

DS #: 05139-2

APN: 131-26-101-001

PROJECT: Summerlin West Village 21 - Beltway Channel Revision
(Far Hills Avenue to Sky Vista Drive) - Update #2

SUBMITTAL: 4th

SCANNED BY/DATE:

CHECKED BY/DATE:



CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		October 14, 2020
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: Summerlin West Village 21 – Beltway Channel Revision (Far Hills Avenue to Sky Vista Drive) – Update #2		COPIES TO: VTN Nevada
Cross Streets:	Western Beltway 215 & Summerlin Parkway	Howard Hughes Company, LLC
File Number:	F:\Depot\DSMemos\DS5139F.doc	Bart Anderson, P.E., DevCo
Parcel Number:	137-26-101-001	CCRFCD
Zoning Action:	N/A	CCPW
FEMA Flood Zone	YES NO X	
Proposed Storm Drain	YES NO X	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	5/15/2019	6/19/2019	Not Approved	\$400.00	3133328: \$400
2 nd Submittal	7/11/2019	8/1/2019	Not Approved	\$400.00	3486271: \$400
CCPW & CCRFCD Comments	9/23/2019	10/1/2019	Conditional Approval	\$400.00	3577028: \$400
CCPW & CCRFCD	10/23/2019 & 11/20/2019	11/26/2019	Approved	N/C	N/C
3 rd Submittal	3/12/2020	4/7/2020	Approved	\$100.00	3777074: \$100
4 th Submittal	9/29/2020	10/14/2020	See Comments Below	\$100.00	4005393: \$100
			TOTAL FEES (LDDRS):	\$1,400.00	----

REMARKS:

4th Submittal: Update #2 to address As-Built geometry for minor deviations from approved plans

3rd Submittal: Update #1: Improvement Plans Revision per New Survey Information

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

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

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

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

END OF REMARKS

ays

T/R/S: T20S/R59E/26

AREA K-26

Update #2 to the Technical Drainage Study for

Summerlin West Village 21 Beltway Channel (Far Hills Avenue to Sky Vista Drive)

Las Vegas, Nevada
W.O. # 7851

Prepared for:

Howard Hughes Company, LLC

Submitted to:

City of Las Vegas
Public Works



HYDROLOGIC CRITERIA AND DRAINAGE MANUAL
DRAINAGE STUDY INFORMATION FORM

Name of Development: Summerlin West Village 21 Beltway Channel Date: September 23, 2020

Location of Development: a) Descriptive (Cross Streets) North/South: Sky Vista Drive
East/West: Far Hills Drive

b) Section: 26/23 Township: 20S Range: 59E

c) APN : 137-23-410-001

Name of Owner: The Howard Hughes Company, LLC

Telephone No.: (702) 791-4336 Fax No.: (702) 791-4453 E-Mail Address: chris.anderson@howardhughes.com

Address: 10801 W. Charleston Blvd. LV, NV, 89135

Contact Person-Name: Joanna Ayson Telephone No.: (702)-873-7550

* E-Mail Address: jayson@vtnnv.com Fax No.: (702)-362-2597

Firm: VTN Nevada

Address: 2727 S. Rainbow Blvd, LV, 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		Existing Facility Improvement

1. Total Owned Land Area: At Site: +/-2.7 Acres Being Developed/Disturbed: +/-2.7 Acres

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

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

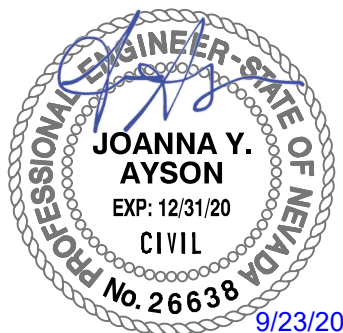
4. Proposed type of development (Residential, Commercial, Etc.): Channel Improvements

5. Approximate upstream land area which drains to the subject site: +/-366 acres

6. Has the site drainage been evaluated in the past? ☒ YES ☐ NO If yes, please identify documentation: Western Segment Las Vegas Beltway(Charleston to Summerlin) by Louis Berger & Associates, Inc.

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: The Beltway Channel will drain south of Far Hills Avenue into an existing 8' x 8' RCB.

8. Briefly describe your proposed schedule for the subject project: As soon as possible



Engineer's Seal

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

***New Required Field**

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

	Revision	Date

Local Entity File No.

REFERENCE:

STANDARD FORM 1

September 23, 2020

Albert Sung, P.E.
Flood Control Division
Department of Public Works
CITY OF LAS VEGAS
333 N. Rancho Blvd, 7th Floor
Las Vegas, NV 89106

**Subject: Update #2 to the Technical Drainage Study for Summerlin West Village 21
Beltway Channel Improvements**

Mr. Sung:

This letter certifies that all items on the **Update #2 to the Technical Drainage Study for Summerlin West Village 21 Beltway Channel Improvements** electronic submittal matches the paper version bound into the study.

Respectfully submitted,



Joanna Ayson, P.E.

CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		April 7, 2020
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:	
	Summerlin West Village 21 – Beltway Channel Revision (Far Hills Avenue to Sky Vista Drive) – Update #1	
Cross Streets:	Western Beltway 215 & Summerlin Parkway	COPIES TO: VTN Nevada
File Number:	F:\Depot\DSMemos\DS5139E.doc	Howard Hughes Company, LLC
Parcel Number:	137-26-101-001	Bart Anderson, P.E., DevCo
Zoning Action:	N/A	CCRFC
FEMA Flood Zone	YES	CCPW
	NO	
Proposed Storm Drain	YES	
	NO	

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TOTAL FEES (LDDRS):				\$1,300.00	----

REMARKS:

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END OF REMARKS

ays

T/R/S: T20S/R59E/26

AREA K-26

September 28, 2020
W.O. #7851

City of Las Vegas
Land Development Services
Department of Building Safety

Attention: Albert Sung, P.E., CFM
Flood Control Project Engineer

**SUBJECT: UPDATE #2 TECHNICAL DRAINAGE STUDY FOR SUMMERLIN WEST VILLAGE 21
WESTERN BELTWAY CHANNEL MODIFICATIONS**

Dear Mr. Sung,

The improvement plans for the subject project have been revised to reflect storm drain as-builts. The as-built geometry of the 8'x8' RCB storm drain differs vertically and horizontally from the approved plans. The system headworks invert was constructed at 3250.23, which is 0.09-feet (approximately 1-inch) lower than the invert shown on the approved plans (3250.32). The system outlet invert was constructed at 3247.73, which is 0.11-feet (approximately 1.3-inches) lower than the invert shown on the approved plans (3247.84). In addition, the horizontal alignment of the storm drain and the manhole (SDMH#1) has shifted approximately ± 2.5 -feet. The differences in geometry are considered minor and will not have an appreciable effect on the hydraulics of the facility. William Meyer at VTN and Albert Sung at CLV have discussed the geometry differences prior to this Update #2 submittal and it was agreed that revised hydraulic models are not required (refer to email correspondence attached). Please note that the as-built geometry also does not impact the access road grading previously shown on the approved plans.

The plans have also been updated to show the as-built geometry of the lateral storm drain stubs. The updates are summarized in the following table. It was determined that the differences in lateral geometry are also considered minor, therefore revised hydraulic models for the laterals are not required.

Lateral Station	Sheet	Inlet Elevation			Outlet Elevation			Slope		
		As-Built	Approved Plans	Diff	As-Built	Approved Plans	Diff	As-Built	Approved Plans	Diff
68+04.32	GR1	3207.99	3207.98	0.01	3207.64	3207.69	0.05	0.59%	0.49%	0.10%
74+41.22	GR3	3218.33	3217.88	0.45	3217.73	3217.61	0.12	1.03%	0.50%	0.53%
84+67.69	GR5	3227.33	3227.19	0.14	3226.95	3226.97	0.02	0.79%	0.50%	0.29%
93+24.57	GR7	3249.21	3249.24	0.03	3248.89	3248.68	0.21	0.43%	0.80%	0.37%

If you have any questions concerning this study or if additional information is needed, please do not hesitate to contact this office.

Respectfully Submitted,

VTN Nevada



Joanna Ayson, P.E.

Joanna Ayson

From: Bill Meyer
Sent: Friday, September 18, 2020 8:07 AM
To: Brian Ruiz; Michael Markvan
Cc: Joanna Ayson; Rachel Lawrence
Subject: FW: Summerlin West V21 Beltway Channel L19-01775

Brian

It looks like we don't need to rerun the models for either Kettle Bend or The Beltway Channel due to the changes shown with the as-builts for the Beltway Channel. Albert wants discussion on the changes to the geometry discussed in the update letter. The headworks invert is approximately 1" lowered than the plan. The headworks has also shifted approximately 2.5" horizontally to the south of the proposed plans. We will also need to discuss the horizontal shift for the SDMH previously shown at 93+23.12.

Let me know if you have any questions.

Thanks

From: Albert Sung <YSung@LasVegasNevada.GOV>
Sent: Thursday, September 17, 2020 5:50 PM
To: Bill Meyer <bmeyer@vtnnv.com>
Subject: RE: Summerlin West V21 Beltway Channel L19-01775

Bill,

Please list all the minor deviation in the narrative of your update letter. 1"-vertical and 2.5'-horizontal should not trigger a re-run of hydraulic calculations.

Hope this help!

Albert Y. Sung

Project Engineer
Public Works Dept. / Flood Control
(702) 229-6541
333 N. Rancho Dr. 7th Floor
Las Vegas, NV 89106



lasvegasnevada.gov



Your opinion is important! Click [here](#) to take a short survey.

From: Bill Meyer <bmeyer@vtnnv.com>

Sent: Thursday, September 17, 2020 2:57 PM

To: Albert Sung <YSung@LasVegasNevada.GOV>

Cc: Brian Ruiz <brianr@vtnnv.com>; Michael Markvan <mmarkvan@vtnnv.com>; Heather Borowski <heatherb@vtnnv.com>

Subject: FW: Summerlin West V21 Beltway Channel L19-01775

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

Albert

Per our previous conversation, I've looked at the geometry changes shown on the As-Built plans for the Beltway Channel. There were some changes from the original plans, but these do not appear to be major.

It looks like the box was built about 1" lower at the headworks than the proposed plans showed originally. The attached Beltway Channel plan shows the connection at an elevation of 3250.32', and the attached As-Built drawing shows the top of box at 3258.90'. Considering an 8" top slab and an 8' depth, the actual invert will be at an approximate elevation of 3250.23'. The 0.09' (1.1") difference in the vertical connection doesn't represent a major deviation from the original design. I've attached a copy of the approved Beltway Channel Sheets GR7 showing the elevation.

The As-Built also show that there is a 2.5' difference in the horizontal location at the headworks of the Beltway Channel. This isn't a great deal of difference and will not have an appreciable effect on the hydraulics of this facility, or the Kettle Bend facility upstream.

I've attached a copy of the As-Built drawing with the facility as built sketched over the proposed facility. Additionally, the elevation taken for comparison at the connection is point 20030 is highlighted on the drawing for reference.

These changes will not have any appreciable effect on the hydraulics of the facility. Let me know if you believe these box (and the Kettle Bend Box) needs to be modeled for the updates.

Thanks

William J. Meyer, P.E.
Senior Engineer



2727 South Rainbow Boulevard
Las Vegas, NV 89146-5148
Main 702.873.7550
Direct 702.253.2422
Fax 702.362.2597

From: David Guerra <DGuerra@LasVegasNevada.GOV>

Sent: Tuesday, September 15, 2020 10:30 AM

To: Bill Meyer <bmeyer@vtnnv.com>; CLV Submittal <clv.submittal@vtnnv.com>

Cc: Albert Sung <YSung@LasVegasNevada.GOV>; Jennifer Shinn <jshinn@LasVegasNevada.GOV>

Subject: Summerlin West V21 Beltway Channel L19-01775

It has been brought to our attention that that the Drainage study needs to be updated and civil plan revised as needed to comply.

It has also been reported that man hole data(MH) on the civil plan for the above referenced project is incorrect and needs to be revised.

It was reported that MH location appears incorrect;

FYI, below are deviations from plan when compared to the information provided on the Final Location map:

Location	Horizontal	Vertical	Remarks
93+31	±3.2'		northeast of Plan
95+64	±2.5'		south of Plan

Please review the information and revise the plan as needed.

If you have questions or need information contact me anytime.

Thank you,
David Guerra

SUMMERLIN WEST V21 BELTWAY CHANNEL SKY VISTA DRIVE TO NV ENERGY FACILITY

APN: 137-23-410-001

CITY OF LAS VEGAS
STATE OF NEVADA

DEVELOPED BY:

HOWARD HUGHES COMPANY, LLC

10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

FUTURE S.I.D. PROJECT

SHEET INDEX

SHEET #	SHEET	DESCRIPTION
1	CV	COVER SHEET
2	NT	NOTE SHEET
3	HC	HORIZONTAL PLAN
4	D	DEMOLITION PLAN
5	GR1	GRADING PLAN 1
6	GR2	GRADING PLAN 2
7	GR3	GRADING PLAN 3
8	GR4	GRADING PLAN 4
9	GR5	GRADING PLAN 5
10	GR6	GRADING PLAN 6
11	GR7	GRADING PLAN 7
12	DT1	DETAIL SHEET 1
13	S1	STRUCTURAL DETAILS
14	S2	STRUCTURAL DETAILS

BASIS OF BEARING

GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS). LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983. SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

LINEAR UNIT: US SURVEY FOOT (FTUS)

DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00

SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)

ZONE: LAS VEGAS HIGH ELEVATION ZONE

PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHING AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FTUS)
EASTING AT CENTRAL MERIDIAN: 300,000.00 M (984,250.0000 FTUS)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)

NOTES:

1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO "GROUND" DISTANCES IN THE PROJECT AREA.
2. GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO MERIDIAN CONVERGENCE.

BENCHMARK

PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

CITY OF LAS VEGAS BENCHMARK: D368 (REVISED 2008)

NAVD88 ELEVATION: 989.574 METERS (3,246.63 FEET)

FND USCGAS DISC SET IN ROCK RIDGE 150' SOUTH OF CHARLESTON BLVD. & WEST OF DETENTION BASIN. T21S,R59E,S03

THESE PLANS AND THE DESIGN CRITERIA CONTAINED WITHIN THESE PLANS ARE BASED UPON THE INFORMATION PRESENTLY KNOWN BY THE ENGINEER AND INTENDED SOLELY AS A GENERAL GUIDELINE FOR CONSTRUCTION. ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL STATUTES, LAWS, CODES, REGULATIONS AND ORDINANCES, INCLUDING BUT NOT LIMITED TO THE FEDERAL FAIR HOUSING AMENDMENTS ACT, AMERICANS WITH DISABILITIES ACT, THE ARCHITECTURAL BARRIERS ACT AND ANY APPLICABLE UNIFORM STANDARDS, SPECIFICATIONS OR DRAWINGS. THE PERSON OR ENTITY PERFORMING THE CONSTRUCTION SHALL BE SOLELY RESPONSIBLE TO MAKE SURE CONSTRUCTION IS IN CONFORMANCE WITH ALL LOCAL, STATE AND FEDERAL STATUTES, LAWS, CODES, REGULATIONS, STANDARDS, GUIDELINES AND ORDINANCES AND FURTHER, IS IN CONFORMANCE WITH ANY APPLICABLE DESIGN CRITERIA, INCLUDING BUT NOT LIMITED TO SOILS REPORTS, TRAFFIC STUDIES, GEOTECHNICAL REPORTS, ARCHITECTURAL PLANS AND SPECIFICATIONS, DRAINAGE PLANS OR STUDIES AND ANY OTHER CRITERIA, STANDARDS OR REQUIREMENTS LISTED IN THE PLANS OR THE GENERAL NOTES RELATED TO THESE PLANS OR PROVIDED BY ANYONE IN REFERENCE TO THIS PROJECT.

APPROVALS

CITY ENGINEER

STEVEN FORD, P.E. # 12175

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 THE CONSTRUCTION OF ANY IMPROVEMENTS THAT DEVIATE FROM ADOPTED STANDARDS AND/OR SPECIFICATIONS EXCEPT THOSE SPECIFICALLY LISTED UNDER DEVIATIONS FROM STANDARD. THE ENGINEER SHALL RESOLVE ANY DEVIATION OTHER THAN THOSE LISTED IN DEVIATIONS FROM STANDARDS IN FAVOR OF THE UNIFORM STANDARD DRAWINGS AND SPECIFICATIONS CLARK COUNTY AREA, NEVADA.

CENTRAL TELEPHONE COMPANY d/b/a CENTURYLINK

DATE

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

NV ENERGY

DATE

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

CITY OF LAS VEGAS DEPARTMENT OF PLANNING

DATE

THIS PLAN MEETS THE APPLICABLE STANDARDS OF THE PLANNING AND DEVELOPMENT DEPARTMENT

COX COMMUNICATIONS LAS VEGAS, INC.

DATE

SOUTHWEST GAS CORPORATION

DATE

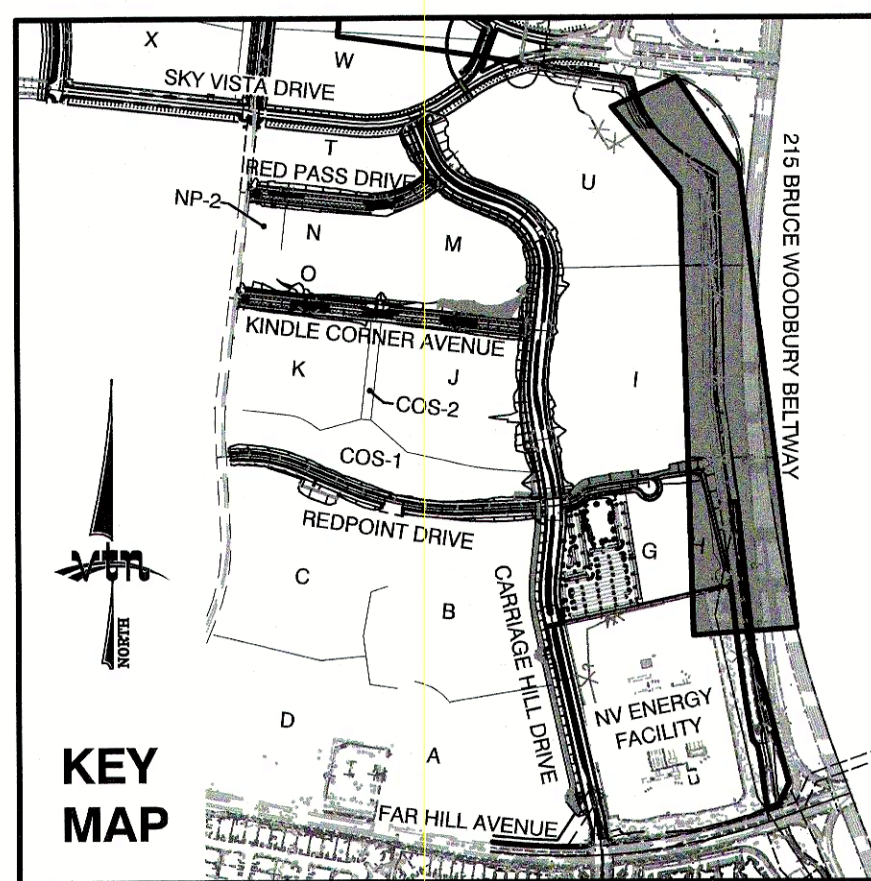
LAS VEGAS FIRE & RESCUE

DATE

KEVIN T. ORROCK, VICE PRESIDENT

DATE

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY



LOCATION MAP

N.T.S.

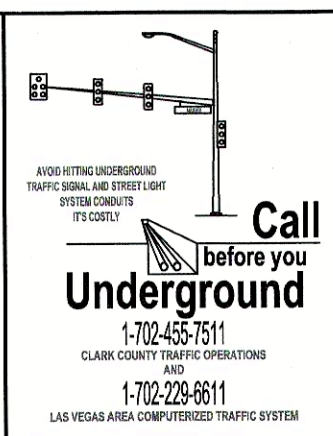
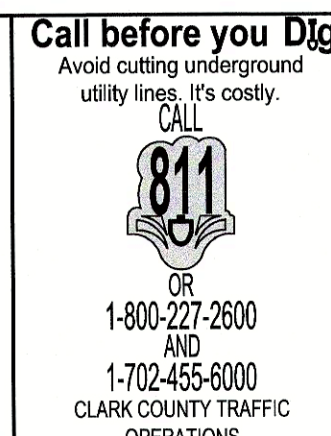
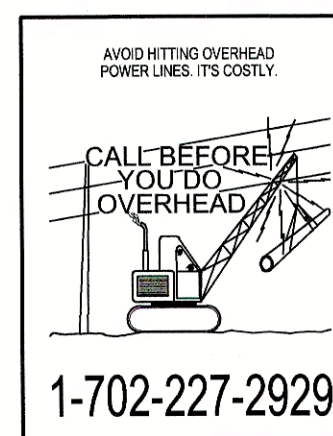


REINFORCED CONCRETE BOX
MANUFACTURED BY
HYDRO CONDUIT LLC
DBA RINKER MATERIAL

OWNER
HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

DEVELOPER
HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

ENGINEERING FIRM
VTN
2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550
FAX (702) 362-2597

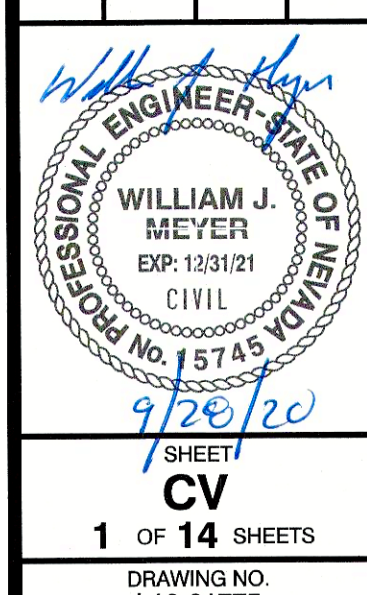


HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

COVER SHEET

SUMMERLIN WEST V21
BELTWAY CHANNEL SKY VISTA DRIVE
TO NV ENERGY FACILITY

DRAWN BY: BCC	DESIGNED BY: BCC	CHECKED BY: WJM	PROJECT NO.: 7851
02/07/2019	02/07/2019	02/07/2019	02/07/2019
SCALE: N/A	SCALE: N/A	SCALE: N/A	SCALE: N/A
HORIZ. VERT.	HORIZ. VERT.	HORIZ. VERT.	HORIZ. VERT.



1. ALL CONSTRUCTION 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 WORK IN THE SUMMERLIN AREA, CLARK COUNTY AREA NEVADA," LATEST REVISED EDITION, THE "SUMMERLIN IMPROVEMENT STANDARDS" FOR WORK IN THE SUMMERLIN AREA, AND OTHER APPLICABLE APPROVED STANDARDS ISSUED BY THE CONTROLLING AGENCY, THE "UNIFORM BUILDING CODE, AND ALL LOCAL CITY CODES AND ORDINANCES APPLICABLE, EXCEPT AS NOTED ON THIS SHEET AS "DEVIATIONS FROM STANDARDS".

2. THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. EXISTING UTILITIES AS SHOWN FROM CLV PLANS LIBRARY ARE APPROXIMATE AND FOR RECORD PURPOSES. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. EXISTING UTILITY SERVICE LATERALS (AT THE PUBLIC RIGHT-OF-WAY, AND STORM DRAIN MAIN ALIGNMENT), INCLUDING DEFLECTION POINTS, THE LOCATION 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.

3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING UTILITY LINES, STRUCTURES AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED SATISFACTORY TO THE CITY ENGINEER AND OWNING UTILITY COMPANY AT THE EXPENSE OF THE CONTRACTOR.

4. ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE PLANS, ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.

5. TYPE V CEMENT SHALL BE USED ON ALL OFF-SITE CONCRETE WORK. CONCRETE TO BE 3000 P.S.I. MINIMUM @ 28 DAYS. MIX DESIGNS TO BE APPROVED BY THE CITY, PRIOR TO THE USE ON THE PROJECT.

6. PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.

7. EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300' IN EXTRUDED-TYPE CURB.

8. AC PAVEMENT TO BE ONE-HALF INCH (1/2") ABOVE LIP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS AND CROSS GUTTERS.

9. CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED PER STANDARD DRAWING 216.

10. SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.

11. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF THE TRANSITIONS TO BE AS SHOWN ON PLANS.

12. ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY: NOVA GEOTECHNICAL, PROJECT NO. G-18-003, DATED MARCH 5, 2018.
APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.

13. EXACT LOCATION OF ALL SAWCUT LINES MAY BE ADJUSTED OR DETERMINED IN THE FIELD BY A CITY OF LAS VEGAS ENGINEER IF LOCATION ON PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES RELOCATIONS.

14. 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.

15. UTILITY COMPANY LETTER 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:

16. ALL WALLS, NEW OR EXISTING, ARE ONLY SHOWN ON CIVIL PLANS FOR THE PURPOSE OF REVIEWING GRADING RELATIONSHIPS; FLOOD CONTROL AND SIGHT DISTANCE AT INTERSECTIONS. NEW WALLS REQUIRE A SEPARATE PERMIT AND INSPECTION BY THE BUILDING DEPARTMENT.

17. ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT OF WAY.

18. 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.

19. MATERIALS, HANDLING AND PLACEMENT OF PORTLAND CEMENT CONCRETE SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF NDOT OR THE CLARK COUNTY AREA SPECIFICATIONS (AS APPLICABLE) AND THE PLANS AND DETAILS SHOWN HEREON.

20. WHEN INSTALLING UNDERGROUND FACILITIES THAT REQUIRE UNDERGROUND LOCATING DEVICES SUCH AS MARKER BAILS, 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.

21. 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, THE CONNECTION OF SEWER SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS (AT THE PUBLIC RIGHT-OF-WAY, AND STORM DRAIN MAIN ALIGNMENT), INCLUDING DEFLECTION POINTS, THE LOCATION 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.

22. THE CITY OF LAS VEGAS FINAL LOCATION MAPS MUST BE SEALED AND CERTIFIED BY A NEVADA PROFESSIONAL LAND SURVEYOR TO HAVE POSITIONAL ACCURACY OF ± 0.01 FEET (3.05 METERS) HORIZONTALLY AND VERTICALLY. A SEPARATE ELECTRONIC COMMA DELIMITED FILE FOR THE SANITARY SEWER AND STORM DRAIN COORDINATES SHALL ALSO ACCOMPANY THE SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S).

23. 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.

24. A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.

24. REVISED 06/04/18

1. ALL STREET LIGHTING INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE STREET LIGHTING PLANS, THE "UNIFORM STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA," LATEST REVISION (USS), AND THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA" (USD), LATEST REVISION.
2. NO DEVIATION OF STREET LIGHT, PULL BOX, CONDUITS, ETC., LOCATIONS SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE TRAFFIC AND CITY ENGINEER. ANY DEVIATION FROM THE PLAN LOCATION WILL REQUIRE COMPLIANCE WITH SECTION 623 OF THE USS.
3. ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION IN ACCORDANCE WITH SECTION 623 G.03.01 OF THE USS.
4. ALL EMPTY CONDUIT SHALL HAVE AT LEAST ONE GREEN NO. 88 AWG WIRE INSTALLED AS TRACER WIRE IN ACCORDANCE WITH SECTION 623 G.02.01 OF THE USS PRIOR TO BACKFILLING AND FINAL INSPECTION.
5. ANY STRUCTURE SUCH AS BLOCK WALLS, CHAIN LINK FENCES, RETAINING WALLS, ETC., SHALL LEAVE A MINIMUM CLEARANCE IN COMPLIANCE WITH USD NO. 320A WHEN POLE IS INSTALLED BEHIND SIDEWALK, AND SHALL AT NO TIME COMPLETELY ENCLOSE THE STREET LIGHTING POLE.
6. AS-BUILT DRAWINGS SHALL BE SUPPLIED TO THE TRAFFIC ENGINEERING DIVISION PRIOR TO ANY PRE-FINAL INSPECTION. THE AS-BUILT DRAWING NEEDS TO BE STAMPED AS-BUILT AND SIGNED BY THE PREPARER.
7. SERVICE POINTS SHALL BE COORDINATED WITH NV ENERGY, AND WHEREVER POSSIBLE, BE LOCATED NEAR THE CENTER OF THE CIRCUIT. SERVICEPOINTS SHALL BE SHOWN ON THE PLANS.
8. WHEREVER THERE IS AN OVERHEAD UTILITY THAT MAY CONFLICT WITH THE INSTALLATION OF STREETLIGHTING CIRCUITS AND/OR POLES, THESE CONFLICTS MUST BE RESOLVED BETWEEN THE DEVELOPER AND THE UTILITIES INVOLVED BEFORE STREETLIGHT BASES ARE INSTALLED, AT NO EXPENSE TO THE CITY OF LAS VEGAS.
9. THE CONTRACTOR SHALL FURNISH COMPLETE CONDUIT, WIRE, ETC. FROM SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON THE PLANS.

REVISED JUNE 28, 2016 (LD VERSION)

CHARLESTON BLVD. & WEST OF DETENTION BASIN.

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LAS VEGAS FIRE AND RESCUE ADOPTED FIRE CODE ORDINANCE #6631 FOR HYDRANT SPECIFICATIONS AND HYDRANT INSTALLATION SPECIFICATIONS.
2. ONLY FIRE HYDRANTS THAT ARE ON THE LAS VEGAS VALLEY WATER DISTRICTS' - APPROVED PRODUCTS LIST ARE ALLOWED TO BE INSTALLED.
3. A PERMIT IS REQUIRED FROM LAS VEGAS FIRE AND RESCUE FOR THE INSTALLATION OF ON-SITE WATER LINES AND FIRE HYDRANTS. THE PERMIT AND CONTRACTOR MATERIAL TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER BEFORE COMMENCEMENT OF WORK. [IFC § 105.6.15]
4. ON ANY RESIDENTIAL OR COMMERCIAL INSTALLATIONS, FIRE HYDRANTS SHALL BE INSTALLED AND FIRE APPARATUS ACCESS ROADS SHALL BE MAINTAINED BEFORE COMMENCEMENT OF ANY COMBUSTIBLE CONSTRUCTION. ALL FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER AND SHALL BE CAPABLE OF DELIVERING THE REQUIRED FIRE FLOW. [IFC § 3310, § 3312]
5. TO IDENTIFY THE FIRE HYDRANT LOCATIONS, THE CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT THE CENTERLINE OF THE STREET ADJACENT TO THE FIRE HYDRANTS. [IFC § 507.5.7.3]
6. 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]
7. ALL ON-SITE UNDERGROUND WATER MAINS AND MATERIALS SHALL BE U.L. LISTED, A.W.W.A APPROVED AND SHALL BE RATED FOR THE APPROPRIATE WORKING PRESSURE. [IFC § 507.2.1, NFPA 24]
8. 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]
9. PRIVATE HYDRANTS SHALL BE PAINTED RED. [IFC § 507.5.7.1]
10. 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]
11. FIRE HYDRANT SPACING SHALL BE AS FOLLOWS: [IFC § C102]
 - RESIDENTIAL - 500 FT UNSPRINKLERED; 600 FT SPRINKLERED.
 - COMMERCIAL - 300 FT UNSPRINKLERED; 400 FT SPRINKLERED.
12. 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 PROTECTION HAZARDS, WHERE STREETS ARE PROVIDED WITH MEDIAN DIVIDERS OR HAVE FOUR (4) OR MORE TRAFFIC LANES AND HAVE A MINIMUM CURE 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]
13. 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.
14. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN 6 FT OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREETLIGHT OR ANY OTHER OBSTRUCTION. [IFC § C102.10]
15. 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]
16. 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]
17. THE MAXIMUM DISTANCE FROM A HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. [IFC § C102.6]
18. TWO (2) SOURCES OF WATER ARE REQUIRED WHENEVER THERE IS 4 OR MORE FIRE HYDRANTS/SPRINKLER LEAD-INS ARE INSTALLED ON A SINGLE SYSTEM, FOR SYSTEMS REQUIRED TO HAVE TWO (2) SOURCES OF WATER SUPPLY, SECTORAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 2 VERIFIABLE HYDRANTS AND/OR FIRE SPRINKLER LEAD-INS CAN BE OUT OF SERVICE DUE TO A SERVICE INTERRUPTION, FOR SYSTEMS PERMITTED TO HAVE ONE SOURCE OF WATER SUPPLY, SECTORAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 3 FIRE HYDRANTS AND/OR FIRE SPRINKLER LEAD-INS CAN BE OUT OF SERVICE DUE TO A SERVICE INTERRUPTION. [IFC § C104]
19. 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 § 503.2.2]
20. 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]
21. 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]
22. VERTICAL CURVING OF ALL FIRE APPARATUS ACCESS ROADS SHALL NOT BE LESS THAN 13FT 6 INS. [IFC § 503.2.1]
23. FIRE DEPARTMENT ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF NOT LESS THAN 33 FT WITH PARKING ON BOTH SIDES MEASURED TO FACE OF CURB, NOT LESS THAN 28 FT WIDE WITH PARKING RESTRICTED TO ONE SIDE MEASURED TO FACE OF CURB, NOT LESS THAN 24 FT WIDE WITH NO PARKING ON EITHER SIDE MEASURED TO FACE OF CURB. FIRE LINES THROUGH PARKING LOTS SHALL BE NOT LESS THAN 24 FT. [IFC § 503.2.1.1]
24. A FIRE APPARATUS ACCESS ROAD SHALL BE REQUIRED WHEN ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY IS LOCATED MORE THAN 150 FT FROM A FIRE DEPARTMENT VEHICLE ACCESS. [IFC § 503.1.1]
25. APPROVED SECONDARY FIRE APPARATUS ACCESS SHALL BE PROVIDED FOR 200 OR MORE DWELLING UNITS, ROAD(S) WITH DEAD-ENDS OR A SINGLE POINT OF ACCESS IN EXCESS OF 600 FT. CLV REGULATION AND MDO
26. 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 85 FT. CLV REGULATION
27. ALL FIRE APPARATUS ACCESS ROADS SHALL BE MARKED BY PLACING APPROVED SIGNS AT THE START OF THE DESIGNATED FIRE LANE, ONE SIGN AT THE END OF THE FIRE LANE WITH SIGN-AT-START AT A MINIMUM 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]
28. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. [IFC § 503.6]
29. WHERE STREETS ARE PROVIDED WITH MEDIAN DIVIDERS, OR HAVING FOUR OR MORE TRAVEL LANES AND A TRAFFIC COUNT OF MORE THAN 30,000 VEHICLES PER DAY, ALL HYDRANTS BEING UTILIZED TO DELIVER FIRE FLOW TO THE PROPOSED LOCATION SHALL BE LOCATED ON THE SAME SIDE OF THE STREET AS THE PROPOSED DEVELOPMENT. CLV REGULATION

EFFECTIVE DATE: FEBRUARY 4th, 2019

9. STREET SIGNS AND STOP SIGNS SHALL BE INSTALLED PER CITY STANDARD SPECIFICATIONS FOR PLACEMENT OF STREET NAME SIGNS.
10. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL DEVICES AND FLAGGERS TO INSURE THE SAFETY OF THE PUBLIC IN OR AROUND THE WORK AREA. THE CONTRACTOR SHALL HAVE A CERTIFIED ATSSA TRAFFIC CONTROL TECHNICIAN OR RISA WORK ZONE SAFETY SPECIALIST SET UP, MAINTAIN AND/OR REMOVE ALL TRAFFIC CONTROL DEVICES IN THE CITY OF LAS VEGAS RIGHT OF WAY.
11. WORK IN PUBLIC STREETS, ONCE BEGUN, SHALL BE EXPEDITED TO COMPLETION SO AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING CITIZENS AREA TRANSIT (C.A.T.) IF THE CONSTRUCTION INTERRUPTS OR RELOCATES A BUS STOP OR HAS AN ADVERSE EFFECT ON BUS SERVICE ON THAT STREET TO ARRANGE FOR TEMPORARY RELOCATION OF STOP.
13. GUARDS SHALL BE OBTAINED BY CONTACTING THE METROPOLITAN POLICE DEPARTMENT SPECIAL EVENTS UNIT (PHONE # 828-3442) WHO WILL PROVIDE OFFICERS PROPERLY TRAINED IN TRAFFIC CONTROL. FEES FOR THE USE OF THESE OFFICERS SHALL BE SET BY METRO AND WILL BE PAID BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR ALL ARRANGEMENTS WITH METRO.
14. ANY WORK WITHIN 300' OF A SIGNALIZED INTERSECTION WILL BE NIGHT WORK, UNLESS DIRECTED BY THE CITY OF LAS VEGAS TRAFFIC ENGINEER.
15. THE CONTRACTOR SHALL CONTACT THE TRAFFIC ENGINEERING DIVISION (TRANSPORTATION SECTION) THROUGH THE PROJECTS OFFSITE INSPECTOR PRIOR TO INITIATING PAVING TO RECEIVE DIRECTION FOR ANY PERMANENT OR TEMPORARY MODIFICATIONS TO THE APPROVED DRAWINGS REGARDING FINAL PAVEMENT TRANSITIONS, MARKINGS AND SIGNING THAT ARE REQUIRED TO MATCH ADJACENT ROADWAY SEGMENTS. THE CONTRACTOR SHALL PROVIDE A DRAWING FOR APPROVAL BY THE TRAFFIC ENGINEERING DIVISION DEPICTING ANY ADJUSTMENTS TO THE FINAL PAVEMENT MARKINGS AND SIGNAGE, WHICH MAY INCLUDE OMITTING, ADDING OR MODIFYING PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS SUCH THAT ADEQUATE TRANSITIONS AND LANE TERMINATIONS BETWEEN ADJACENT ROADWAY SEGMENTS ARE CONSTRUCTED.

REVISÉ 04/05/10

1. IN THE EVENT THAT ANY UNFORESEEN CONDITIONS NOT COVERED BY THESE NOTES ARE ENCOUNTERED DURING GRADING OPERATIONS, THE OWNER/ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTION.

2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL NECESSARY CUTS AND FILLS WITHIN THE LIMITS OF THIS PROJECT AND THE RELATED OFF-SITE WORK, SO AS TO GENERATE THE DESIRED SUBGRADE, FINISH GRADES AND SLOPES SHOWN.

3. CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ALL EXCAVATION. ADEQUATE SHORING SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR TO PREVENT UNDERMINING OF ANY ADJACENT FEATURES OR FACILITIES AND/OR CAVING OF THE EXCAVATION.

4. THE CONTRACTOR IS WARNED THAT AN EARTHWORK BALANCE WAS NOT NECESSARILY THE INTENT OF THIS PROJECT. ANY ADDITIONAL MATERIAL REQUIRED OR LEFTOVER MATERIAL FOLLOWING EARTHWORK OPERATIONS BECOMES THE RESPONSIBILITY OF THE CONTRACTOR.

5. THE GRADING CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE OWNER TO PROVIDE FOR THE REQUIREMENTS OF THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND ASSOCIATED PERMIT.

6. CONTRACTOR SHALL GRADE TO THE LINES AND ELEVATIONS SHOWN ON THE PLANS WITHIN THE FOLLOWING HORIZONTAL AND VERTICAL TOLERANCES AND DEGREES OF COMPACTION, IN THE AREAS INDICATED:

	<u>HORIZONTAL</u>		<u>VERTICAL</u>	<u>COMPACTION</u>
A PAVEMENT AREA SUBGRADE	0.1"	+0.070-0.1"		SEE SOILS REPORT
B ENGINEERED FILL	0.5"	+0.110-0.1"		SEE SOILS REPORT

REPORT COMPACTION TESTING WILL BE PERFORMED BY THE OWNER OR HIS REPRESENTATIVE.

7. ALL CUT AND FILL SLOPES SHALL BE PROTECTED UNTIL EFFECTIVE EROSION CONTROL HAS BEEN ESTABLISHED.

8. THE USE OF POTABLE WATER WITHOUT A SPECIAL PERMIT FOR BUILDING OR CONSTRUCTION PURPOSES INCLUDING CONSOLIDATION OF BACKFILL OR DUST CONTROL IS PROHIBITED. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION WATER.

9. THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWALKS AND ALL OTHER PUBLIC RIGHT-OF-WAY IN A CLEAN, SAFE AND USABLE CONDITION. ALL SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE PUBLICLY OWNED PROPERTY. DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT, ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC, SHALL BE MAINTAINED IN A CLEAN, SAFE AND USABLE CONDITION.

10. IN THE EVENT THAT ANY TEMPORARY CONSTRUCTION ITEM IS REQUIRED THAT IS NOT SHOWN ON THESE DRAWINGS, THE OWNER AGREES TO PROVIDE AND INSTALL SUCH ITEM AT HIS OWN EXPENSE AND AT THE DIRECTION OF THE CITY ENGINEER. TEMPORARY CONSTRUCTION INCLUDES DITCHES, BERMS, ROAD SIGNS AND BARRICADES, ETC.

1. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATED IN, THE PUBLIC RIGHTS OF WAY OF THE CITY OF LAS VEGAS AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.
2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN THE CITY OF LAS VEGAS AND THE LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION II.4.5.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS, AND ALL BMPs WEEKLY, AND WITHIN 24 HOURS AFTER ANY RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO THE GENERAL REQUIREMENTS, SUCH AS SCHEDULING OF LAND DISTURBANCE ACTIVITIES, REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION II.4.12.
5. ACCUMULATED SEDIMENT IN BMPs SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT SHALL BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

**SOUTHWEST
GE**

SOUTHWEST GAS CORPORATION DATE

CAUTION: HIGH PRESSURE GAS
CALL SOUTHWEST GAS AT 702-400-1789 FOR STANDARDS
EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES
48 HOURS PRIOR TO CONSTRUCTION.

FF	FINISH FLOOR	DI	DROP INLET
FG	FINISH GRADE	DE	BASE FLOOD ELEVATION
FL	FLOW LINE	CCUSD	CLARK COUNTY UNIFORM STANDARD DRAWINGS
TC	TOP OF CURB	SW	SIDEWALK
TRC	TOP OF ROLL CURB	TST	TOP OF SIDEWALK
EDP	EDGE OF ASPHALT PAVEMENT	INT	INTERSECTION
FUT	FUTURE	D	DESIGN GRADE
EX	EXISTING	C	CENTER LINE
VG	VALLEY GUTTER	O/C	OFFSET CROWN
NG	NATURAL GROUND	BC	BACK OF CURB
H.P.	HIGH POINT	BOR	BEGIN CURB RETURN
LP	LOW POINT	BCL	BACK OF CURB LENGTH
SSMH	SEWER MANHOLE	TF	TOP OF FOOTING
WTR	WATER LINE	GB	GRADE BRACK
SD	STORM DRAIN	PC	POINT OF CURVATURE
RP	REINFORCED CONCRETE PIPE	TPW	TOP OF PLANTER WALL
PT	POINT OF TANGENCY	TRW	TOP OF RETAINMENT WALL
PRC	POINT OF REVERSE CURVATURE	TOE	TOE OF CHANNEL/SCARP
PC	POINT OF COMPOUND CURVATURE	TOE	TOE OF CHANNEL/SCARP
BVC	BEGIN VERTICAL CURVE	TOB	TOP OF BOX
MVC	MID-POINT OF VERTICAL CURVE	PP	POWER POLE
ENC	END VERTICAL CURVE	TRANS.	TRANSITION
PRVC	POINT OF REVERSE VERTICAL CURVE	RET.	RETAINMENT
RW	RIGHT-OF-WAY		

DESCRIPTION	PROPOSED	EXISTING	FUTURE
CONTOUR (5' INTERVAL)			
CONTOUR (1' INTERVAL)			
EDGE OF PAVEMENT			
SAW CUT			
RETAINING WALL			
SCREEN WALL			
RIGHT OF WAY			
CENTER LINE			
BACK OF CURB			
LIP OF GUTTER			
FACE OF CURB			
SIDEWALK			
UNIT BOUNDARY LINE			
UNIT BOUNDARY / ROW			
PROPERTY LINE			
FLOW LINE			
SLOPE AND FLOW DIRECTION			
SCARP AREA			
MATCHLINE			
SIDEWALK RAMP			
SIGHT VISIBILITY ZONES			
PAVED ROAD			
PAVEMENT REMOVAL			
WATER UNDER 18"			
WATER 18" & OVER			
SANITARY SEWER UNDER 18"			
SANITARY SEWER 18" & OVER			
STORM SEWER			
FIRE HYDRANT			
SANITARY SEWER MAN HOLE			
CLEAN OUT			
STORM DRAIN MAN HOLE			

ESTIMATED UTILITY QUANTITIES		PUBLIC
8"x8" RCB STORM DRAIN	298 LF	3
36" RCP STORM DRAIN	179 LF	
42" RCP STORM DRAIN	58 LF	
STEM WALL	3,869 LF	
ESTIMATED GRADING QUANTITIES		PUBLIC
EARTHWORKS CUT	834 CY	2
EARTHWORKS FILL	2,927 CY	
EARTHWORKS TOTAL (FILL)	2,093 CY	

DRAWN BY: BCC	02/07/2019	DESIGNED BY: BCC	02/07/2019	CHECKED BY: WAM	09/23/2020	PROJECT NO: 7851	SCALE: N/A N/A VERT.	BELT

Handwritten: *Wall & Associates*

PROFESSIONAL ENGINEER - STATE OF NEVADA

WILLIAM J. MEYER

EXP: 12/31/21

CIVIL

No. 15745

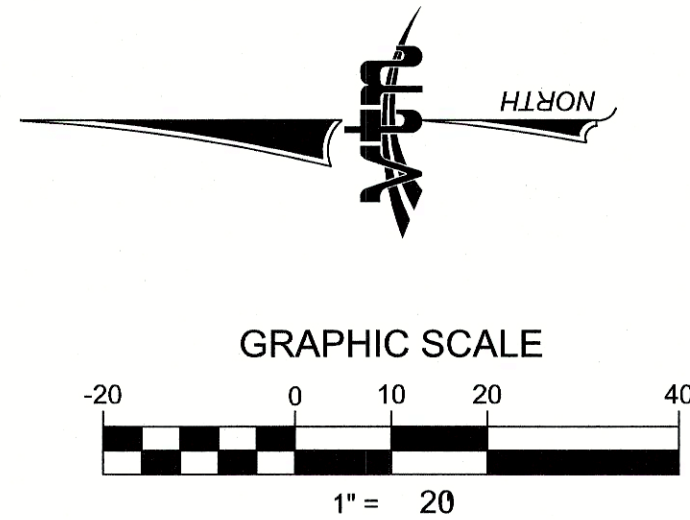
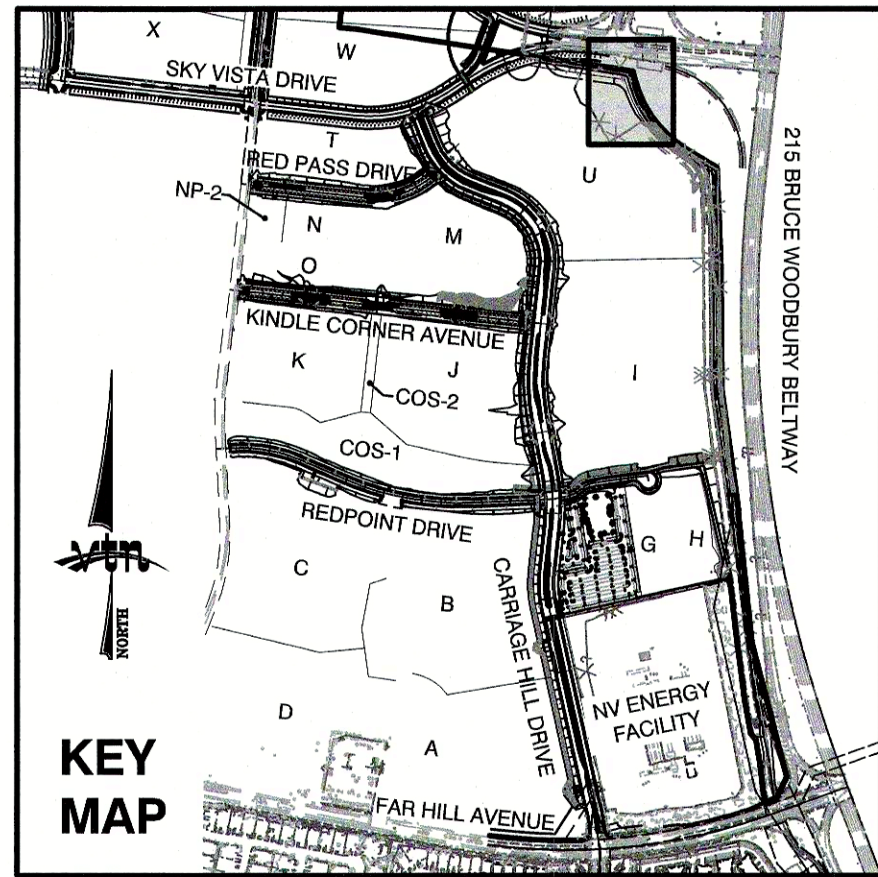
7/28/20

SHEET

NT

2 OF **14** SHEETS

DRAWING NO.
L19-01775
327-301



CONSTRUCTION NOTES

- BEGIN REMOVAL OF RIP-RAP
- END REMOVAL OF RIP-RAP
- BEGIN REMOVAL OF CONCRETE
- END REMOVAL OF CONCRETE
- BEGIN REMOVE WALL
- END REMOVAL OF WALL
- BEGIN REMOVAL OF FENCE
- END REMOVAL OF FENCE
- REMOVE AND REPLACE EXISTING FENCE
- BEGIN REMOVAL OF STORM DRAIN
- END REMOVAL OF STORM DRAIN
- REMOVE STORM DRAIN END SECTIONS

BASIS OF BEARING

GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

LINEAR UNIT: US SURVEY FOOT (FTUS)

DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00

SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)

ZONE: LAS VEGAS HIGH ELEVATION ZONE

PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHINGS AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FTUS)
EASTING AT CENTRAL MERIDIAN: 300,000 M (984,250.0000 FTUS)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)

NOTES:
1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO "GROUND" DISTANCES IN THE PROJECT AREA.
2. GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO MERIDIAN CONVERGENCE.

BENCHMARK

PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

CITY OF LAS VEGAS BENCHMARK: D368 (REVISED 2008)
NAVD88 ELEVATION: 989.574 METERS (3,246.63 FEET)

FND USC&GS DISC SET IN ROCK RIDGE 150' SOUTH OF CHARLESTON BLVD. & WEST OF DETENTION BASIN.
T21S,R56E,S03

Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811
OR
1-800-227-2600
AND
1-702-455-6000
CLARK COUNTY TRAFFIC OPERATIONS

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.

CALL BEFORE YOU DO OVERHEAD

Call before you Dig
1-702-455-7511
CLARK COUNTY TRAFFIC OPERATIONS
AND
1-702-228-6011
LAS VEGAS AREA COMPUTERIZED TRAFFIC SYSTEM

AVOID HITTING UNDERGROUND UTILITY LINES. IT'S COSTLY.

Call before you Dig
1-702-455-7511
CLARK COUNTY TRAFFIC OPERATIONS
AND
1-702-228-6011
LAS VEGAS AREA COMPUTERIZED TRAFFIC SYSTEM

HOWARD HUGHES COMPANY, LLC A DELAWARE LIMITED LIABILITY COMPANY 10845 GRIFFITH PEAK DRIVE, SUITE 100 LAS VEGAS, NEVADA 89135 702.791.4000				CITY OF LAS VEGAS 2727 SOUTH RAINBOW BOULEVARD LAS VEGAS, NEVADA 89146-5148 PH: (702) 872-7550 FAX: (702) 382-2597 WEB: WWW.VTNV.COM LAS VEGAS, NEVADA 89135 702.791.4000			
DEMOLITION PLAN				SUMMERLIN WEST V21 BELTWAY CHANNEL SKY VISTA DRIVE TO NV ENERGY FACILITY			
DRAWN BY: BCC	02/18/2019	DESIGNED BY: BCC	02/18/2019	CHECKED BY: WJM	08/23/2020	PROJECT NO: 7951	SCALE: HORIZ. VERT. N/A N/A
				SHEET D 4 OF 14 SHEETS DRAWING NO. L19-01775 327-301			

Call before you dig
1-702-455-7511
CLARK COUNTY TRAFFIC OPERATIONS
LAS VEGAS AREA COMPREHENSIVE TRAFFIC SYSTEM

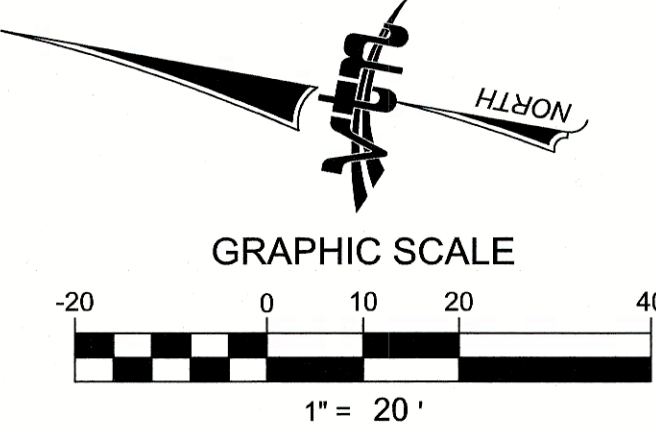
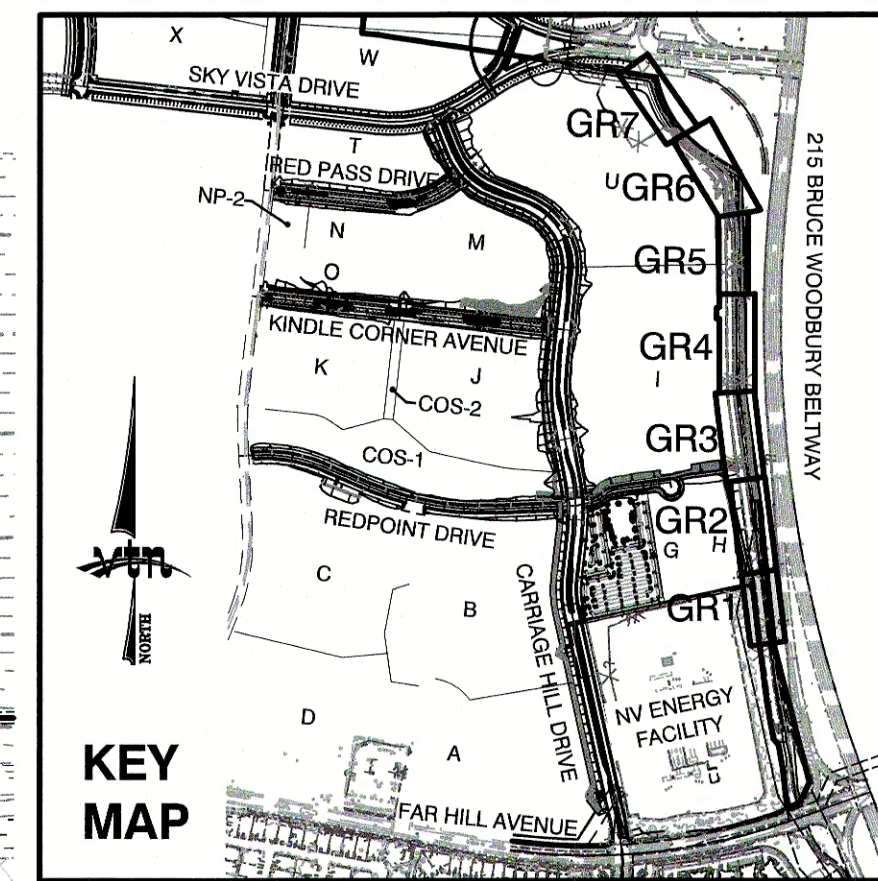
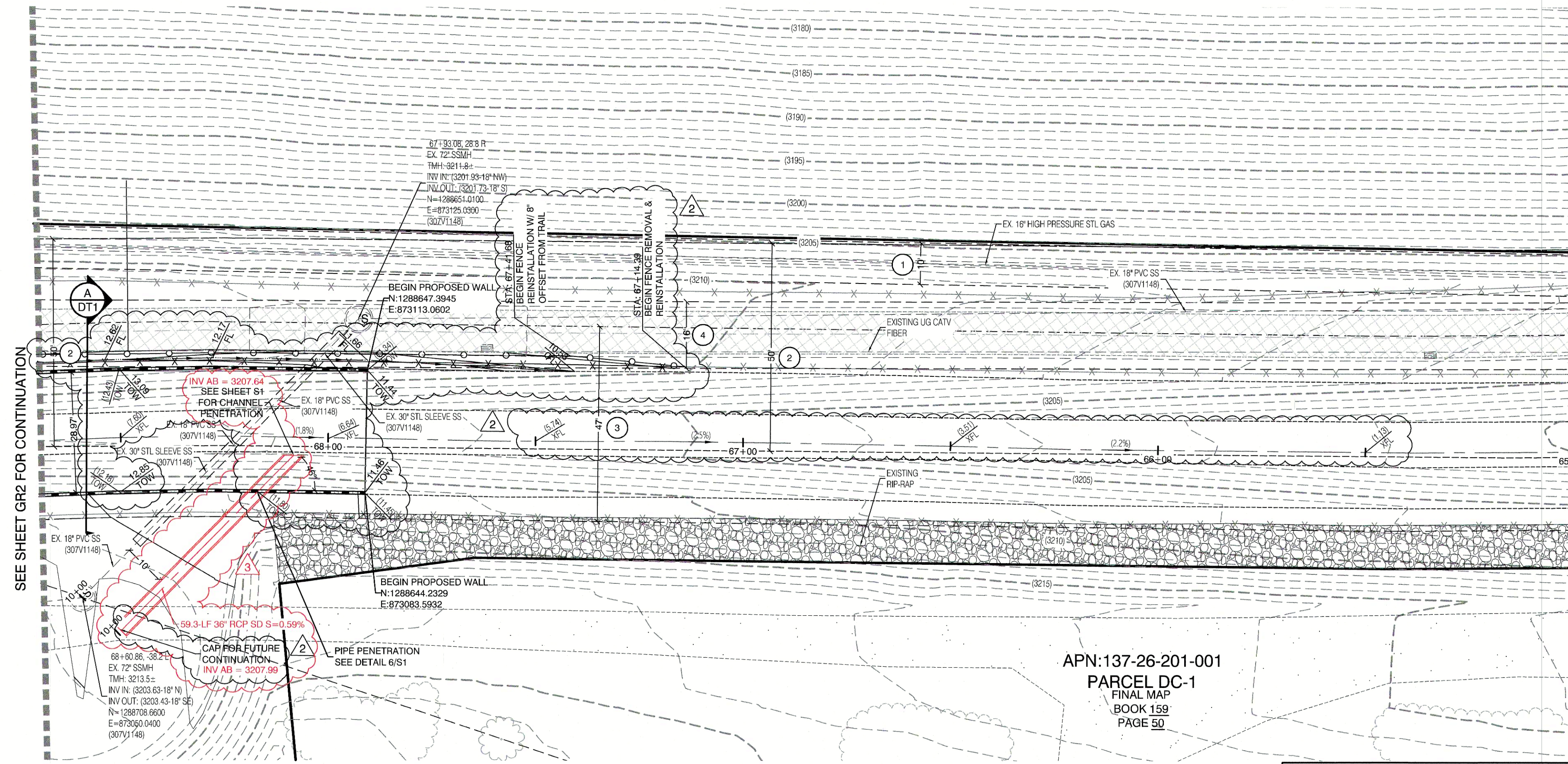
Call before you dig
1-702-227-2929
CLARK COUNTY TRAFFIC OPERATIONS

Call before you dig
1-800-227-2600
AND
1-702-455-6000
CLARK COUNTY TRAFFIC OPERATIONS

SOUTHWEST GAS CORPORATION DATE

CAUTION: HIGH PRESSURE GAS!!
CALL SOUTHWEST GAS AT 702-400-1789 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES 48 HOURS PRIOR TO CONSTRUCTION.

CONTRACTOR NOTE
ANY EXISTING STRUCTURES OR FACILITIES MOVED OR DAMAGED DURING CONSTRUCTION WILL BE REPLACED BY CONTRACTOR



BASIS OF BEARING
GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983, SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.
LINEAR UNIT: US SURVEY FOOT (FTUS)
DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS HIGH ELEVATION ZONE
PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHING AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FTUS)
EASTING AT CENTRAL MERIDIAN: 300,000.00 M (984,250.0000 FTUS)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)
NOTES:
1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO "GROUND" DISTANCES IN THE PROJECT AREA.
2. GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO MERIDIAN CONVERGENCE.

BENCHMARK
PROJECT DATUM: NORTH AMERICAN DATUM OF 1988 (NAVD88)
CITY OF LAS VEGAS BENCHMARK: D368 (REVISED 2008)
NAVD88 ELEVATION: 989.574 METERS (3,246.63 FEET)
FND USC&GS DISC SET IN ROCK RIDGE 150' SOUTH OF CHARLESTON BLVD. & WEST OF DETENTION BASIN.
T21S, R89E, S03

GRADING PERMIT NOTE
THIS GRADING PERMIT DOES NOT INCLUDE THE CONSTRUCTION OF RETAINING WALLS AND OTHER STRUCTURES. SEPARATE PERMITS AND APPLICATIONS ARE REQUIRED FOR THESE.

GEOTECHNICAL NOTE:
REFER TO SOILS REPORT: NOVA GEOTECHNICAL PROJECT #G-16-003, DATED MARCH 5, 2018

SIGHT VISIBILITY ZONES:
NO STRUCTURE, WALLS, VEGETATION, OR OBJECT OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT VISIBILITY ZONES.

EASEMENT REFERENCE LEGEND
1 10' GAS EASEMENT GRANTED TO SOUTHWEST GAS COMPANY PER OR: 19691103-0000924.
2 50' WIDE NEVADA POWER COMPANY EASEMENT GRANTED PER OR: 20071111-0002005.
3 DRAINAGE EASEMENT GRANTED TO CLARK COUNTY PER OR: 20000816-0000525.
4 PEDESTRIAN TRAIL EASEMENT GRANTED TO CLARK COUNTY PER OR: 20060527-0005041.
5 50' WIDE NEVADA POWER COMPANY EASEMENT GRANTED PER OR: 19990310-0001072. SUPERCEDES 50' WIDE NEVADA POWER COMPANY EASEMENT GRANTED PER OR: 19961001-0000671.

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

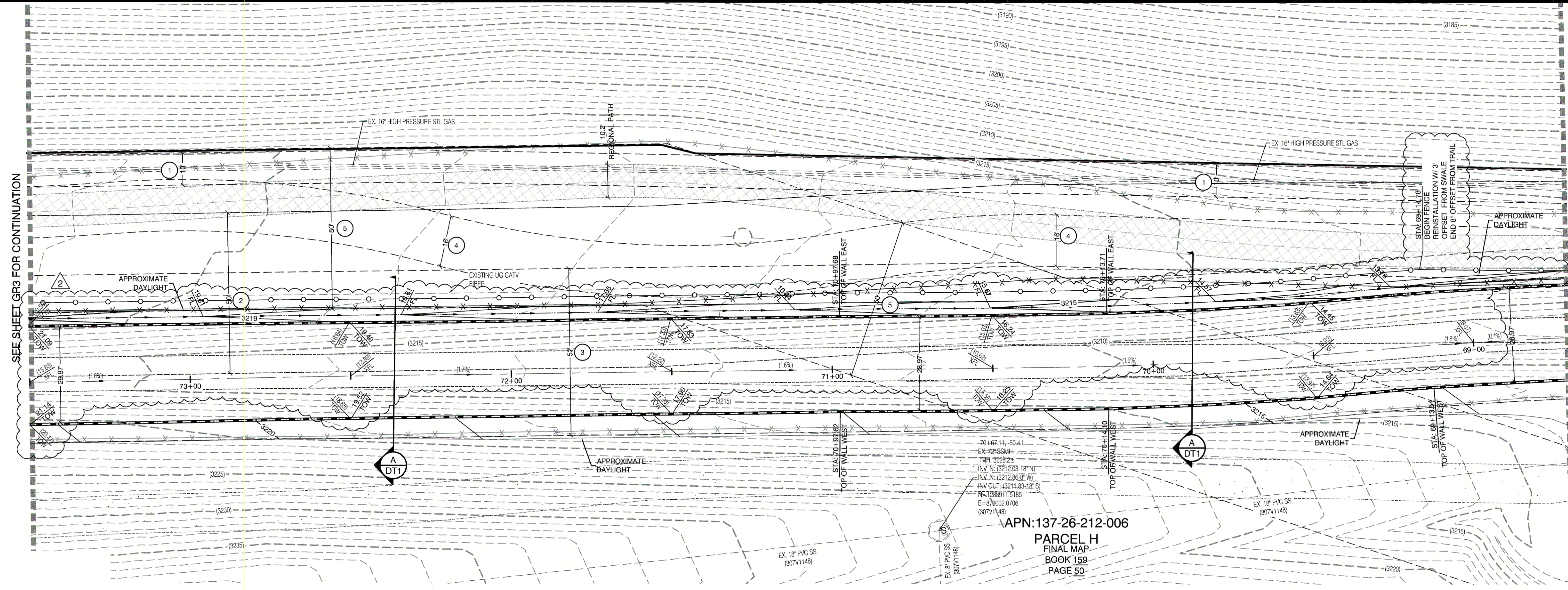
I CERTIFY THAT THIS GRADING PLAN CONFORMS TO THE APPROVED DRAINAGE STUDY FOR THIS SITE ON FILE WITH CITY OF LAS VEGAS, #D85139
WILLIAM J MEYER, P.E. No. 7545 DATE 7/20/20

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
CITY OF LAS VEGAS
2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 872-7550 FAX (702) 382-2587 WEB WWW.VTNV.COM
CONSULTING ENGINEERS • PLANNERS • AND SURVEYORS

GRADING PLAN 1
SUMMERLIN WEST V21
BELTWAY CHANNEL SKY VISTA DRIVE
TO NV ENERGY FACILITY

DRAWN BY: BCC
DESIGNED BY: BCC
CHECKED BY: WJM
PROJECT NO: 7551
SCALE: 1"=20' HORIZ. VERT. N/A

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J MEYER
CIVIL
No. 15745
7/20/20
5 OF 14 SHEETS
DRAWING NO. L19-01775 327-301



CAUTION: HIGH PRESSURE GAS!!
CALL SOUTHWEST GAS AT 702-400-1789 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES 48 HOURS PRIOR TO CONSTRUCTION.

FLOOD ZONE NOTE
SITE IS LOCATED IN A SHADED ZONE X AS SHOWN IN FIRM MAP 32003C22150E, DATED SEPTEMBER 27, 2002. A SHADED ZONE X IS DETERMINED TO BE OUTSIDE THE 2.0% ANNUAL CHANCE FLOODPLAIN. ENTIRE SITE BOUNDARY IS WITHIN ZONE X.

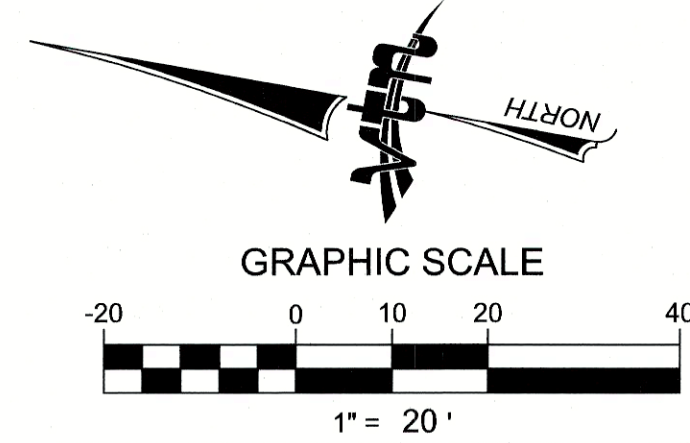
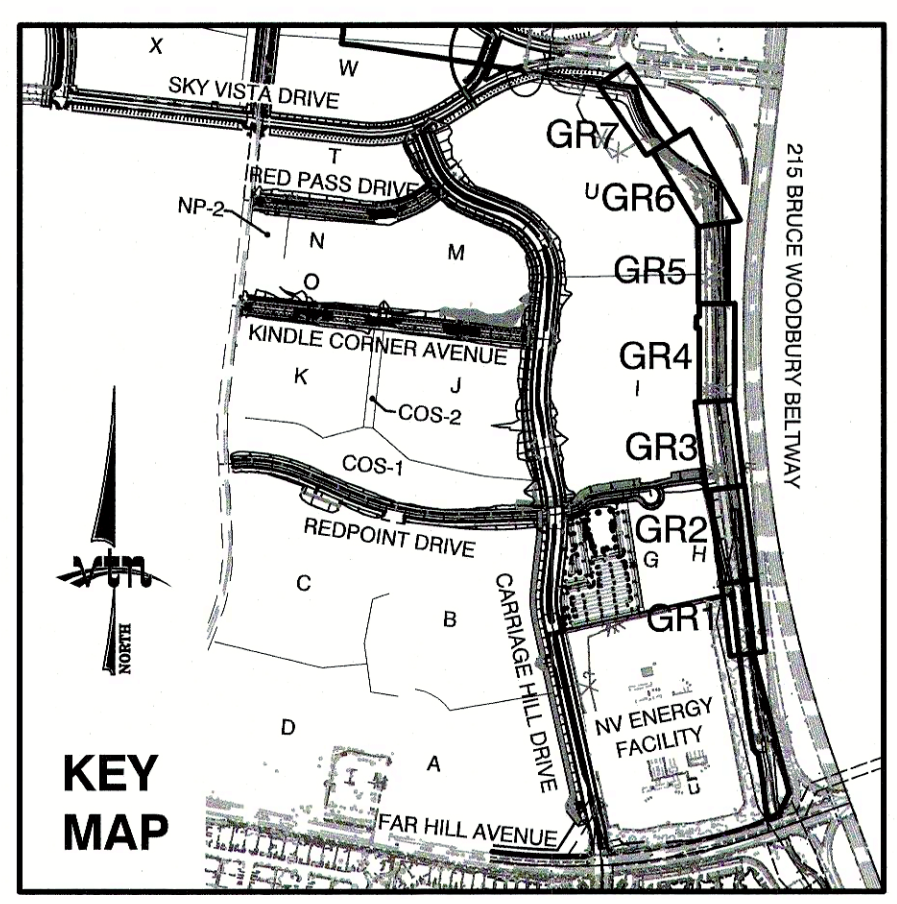
Call before you Dig
1-702-455-7311
CLARK COUNTY TRAFFIC OPERATIONS
LAS VEGAS AREA COMPREHENSIVE TRAFFIC SYSTEM

Call before you Dig
1-702-227-2929
CLARK COUNTY TRAFFIC OPERATIONS
LAS VEGAS AREA COMPREHENSIVE TRAFFIC SYSTEM

Call before you Dig
1-800-227-2600
AND
1-702-455-6000
CLARK COUNTY TRAFFIC OPERATIONS

CONTRACTOR NOTE
ANY EXISTING STRUCTURES OR FACILITIES MOVED OR DAMAGED DURING CONSTRUCTION WILL BE REPLACED BY CONTRACTOR

APN:137-26-212-006
PARCEL H
BOOK 159
PAGE 50



BASIS OF BEARING
GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.
LINEAR UNIT: US SURVEY FOOT (FTUS)
DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS HIGH ELEVATION ZONE
PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHING AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FTUS)
EASTING AT CENTRAL MERIDIAN: 300,000.00 M (984,250.0000 FTUS)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)
NOTES:
1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO "GROUND" DISTANCES IN THE PROJECT AREA.
2. GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO MERIDIAN CONVERGENCE.

BENCHMARK
PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
CITY OF LAS VEGAS BENCHMARK: D368 (REVISED 2008)
NAVD88 ELEVATION: 989.574 METERS (3,246.63 FEET)
FIND US&GS DISC SET IN ROCK RIDGE 150' SOUTH OF CHARLESTON BLVD. & WEST OF DETENTION BASIN.
T21S, R96E, S03

GRADING PERMIT NOTE
THIS GRADING PERMIT DOES NOT INCLUDE THE CONSTRUCTION OF RETAINING WALLS AND OTHER STRUCTURES. SEPARATE PERMITS AND APPLICATIONS ARE REQUIRED FOR THESE.

GEOTECHNICAL NOTE:
REFER TO SOILS REPORT: NOVA GEOTECHNICAL PROJECT #G-16-003, DATED MARCH 5, 2018

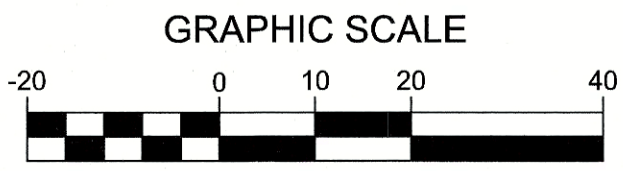
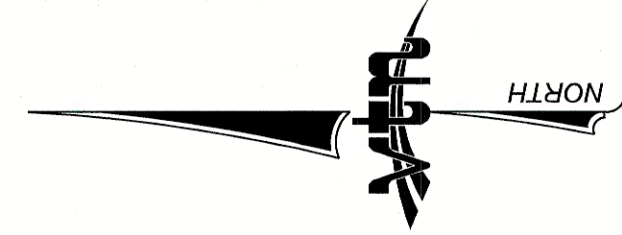
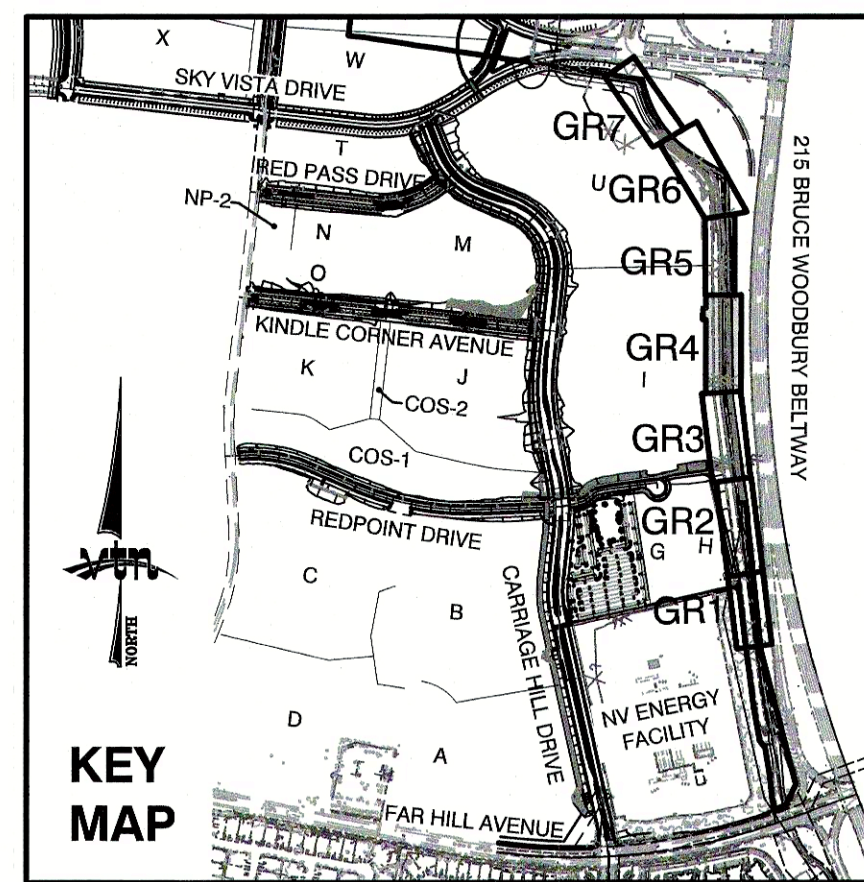
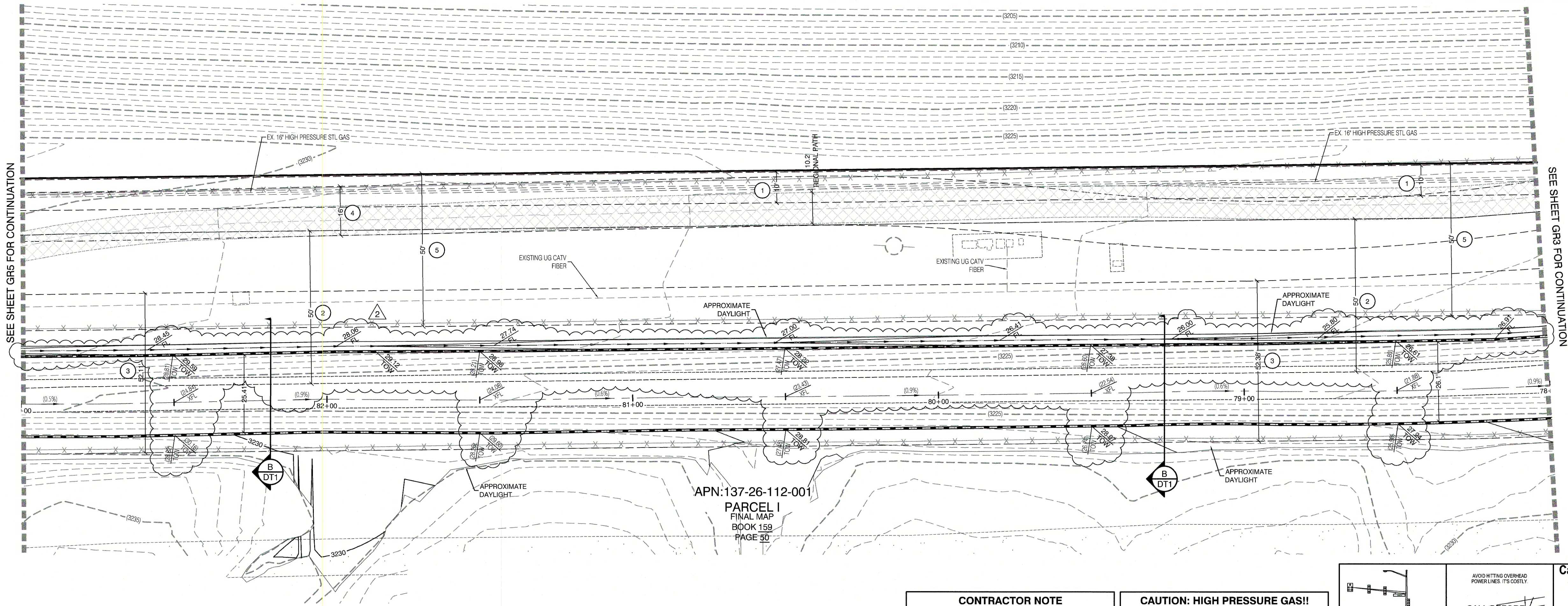
SIGHT VISIBILITY ZONES:
NO STRUCTURE, WALLS, VEGETATION, OR OBJECT OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT VISIBILITY ZONES.

EASEMENT REFERENCE LEGEND
1. 10' GAS EASEMENT GRANTED TO SOUTHWEST GAS COMPANY PER OR: 19961103-0000824.
2. 50' WIDE NEVADA POWER COMPANY EASEMENT GRANTED PER OR: 20071119-0002005.
3. DRAINAGE EASEMENT GRANTED TO CLARK COUNTY PER OR: 20000816-0000525.
4. PEDESTRIAN TRAIL EASEMENT GRANTED TO CLARK COUNTY PER OR: 20080527-0005041.
5. 50' WIDE NEVADA POWER COMPANY EASEMENT GRANTED PER OR: 19960310-0001072. SUPERCEDES 50' WIDE NEVADA POWER COMPANY EASEMENT GRANTED PER OR: 19961001-0000671.

ENGINEER DISCLAIMER NOTE:
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I CERTIFY THAT THIS GRADING PLAN CONFORMS TO THE APPROVED DRAINAGE STUDY FOR THIS SITE ON FILE WITH CITY OF LAS VEGAS, #DS5139
WILLIAM J MEYER, P.E. No. 15745 DATE 9/26/20

HOWARD HUGHES COMPANY, LLC A DELAWARE LIMITED LIABILITY COMPANY LAS VEGAS, NEVADA 89135 702-797-4000		CITY OF LAS VEGAS 2727 SOUTH RAINBOW BOULEVARD LAS VEGAS, NEVADA 89146-5148 PH: (702) 872-7550 FAX: (702) 382-2587 WEB: WWW.VTNV.COM CONSULTING ENGINEERS • PLANNERS • LAND SURVEYORS	
GRADING PLAN 2		SUMMERLIN WEST V21 BELTWAY CHANNEL SKY VISTA DRIVE TO NV ENERGY FACILITY	
DRAWN BY: BCC	DESIGNED BY: BCC	CHECKED BY: WJM	PROJECT NO.: 7851
DATE: 02/07/2019		DATE: 02/07/2019	
DATE: 09/23/2020		DATE: 09/23/2020	
SCALE: N/A		SCALE: N/A	
SHEET 6 OF 14 SHEETS		SHEET GR2	
DRAWING NO. L19-01775		DRAWING NO. L19-01775	



1" = 20'

BASIS OF BEARING

GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

LINEAR UNIT: US SURVEY FOOT (FTUS)
DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS HIGH ELEVATION ZONE
PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N
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EASTING AT CENTRAL MERIDIAN: 300,000.00 M (984,250.0000 FTUS)
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CITY OF LAS VEGAS BENCHMARK: D368 (REVISED 2008)
NAVD88 ELEVATION: 989.574 METERS (3,246.63 FEET)
FND USC&GS DISC SET IN ROCK RIDGE 150' SOUTH OF CHARLESTON BLVD. & WEST OF DETENTION BASIN.
T21S,R89E,S03

GRADING PERMIT NOTE

THIS GRADING PERMIT DOES NOT INCLUDE THE CONSTRUCTION OF RETAINING WALLS AND OTHER STRUCTURES. SEPARATE PERMITS AND APPLICATIONS ARE REQUIRED FOR THESE.

GEOTECHNICAL NOTE:

REFER TO SOILS REPORT: NOVA GEOTECHNICAL PROJECT #G-18-003, DATED MARCH 5, 2018

SIGHT VISIBILITY ZONES:

NO STRUCTURE, WALLS, VEGETATION, OR OBJECT OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT VISIBILITY ZONES.

EASEMENT REFERENCE LEGEND

- 10' GAS EASEMENT GRANTED TO SOUTHWEST GAS COMPANY PER OR: 198911103:0000824.
- 50' WIDE NEVADA POWER COMPANY EASEMENT GRANTED PER OR: 200711119:0002005.
- DRAINAGE EASEMENT GRANTED TO CLARK COUNTY PER OR: 20000816:0000525.
- PEDESTRIAN TRAIL EASEMENT GRANTED TO CLARK COUNTY PER OR: 20080527:0005041.
- 50' WIDE NEVADA POWER COMPANY EASEMENT GRANTED PER OR: 19960310:0001072. SUPERSEDES 50' WIDE NEVADA POWER COMPANY EASEMENT GRANTED PER OR: 19961001:0000671.

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I CERTIFY THAT THIS GRADING PLAN CONFORMS TO THE APPROVED DRAINAGE STUDY FOR THIS SITE ON FILE WITH CITY OF LAS VEGAS, #DS95139
WILLIAM J MEYER, P.E. No. 1574 DATE 9/8/20

CONTRACTOR NOTE

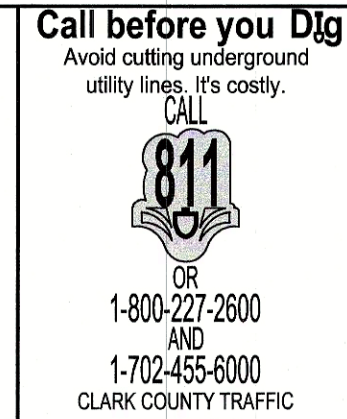
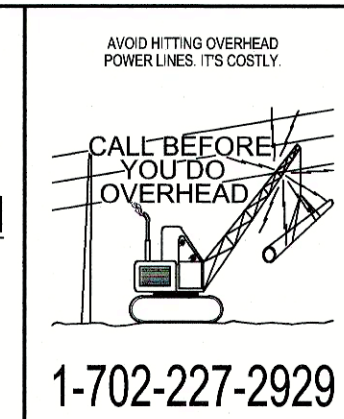
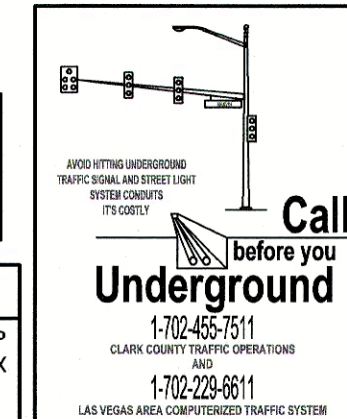
ANY EXISTING STRUCTURES OR FACILITIES MOVED OR DAMAGED DURING CONSTRUCTION WILL BE REPLACED BY CONTRACTOR

CAUTION: HIGH PRESSURE GAS!!

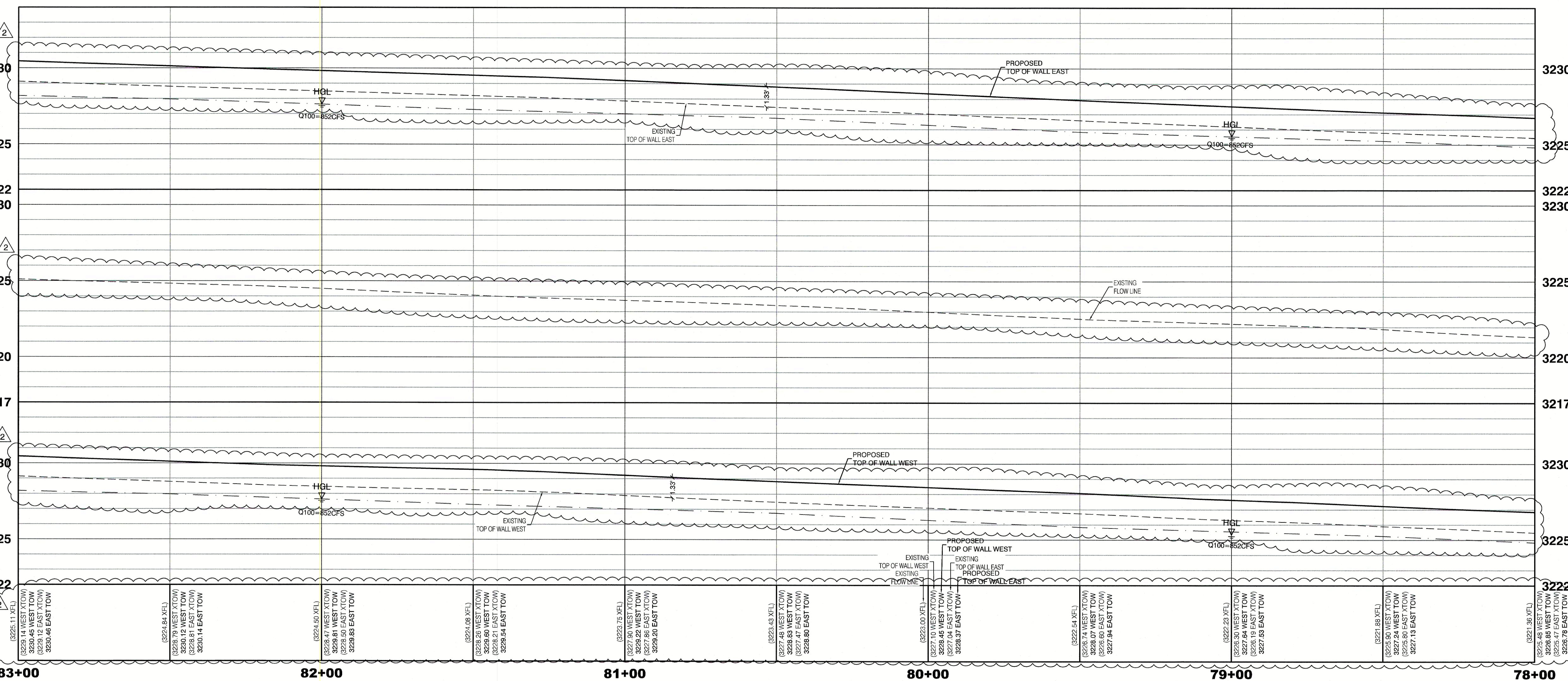
CALL SOUTHWEST GAS AT 702-400-1789 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES 48 HOURS PRIOR TO CONSTRUCTION.

FLOOD ZONE NOTE

SITE IS LOCATED IN A SHADED ZONE X AS SHOWN IN FIRM MAP 32003C22150E, DATED SEPTEMBER 27, 2002, A SHADED ZONE X IS DETERMINED TO BE OUTSIDE THE 2.0% ANNUAL CHANCE FLOODPLAIN, ENTIRE SITE BOUNDARY IS WITHIN ZONE X.



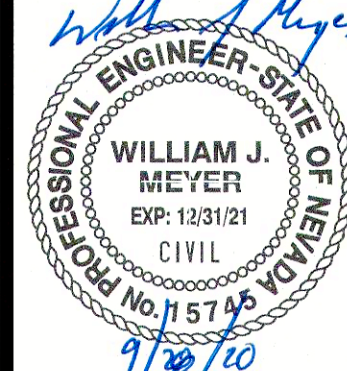
SOUTHWEST GAS CORPORATION DATE

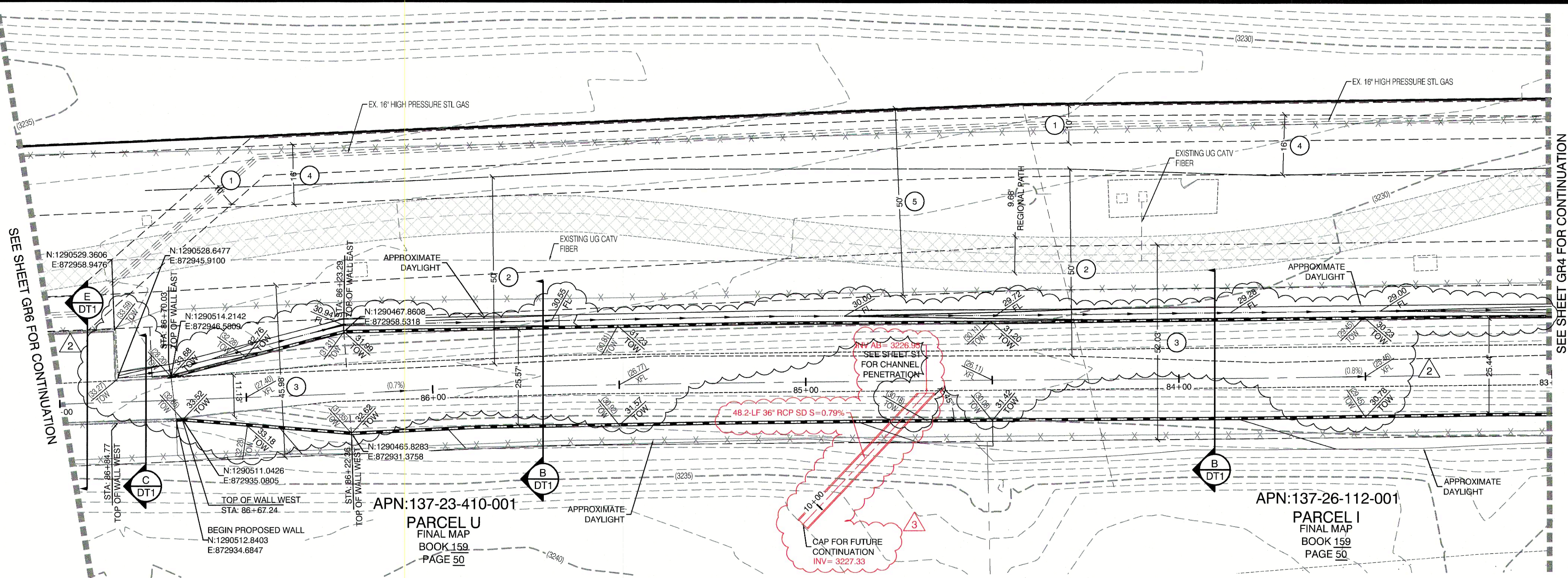


HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
CITY OF LAS VEGAS
2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89148-5148
PH: (702) 875-7560 FAX: (702) 382-2897 WEB: WWW.VTNV.COM
CONSULTING ENGINEERS • PLANNERS • LAND SURVEYORS

GRADING PLAN 4
SUMMERLIN WEST V21
BELTWAY CHANNEL SKY VISTA DRIVE
TO NV ENERGY FACILITY

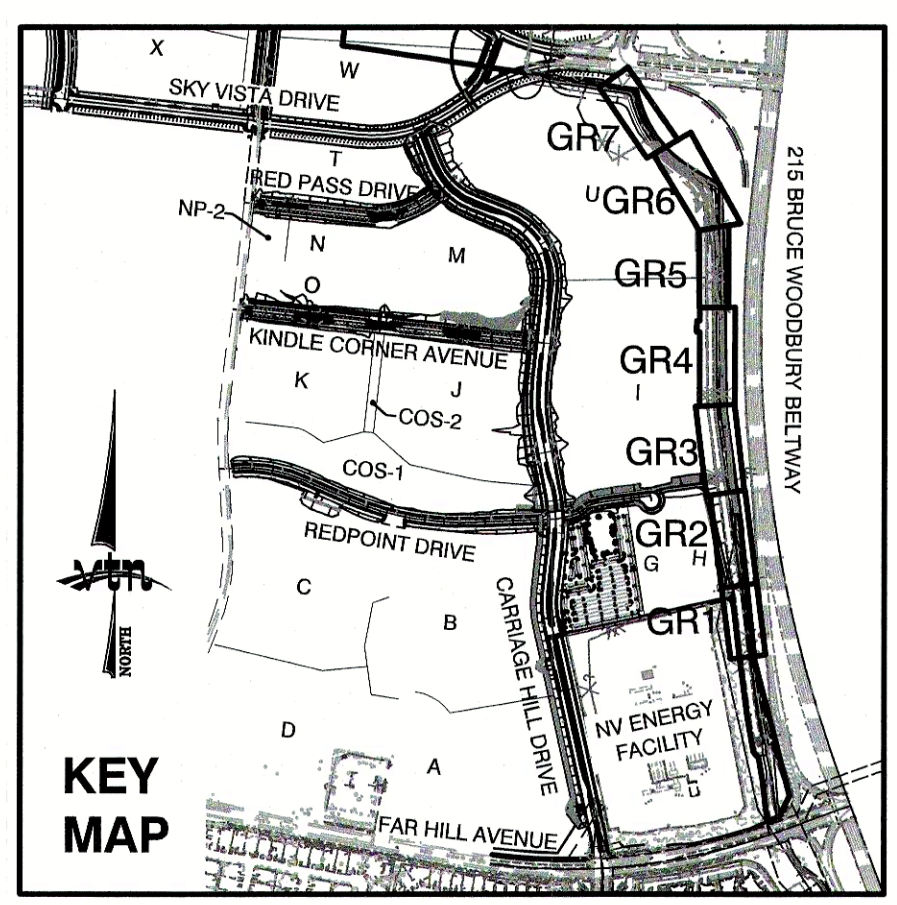
DRAWN BY: BCC
DESIGNED BY: BCC
CHECKED BY: WJM
PROJECT NO: 7951
SCALE: 1"=20'
SHEET 8 OF 14 SHEETS
DRAWING NO. L19-01775 327-301





BASIS OF BEARING
GRID NORTH AS DERIVED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.
LINEAR UNIT: US SURVEY FOOT (FTUS)
DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS HIGH ELEVATION ZONE
PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHING AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FTUS)
EASTING AT CENTRAL MERIDIAN: 300,000.00 M (984,250.0000 FTUS)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)
NOTES:
1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO "GROUND" DISTANCES IN THE PROJECT AREA.
2. GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO MERIDIAN CONVERGENCE.

BENCHMARK
PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
CITY OF LAS VEGAS BENCHMARK: D389 (REVISED 2008)
NAVD88 ELEVATION: 999.574 METERS (3,263.63 FEET)
FND USGCS DISC SET IN ROCK RIDGE 150' SOUTH OF CHARLESTON BLVD. & WEST OF DETENTION BASIN.
T21S, R95E, S03



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

CONTRACTOR NOTE
ANY EXISTING STRUCTURES OR FACILITIES MOVED OR DAMAGED DURING CONSTRUCTION WILL BE REPLACED BY CONTRACTOR

EASEMENT REFERENCE LEGEND
1 10' GAS EASEMENT GRANTED TO SOUTHWEST GAS COMPANY PER OR: 19991103:0000824.
2 50' WIDE NEVADA POWER COMPANY EASEMENT GRANTED PER OR: 20071119:0002005.
3 DRAINAGE EASEMENT GRANTED TO CLARK COUNTY PER OR: 20000816:0000525.
4 PEDESTRIAN TRAIL EASEMENT GRANTED TO CLARK COUNTY PER OR: 20080827:0005041.
5 50' WIDE NEVADA POWER COMPANY EASEMENT GRANTED PER OR: 19980310:0001072. SUPERSEDES 50' WIDE NEVADA POWER COMPANY EASEMENT GRANTED PER OR: 19981001:0000671.

FLOOD ZONE NOTE
SITE IS LOCATED IN A SHADED ZONE X AS SHOWN IN FIRM MAP 33003C22150E, DATED SEPTEMBER 27, 2002. A SHADED ZONE X IS DETERMINED TO BE OUTSIDE THE 2.0% ANNUAL CHANCE FLOODPLAIN, ENTIRE SITE BOUNDARY IS WITHIN ZONE X.

GRADING PERMIT NOTE
THIS GRADING PERMIT DOES NOT INCLUDE THE CONSTRUCTION OF RETAINING WALLS AND OTHERS STRUCTURES. SEPARATE PERMITS AND APPLICATIONS ARE REQUIRED FOR THESE.

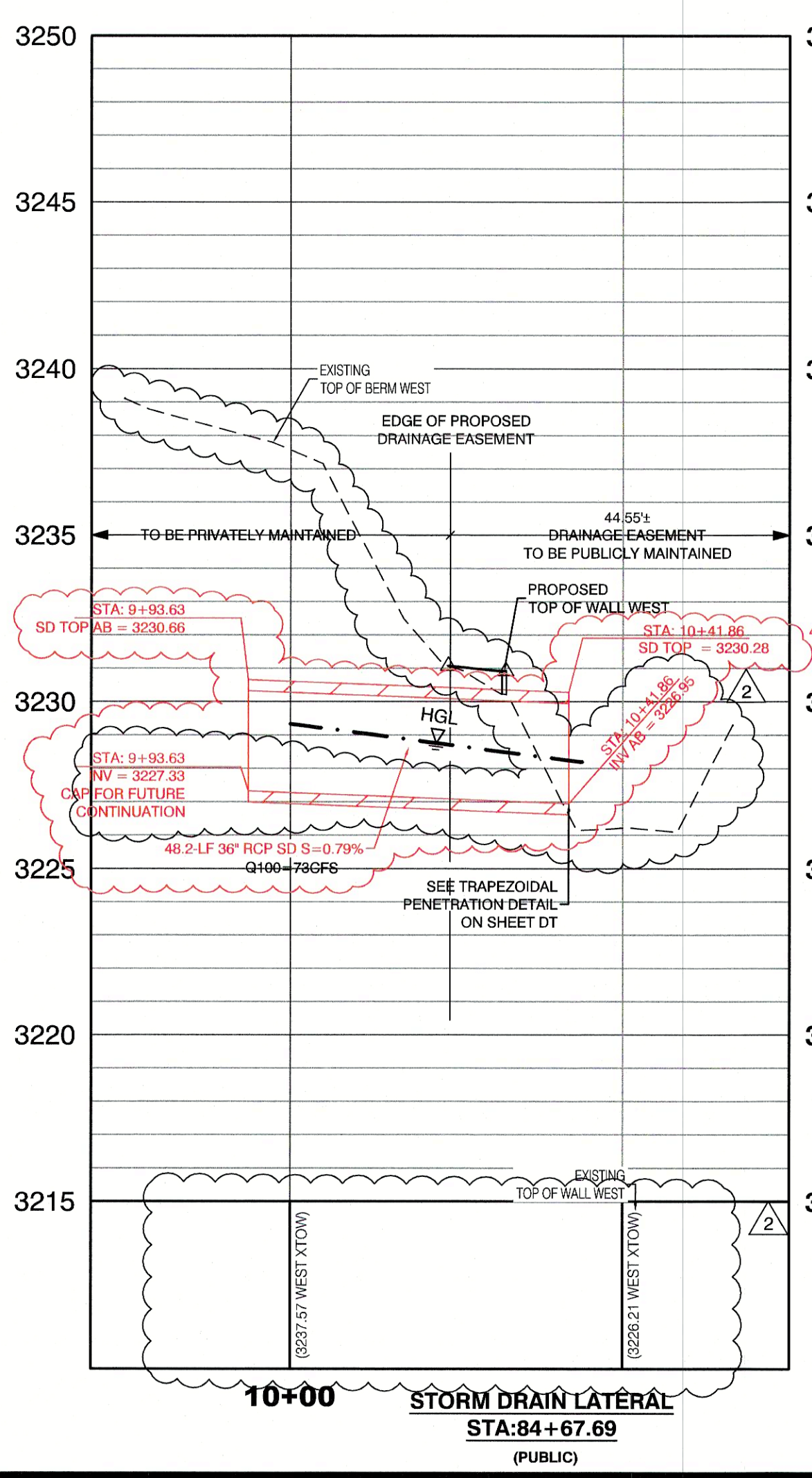
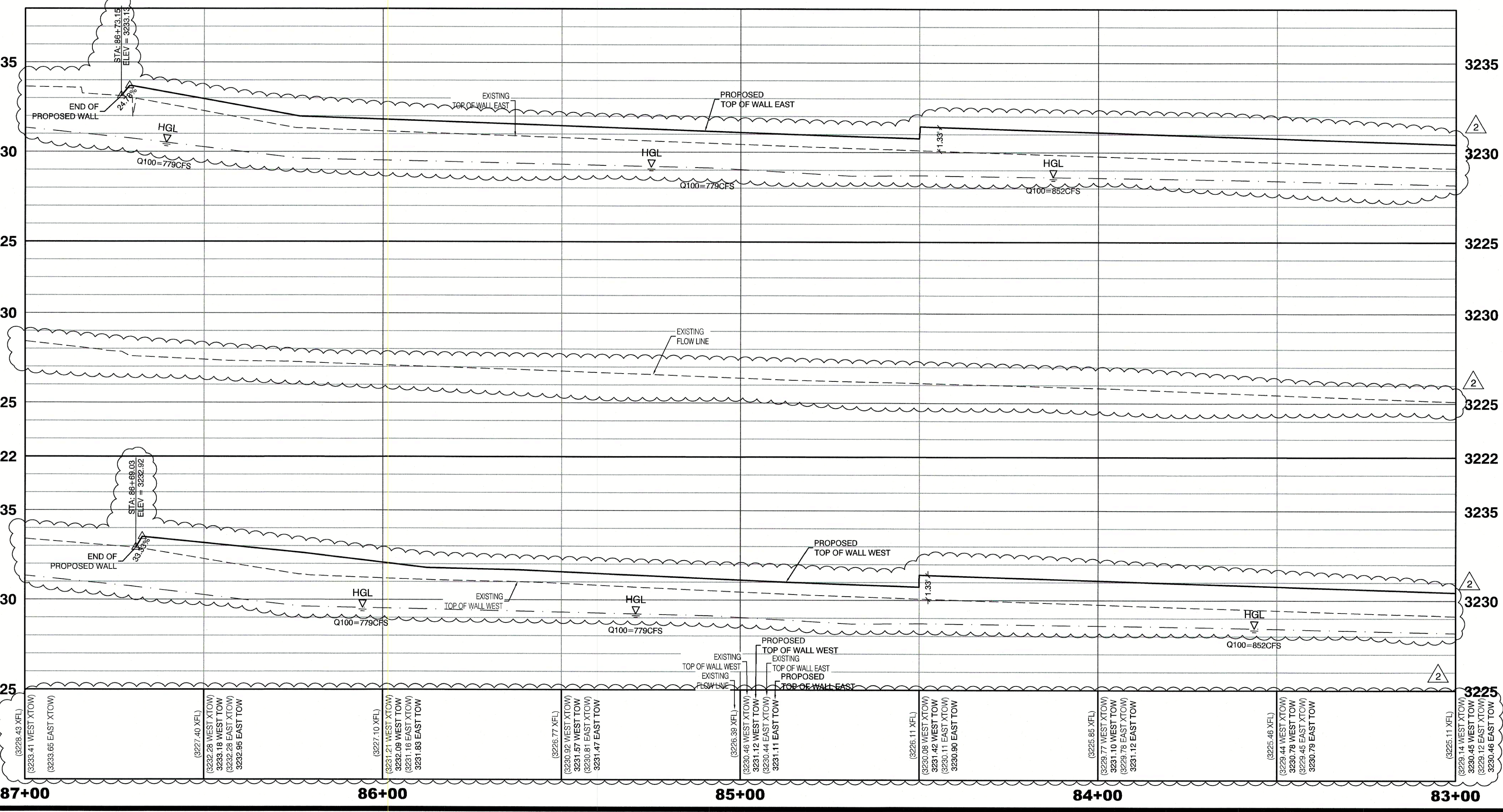
GEOTECHNICAL NOTE:
REFER TO SOILS REPORT: NOVA GEOTECHNICAL PROJECT #G-18-003, DATED MARCH 5, 2018

SIGHT VISIBILITY ZONES:
NO STRUCTURE, WALLS, VEGETATION, OR OBJECT OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT VISIBILITY ZONES.

Call before you Dig
1-702-455-7511
1-702-228-6811
CLARK COUNTY TRAFFIC OPERATIONS AND LAS VEGAS AREA COMPREHENSIVE TRAFFIC SYSTEM

Call before you Dig
1-702-227-2929
CLARK COUNTY TRAFFIC OPERATIONS

Call before you Dig
1-800-227-2600
1-702-455-6000
CLARK COUNTY TRAFFIC OPERATIONS



SOUTHWEST GAS CORPORATION DATE
CAUTION: HIGH PRESSURE GAS!!
CALL SOUTHWEST GAS AT 702-400-1789 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES 48 HOURS PRIOR TO CONSTRUCTION.

I CERTIFY THAT THIS GRADING PLAN CONFORMS TO THE APPROVED DRAINAGE STUDY FOR THIS SITE ON FILE WITH CITY OF LAS VEGAS, #DS5139

WILLIAM J. MEYER
P.E. No. 15745
DATE 9/26/20

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10945 GRIFFITH PEAK DRIVE, SUITE 100
LAS VEGAS, NEVADA 89135
702-797-4000

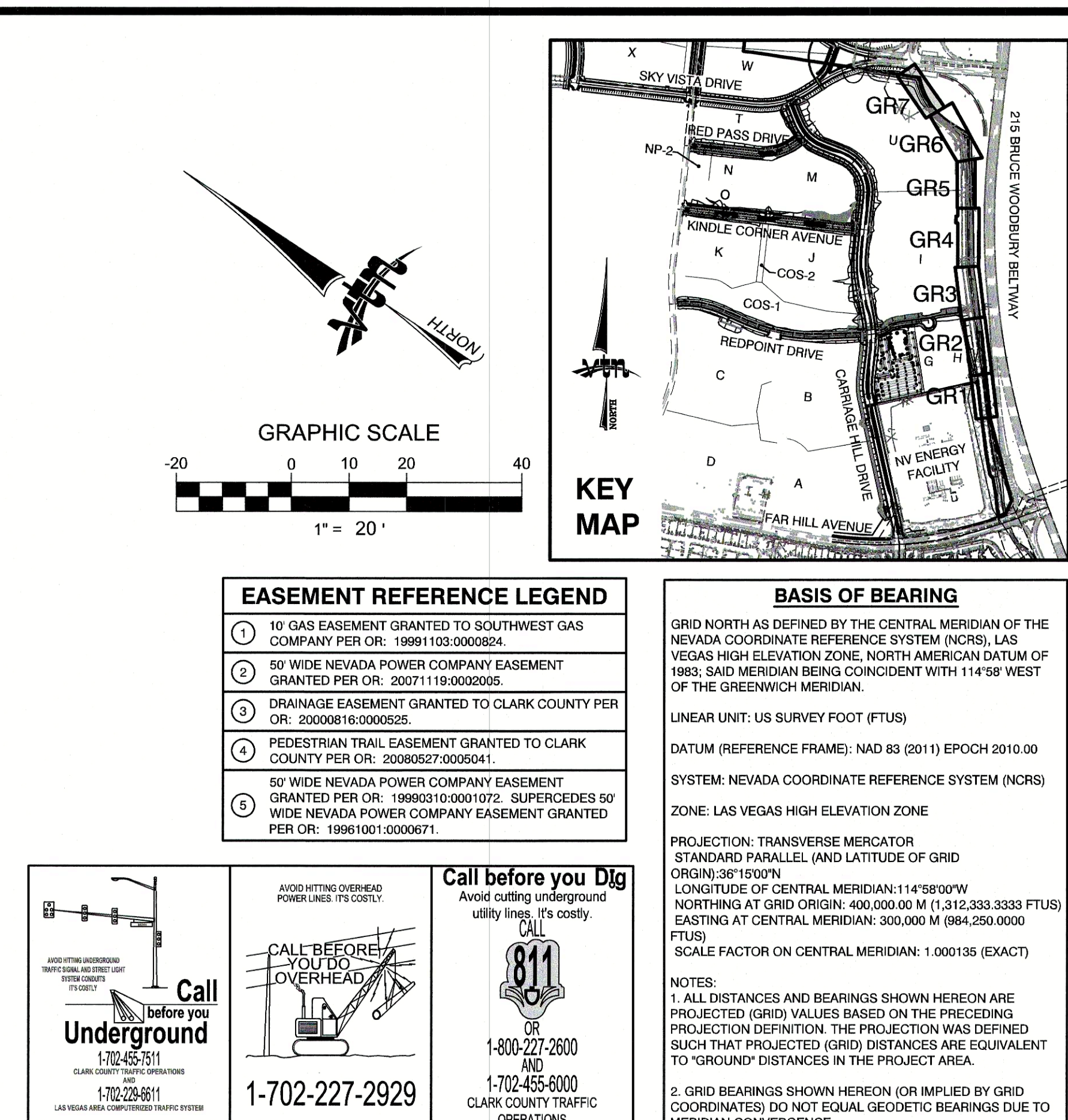
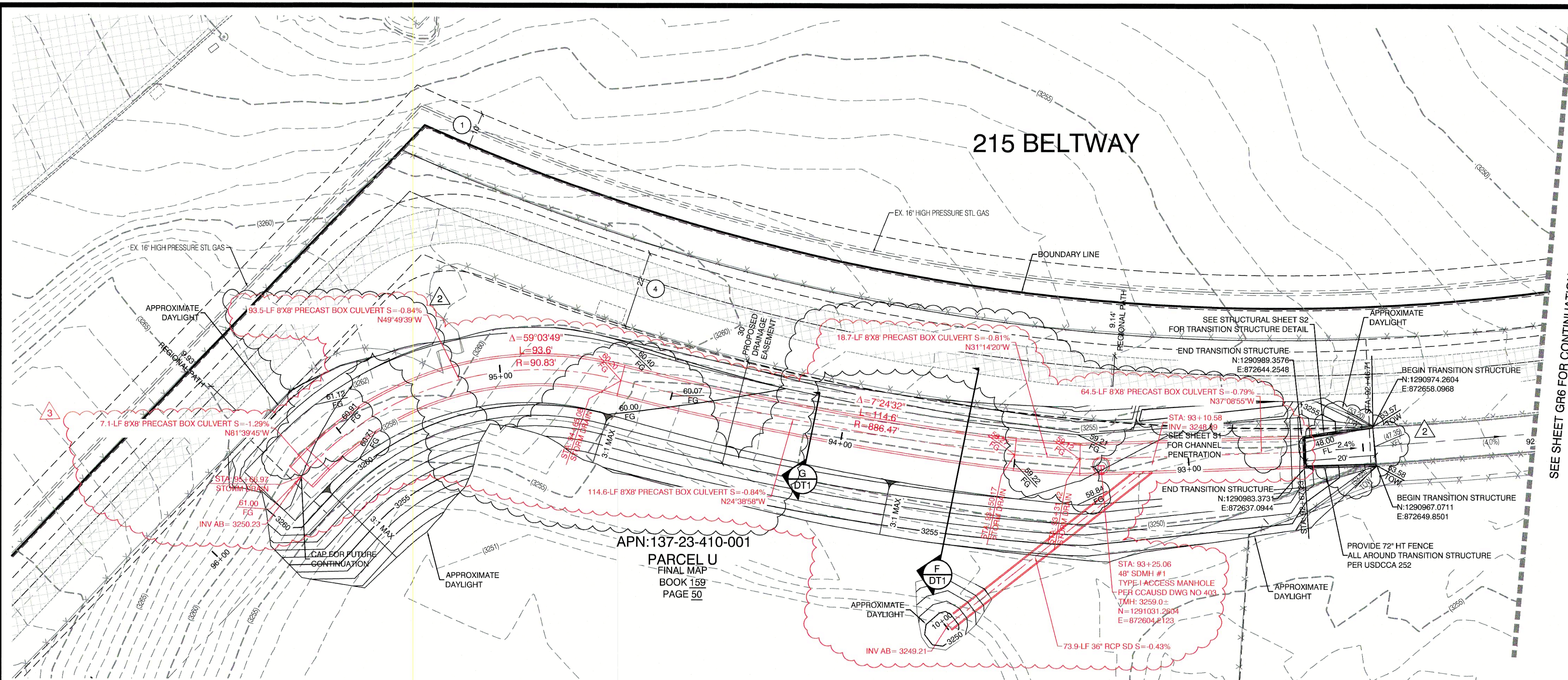
CITY OF LAS VEGAS

GRADING PLAN 5

SUMMERLIN WEST V21
BELTWAY CHANNEL SKY VISTA DRIVE
TO NV ENERGY FACILITY

DRAWN BY: BCC 02/07/2019
DESIGNED BY: BCC 02/07/2019
CHECKED BY: WJM 09/23/2020
PROJECT NO: 7851
SCALE: 1"=20'
SHEET: GR5
9 OF 14 SHEETS
DRAWING NO. L19-01775
327-301

10/7/2011 Beltway Channel Sheet 5 of 14
H:\7851 Beltway Channel Sheet 5 of 14.GRD dwg 9/28/2020 6:15 AM brandon



GRADING PERMIT NOTE

THIS GRADING PERMIT DOES NOT INCLUDE THE CONSTRUCTION OF RETAINING WALLS AND OTHERS STRUCTURES. SEPARATE PERMITS AND APPLICATIONS ARE REQUIRED FOR THESE.

FLOOD ZONE NOTE

SITE IS LOCATED IN A SHADED ZONE X AS SHOWN IN FIRM MAP 32008322150E, DATED SEPTEMBER 27, 2002. A SHADED ZONE X IS DETERMINED TO BE OUTSIDE THE 2.0% ANNUAL CHANCE FLOODPLAIN, ENTIRE SITE BOUNDARY IS WITHIN ZONE X.

CAUTION: HIGH PRESSURE GAS!!

CALL SOUTHWEST GAS AT 702-400-1789 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES 48 HOURS PRIOR TO CONSTRUCTION.

GEOTECHNICAL NOTE:

REFER TO SOILS REPORT: NOVA GEOTECHNICAL PROJECT #G-18-003, DATED MARCH 5, 2018

SIGHT VISIBILITY ZONES:

NO STRUCTURE, WALLS, VEGETATION, OR OBJECT OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT VISIBILITY ZONES.

CONTRACTOR NOTE

ANY EXISTING STRUCTURES OR FACILITIES MOVED OR DAMAGED DURING CONSTRUCTION WILL BE REPLACED BY CONTRACTOR

ENGINEER DISCLAIMER NOTE:

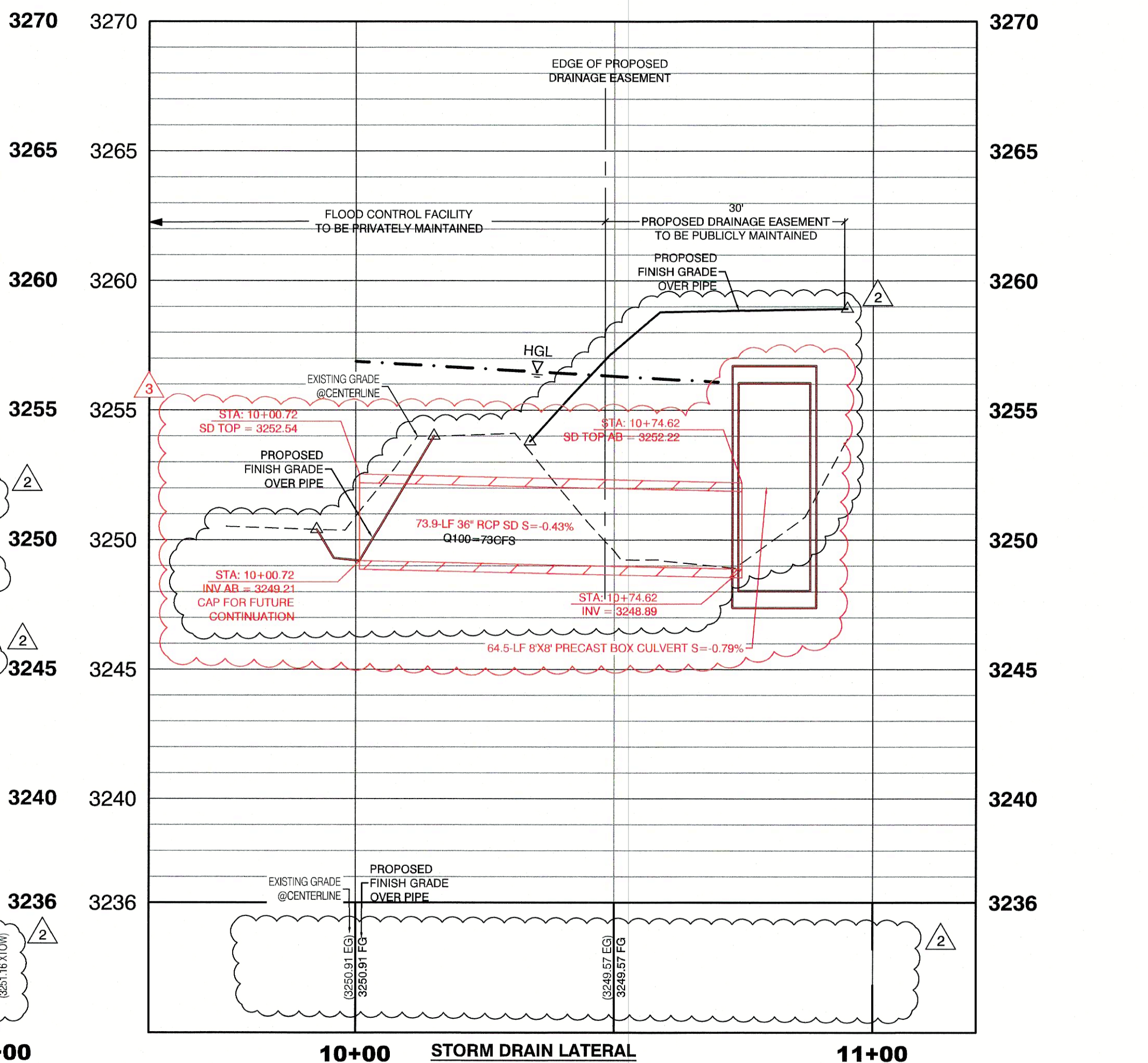
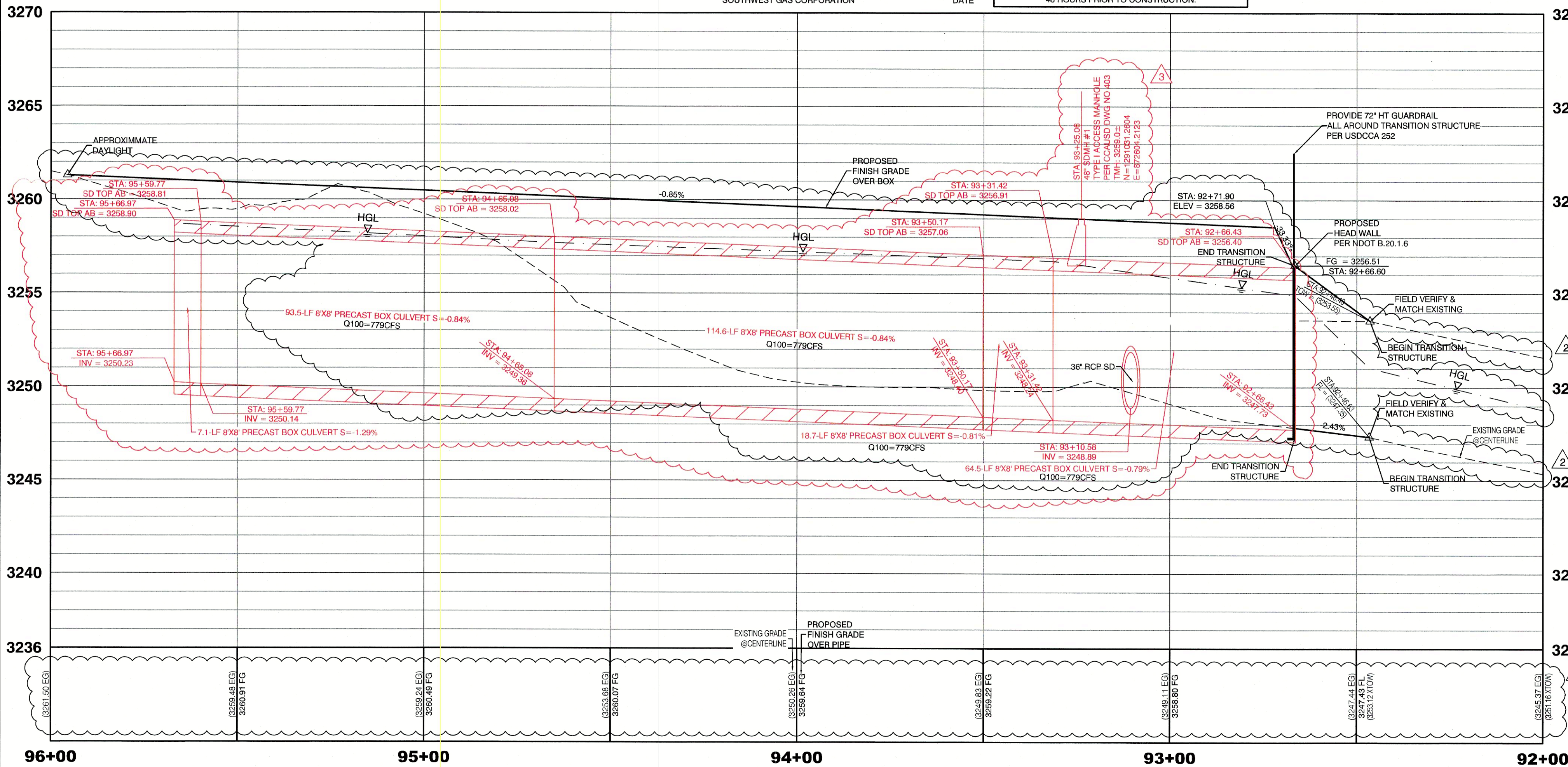
UTILITY LOCATIONS SHOWN HERE ON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES AND NOTIFY THE DESIGN ENGINEER IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO COMMENCING CONSTRUCTION.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

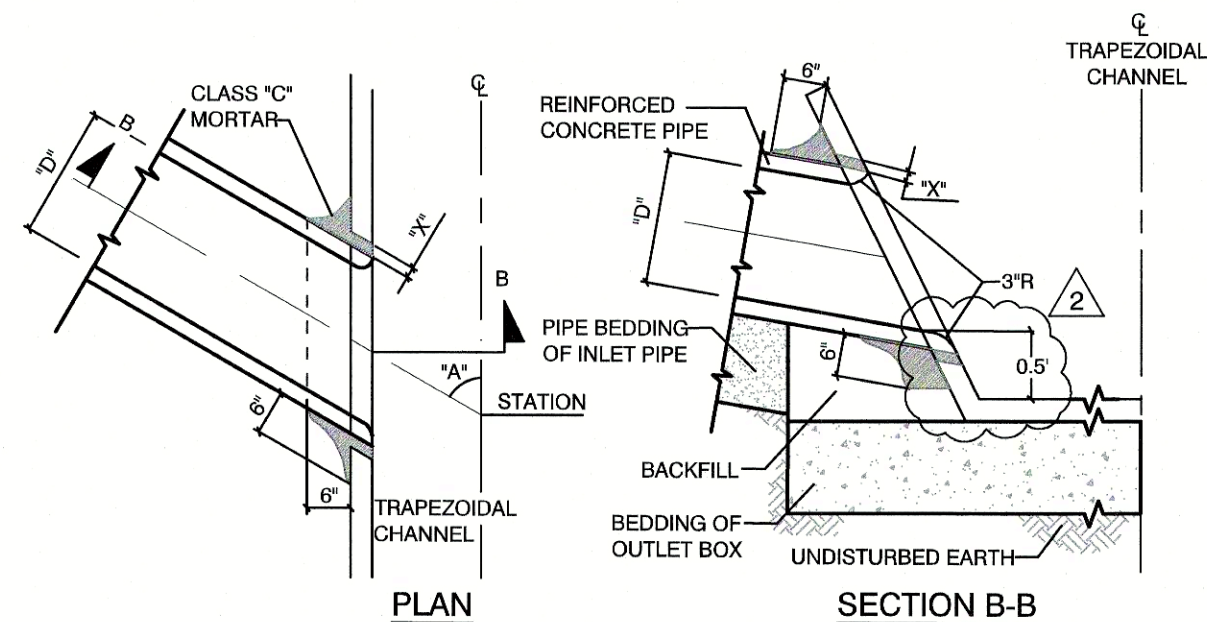
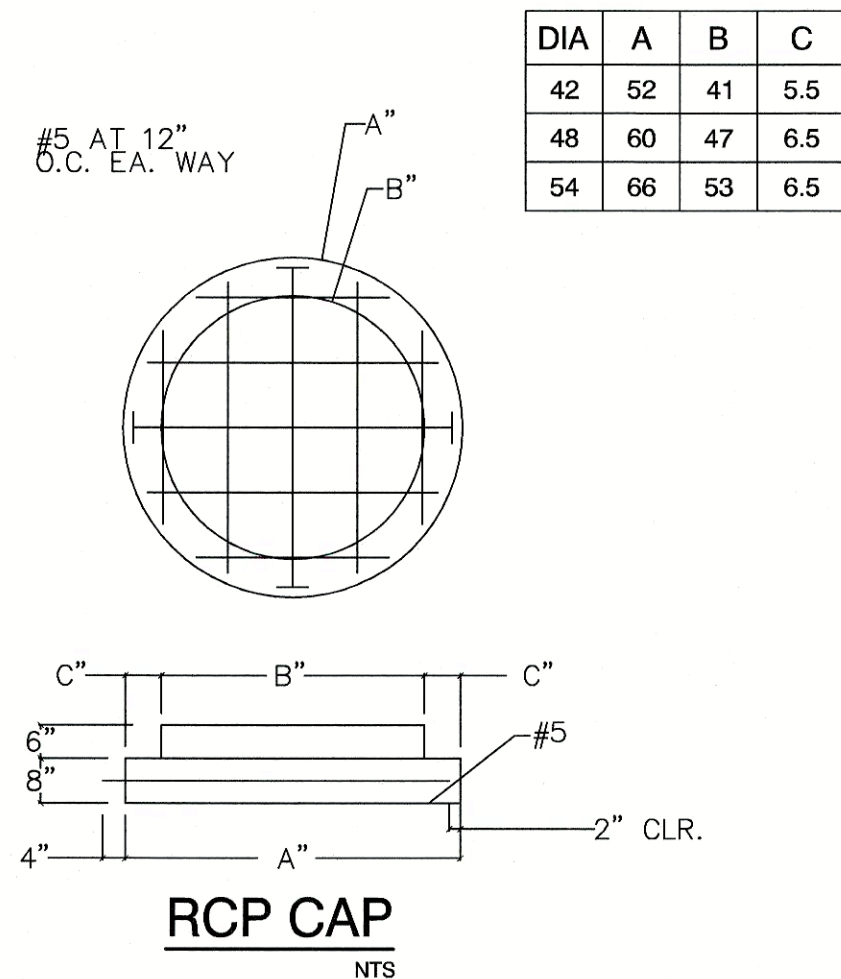
I CERTIFY THAT THIS GRADING PLAN CONFORMS TO THE APPROVED DRAINAGE STUDY FOR THIS SITE ON FILE WITH CITY OF LAS VEGAS, P.E. No. 15745 DATE

WILLIAM J MEYER, P.E. No. 15745 DATE

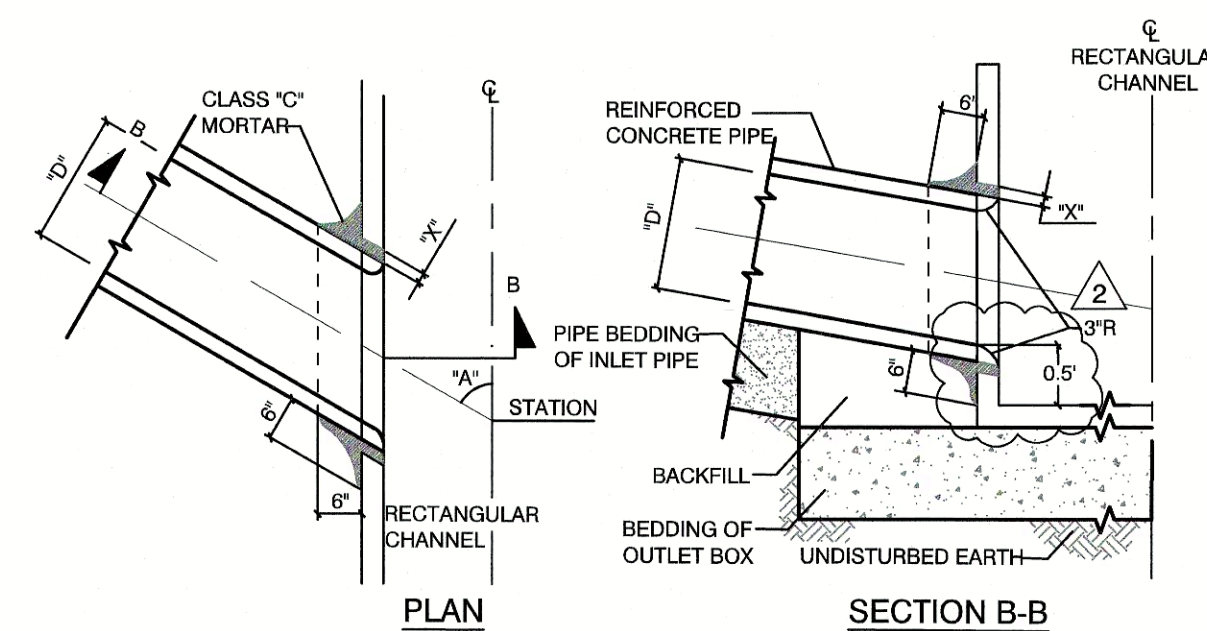
BENCHMARK

PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
CITY OF LAS VEGAS BENCHMARK: D368 (REVISED 2008)
NAVD88 ELEVATION: 989.574 METERS (3,246.63 FEET)
FND USGAS DISC SET IN ROCK RIDGE 150' SOUTH OF CHARLESTON BLVD. & WEST OF DETENTION BASIN. T215, R69E, S03

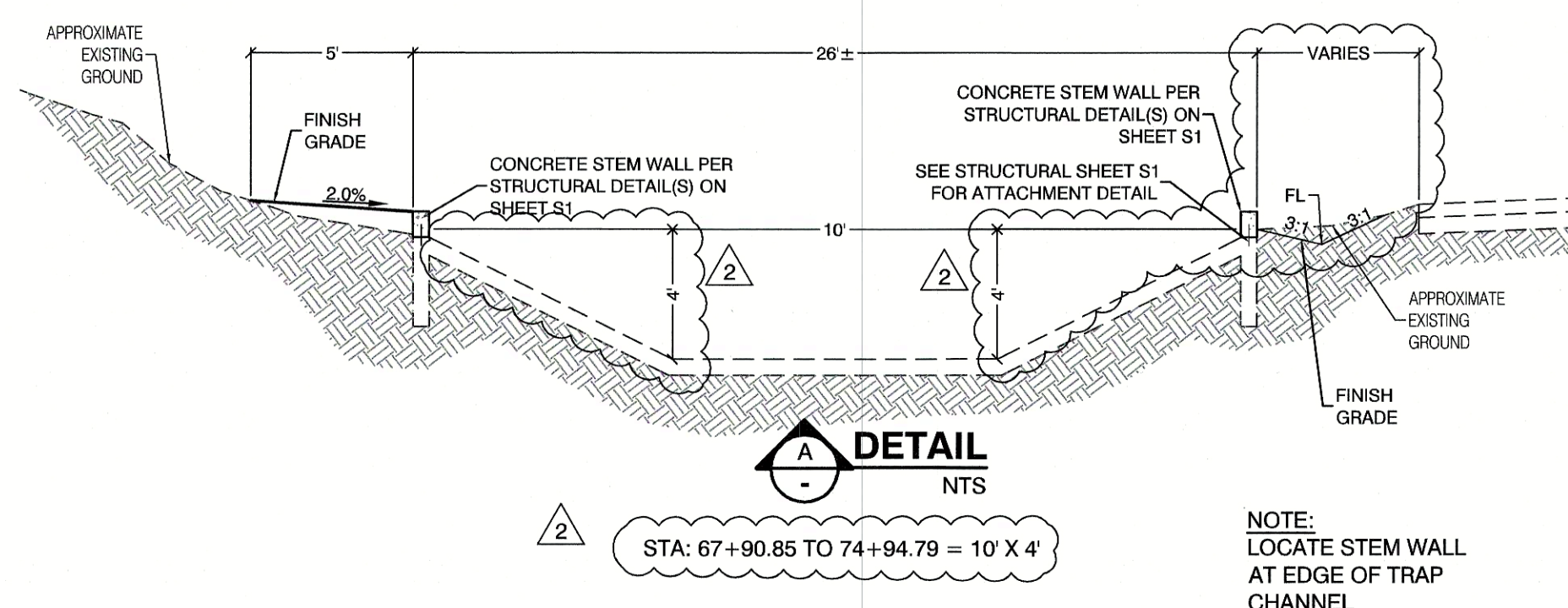
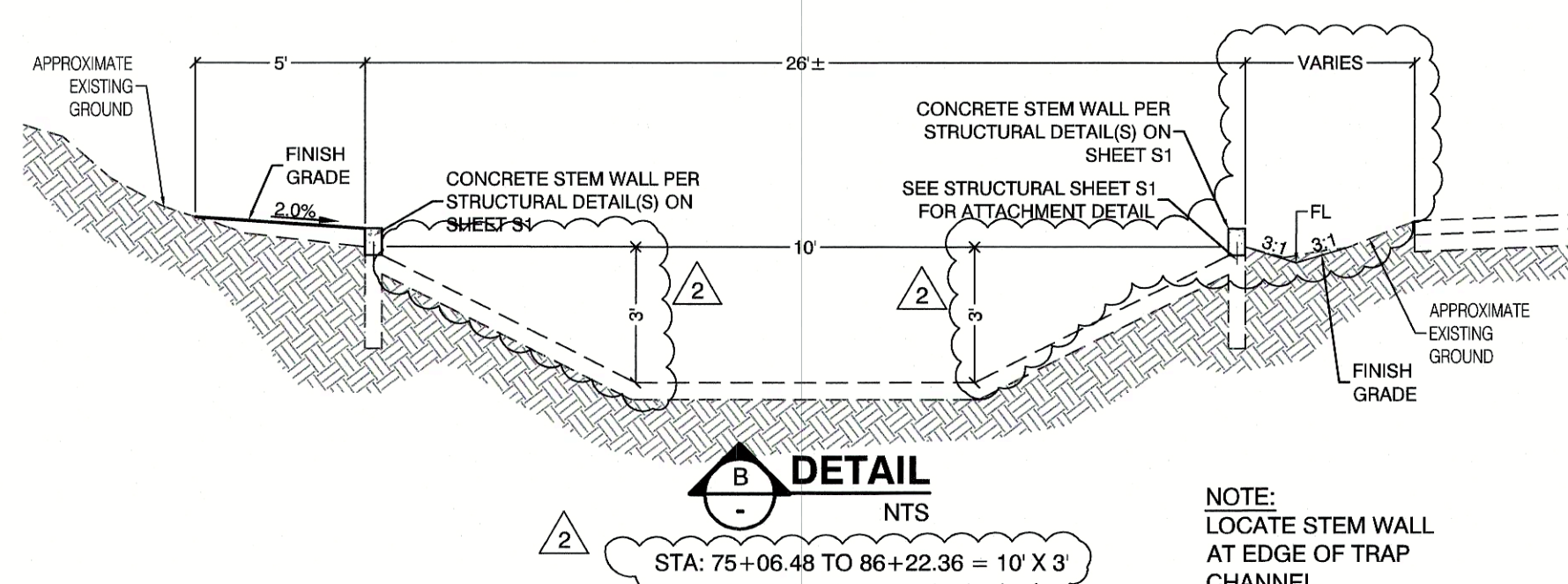
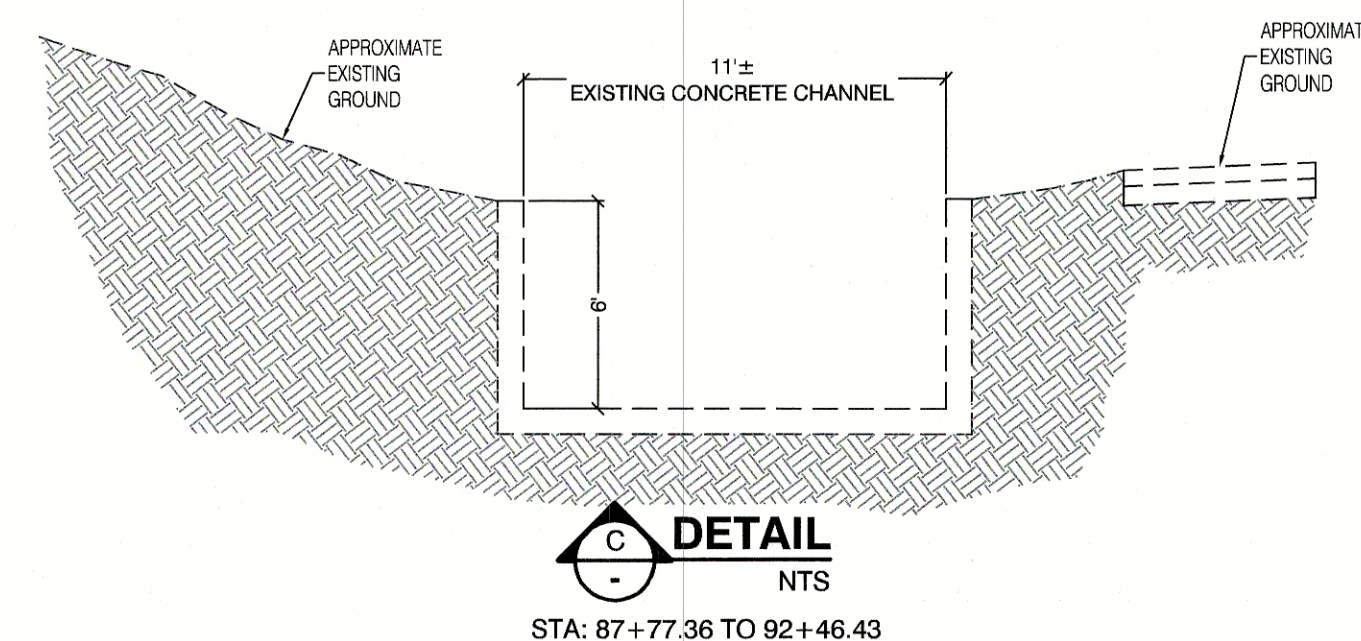
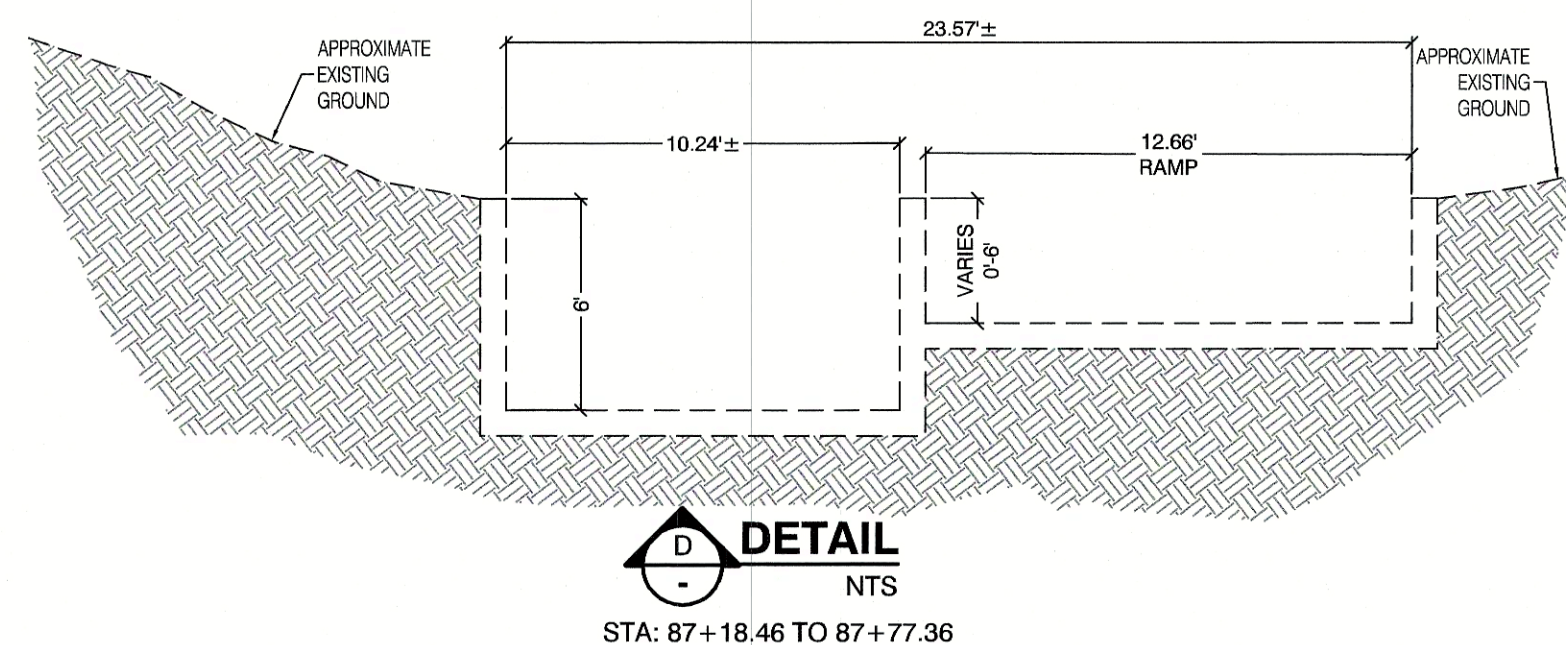
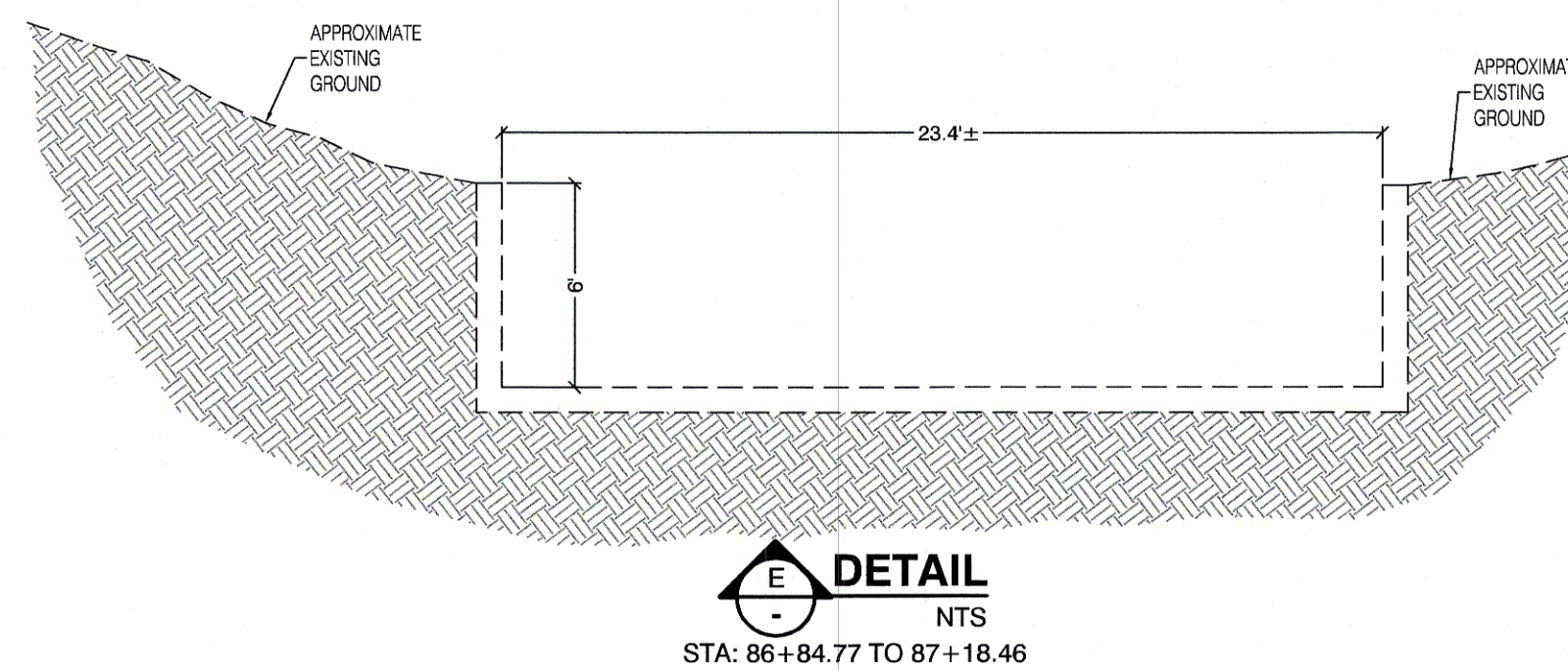
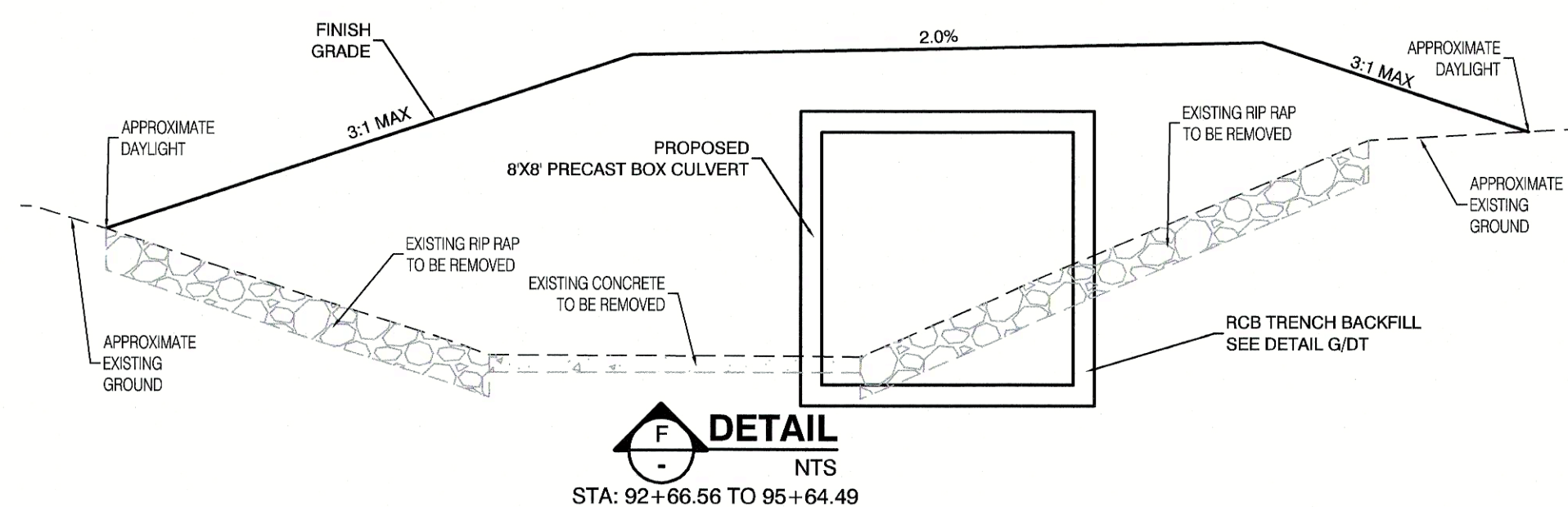




- NOTES:**
1. SEE PLAN FOR ANGLE "A"
 2. DIMENSION "X" SHALL BE 2" MINIMUM AND 4" MAXIMUM
 3. BURN OR CHIP END OF INLET PIPE FLUSH WITH INNER SURFACE OF MAINLINE. ROUND EDGES OF MAINLINE AND INLET PIPE.



- NOTES:**
1. SEE PLAN FOR ANGLE "A"
 2. DIMENSION "X" SHALL BE 2" MINIMUM AND 4" MAXIMUM
 3. BURN OR CHIP END OF INLET PIPE FLUSH WITH INNER SURFACE OF MAINLINE. ROUND EDGES OF MAINLINE AND INLET PIPE.



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

CALL
811

OR
1-800-227-2600
AND
1-702-455-6000

CLARK COUNTY TRAFFIC
OPERATIONS

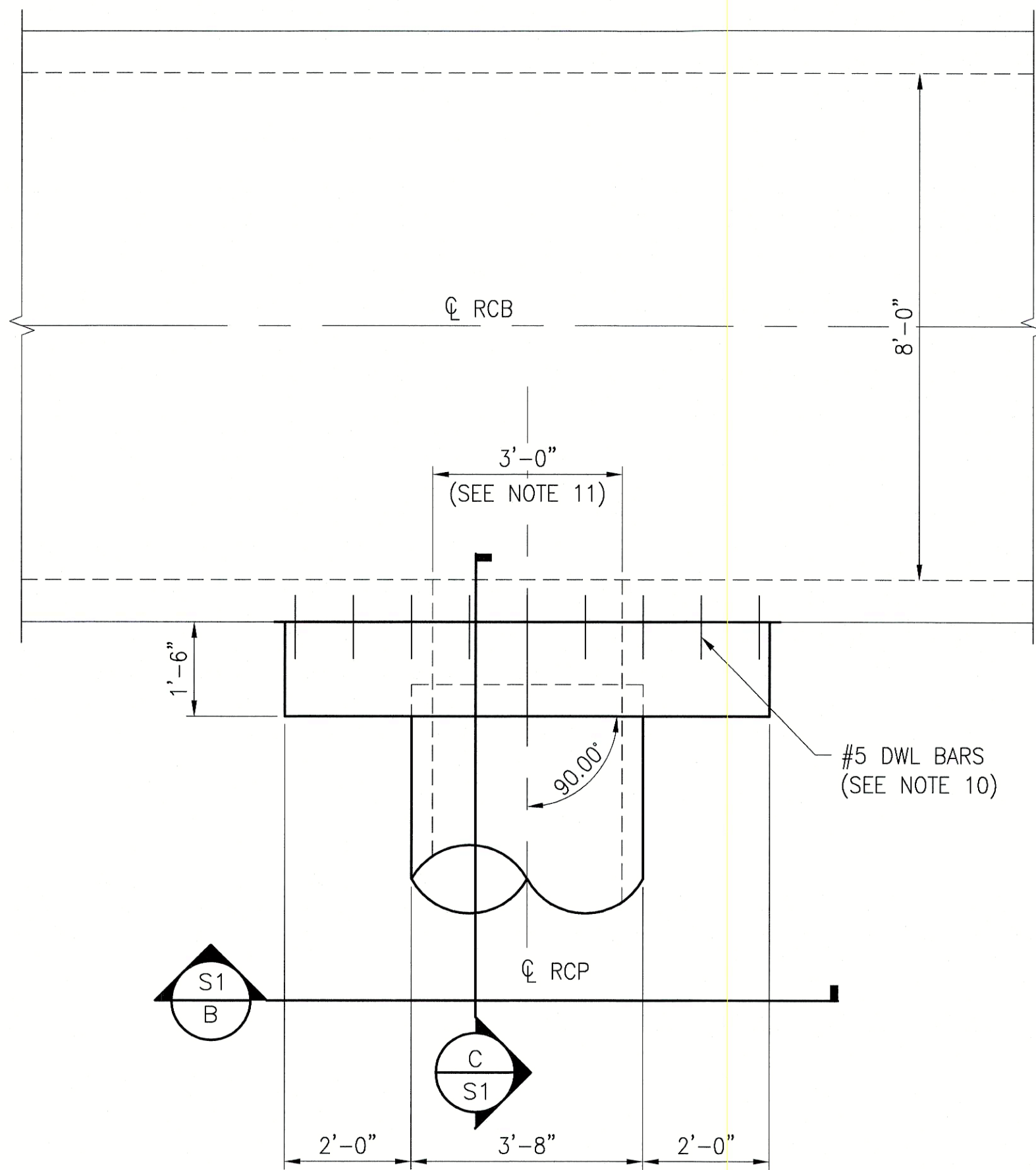
**HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY**

DETAIL SHEET 1
SUMMERLIN WEST V21
BELTWAY CHANNEL SKY VISTA DRIVE
TO NV ENERGY FACILITY

DRAWN BY: BCC	02/07/2019	SCALE: 1"=20' N/A VERT.
DESIGNED BY: BCC	02/07/2019	
CHECKED BY: WJM	09/23/2020	
PROJECT NO: 7851		

WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15795
9/26/10
SHEET
DT1
12 of 14 SHEETS
DRAWING NO.
L19-01775
327-301

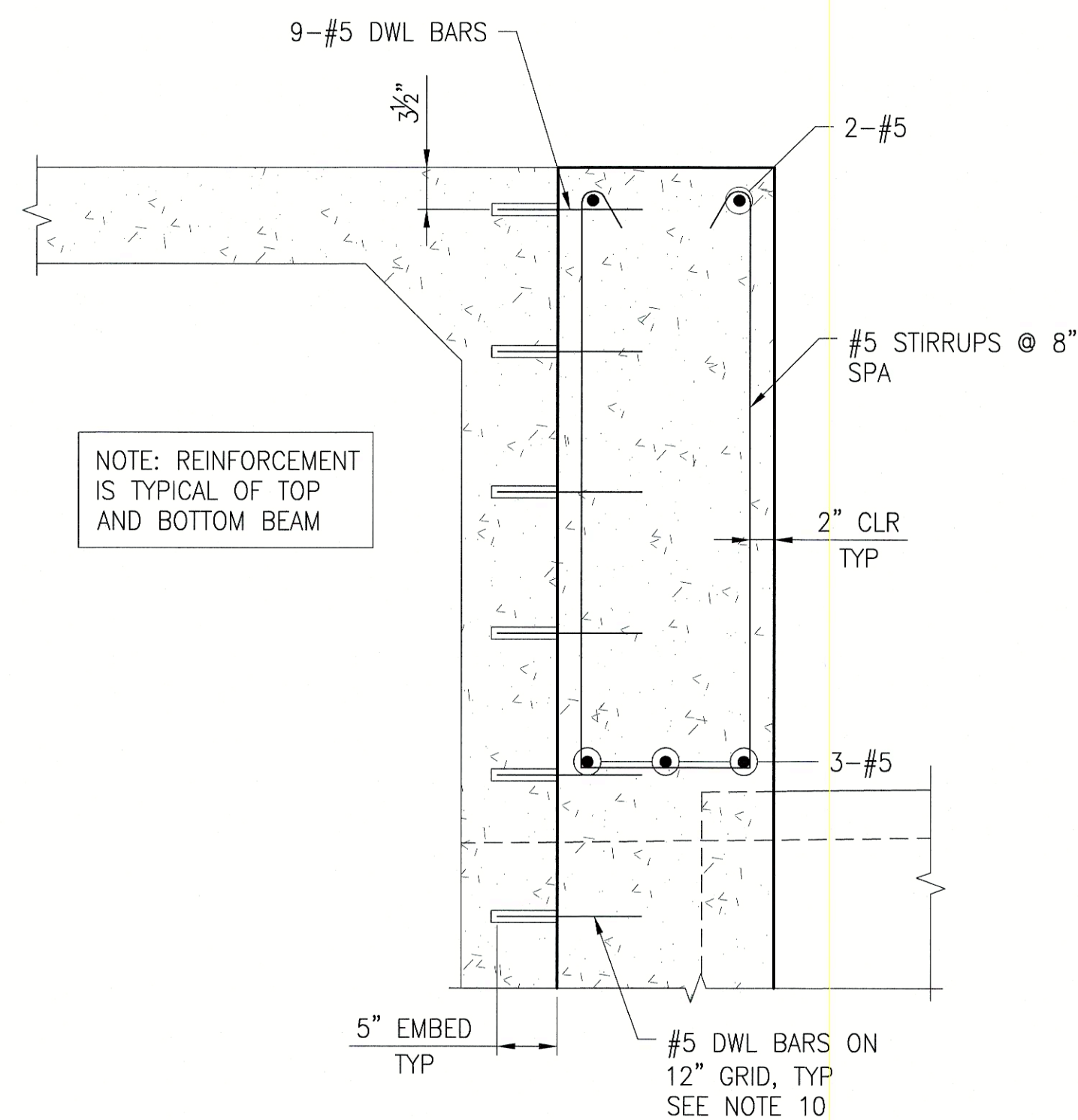
\\7851\Beltway Channel\Sheet Set\7851-DT.dwg:4/9/2020 3:08 PM:kcampbell



COLLAR PLAN

SCALE: 1/2"=1'-0"

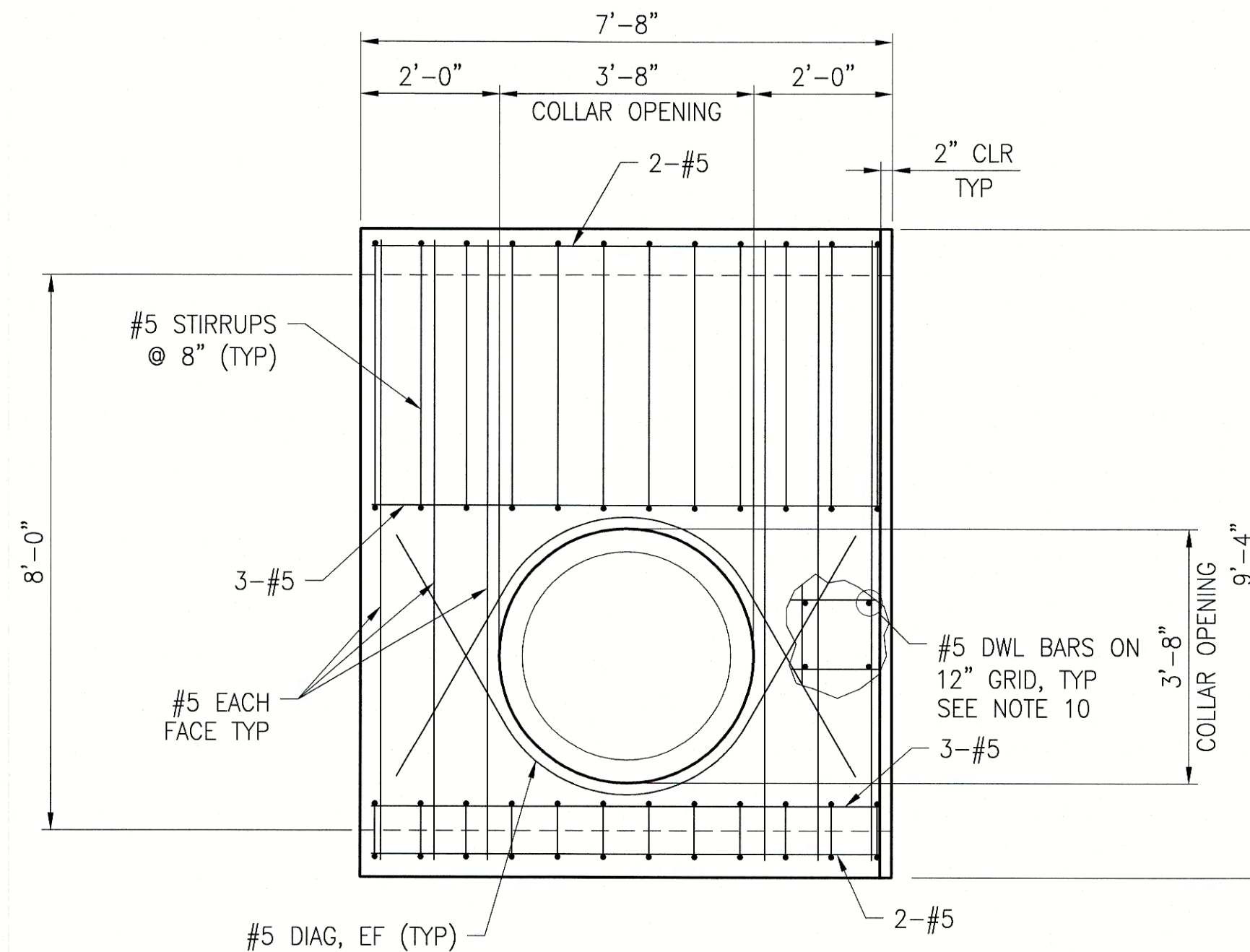
(A)
S1



COLLAR BEAM DETAIL

SCALE: 1"=1'-0"

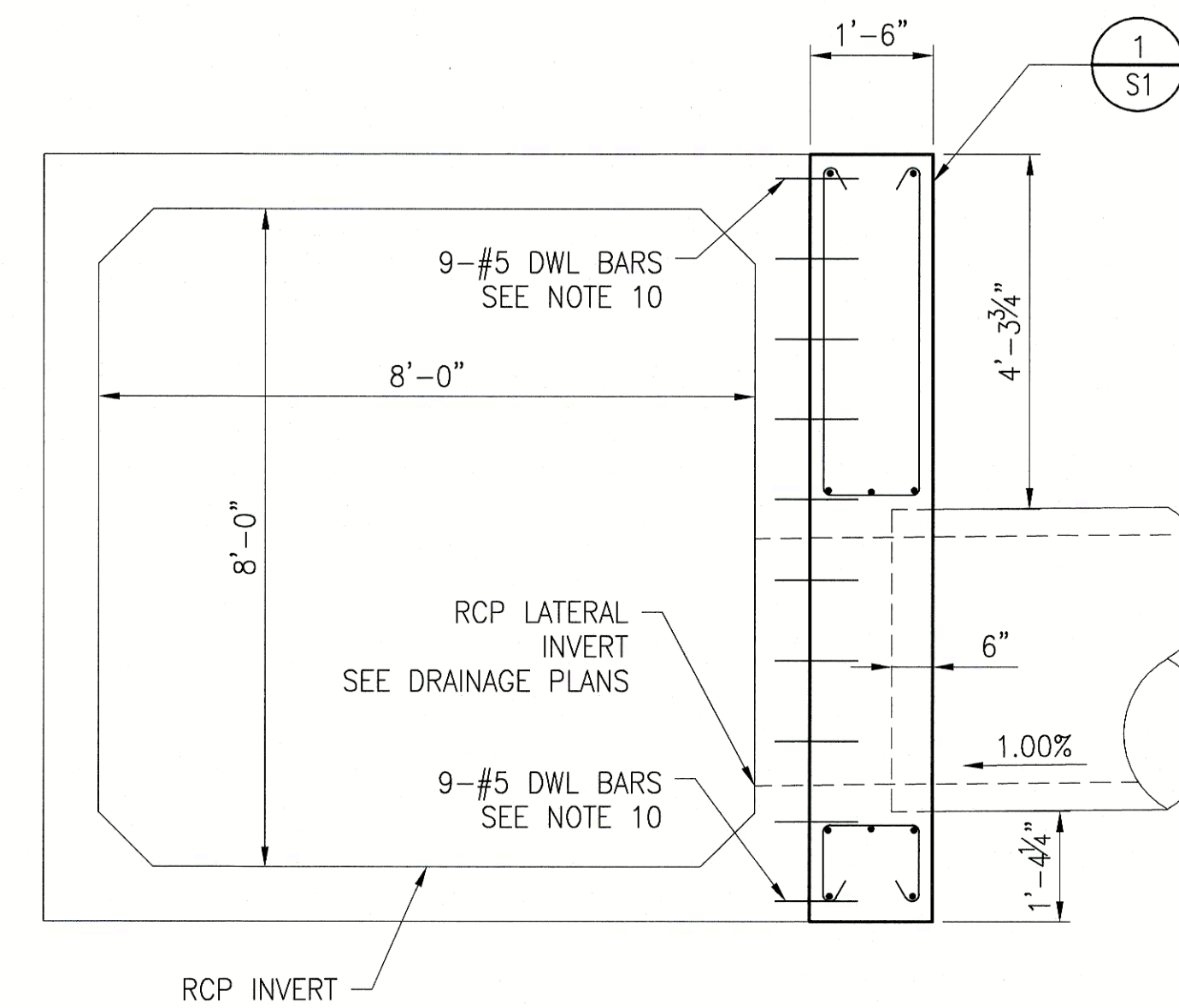
(1)
S1



COLLAR DETAIL

SCALE: 1/2"=1'-0"

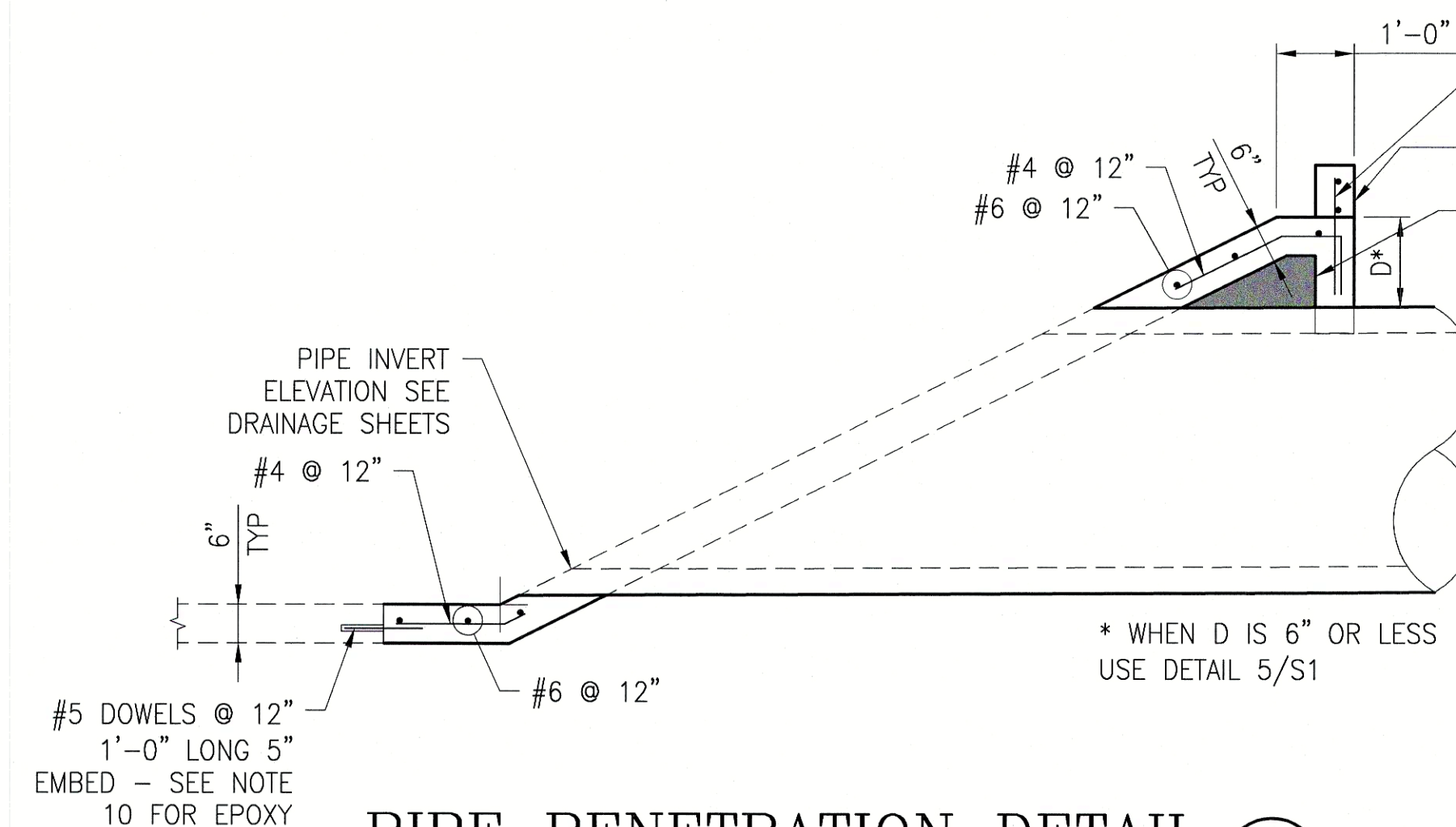
(B)
S1



COLLAR SECTION

SCALE: 1/2"=1'-0"

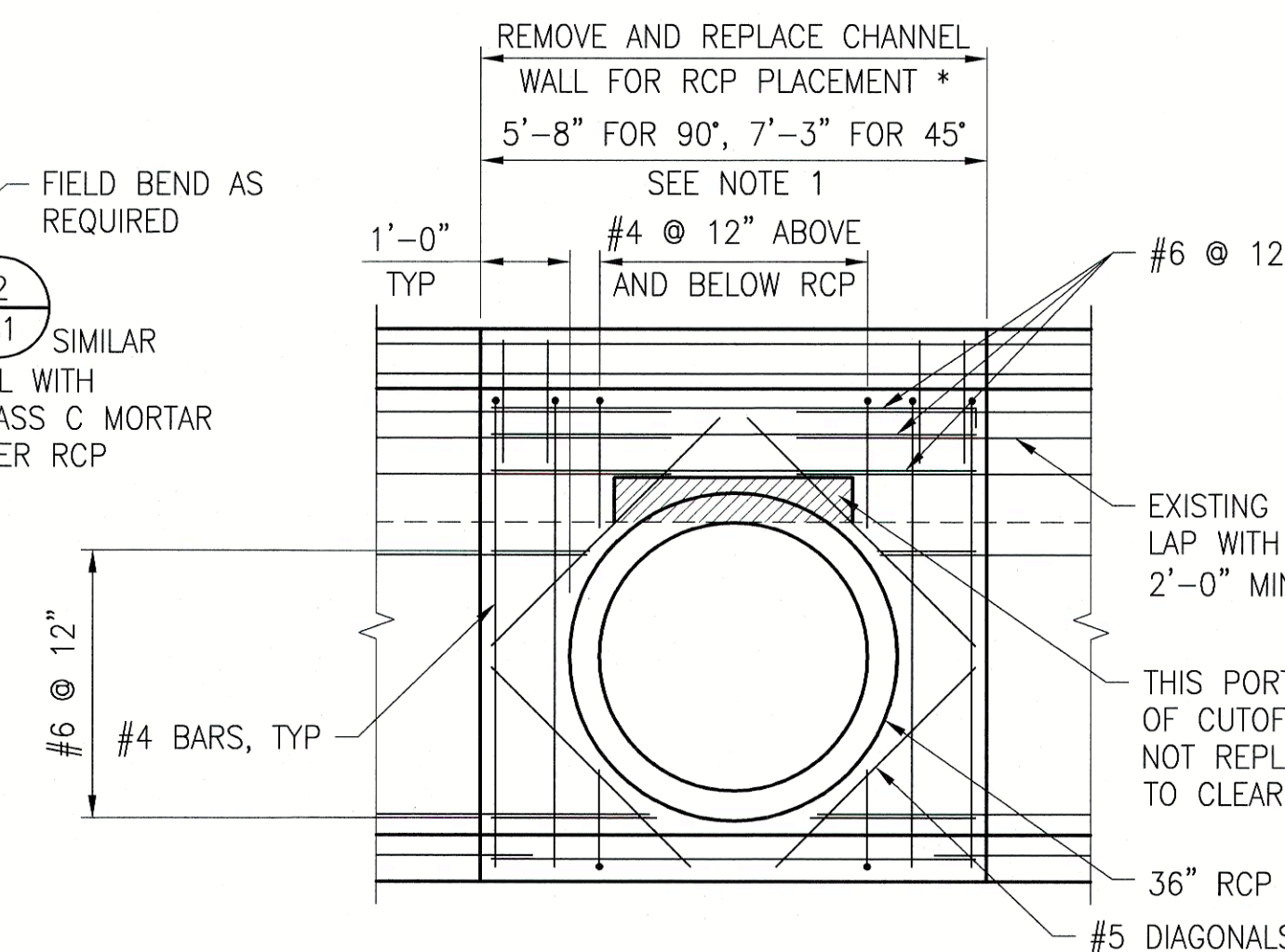
(C)
S1



PIPE PENETRATION DETAIL

SCALE: 1/2"=1'-0"

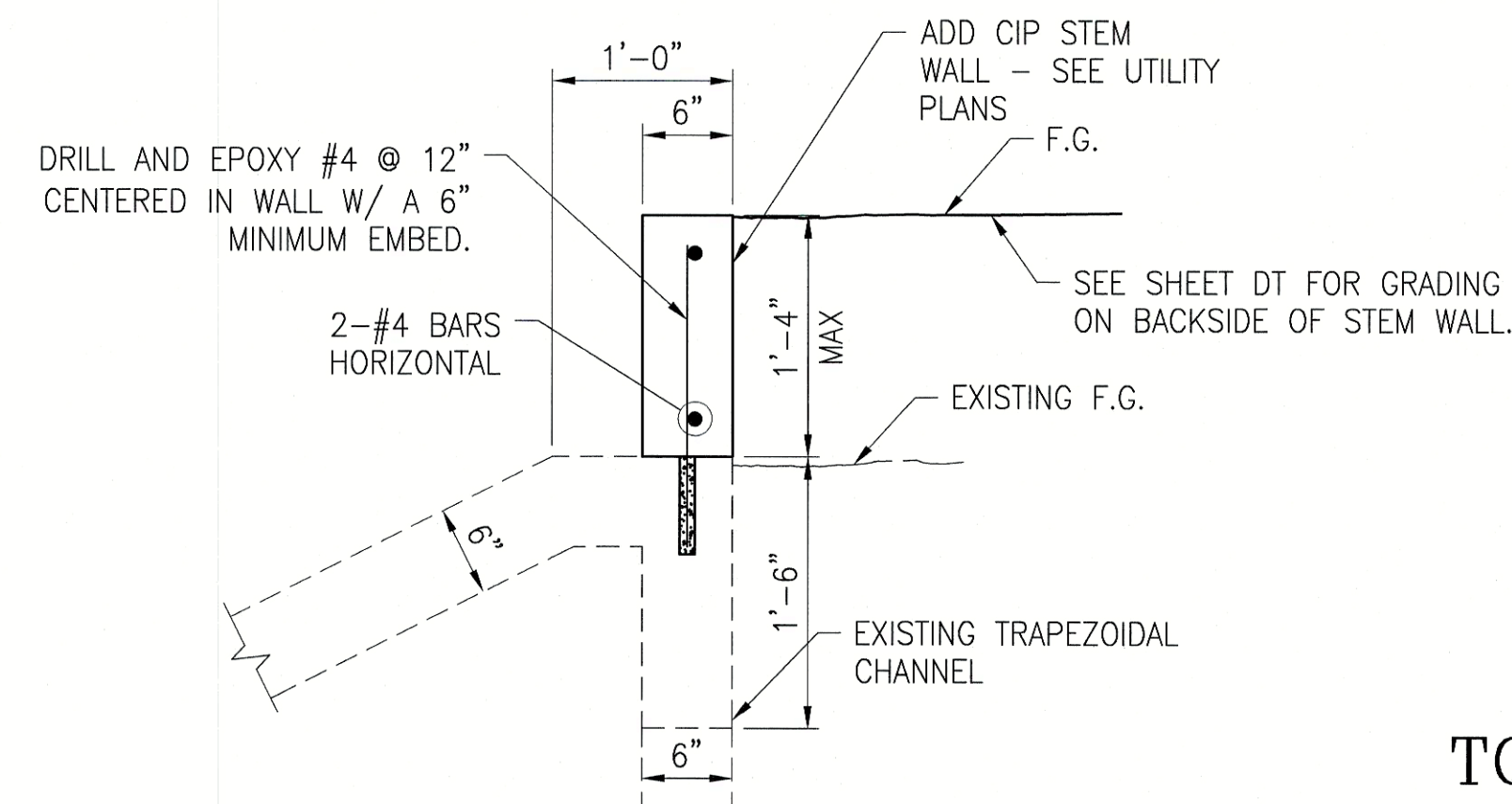
(3)
S1



PIPE PENETRATION ELEVATION

SCALE: 1/2"=1'-0"

(4)
S1



TYPICAL STEM WALL CONNECTION DETAIL

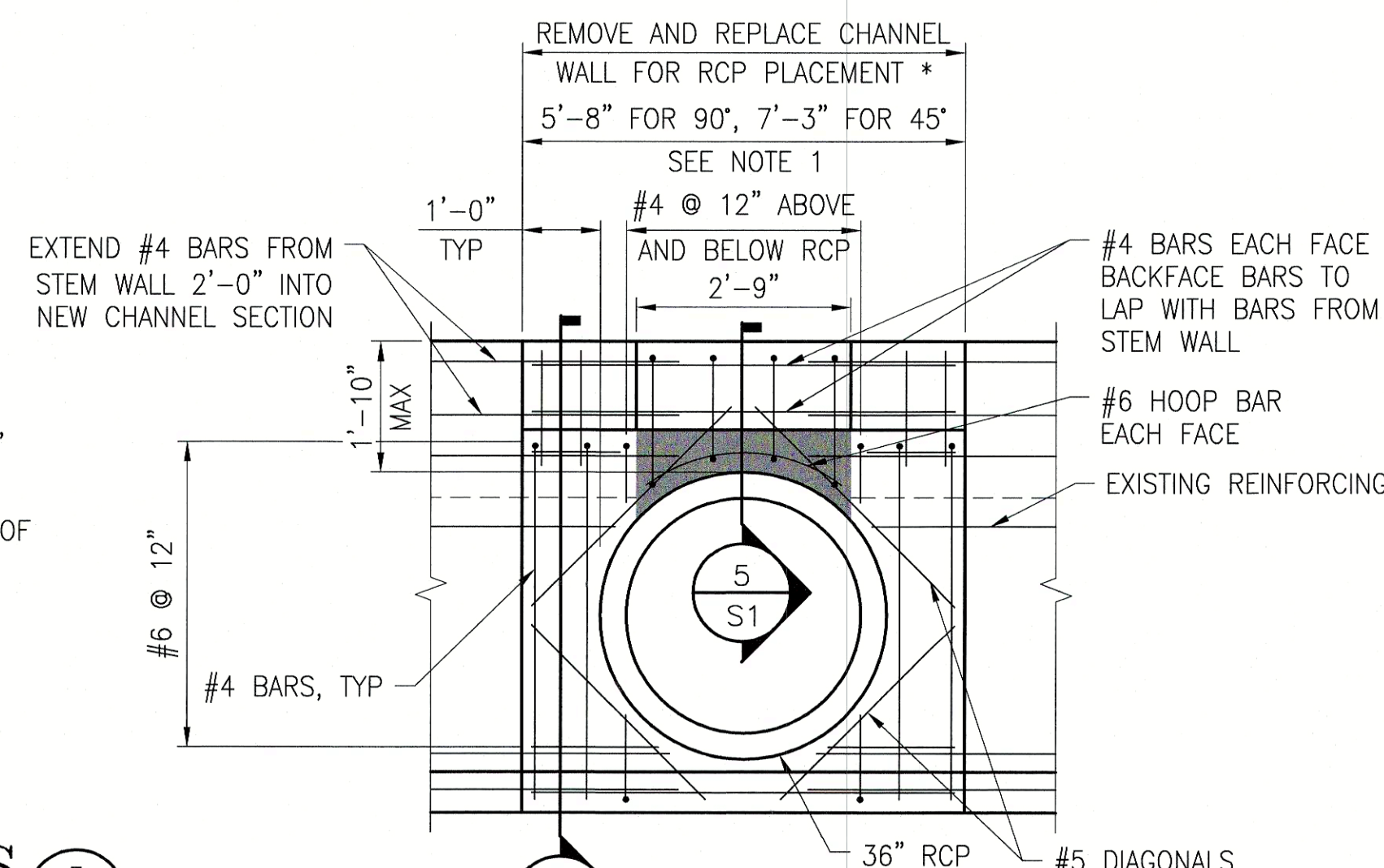
SCALE: 1/2"=1'-0"

(2)
S1

TOP OF PIPE PENETRATION DETAIL FOR "D" 6" OR LESS

SCALE: 1/2"=1'-0"

(5)
S1



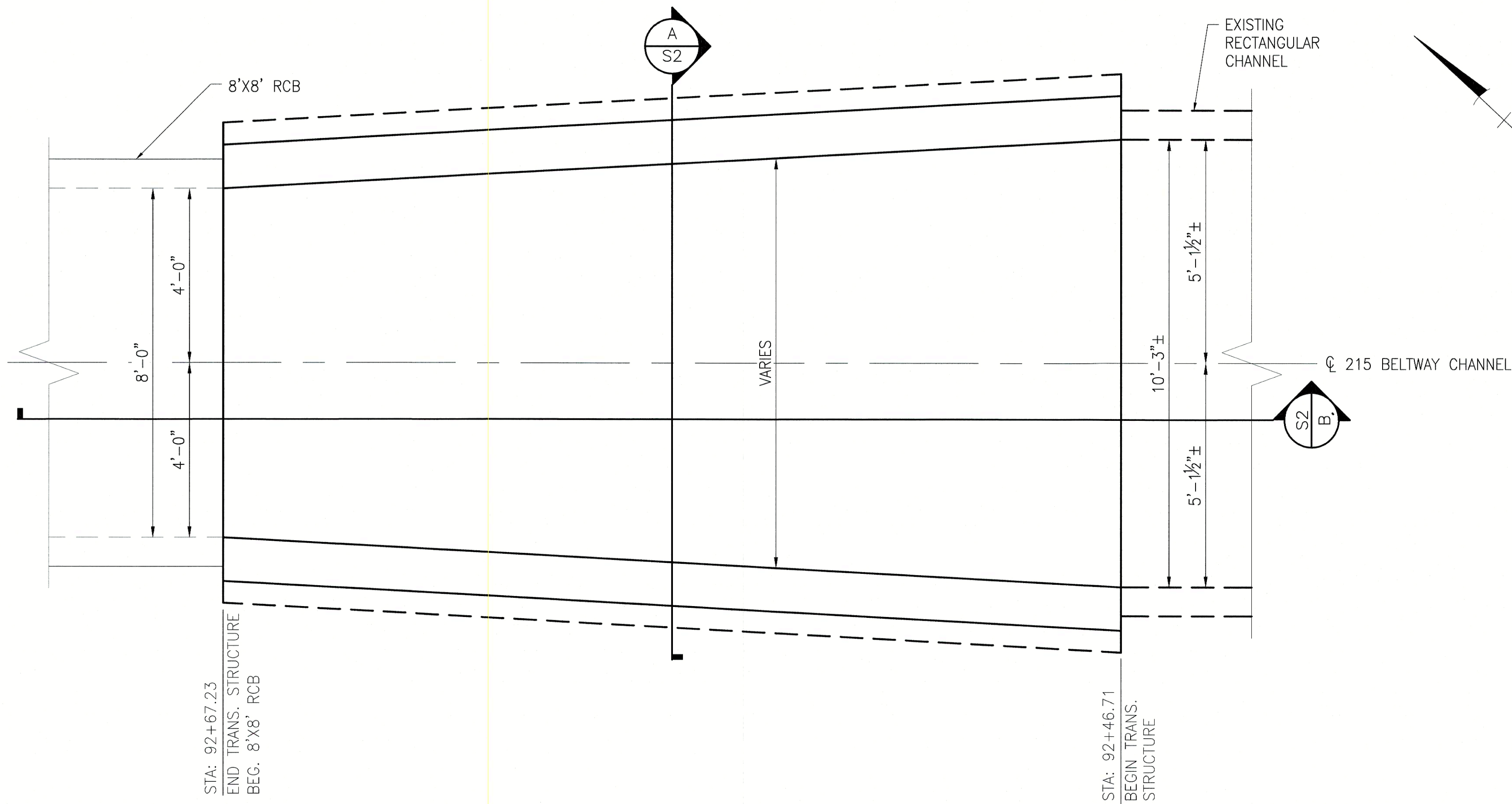
PIPE PENETRATION ELEVATION FOR "D" 6" OR LESS

SCALE: 1/2"=1'-0"

(6)
S1

- NOTES:**
- FOR EXACT LOCATION, HORIZONTAL ANGLE OF PIPE PENETRATION AND ELEVATION OF PIPE SEE DRAINAGE PLANS.
 - PORTLAND CEMENT SHALL CONFORM TO A.S.T.M. C-150, TYPE V. AGGREGATE SHALL CONFORM TO A.S.T.M. C-33.
 - ALL STRUCTURAL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 4500 PSI AT 28 DAYS.
 - RCB REINFORCEMENT NOT SHOWN FOR CLARITY.
 - ALL REINFORCING STEEL SHALL BE ASTM DESIGNATION A615 GRADE 60.
 - COVERAGE FOR REINFORCING BARS, EXCEPT WHERE OTHERWISE SHOWN, SHALL BE: 3" FOR CONCRETE PLACED AGAINST EARTH; 2" FOR OTHERS.
 - USE 3/4" CHAMFER ON ALL EXPOSED CORNERS.
 - ALL REINFORCING BAR LAP SPLICES SHALL CONFORM TO ACI 318-11.
 - DESIGN LIVE LOAD: HL-93
DESIGN EARTH COVER: 2'
 - DRILL & EPOXY #5 x 1'-0" LG SHEAR DOWELS w/ 5" EMBED INTO PRECAST RCB. PROVIDE #5 DOWELS OF THE NUMBER AND SPACING AS INDICATED IN C/S1. PROVIDE 1 ROW CENTERED HORIZONTALLY ABOVE AND BELOW THE PIPE OPENING. PROVIDE DOWELS ELSEWHERE ON A 12" O.C. MAX GRID. USE SIMPSON SET-XP EPOXY ADHESIVE OR APPROVED EQUAL.
 - THE OPENING SIZE MAY BE INCREASED (±3") FOR EASE OF INSTALLATION. FILL VOIDS WITH NON-SHRINK CONCRETE GROUT.
 - SEE SHEET S2 FOR SPECIAL INSPECTION NOTES AND MATRIX.

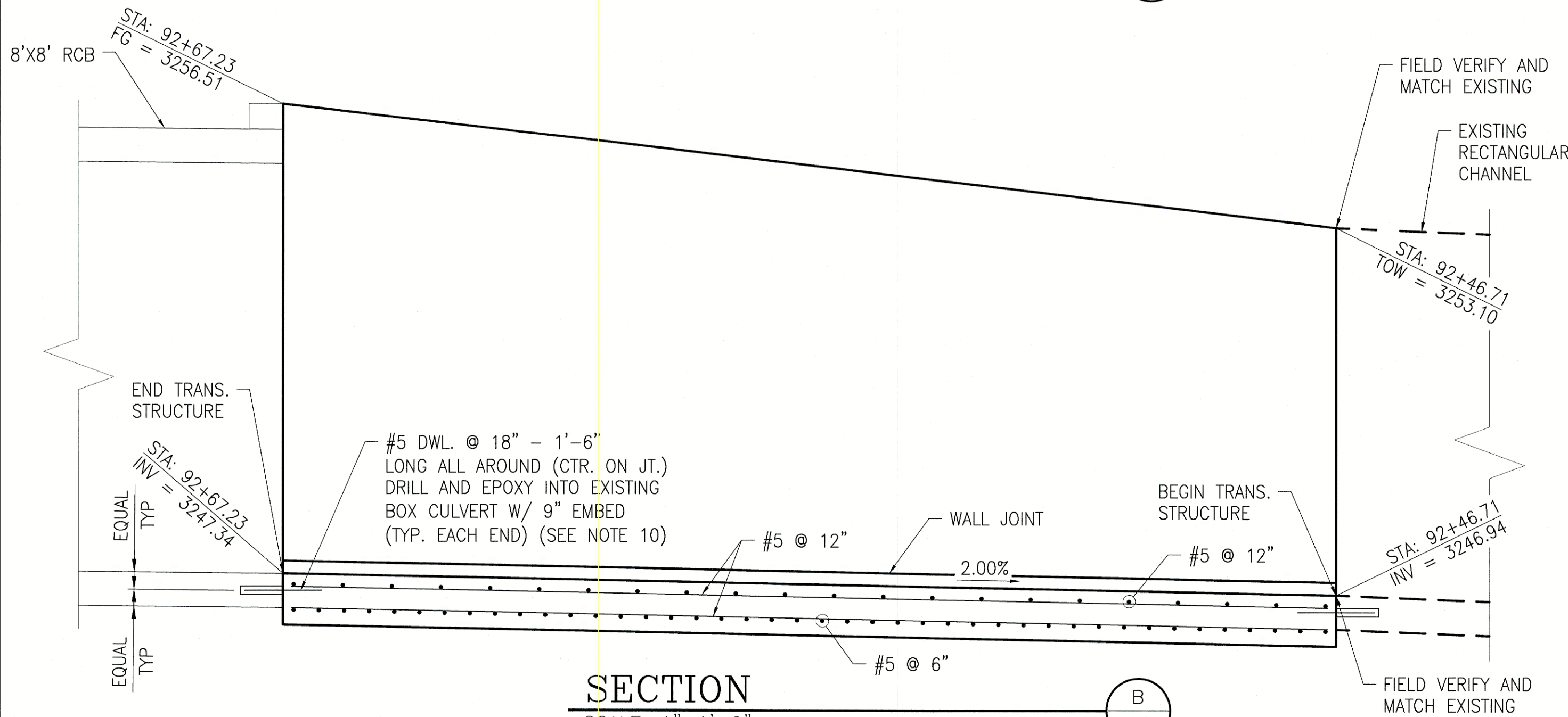
CITY OF LAS VEGAS				REVISION			
HOWARD HUGHES COMPANY, LLC A DELAWARE LIMITED LIABILITY COMPANY				BY			
1401 N. GREEN VALLEY PARKWAY, STE. 160 HENDERSON, NV 89074 PH. (702) 966-4033 WEB WWW.HORROCKSENGINEERS.COM				DATE			
HORROCKS ENGINEERS				REV			
STRUCTURAL DETAILS				DRAWING NO.			
SUMMERLIN WEST V21 BELTWAY CHANNEL SKY VISTA DRIVE TO NV ENERGY FACILITY A DELAWARE LIMITED LIABILITY COMPANY				SHEET			
DRAWN BY: 07/18/19				13 OF 14 SHEETS			
DESIGNED BY: 07/18/19				DRAWING NAME			
CHECKED BY: 07/18/19				10/22/2019			
PROJECT NO: NV-1917-1808				SCALE: 1"=1'-0" HORIZ 1"=1'-0" VERT.			
PROFESSIONAL SEAL				SHEET			
PEGGY KNOTT				13 OF 14 SHEETS			
EXP. 8/30/21				DRAWING NAME			
CIVIL				10/22/2019			
No. 7374				SCALE: 1"=1'-0" HORIZ 1"=1'-0" VERT.			



PARTIAL PLAN

SCALE: 1/2"=1'-0"

1
S2



SECTION

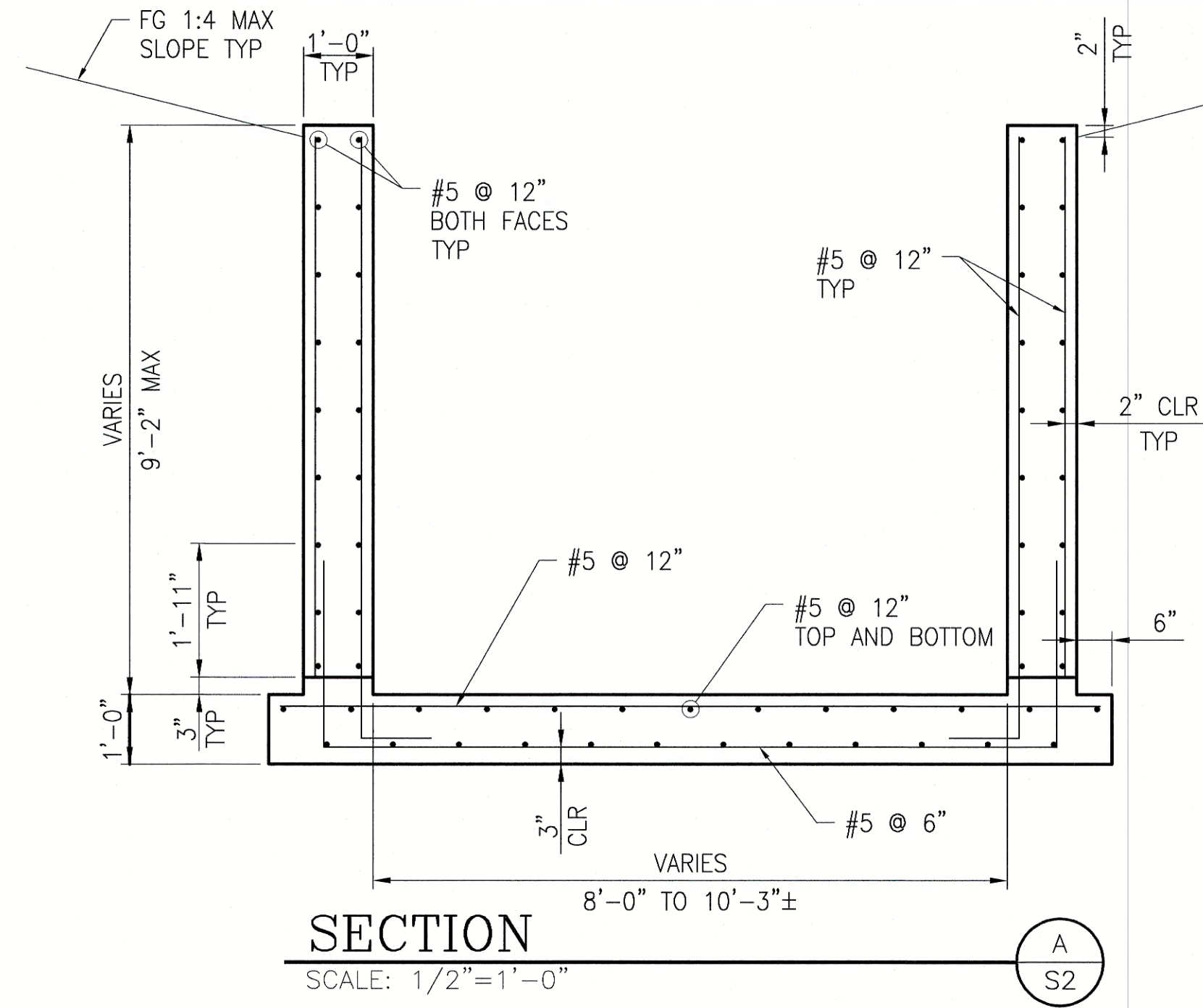
SCALE: 1"=1'-0"

B
S2

WALL REINFORCING NOT SHOWN FOR CLARITY, SEE SECTION A THIS SHEET

STRUCTURAL NOTES

- DESIGN SPECIFICATIONS: ACI 318-11, AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH. EDITION, 2017
- LIVE LOAD APPLIED: 1' VERTICAL SURCHARGE.
- PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE V AGGREGATE SHALL CONFORM TO ASTM C-33
- ALL STRUCTURAL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 4500 PSI AT 28 DAYS.
- ALL REINFORCEMENT STEEL SHALL BE ASTM DESIGNATION A615 GRADE 60.
- COVERAGE FOR REINFORCING BARS, EXCEPT WHERE OTHERWISE SHOWN, SHALL BE: 3" FOR CONCRETE PLACED AGAINST EARTH; 2" FOR OTHERS.
- USE 3/4" CHAMFER ON ALL EXPOSED CORNERS.
- RCB WALL AND SLAB THICKNESSES ARE ASSUMED. CONTRACTOR SHALL VERIFY ACTUAL RCB THICKNESSES.
- FOR SUBGRADE, BACKFILL, AND COMPACTION RECOMMENDATIONS SEE THE PROJECT GEOTECH REPORT:
GEOTECHNICAL EXPLORATION REPORT
VILLAGE 21 ROADWAYS & WATERLINES
WEST OF CC-215 BETWEEN FAR HILLS AVENUE AND SUMMERLIN PARKWAY
SUMMERLIN VILLAGE 21, LAS VEGAS, NEVADA
PROJECT NO. G-18-003, MARCH 5, 2018
FOR THE HOWARD HUGHES CORPORATION
PREPARED BY: NOVA GEOTECHNICAL & INSPECTION SERVICES
- USE SIMPSON SET-XP EPOXY ADHESIVE OR APPROVED EQUAL FOR DOWELS.
- FOR INFORMATION NOT SHOWN, SEE CIVIL DRAWINGS.



SECTION

SCALE: 1/2"=1'-0"

A
S2

STATEMENT OF SPECIAL INSPECTION

- PROVIDE SPECIAL INSPECTIONS IN ACCORDANCE WITH THE APPROPRIATE SECTIONS OF CHAPTER 17 OF THE BUILDING CODE FOR THE ITEMS SHOWN IN THE TABLE BELOW ALONG WITH ANY ADDITIONAL INSPECTIONS AS REQUIRED BY THE OWNER, BUILDING OFFICIAL, ENGINEER OR ARCHITECT AS THEY SEE FIT.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM THE SPECIAL INSPECTOR OR INSPECTION AGENCY AT LEAST ONE WORKING DAY PRIOR TO PERFORMING ANY WORK THAT REQUIRES SPECIAL INSPECTION. ALL WORK PERFORMED WITHOUT REQUIRED SPECIAL INSPECTION IS SUBJECT TO REMOVAL.
- WHERE SPECIAL INSPECTION IS REQUIRED, IT MUST BE PERFORMED BY A CERTIFIED SPECIAL INSPECTOR EMPLOYED BY THE OWNER & APPROVED BY THE BUILDING OFFICIAL. THE SPECIAL INSPECTOR SHALL DEMONSTRATE COMPETENCE FOR THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION TO THE BUILDING OFFICIAL AND ENGINEER, PER SECTION 1704.1 OF THE BUILDING CODE. THE SPECIAL INSPECTORS MUST BE CERTIFIED BY THE GOVERNING JURISDICTION TO PERFORM THE TYPES OF INSPECTIONS SPECIFIED. PROVIDE SPECIAL INSPECTION REPORTS TO THE ENGINEER WITHIN 7 DAYS FROM THE DAY OF INSPECTION.
- THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS. THE SPECIAL INSPECTOR SHALL FURNISH COPIES OF INSPECTION REPORTS TO THE BUILDING OFFICIAL AND TO HORROCKS ENGINEERS FOR REVIEW WITHIN SEVEN (7) DAYS OF THE WORK. EACH REPORT SHALL BE SIGNED BY A LICENSED ENGINEER OR ARCHITECT. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN IF UNCORRECTED TO THE BUILDING OFFICIAL AND HORROCKS ENGINEERS. HORROCKS ENGINEERS SHALL BE NOTIFIED IMMEDIATELY OF ANY TEST WHICH INDICATES NON-COMPLIANCE WITH APPLICABLE CODES OR REQUIREMENTS OF THESE PLANS, PER SECTION 1704.2.4 OF THE BUILDING CODE.
- THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTORS KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE, TO THE BUILDING OFFICIAL AND TO HORROCKS ENGINEERS, PER SECTION 1704.2.4 OF THE BUILDING CODE.
- AN APPLICATION OF OFF-SITE FABRICATION MUST BE SUBMITTED TO THE BUILDING OFFICIAL FOR APPROVAL PRIOR TO FABRICATION.
- A CERTIFICATE OF COMPLIANCE FOR OFF-SITE FABRICATION MUST BE COMPLETED AND SUBMITTED TO THE BUILDING OFFICIAL FOR APPROVAL PRIOR TO ERECTION OF PREFABRICATED COMPONENTS. SPECIAL INSPECTION REQUIRED PER SECTION 1704.2.5 OF THE BUILDING CODE.
- SPECIAL INSPECTION OF SHOP FABRICATION AND SHOP WELDING IS NOT REQUIRED FOR CERTIFIED FABRICATOR AS REQUIRED BY THE STRUCTURAL STEEL SECTION OF THE GENERAL STRUCTURAL NOTES.
- THE CONSTRUCTION INSPECTIONS LISTED ARE IN ADDITION TO THE CALLED INSPECTIONS REQUIRED BY SECTION 109 OF THE BUILDING CODE. SPECIAL INSPECTION IS NOT A SUBSTITUTE FOR INSPECTION BY A CITY INSPECTOR. SPECIALLY INSPECTED WORK WHICH IS INSTALLED OR COVERED WITHOUT APPROVAL OF THE CITY INSPECTOR IS SUBJECT TO REMOVAL OR EXPOSURE.
- SPECIAL INSPECTION (INSP) AND MATERIAL (TEST) MATRIX:

SPECIAL INSPECTOR:		FREQUENCY		SPECIAL INSPECTOR APPROVED (INITIAL & DATE)
PHONE NUMBER:		CONTINUOUS	PERIODIC	
MATERIAL	TASK			
SOIL	VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	-	TEST	
	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	-	INSP	
	PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS	-	TEST	
	VERIFY PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL	INSP	-	
CAST-IN-PLACE AND SITE PRE-CAST CONCRETE	PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUB-GRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	-	INSP	
	REINFORCING STEEL AND PLACEMENT	-	INSP	
	INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	-	INSP	
	BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT	INSP	-	
	VERIFY USE OF REQUIRED DESIGN MIX	-	INSP	
	AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENTS TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	TEST	-	
STRUCTURAL STEEL	CONCRETE AND/OR SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	INSP	-	
	INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	-	INSP	
	VERIFICATION OF HIGH STRENGTH BOLTS, NUTS, AND WASHERS:			
	-IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENT	-	INSP	
	-MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED	-	INSP	

DRAWN BY: AF		DESIGNED BY: PLK		CHECKED BY: JAC		PROJECT NO: N-1817-188		SCALE: 1"=1'-0" HORIZ. 1"=1'-0" VERT.	
08/08/19		08/08/19		08/08/19					
AF		PLK		JAC					
HOWARD HUGHES COMPANY, LLC A DELAWARE LIMITED LIABILITY COMPANY 1401 N. GREEN VALLEY PARKWAY, STE. 160 HENDERSON, NV 89074 PH: (702) 968-4063 WEB: WWW.HORROCKSENGINEERS.COM		CITY OF LAS VEGAS		SUMMERLIN WEST V21 BELTWAY CHANNEL SKY VISTA DRIVE TO NV ENERGY FACILITY A DELAWARE LIMITED LIABILITY COMPANY		HORROCKS ENGINEERS		REVISION	
10/22/2019		SHEET S2		14 OF 14 SHEETS		DRAWING NO: 14-1817-188		DRAWING NAME	