

DS #: 05259

APN: 137-22.000-017

PROJECT: Summerlin West 4125 Zone North Reservoir

SUBMITTAL: 2nd

SCANNED BY/DATE:

CHECKED BY/DATE:



CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		May 20, 2020
TO: Land Development Services Department of Building & Safety		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	COPIES TO:	
Drainage Study for:	Atkins	
Summerlin West 4125 Zone North Reservoir		
Cross Streets:	West of Lake Mead Blvd. & Park Drift Trail	Howard Hughes Properties Inc.
File Number:	F:\Depot\DSMemos\DS5259B.doc	Bart Anderson, P.E., DevCo
Parcel Number:	137-22-000-017	
Zoning Action:	CRG-78427	
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	3/5/2020	3/31/2020	Not Approved	\$400.00	3770635: \$400
2 nd Submittal	4/23/2020	5/20/2020	See Comments Below	\$400.00	3824141: \$400
			TOTAL FEES (LDDRS):	\$800.00	----

REMARKS:

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

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

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.

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

END OF REMARKS

ays

T/R/S: T20S/R59E/22
AREA K-22

ATKINS

Atkins North America, Inc.
2270 Corporate Circle, Suite 200
Henderson, Nevada 89074-7755
Telephone: 702.263.7275
Fax: 702.263.7200
www.atkinsglobal.com/northamerica

April 16, 2020

City of Las Vegas
City Current Planning
333 N. Rancho Drive
Las Vegas, Nevada 89106
ATTN: Ms. Linda Hartman Maynard

RE: Summerlin West – 4125 Zone North Reservoir
City of Las Vegas Zoning Action CRG-78427
LVVWD Contract No. C1548
Atkins Project No. 100065611

PLANS APPROVED
PLANNING
Dept. of Planning
City of Las Vegas, Nevada
2' GRADE DIFFERENCE
LHM APR 21 2020 ONLY

Conforms to the minimum requirement of
LVMC Title 19; applicable Master Plan
Development standards and/or Conditions of
Approval. Make No Change Without Approval.
Plan is Not a Permit to Violate Any Ordinance.

Ms. Hartman Maynard:

Pursuant to Technical Drainage Study Comment #2 (attached), this letter has been generated to assist with review of the Project Plans as referenced above.

INTRODUCTION

The Howard Hughes Company, LLC. (HHC) has contracted with Atkins North America, Inc. (Atkins) to provide engineering design services for the Summerlin West 4125 Zone North Reservoir proposed to be located on an approximate 5.6 (+/-) acre portion of an existing parcel owned by HHC (APN: 137-21-101-002) located just shy of one-mile northwest of the intersection of Lake Mead Boulevard and Park Drift Trail. HHC has entered into a development agreement with the Las Vegas Valley Water District (LVVWD) to provide for design of this facility. Per the agreement, the portion of land in question, as well as the proposed improvements to be implemented on the portion of land, will be constructed, owned and operated by the LVVWD.

The proposed facility lies within the Summerlin West Planned Community District (P-C) and is required to provide potable water necessary to service properties in its immediate vicinity. This area of the Las Vegas Valley has been annexed to the City of Las Vegas (City), and without the development of additional potable water infrastructure, partially developed and undeveloped properties proposed to be serviced by the facility would be unable to obtain potable water, significantly limiting the degree of property betterment and use that would otherwise be enjoyed.

PURPOSE AND OBJECTIVES

The purpose of this Submittal Letter is to provide a finalized TDS with grading plans for the review of site improvements and justification for the proposed grade differences reflected therein.

PROPOSED SITE DEVELOPMENT

The project area lies within the Summerlin West Planned Community District (P-C) and is subject to design review and approval in accordance with Summerlin West Planned Community District established procedures.

**TRANSMITTAL**

2270 Corporate Circle, Suite 200
Henderson, Nevada 89704
(702) 263-7275 (Office)

To: **Mr. Albert Sung, P.E.**
Land Development Services
Department of Building and Safety
333 N. Rancho Drive
Las Vegas, NV 89106

DATE: 4/22/2020	JOB NO: 100065611
RE: SUMMERLIN WEST 4125 ZONE NORTH RESERVOIR	
CC: Mr. Chris Anderson, HHC Vance Skidmore, P.E. (Atkins) Jonathan Tull, P.E. (Atkins) Mary Carr, P.E. (Atkins)	

We are sending you ☒ Attached ☐ Under Separate Cover via _____ the following item(s):

☐ Shop Drawings ☐ Prints ☒ Plans ☐ Samples ☐ Specifications
☐ Copy of Letter ☐ Change Order ☒ Report Addendum

COPIES	DATE	Project No.	DESCRIPTION
1	4/21/20	DS 5259	TDS for Summerlin 4125 Reservoir - Addendum
1	4/21/20	100065611	Revised 4125 Zone North Reservoir Grading Plans, rolled
1	4/21/20	DS 5259	CD – electronic file of Addendum with Plans

These are transmitted as checked below:

☒ For Approval ☐ Approved As Submitted ☐ For Your Use
☒ As Requested ☐ Returned For Corrections ☐ Approved As Noted

REMARKS:

SIGNED: _____

Judy M. Kareck, P.E.
Senior Engineer

If enclosures are not as noted, please notify us at once

HYDROLOGIC CRITERIA AND DRAINAGE MANUAL
DRAINAGE STUDY INFORMATION FORM

Name of Development: TDS for Summerlin 4125 Reservoir Date: 4/21/2020

Location of Development: a) Descriptive (Cross Streets) North/South: Street Z

East/West: Lake Mead Blvd

b) Section: 16 & 21 Township: 20S Range: 59E

c) APN : 137-21-101-002

Name of Owner: Howard Hughes Company, LLC

Telephone No.: (702) 791-4000 Fax No.: (702) 791-4450 E-Mail Address: chris.anderson@howardhughes.com

Address: 10845 Griffith Peak Drive, Ste 160, Las Vegas, NV 89135

Contact Person-Name: Vance Skidmore, PE Telephone No.: 702-551-0309

* E-Mail Address: vance.skidmore@atkinsglobal.com Fax No.: _____

Firm: Atkins

Address: 2270 Corporate Circle, Ste 200, Henderson, NV 89074

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: +/- 2006 acres Being Developed/Disturbed: +/- 6 acres

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

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

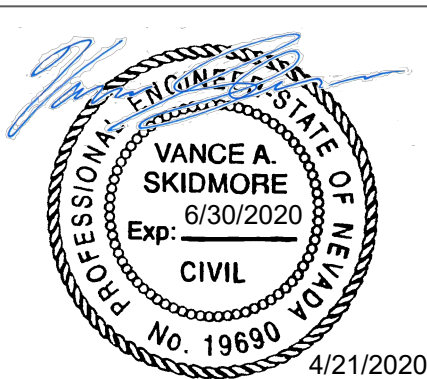
4. Proposed type of development (Residential, Commercial, Etc.): _____

5. Approximate upstream land area which drains to the subject site: 6.8 square miles

6. Has the site drainage been evaluated in the past? ☒ YES ☐ NO If yes, please identify documentation: Summerlin West Village 30A Rough Grade Technical Drainage Memo

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: There are three discharge points: 1 - A storm drain out to the existing wash north of the reservoir project site, 2 - A channel discharging to roughly the same location, and 3 - Flow running off onto the rough-grade access road

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.**

DS 5259 Local Entity File No.	Revision	Date

REFERENCE:

STANDARD FORM 1

CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		March 31, 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 4125 Zone North Reservoir	
Cross Streets:	West of Lake Mead Blvd. & Park Drift Trail	
File Number:	F:\Depot\DSMemos\DS5259A.doc	
Parcel Number:	137-22-000-017	
Zoning Action:	CRG-78427	
FEMA Flood Zone	YES	NO X
Proposed Storm Drain	YES	NO X
COPIES TO:		Atkins
		Howard Hughes Properties Inc.
		Bart Anderson, P.E., DevCo

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	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.

1. Provide a copy of the zoning/planning conditions associated with this site (**CRG-78427**) with the next submittal to verify compliance with conditions. *Flood Control* will not issue conditional approval of the drainage study without the associated zoning/planning conditions (issued by the *City Council*). Any associated conditions of approval that revise the site drainage parameters will require that the drainage study be revised and resubmitted.
2. Sites with a grade difference of 2 feet above or below existing are required to have approval from the *City Planning and Development Department*. The engineer must submit copies of the grading plans and detail sheet with a letter justifying the grade difference to the *City Planning Department* (229-6301). The engineer must provide Planning approval with the next submittal.
3. Address at the northeast corner of the site, whether there is any wall opening for emergency overflow path in case the proposed drop inlet is totally clogged in the next submittal.
4. Provide a note on the grading plan that states: All offsite berms/swales are owned and to be privately maintained by *Howard Hughes Corporation*.

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

END OF REMARKS

ays

T/R/S: T20S/R59E/22

AREA K-22



Member of the SNC-Lavalin Group

Atkins

2270 Corporate Circle

Suite 200

Henderson, NV 89074-7755

Direct: (702) 551-0309

Vance.skidmore@atkinsglobal.com

Our reference: TDS for Summerlin 4125 Reservoir

Your reference: DS 5259

Albert Sung
CLV Department of Public Works
333 N Rancho Dr
Las Vegas, NV 89106

atkinsglobal.com

snclavalin.com

21 April 2020

Dear Mr. Sung

The City of Las Vegas issued a comment letter on the TDS for the Summerlin 4125 Reservoir on March 31, 2020. This TDS addendum provides information and responses to these comments. See the individual responses below.

1. Provide a copy of the zoning/planning conditions associated with this site (CRG - 8427) with the next submittal to verify compliance with conditions. Flood Control will not issue conditional approval of the drainage study without the associated zoning/planning conditions (issued by the City Council). Any associated conditions of approval that revise the site drainage parameters will require that the drainage study be revised and resubmitted.

Answer: The zoning and planning conditions are included in **Appendix A**.

2. Sites with a grade difference of 2 feet above or below existing are required to have approval from the City Planning and Development Department. The engineer must submit copies of the grading plans and detail sheet with a letter justifying the grade difference to the City Planning Department (229-6301). The engineer must provide Planning approval with the next submittal.

Answer: The planning approval is included in **Appendix A**.

3. Address at the north east corner of the site, whether there is any wall opening for emergency overflow path in case the proposed drop inlet is totally clogged in the next submittal.

Answer: A tubular steel fence is placed downstream of the drop inlet in case of the clogging of the drop inlet or pipe. See improvement plans in **Appendix B**.

4. Provide a note on the grading plan that states: All offsite berms/swales are owned and to be privately maintained by Howard Hughes Corporation.

Answer: A note was added to the grading plan. See improvement plans in **Appendix B**.

Please let me know if you need or require any additional information to complete your review of the project.

Yours sincerely

A handwritten signature in blue ink, appearing to read "Vance Skidmore", with a stylized flourish at the end.

Vance Skidmore, PE
Senior Engineer
Atkins North America

Appendix A CLV Documents



**LAS VEGAS
CITY COUNCIL**

CAROLYN G. GOODMAN
Mayor

MICHELE FIORE
Mayor Pro Tem

STAVROS S. ANTHONY
CEDRIC CREAR
BRIAN KNUDSEN
VICTORIA SEAMAN
OLIVIA DÍAZ

SCOTT D. ADAMS
City Manager

DEPARTMENT OF PLANNING

ROBERT SUMMERFIELD
DIRECTOR

**DEVELOPMENT
SERVICES CENTER**

333 N. RANCHO DRIVE
3RD FLOOR
LAS VEGAS, NV 89106
702.229.6301 | VOICE
702.474.7463 | FAX
711 | TTY



cityoflasvegas
lasvegasnevada.gov

March 25, 2020

Mr. Kevin Orrock
Howard Hughes Company, LLC
10845 Griffith Peak Drive, Suite #160
Las Vegas, Nevada 89135

Re: CRG-78427 [PRJ-78262] - CITY REFERRAL GROUP

Dear Mr. Orrock:

The City Referral Group at its regular meeting on March 25, 2020 administratively **APPROVED** your request for a Site Development Plan Review FOR A PROPOSED WATER RESERVIOR AND PUMP STATION on a portion of 2,005.63 acres located on the Lake Mead Boulevard alignment west of Park Drift Trail (A Portion of APN 137-21-101-002), PC (Planned Community) Zone, Ward 2 (Seaman) [PRJ-78262].

This approval is subject to the following conditions:

Planning

1. Conformance with the Summerlin Development Standards.
2. Conformance with the Summerlin Non-Residential Design Review Committee (SNRDRC), Review and Conditional Approval for the 4125 Zone Water Reservoir in Summerlin West dated 02/14/20.
3. Conformance to the Conditions of Approval for General Development Plan Review (MDR-72841) shall be required.
4. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
5. All development shall be in conformance with the site plan and building elevations, date stamped 02/24/20 except as amended by conditions herein.
6. All necessary building permits shall be obtained and final inspections shall be completed in compliance with Title 19 and all codes as required by the Department of Building and Safety.

Mr. Kevin Orrock
Howard Hughes Company, LLC
CRG-78427 [PRJ-78262] – Page Two
March 25, 2020

7. These Conditions of Approval shall be affixed to the cover sheet of any plan set submitted for building permit.
8. A fully operational fire protection system, including fire apparatus roads, fire hydrants and water supply, shall be installed and shall be functioning prior to construction of any combustible structures.
9. All City Code requirements and design standards of all City Departments must be satisfied, except as modified herein.

Public Works

10. A Drainage Plan and Technical Drainage Study must be submitted to and approved by the Department of Public Works prior to the issuance of any building or grading permits or submittal of any construction drawings, whichever may occur first. Provide and improve all drainageways recommended in the approved drainage plan/study. The developer of this site shall be responsible to construct such neighborhood or local drainage facility improvements as are recommended by the City of Las Vegas Neighborhood Drainage Studies and approved Drainage Plan/Study concurrent with development of this site.

This administrative action by the City Referral Group on March 25, 2020 is final unless a written appeal is filed with the Director of the Department of Planning within ten (10) days of the date of the City Referral Group's decision.

Sincerely,



Jonathan Boyles
Senior Planner
Department of Planning
Case Planning Division

JB:clb

cc: Mr. Jonathan Tull
Atkins North America, Inc.
2270 Corporate Circle, Suite #200
Henderson, Nevada 89074

ATKINS

Atkins North America, Inc.
2270 Corporate Circle, Suite 200
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April 16, 2020

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RE: Summerlin West – 4125 Zone North Reservoir
City of Las Vegas Zoning Action CRG-78427
LVVWD Contract No. C1548
Atkins Project No. 100065611

PLANS APPROVED
PLANNING
Dept. of Planning
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2' GRADE DIFFERENCE
LHM APR 21 2020 ONLY

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PROPOSED SITE DEVELOPMENT

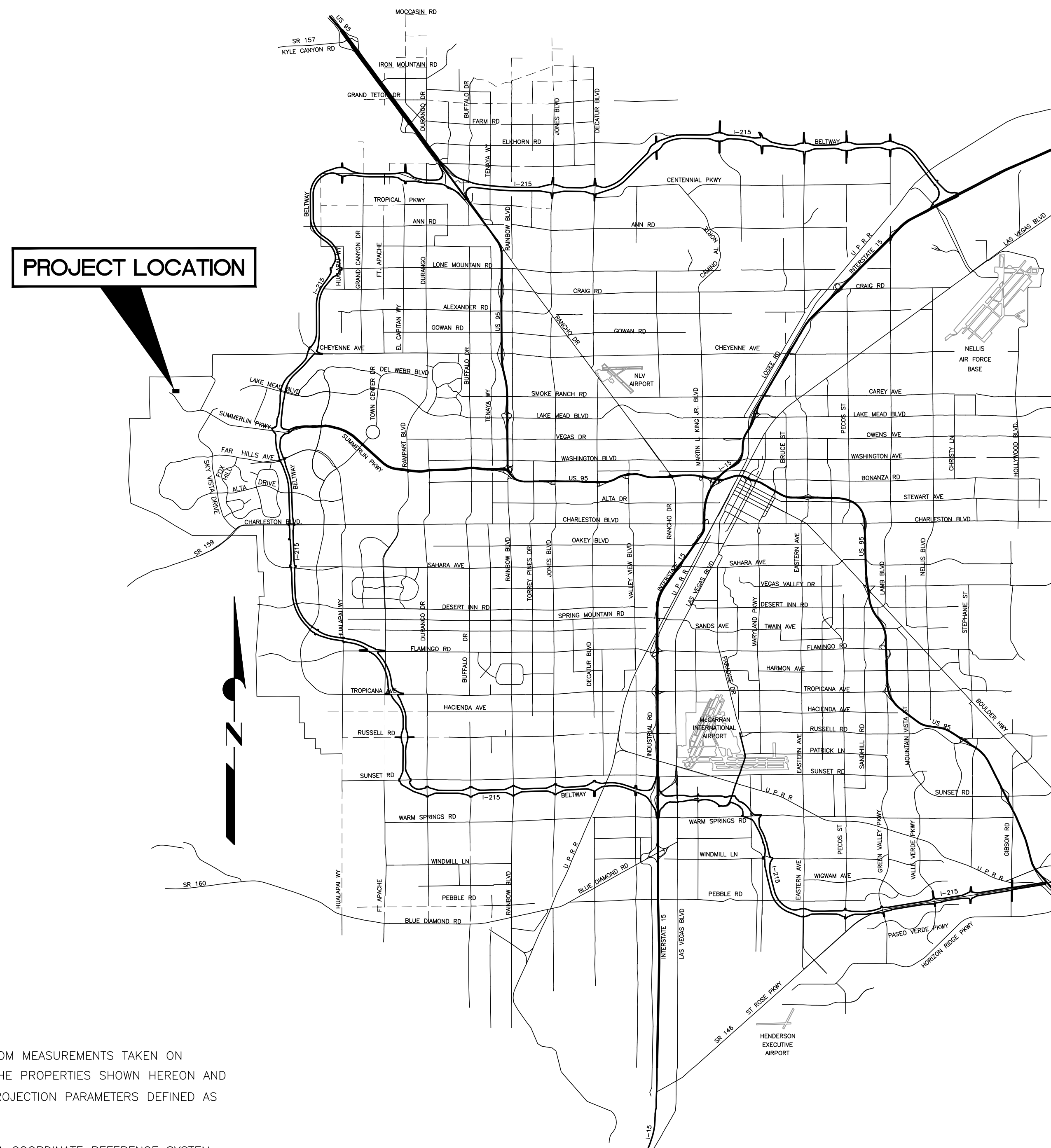
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Appendix B Improvement Plans

LAS VEGAS VALLEY WATER DISTRICT

CONTRACT NO. C1548

4125 ZONE NORTH RESERVOIR



BASIS OF BEARINGS :

THE BASIS OF BEARINGS FOR THIS PROJECT HAS BEEN DERIVED FROM MEASUREMENTS TAKEN ON CONTROLLING MONUMENTS USED TO DETERMINE THE LOCATION OF THE PROPERTIES SHOWN HEREON AND APPLYING THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS) PROJECTION PARAMETERS DEFINED AS FOLLOWS:

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.

BENCHMARK :

CITY OF LAS VEGAS VERTICAL CONTROL POINT "7LV0934SW6", RIVET & PLATE TOP CURB S.E. CORNER
DESERT MOON RD. & SKY VISTA DR.

NAVD 88 (2008) - 1,011.422 METERS
3,318.31 U.S. SURVEY FEET

LOCATION MAP

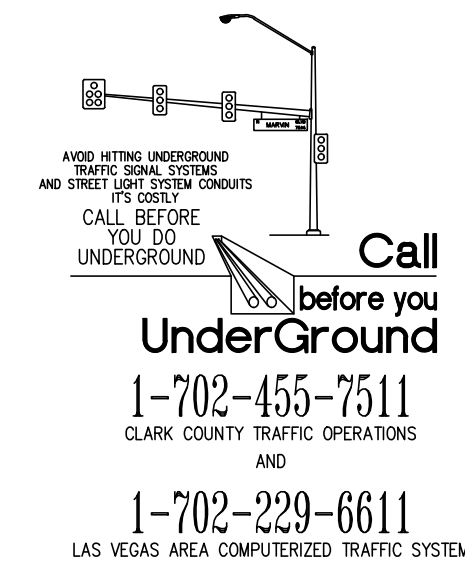
NOT TO SCALE

CAUTION TO CONTRACTOR:

THE CONTRACTOR SHALL BE RESPONSIBLE TO INVESTIGATE AND VERIFY THE ACTUAL LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND FACILITIES AT LEAST 48 HOURS IN ADVANCE OF THE PERFORMANCE OF ANY WORK.

ACCEPTED BY:

PETER JAUCH, PE, DIRECTOR OF ENGINEERING



CLV DWG #

4125 ZONE NORTH RESERVOIR

COVER SHEET

DRAWN BY:		03/25/2020
P. RAJ		
CHECKED BY:		
T. NAKAKURA		03/25/2020
RECOMMENDED BY:		
L. STEVEN ANDERSON		DATE
ACCEPTED BY:		
RYAN C. PEARSON		DATE



CONTRACT NUMBER
C1548
DRAWING NUMBER G1
SHEET 1 OF 143

LAS VEGAS VALLEY WATER DISTRICT

VERIFY SCALE

		SCALE HORIZ. SCALE NONE VERT. SCALE NONE
--	--	--

ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1.702.263.7275
Fax: +1.702.263.7200

CITY OF LAS VEGAS FIRE AND RESCUE GENERAL NOTES

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LAS VEGAS FIRE AND RESCUE ADOPTED FIRE CODE ORDINANCE #6631 FOR HYDRANT SPECIFICATIONS AND HYDRANT INSTALLATION SPECIFICATIONS.
2. ONLY FIRE HYDRANTS THAT ARE ON THE LAS VEGAS VALLEY WATER DISTRICT'S – 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 CONTRACTORS 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 CENTER LINE 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 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
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 SUPPLY ARE REQUIRED WHENEVER THERE IS 4 OR MORE FIRE HYDRANTS/SPRINKLER LEAD-INS ARE INSTALLED ON A SINGLE SYSTEM. FOR SYSTEMS REQUIRED TO HAVE TWO (2) SOURCES OF WATER SUPPLY, SECTIONAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 2 FIRE HYDRANTS AND/OR FIRE SPRINKLER LEAD-INS CAN BE OUT OF SERVICE DUE TO A SERVICE INTERRUPTION. FOR SYSTEMS PERMITTED TO HAVE ONE SOURCE OF WATER SUPPLY, SECTIONAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 3 FIRE HYDRANTS AND/OR FIRE SPRINKLER LEAD-INS CAN BE OUT OF SERVICE DUE TO A SERVICE INTERRUPTION. IFC § C104
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 § 503.2.3
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 CLEARANCE 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 LANES 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 MOU
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 81 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 AND WITH SIGNS AT INTERVALS OF 100 FT ALONG THE DESIGNATED FIRE LANES. SIGNS TO BE PLACED ON BOTH SIDES OF AN ACCESS ROADWAY IF NEEDED TO PREVENT PARKING ON EITHER SIDE. SIGNS TO BE INSTALLED NO HIGHER THAN 10 FT OR LESS THAN 6 FT FROM THE ROADWAY LEVEL. THE CURB ALONG OR ON THE PAVEMENT OR CEMENT (IF NO CURB IS PROVIDED) SHALL BE PAINTED WITH A RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS. IFC § 503.3
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

REVISED 02/04/2019

CITY OF LAS VEGAS GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENTS, CLARK COUNTY AREA NEVADA". LATEST ISSUE, THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY AREA NEVADA", LATEST REVISED EDITION; THE "SUMMERLIN IMPROVEMENT STANDARDS" FOR WORK IN THE SUMMERLIN AREA; AND OTHER APPLICABLE APPROVED STANDARDS ISSUED BY THE CONTROLLING AGENCY; THE UNIFORM BUILDING CODE; AND ALL LOCAL CITY CODES AND ORDINANCES APPLICABLE, EXCEPT AS NOTED ON THIS SHEET AS "DEVIATIONS FROM STANDARDS".
2. THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. EXISTING UTILITIES AS SHOWN FROM CLV PLANS LIBRARY ARE APPROXIMATE, AND FOR RECORD PURPOSES. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. EXISTING UTILITY SERVICE LATERALS MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND AND OVERHEAD INTERFERENCE'S WHICH MAY AFFECT HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH.
3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING UTILITY LINES, STRUCTURES AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE FROM DAMAGE, AND ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED SATISFACTORY TO THE CITY ENGINEER AND OWNING UTILITY COMPANY AT THE EXPENSE OF THE CONTRACTOR.
4. ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE PLANS, ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.
5. TYPE V CEMENT SHALL BE USED IN ALL OFF-SITE CONCRETE WORK, CONCRETE TO BE 3000 P.S.I. MINIMUM @ 28 DAYS. MIX DESIGNS TO BE APPROVED BY THE CITY, PRIOR TO THE USE ON THE PROJECT.
6. PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.
7. EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300' IN EXTRUDED-TYPE CURB.
8. AC PAVEMENT TO BE ONE-HALF INCH (½) ABOVE LIP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS AND CROSS GUTTERS.
9. CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED PER STANDARD DRAWING 216.
10. SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.
11. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF THE TRANSITIONS TO BE AS SHOWN ON PLANS.
12. ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY THE (NOVA GEOTECHNICAL, G-19-183, 10/21/2019) 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 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:
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 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.
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 SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS EXIT THE PUBLIC RIGHT-OF-WAY, SEWER AND STORM DRAIN MAIN ALIGNMENT, INCLUDING DEFLECTION POINTS, THE LOCATION SHALL BE DESCRIBED BY COORDINATES WHICH SHALL BE BASED ON THE OFFICIAL HORIZONTAL AND VERTICAL CONTROL NETWORKS OF THE CITY OF LAS VEGAS. FINAL LOCATION MAPS MUST BE SEALED AND CERTIFIED BY A NEVADA PROFESSIONAL LAND SURVEYOR TO HAVE POSITIONAL CERTAINTIES OF ± 0.09 METERS (± 0.3 FEET) HORIZONTALLY AND VERTICALLY. A SEPARATE ELECTRONIC COMMA DELIMITED FILE FOR THE SANITARY SEWER AND STORM DRAIN COORDINATES SHALL ALSO ACCOMPANY THE SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S).
22. 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.
23. A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.

REVISED 06/04/18

CITY OF LAS VEGAS GRADING NOTES

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

REVISED 04/15/10

APPROVED BY:

APPROVAL OF THESE PLANS BY THE CITY OF LAS VEGAS IS LIMITED TO THOSE IMPROVEMENTS CONSTRUCTED IN THE DEDICATED RIGHTS-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 STANDARDS". 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".

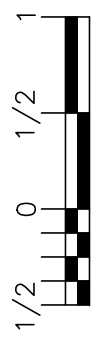
CITY OF LAS VEGAS FIRE DEPARTMENTDATE

SWPPP STANDARD NOTES

1. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATED IN, THE PUBLIC RIGHTS OF WAY OF THE CITY OF LAS VEGAS AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT 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 ORDINANCE 20.08.030 AND THE LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.5.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS, AND ALL BMPs WEEKLY, AND WITHIN 24 HOURS AFTER ANY RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12.
5. ACCUMULATED SEDIMENT IN BMPs SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

LAS VEGAS VALLEY WATER DISTRICT

VERIFY SCALE



BAR REPRESENTS ONE AND ONE-HALF INCHES ON ORIGINAL

4125 ZONE NORTH RESERVOIR

GENERAL NOTES

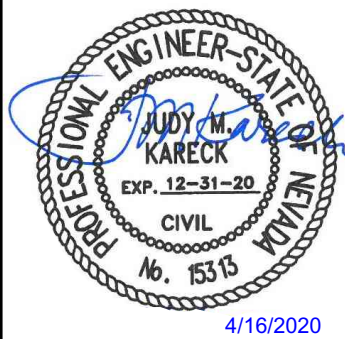
SCALE
HORIZ. SCALE
VERT. SCALE
NONE

DRAWN BY: 03/25/2020

CHECKED BY: E. NAKAKURA 03/25/2020

RECOMMENDED BY: L. STEVEN ANDERSON DATE

ACCEPTED BY: RYAN C. PEARSON DATE



CONTRACT NUMBER

C1548

DRAWING NUMBER 63 SHEET 3 OF 143

CLV DWG #

LEGEND

DESCRIPTION	SYMBOL	
	PROPOSED	EXISTING
12" WATER PIPELINE		
66" WATER PIPELINE		
IN-LINE VALVE VAULT		
ACCESS MANHOLE (TO PIPELINE)		
BLOWOFF		
COMBINATION AIR VALVE		
TEST STATION (CATHODIC)		
REDUCER		
END CAP FOR WATER PIPELINE		
WATER VALVE		
FIRE HYDRANT ASSEMBLY		
WATER METER		
WATER METER SIZE		
IDENTIFICATION HEXAGON		
EDGE OF PAVEMENT		
SANITARY SEWER MANHOLE		
STORM DRAIN MANHOLE		
POWER POLE W/GUY WIRE		
STREET LIGHT (GENERIC SYMBOL NOT RELATED TO WATTAGE)		
SURVEY MONUMENT		
POLYGON FOR TRANSMISSION POLE		
ELECTRICAL BOX		
ELECTRICAL PANEL BOX		
CABLE TV		
FENCE		
GAS LINE		
CONTOURS		
DITCH		
SANITARY SEWER		
STORM DRAIN		
UNDERGROUND POWER		
UNDERGROUND TELEPHONE		
CURB, GUTTER AND SIDEWALK		
PROPERTY LINE		
CENTER LINE		
BLOCK WALL		
RIGHT-OF-WAY LINE		
PATENT RESERVATION OR EASEMENT LINE		
SECTION LINE		
ANGLE (HORIZONTAL OR VERTICAL)		
ANGLE OF CURVE		
FIELD WELD		
REFERENCE BUBBLE	DETAIL OR SECTION REFERENCE NUMBER (DETAIL) OR LETTER (SECTION) DRAWING NUMBER OF SHEET WHERE DETAIL OR SECTION RESIDES C1, C9, C11 → ALL SHEETS THAT REFERENCE TO THE DETAIL OR SECTION	

LAS VEGAS VALLEY WATER DISTRICT NOTES

1. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES FOR PROPER DRAINAGE, AND FOR INGRESS AND EGRESS TO SAID CONSTRUCTION. EXTENT OF TRANSITIONS TO BE DETERMINED IN THE FIELD BY THE LVWD ENGINEER.
2. REPLACE EXISTING SEWER LINES OR STORM DRAINS WHICH CROSS OVER NEW WATER LINE WITH C900 WATER QUALITY PIPE TEN (10) FEET BEYOND EACH SIDE OF WATER LINE OR SLURRY ENCASE OR WELD JOINTS (MLCP) OF NEW WATER LINE TEN (10) FEET BEYOND EACH SIDE OF ALL SEWER MAINS AND LATERALS OR STORM DRAINS.
3. SOME WATER SERVICE LATERALS ARE NOT SHOWN. ALL WATER SERVICE LATERALS SHALL BE PROTECTED IN PLACE OR REPLACED WITH COPPER TUBING AT THE CONTRACTOR'S EXPENSE IN ACCORDANCE WITH THE UDS.
4. DURING ALL PHASES OF CONSTRUCTION THE CONTRACTOR SHALL MAINTAIN A 10 FOOT MINIMUM CLEARANCE IN ALL DIRECTIONS OF ALL OVERHEAD POWER LINES AND EQUIPMENT.
5. REMOVAL OR RELOCATION OF POWER POLES, TELEPHONE POLES, CABLE POLES OR JOINTLY-OWNED POLES AND APPURTENANCES WHICH INTERFERE WITH THE IMPROVEMENTS REQUIRED TO BE CONSTRUCTED UNDER THIS CONTRACT, SHALL BE COORDINATED BY THE CONTRACTOR WITH THE RESPECTIVE UTILITY COMPANY.
6. ALL AGENCY/UTILITY INSPECTORS SHALL BE CALLED WHENEVER WORK IS TO BE PERFORMED NEAR OR ON ANY OF THEIR FACILITIES.
7. SEWER LATERALS ARE NOT SHOWN. THE CONTRACTOR SHALL MAINTAIN CONTINUOUS SEWER SERVICE TO CUSTOMERS. SEWER LATERALS CUT DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE PER DESIGN AND CONSTRUCTION STANDARDS OF AGENCY HAVING JURISDICTION.
8. SANITARY SEWER MANHOLES SHALL BE PROTECTED FROM DAMAGE WHEN EXCAVATING IN THEIR VICINITY.

DEVIATIONS FROM STANDARDS

THERE ARE NO DEVIATIONS FROM APPLICABLE LAS VEGAS VALLEY WATER DISTRICT STANDARDS, UNLESS STATED IN THE SPECIFICATIONS

APPROVED BY

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.

NV ENERGY	DATE
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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.

CENTRAL TELEPHONE COMPANY, D/B/A CENTURYLINK DATE

COX COMMUNICATIONS, LAS VEGAS INC.	DATE
------------------------------------	------

SOUTHWEST GAS CORPORATION DATE

ESTIMATED QUANTITIES

ITEM- DESCRIPTION	UNIT	QUANTITY
CUT	CY	41,129
FILL	CY	24,279

CAUTION TO CONTRACTOR

THE CONTRACTOR SHALL BE RESPONSIBLE TO INVESTIGATE AND VERIFY THE ACTUAL LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND FACILITIES AT LEAST 48 HOURS IN ADVANCE OF THE PERFORMANCE OF ANY WORK.

CIV DWG #

LAS VEGAS VALLEY WATER DISTRICT

2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1.702.263.7275
Fax: +1.702.263.7200

ATKINS

VERIFY SCALE



BAR REPRESENTS ONE AND ONE-HALF INCHES ON ORIGINAL

4125 ZONE NORTH RESERVOIR

GENERAL NOTES, LEGEND AND UTILITY SIGNATURES

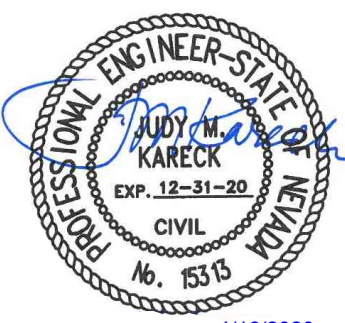
SCALE	HORIZ. SCALE	VERT. SCALE
NONE		
NONE		

DRAWN BY:
P. RAJ

RECOMMENDED BY:

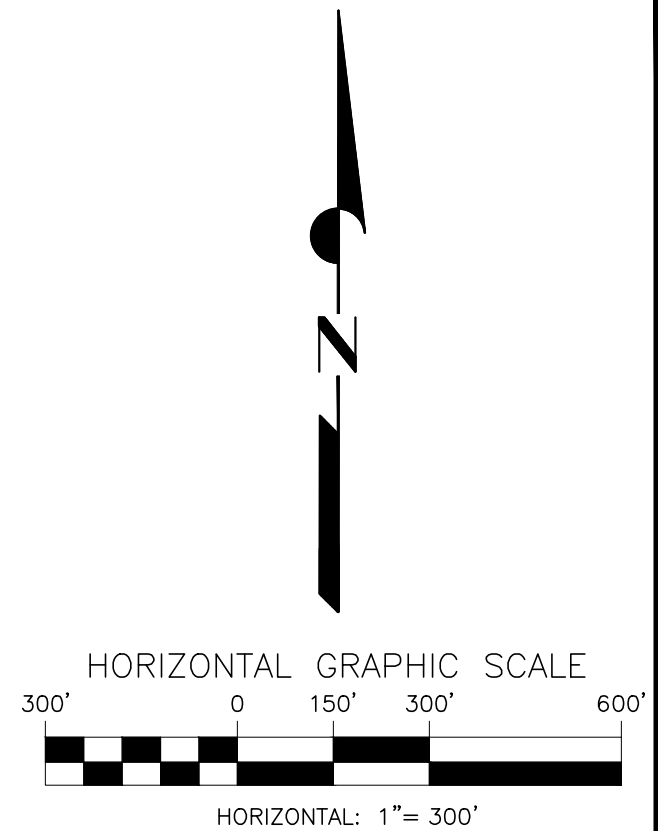
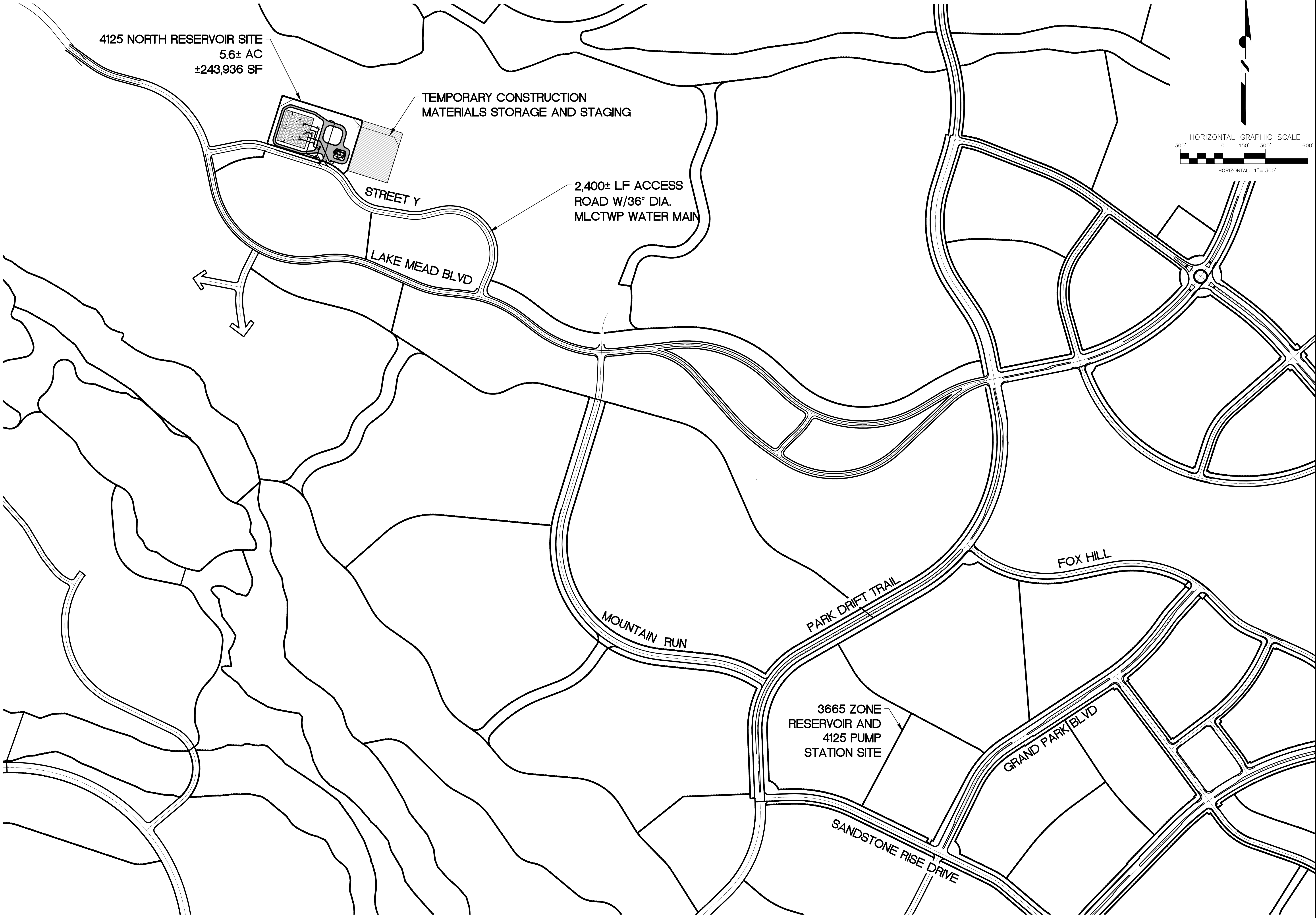
L. STEVEN ANDERSON DATE

RYAN C PEARSON _____ DATE _____



CONTRACT NUMBER

C1548
DRAWING NUMBER G4



4125 NORTH RESERVOIR SITE
5.6± AC
±243,936 SF

TEMPORARY CONSTRUCTION
MATERIALS STORAGE AND STAGING

STREET Y

LAKE MEAD BLVD

2,400± LF ACCESS
ROAD W/36" DIA.
MLCTWP WATER MAIN

MOUNTAIN RUN

PARK DRIFT TRAIL

FOX HILL

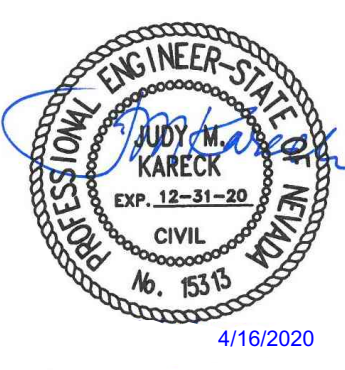
3665 ZONE
RESERVOIR AND
4125 PUMP
STATION SITE

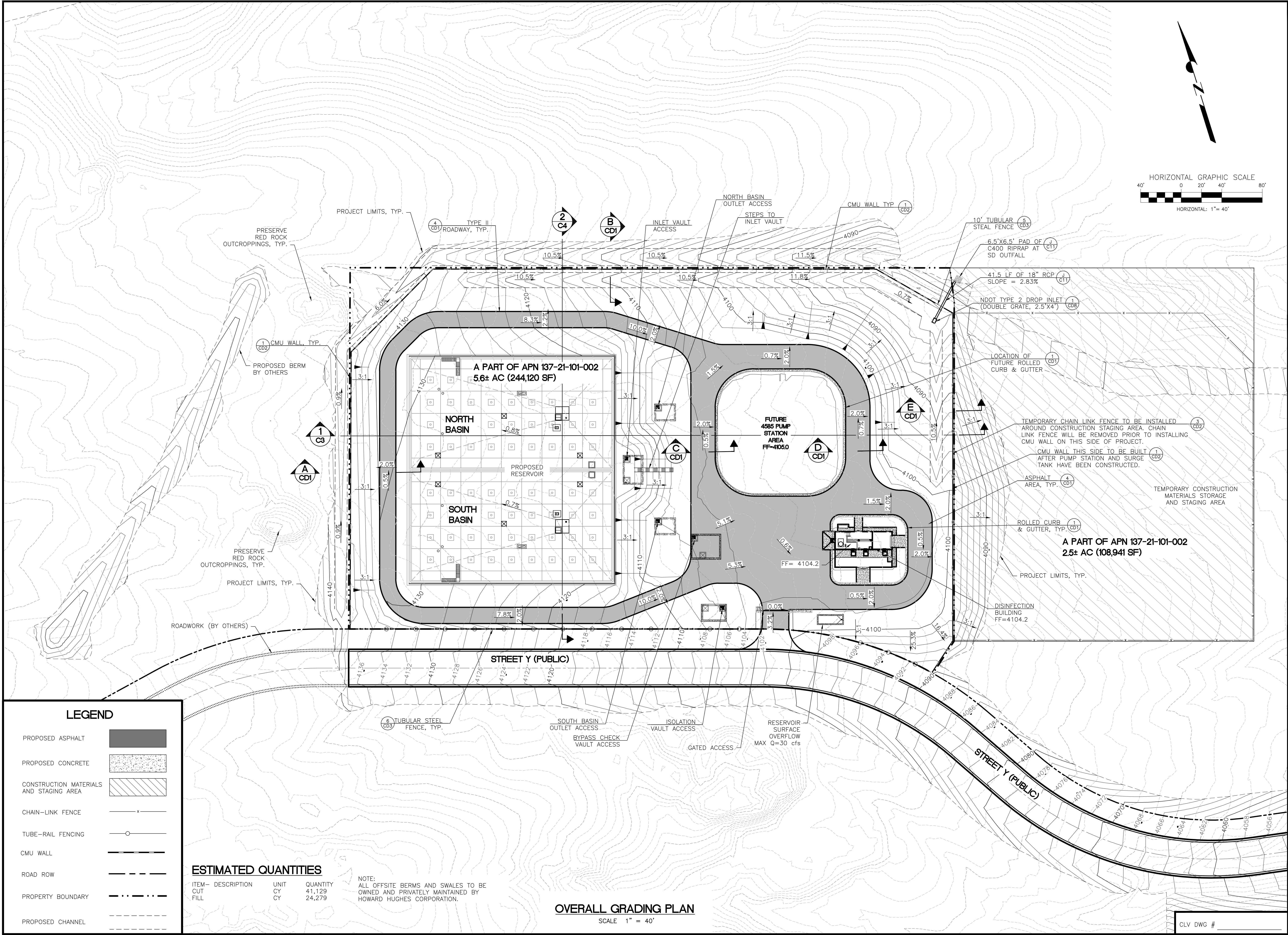
GRAND PARK BLVD

SANDSTONE RISE DRIVE

SITE VICINITY MAP
SCALE 1" = 300'

CLV DWG # _____

LAS VEGAS VALLEY WATER DISTRICT		ATKINS 2270 Corporate Circle, Suite 200 Las Vegas, NV 89102 Telephone: +1.702.263.7275 Fax: +1.702.263.7200	
VERIFY SCALE 1/2" = 0' 1/2" = 150' 1" = 300'	BAR REPRESENTS ONE AND ONE-HALF INCHES ON ORIGINAL		
4125 ZONE NORTH RESERVOIR		SITE VICINITY MAP	
DRAWN BY: _____ CHECKED BY: T. NAKAKURA RECOMMENDED BY: _____ L. STEVEN ANDERSON ACCEPTED BY: _____		DATE: _____ DATE: _____ DATE: _____	
		4/16/2020	
REVISIONS:		CONTRACT NUMBER	
		G1548	
		DRAWING NUMBER G6 SHEET 6 OF 143	



ESTIMATED QUANTITIES

ITEM- CUT FILL	DESCRIPTION	UNIT	QUANTITY
		CY	41,129
		CY	24,279

NOTE:
ALL OFFSITE BERMS AND SWALES TO BE
OWNED AND PRIVATELY MAINTAINED BY
HOWARD HUGHES CORPORATION.

OVERALL GRADING PLAN

SCALE 1" = 40'

LAS VEGAS VALLEY WATER DISTRICT

2270 Corporate Circle Suite 200
Las Vegas, NV 89119
Telephone: +1.702.263.7775
Fax: +1.702.263.7200

ATKINS

VERIFY SCALE

1/2" = 0' 1/2" = 1'

BAR REPRESENTS
ONE AND ONE-HALF
INCHES ON ORIGINAL

4125 ZONE NORTH RESERVOIR

OVERALL CIVIL SITE GRADING PLAN

SCALE
HORIZ. SCALE
VERT. SCALE
NONE

DRAWN BY:
CHECKED BY:
RECOMMENDED BY:
L. STEVEN ANDERSON
ACCEPTED BY:

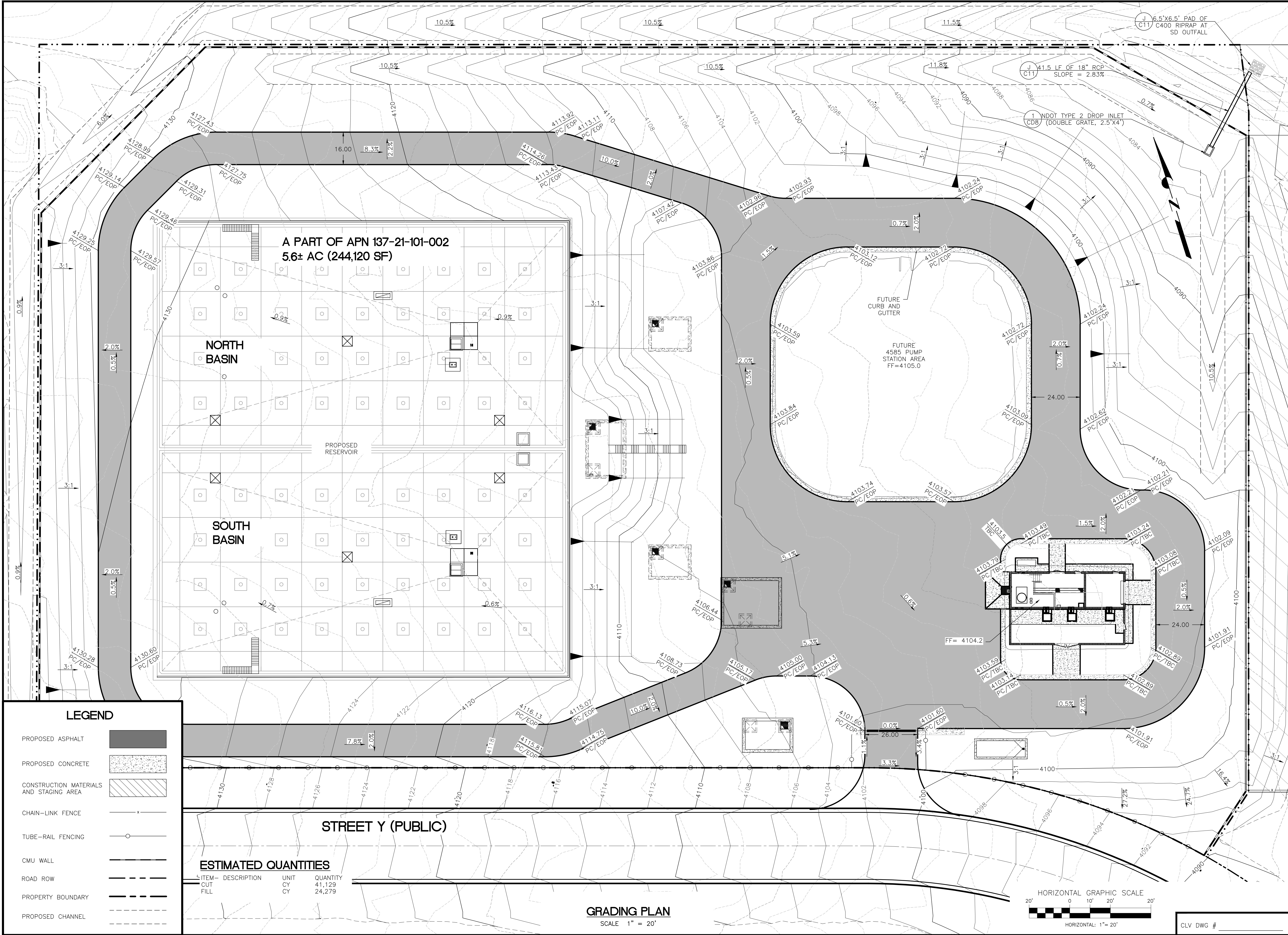
04/16/2020
04/16/2020
DATE
DATE

PROFESSIONAL ENGINEER-STATE OF NEVADA
KARECK
EXP. 12-31-20
CIVIL
No. 6315

4/16/2020

CONTRACT NUMBER
DRAWING NUMBER C1
SHEET 11 OF 143

C1548



LAS VEGAS VALLEY WATER DISTRICT

2270 Corporate Circle, Suite 200
Las Vegas, NV 89165
Telephone: +1 702 263 7775
Fax: +1 702 263 7200

ATKINS

VERIFY SCALE

1/2" = 0' 1/2" = 1'

BAR REPRESENTS ONE AND ONE-HALF INCHES ON ORIGINAL

4125 ZONE NORTH RESERVOIR

CIVIL SITE GRADING PLAN

SCALE: HORIZ. SCALE: VERT. SCALE: NONE

DRAWN BY: 03/25/2020

CHECKED BY: T. NAKAKURA 03/25/2020

RECOMMENDED BY: L. STEVEN ANDERSON

ACCEPTED BY: DATE

REVISIONS:

CONTRACT NUMBER

C1548

DRAWING NUMBER C2

SHEET 12 OF 143

PROFESSIONAL ENGINEER-STATE OF NEVADA

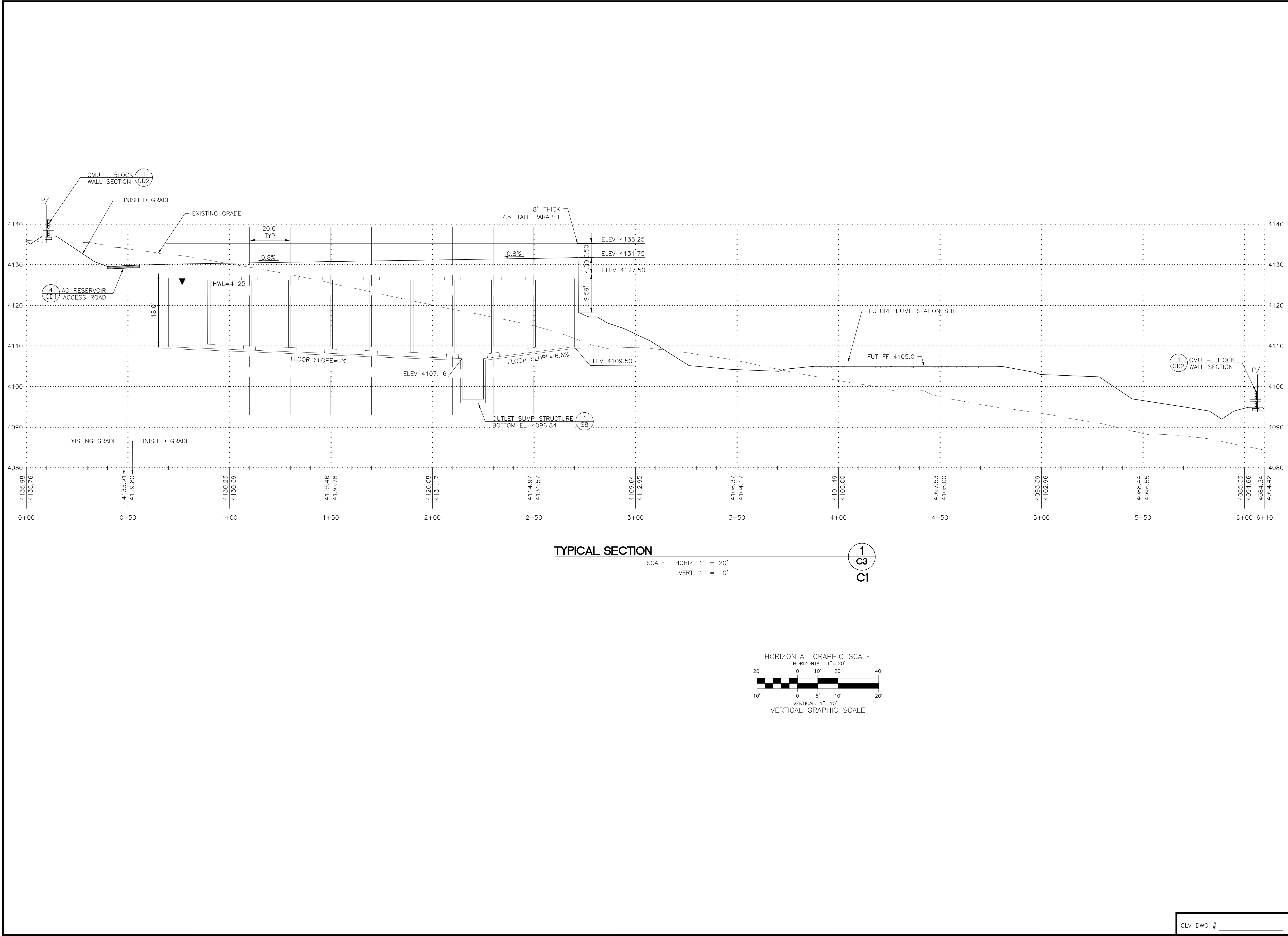
1001 N. KARECK

EXP. 12-31-20

CIVIL

16, 8315

4/16/2020



LAS VEGAS VALLEY WATER DISTRICT

2270 Corporate Circle, Suite 200
Las Vegas, NV 89169
Telephone: +1.702.263.7775
Fax: +1.702.263.7200

ATKINS

VERIFY SCALE

1/2 0 1/2 1

BAR REPRESENTS ONE AND ONE-HALF INCHES ON ORIGINAL

4125 ZONE NORTH RESERVOIR

CIVIL GRADING SECTIONS I

SCALE: HORIZ. SCALE 1"=20' VERT. SCALE 1"=10'

DRAWN BY: _____ 03/25/2020

CHECKED BY: T. NAKAKURA 03/25/2020

RECOMMENDED BY: _____ DATE: _____

L. STEVEN ANDERSON DATE: _____

ACCEPTED BY: _____ DATE: _____

PROFESSIONAL ENGINEER-STATE OF NEVADA

1007 L. KARECK

EXP. 12-31-20

CIVIL

No. 8318

4/16/2020

CONTRACT NUMBER

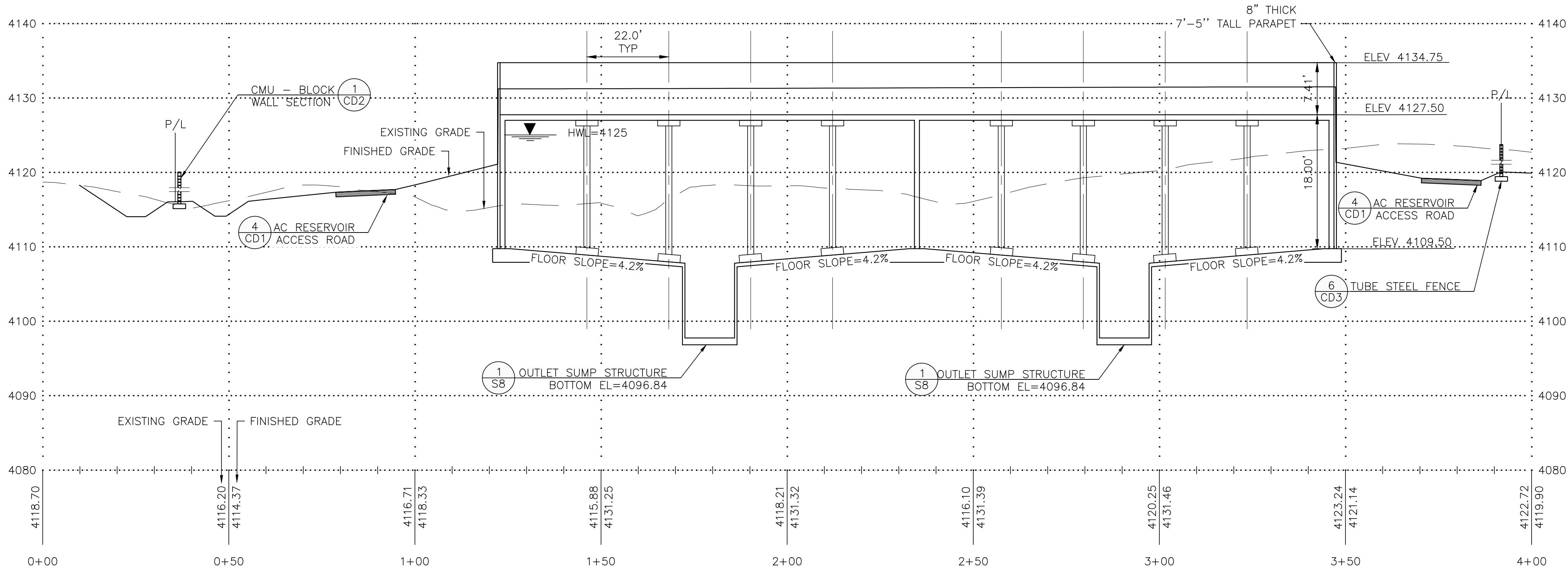
C1548

DRAWING NUMBER C3

SHEET 13 OF 143

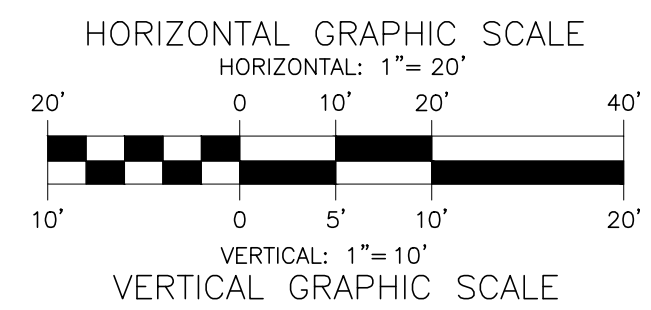
REVISIONS:

CLV DWG # _____



TYPICAL SECTION

SCALE: HORIZ. 1" = 20'
VERT. 1" = 10'

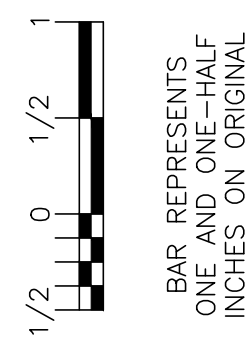


4125 ZONE NORTH RESERVOIR

CIVIL GRADING SECTIONS II

LAS VEGAS VALLEY WATER DISTRICT

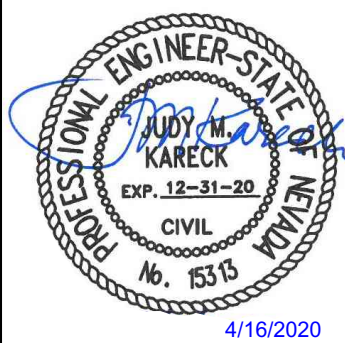
VERIFY SCALE



SCALE
HORIZ. SCALE
VERT. SCALE
1"=10'

DRAWN BY: J. NAKAKURA
CHECKED BY: T. NAKAKURA
DATE: 03/25/2020

RECOMMENDED BY: L. STEVEN ANDERSON
ACCEPTED BY: DATE: 03/25/2020



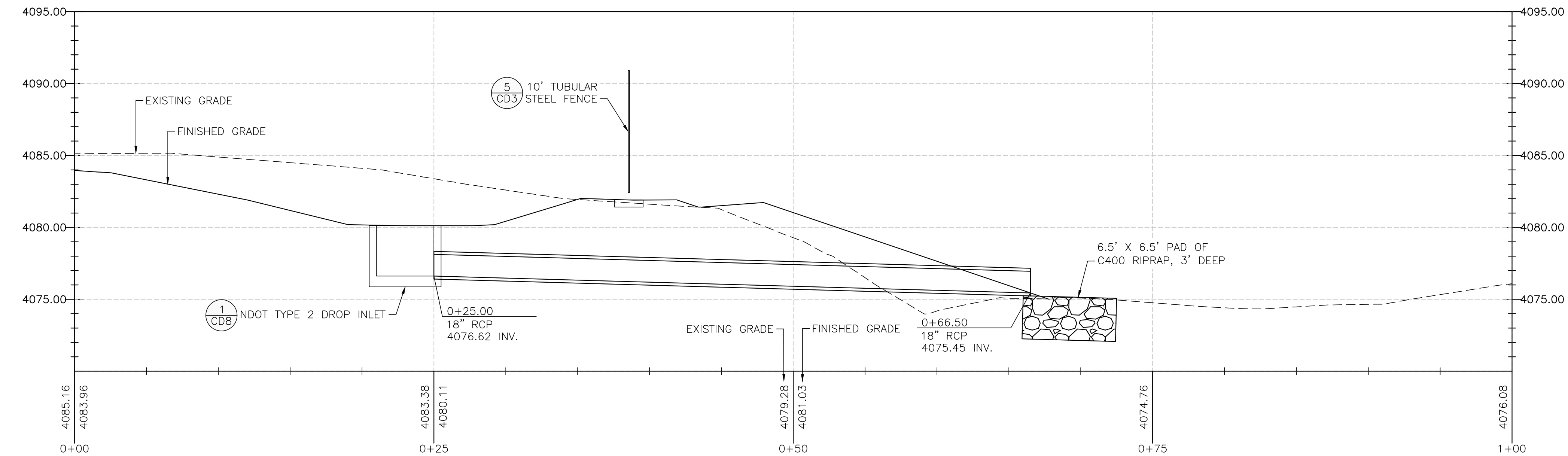
CONTRACT NUMBER

C1548
DRAWING NUMBER C4
SHEET 14 OF 143

CLV DWG # _____

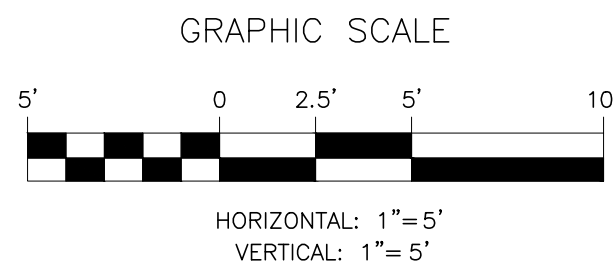
2270 Corporate Circle, Suite 200
Las Vegas, NV 89129
Telephone: +1.702.263.7775
Fax: +1.702.263.7200

ATKINS



PROFILE "J"

SCALE: HORIZ. 1" = 5'
VERT. 1" = 5'



CLV DWG # _____

REVISIONS:

DRAWN BY: N. R. MANDEZ	3/25/2020
CHECKED BY: T. NAKAKURA	3/25/2020
RECOMMENDED BY: L. STEVEN ANDERSON	DATE
ACCEPTED BY:	DATE

PROFESSIONAL ENGINEER-STATE OF CALIFORNIA

ADY N. KARECK

CIVIL

EXP. 12-31-20

No. 6313

4/16/2020

CONTRACT NUMBER

C1548

DRAWING NUMBER C11

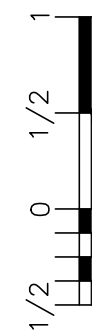
SHEET 21 OF 143

4125 ZONE NORTH RESERVOIR

CIVIL SITE PIPING PROFILES III

LAS VEGAS VALLEY WATER DISTRICT

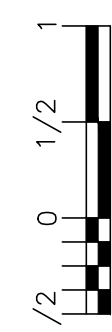
VERIFY SCALE

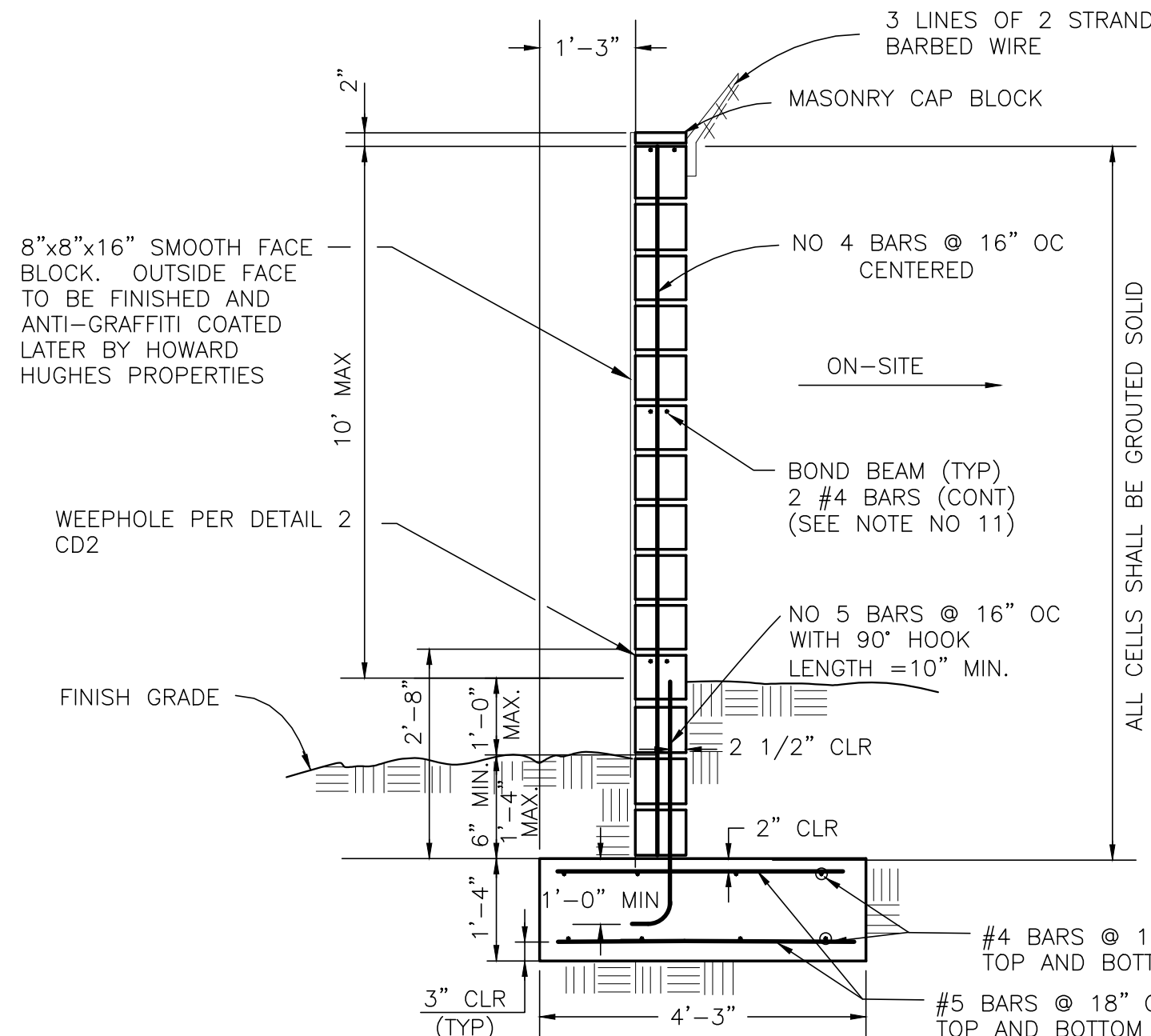


BAR REPRESENTS
ONE AND ONE-HALF
INCHES ON ORIGINAL

2270 Corporate Circle, Suite 200
Las Vegas, Nevada 89102
Telephone: +1.702.263.7775
Fax: +1.702.263.7200

ATKINS



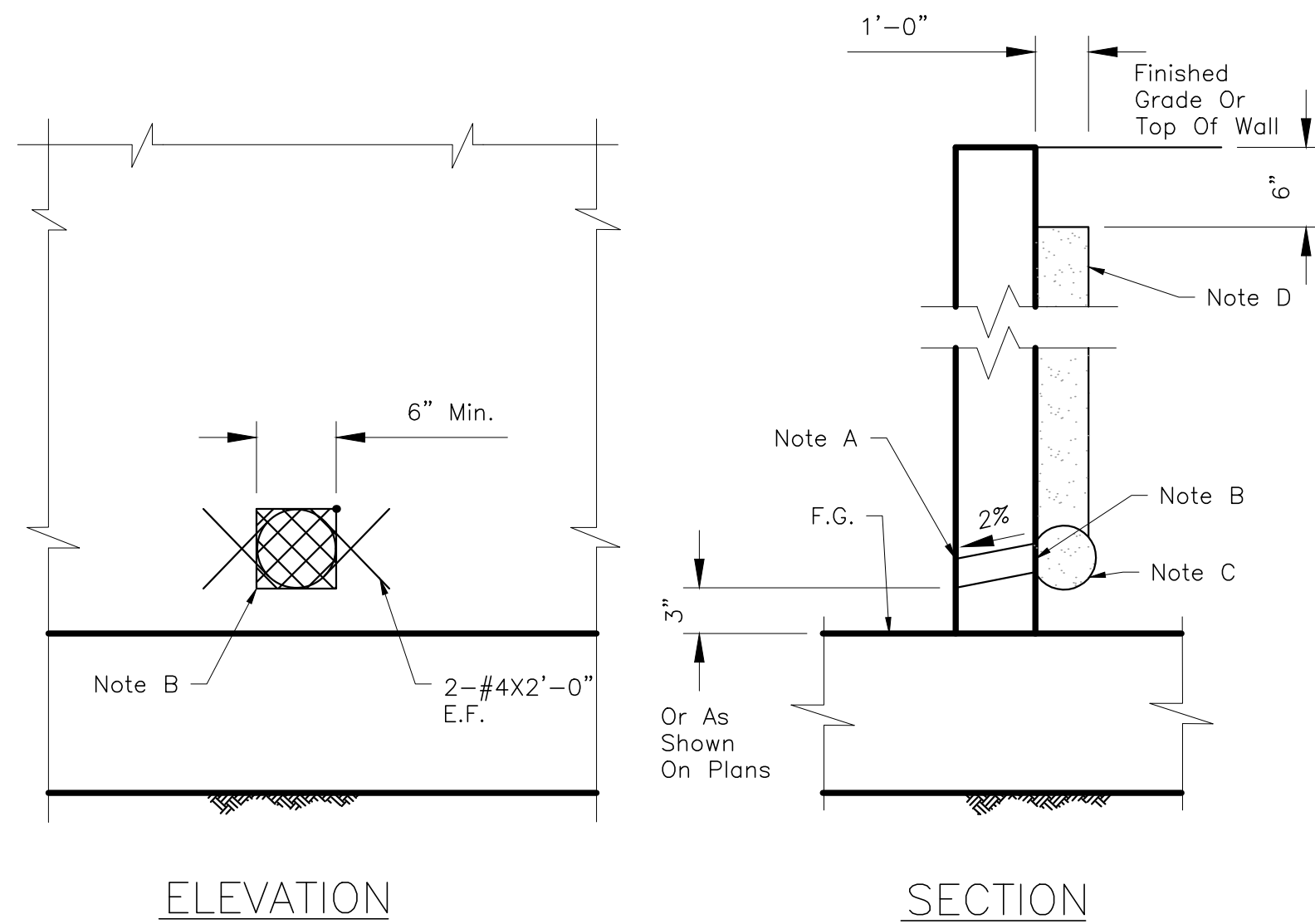


NOTES:

- MASONRY UNITS SHALL BE ASTM C-90, GRADE N-1 HOLLOW CONCRETE UNITS. MASONRY DESIGN STRESS IS AS FOLLOWS: $f_m = 1500$ PSI
- MORTAR SHALL BE ASTM C270, TYPE "M" OR "S".
- GROUT SHALL HAVE A MINIMUM STRENGTH OF 2000 PSI AT 28 DAYS USING TYPE V CEMENT PER ASTM C-150.
- CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 4500 PSI AT 28 DAYS USING TYPE V CEMENT PER ASTM C-150.
- REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60, $F_y = 60,000$ PSI.
- UNLESS OTHERWISE NOTED, ALL MATERIALS SHALL CONFORM TO THE INTERNATIONAL BUILDING CODE, LATEST EDITION, AND PER STANDARD SPECIFICATIONS FOR THE CITY OF LAS VEGAS, NEVADA.
- SOLID GROUT ALL MASONRY UNITS AS SHOWN IN DRAWINGS.
- ALL WALLS ARE SUBJECT TO APPROVAL BY THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
- STEP WALL AT 8" COURSE TO MAINTAIN MINIMUM 8' HEIGHT. THE 1'-0" MAXIMUM GRADE DIFFERENCE MAY BE PLACED ON EITHER SIDE OF THE WALL.
- ALL CORNERS OR ANGLES SHALL BE TIED TOGETHER WITH REINFORCING STEEL AND GROUTED SOLID.
- THE WALL SHALL HAVE HORIZONTAL JOINT REINFORCEMENT AT EVERY COURSE OR ELSE A HORIZONTAL BOND BEAM WITH 2-#4 BARS EVERY 32".
- BOND BEAMS AND JOINT REINFORCING SHALL NOT BE CONTINUOUS THROUGH WALL CONSTRUCTION JOINTS.
- WHERE VERTICAL GROUT LIFTS ARE NOT CONTINUOUS FOR THE ENTIRE HEIGHT OF THE WALL, TERMINATE LIFT 1" BELOW TOP OF TOP BLOCK TO FORM A KEY FOR FUTURE LIFTS.
- LOCATE CONSTRUCTION JOINTS IN WALL AT STEP LOCATIONS OR AT 24'-0" MAXIMUM (SEE MASONRY CONTROL JOINT DETAIL 10 SHEET SD3).
- PROJECT SOILS REPORT: NOVA GEOTECHNICAL AND INSPECTION SERVICES. NOVA PROJECT NO. G-19-090 JUNE 13, 2019

CMU - BLOCK WALL SECTION (TYPICAL)

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



- 2" DIA. PVC WEEPHOLES SPACED AT 8'-0" MAX. FOR CANTILEVER WALLS. BOTTOM OF EXPOSED WALL DRAINS SHALL BE LOCATED 3" ABOVE FINISHED GRADE OR AS SHOWN ON PLANS
- 6" SQUARE ALUMINUM OR GALVANIZED STEEL WIRE 1/4" MESH HARDWARE CLOTH (MIN. WIRE DIA. 0.030") ANCHOR FIRMLY TO BACK SPACE.
- ONE CU. FT/FT OF DRAIN BACKFILL, ENCAPSULATED IN NONWOVEN FILTER FABRIC, MIRAFI 180N OR EQUAL.
- 2" OR 3" SIZE DRAIN BACKFILL PER SECTION 704.03.01 OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA.

WEEP HOLE DETAIL

SCALE: NONE

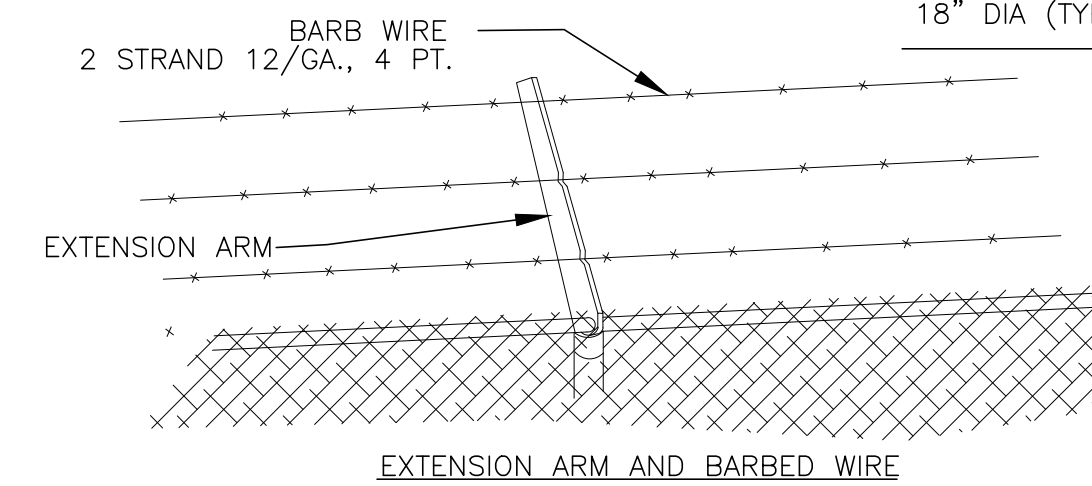
2

CD2

NOTES

- FENCING SHALL BE CHAIN LINK AND SHALL CONSIST OF GALVANIZED CHAIN LINK FABRIC WITH BLACK VINYL COATING ON STEEL POSTS.
 - ALL POST TOPS SHALL BE FITTED WITH SUITABLE FINIALS
 - ALL POSTS SHALL CONFORM TO ASTM A53, GRADE B STEEL
 - BRACES SHALL BE SPACED APPROXIMATELY 12" BELOW TOP OF TERMINAL POSTS OF TERMINAL POSTS AND SHALL EXTEND FROM END, GATE, OR CORNER POSTS TO FIRST ADJACENT LINE POST.
 - ALL FITTINGS SHALL BE HOT DIPPED GALVANIZED MALLEABLE, CAST IRON, OR PRESSED STEEL.
 - TOP AND BOTTOM SELVAGES OF THE FENCE SHALL HAVE A TWISTED AND BARBED FINISH.
- BARBED WIRE, EXTENSION ARMS, AND TOP HORIZONTAL RAILS SHALL BE INSTALLED.

TABLE 1 FOR CHAIN LINK FENCE 8' AND LESS		
LOCATION	MIN. SIZE	MIN. WEIGHT
END, CORNER & PULL LINE	5.56 OD	14.6
BRACES	5.56 OD	14.6
TOP RAIL	2.38 OD	3.66
	2.38 OD	3.66



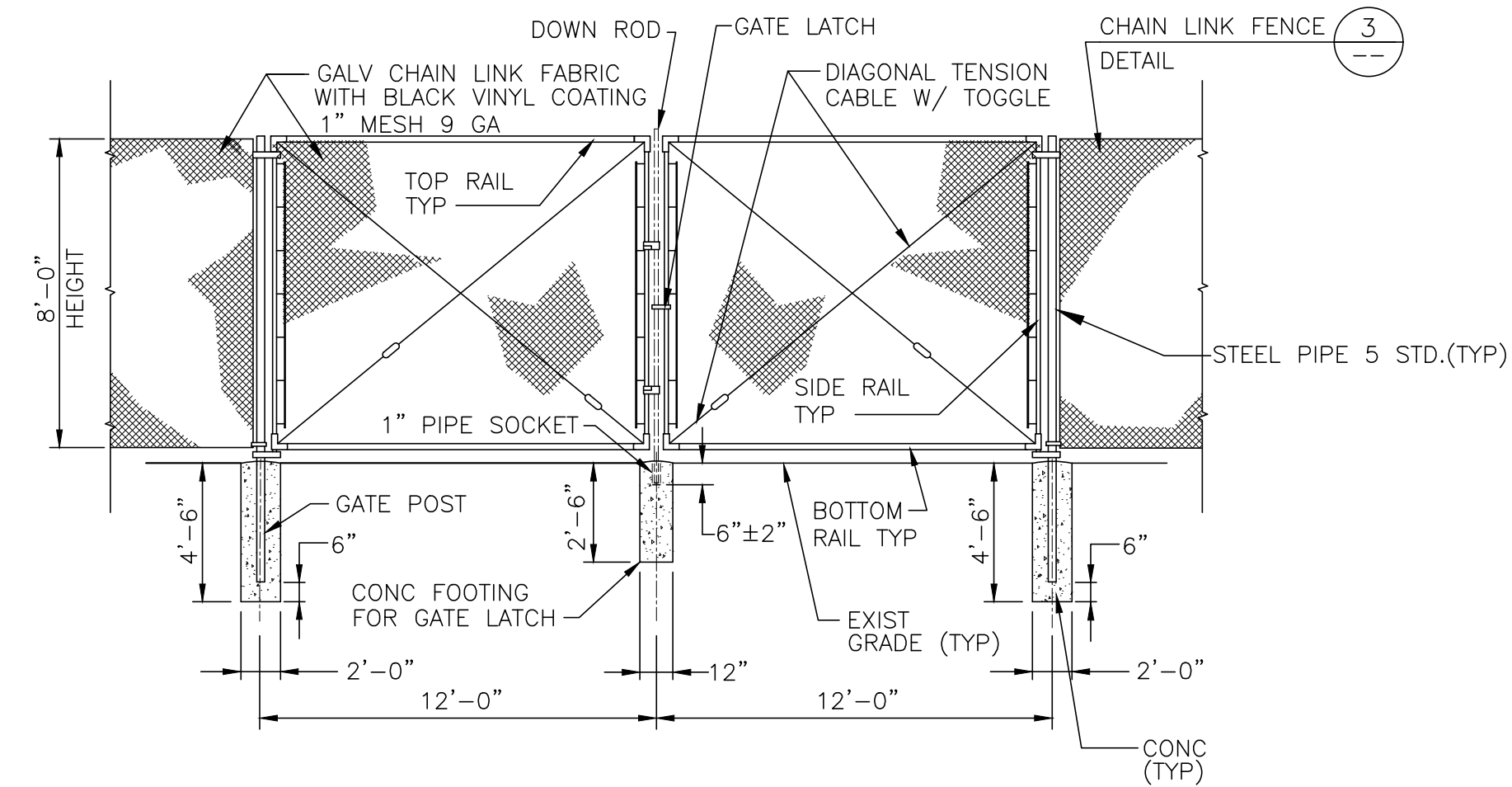
CHAIN LINK FENCE

SCALE: NONE

3

CD2

C1



NOTES:

- REFER TO SPECIFICATIONS SECTION 32 31 13 FOR ALL FENCING MATERIALS.
- ANCHOR BOLT TO INSIDE OF FENCE TOWARDS PROPERTY.

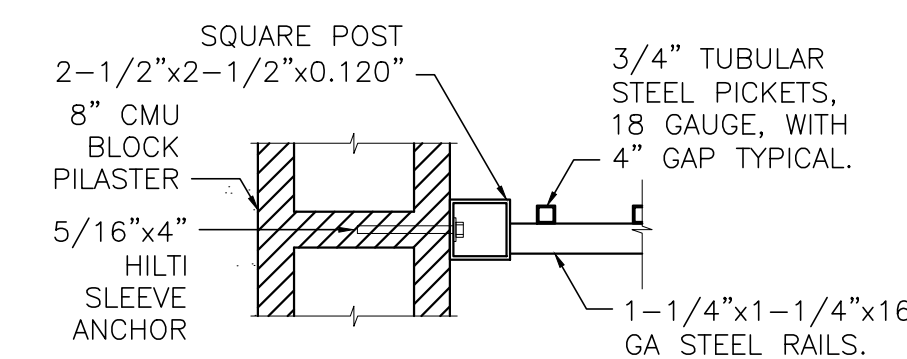
DOUBLE LEAF GATE

SCALE: NONE

5

CD2

C1



5/16"x4" HILTI SLEEVE ANCHOR (TYP)

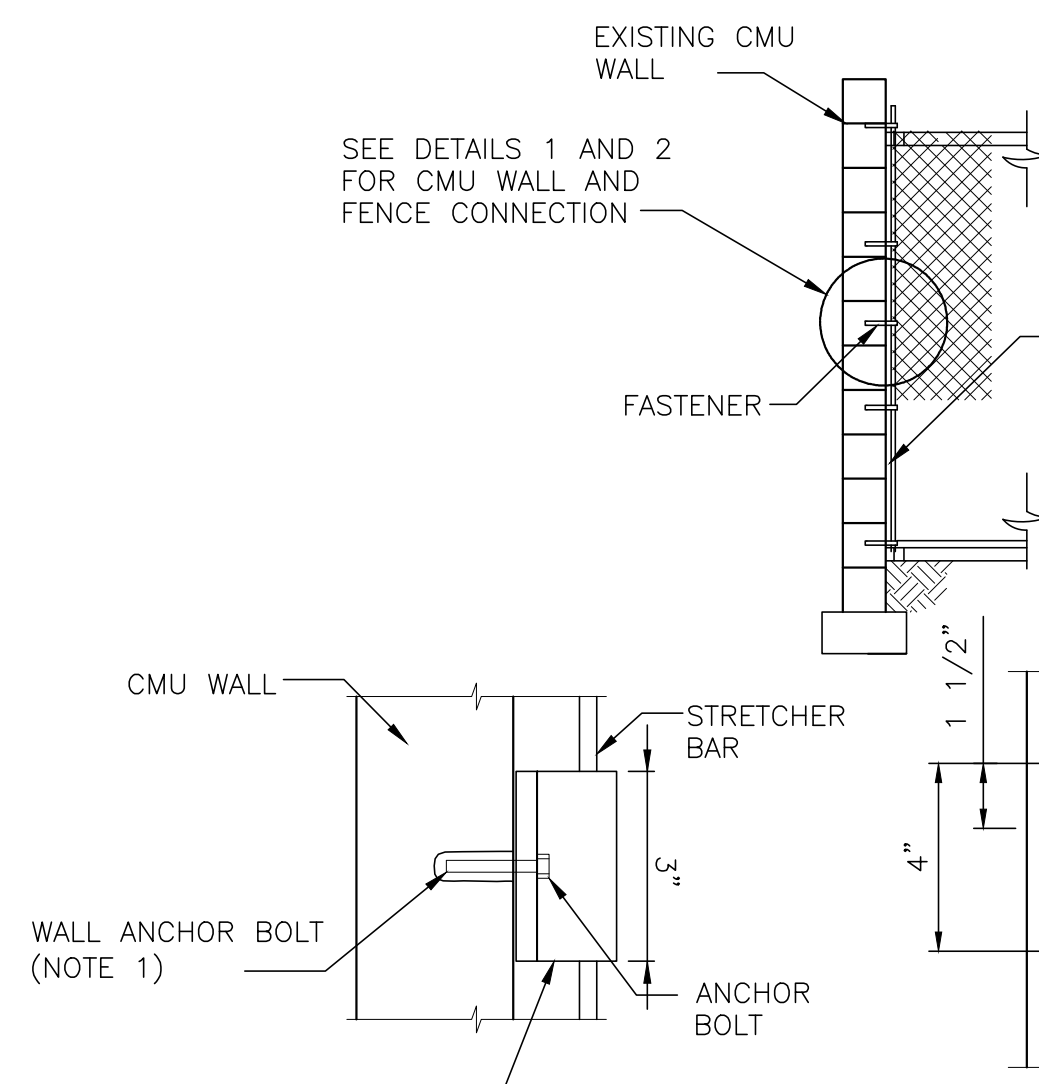
NOT TO SCALE

6

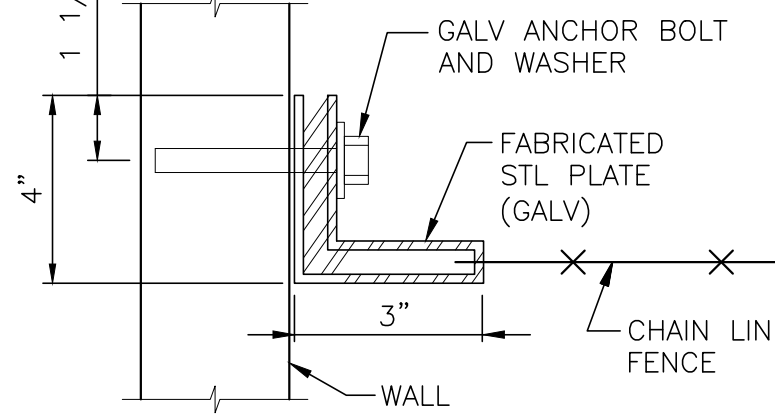
CD2

CD3

DETAIL 1



DETAIL 2 (PLAN)



NOTES:

- WALL ANCHOR BOLT TO BE ADHESIVE ANCHOR, 2" MIN. GALVANIZED. PROVIDE SHOP DRAWINGS.

CMU WALL CONNECTION

SCALE: NONE

4

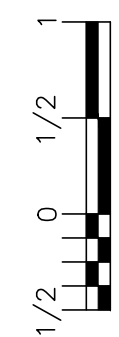
CD2

LAS VEGAS VALLEY WATER DISTRICT

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Fax: +1 702 263 7200

ATKINS

VERIFY SCALE



BAR REPRESENTS ONE AND ONE-HALF INCHES ON ORIGINAL

4125 ZONE NORTH RESERVOIR

SITE WORK DETAILS I

DRAWN BY: 3/25/2020
CHECKED BY: T. NAKAKURA 3/25/2020

RECOMMENDED BY: L. STEVEN ANDERSON DATE

ACCEPTED BY: RYAN C. PEARSON DATE



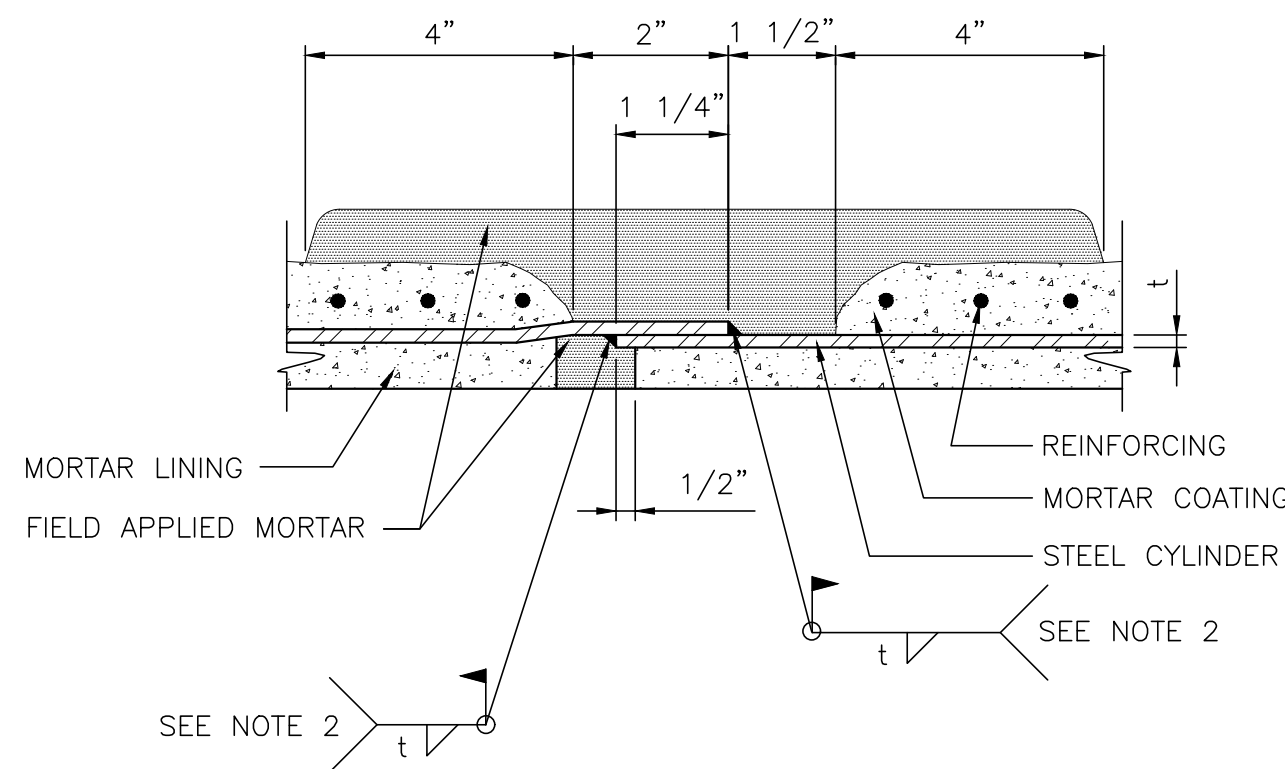
4/16/2020

CONTRACT NUMBER

C1548

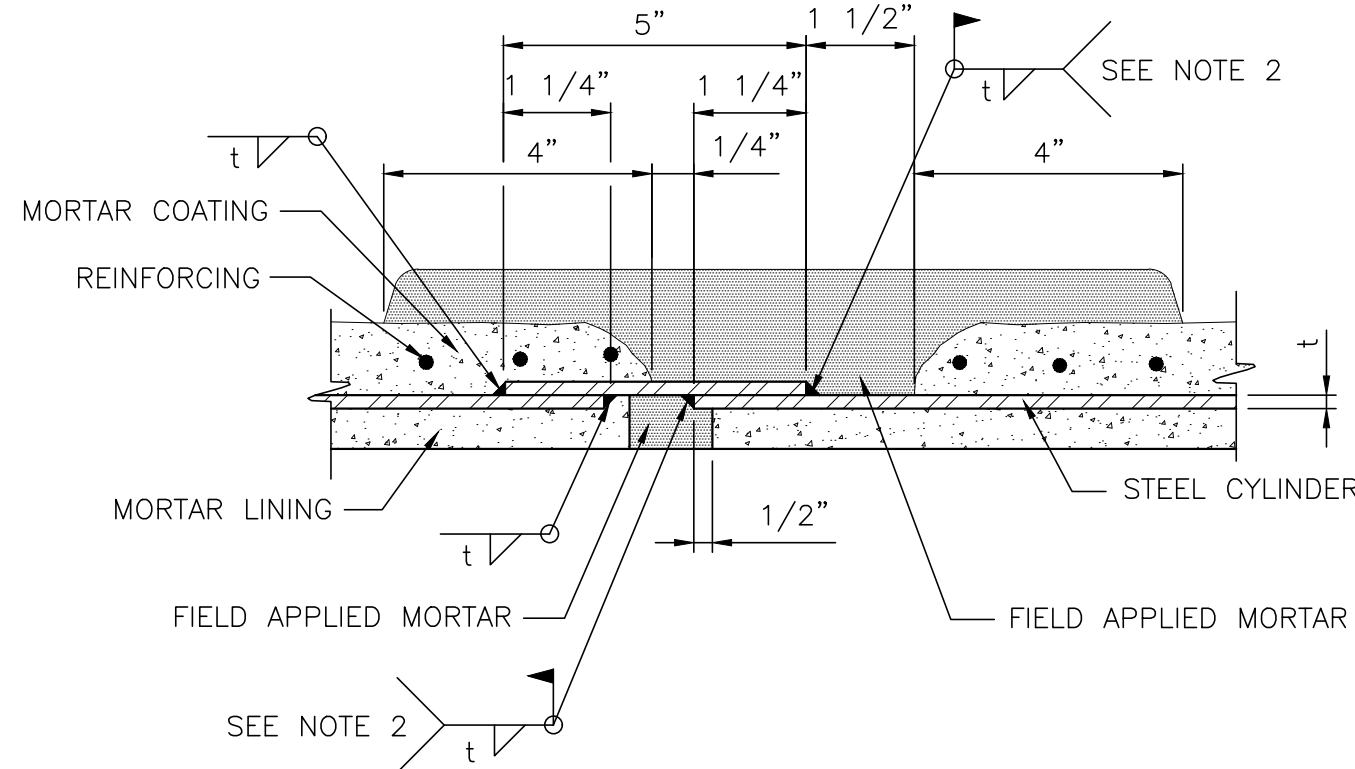
DRAWING NUMBER CD2
SHEET 23 OF 143

CLV DWG #



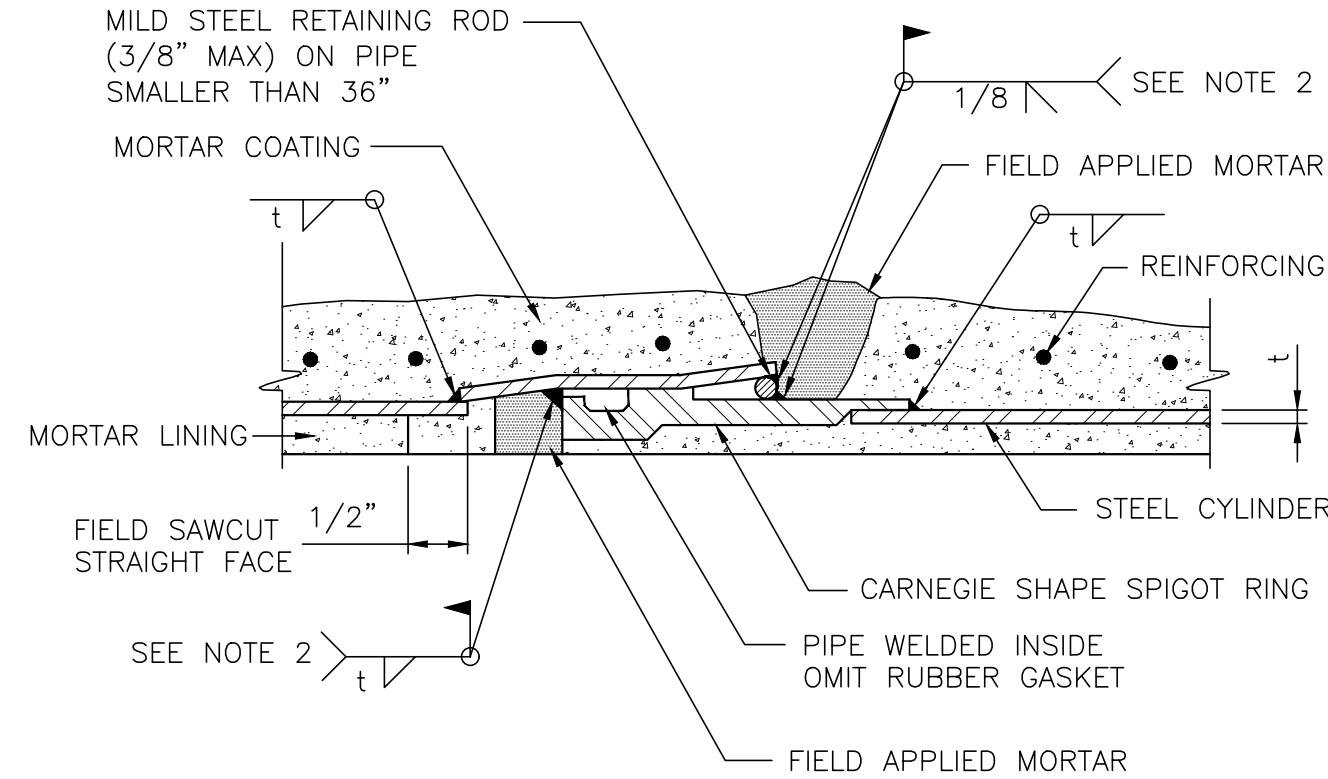
- NOTES:**
1. SEE SPECS SEC 33 11 50 FOR MORTAR LINED AND COATED STEEL PIPE.
 2. WELD OUTSIDE ON PIPE SMALLER THAN 36". WELD INSIDE ON PIPE GREATER THAN OR EQUAL TO 36", UNLESS APPROVED BY ENGINEER.
 3. TAPE WRAP JOINTS IN ACCORDANCE WITH SPECIFICATIONS.

**LAP - WELDED SLIP JOINT
ALTERNATE 'A' FIELD WELDED** **1**
SCALE: NONE **CD3**



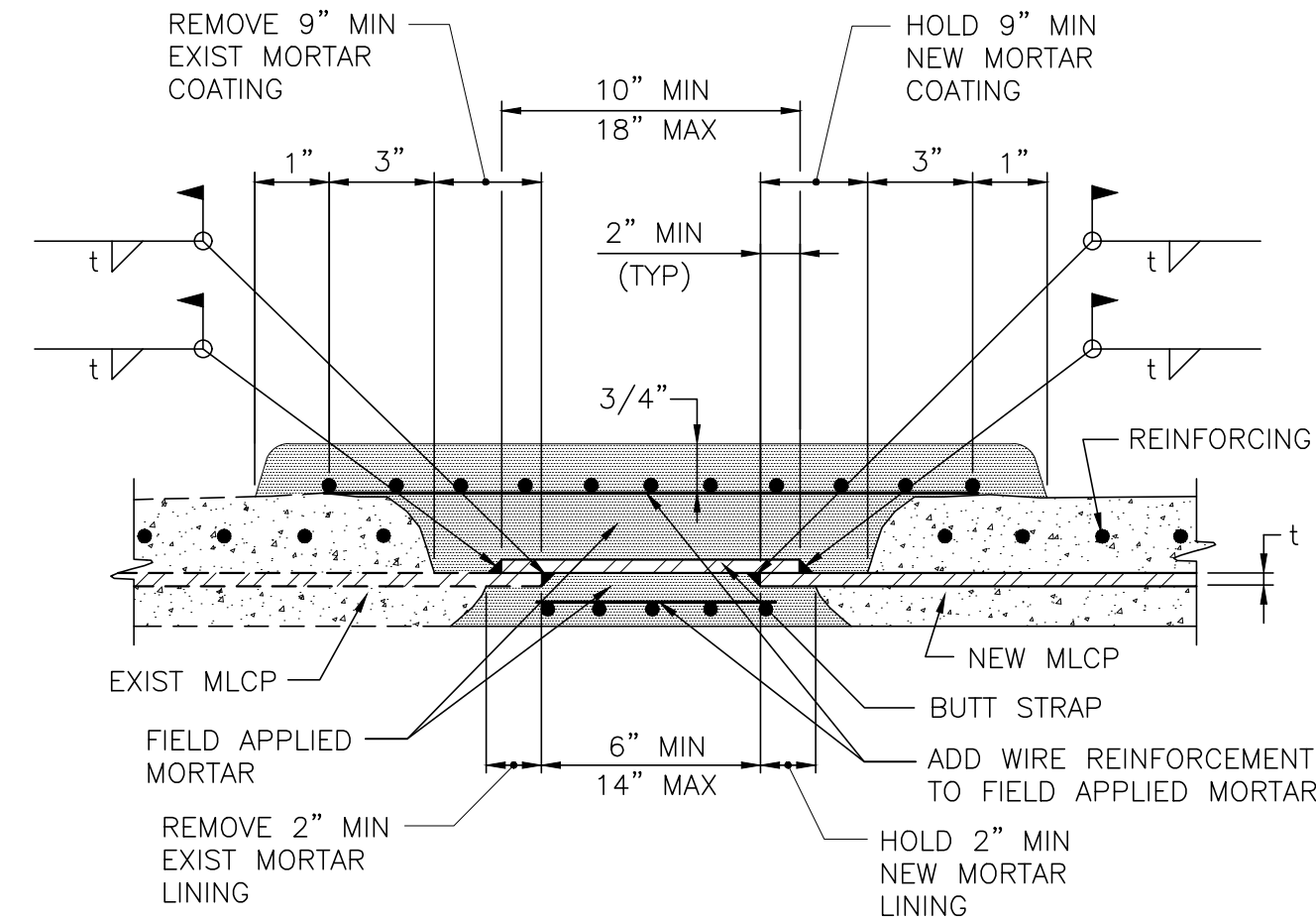
- NOTES:**
1. SEE SPECS SEC 33 11 50 FOR MORTAR LINED AND COATED STEEL PIPE.
 2. WELD OUTSIDE ON PIPE SMALLER THAN 36". WELD INSIDE ON PIPE GREATER THAN OR EQUAL TO 36", UNLESS APPROVED BY ENGINEER.
 3. TAPE WRAP JOINTS IN ACCORDANCE WITH SPECIFICATIONS.

**LAP - WELDED SLIP JOINT
ALTERNATE 'B' FIELD WELDED** **2**
SCALE: NONE **CD3**



- NOTES:**
1. SEE SPECS SEC 33 11 50 FOR MORTAR LINED AND COATED STEEL PIPE.
 2. WELD OUTSIDE ON PIPE SMALLER THAN 36". WELD INSIDE ON PIPE GREATER THAN OR EQUAL TO 36", UNLESS APPROVED BY ENGINEER.
 3. TAPE WRAP JOINTS IN ACCORDANCE WITH SPECIFICATIONS.

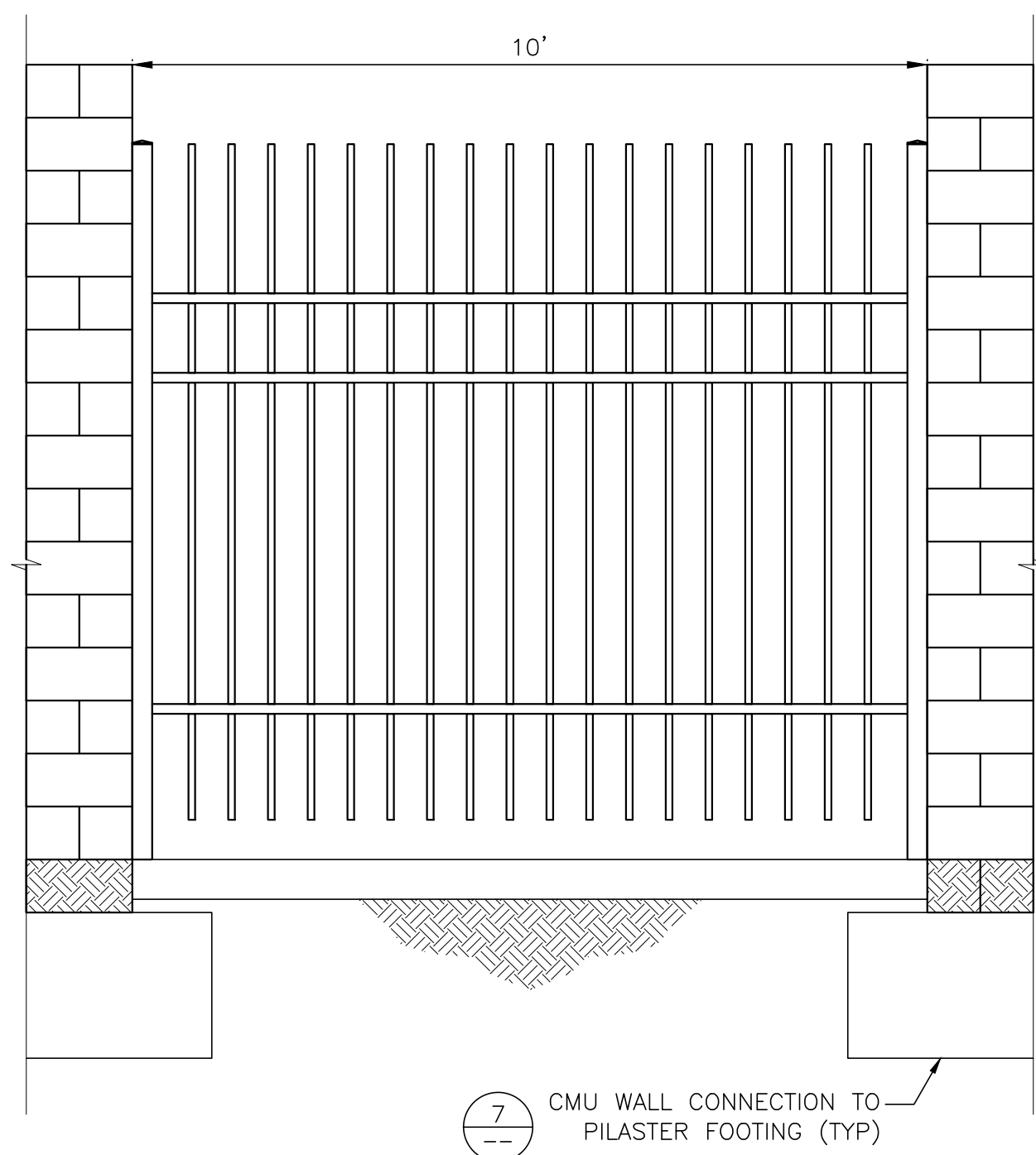
CARNEGIE JOINT FIELD WELDED **3**
SCALE: NONE **CD3**



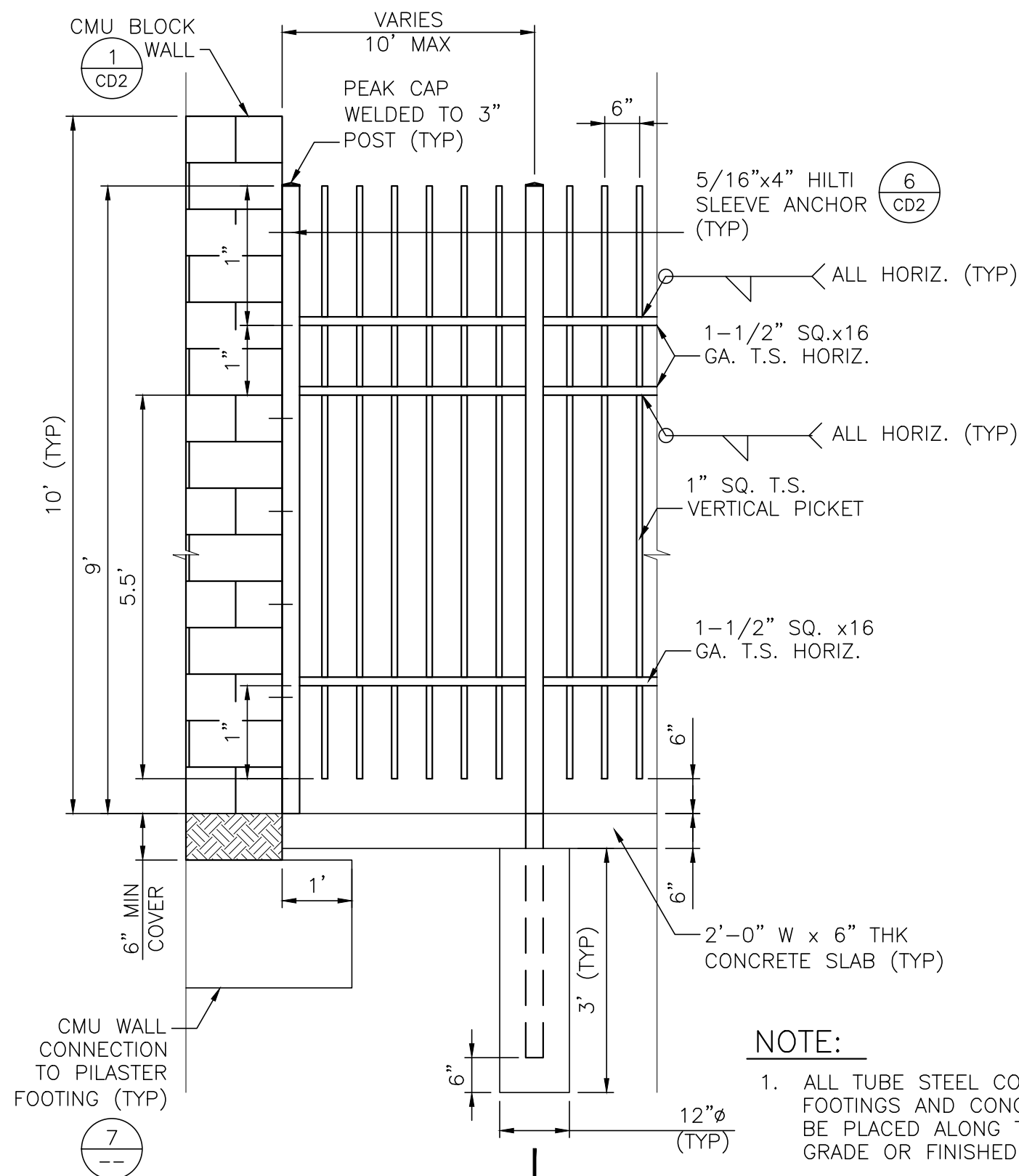
- NOTE:**
- SEE SPECS SEC 33 11 50 FOR MORTAR LINED AND COATED STEEL PIPE.
TAPE WRAP JOINTS IN ACCORDANCE WITH SPECIFICATIONS.

**BUTT STRAP JOINT AT MLCP
CONNECTIONS TO EXISTING MLCP** **4**
SCALE: NONE **CD3**

M8, MD4

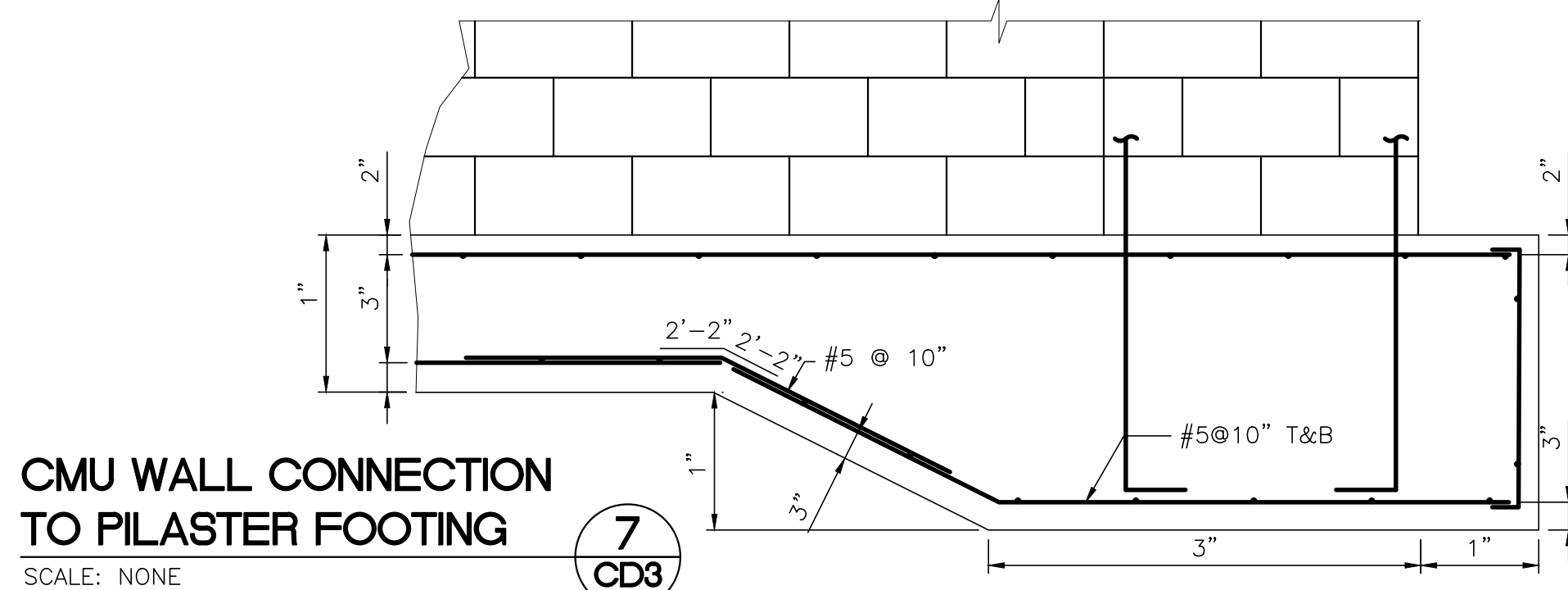
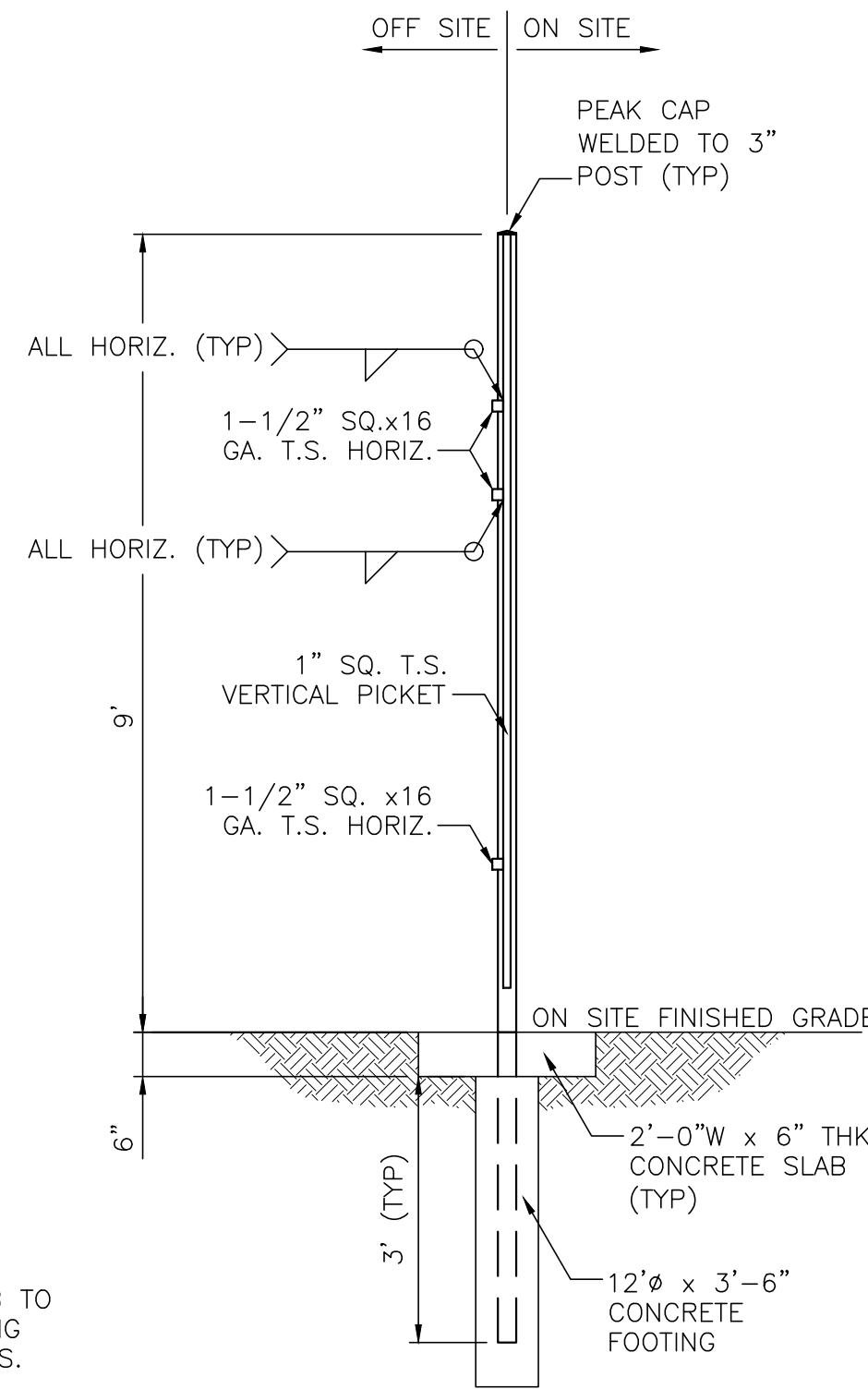


10' TUBULAR STEEL FENCE **5**
NOT TO SCALE **CD3**
C1



- NOTE:**
1. ALL TUBE STEEL CONCRETE FOOTINGS AND CONCRETE SLAB TO BE PLACED ALONG THE EXISTING GRADE OR FINISHED ELEVATIONS.
 2. ALL TUBE CONCRETE FOOTING DESIGN IS BASED ON 3000 PSI.

TUBULAR STEEL FENCE DETAIL (TYP) **6**
SCALE: NONE **CD3**
C1, C4



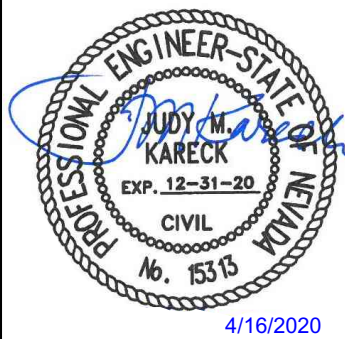
**CMU WALL CONNECTION
TO PILASTER FOOTING** **7**
SCALE: NONE **CD3**

LAS VEGAS VALLEY WATER DISTRICT

VERIFY SCALE

4125 ZONE NORTH RESERVOIR

DRAWN BY: 03/25/2020
CHECKED BY: T. NAKAKURA 03/25/2020
RECOMMENDED BY: L. STEVEN ANDERSON
ACCEPTED BY: RYAN C. PEARSON



CONTRACT NUMBER
C1548
DRAWING NUMBER **CD3**
SHEET **24** OF **143**

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Telephone: +1 702 263 7775
Fax: +1 702 263 7200

ATKINS

SCALE
1/2" = 1'
0
1/2
1
BAR REPRESENTS
ONE AND ONE-HALF
INCHES ON ORIGINAL

SCALE
HORIZ. SCALE
VERT. SCALE
NONE

