOND
 SEC - SECTION/SECOND
 SHLD - SHOULDER
 SH - SHEET
 SID - SPECIAL DISTRICT
 SIG - SIGNAL
 SL - SLOPE
 SLE - SLEEVE
 SNVA - SOUTHERN NEVADA WATER AUTHORITY
 SPEC(S) - SPECIFICATION(S)
 SQ - SQUARE
 SQ FT - SQUARE FOOT/FEET
 SQ YD - SQUARE YARD
 SS - SANITARY SEWER
 ST - STREET
 STA - STATION
 STD - STANDARD
 STL - STEEL
 STLT - STREET LIGHT
 SUR - SURVEY
 SW - SIDEWALK OR SOUTHWEST
 SY - SEWER
 SY - SEWER
 SYS - SYSTEM
 T&B - TOP & BOTTOM
 T&B - TOP OF MANHOLE
 TM - TEMPORARY BENCHMARK
 TO - TOP OF CURB
 TO - TRENCH DRAIN
 TEMP - TEMPORARY
 THK - THICKNESS
 THR BK - THRUST BLOCK
 TO - TOP OF CURB
 TOR - TOP OF FOOTING
 TOR - TOP OF GRADE
 TOR - TOP OF MANHOLE
 TOR - TOP OF RIM
 TOR - TOP OF SLAB
 TOR - TOP OF SIDEWALK
 TOT - TOTAL
 TOW - TOP OF WALL
 TOW - TOP OF ROLL CURB
 TRC - TYPICAL
 UN - UNLESS NOTED OTHERWISE
 UPDR - UNITED PACIFIC RAILROAD
 USSS - UNITED STATES GEOLOGIC SURVEY
 UTIL - UTILITY
 V - VOLT OR VALVE
 VAR - VARIES
 VOP - VALVED BOX
 VOP - VALVED GLAY PIPE
 VPC - VERTICAL CURVE
 VEL - VELOCITY
 VERT - VERTICAL
 VGL - VERTICAL GUTTER
 VOL - VOLUME
 VPI - VERTICAL POINT OF INTERSECTION
 W - WEST
 W - WEST/WATER
 W/O - WITH
 WD - WIDTH
 WDM - WASTE DRAIN
 WL - WROUGHT IRON
 WL - WASTE LINE
 WP - WORK POINT/WEATHER PROOF
 WSP - WATER SURFACE
 WT - WEIGHT
 WTR - WATER
 WTR - WATER VALVE
 WMD - WELDED WIRE FABRIC
 WMD - WELDED WIRE MESH
 XFR - TRANSFORMER
 XFR - TRANSFER
 XSEC - CROSS SECTION
 YD - YARD
 LD - YIELD

CLARK COUNTY WATER RECLAMATION DISTRICT NOTES

ALL DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS LATEST EDITION SHALL BE APPLIED TO SUCH PROJECTS. THE FOLLOWING ARE THE MINIMUM STANDARDS, LATEST EDITION: THE UNIFORM STANDARDS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY, NEVADA, AS AMENDED; AND THE UNIFORM PLUMBING CODE, CLARK COUNTY, NEVADA, AS AMENDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THESE SPECIFICATIONS PRIOR TO PROCEEDING WITH THE WORK GOVERNED BY THE CONFLICTING REQUIREMENTS. THE ENGINEER AND/OR CONTRACTOR SHALL PROPOSE A RESOLUTION TO THE CONFLICT FOR REVIEW BY THE AGENCY PRIOR TO PERFORMING THE WORK AFFECTED BY THE CONFLICT. THE RESOLUTION OF ANY CONFLICTS DISCOVERED THAT YIELDS THE HIGHER QUALITY AND/OR PERFORMANCE OF THE WORK, THE CONTROLLING AGENCY SHALL ISSUE WRITTEN APPROVAL FOR THE RESOLUTION OF THE CONFLICT WHICH SHALL BE A PART OF THE CONTROLLING AGENCY'S RECORDS FOR THE WORK.

1. THESE STANDARDS APPLY TO ALL CONSTRUCTION.
2. SEWER MAINS SHALL BE LAID INDIVIDUALLY IN TRENCHES THAT ARE INDEPENDENT FROM OTHER UTILITIES.
3. ALL LATERALS SHALL BE LAID AT SLOPES NOT LESS THAN THE MINIMUM SLOPES SHOWN IN THESE SPECIFICATIONS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTRACTOR'S SOLE RESPONSIBILITY TO PERFORM CONSTRUCTION IN FULL CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. SHOULD THE DEVELOPER, ENGINEER OR CONTRACTOR WISH TO MAKE CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS, SUCH CHANGES SHALL BE SUBMITTED TO THE AGENCY PRIOR TO CONSTRUCTION OF THE AFFECTED IMPROVEMENTS. CHANGES CONSTRUCTED WITHOUT AGENCY APPROVAL SHALL BE REMOVED BY THE CONTRACTOR AT ITS OWN EXPENSE AND THE WORK CONSTRUCTED AS DEPICTED IN THE APPROVED CONSTRUCTION DOCUMENTS.
5. CLOSURE TESTING SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 3.15 OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS, LATEST EDITION.
6. ALL AIR TESTING, VISUAL INSPECTIONS, SYSTEM CLEANING, DEFLECTION TESTING, TELEVISION, PRESSURE TESTING AND LEAKAGE TESTING SHALL BE IN ACCORDANCE WITH SECTION 3.19 OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS, LATEST EDITION.
7. CUT SHEETS CONFORMING TO SECTION 3.6 OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS, LATEST EDITION SHALL BE SUBMITTED BY THE CONTRACTOR TO THE CONTROLLING AGENCY FOR REVIEW BEFORE BEGINNING CONSTRUCTION. CONTRACTOR SHALL NOT BEGIN CONSTRUCTION UNTIL AUTHORIZED BY THE AGENCY.
8. CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE AGENCY SHALL POSSESS A CLASS "A" LICENSE PER THE NEVADA STATE CONTRACTOR'S BOARD.
9. WHEN CONSTRUCTING TO AN EXISTING STUB, CONTRACTOR SHALL CLEAN AND TEST BOTH THE NEW AND EXISTING PORTIONS OF THE LINE TO THE NEXT MANHOLE UPSTREAM/DOWNSTREAM.
10. ALL SANITARY SEWER MANHOLES SHALL BE LOCATED AND CONSTRUCTED SUCH THAT THE SEWER MANHOLE CONVENTIONALLY SEWER MAINTENANCE VEHICLES AT ALL TIMES AND UNDER ALL WEATHER CONDITIONS. THOSE MANHOLES INSTALLED ALONG ACCESS ROADS HAVING SINGLE POINTS OF ENTRY AND EGRESS (I.E. "DEAD-END ROADS") SHALL HAVE AT LEAST ONE 30' X 30' AT THE POINT OF CONNECTION TO THE EXISTING SEWER SYSTEM TO ALLOW TRUCKS-AROUNDS OF VEHICLES HAVING INSIDE TURNING RADIUS OF 50- FEET.
11. ALL SEWER MAINS UNDER CONSTRUCTION SHALL HAVE A DEBRIS TRAP PER STANDARD SPECIFICATION. ALL DEBRIS TRAPS SHALL BE INSTALLED IN ACCORDANCE WITH THE AGENCY CONSTRUCTION ACTIVITIES, INCLUDING FINAL TESTING, ARE COMPLETED AND THE SEWER IS READY FOR FINAL ACCEPTANCE BY THE AGENCY.
12. ALL MANHOLES UNDER CONSTRUCTION SHALL HAVE PLUGS PLACED IN THEIR OUTLET PIPES DURING ALL CONSTRUCTION ACTIVITIES TO PREVENT THE MIGRATION OF SEWER CONSTRUCTION DEBRIS DOWNSTREAM. THESE PLUGS MAY BE REMOVED FOR SHORT PERIODS AS NECESSARY TO ACCOMPLISH FINAL SEWER CLEANING AND TESTING TASKS PRIOR TO FINAL ACCEPTANCE OF THE IMPROVEMENTS.
13. PRIOR TO ANY SEWER MAIN BEING PLACED IN SERVICE AND AS A CONDITION OF FINAL ACCEPTANCE, ALL NEW SEWER MAINS SHALL BE TELEVISION IN ACCORDANCE WITH SECTION 3.19.1.6 OF THE DESIGN STANDARDS.
14. IF ANY EXISTING MANHOLE HAVING A LINING SYSTEM IS BEING MODIFIED AS PART OF THE CONSTRUCTION OF THE NEW SANITARY SEWER, THAT LINING SYSTEM SHALL BE REMOVED TO THE ORIGINAL CONDITION PRIOR TO THE MODIFICATIONS USING LINING MATERIALS AND SYSTEMS THAT ARE FULLY COMPATIBLE WITH THE ORIGINAL LINING.
15. FIELD-INSTALLED SEWER LINING SYSTEMS MAY NOT BE INSTALLED UNTIL AFTER ALL MANHOLE CONSTRUCTION TASKS ARE COMPLETED, INCLUDING BACKFILLING AND INITIAL GRADE ADJUSTMENTS, BUT PRIOR TO FINAL GRADE ADJUSTMENT.
16. NEW SEWERS HAVING GRADES OF 0.5 PERCENT OR LESS SHALL BE STAKED FOR CONSTRUCTION AT A MAXIMUM OF 25- FEET ON CENTER.
17. SEWER LATERALS SHALL BE CONNECTED TO SEWER MAINS ONLY. LATERALS MAY NOT BE CONNECTED TO SANITARY SEWER MANHOLES UNLESS APPROVED BY THE AGENCY.
18. THE EXTERIOR OF PIPE AND MANHOLE WALL THICKNESS, INTERNAL DIAMETER AND PIPE SLOPE SHALL BE UNIFORM BETWEEN MANHOLES, CHANGES IN PIPE MATERIALS, SPECIFICATIONS, WALL THICKNESSES, INTERNAL DIAMETERS AND/OR PIPE SLOPES SHALL BE APPROVED BY THE AGENCY.
19. LOCATOR RIBBON AND MARKER BALLS SHALL BE PLACED ABOVE ALL NEW SANITARY SEWERS, LATERALS AND FORCE MAINS IN ACCORDANCE WITH SECTION 3.14 OF THE DESIGN STANDARDS.
20. MANHOLE PROTECTION NOTE: WHEN ADJUSTING MANHOLES, THE CONTRACTOR SHALL INSTALL PLYWOOD COVERS IN SANITARY SEWER MANHOLE INVERTS AS WELL AS STEEL PLATE COVERS OVER MANHOLES (AFTER MANHOLE RINGS/FRAMES ARE REMOVED) TO PROTECT EXTERIOR OF PIPE AND MANHOLE WALL THICKNESS. INTERNAL DEBRIS IN THE MANHOLES SHALL BE REMOVED PRIOR TO PLYWOOD REMOVAL. PLYWOOD AND STEEL COVERS FOR MANHOLES SHALL BE INSTALLED AND REMOVED IN THE PRESENCE OF COWRO INSPECTOR. ALL DEBRIS IN THE SEWER MANHOLES AND/OR CORRESPONDING LINES SHALL BE RETRIEVED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL CLEAN (E.G., JET VAC OR EQUIVALENT) THE DEBRIS OUT OF THE AFFECTED MANHOLES AND/OR SEWER LINES IN THE PRESENCE OF COWRO INSPECTOR AND APPROVED BY THE CONSTRUCTION MANAGER.
21. MANHOLE ADJUSTMENTS SHALL BE PER PER CONCRETE, LATEST EDITION, PER SDA AND SDS. IF CORROSION PROTECTION EXISTS ON MANHOLE CONCRETE SURFACES, CONTRACTOR SHALL PREPARE SURFACE AND REPAIRLY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. COWRO INSPECTOR SHALL BE PRESENT DURING THE WORK, AT AGENCY DISCRETION. CONTRACTOR SHALL COORDINATE A MINIMUM OF 24 HOURS IN ADVANCE OF THE WORK.

DEPARTMENT OF PUBLIC WORKS

TRAFFIC NOTES

1. 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 ROUTE TO BE IMPROVED. THEREAFTER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS, SHALL BE FOR THE PLANS.
2. BEFORE ANY WORK IS STARTED IN THE LINE-OF-WAY, THE CONTRACTOR SHALL INSTALL ADVANCE WARNING SIGNS FOR THE CONSTRUCTION ZONE. THE CONTRACTOR SHALL INSTALL TEMPORARY GROUND MOUNTED STOP SIGNS AT ALL NEW STREET ENCROACHMENTS INTO EXISTING COUNTY STREETS IMMEDIATELY AFTER FIRST GRADING WORK IS ACCOMPLISHED AND SHALL MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED.
3. ALL CONSTRUCTION SIGNING, BARRICADING AND PAVEMENT MARKINGS SHALL CONFORM TO THE STANDARD TRAFFIC CONTROL HANDBOOK - 1986 AND TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.
4. IF THE IMPROVEMENTS NECESSITATE THE OBLITERATION, TEMPORARY OBSTRUCTION, TEMPORARY REMOVAL OR RELOCATION OF ANY EXISTING TRAFFIC PAVEMENT MARKING, SUCH PAVEMENT MARKING SHALL BE RESTORED OR REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE COUNTY TRAFFIC MANAGER.
5. THE DEVELOPER SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL ALL PERMANENT SIGNS SHOWN ON THE PLANS. STREET NAME SIGNS SHALL CONFORM IN THEIR ENTIRETY TO CLARK COUNTY SIGNAGE STANDARDS. STOP SIGNS SHALL BE 18" SQUARE UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL SIGNPOSTS SHALL BE INSTALLED IN ACCORDANCE WITH CLARK COUNTY AREA STANDARDS. ALL SIGNS SHALL USE CLASS V SHEETING.
6. IF A PROPOSED STREET LIGHT STANDARD IS FIELD LOCATED TO WITHIN FIVE (5) FEET OF ANY SIGN SHOWN HEREON TO BE MOUNTED ON A SIGN POST, CHANGE SIGN MOUNTING TO ONE ON THE STREETLIGHT STANDARD.
7. PRIOR TO CONSTRUCTION, THE STREET SIGN CONTRACTOR SHALL OBTAIN STREET NAMES AND BLOCK NUMBERING FROM THE CURRENT PLANNING DIVISION OF THE DEPARTMENT OF COMPREHENSIVE PLANNING.
8. ALL TRAFFIC SIGNAL POLE ASSEMBLIES, STEEL PEDESTALS FOR CABINETS AND STREET LIGHT POLES SHALL BE GALVANIZED PER ASTM A123.
9. ALL STREET LIGHTING INSTALLATIONS EXCEPT NOTED ON THE STREET LIGHTING PLANS SHALL CONFORM TO THE UNIFORM STANDARD DRAWINGS AND THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS CLARK COUNTY, NEVADA, LATEST EDITION OF EACH.
10. THE FOLLOWING CLARK COUNTY UNDERGROUND FACILITIES MAY BE LOCATED IN YOUR PROJECT: STREET LIGHTS, TRAFFIC SIGNALS, AND FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION (F.A.S.T.) INTERCONNECT CABLE. YOU MUST CONTACT CLARK COUNTY TRAFFIC MANAGEMENT DIVISION, OPERATIONS UNIT AT 455-6000 FOR LOCATIONS AT LEAST 48 HOURS PRIOR TO WORKING IN THE AREA. CLARK COUNTY IS NOT A MEMBER OF C.A.T.S. (CALIFORNIA AND ARIZONA TRAFFIC SIGNALS) AND A CALL TO THAT ORGANIZATION DOES NOT RELIEVE YOU OF LIABILITY FOR CLARK COUNTY FACILITIES.
11. F.A.S.T. INTERCONNECT CABLE POLICY IS IN EFFECT. INTERCONNECT CABLE MUST BE MAINTAINED AT ALL TIMES. DEVELOPER/CONTRACTOR SHALL PROVIDE TEMPORARY OVERHEAD INTERCONNECT CABLE WHILE PERMANENT CABLE IS BEING RELOCATED. TEMPORARY ARTERIAL INSTALLATION MUST BE ACCEPTABLE TO THE COUNTY TRAFFIC MANAGER AND TO F.A.S.T. ANY CABLE TO THIS CABLE IS DEEMED IN EMERGENCY BY F.A.S.T., CITY OF LAS VEGAS, CLARK COUNTY AND NDOT AND MUST BE REPAIRED IMMEDIATELY TO F.A.S.T. ACCEPTANCE. \$2,500 PER DAY DAMAGES MAY BE ASSESSED AFTER 24 HOURS HAS ELAPSED FROM TIME OF BREAK OR DAMAGE.
12. ALL NEW OR REPLACEMENT TRAFFIC SIGNAL LOOPS SHALL BE INSTALLED USING CABLE-IN-DUCT WIRING. SHALL HAVE INDEPENDENT LEAD-IN WIRES FOR EACH LOOP FROM THE CONTROLLER TO THE PULL-BOX, AND EACH LEAD-IN SHALL BE INDIVIDUALLY TAGGED.
13. TRAFFIC SIGNAL PEDESTRIAN HEADS SHALL BE THE L.E.D. TYPE.
14. ELECTRICAL POWER SERVICE POINT LOCATION(S) FOR STREET LIGHTING AND TRAFFIC SIGNALS MUST BE INDICATED ON THE PLANS. IF CONNECTING TO AN EXISTING CIRCUIT, INDICATE LOCATION OF EXISTING SERVICE POINT FOR EACH CIRCUIT.
15. WHEN STREETLIGHTS ARE TO BE CONNECTED TO AN EXISTING CIRCUIT, THE ENGINEER MUST CERTIFY THAT THE EXISTING CIRCUIT IS CAPABLE OF HANDLING THE ADDITIONAL CIRCUIT LOAD.
16. CLARK COUNTY RESERVES THE RIGHT TO REJECT STREET LIGHT AND TRAFFIC SIGNAL POLES AND ASSEMBLIES WHICH HAVE A "STRIPED" APPEARANCE.
17. TWO WEEKS PRIOR TO BEGINNING OF CONSTRUCTION, MODIFICATION OR RELOCATION OF ANY TRAFFIC SIGNAL SYSTEM, WRITTEN NOTICE SHALL BE SUBMITTED TO THE CLARK COUNTY TRAFFIC MANAGEMENT DIVISION OF THE DATE THAT WORK WILL BEGIN.
18. THREE (3) NORMAL WORKING DAYS PRIOR TO TURN-ON OR COMPLETION OF MODIFICATION(S) TO A TRAFFIC SIGNAL SYSTEM, WRITTEN NOTICE SHALL BE SUBMITTED TO THE CLARK COUNTY TRAFFIC MANAGEMENT DIVISION THAT WORK IS BEING COMPLETED AND THE PROPOSED DATE OF COMPLETION.

FIRE DEPARTMENT NOTES

VI. FIRE PREVENTION BUREAU GENERAL NOTES
UNIFORM GUIDELINES, INSTALLATION, AND SPECIFICATION OF FIRE HYDRANTS

A. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE CLARK COUNTY FIRE CODE AS AMENDED, AND THE 2007 EDITION OF NATIONAL FIRE PROTECTION ASSOCIATION PAMPHLET #1.

B. FIRE HYDRANTS AND WATER SUPPLIES FOR FIRE PROTECTION SHALL BE AND MADE SERVICEABLE PRIOR TO AND DURING THE TIME OF CONSTRUCTION IN ACCORDANCE WITH SECTION 1412 OF THE CLARK COUNTY FIRE CODE, AS AMENDED.

C. IF DURING CONSTRUCTION IT BECOMES NECESSARY TO CLOSE ANY CONTROL VALVE OR PLACE A HYDRANT OUT OF SERVICE, APPROVAL SHALL BE OBTAINED FROM THE FIRE PREVENTION BUREAU PRIOR TO PLACING THE HYDRANT OUT OF SERVICE.

D. PAINTING OF CURBS AND/OR STRIPING OF ASPHALT AREAS AND PROTECTION OF HYDRANT FROM DAMAGE BY PHYSICAL CONTACT SHALL BE PER THE FIRE HYDRANT INSTALLATION SPECIFICATIONS OF THE FIRE PREVENTION BUREAU.

E. NO FIRE HYDRANT SHALL BE LOCATED WITHIN 25 FEET OF ANY STRUCTURE, OR 6 FEET OF A DRIVEWAY, POWER POLE, LIGHT STANDARD, OR ANY OTHER OBSTRUCTION. FOR WALL, FENCE AND PLANTER LOCATIONS, A PERIMETER AROUND THE HYDRANT MEASURING A MINIMUM OF 3 FEET SHALL BE MAINTAINED CLEAR OF ALL OBSTRUCTION AT ALL TIMES.

F. FIRE APPARATUS ACCESS ROADS SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS, WITH A MINIMUM VEHICLE LOAD OF 18,000 POUNDS PER AXLE, AND SHALL BE SURFACED AND PAVED SO AS TO PROVIDE ALL-WEATHER DRIVING CAPABILITY.

EXCEPTION: TEMPORARY ACCESS ROADS SERVING ONLY BUILDINGS UNDER CONSTRUCTION SHALL NOT BE REQUIRED TO BE PAVED, BUT SHALL COMPLY WITH ALL OTHER REQUIREMENTS OF SECTION 103.2.3 OF THE CLARK COUNTY FIRE CODE.

G. PRIOR TO ACCEPTANCE OF ANY FIRE SERVICE MAIN, A SATISFACTORY HYDROSTATIC TEST WITH MINIMUM 150 PSI SHALL BE CONDUCTED AND A PLUGGED AN INSTALLATION PERMIT AND A CONTRACTOR'S MATERIALS AND TEST CERTIFICATE MUST BE PROVIDED AT TIME OF INSPECTION. SCHEDULE INSPECTION AT WWW.CLARKCOUNTYNV.GOV/DEPTS/DEVELOPMENT_SERVICES/FIRE_PREVENTION.

H. FIRE HYDRANTS SHALL BE LOCATED 4' TO 7' FROM BACK OF CURB AND A MINIMUM OF 6 FEET FROM TURN.

I. BLUE REFLECTIVE MARKERS MUST BE INSTALLED BEFORE FINAL HYDRANT ACCEPTANCE CAN BE ATTACHED (SECTION C107 OF THE CLARK COUNTY FIRE CODE, AS AMENDED).

J. FIRE HYDRANTS THAT ARE PROPOSED FOR INSTALLATION IN PUBLIC WATER SYSTEMS SHALL BE APPROVED BY THE CLARK COUNTY FIRE PREVENTION BUREAU. PRIVATE WATER SYSTEMS/HYDRANTS PROPOSED FOR INSTALLATION ON PRIVATE WATER SYSTEMS SHALL BE IN ACCORDANCE WITH APPROVED FIRE HYDRANTS AS ALLOWED BY THE FIRE PREVENTION

STORMWATER MANAGEMENT NOTES

A) THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS FROM THE CONSTRUCTION AREA PRIOR TO THE BEGINNING OF EACH DAY'S WORK. THE RIGHTS OF WAY OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT, SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.

B) ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED BY THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR OTHER UNEXPECTED PLAYING OF THE WEATHER. REFER TO THE STANDARDS SPECIFIED IN CLARK COUNTY TITLE 24.40 AND THE LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL.

C) TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION OF THE DISTURBED AREAS BEGINS. EROSION CONTROL, TEMPORARILY OR PERMANENTLY CEASED, SOME EXCEPTIONS MAY APPLY. REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVRI000000, SECTION III.A.5.

D) AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO WIND, RAIN, OR OTHER WEATHER AND EXIT LOCATIONS, AND ALL BMP'S WEEKLY AND WITHIN 24 HOURS AFTER A RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY TO REFLECT NEW OR CHANGING CONSTRUCTION ACTIVITIES OR SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVRI000000, SECTION III.A.12.

E) ACCUMULATED SEDIMENT IN BMP'S SHALL BE REMOVED WITHIN 7 DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT. WHEN THE SEDIMENT IS FULLY DRY, IT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN EXCEEDED BY 50% OR MORE.

DEPARTMENT OF PUBLIC WORKS CONSTRUCTION NOTES

1. **INSPECTIONS ARE REQUIRED.** CALL 24 HOURS IN ADVANCE AT (702) 455-4610. YOUR PERMIT, APPROVED PLANS, AND BARRICADE PLANS FOR THIS WORK MUST BE ON THE JOB SITE AT ALL TIMES.
2. EXACT LOCATION OF ALL SAW-CUT LINES SHALL BE DETERMINED IN THE FIELD BY A CLARK COUNTY INSPECTOR.
3. CURB AND GUTTER WITH A GRADE OF LESS THAN 4/10 OF ONE PERCENT SHALL BE CONSTRUCTED BY FORMING. EACH JOINT SHALL BE CHECKED FOR GRADE PRIOR TO CONSTRUCTION AND WORK TESTED AS SOON AS POSSIBLE AFTER CONSTRUCTION.
4. FINAL ASPHALTIC CONCRETE (AC) PAVEMENT SURFACES SHALL BE ONE-HALF (1/2") INCH ABOVE THE LIP OF THE GUTTER (INCLUDING OPEN GRADE).
5. ALL OFF-SITE IMPROVEMENT CONSTRUCTION SHALL CONFORM TO THE **UNIFORM STANDARD SPECIFICATIONS AND STANDARD DRAWINGS** CLARK COUNTY AREA NEVADA AND CLARK COUNTY SUPPLEMENT TO UNIFORM STANDARD DRAWINGS AND SPECIFICATIONS, LATEST REVISION.
6. PRIVATE STREETS, CURB & GUTTER, AND VALLEY GUTTERS REFLECTED ON THESE PLANS ARE TO BE INSPECTED BY A CLARK COUNTY INSPECTOR.
7. WHEEL CHAIR RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION. STANDARD DRAWING 225, EXISTING LAYOUT OF PLACES SHALL BE DETERMINED IN THE FIELD BY A CLARK COUNTY INSPECTOR.
8. PROPER SIGNS, BARRIERS, BARRICADES AND LIGHTS SHALL BE PLACED AND MAINTAINED IN ACCORDANCE WITH THE LATEST **MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS**, TRAFFIC, SCHOOL, OR STREET SIGNS OF ANY KIND ARE NOT TO BE MOVED FOR ANY REASON WITHOUT FIRST COORDINATING WITH THE DEPARTMENT OF PUBLIC WORKS OFF-SITE INSPECTOR AT (702) 455-4610.
9. THIS PLAN DOES NOT AUTHORIZE CLOSURE OF ANY ROAD OR STREET.
10. NO OPEN TRENCH SHALL BE ALLOWED ACROSS ANY STREET OR WITHIN TEN (10) FEET OF ANY TRAVEL-WAY, EXCEPT WHEN WORK IS IN ACTUAL PROGRESS. AREAS COVERED BY ACCEPTABLE STEEL PLATE ARE NOT TO BE CONSTRUCTED AS A TRENCH. NO OPEN TRENCH IS PERMITTED IN EXCESS OF 500 FEET OR LENGTH NECESSARY TO ACCOMMODATE PIPE OR STRUCTURE. IF SINGLE DAY, WHICHEVER IS GREATER. ALL TRENCH CROSSINGS AND BACKFILL SHALL MEET THE STANDARD SPECIFICATION UNLESS OTHERWISE STATED.
11. A TEMPORARY PATCH IS TO BE IN PLACE AT THE END OF EACH WORK DAY WHERE THE BACKFILL IN THE TRENCH HAS BEEN COMPLETED AND PRIOR TO WORK THE WORK AREA BACK TO TRAFFIC AND IS TO BE MAINTAINED BY THE PERMITTEE. A PERMANENT PATCH IS TO BE IN PLACE WITHIN THIRTY (30) DAYS AFTER THE INSTALLATION OF THE TEMPORARY PATCH.
12. COMPACTION TESTS ARE REQUIRED.

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PM : J. PEARCE	
DRAWN BY :	
DESIGNED BY :	
CHECKED BY :	
ADA CHECKED :	
JOB NO. : 007:108	
SCALE :	

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DR HORTON
ELKHORN 40
CLARK COUNTY GENERAL NOTES

A circular professional engineer seal for the State of Nevada. The outer ring contains the text "PROFESSIONAL ENGINEER-STATE OF NEVADA" at the top and "No. 9552" at the bottom. The center of the seal contains the name "JAMES M. PEARCE", the expiration date "Exp. 12-31-17", and the word "CIVIL". The seal is stamped over a document with a grid background.

SHEET **26** OF 26
C.L.V. DWG.#

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