

DS #: 5421

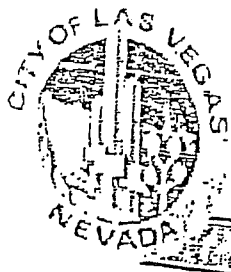
APN: 137-15-801-002 & More

PROJECT: Summerlin West V25 - Scarry Blvd Drive Improvements

SUBMITTAL: 2nd

SCANNED BY/DATE:

CHECKED BY/DATE:



CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		May 5, 2021
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:	COPIES TO:
Summerlin West V25 - Scurry Bend Drive Improvements (from Sunset Run Dr. to Lake Mead Blvd.)		Atkins
Cross Streets:	Scurry Bend Drive. & Lake Mead Boulevard	Howard Hughes Company, LLC
File Number:	F:\Depot\DSMemos\DS5427B.doc	Bart Anderson, P.E., DevCo
Parcel Number:	137-15-801-002 & more	
Zoning Action:	N/A	
FEMA Flood Zone	YES NO X	
Proposed Storm Drain	YES X NO	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	3/11/2021	3/31/2021	Not Approved	\$400.00	4198949: \$400
2 nd Submittal	4/21/2021	5/5/2021	See Comments Below	\$400.00	4255233: \$400
TOTAL FEES (LDDRS):				\$800.00	----

REMARKS:

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

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

- The subject project is based on the premise that the downstream *Fleet Wing Avenue* and *Flight Range Avenue* and the associated storm drain facilities are in place for flood flow perpetuation. The subject drainage study will not be finally approved prior to the posting of the construction bonds of the *Summerlin West Village 22 – Fleet Wing Avenue (Kettle Ridge to Scurry Bend)* and *Summerlin West Village 22- Flight Range Avenue (Scurry Bend to Kettle Ridge)* street improvements project.
- An updated *Figure 3: (Interim Hydrology Workmap)* for the subject study to address previous Comments #4 and #5 had not been provided in the last submittal.
- Previous Comment #9:** *Provide City of Las Vegas recorded drawing numbers for all existing storm drains on the grading plans.*

The format for *City of Las Vegas* recorded drawing number is 107Y-xxxxx or 107V-xxxxx etc. Not L20-xxxxx etc as shown in the last submittal. Review and revise accordingly.
- Previous Comment #13:** *Sheet 14/42 and Sheet 15/42: The proposed 30"-RCP mainline is too close to the street curb. Maintain a minimum of 3'-clearance between the edge of the storm drain and the lip of the concrete gutter.*

Clearly label the 3'-minimum requirement on the plans at the tightest location in the next submittal.

5. **Previous Comment #17:** *Sheet 22/42 and Sheet 23/42: Discuss about whether there will be any inlets in the future Lake Mead Boulevard upstream of the intersection with Scurry Bend Drive. If there are none and to meet the 600'-maximum spacing requirement for inlets, the storm drain may need to be extended from SDMH #7 and two nominal inlets be provided in the vicinity of the intersection of the two roadways.*

The response is that there will be a drop inlet in *Lake Mead Boulevard* upstream of the intersection with *Scurry Bend Drive*. Show as such the inlet on *Sheet 22/42* and *Sheet 23/42* as "Future" in the next submittal.

6. **Previous Comment #18:** *Indicate the length and depth of the inlets on all pertinent plans. Any inlets deeper than 10' require City Building & Safety Department review and approval of the structural design and calculations.*

It is still not clear what's the depth of SDDI #4?

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
HDR/AYS

T/R/S: T20S/R59E/15
AREA K-15



Summerlin West Village 25

Scurry Bend Drive: Sunset Run Drive to Lake
Mead Boulevard

Prepared for Howard Hughes Company, LLC

April 19, 2021

HYDROLOGIC CRITERIA AND DRAINAGE MANUAL

DRAINAGE STUDY INFORMATION FORM

Name of Development: Summerlin West Village 25 Scurry Bend Drive: Sunset Run Dr to Lake Mead Blvd Date: April 19, 2021

Location of Development: a) Descriptive (Cross Streets) North/South: Scurry Bend Drive
 East/West: Lake Mead Boulevard

b) Section: 23 and 14 Township: 20S Range: 59E

c) APN : 137-15-801-002, 137-15-811-001, 137-22-301-006, 137-23-211-001

Name of Owner: Howard Hughes Company, LLC

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

Address: 10845 Griffith Peak Dr. Suite 160, Las Vegas, NV 89135

Contact Person-Name: Janelle Klein, PE Telephone No.: (702) 551-0365

* E-Mail Address: janelle.klein@atkinsglobal.com Fax No.: (702) 263-7200

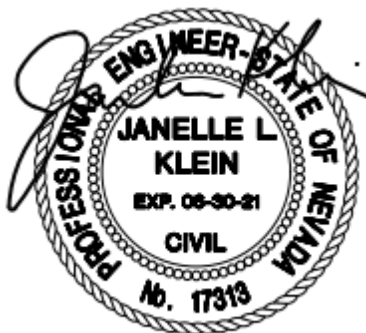
Firm: Atkins

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	☒	Street improvements

- Total Owned Land Area: At Site: +/- 446 acres Being Developed/Disturbed: +/- 4.74 acres
- Is a portion or all of the subject property located in a designated FEMA Flood Hazard Area? ☐ Yes** ☒ No
- Is the property bordered or crossed by an existing or proposed Clark County Regional Flood Control District Master Planned Facility? ☐ Yes** ☒ No
- Proposed type of development (Residential, Commercial, Etc.): Rough Grade
- Approximate upstream land area which drains to the subject site: 225.54 acres
- Has the site drainage been evaluated in the past? ☒ YES ☐ NO If yes, please identify documentation: Overall Master Conceptual Drainage Study for Summerlin West, Scurry Bend Rough Grade DS 5253
- If known, please briefly identify the proposed discharge point(s) of runoff from the site: Existing CC-215 Western Beltway Channel
- Briefly describe your proposed schedule for the subject project: ASAP



4/19/2021

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

CITY OF LAS VEGAS			DATE:	
INTER-OFFICE MEMORANDUM			April 1, 2021	
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:	COPIES TO:	
Summerlin West V25 - Scurry Bend Drive Improvements (from Sunset Run Dr. to Lake Mead Blvd.)			Atkins	
Cross Streets:	Scurry Bend Drive. & Lake Mead Boulevard		Howard Hughes Company, LLC	
File Number:	F:\Depot\DSMemos\DS5427A.doc		Bart Anderson, P.E., DevCo	
Parcel Number:	137-15-801-002 & more			
Zoning Action:	N/A			
FEMA Flood Zone	YES	NO	X	
Proposed Storm Drain	YES	X	NO	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	3/11/2021	3/31/2021	See Comments Below	\$400.00	4198949: \$400
			TOTAL FEES (LDDRS):	\$400.00	----

REMARKS:

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

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

- The subject project is based on the premise that the downstream *Fleet Wing Avenue* and *Flight Range Avenue* and the associated storm drain facilities are in place for flood flow perpetuation. The subject drainage study will not be finally approved prior to the posting of the construction bonds of the *Summerlin West Village 22 – Fleet Wing Avenue (Kettle Ridge to Scurry Bend)* and *Summerlin West Village 22- Flight Range Avenue (Scurry Bend to Kettle Ridge)* street improvements project.
- The interim condition of the study and project appears to include offsite basin to the west of *Lake Mead Boulevard* alignment, ie, *Lake Mead Boulevard* is not considered as improved or a cut-off for basins to the west. If this is the case, provide interim berms or swales along the west side of *Scurry Bend Drive* for interim flood protection for the improved AC roadway.

Provide a master grading plan to show the berms/swales accordingly in the next submittal. Maintenance bond and liability agreement will be required.
- The ultimate condition hydrology table provided on *Figure 3: Interim Hydrology Workmap* is unclear. How are these derived? Only a few of them are noted to be reference flows however an ultimate condition HEC-1 is not provided.
- Provide basin flow arrows for all proposed roadway basins.

5. Show combination points on all the hydrologic condition basin maps.
6. Basin area for SN-1AE is 0.00135 on the Tc calculations but 0.00134 in the HEC-1. Basin area for SN-1BW is 0.00136 on the Tc calculations but 0.00135 on the HEC-1 model. Revise the discrepancy.
7. Drop Inlet SDDI#5 & #6 receive 4.0 cfs, intercept 3.6 cfs and bypass 0.5 cfs which totals 4.1 cfs. Address and resolve in the next submittal.
8. *Hydraulic Section SN-1BS* should be SN-1BW (4cfs)+SN-1BE (4cfs)+ SDDI#5 bypass (0.5cfs) + SDDI#6 bypass (0.5 cfs) = 9.0 cfs instead of 8.9 cfs as shown in the *Summary Table*. Resolve in the next submittal.
9. Provide *City of Las Vegas* recorded drawing numbers for all existing storm drains on the grading plans.
10. Roadway plan and profile *Sheet 12/42* and *Sheet 13/42* inlet SDDI#1 curb transition is located in the pedestrian curb ramp. Revise so that these do not overlap.
11. Show the HGL for the lateral pipe for SDMH#1 on plan / profile *Sheet 13/42*.
12. Provide one nominal inlet on the east curb of *Scurry Bend Drive* from SDMH #1.
13. *Sheet 14/42 and Sheet 15/42*: The proposed 30"-RCP mainline is too close to the street curb. Maintain a minimum of 3'-clearance between the edge of the storm drain and the lip of the concrete gutter. Review and revise accordingly.
14. The WSPG model for SDMH#3 elevations do not match the profile elevations presented on plan and profile *Sheet 15/42*.
15. *Sheet 16/42 and Sheet 17/42*: The proposed SDDI #4 is at a local low point. Address what is the maximum ponding depth in case the inlet is totally clogged and describe the emergency overflow path in the next submittal.
16. The inlets shown on the roadway grading plan *Sheet 18/42* are missing the SDDI number labels. Should show SDDI#5 and SDDI #6.
17. *Sheet 22/42 and Sheet 23/42*: Discuss about whether there will be any inlets in the future *Lake Mead Boulevard* upstream of the intersection with *Scurry Bend Drive*. If there are none and to meet the 600'-maximum spacing requirement for inlets, the storm drain may need to be extended from SDMH #7 and two nominal inlets be provided in the vicinity of the intersection of the two roadways. Address and resolve in the next submittal.
18. Indicate the length and depth of the inlets on all pertinent plans. Any inlets deeper than 10' require *City Building & Safety Department* review and approval of the structural design and calculations. Clarify in the next submittal.

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
HDR/AYS

T/R/S: T20S/R59E/15
AREA K-15

Engineer's Certification

Atkins certifies that the information contained herein has been prepared in accordance with generally accepted engineering principles and practices, and to the best of our knowledge, is true and correct.

This letter certifies that all items in the **Addendum #1 to the Technical Drainage Study for Scurry Bend Drive: Sunset Run Drive to Lake Mead Boulevard** electronic submittal matches the paper version bound into the study.



Janelle L. Klein, PE (NV #17313)
Senior Engineer

Comment Response Letter

Your reference: DS #5427A

Albert Sung
City of Las Vegas Public Works
333 N. Rancho Dr, 7th Floor
Las Vegas, NV 89106

April 19, 2021

**RE: ADDENDUM #1 TECHNICAL DRAINAGE STUDY FOR SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE – SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD**

Dear Albert,

This letter and the attached documents have been prepared as an Addendum #1 to the *Technical Drainage Study (TDS) for Summerlin West Village 25 - Scurry Bend Drive - Sunset Run Drive to Lake Mead Boulevard*

Comment #1: *The subject project is based on the premise that the downstream Fleet Wing Avenue and Flight Range Avenue and the associated storm drain facilities are in place for flood flow perpetuation. The subject drainage study will not be finally approved prior to the posting of the construction bonds of Summerlin West Village 22 – Fleet Wing Avenue (Kettle Ridge to Scurry Bend) and Summerlin West Village 22 – Flight Range Avenue (Scurry Bend to Kettle Ridge) street improvements project.*

Comment response: Acknowledged

Comment #2: *The interim condition of the study and project appears to include offsite basin to the west of Lake Mead Boulevard alignment, ie, Lake Mead Boulevard is not considered as improved or a cut-off for basins to the west. If this is the case, provide interim berms or swales along the west side of Scurry Bend Drive for interim flood protection for the improved AC roadway.*

Provide a master grading plan to show the berms/swales accordingly in the next submittal. Maintenance bond and liability agreement will be required.

Comment response: Interim swales along the west side of Scurry bend are provided in the Rough Grade improvements for Scurry Bend that were approved with the Kettle Ridge (Street J): Fleet Wing Avenue to Lake Mead Boulevard & Scurry Bend Drive (Street N) Rough Grade: Fleet Wing Avenue to Lake Mead Boulevard (DS5156) and re-analyzed in the approved Technical Drainage Study for the V25 High School Stockpile (DS5402). The Swale diagram is provided in Appendix A of this submittal.

Comment #3: *The ultimate condition hydrology table provided on Figure 3: Interim Hydrology Workmap is unclear. How are these derived? Only a few of them are noted to be reference flows however an ultimate condition HEC-1 is not provided.*

Comment response: 25-HS1B and 25-HS1 in the ultimate condition hydrology table are derived from HS-1A and HS-1B found on Figure 6 of Update #1 to the Master Conceptual Drainage Study for Summerlin West Village 25 in Appendix A. The values for Scurry Bend Drive (Street N) subbasins and associated combination points are from the interim model, the other basins remain as modeled in the MCDS Ultimate condition. The summary table on Figure 3 provided in Appendix A has been updated to reflect the proper referenced basins.

Comment #4: *Provide basin flow arrows for all proposed roadway basins.*

Comment response: An updated Figure 3: Interim Hydrology Workmap has been provided.

Comment #5: *Show combination points on all the hydrologic condition basin maps.*

Comment response: An updated Figure 3: Interim Hydrology Workmap has been provided.

Comment #6: *Basin area for SN-1AE is 0.00135 on the Tc calculations but 0.00134 in the HEC-1. Basin area for SN-1BW is 0.00136 on the Tc calculations but 0.00135 on the HEC-1 model. Revise the discrepancy.*

Comment response: HEC-1 inputs have been modified to match Standard Form 4. The revised HEC-1 is provided with this submittal in Appendix B. The total flows did not change.

Comment #7: *Drop Inlet SDDI#5 & #6 receive 4.0 cfs, intercept 3.6 cfs and bypass 0.5 cfs which totals 4.1 cfs. Address and resolve in the next submittal. Comment response:*

Comment response: Values for the intercepted flow and bypass flow were rounded to one decimal place in the summary table. In Appendix C.1, the Flowmaster calculations for Drop Inlet #5 and Drop Inlet #6 both have values of 3.55 cfs for the intercepted flow and 0.45 cfs for the bypass flow which add up to 4.00 cfs.

Comment #8: *Hydraulic Section SN-1BS should be SN-1BW (4cfs) + SN-1BE (4cfs) + SDDI#5 bypass (0.5cfs) + SDDI#6 bypass (0.5 cfs) = 9.0 cfs instead of 8.9 cfs as shown in the Summary Table. Resolve in the next submittal.*

Comment response: Values for the bypass flow were rounded to one decimal place in the summary table. In Appendix C.1, the Flowmaster calculations for Drop Inlet #5 and Drop Inlet #6 both have values of 0.45 cfs for the bypass flow which add up to 0.9 cfs.

Comment #9: *Provide City of Las Vegas recorded drawing numbers for all existing storm drains on the grading plans.*

Comment response: The improvement plans have been updated with the project numbers for adjacent projects that have been reviewed.

Comment #10: *Roadway plan and profile Sheet 12/42 and Sheet 13/42 inlet SDDI#1 curb transition is located in the pedestrian curb ramp. Revise so that these do not overlap.*

Comment response: The improvement plans have been revised so that there is no conflict with the drop inlets and the pedestrian curb ramps.

Comment #11: *Show the HGL for the lateral pipe for SDMH#1 on plan / profile Sheet 13/42.*

Comment response: The improvement plans have been updated with the HGL.

Comment #12: *Provide one nominal inlet on the east curb of Scurry Bend Drive from SDMH #1.*

Comment response: A drop inlet is provided on Flight Range Avenue to collect the flow, as depicted in Figure 3 from the approved Technical Drainage Study for Summerlin West Village 22 Flight Range Avenue (street E): Curry Bend Drive (Street N) to Kettle Ridge Drive (Street J) DS5385. Provided in Appendix A of this submittal.

Comment #13: *Sheet 14/42 and Sheet 15/42: The proposed 30"-RCP mainline is too close to the street curb. Maintain a minimum of 3'-clearance between the edge of the storm drain and the lip of the concrete gutter. Review and revise accordingly.*

Comment response: The improvement plans have been updated to provide more clearance from the curb to the storm drain.

Comment #14: *The WSPG model for SDMH#3 elevations do not match the profile elevations presented on plan and profile Sheet 15/42.*

Comment response: The improvement plans show the HGL from the WSPG model SCURRY-BEND-SOUTH_ULT.OUT and SCURRY-BEND-SOUTH_INT.OUT for SDMH#3 and SDMH#4 connected to the SDMH#5 WSPG from FFW-INT.OUT.

Comment #15: *Sheet 16/42 and Sheet 17/42: The proposed SDDI #4 is at a local low point. Address what is the maximum ponding depth in case the inlet is totally clogged and describe the emergency overflow path in the next submittal.*

Comment response: The FG elevation at the street centerline is 3495.04, the FL elevation of SDDI#4 is 3494.97, resulting in a maximum ponding depth of 0.07 ft (0.8 in) before the flow overtops and flows down Fleet Wing Avenue. Per the approved Technical Drainage Study for Fleet Wing Avenue (Street G): Kettle Ridge Drive to Scurry Bend Drive (DS5367) the drop inlets at the upstream end of Fleet Wing Avenue have been sized to accept the overflow. Figure 4 is provided in Appendix A of this submittal.

Comment #16: *The inlets shown on the roadway grading plan Sheet 18/42 are missing the SDDI number labels. Should show SDDI#5 and SDDI #6.*

Comment response: The improvement plans have been updated with the drop inlet labels.

Comment #17: *Sheet 22/42 and Sheet 23/42: Discuss about whether there will be any inlets in the future Lake Mead Boulevard upstream of the intersection with Scurry Bend Drive. If there are none and to meet the 600'-maximum spacing requirement for inlets, the storm drain may need to be extended from SDMH #7 and two nominal inlets be provided in the vicinity of the intersection of the two roadways. Address and resolve in the next submittal.*

Comment response: The Master Drainage Plan for Lake Mead Boulevard: Kettle Ridge Drive to Scurry Bend Drive is provided in Appendix A to show the prop inlets that will be provided to collect flow in Lake Mead Boulevard. The drainage study for Lake Mead Boulevard: Kettle Ridge Drive to Scurry Bend Drive has not yet been reviewed by the City, however this design complies with the approved Master Conceptual Drainage Study for Summerlin West Village 22.

Comment #18: *Indicate the length and depth of the inlets on all pertinent plans. Any inlets deeper than 10' require City Building & Safety Department review and approval of the structural design and calculations. Clarify in the next submittal.*

Comment response: The drop inlet labels on the Sheet 24: Storm Drain Lateral Profiles have been updated with that specify the inlet length and depth.

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.

Comment response: Acknowledged

Please contact our office at 702-551-0365 or email me at Janelle.Klein@atkinsglobal.com if you have any question regarding this submittal.

Sincerely,
Atkins,



Janelle L. Klein, PE (NV #17313)
Senior Engineer

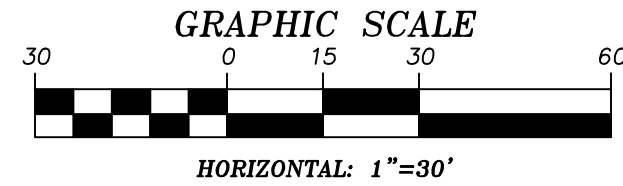
Appendices



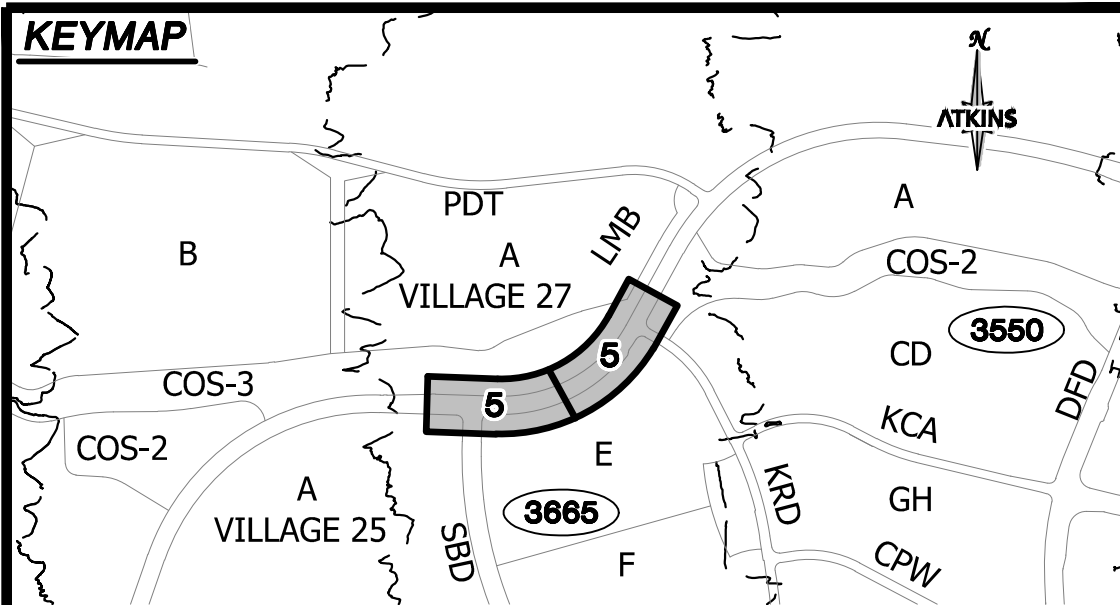
Appendix A. Referenced Reports

- A.1. Lake Mead Boulevard: Kettle Ridge Drive to Scurry Bend Drive - Master Drainage Plan
- A.2. Fleet Wing Avenue: Scurry Bend Drive to Kettle Ridge Drive – Hydraulics Workmap
- A.3. Flight Range Avenue: Scurry Bend Drive to Kettle Ridge Drive – Interim Hydrology Workmap
- A.4. Kettle Ridge Drive: Fleet Wing Avenue to Lake Mead Boulevard & Scurry Bend Drive Rough Grade: Fleet Wing Avenue to Lake Mead Boulevard – Hydrology Workmap
- A.5. V25 High School Staging Area – Hydraulics
- A.6. Scurry Bend Drive (Street N) Rough Grade: Sunset Run Drive to Fleet Wing Avenue (Street G) – Master Drainage Plan

A.1. Lake Mead Boulevard: Kettle Ridge Drive to Scurry Bend Drive - Master Drainage Plan



1. SEE PROFILE SHEETS FOR CONSTRUCTION NOTES AND INFORMATION RELATED TO PIPE SIZE (INNER DIAMETER), MANHOLE BASE SIZE (INSIDE DIMENSIONS), AND DROP INLET LENGTHS (CURB OPENING).
2. ALL STORM DRAIN MATERIAL TO BE CLASS III REINFORCED CONCRETE PIPE, UNLESS OTHERWISE NOTED IN PROFILES.
3. CONTRACTOR TO PROVIDE 6" MINIMUM OF CLEARANCE BETWEEN OUTSIDE OF PIPE TO INSIDE WALL OF STORM DRAIN STRUCTURES.

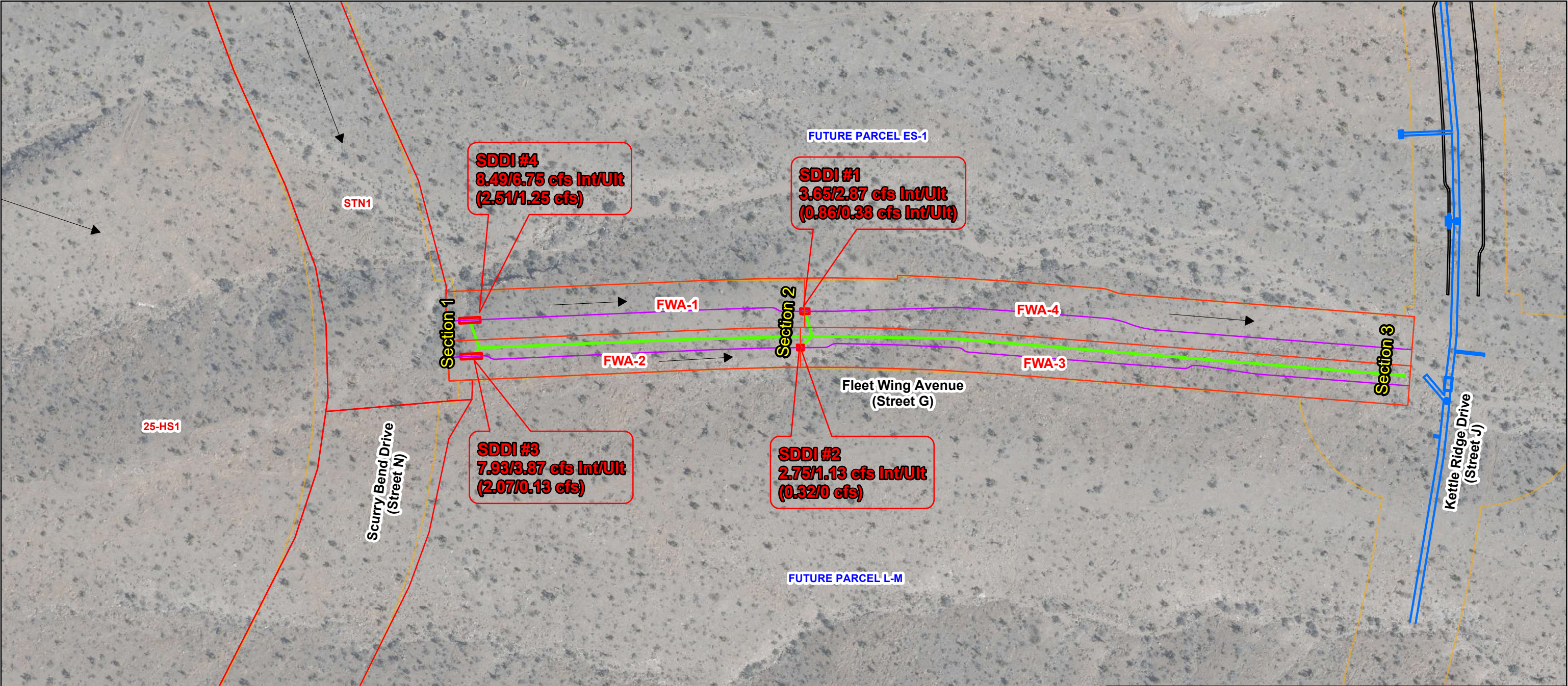


UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE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

NOT FOR CONSTRUCTION
90% SUBMITTAL

XXXXXXXXXX LXX-XXXXX	DESIGNED BY: L. MAMACLAY
DATE: FEBRUARY, 2021	DRAWN BY: G. HANSEN
DRAWING NO.	CHECKED BY: P. BATES
5 /24	HORIZ.: 1"=30' VERT.: NONE

A.2. Fleet Wing Avenue: Scurry Bend Drive to Kettle Ridge Drive – Hydraulics Workmap



Drop Inlet Calculations (100-YEAR)						
Drop Inlet	Plan Station	Total Discharge (CFS)	Discharge Source	Drop Inlet Type	Intercepted Flow (CFS)	Bypass Flow (CFS)
Interim 100-yr						
SDDI#1	34+90	4.51	FWA-1 + Bypass SDDI#4	CM2, L=7.5'	3.65	0.86
SDDI#2	34+90	3.07	FWA-2 + Bypass SDDI#3	CM2, L=5'	2.75	0.32
SDDI#3	38+00	10	StN-2	CM2, L=15'	7.93	2.07
SDDI#4	38+00	11	StN-1	CM2, L=15'	8.49	2.51
Ultimate 100-year						
SDDI#1	34+90	3.25	FWA-1 + Bypass SDDI#4	CM2, L=7.5'	2.87	0.38
SDDI#2	34+90	1.13	FWA-2 + Bypass SDDI#3	CM2, L=5'	1.13	0
SDDI#3	38+00	4	StN-2c	CM2, L=15'	3.87	0.13
SDDI#4	38+00	8	StN-1b	CM2, L=15'	6.75	1.25

Normal Depth Calculation Summary Table						
Section ID	Plan Station	Total Discharge (CFS)	Discharge Source	Flow Depth (FT)	Flow Velocity (FPS)	Depth * Velocity
Interim 100-yr						
STG-1	38+50	21	STN1+STN2	0.39	5.43	2.12
STG-2	35+00	7.58	FWA1+FWA2+bypass SDDI#3 & SDDI#4	0.23	5.52	1.27
STG-3	28+70	8.18	FWA3+FWA4+bypass SDDI#1 & SDDI#2	0.30	4.37	1.31
Ultimate 100-year						
STG-1	38+50	12	STN1b+STN2c	0.33	4.76	1.57
STG-2	35+00	4.38	FWA1+FWA2+bypass SDDI#3 & SDDI#4	0.20	4.90	0.98
STG-3	28+70	7.38	FWA3+FWA4+bypass SDDI#1 & SDDI#2	0.29	4.27	1.24

TECHNICAL DRAINAGE STUDY FOR SUMMERLIN VILLAGE 22

FLEET WING AVE. (STREET G)

SCURRY BEND DRIVE TO KETTLE RIDGE DRIVE (STREET J)

FIGURE 4: HYDRAULICS WORKMAP

Fleet Wing Ave (FWA) Basins

Proposed FWA Roadway

FWA Drop Inlets

FWA Storm Drain

Existing Storm Drain

Flow Paths

Existing Roadways

Ultimate Condition Parcels

Intercepted Flow (Bypass Flow)

N

1 inch = 100 feet

ATKINS

Member of the SNC-Lavalin Group

Aerial Source: Clark County Spring 2018

0

50

100

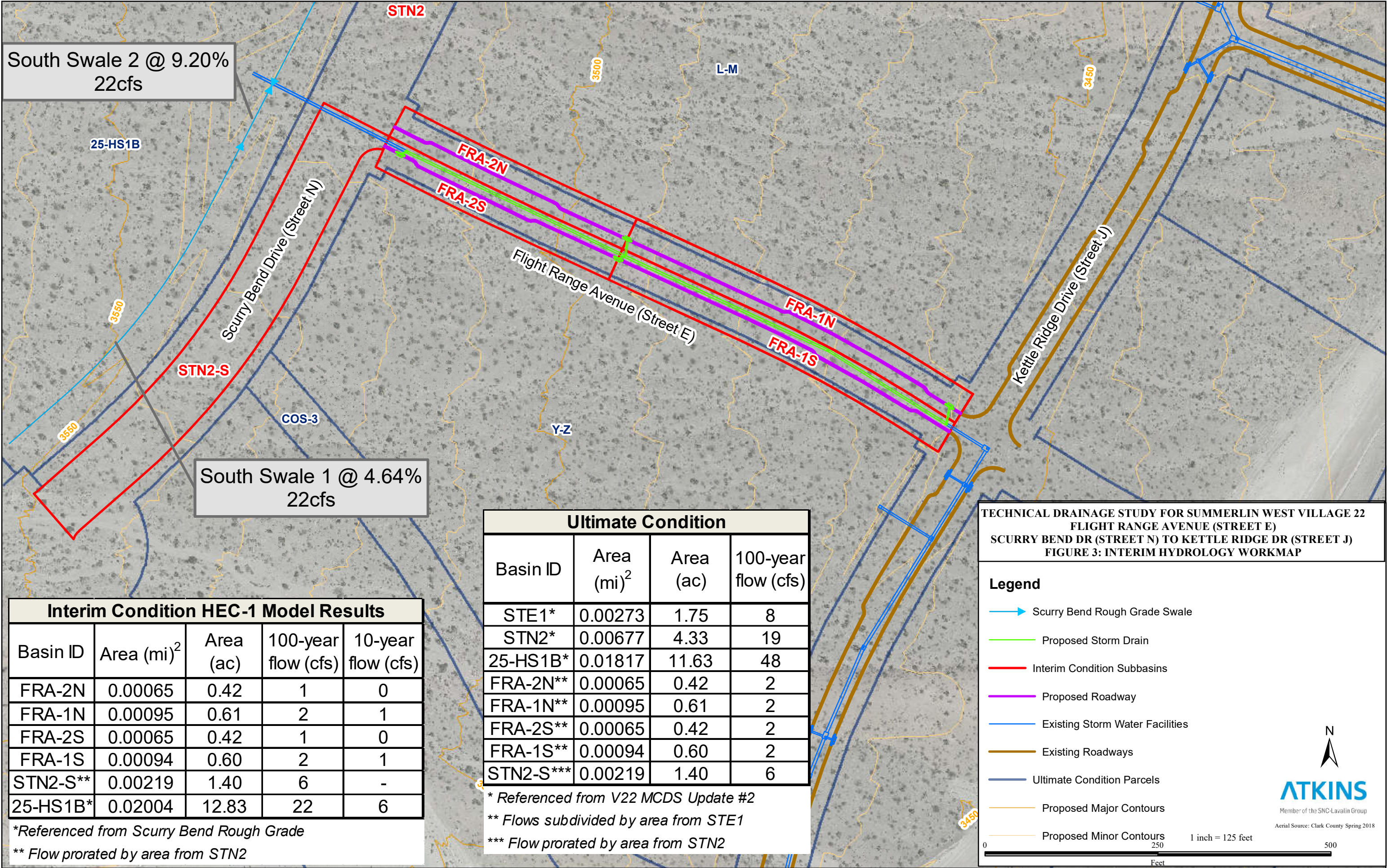
200

300

400

Feet

A.3. Flight Range Avenue: Scurry Bend Drive to Kettle Ridge Drive – Interim Hydrology Workmap



Interim Condition HEC-1 Model Results				
Basin ID	Area (mi) ²	Area (ac)	100-year flow (cfs)	10-year flow (cfs)
FRA-2N	0.00065	0.42	1	0
FRA-1N	0.00095	0.61	2	1
FRA-2S	0.00065	0.42	1	0
FRA-1S	0.00094	0.60	2	1
STN2-S**	0.00219	1.40	6	-
25-HS1B*	0.02004	12.83	22	6

*Referenced from Scurry Bend Rough Grade

** Flow prorated by area from STN2

Ultimate Condition			
Basin ID	Area (mi) ²	Area (ac)	100-year flow (cfs)
STE1*	0.00273	1.75	8
STN2*	0.00677	4.33	19
25-HS1B*	0.01817	11.63	48
FRA-2N**	0.00065	0.42	2
FRA-1N**	0.00095	0.61	2
FRA-2S**	0.00065	0.42	2
FRA-1S**	0.00094	0.60	2
STN2-S***	0.00219	1.40	6

* Referenced from V22 MCDS Update #2

** Flows subdivided by area from STE1

*** Flow prorated by area from STN2

TECHNICAL DRAINAGE STUDY FOR SUMMERLIN WEST VILLAGE 22

FLIGHT RANGE AVENUE (STREET E)

SCURRY BEND DR (STREET N) TO KETTLE RIDGE DR (STREET J)

FIGURE 3: INTERIM HYDROLOGY WORKMAP

Legend

- Scurry Bend Rough Grade Swale
- Proposed Storm Drain
- Interim Condition Subbasins
- Proposed Roadway
- Existing Storm Water Facilities
- Existing Roadways
- Ultimate Condition Parcels
- Proposed Major Contours
- Proposed Minor Contours

ATKINS

Member of the SNC-Lavalin Group

Aerial Source: Clark County Spring 2018

1 inch = 125 feet

0 250 500 Feet

A.4. Kettle Ridge Drive: Fleet Wing Avenue to Lake Mead Boulevard &
Scurry Bend Drive Rough Grade: Fleet Wing Avenue to Lake Mead Boulevard –
Hydrology Workmap

CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		March 19, 2019
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 V22 – Kettle Ridge Drive (Street J) and Scurry Bend Drive (Street N) Street Improvements (both from Lake Mead Blvd. to Fleet Wing Ave.)	
Cross Streets:	Lake Mead Boulevard & Desert Foothill Drive	COPIES TO: Atkins
File Number:	F:\Depot\DSMemos\DS5156E.doc	Howard Hughes Company, LLC
Parcel Number:	137-14-401-006 & 137-23-101-002	Bart Anderson, P.E., DevCo
Zoning Action:	N/A	CCRFC
FEMA Flood Zone	YES NO X	
Proposed Storm Drain	YES X NO	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	7/16/2019	8/8/2019	Not Approved	\$400.00	3490122: \$400
2 nd Submittal	9/11/2019	9/25/2019	Not Approved	\$400.00	3563447: \$400
3 rd Submittal	10/16/2019	10/30/2019	Conditional Approval	\$400.00	3612958: \$400
4 th Submittal & CCRFC	2/25/2020 & 3/5/2020	3/10/2020	Concurrence Recv'd	\$100.00	3755821: \$100
Supplement	3/18/2020	3/19/2020	See Comments Below	N/C	N/C
TOTAL FEES (LDDRS):				\$1,300.00	----

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.

The following conditions are repeated until they are complete:

1. The project proposes to build temporary drainage facilities, ie, berms/swales along the west side of *Scurry Bend Drive* and *Kettle Ridge Drive* and at the southern end of *Kettle Ridge Drive* for interim flood protection. Prior to final plan approval the developer must complete a maintenance and liability agreement for the interim drainage improvements (berms or channels) and post a minimum maintenance bond of \$50,000 or 50-percent of the construction cost for the improvements, whichever is greater. The engineer must submit an estimate of the quantities for constructing the facility and an exhibit that adequately shows the location and limits of the drainage facility to *City of Las Vegas Flood Control* for approval. Once the drainage study is conditionally approved, the engineer should contact the *City's Land Development Section* (229-6371) to begin the agreement process.

In order for the maintenance bond to be released in the future, a drainage update / letter will be required to justify that the offsite berms / channels are no longer necessary and can be removed.

In an effort to increase administrative efficiency, for all original and re-submittal packages including updates and the addenda, the City of Las Vegas Public Works Department requires both a hardcopy and a digital copy (PDF) on CD for the drainage study.

A letter sealed and signed by a Nevada registered civil engineer must be included in every submittal certifying documents on the electronic CD matches 100% of the hardcopy submittal. The new submittal requirement is effective on May 1, 2019. If there are any questions regarding these new requirements, please contact Albert Sung in the City Flood Control Section at (702) 229-6541.



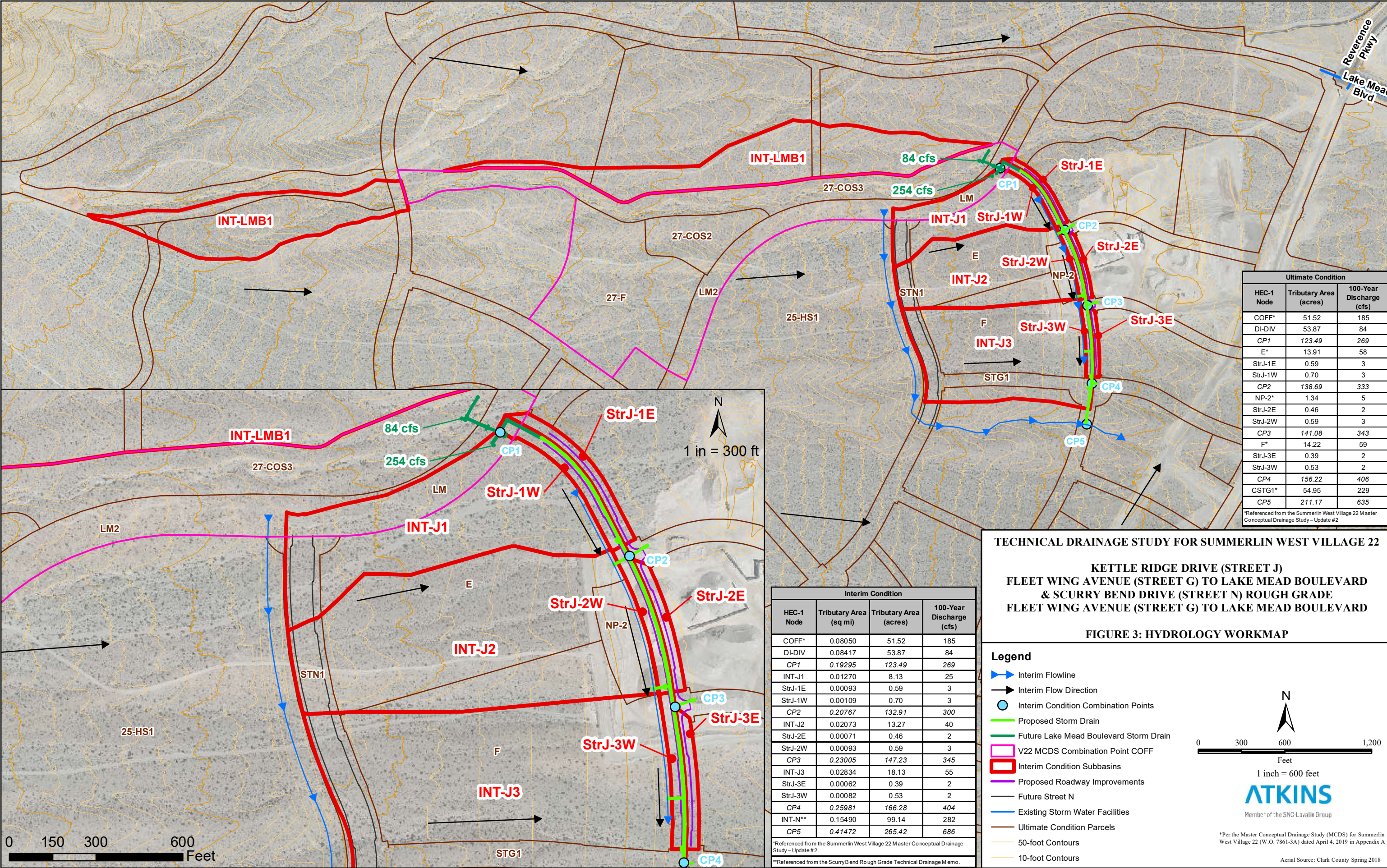
Sample Letter to
certify CD.pdf

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.

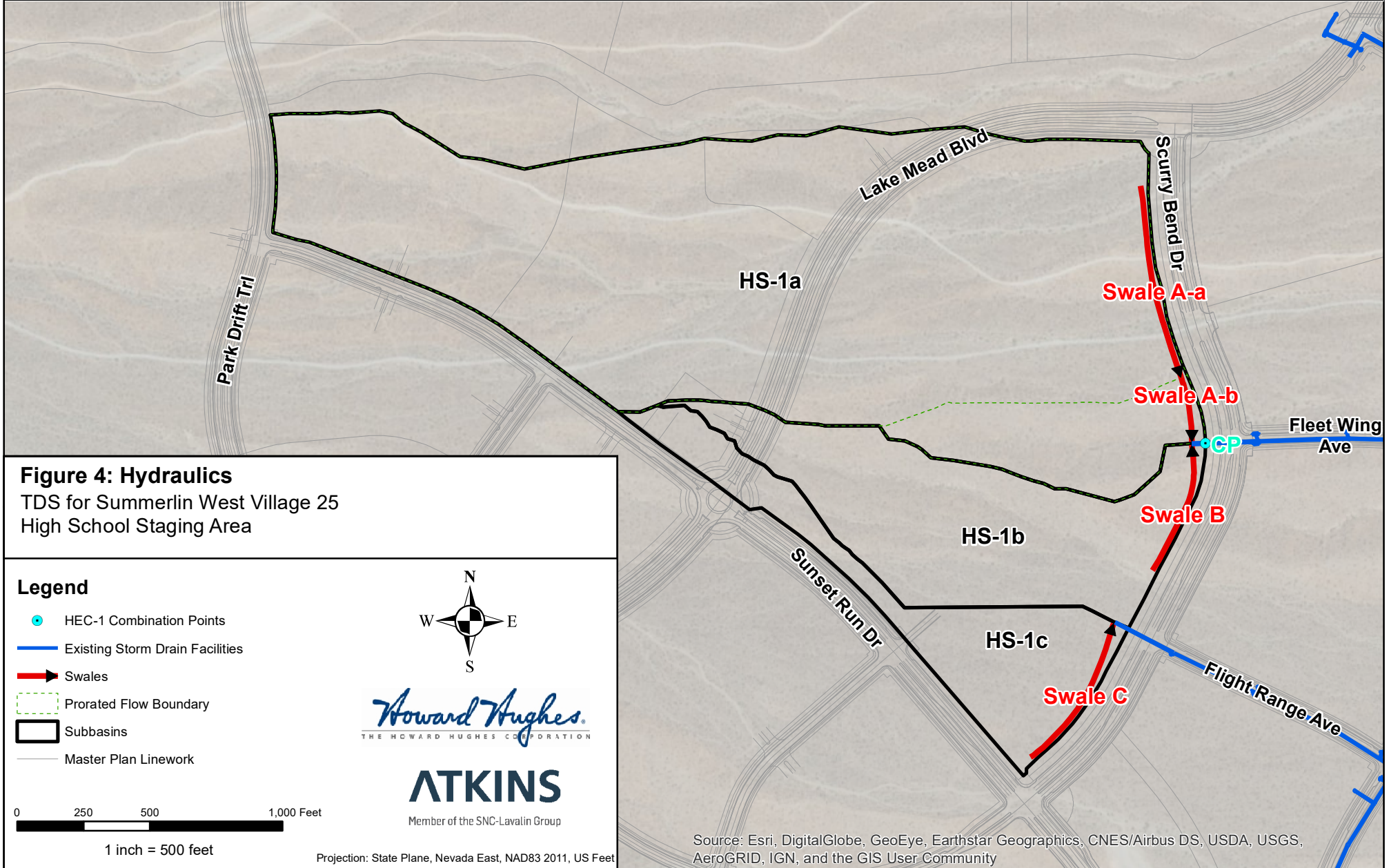
END OF REMARKS
ays

T/R/S: T20S/R59E/14
AREA K-14



A.5. V25 High School Staging Area – Hydraulics

Channel Name	Slope (ft/ft)		Q ₁₀₀ (cfs)	Contributing Area (mi ²)	Channel Cross Section (ft)				Rip Rap, D ₅₀ (in)	Roughness n	Velocity (fps)		Depth (ft)		Freeboard (ft) min
	max	min			bottom width	top width	depth	side slope			max	min	max	min	
Swale A-a	0.043	0.020	196	Prorated HS-1a flow (0.1037/0.1148)	5	41	6.0	3:1	10	0.038	9.3	7.0	2.3	2.0	3.7
Swale A-b	0.052	0.052	217	HS-1a (0.1148)	5	26	3.5	3:1	12	0.040	9.8		2.0		1.5
Swale B	0.063	0.032	56	HS-1b (0.0278)	5	26	3.5	3:1	8	0.037	7.7	6.0	1.1	0.9	2.4
Swale C	0.092	0.023	24	HS-1c (0.0170)	5	26	3.5	3:1	8	0.037	6.8	4.2	0.8	0.5	2.7



A.6. Scurry Bend Drive (Street N) Rough Grade: Sunset Run Drive to Fleet Wing Avenue (Street G) – Master Drainage Plan

CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		February 23, 2021
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:	COPIES TO:
	Summerlin West V22 – Scurry Bend Drive Rough Grade - Update (from Sunset Run <Street Q> to Fleet Wing <Street G>)	Atkins
Cross Streets:	Scurry Bend Drive & Fleet Wing Avenue	Howard Hughes Company, LLC
File Number:	F:\Depot\DSMemos\DS5253B.doc	Bart Anderson, P.E., DevCo
Parcel Number:	137-23-201-001	
Zoning Action:	N/A	
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	2/25/2020	3/17/2020	Approved	\$400.00	3755825: \$400
2 nd Submittal	2/3/2021	2/23/2021	See Comments Below	\$100.00	4157979: \$100
			TOTAL FEES (LDDRS):	\$500.00	----

REMARKS:

2nd Submittal: Update to widen the right-of-way width of Scurry Bend Drive by 1.5'

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.

The following conditions are repeated until they are complete:

1. The approval of this drainage study is for the issuance of rough grading permit for future streets and temporary construction access only.
2. *Howard Hughes Company (Summerlin)* is solely responsible for the maintenance and erosion control of the interim facilities.

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/23
AREA K-23

SUMMERLIN VILLAGE 22
IMPROVEMENT PLANS FOR:
SCURRY BEND DRIVE (STREET N) ROUGH GRADE
SUNSET RUN DRIVE TO FLEET WING AVENUE (STREET G)

SHEET INDEX		
1	COVER SHEET	
2	LEGEND AND ABBREVIATIONS	
3	GENERAL NOTES	
4	MASTER GRADING PLAN	
5	MASTER DRAINAGE PLAN	STA 19+50 TO END
6	MASTER DRAINAGE PLAN	BEGIN TO STA 19+50
7	ROUGH GRADING PLAN AND PROFILE	STA 23+50 TO END
8	ROUGH GRADING PLAN AND PROFILE	STA 17+00 TO 23+50
9	ROUGH GRADING PLAN AND PROFILE	BEGIN TO STA 17+00
10	ROUGH GRADING PLAN AND PROFILE	FLEET WING CHANNEL
11	ROUGH GRADING PLAN AND PROFILE	FLIGHT RANGE CHANNEL
12	ACCESS ROAD ROUGH GRADE PLAN	
13	ACCESS ROAD ROUGH GRADE PLAN	
14	ACCESS ROAD ROUGH GRADE PLAN	
15	STORM DRAIN LATERAL PROFILES	
16	STORM DRAIN LATERAL PROFILES	
17	TYPICAL SECTIONS	
18	TYPICAL SECTIONS	



UTILITY NOTE

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

CALL BEFORE YOU DIG: 1-800-642-2444

THIS PROPERTY MAY HAVE STATIC WATER PRESSURE IN EXCESS OF 80 PSI. THE UNIFORM PLUMBING CODE REQUIRES THAT INDIVIDUAL, ON-SITE (PRIVATE) PRESSURE REDUCING VALVES BE INSTALLED WHENEVER THE PRESSURE EXCEEDS 80 PSI. PRV'S ARE THE DEVELOPER'S RESPONSIBILITY AND WILL NOTE BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF THE LAS VEGAS VALLEY WATER DISTRICT FACILITIES.

NOTICE OF INTENT NOTE

NOTE: ALL LAND SURFACE AREA DISTURBANCES OVER 1 ACRE REQUIRE A STORMWATER DISCHARGE PERMIT ISSUED BY THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION (NDEP). A PHASED CONSTRUCTION UNIT IN A CONTIGUOUS SUBDIVISION IS CONSIDERED UNDER CONSTRUCTION UNTIL ALL STRIPPED SURFACE AREAS HAVE BEEN COVERED BY PAVING, BUILDING CONSTRUCTION OR PLANTING. A STORMWATER DISCHARGE PERMIT APPLICATION AND ASSOCIATED INFORMATION MAY BE DOWNLOADED FROM THE WEB SITE: [HTTP://WWW.STATE.NV.US/BWPC/STORM01.HTM](http://www.state.nv.us/bwpc/storm01.htm) PROJECTS THAT DISTURB MORE THAN ONE ACRE OF LAND MUST SUBMIT TO NDEP A "NOTICE OF INTENT" FOR INCLUSION UNDER STORMWATER PERMIT NO. NVR100000 ALONG WITH APPROPRIATE FILLING FEE.

NPDES PERMIT NOTE

THE ENGINEER SHOULD CONTACT THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION (NDEP) TO OBTAIN A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT PRIOR TO CONSTRUCTION. ALL CONSTRUCTION PROJECTS ONE ACRE OR LARGER MUST APPLY FOR THE PERMIT THROUGH NDEP. ALL QUESTIONS REGARDING THE NPDES PERMIT REQUIREMENTS SHOULD BE DIRECTED TO THE NDEP AT (775) 687-9429.

FEMA FLOOD ZONE INFORMATION

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE X (UNSHADED) AS DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANEL 32003C2150E, DATED 9/27/2002. A ZONE X (UNSHADED) IS DESCRIBED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.

PROPOSED RIGHT-OF-WAY ACREAGE
N/A

PROPOSED DISTURBED AREA ACREAGE
22.66 AC

GEOTECHNICAL ENGINEER
PREPARED BY: NOVA GEOTECHNICAL & INSPECTION SERVICES
4480 W. HACIENDA AVENUE, SUITE 104, LAS VEGAS, NV 89118
PHONE: 702-873-3478
PROJECT NO.: G-18-176
DATED: DECEMBER 30, 2019

OWNER /DEVELOPER

OWNER

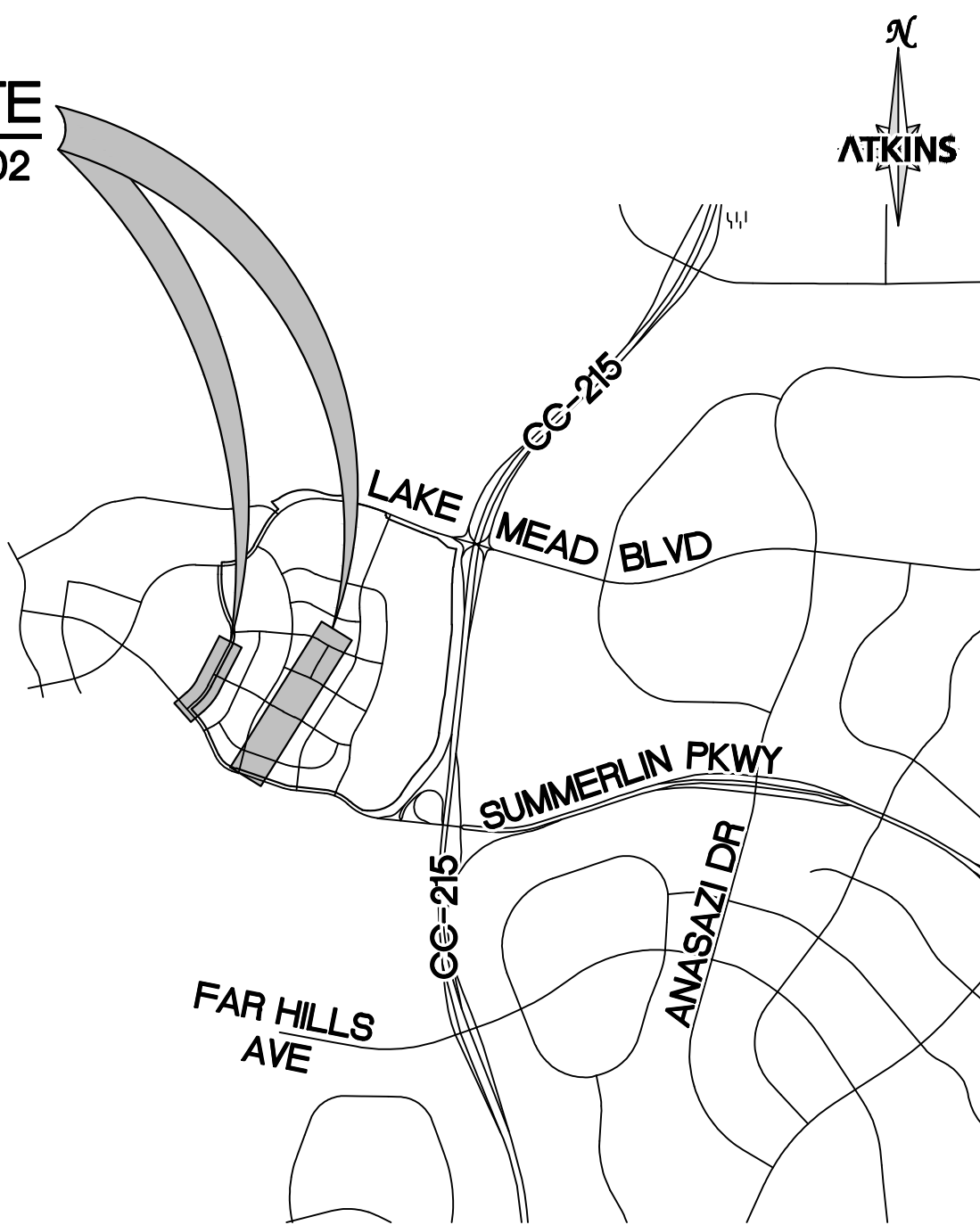
CONTACT: KEVIN ORROCK
HOWARD HUGHES COMPANY LLC, A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NV 89135

ENGINEER / CONSULTANT

CIVIL

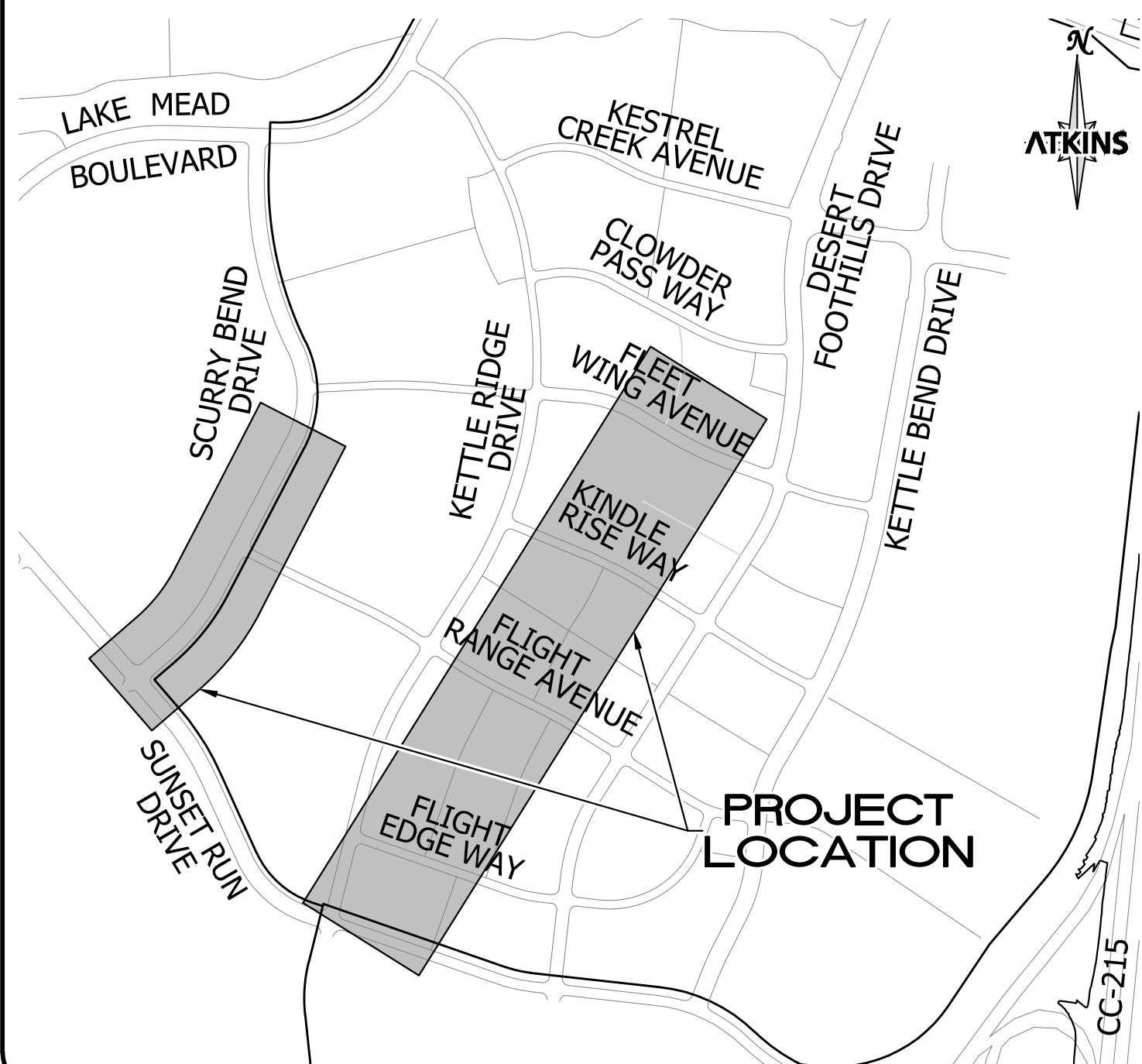
CONTACT: ANTHONY J. ORTIZ P.E.
ATKINS
2270 CORPORATE CIRCLE SUITE 200
HENDERSON, NEVADA 89074
(702) 263-7275

LOCATION MAP



PROJECT SITE
APN 137-23-101-002

VICINITY MAP



APPROVALS

HOWARD HUGHES COMPANY LLC, A DELAWARE LIMITED LIABILITY COMPANY

KEVIN T. ORROCK, VICE PRESIDENT

DATE

CITY OF LAS VEGAS ENGINEER

DATE

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

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 M (984,250.0000 FTUS)

SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)

NOTES:

- 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
- 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)

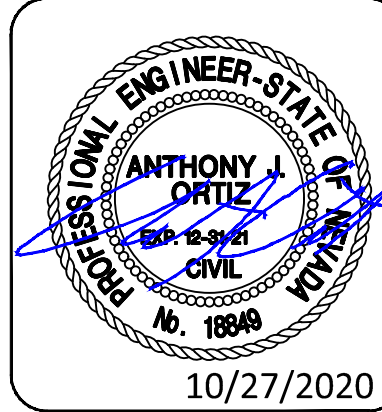
CITY OF LAS VEGAS BENCHMARK: D368 (REVISED 2008)

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,R59E,S03

LEGAL DESCRIPTION

BEING A PORTION OF LOT 2 AS SHOWN ON THE MAP THEREOF IN BOOK 123 OF PLATS, PAGE 36, OFFICIAL RECORDS, CITY OF LAS VEGAS CLARK COUNTY, NEVADA



DESIGNED BY: J. BANTA
DRAWN BY: C. DANIELS
CHECKED BY: P. BATES
INCHES: NONE
FEET: NONE
1078560
DATE: L20-01966
DECEMBER, 2020
DRAWING NO.
1/18
JOB NO. 100068040

SUMMERLIN VILLAGE 22
SCURRY BEND DRIVE (STREET N) ROUGH GRADE
SUNSET RUN DRIVE TO FLEET WING AVENUE (STREET G)

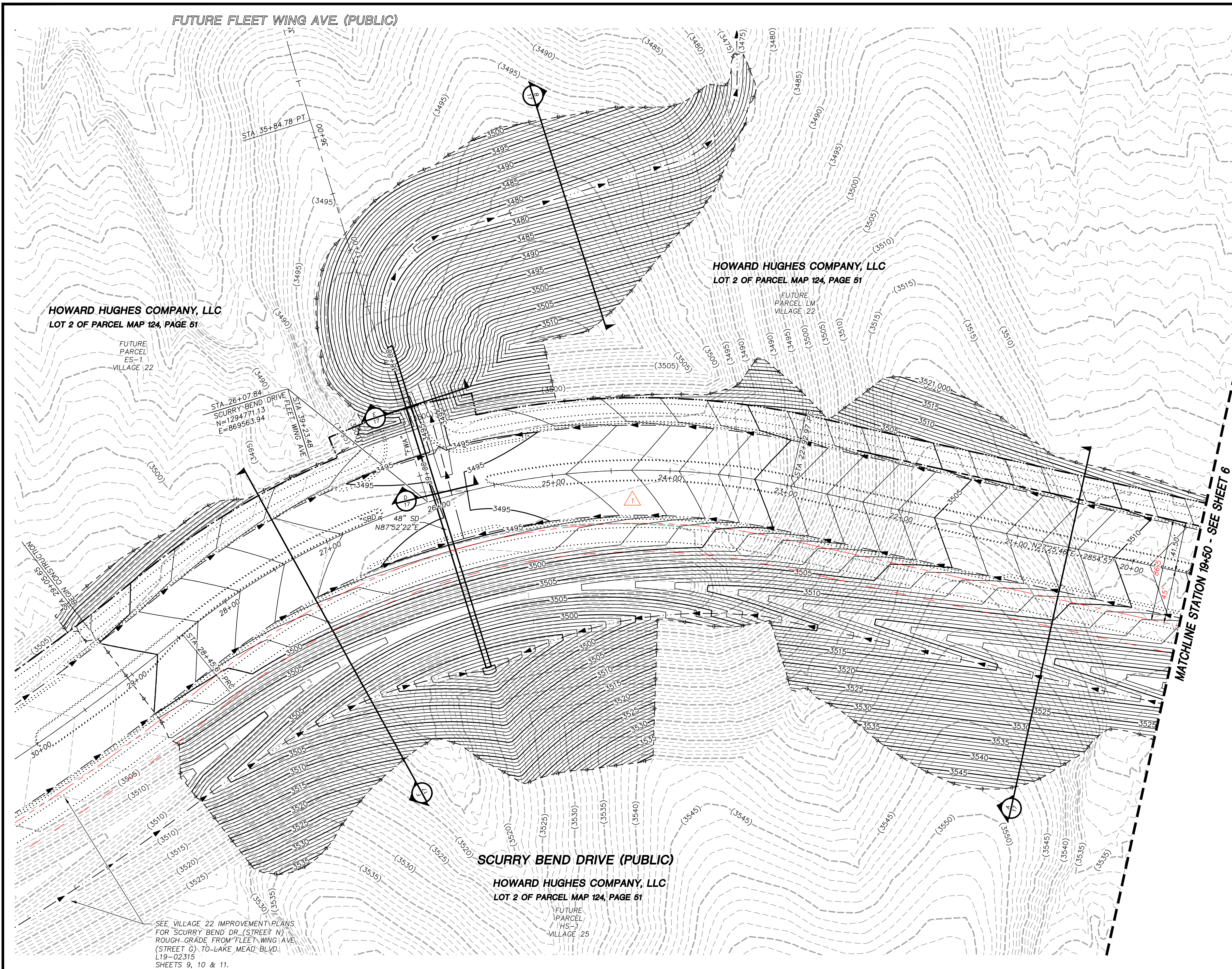
COVER SHEET

REVISIONS

REV.	DESCRIPTION	BY	DATE	APPROVAL
1	REVISED TYPICAL SECTION FOR A WIDER ROW			
2	MOVED BOTTOM OF SLOPE 1:5 WEST			
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				

ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7275
Fax: +1702.263.7200

SUMMERLIN®



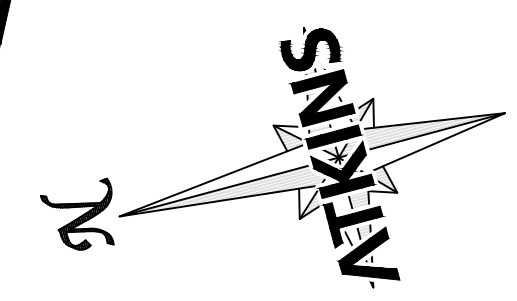
SUMMARY OF QUANTITIES

DESCRIPTION	QUANTITY	UNIT
DRAINAGE		
48" RCP CLASS III	285	LF
36" RCP CLASS III	259	LF
RIP-RAP (D50=8", 16" THICKNESS)	2,935	CY
RIP-RAP (D50=12", 24" THICKNESS)	544	CY
EARTHWORK		
CUT	125,500	CY
FILL	144,500	CY
NET	19,000	CY

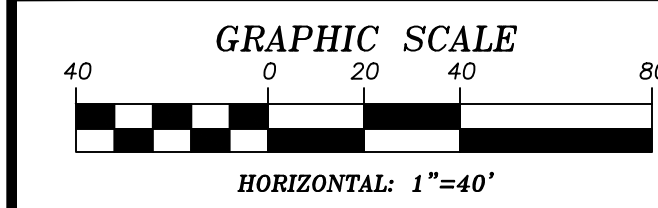
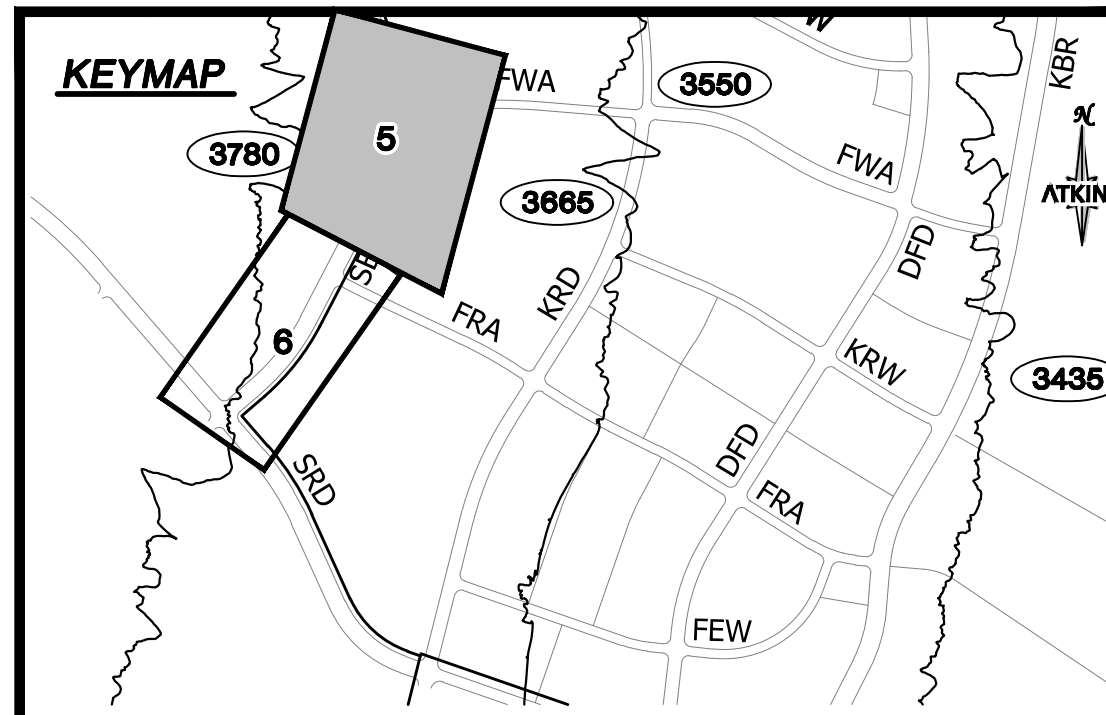
MASTER PLAN NOTE
THIS SHEET IS FOR INFORMATIONAL PURPOSES ONLY. IT IS AN OVERALL REPRESENTATION OF THE UTILITY FOR REVIEW AND COORDINATION WITH OTHER PROJECT DETAILS WITHIN THIS PLAN SET.

STORM DRAIN NOTES

- SEE ROUGH GRADING PLAN AND PROFILE SHEETS FOR CONSTRUCTION DETAILS.
- ALL STORM DRAIN MATERIAL TO BE CLASS III REINFORCED CONCRETE PIPE, UNLESS OTHERWISE NOTED IN PROFILES.
- CONTRACTOR TO PROVIDE 6" MINIMUM OF CLEARANCE BETWEEN OUTSIDE OF PIPE TO INSIDE WALL OF STORM DRAIN STRUCTURES.



MAINTENANCE NOTE
HOWARD HUGHES IS SOLELY RESPONSIBLE FOR THE MAINTENANCE AND EROSION CONTROL OF THE INTERIM FACILITIES



SOILS REPORT
BY NOVA
PROJECT NO. G-18-176
DATED 12/03/18 AND
SUBSEQUENT UPDATE LETTER
DATED 12/30/19
EARTHWORK QUANTITIES (RAW):
CUT= 125,500 CU YDS
FILL= 144,500 CU YDS

GRADING PLAN CERTIFICATION
ANTHONY J. ORTIZ PE#18849 DATE 10/27/2020
CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY FOR THIS SITE ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT. DS#5253

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.

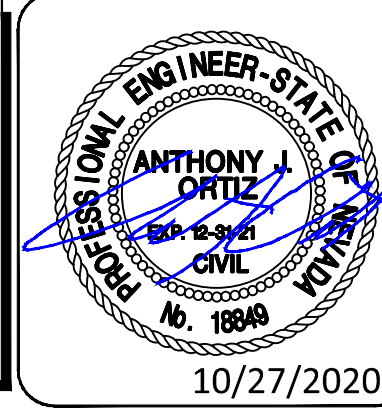
BENCHMARK
CITY OF LAS VEGAS BENCHMARK: D368 (REVISED 2008)
NAVD88 ELEVATION: 989.574 METERS (3,246.63 FEET)
FND USC&GS DISC SET IN ROCK RIDGE 150' SOUTH OF CHARLESTON BLVD. & WEST OF DETENTION BASIN. T21S,R59E,S03

FAST
Call before you Dig
UnderGround
1-702-432-5300
FREQUENTLY AND ACCURATELY
LOCATING ALL UTILITIES

Call before you Dig
ONE-STOP UTILITY LOCATOR
Call
811
1-800-642-2444

CALL BEFORE YOU DIG
UNDERGROUND
1-702-227-2929

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



ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7275
Fax: +1702.263.7200

SUMMERLIN

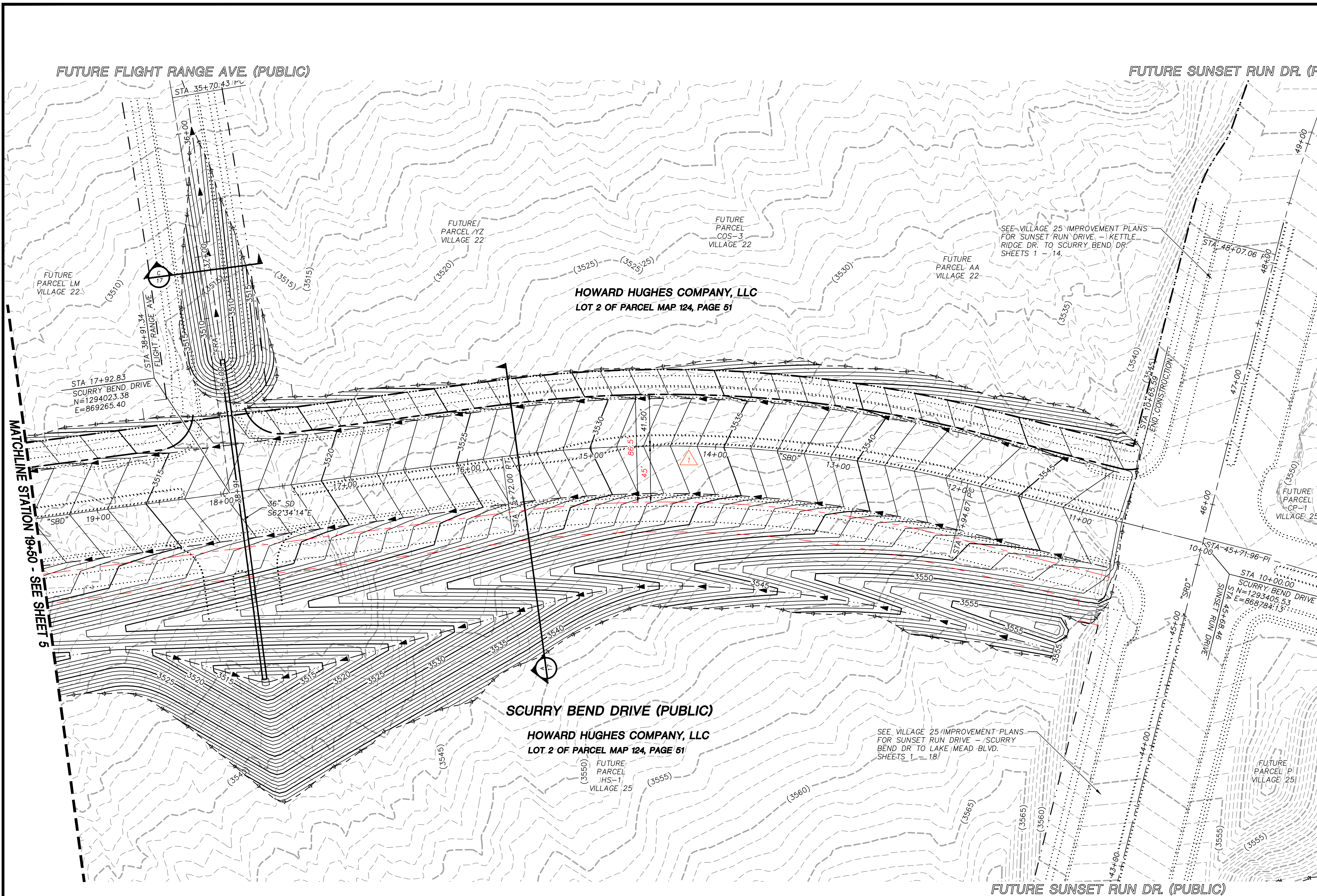
SUMMERLIN VILLAGE 22
SCURRY BEND DRIVE (STREET N) ROUGH GRADE
SUNSET RUN DRIVE TO FLEET WING AVENUE (STREET G)
MASTER DRAINAGE PLAN
STA 19+50 TO END

DESIGNED BY: J. BANTA
DRAWN BY: C. DANIELS
CHECKED BY: P. BATES
HORIZ.: 1"=40'
VERT.: 1"=8'

DATE: DECEMBER, 2020
DRAWING NO. 5/18

10/27/2020
JOB NO. 100068040

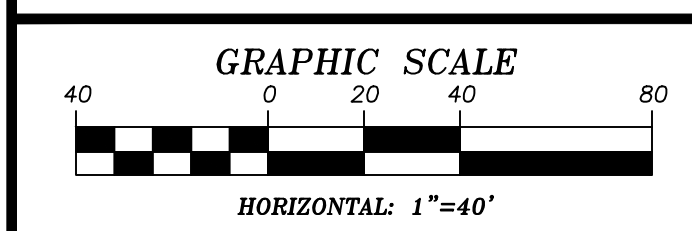
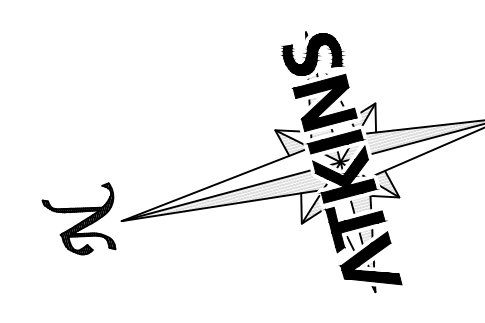
Revisions Table:
REV. DESCRIPTION BY DATE APPROVAL
1 MOVED FUTURE ROW, MOVED BOTTOM OF SLOPE WEST 1.5'



SUMMARY OF QUANTITIES		
DESCRIPTION	QUANTITY	UNIT
DRAINAGE		
48" RCP CLASS III	285	LF
36" RCP CLASS III	259	LF
RIP-RAP (D50=8", 16" THICKNESS)	2,935	CY
RIP-RAP (D50=12", 24" THICKNESS)	544	CY
EARTHWORK		
CUT	125,500	CY
FILL	144,500	CY
NET	19,000	CY

MASTER PLAN NOTE
THIS SHEET IS FOR INFORMATIONAL PURPOSES ONLY. IT IS AN OVERALL REPRESENTATION OF THE UTILITY FOR REVIEW AND COORDINATION WITH OTHER PROJECT DETAILS WITHIN THIS PLAN SET.

- STORM DRAIN NOTES**
- SEE ROUGH GRADING PLAN AND PROFILE SHEETS FOR CONSTRUCTION DETAILS.
 - ALL STORM DRAIN MATERIAL TO BE CLASS III REINFORCED CONCRETE PIPE, UNLESS OTHERWISE NOTED IN PROFILES.
 - CONTRACTOR TO PROVIDE 6" MINIMUM OF CLEARANCE BETWEEN OUTSIDE OF PIPE TO INSIDE WALL OF STORM DRAIN STRUCTURES.

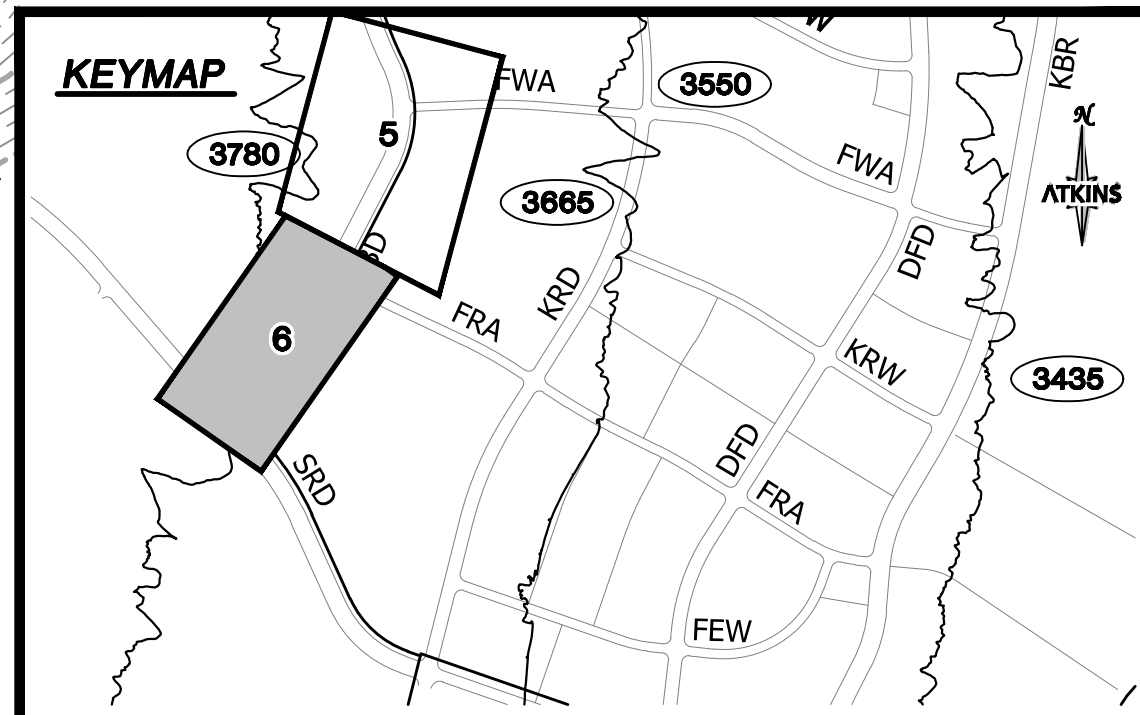


SOILS REPORT
BY NOVA
PROJECT NO. G-18-176
DATED 12/03/18 AND
SUBSEQUENT UPDATE LETTER
DATED 12/30/19
EARTHWORK QUANTITIES (RAW):
CUT= 125,500 CU YDS
FILL= 144,500 CU YDS

GRADING PLAN CERTIFICATION
ANTHONY J. ORTIZ PE#18849
DATE 10/27/2020
CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY FOR THIS SITE ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT.
DS#5253

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.

BENCHMARK
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,R59E,S03



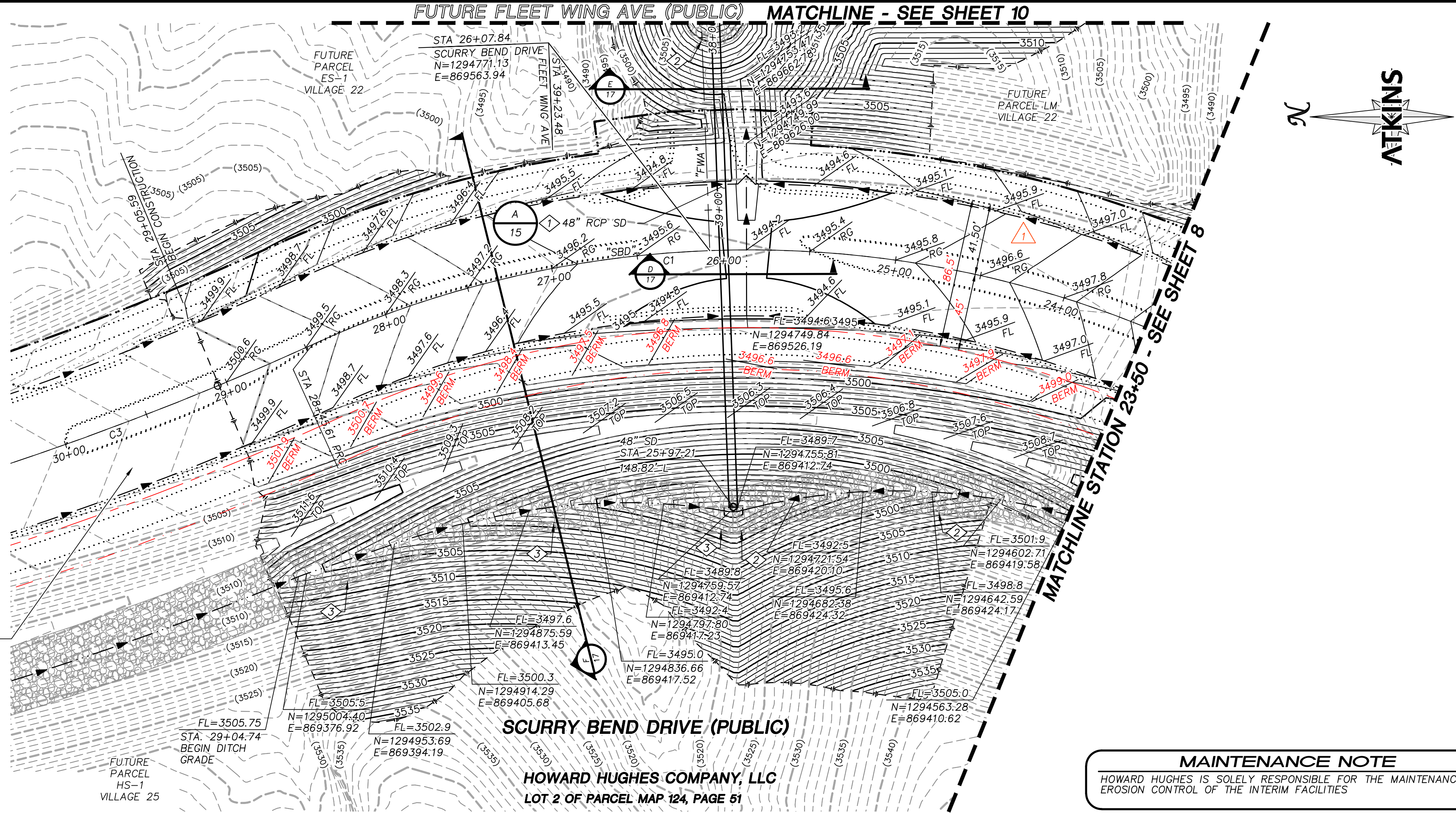
DESIGNED BY: N. BARCOS
DRAWN BY: L. MAMACLAY
CHECKED BY: P. BATES
HORIZ.: 1"=40'
VERT.: 1"=8'
10/27/2020

2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7275
Fax: +1702.263.7200

SUMMERLIN VILLAGE 22
SCURRY BEND DRIVE (STREET N) ROUGH GRADE
SUNSET RUN DRIVE TO FLEET WING AVENUE (STREET G)
MASTER DRAINAGE PLAN
BEGIN TO STA 19+50

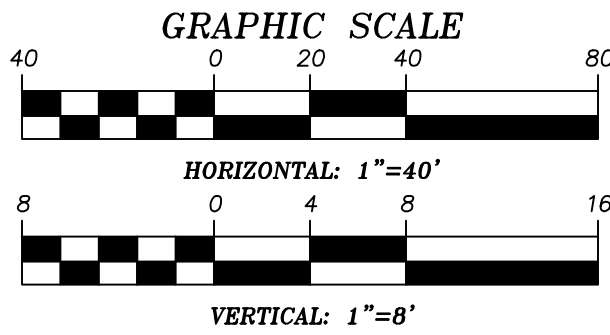
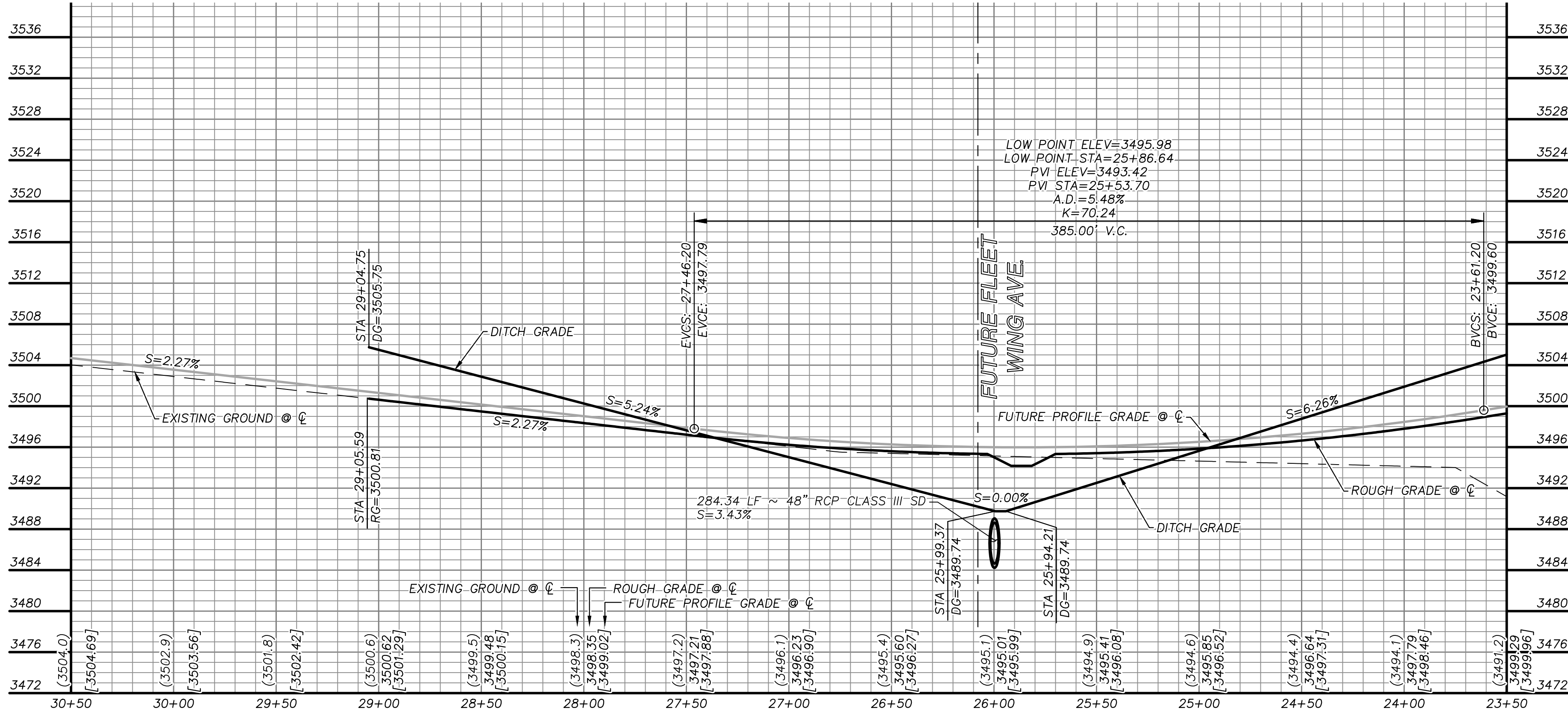
107/8560
L20-01966
DATE: DECEMBER, 2020
DRAWING NO. 6 / 18
JOB NO. 100068040

CENTERLINE CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	610.00'	51°54'28"	552.64'	296.91'
C3	1803.50'	26°17'46"	827.72'	421.28'



SEE VILLAGE 22 IMPROVEMENT PLANS FOR SCURRY BEND DR (STREET N) ROUGH GRADE FROM FLEET WING AVE (STREET G) TO LAKE MEAD BLVD. SHEETS 9, 10 & 11.

MAINTENANCE NOTE
HOWARD HUGHES IS SOLELY RESPONSIBLE FOR THE MAINTENANCE AND EROSION CONTROL OF THE INTERIM FACILITIES



GRADING PLAN CERTIFICATION
ANTHONY J. ORTIZ PE#18849 DATE 10/27/2020
CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY FOR THIS SITE ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT. DS#5253

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.

BENCHMARK
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,R59E,S03

FAST Call before you dig. 1-800-642-2444

Call before you dig 811 1-702-432-5300

CALL BEFORE YOU DIG 1-702-227-2929

- STORM DRAIN CONSTRUCTION NOTES**
- 1. INSTALL STORM DRAIN. SEE SHEET 3 FOR ADDITIONAL STORM DRAIN NOTES AND INFORMATION.
 - 2. INSTALL RIP-RAP (D50=8", THICKNESS=16") PER TYPICAL SECTION ON SHEET 17.
 - 3. INSTALL RIP-RAP (D50=12", THICKNESS=24") PER TYPICAL SECTION ON SHEET 17.

REV.	DESCRIPTION	BY	DATE	APPROVAL
1	MOVED FUTURE ROW, MOVED BOTTOM OF SLOPE WEST 1.5'			

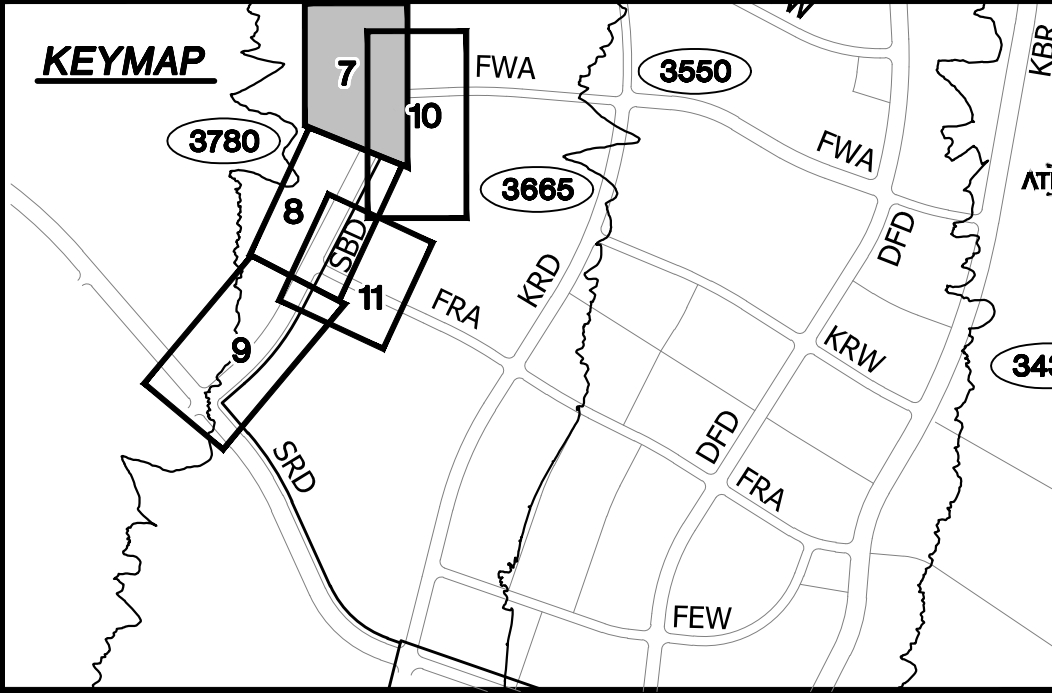
ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7275
Fax: +1702.263.7200

SUMMERLIN

SUMMERLIN VILLAGE 22
SCURRY BEND DRIVE (STREET N) ROUGH GRADE
SUNSET RUN DRIVE TO FLEET WING AVENUE (STREET G)

ROUGH GRADING PLAN AND PROFILE
STA 23+50 TO END

ROUGH GRADE
THE PROPOSED ROUGH GRADE IN PAVEMENT IS 8" BELOW THE FINISH GRADE SHOWN WITHIN THESE PLANS.

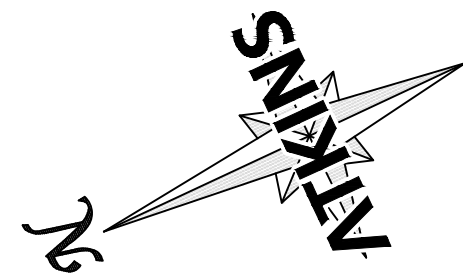
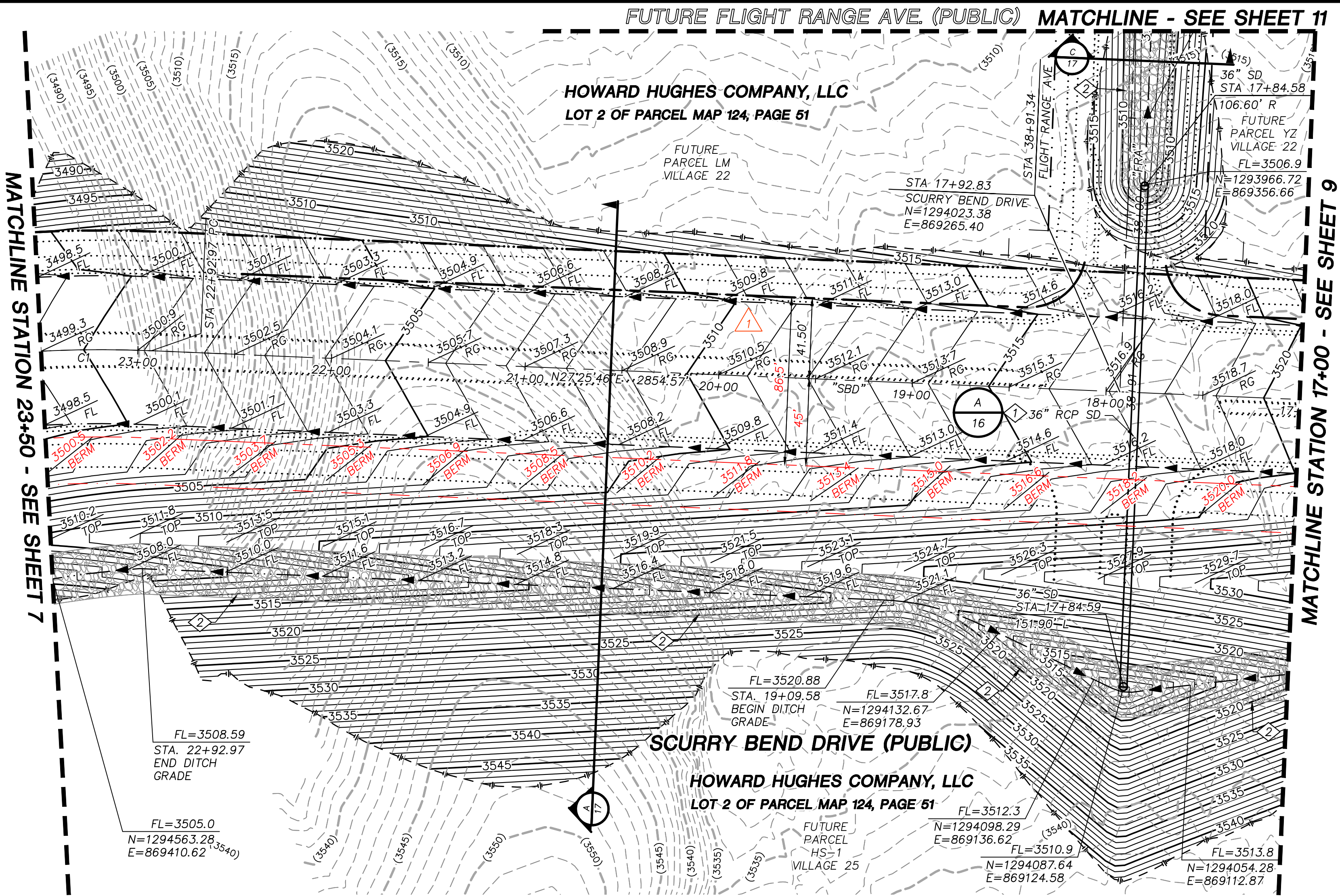


UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE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

PROFESSIONAL ENGINEER - STATE OF NEVADA
ANTHONY J. ORTIZ
No. 18849
10/27/2020

DESIGNED BY: J. BANTA	10/7/2020
DRAWN BY: C. DANIELS	12/01/2016
CHECKED BY: P. BATES	DECEMBER, 2020
DATE: 10/27/2020	DRAWING NO. 7/18
VERT.: 1"=8'	JOB NO. 100068040

CENTERLINE CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C2	996.50'	21°41'43"	377.33'	190.95'



- STORM DRAIN CONSTRUCTION NOTES**
- INSTALL STORM DRAIN. SEE SHEET 3 FOR ADDITIONAL STORM DRAIN NOTES AND INFORMATION.
 - INSTALL RIP-RAP (D50=8", THICKNESS=16") PER TYPICAL SECTION ON SHEET 17.
 - INSTALL RIP-RAP (D50=12", THICKNESS=24") PER TYPICAL SECTION ON SHEET 17.

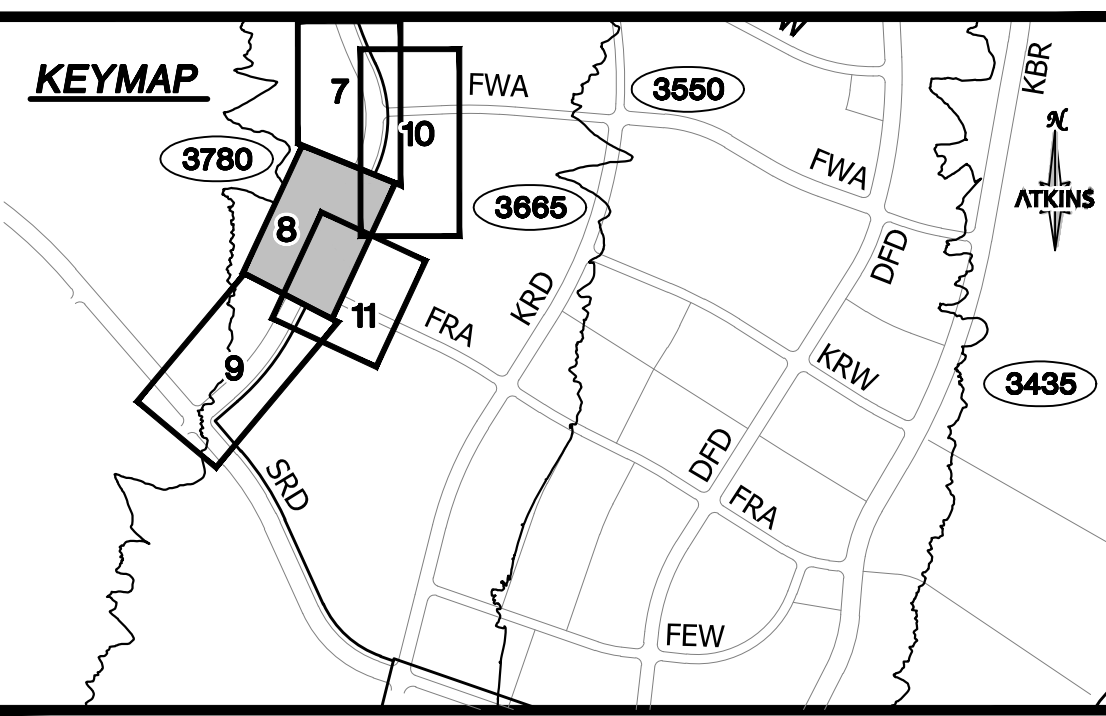
REV.	DESCRIPTION	BY	DATE	APPROVAL
1	MOVED FUTURE ROW. MOVED BOTTOM OF SLOPE WEST 1.5'			

ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7275
Fax: +1702.263.7200

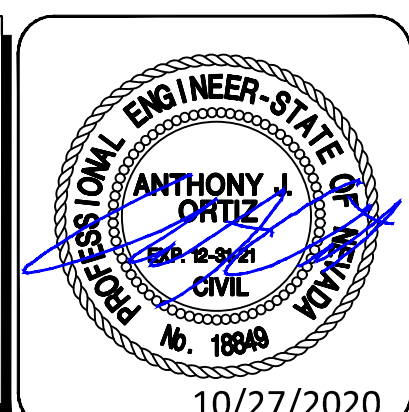
SUMMERLIN

SUMMERLIN VILLAGE 22
SCURRY BEND DRIVE (STREET N) ROUGH GRADE
SUNSET RUN DRIVE TO FLEET WING AVENUE (STREET G)
ROUGH GRADING PLAN AND PROFILE
STA 17+00 TO 23+50

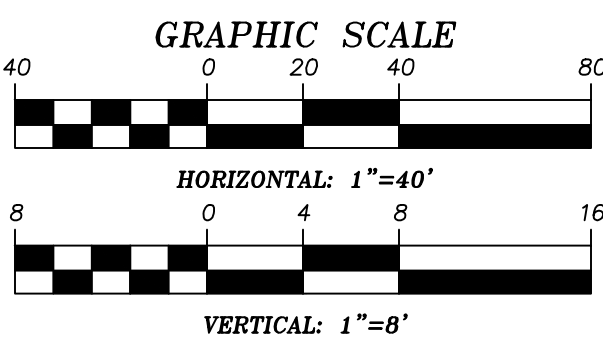
- MAINTENANCE NOTE**
HOWARD HUGHES IS SOLELY RESPONSIBLE FOR THE MAINTENANCE AND EROSION CONTROL OF THE INTERIM FACILITIES.
- ROUGH GRADE**
THE PROPOSED ROUGH GRADE IN PAVEMENT IS 8" BELOW THE FINISH GRADE SHOWN WITHIN THESE PLANS.



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



DESIGNED BY: J. BANTA	DRAWN BY: C. DANIELS	CHECKED BY: P. BATES	HORIZ.: 1"=40'	VERT.: 1"=8'
10/7/2020	12/01/2020	12/01/2020	8/18	10/27/2020
JOB NO. 100068040				



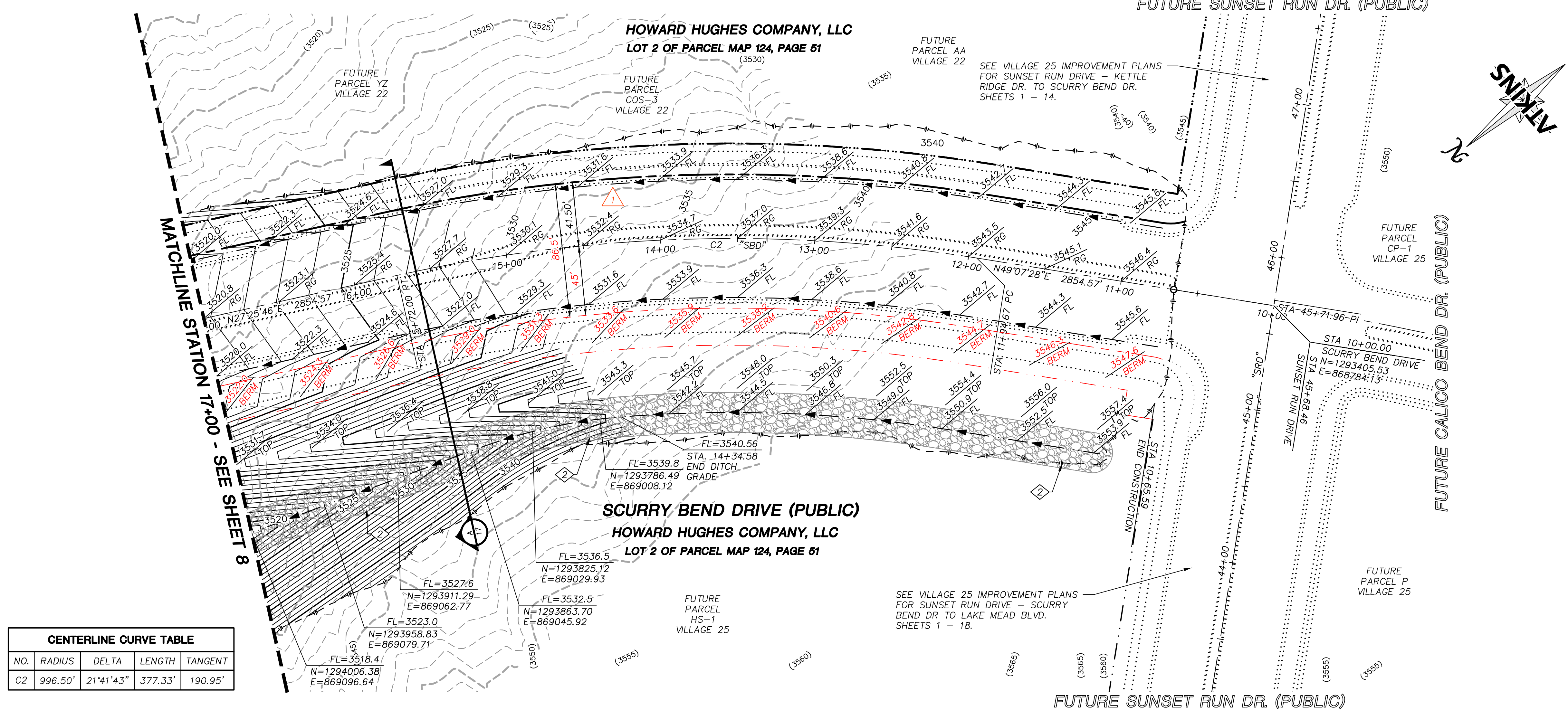
GRADING PLAN CERTIFICATION
ANTHONY J. ORTIZ PE#18849
10/27/2020
DATE
CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY FOR THIS SITE ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT.
DS#5253

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.

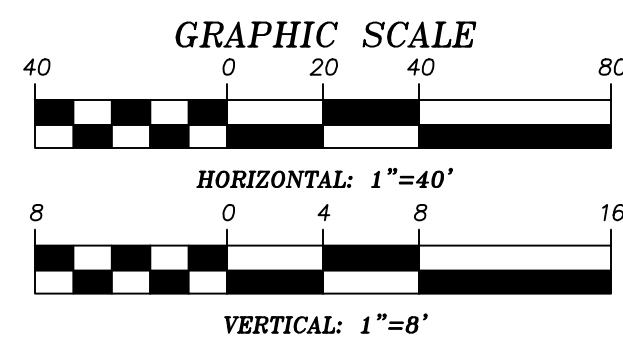
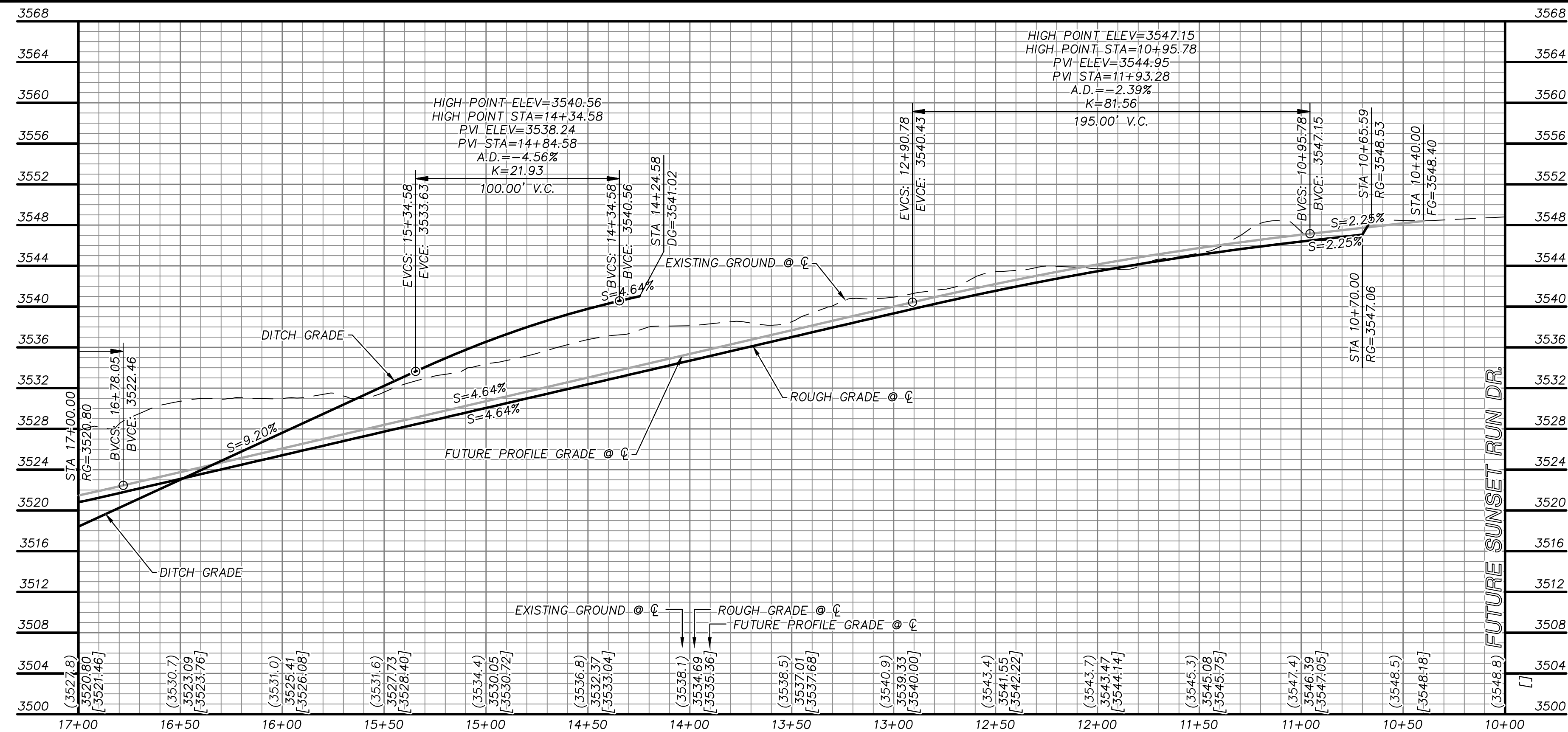
BENCHMARK
CITY OF LAS VEGAS BENCHMARK: D368 (REVISED 2008)
NAVD88 ELEVATION: 989.574 METERS (3,246.63 FEET)
FND USC&GS DISC SET IN ROCK RIDGE 150' SOUTH OF CHARLESTON BLVD. & WEST OF DETENTION BASIN.
T21S,R59E,S03



1-702-227-2929



CENTERLINE CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C2	996.50'	21°41'43"	377.33'	190.95'



GRADING PLAN CERTIFICATION


ANTHONY J. ORTIZ PE#18849 10/27/2020
DATE

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

DS#5253

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.

BENCHMARK

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,R59E,S03



Call before you D grade
AVOID CUTTING UNDERGROUND
UTILITY LINES. IT'S COSTLY.

Call
811
 OR
1-800-642-2444



STORM DRAIN CONSTRUCTION NOTES

- 1 INSTALL STORM DRAIN. SEE SHEET 3 FOR ADDITIONAL STORM DRAIN NOTES AND INFORMATION.
- 2 INSTALL RIP-RAP (D50=8", THICKNESS=16") PER TYPICAL SECTION ON SHEET 17
- 3 INSTALL RIP-RAP (D50=12", THICKNESS=24") PER TYPICAL SECTION ON SHEET 17

[illegible]

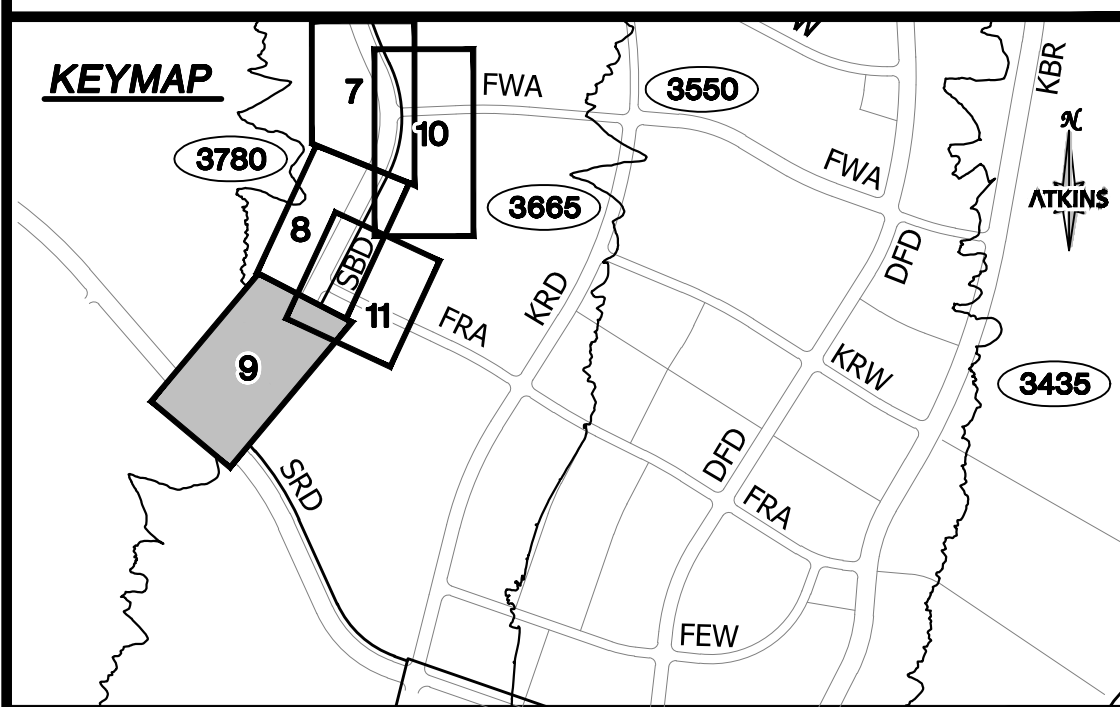
ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7275
Fax: +1702.263.7200



SUMMERLIN VILLAGE 22
CURRY BEND DRIVE (STREET N) ROUGH GRADE
INSET RUN DRIVE TO FLEET WING AVENUE (STREET G)

ROUGH GRADING PLAN AND PROFILE
BEGIN TO STA 17+00

DESIGNED BY: J. BANTA	107V8560
DRAWN BY: C. DANIELS	L20-01966
CHECKED BY: P. BATES	DATE: DECEMBER, 2020
HORIZ.: 1"=40'	DRAWING NO.
VERT.: 1"=8'	9 /18



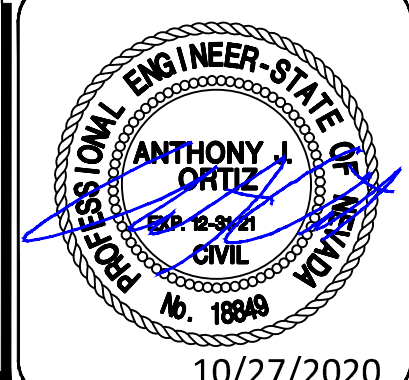
MAINTENANCE NOTE

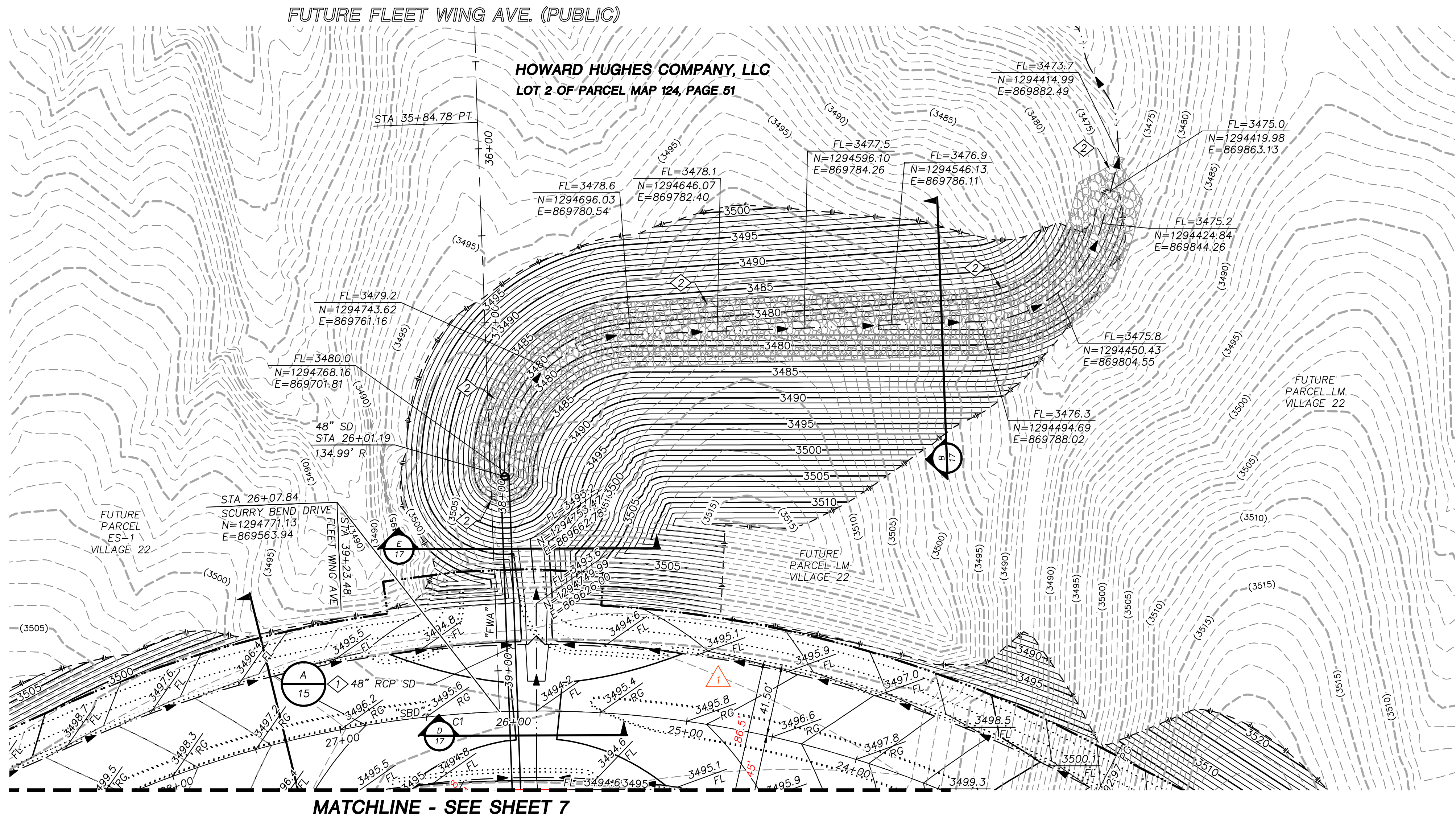
HOWARD HUGHES IS SOLELY RESPONSIBLE FOR THE
MAINTENANCE AND EROSION CONTROL OF THE INTERIM
FACILITIES

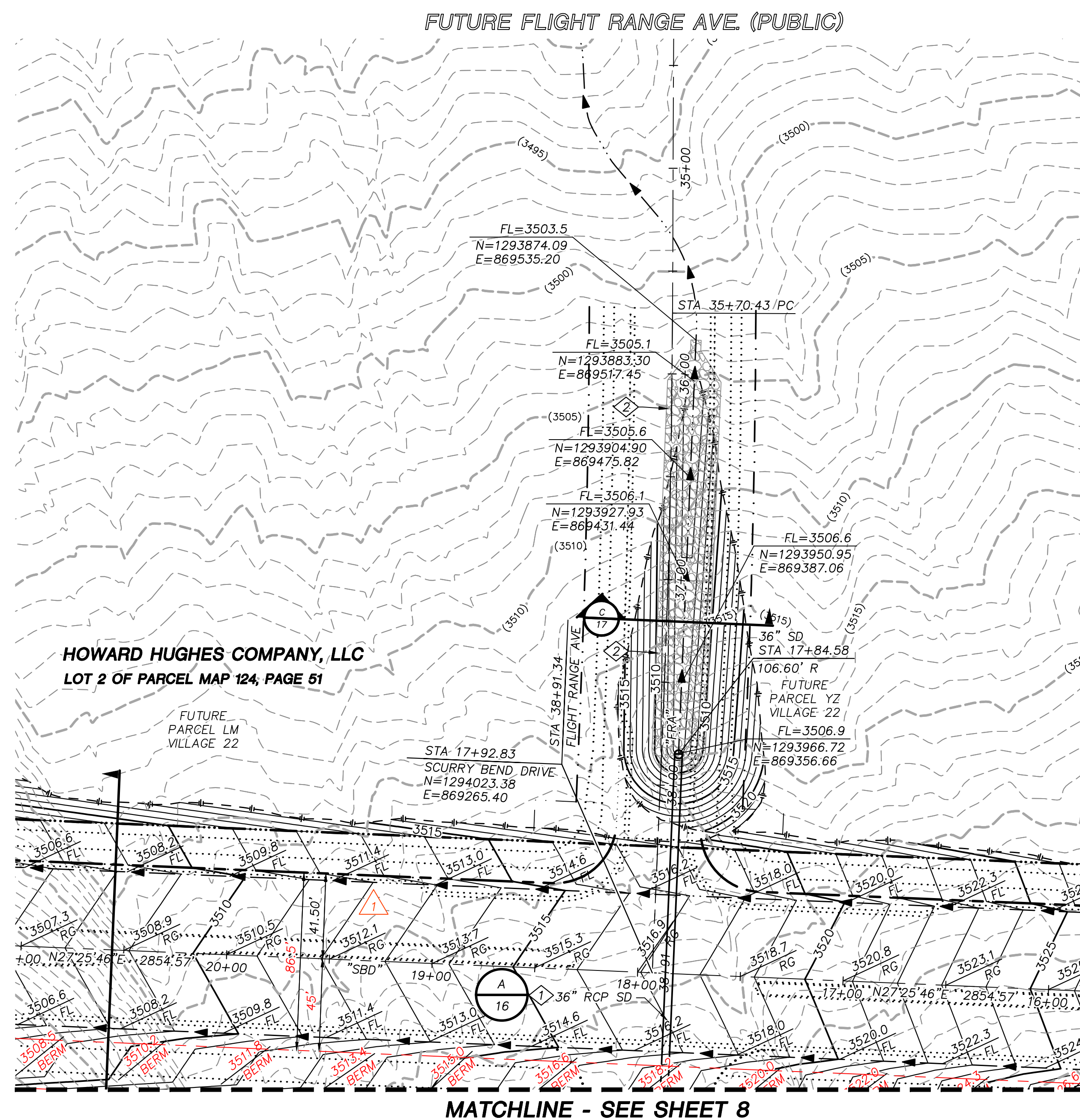
ROUGH GRADE

THE PROPOSED ROUGH GRADE IN PAVEMENT IS 8"
BELOW THE FINISH GRADE SHOWN WITHIN THESE PLANS.

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







GRAPHIC SCALE

HORIZONTAL: 1"=40'

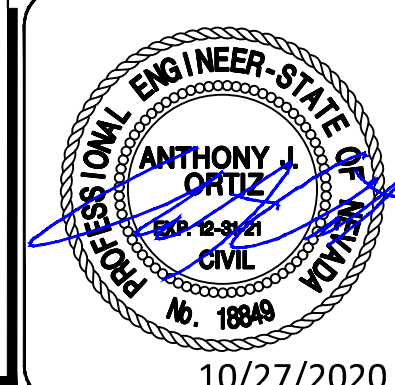
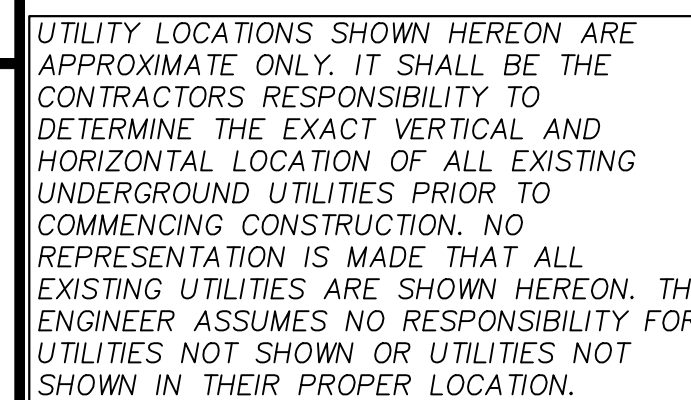
ANTHONY J. ORTIZ PE#18849 10/27/2020 DATE

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

DS#5253

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.

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,R59E,S03



1. INSTALL STORM DRAIN. SEE SHEET 3 FOR ADDITIONAL STORM DRAIN NOTES AND INFORMATION.
2. INSTALL RIP-RAP (D50=8", THICKNESS=16") PER TYPICAL SECTION ON SHEET 17
3. INSTALL RIP-RAP (D50=12", THICKNESS=24") PER TYPICAL SECTION ON SHEET 17

[illegible]

ATKINS

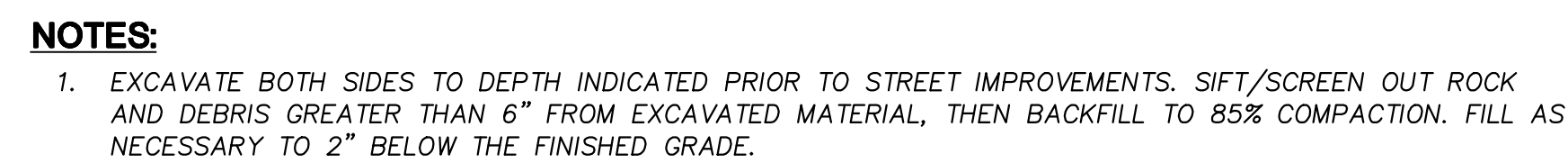


SUMMERLIN VILLAGE 22
SCURRY BEND DRIVE (STREET N) ROUGH GRADE
SUNSET RUN DRIVE TO FLEET WING AVENUE (STREET G)

ROUGH GRADING PLAN AND PROFILE FLIGHT RANGE CHANNEL

107V8560 L20-01966	DESIGNED BY: J. BANITA
DATE: DECEMBER, 2020	DRAWN BY: C. DANIELS
DRAWING NO.	CHECKED BY: P. BATES
11/18	HORIZ.: 1"=40' VERT.: 1"=8'

\\Projects\SummWest\Villae 22\100068040 - V22 Scurry Bend Dr (Sunset Run to Fleet Wing)\ Sheets\68040-07-PLAN-P1.dwg LAYOUT: 9 Dec 16, 2020 - 12:59PM



N.T.S.

N.T.S.

N.T.S.

N.T.S.

N.T.S.

NOTES:

1. EXCAVATE BOTH SIDES TO DEPTH INDICATED PRIOR TO STREET IMPROVEMENTS. SIFT/SCREEN OUT ROCK AND DEBRIS GREATER THAN 6" FROM EXCAVATED MATERIAL, THEN BACKFILL TO 85% COMPACTION. FILL AS NECESSARY TO 2" BELOW THE FINISHED GRADE.

N.T.S.

10/27/2020

DESIGNED BY: J. BANTA	107V8560
DRAWN BY: C. DANIELS	L20-01966
CHECKED BY: J. IZZOLO/P.	DATE: DECEMBER, 2020
HORIZ.: NONE	DRAWING NO.
VERT.: NONE	17/18

SUMMERLIN VILLAGE 22
SCURRY BEND DRIVE (STREET N) ROUGH GRADE
SUNSET RUN DRIVE TO FLEET WING AVENUE (STREET G)

TYPICAL SECTIONS



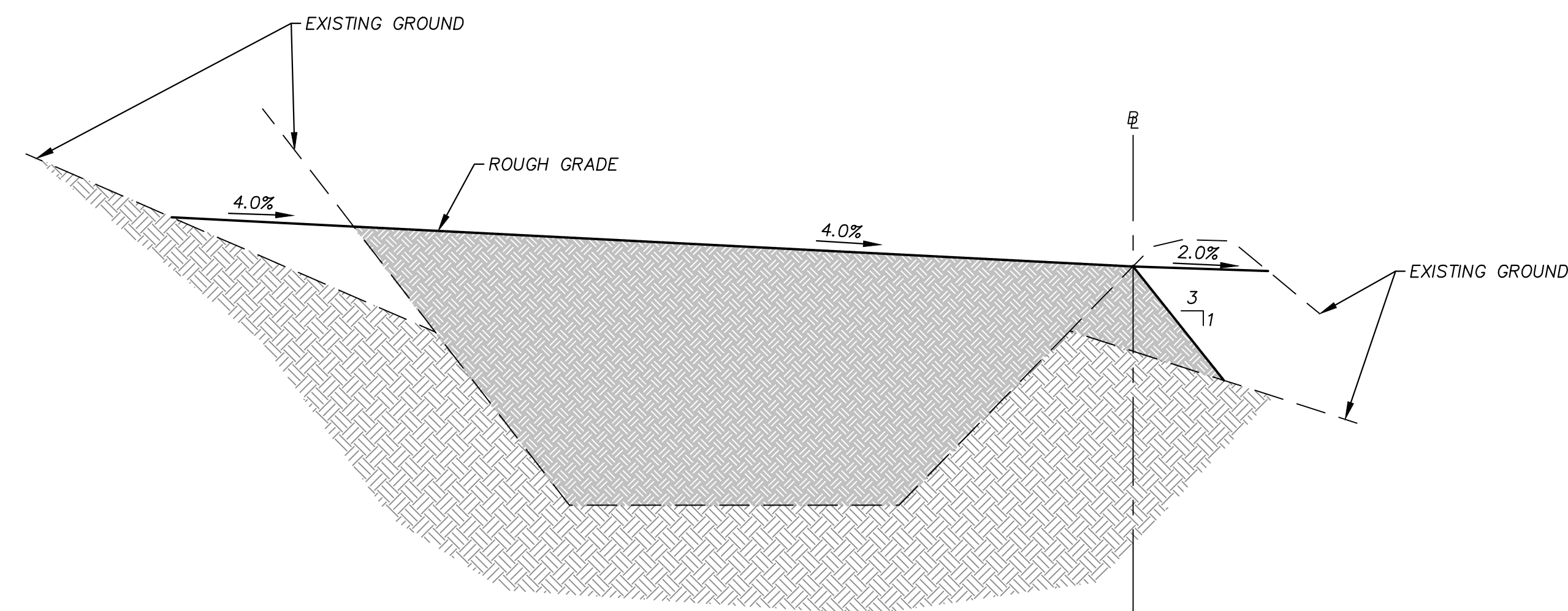
ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7275
Fax: +1702.263.7200

[illegible]

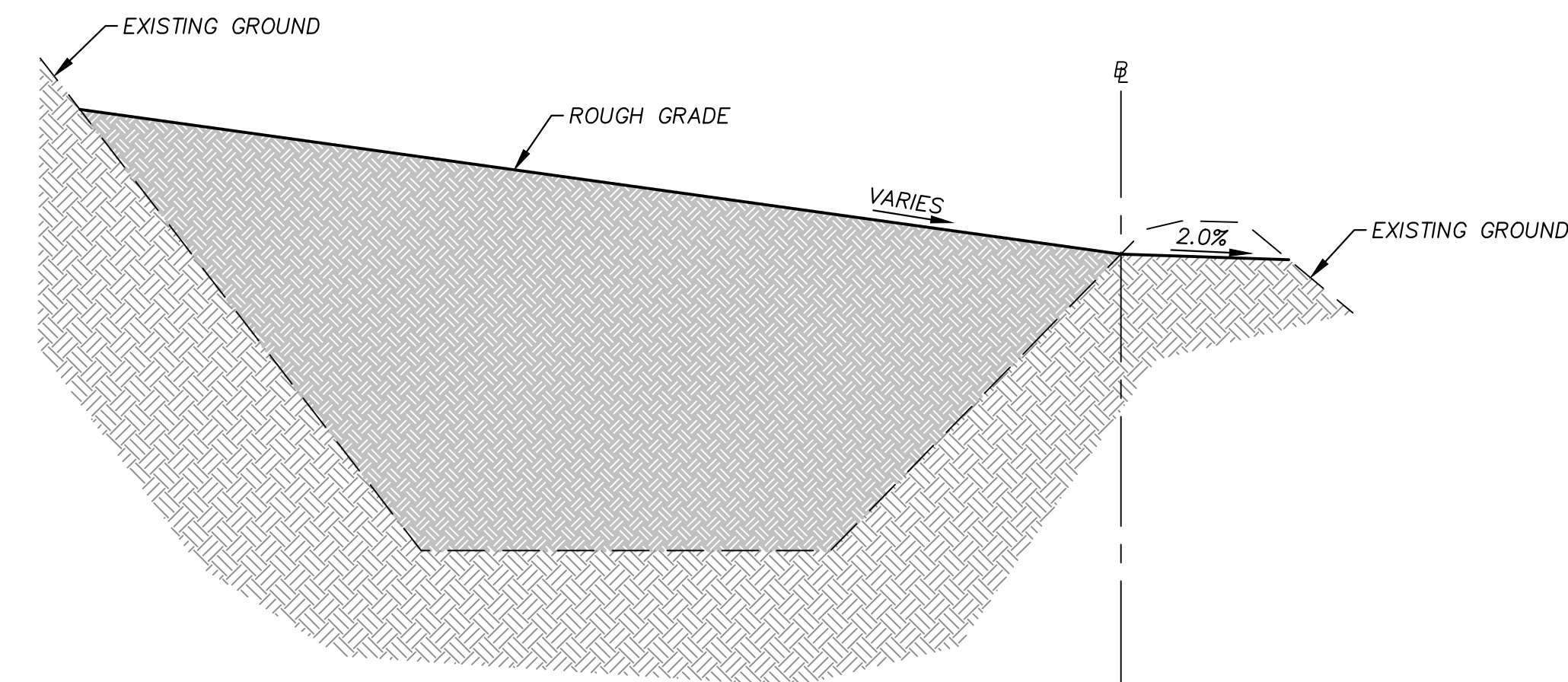
REVISIONS

REV.	DESCRIPTION
1	REVISED TYPICAL SECTION FOR A WIDER ROW MOVED BOTTOM OF SLOPE 1.5', WEST

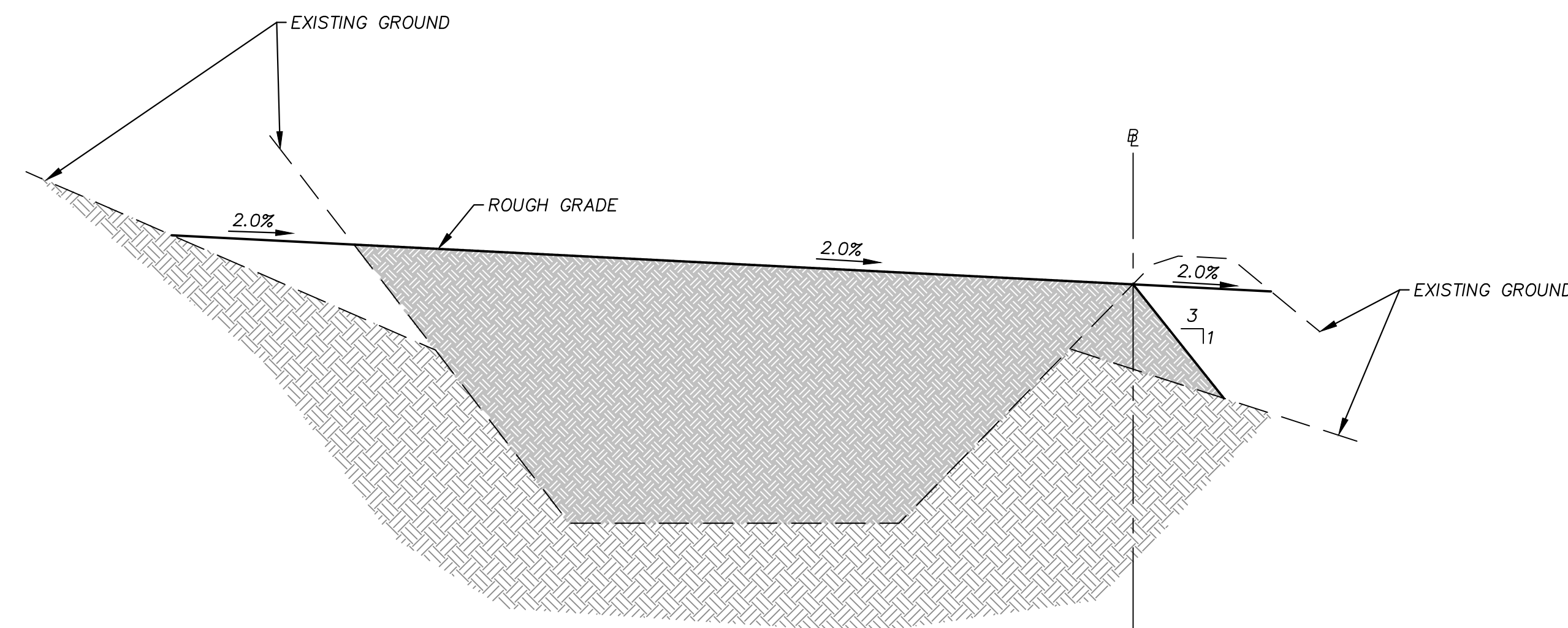
\\Projects\\SummWest\\Village 22\\100068040 - V22 Scurry Bend Dr (Sunset Run to Fleet Wing)\\ Sheets\\68040-12-DET-L-D1.dwg LAYOUT: 16 Dec 2020 - 12:59PM



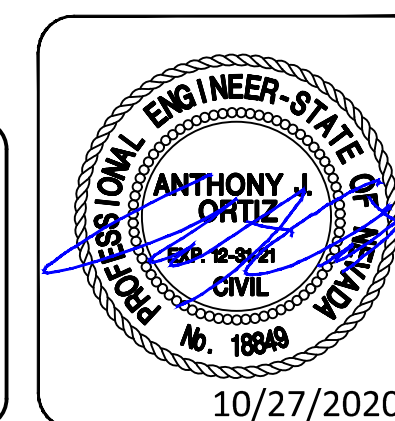
ACCESS ROAD - ROUGH GRADE SECTION
N.T.S.



ACCESS ROAD - ROUGH GRADE SECTION
N.T.S.



ACCESS ROAD - ROUGH GRADE SECTION
N.T.S.



107V8560 J. BANTA L20-01966 DATE: DECEMBER, 2020 C. DANIELS J. JZDO/P. BATES DRAWING NO.		SUMMERLIN VILLAGE 22 SCURRY BEND DRIVE (STREET N) ROUGH GRADE SUNSET RUN DRIVE TO FLEET WING AVENUE (STREET G)		 SUMMERLIN® 2270 Corporate Circle Suite 200 Henderson, Nevada 89074 Tel: 702.263.275 Fax: 702.263.2700		ATKINS	
18/18		TYPICAL SECTIONS		REVISIONS		REV. DESCRIPTION BY DATE APPROVAL	

Appendix B. Revised Hydrology

B.1. HEC-1

B.1. HEC-1


```

1*****
*****
*                                     *
*                                     *
*   FLOOD HYDROGRAPH PACKAGE   (HEC-1) *
ENGINEERS *
*           JUN   1998           *
ENGINEERING CENTER *
*           VERSION 4.1           *
STREET *
*                                     *
CALIFORNIA 95616 *
* RUN DATE   06APR21   TIME  14:35:57 *
756-1104 *
*                                     *
*                                     *
*****
*****

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X   X XXXXXXX XXXXX   X
X   X X   X   X   X   XX
X   X X   X   X   X   X
XXXXXXX XXXX   X   XXXXX X
X   X X   X   X   X   X
X   X X   X   X   X   X
X   X XXXXXXX XXXXX   XXX

```

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.

THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION

NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY, DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1 HEC-1 INPUT PAGE
1

```

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

*DIAGRAM

*** FREE ***

1 ID TECHNICAL DRAINAGE STUDY
2 ID SUMMERLIN VILLAGE 25 West
3 ID SCURRY BEND DRIVE(STREET N): SUNSET RUN DRIVE (STREET Q) TO LAKE MEAD BOULEVAR
4 ID DESIGN STORM 100-YEAR 6 HOUR
5 ID
6 ID JR CARDS CONTAIN DARFS BASED ON THE FOLLOWING VALUES
7 ID
8 ID AREA (SQUARE MILES) DARF
9 ID
10 ID 0 - 0.5 0.99
11 ID Estimated 10-year 0.57
12 ID
13 IT 5 0 0 300
14 IO 5 0 0
15 IN 5 0 0
16 JR PREC 0.99 0.57
*

```


61	KK	SN2CE
62	BA	0.00073
63	PB	3.44

64	LS	0	98.0
65	UD	0.050	
	*		
66	KKCP-STMH5		
67	KO	1	
68	HC	3	
	*		
69	KK	SN1AW	
70	BA	0.00135	
71	PB	3.44	
72	LS	0	98.0
73	UD	0.050	
	*		
74	KK	SN1AE	
75	BA	0.00135	
76	PB	3.44	
77	LS	0	98.0
78	UD	0.050	
	*		

1
3

HEC-1 INPUT

PAGE

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

79	KKCP-SBD-NA		
80	KO	1	
81	HC	2	
	*		
82	KK	SN1BW	
83	BA	0.00136	
84	PB	3.44	
85	LS	0	98.0
86	UD	0.050	
	*		
87	KK	SN1BE	
88	BA	0.00136	
89	PB	3.44	
90	LS	0	98.0
91	UD	0.050	
	*		

92	KKCP-SBD-NB		
93	HC	2	
	*		
94	KKINT-HS-1A		
95	BA	0.1148	
96	PB	3.47	
97	LS	0	88.7
98	UD	0.150	
	*		

99	KKINTHS-1B		
100	KM	PART OF BASIN HS-1 FROM VTN VILLAGE 25 MCDS AND CONTRIBUTORY OFFSITE	
101	BA	0.0278	
102	PB	3.45	
103	LS	0	88.6
104	UD	0.100	
	*		

105	KKCP-INT-HSAB		
106	KM	COMBINE SUBBASINS HS-1a AND HS-1b	
107	HC	2	


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*
108      KK  CP-SBD
109      HC    3
*
110      ZZ

```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

INPUT LINE	(V) ROUTING	(--->) DIVERSION OR PUMP FLOW
NO.	(.) CONNECTOR	(<---) RETURN OF DIVERTED OR PUMPED FLOW
17	SN2AW	
	.	
30	.	SN2AE
	.	
35	.	INT-HS1-
	.	.
40	CP-FRA.....	
	.	
43	.	SN2BW
	.	
48	.	SN2BE
	.	.
53	CP-DMH3.....	
	.	
56	.	SN2CW
	.	.
61	.	SN2CE
	.	.
66	CP-STMH5.....	
	.	
69	.	SN1AW
	.	.
74	.	SN1AE
	.	.
79	CP-SBD-N.....	
	.	
82	.	SN1BW
	.	.
87	.	SN1BE
	.	.
92	CP-SBD-N.....	
	.	
94	.	INT-HS-1
	.	.
99	.	INTHS-1B
	.	.
105	CP-INT-H.....	
	.	

108 . . CP-SBD.....

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

1*****

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*
*
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
ENGINEERS *
* JUN 1998 *
ENGINEERING CENTER *
* VERSION 4.1 *
STREET *
*
CALIFORNIA 95616 *
* RUN DATE 06APR21 TIME 14:35:57 *
756-1104 *
*
*
*****
*****
```

U.S. ARMY CORPS OF
HYDROLOGIC
609 SECOND
DAVIS,
(916)

TECHNICAL DRAINAGE STUDY
SUMMERLIN VILLAGE 25 West
SCURRY BEND DRIVE(STREET N): SUNSET RUN DRIVE (STREET Q) TO LAKE MEAD BOULEVAR
DESIGN STORM 100-YEAR 6 HOUR

JR CARDS CONTAIN DARFS BASED ON THE FOLLOWING VALUES

AREA (SQUARE MILES)	DARF
0 - 0.5	0.99
Estimated 10-year	0.57

14 IO OUTPUT CONTROL VARIABLES

IPRNT	5	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE

IT HYDROGRAPH TIME DATA

NMIN	5	MINUTES IN COMPUTATION INTERVAL
IDATE	1	0 STARTING DATE
ITIME	0000	STARTING TIME
NQ	300	NUMBER OF HYDROGRAPH ORDINATES
NDDATE	2	0 ENDING DATE
NDTIME	0055	ENDING TIME
ICENT	19	CENTURY MARK

COMPUTATION INTERVAL	.08 HOURS
TOTAL TIME BASE	24.92 HOURS

ENGLISH UNITS

DRAINAGE AREA	SQUARE MILES
PRECIPITATION DEPTH	INCHES
LENGTH, ELEVATION	FEET
FLOW	CUBIC FEET PER SECOND
STORAGE VOLUME	ACRE-FEET
SURFACE AREA	ACRES
TEMPERATURE	DEGREES FAHRENHEIT

JP MULTI-PLAN OPTION

NPLAN	1	NUMBER OF PLANS
-------	---	-----------------

[illegible]

[illegible]

240	1	0110 0.	15	0.	*	1	0725	90	0.	*	1	1340	165	0.	*	1	1955
241	1	0115 0.	16	0.	*	1	0730	91	0.	*	1	1345	166	0.	*	1	2000
242	1	0120 0.	17	0.	*	1	0735	92	0.	*	1	1350	167	0.	*	1	2005
243	1	0125 0.	18	1.	*	1	0740	93	0.	*	1	1355	168	0.	*	1	2010
244	1	0130 0.	19	1.	*	1	0745	94	0.	*	1	1400	169	0.	*	1	2015
245	1	0135 0.	20	1.	*	1	0750	95	0.	*	1	1405	170	0.	*	1	2020
246	1	0140 0.	21	1.	*	1	0755	96	0.	*	1	1410	171	0.	*	1	2025
247	1	0145 0.	22	1.	*	1	0800	97	0.	*	1	1415	172	0.	*	1	2030
248	1	0150 0.	23	1.	*	1	0805	98	0.	*	1	1420	173	0.	*	1	2035
249	1	0155 0.	24	0.	*	1	0810	99	0.	*	1	1425	174	0.	*	1	2040
250	1	0200 0.	25	0.	*	1	0815	100	0.	*	1	1430	175	0.	*	1	2045
251	1	0205 0.	26	0.	*	1	0820	101	0.	*	1	1435	176	0.	*	1	2050
252	1	0210 0.	27	1.	*	1	0825	102	0.	*	1	1440	177	0.	*	1	2055
253	1	0215 0.	28	2.	*	1	0830	103	0.	*	1	1445	178	0.	*	1	2100
254	1	0220 0.	29	2.	*	1	0835	104	0.	*	1	1450	179	0.	*	1	2105
255	1	0225 0.	30	2.	*	1	0840	105	0.	*	1	1455	180	0.	*	1	2110
256	1	0230 0.	31	1.	*	1	0845	106	0.	*	1	1500	181	0.	*	1	2115
257	1	0235 0.	32	1.	*	1	0850	107	0.	*	1	1505	182	0.	*	1	2120
258	1	0240 0.	33	2.	*	1	0855	108	0.	*	1	1510	183	0.	*	1	2125
259	1	0245 0.	34	2.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130
260	1	0250 0.	35	1.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135
261	1	0255 0.	36	1.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140
262	1	0300 0.	37	1.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145
263	1	0305 0.	38	3.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150
264	1	0310 0.	39	5.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155
265	1	0315 0.	40	9.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200
266	1	0320 0.	41	17.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205
267	1	0325 0.	42	24.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210
268	1	0330 0.	43	32.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215
269	1	0335 0.	44	28.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220
270	1	0340 0.	45	19.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225
271	1	0345 0.	46	15.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230
272	1	0350 0.	47	10.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235
273	1	0355 0.	48	7.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240
	1	0400	49	7.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245

274	0.																		
1	0405	50	5.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250			
275	0.																		
1	0410	51	3.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255			
276	0.																		
1	0415	52	3.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300			
277	0.																		
1	0420	53	3.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305			
278	0.																		
1	0425	54	4.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310			
279	0.																		
1	0430	55	6.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315			
280	0.																		
1	0435	56	7.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320			
281	0.																		
1	0440	57	6.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325			
282	0.																		
1	0445	58	5.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330			
283	0.																		
1	0450	59	7.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335			
284	0.																		
1	0455	60	6.	*	1	1110	135	0.	*	1	1725	210	0.	*	1	2340			
285	0.																		
1	0500	61	4.	*	1	1115	136	0.	*	1	1730	211	0.	*	1	2345			
286	0.																		
1	0505	62	3.	*	1	1120	137	0.	*	1	1735	212	0.	*	1	2350			
287	0.																		
1	0510	63	2.	*	1	1125	138	0.	*	1	1740	213	0.	*	1	2355			
288	0.																		
1	0515	64	1.	*	1	1130	139	0.	*	1	1745	214	0.	*	2	0000			
289	0.																		
1	0520	65	1.	*	1	1135	140	0.	*	1	1750	215	0.	*	2	0005			
290	0.																		
1	0525	66	1.	*	1	1140	141	0.	*	1	1755	216	0.	*	2	0010			
291	0.																		
1	0530	67	1.	*	1	1145	142	0.	*	1	1800	217	0.	*	2	0015			
292	0.																		
1	0535	68	0.	*	1	1150	143	0.	*	1	1805	218	0.	*	2	0020			
293	0.																		
1	0540	69	0.	*	1	1155	144	0.	*	1	1810	219	0.	*	2	0025			
294	0.																		
1	0545	70	1.	*	1	1200	145	0.	*	1	1815	220	0.	*	2	0030			
295	0.																		
1	0550	71	1.	*	1	1205	146	0.	*	1	1820	221	0.	*	2	0035			
296	0.																		
1	0555	72	0.	*	1	1210	147	0.	*	1	1825	222	0.	*	2	0040			
297	0.																		
1	0600	73	0.	*	1	1215	148	0.	*	1	1830	223	0.	*	2	0045			
298	0.																		
1	0605	74	0.	*	1	1220	149	0.	*	1	1835	224	0.	*	2	0050			
299	0.																		
1	0610	75	0.	*	1	1225	150	0.	*	1	1840	225	0.	*	2	0055			
300	0.																		
				*					*					*					

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
			(CFS)			
+	32.	3.50	4.	1.	1.	1.
			(INCHES)	1.765	1.767	1.767
			(AC-FT)	2.	2.	2.
CUMULATIVE AREA =			.02 SQ MI			

HYDROGRAPH AT STATION CP-FRA
SUM OF 3 HYDROGRAPHS
PLAN 1, RATIO = .57

2025										2026											
ORD	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN
ORD	FLOW																				
						*						*							*		
226	1		0000	1	0.	*	1		0615	76	0.	*	1		1230	151	0.	*	1		1845
227	1		0005	2	0.	*	1		0620	77	0.	*	1		1235	152	0.	*	1		1850
228	1		0010	3	0.	*	1		0625	78	0.	*	1		1240	153	0.	*	1		1855
229	1		0015	4	0.	*	1		0630	79	0.	*	1		1245	154	0.	*	1		1900
230	1		0020	5	0.	*	1		0635	80	0.	*	1		1250	155	0.	*	1		1905
231	1		0025	6	1.	*	1		0640	81	0.	*	1		1255	156	0.	*	1		1910
232	1		0030	7	1.	*	1		0645	82	0.	*	1		1300	157	0.	*	1		1915
233	1		0035	8	0.	*	1		0650	83	0.	*	1		1305	158	0.	*	1		1920
234	1		0040	9	0.	*	1		0655	84	0.	*	1		1310	159	0.	*	1		1925
235	1		0045	10	0.	*	1		0700	85	0.	*	1		1315	160	0.	*	1		1930
236	1		0050	11	0.	*	1		0705	86	0.	*	1		1320	161	0.	*	1		1935
237	1		0055	12	0.	*	1		0710	87	0.	*	1		1325	162	0.	*	1		1940
238	1		0100	13	0.	*	1		0715	88	0.	*	1		1330	163	0.	*	1		1945
239	1		0105	14	0.	*	1		0720	89	0.	*	1		1335	164	0.	*	1		1950
240	1		0110	15	0.	*	1		0725	90	0.	*	1		1340	165	0.	*	1		1955
241	1		0115	16	0.	*	1		0730	91	0.	*	1		1345	166	0.	*	1		2000
242	1		0120	17	0.	*	1		0735	92	0.	*	1		1350	167	0.	*	1		2005
243	1		0125	18	0.	*	1		0740	93	0.	*	1		1355	168	0.	*	1		2010
244	1		0130	19	0.	*	1		0745	94	0.	*	1		1400	169	0.	*	1		2015
245	1		0135	20	0.	*	1		0750	95	0.	*	1		1405	170	0.	*	1		2020
246	1		0140	21	0.	*	1		0755	96	0.	*	1		1410	171	0.	*	1		2025
247	1		0145	22	0.	*	1		0800	97	0.	*	1		1415	172	0.	*	1		2030
248	1		0150	23	0.	*	1		0805	98	0.	*	1		1420	173	0.	*	1		2035
249	1		0155	24	0.	*	1		0810	99	0.	*	1		1425	174	0.	*	1		2040
250	1		0200	25	0.	*	1		0815	100	0.	*	1		1430	175	0.	*	1		2045
251	1		0205	26	0.	*	1		0820	101	0.	*	1		1435	176	0.	*	1		2050
252	1		0210	27	0.	*	1		0825	102	0.	*	1		1440	177	0.	*</			

253	1	0215 0.	28	1.	*	1	0830	103	0.	*	1	1445	178	0.	*	1	2100
	1	0220 0.	29	0.	*	1	0835	104	0.	*	1	1450	179	0.	*	1	2105
254	1	0225 0.	30	0.	*	1	0840	105	0.	*	1	1455	180	0.	*	1	2110
255	1	0230 0.	31	0.	*	1	0845	106	0.	*	1	1500	181	0.	*	1	2115
256	1	0235 0.	32	0.	*	1	0850	107	0.	*	1	1505	182	0.	*	1	2120
257	1	0240 0.	33	0.	*	1	0855	108	0.	*	1	1510	183	0.	*	1	2125
258	1	0245 0.	34	0.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130
259	1	0250 0.	35	0.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135
260	1	0255 0.	36	0.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140
261	1	0300 0.	37	0.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145
262	1	0305 0.	38	1.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150
263	1	0310 0.	39	2.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155
264	1	0315 0.	40	3.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200
265	1	0320 0.	41	6.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205
266	1	0325 0.	42	9.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210
267	1	0330 0.	43	13.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215
268	1	0335 0.	44	11.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220
269	1	0340 0.	45	8.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225
270	1	0345 0.	46	6.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230
271	1	0350 0.	47	4.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235
272	1	0355 0.	48	3.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240
273	1	0400 0.	49	3.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245
274	1	0405 0.	50	2.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250
275	1	0410 0.	51	1.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255
276	1	0415 0.	52	1.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300
277	1	0420 0.	53	1.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305
278	1	0425 0.	54	2.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310
279	1	0430 0.	55	3.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315
280	1	0435 0.	56	3.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320
281	1	0440 0.	57	3.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325
282	1	0445 0.	58	2.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330
283	1	0450 0.	59	3.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335
284	1	0455 0.	60	3.	*	1	1110	135	0.	*	1	1725	210	0.	*	1	2340
285	1	0500 0.	61	2.	*	1	1115	136	0.	*	1	1730	211	0.	*	1	2345
286	1	0505	62	1.	*	1	1120	137	0.	*	1	1735	212	0.	*	1	2350

287	0.															
1	0510	63	1.	*	1	1125	138	0.	*	1	1740	213	0.	*	1	2355
288	0.															
1	0515	64	1.	*	1	1130	139	0.	*	1	1745	214	0.	*	2	0000
289	0.															
1	0520	65	0.	*	1	1135	140	0.	*	1	1750	215	0.	*	2	0005
290	0.															
1	0525	66	0.	*	1	1140	141	0.	*	1	1755	216	0.	*	2	0010
291	0.															
1	0530	67	0.	*	1	1145	142	0.	*	1	1800	217	0.	*	2	0015
292	0.															
1	0535	68	0.	*	1	1150	143	0.	*	1	1805	218	0.	*	2	0020
293	0.															
1	0540	69	0.	*	1	1155	144	0.	*	1	1810	219	0.	*	2	0025
294	0.															
1	0545	70	0.	*	1	1200	145	0.	*	1	1815	220	0.	*	2	0030
295	0.															
1	0550	71	0.	*	1	1205	146	0.	*	1	1820	221	0.	*	2	0035
296	0.															
1	0555	72	0.	*	1	1210	147	0.	*	1	1825	222	0.	*	2	0040
297	0.															
1	0600	73	0.	*	1	1215	148	0.	*	1	1830	223	0.	*	2	0045
298	0.															
1	0605	74	0.	*	1	1220	149	0.	*	1	1835	224	0.	*	2	0050
299	0.															
1	0610	75	0.	*	1	1225	150	0.	*	1	1840	225	0.	*	2	0055
300	0.															
			*					*					*			

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
		(CFS)				
+	13.	3.50	1.	0.	0.	0.
		(INCHES)	.694	.695	.695	.695
		(AC-FT)	1.	1.	1.	1.
CUMULATIVE AREA =			.02 SQ MI			

*** **
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* *
53 KK * CP-DMH3 *
* *

54 KO OUTPUT CONTROL VARIABLES
IPRNT 1 PRINT CONTROL
IPLOT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

55 HC HYDROGRAPH COMBINATION
ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

HYDROGRAPH AT STATION CP-DMH3
SUM OF 2 HYDROGRAPHS
PLAN 1, RATIO = .99

ORD	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN
ORD			FLOW																		
226	1		0000 0.	1	0.	*	1		0615	76	0.	*	1		1230	151	0.	*	1		1845
227	1		0005 0.	2	0.	*	1		0620	77	0.	*	1		1235	152	0.	*	1		1850
228	1		0010 0.	3	1.	*	1		0625	78	0.	*	1		1240	153	0.	*	1		1855
229	1		0015 0.	4	1.	*	1		0630	79	0.	*	1		1245	154	0.	*	1		1900
230	1		0020 0.	5	1.	*	1		0635	80	0.	*	1		1250	155	0.	*	1		1905
231	1		0025 0.	6	1.	*	1		0640	81	0.	*	1		1255	156	0.	*	1		1910
232	1		0030 0.	7	1.	*	1		0645	82	0.	*	1		1300	157	0.	*	1		1915
233	1		0035 0.	8	1.	*	1		0650	83	0.	*	1		1305	158	0.	*	1		1920
234	1		0040 0.	9	0.	*	1		0655	84	0.	*	1		1310	159	0.	*	1		1925
235	1		0045 0.	10	0.	*	1		0700	85	0.	*	1		1315	160	0.	*	1		1930
236	1		0050 0.	11	0.	*	1		0705	86	0.	*	1		1320	161	0.	*	1		1935
237	1		0055 0.	12	0.	*	1		0710	87	0.	*	1		1325	162	0.	*	1		1940
238	1		0100 0.	13	0.	*	1		0715	88	0.	*	1		1330	163	0.	*	1		1945
239	1		0105 0.	14	0.	*	1		0720	89	0.	*	1		1335	164	0.	*	1		1950
240	1		0110 0.	15	0.	*	1		0725	90	0.	*	1		1340	165	0.	*	1		1955
241	1		0115 0.	16	0.	*	1		0730	91	0.	*	1		1345	166	0.	*	1		2000
242	1		0120 0.	17	0.	*	1		0735	92	0.	*	1		1350	167	0.	*	1		2005
243	1		0125 0.	18	1.	*	1		0740	93	0.	*	1		1355	168	0.	*	1		2010
244	1		0130 0.	19	1.	*	1		0745	94	0.	*	1		1400	169	0.	*	1		2015
245	1		0135 0.	20	1.	*	1		0750	95	0.	*	1		1405	170	0.	*	1		2020
246	1		0140 0.	21	1.	*	1		0755	96	0.	*	1		1410	171	0.	*	1		2025
247	1		0145 0.	22	0.	*	1		0800	97	0.	*	1		1415	172	0.	*	1		2030
248	1		0150 0.	23	0.	*	1		0805	98	0.	*	1		1420	173	0.	*	1		2035
249	1		0155 0.	24	0.	*	1		0810	99	0.	*	1		1425	174	0.	*	1		2040
250	1		0200 0.	25	0.	*	1		0815	100	0.	*	1		1430	175	0.	*	1		2045
251	1		0205 0.	26	0.	*	1		0820	101	0.	*	1		1435	176	0.	*	1		2050
252	1		0210 0.	27	0.	*	1		0825	102	0.	*	1		1440	177	0.	*	1		2055
253	1		0215 0.	28	1.	*	1		0830	103	0.	*	1		1445	178	0.	*	1		2100
254	1		0220 0.	29	1.	*	1		0835	104	0.	*	1		1450	179	0.	*	1		2105

255	1	0225 0.	30	1.	*	1	0840	105	0.	*	1	1455	180	0.	*	1	2110
256	1	0230 0.	31	0.	*	1	0845	106	0.	*	1	1500	181	0.	*	1	2115
257	1	0235 0.	32	0.	*	1	0850	107	0.	*	1	1505	182	0.	*	1	2120
258	1	0240 0.	33	1.	*	1	0855	108	0.	*	1	1510	183	0.	*	1	2125
259	1	0245 0.	34	1.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130
260	1	0250 0.	35	0.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135
261	1	0255 0.	36	0.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140
262	1	0300 0.	37	1.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145
263	1	0305 0.	38	1.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150
264	1	0310 0.	39	2.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155
265	1	0315 0.	40	3.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200
266	1	0320 0.	41	5.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205
267	1	0325 0.	42	6.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210
268	1	0330 0.	43	7.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215
269	1	0335 0.	44	4.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220
270	1	0340 0.	45	3.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225
271	1	0345 0.	46	2.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230
272	1	0350 0.	47	1.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235
273	1	0355 0.	48	1.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240
274	1	0400 0.	49	1.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245
275	1	0405 0.	50	1.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250
276	1	0410 0.	51	0.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255
277	1	0415 0.	52	0.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300
278	1	0420 0.	53	1.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305
279	1	0425 0.	54	1.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310
280	1	0430 0.	55	1.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315
281	1	0435 0.	56	1.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320
282	1	0440 0.	57	1.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325
283	1	0445 0.	58	1.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330
284	1	0450 0.	59	1.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335
285	1	0455 0.	60	1.	*	1	1110	135	0.	*	1	1725	210	0.	*	1	2340
286	1	0500 0.	61	0.	*	1	1115	136	0.	*	1	1730	211	0.	*	1	2345
287	1	0505 0.	62	0.	*	1	1120	137	0.	*	1	1735	212	0.	*	1	2350
288	1	0510 0.	63	0.	*	1	1125	138	0.	*	1	1740	213	0.	*	1	2355
	1	0515	64	0.	*	1	1130	139	0.	*	1	1745	214	0.	*	2	0000

289	0.															
1	0520	65	0.	*	1	1135	140	0.	*	1	1750	215	0.	*	2	0005
290	0.															
1	0525	66	0.	*	1	1140	141	0.	*	1	1755	216	0.	*	2	0010
291	0.															
1	0530	67	0.	*	1	1145	142	0.	*	1	1800	217	0.	*	2	0015
292	0.															
1	0535	68	0.	*	1	1150	143	0.	*	1	1805	218	0.	*	2	0020
293	0.															
1	0540	69	0.	*	1	1155	144	0.	*	1	1810	219	0.	*	2	0025
294	0.															
1	0545	70	0.	*	1	1200	145	0.	*	1	1815	220	0.	*	2	0030
295	0.															
1	0550	71	0.	*	1	1205	146	0.	*	1	1820	221	0.	*	2	0035
296	0.															
1	0555	72	0.	*	1	1210	147	0.	*	1	1825	222	0.	*	2	0040
297	0.															
1	0600	73	0.	*	1	1215	148	0.	*	1	1830	223	0.	*	2	0045
298	0.															
1	0605	74	0.	*	1	1220	149	0.	*	1	1835	224	0.	*	2	0050
299	0.															
1	0610	75	0.	*	1	1225	150	0.	*	1	1840	225	0.	*	2	0055
300	0.															

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
			(CFS)			
+	7.	3.50	1.	0.	0.	0.
			(INCHES)	3.170	3.172	3.172
			(AC-FT)	0.	0.	0.
CUMULATIVE AREA =			.00 SQ MI			

HYDROGRAPH AT STATION CP-DMH3
SUM OF 2 HYDROGRAPHS
PLAN 1, RATIO = .57

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD
ORD																					
1	0000	1	0.	*	1	0615	76	0.	*	1	1230	151	0.	*	1	1845					
226	0.																				
1	0005	2	0.	*	1	0620	77	0.	*	1	1235	152	0.	*	1	1850					
227	0.																				
1	0010	3	0.	*	1	0625	78	0.	*	1	1240	153	0.	*	1	1855					
228	0.																				
1	0015	4	0.	*	1	0630	79	0.	*	1	1245	154	0.	*	1	1900					
229	0.																				
1	0020	5	0.	*	1	0635	80	0.	*	1	1250	155	0.	*	1	1905					
230	0.																				
1	0025	6	0.	*	1	0640	81	0.	*	1	1255	156	0.	*	1	1910					
231	0.																				
1	0030	7	0.	*	1	0645	82	0.	*	1	1300	157	0.	*	1	1915					
232	0.																				
1	0035	8	0.	*	1	0650	83	0.	*	1	1305	158	0.	*	1	1920					

233	1	0. 0040	9	0.	*	1	0655	84	0.	*	1	1310	159	0.	*	1	1925
234	1	0. 0045	10	0.	*	1	0700	85	0.	*	1	1315	160	0.	*	1	1930
235	1	0. 0050	11	0.	*	1	0705	86	0.	*	1	1320	161	0.	*	1	1935
236	1	0. 0055	12	0.	*	1	0710	87	0.	*	1	1325	162	0.	*	1	1940
237	1	0. 0100	13	0.	*	1	0715	88	0.	*	1	1330	163	0.	*	1	1945
238	1	0. 0105	14	0.	*	1	0720	89	0.	*	1	1335	164	0.	*	1	1950
239	1	0. 0110	15	0.	*	1	0725	90	0.	*	1	1340	165	0.	*	1	1955
240	1	0. 0115	16	0.	*	1	0730	91	0.	*	1	1345	166	0.	*	1	2000
241	1	0. 0120	17	0.	*	1	0735	92	0.	*	1	1350	167	0.	*	1	2005
242	1	0. 0125	18	0.	*	1	0740	93	0.	*	1	1355	168	0.	*	1	2010
243	1	0. 0130	19	0.	*	1	0745	94	0.	*	1	1400	169	0.	*	1	2015
244	1	0. 0135	20	0.	*	1	0750	95	0.	*	1	1405	170	0.	*	1	2020
245	1	0. 0140	21	0.	*	1	0755	96	0.	*	1	1410	171	0.	*	1	2025
246	1	0. 0145	22	0.	*	1	0800	97	0.	*	1	1415	172	0.	*	1	2030
247	1	0. 0150	23	0.	*	1	0805	98	0.	*	1	1420	173	0.	*	1	2035
248	1	0. 0155	24	0.	*	1	0810	99	0.	*	1	1425	174	0.	*	1	2040
249	1	0. 0200	25	0.	*	1	0815	100	0.	*	1	1430	175	0.	*	1	2045
250	1	0. 0205	26	0.	*	1	0820	101	0.	*	1	1435	176	0.	*	1	2050
251	1	0. 0210	27	0.	*	1	0825	102	0.	*	1	1440	177	0.	*	1	2055
252	1	0. 0215	28	0.	*	1	0830	103	0.	*	1	1445	178	0.	*	1	2100
253	1	0. 0220	29	0.	*	1	0835	104	0.	*	1	1450	179	0.	*	1	2105
254	1	0. 0225	30	0.	*	1	0840	105	0.	*	1	1455	180	0.	*	1	2110
255	1	0. 0230	31	0.	*	1	0845	106	0.	*	1	1500	181	0.	*	1	2115
256	1	0. 0235	32	0.	*	1	0850	107	0.	*	1	1505	182	0.	*	1	2120
257	1	0. 0240	33	0.	*	1	0855	108	0.	*	1	1510	183	0.	*	1	2125
258	1	0. 0245	34	0.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130
259	1	0. 0250	35	0.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135
260	1	0. 0255	36	0.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140
261	1	0. 0300	37	0.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145
262	1	0. 0305	38	1.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150
263	1	0. 0310	39	1.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155
264	1	0. 0315	40	2.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200
265	1	0. 0320	41	3.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205
266	1	0. 0325	42	3.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210
267		0.															

268	1	0330 0.	43	4.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215
269	1	0335 0.	44	2.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220
270	1	0340 0.	45	2.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225
271	1	0345 0.	46	1.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230
272	1	0350 0.	47	1.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235
273	1	0355 0.	48	1.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240
274	1	0400 0.	49	1.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245
275	1	0405 0.	50	0.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250
276	1	0410 0.	51	0.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255
277	1	0415 0.	52	0.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300
278	1	0420 0.	53	0.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305
279	1	0425 0.	54	0.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310
280	1	0430 0.	55	1.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315
281	1	0435 0.	56	1.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320
282	1	0440 0.	57	0.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325
283	1	0445 0.	58	0.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330
284	1	0450 0.	59	1.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335
285	1	0455 0.	60	0.	*	1	1110	135	0.	*	1	1725	210	0.	*	1	2340
286	1	0500 0.	61	0.	*	1	1115	136	0.	*	1	1730	211	0.	*	1	2345
287	1	0505 0.	62	0.	*	1	1120	137	0.	*	1	1735	212	0.	*	1	2350
288	1	0510 0.	63	0.	*	1	1125	138	0.	*	1	1740	213	0.	*	1	2355
289	1	0515 0.	64	0.	*	1	1130	139	0.	*	1	1745	214	0.	*	2	0000
290	1	0520 0.	65	0.	*	1	1135	140	0.	*	1	1750	215	0.	*	2	0005
291	1	0525 0.	66	0.	*	1	1140	141	0.	*	1	1755	216	0.	*	2	0010
292	1	0530 0.	67	0.	*	1	1145	142	0.	*	1	1800	217	0.	*	2	0015
293	1	0535 0.	68	0.	*	1	1150	143	0.	*	1	1805	218	0.	*	2	0020
294	1	0540 0.	69	0.	*	1	1155	144	0.	*	1	1810	219	0.	*	2	0025
295	1	0545 0.	70	0.	*	1	1200	145	0.	*	1	1815	220	0.	*	2	0030
296	1	0550 0.	71	0.	*	1	1205	146	0.	*	1	1820	221	0.	*	2	0035
297	1	0555 0.	72	0.	*	1	1210	147	0.	*	1	1825	222	0.	*	2	0040
298	1	0600 0.	73	0.	*	1	1215	148	0.	*	1	1830	223	0.	*	2	0045
299	1	0605 0.	74	0.	*	1	1220	149	0.	*	1	1835	224	0.	*	2	0050
300	1	0610 0.	75	0.	*	1	1225	150	0.	*	1	1840	225	0.	*	2	0055
					*						*						*

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	24.92-HR
+	4.	3.50	0.	0.	0.	0.
		(CFS)				
		(INCHES)	1.735	1.736	1.736	1.736
		(AC-FT)	0.	0.	0.	0.
CUMULATIVE AREA =			.00 SQ MI			

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* *
66 KK * CP-STMHS *
* *

67 KO OUTPUT CONTROL VARIABLES
IPRNT 1 PRINT CONTROL
IPLOT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

68 HC HYDROGRAPH COMBINATION
ICOMP 3 NUMBER OF HYDROGRAPHS TO COMBINE

HYDROGRAPH AT STATION CP-STMHS
SUM OF 3 HYDROGRAPHS
PLAN 1, RATIO = .99

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD
226	1	0000	1	0.	*	1	0615	76	0.	*	1	1230	151	0.	*	1	1845				
227	1	0005	2	0.	*	1	0620	77	0.	*	1	1235	152	0.	*	1	1850				
228	1	0010	3	1.	*	1	0625	78	0.	*	1	1240	153	0.	*	1	1855				
229	1	0015	4	1.	*	1	0630	79	0.	*	1	1245	154	0.	*	1	1900				
230	1	0020	5	1.	*	1	0635	80	0.	*	1	1250	155	0.	*	1	1905				
231	1	0025	6	2.	*	1	0640	81	0.	*	1	1255	156	0.	*	1	1910				
232	1	0030	7	2.	*	1	0645	82	0.	*	1	1300	157	0.	*	1	1915				
233	1	0035	8	1.	*	1	0650	83	0.	*	1	1305	158	0.	*	1	1920				
234	1	0040	9	0.	*	1	0655	84	0.	*	1	1310	159	0.	*	1	1925				
	1	0045	10	0.	*	1	0700	85	0.	*	1	1315	160	0.	*	1	1930				

235	1	0. 0050	11	0.	*	1	0705	86	0.	*	1	1320	161	0.	*	1	1935
236	1	0. 0055	12	0.	*	1	0710	87	0.	*	1	1325	162	0.	*	1	1940
237	1	0. 0100	13	0.	*	1	0715	88	0.	*	1	1330	163	0.	*	1	1945
238	1	0. 0105	14	0.	*	1	0720	89	0.	*	1	1335	164	0.	*	1	1950
239	1	0. 0110	15	1.	*	1	0725	90	0.	*	1	1340	165	0.	*	1	1955
240	1	0. 0115	16	0.	*	1	0730	91	0.	*	1	1345	166	0.	*	1	2000
241	1	0. 0120	17	0.	*	1	0735	92	0.	*	1	1350	167	0.	*	1	2005
242	1	0. 0125	18	1.	*	1	0740	93	0.	*	1	1355	168	0.	*	1	2010
243	1	0. 0130	19	1.	*	1	0745	94	0.	*	1	1400	169	0.	*	1	2015
244	1	0. 0135	20	1.	*	1	0750	95	0.	*	1	1405	170	0.	*	1	2020
245	1	0. 0140	21	1.	*	1	0755	96	0.	*	1	1410	171	0.	*	1	2025
246	1	0. 0145	22	1.	*	1	0800	97	0.	*	1	1415	172	0.	*	1	2030
247	1	0. 0150	23	0.	*	1	0805	98	0.	*	1	1420	173	0.	*	1	2035
248	1	0. 0155	24	0.	*	1	0810	99	0.	*	1	1425	174	0.	*	1	2040
249	1	0. 0200	25	0.	*	1	0815	100	0.	*	1	1430	175	0.	*	1	2045
250	1	0. 0205	26	0.	*	1	0820	101	0.	*	1	1435	176	0.	*	1	2050
251	1	0. 0210	27	1.	*	1	0825	102	0.	*	1	1440	177	0.	*	1	2055
252	1	0. 0215	28	1.	*	1	0830	103	0.	*	1	1445	178	0.	*	1	2100
253	1	0. 0220	29	1.	*	1	0835	104	0.	*	1	1450	179	0.	*	1	2105
254	1	0. 0225	30	1.	*	1	0840	105	0.	*	1	1455	180	0.	*	1	2110
255	1	0. 0230	31	0.	*	1	0845	106	0.	*	1	1500	181	0.	*	1	2115
256	1	0. 0235	32	0.	*	1	0850	107	0.	*	1	1505	182	0.	*	1	2120
257	1	0. 0240	33	1.	*	1	0855	108	0.	*	1	1510	183	0.	*	1	2125
258	1	0. 0245	34	1.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130
259	1	0. 0250	35	1.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135
260	1	0. 0255	36	0.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140
261	1	0. 0300	37	1.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145
262	1	0. 0305	38	2.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150
263	1	0. 0310	39	3.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155
264	1	0. 0315	40	5.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200
265	1	0. 0320	41	8.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205
266	1	0. 0325	42	9.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210
267	1	0. 0330	43	11.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215
268	1	0. 0335	44	6.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220
269		0.															

270	1	0340 0.	45	4.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225
271	1	0345 0.	46	4.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230
272	1	0350 0.	47	2.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235
273	1	0355 0.	48	2.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240
274	1	0400 0.	49	2.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245
275	1	0405 0.	50	1.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250
276	1	0410 0.	51	1.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255
277	1	0415 0.	52	1.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300
278	1	0420 0.	53	1.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305
279	1	0425 0.	54	1.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310
280	1	0430 0.	55	2.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315
281	1	0435 0.	56	2.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320
282	1	0440 0.	57	1.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325
283	1	0445 0.	58	1.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330
284	1	0450 0.	59	2.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335
285	1	0455 0.	60	1.	*	1	1110	135	0.	*	1	1725	210	0.	*	1	2340
286	1	0500 0.	61	1.	*	1	1115	136	0.	*	1	1730	211	0.	*	1	2345
287	1	0505 0.	62	0.	*	1	1120	137	0.	*	1	1735	212	0.	*	1	2350
288	1	0510 0.	63	0.	*	1	1125	138	0.	*	1	1740	213	0.	*	1	2355
289	1	0515 0.	64	0.	*	1	1130	139	0.	*	1	1745	214	0.	*	2	0000
290	1	0520 0.	65	0.	*	1	1135	140	0.	*	1	1750	215	0.	*	2	0005
291	1	0525 0.	66	0.	*	1	1140	141	0.	*	1	1755	216	0.	*	2	0010
292	1	0530 0.	67	0.	*	1	1145	142	0.	*	1	1800	217	0.	*	2	0015
293	1	0535 0.	68	0.	*	1	1150	143	0.	*	1	1805	218	0.	*	2	0020
294	1	0540 0.	69	0.	*	1	1155	144	0.	*	1	1810	219	0.	*	2	0025
295	1	0545 0.	70	0.	*	1	1200	145	0.	*	1	1815	220	0.	*	2	0030
296	1	0550 0.	71	0.	*	1	1205	146	0.	*	1	1820	221	0.	*	2	0035
297	1	0555 0.	72	0.	*	1	1210	147	0.	*	1	1825	222	0.	*	2	0040
298	1	0600 0.	73	0.	*	1	1215	148	0.	*	1	1830	223	0.	*	2	0045
299	1	0605 0.	74	0.	*	1	1220	149	0.	*	1	1835	224	0.	*	2	0050
300	1	0610 0.	75	0.	*	1	1225	150	0.	*	1	1840	225	0.	*	2	0055
					*						*						*

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	24.92-HR

CUMULATIVE AREA = .00 SQ MI

HYDROGRAPH AT STATION CP-STMH5
SUM OF 3 HYDROGRAPHS
PLAN 1, RATIO = .57

ORD	DA MON HRMN				FLOW	DA MON HRMN				FLOW	DA MON HRMN				FLOW	DA MON HRMN			
	DA	MON	HRMN	ORD		DA	MON	HRMN	ORD		DA	MON	HRMN	ORD		DA	MON	HRMN	ORD
ORD	FLOW				*					*					*				
226	1		0000 0.	1	0.	*	1	0615	76	0.	*	1	1230	151	0.	*	1	1845	
227	1		0005 0.	2	0.	*	1	0620	77	0.	*	1	1235	152	0.	*	1	1850	
228	1		0010 0.	3	0.	*	1	0625	78	0.	*	1	1240	153	0.	*	1	1855	
229	1		0015 0.	4	0.	*	1	0630	79	0.	*	1	1245	154	0.	*	1	1900	
230	1		0020 0.	5	1.	*	1	0635	80	0.	*	1	1250	155	0.	*	1	1905	
231	1		0025 0.	6	1.	*	1	0640	81	0.	*	1	1255	156	0.	*	1	1910	
232	1		0030 0.	7	1.	*	1	0645	82	0.	*	1	1300	157	0.	*	1	1915	
233	1		0035 0.	8	0.	*	1	0650	83	0.	*	1	1305	158	0.	*	1	1920	
234	1		0040 0.	9	0.	*	1	0655	84	0.	*	1	1310	159	0.	*	1	1925	
235	1		0045 0.	10	0.	*	1	0700	85	0.	*	1	1315	160	0.	*	1	1930	
236	1		0050 0.	11	0.	*	1	0705	86	0.	*	1	1320	161	0.	*	1	1935	
237	1		0055 0.	12	0.	*	1	0710	87	0.	*	1	1325	162	0.	*	1	1940	
238	1		0100 0.	13	0.	*	1	0715	88	0.	*	1	1330	163	0.	*	1	1945	
239	1		0105 0.	14	0.	*	1	0720	89	0.	*	1	1335	164	0.	*	1	1950	
240	1		0110 0.	15	0.	*	1	0725	90	0.	*	1	1340	165	0.	*	1	1955	
241	1		0115 0.	16	0.	*	1	0730	91	0.	*	1	1345	166	0.	*	1	2000	
242	1		0120 0.	17	0.	*	1	0735	92	0.	*	1	1350	167	0.	*	1	2005	
243	1		0125 0.	18	0.	*	1	0740	93	0.	*	1	1355	168	0.	*	1	2010	
244	1		0130 0.	19	1.	*	1	0745	94	0.	*	1	1400	169	0.	*	1	2015	
245	1		0135 0.	20	1.	*	1	0750	95	0.	*	1	1405	170	0.	*	1	2020	
246	1		0140 0.	21	0.	*	1	0755	96	0.	*	1	1410	171	0.	*	1	2025	
247	1		0145 0.	22	0.	*	1	0800	97	0.	*	1	1415	172	0.	*	1	2030	
	1		0150	23	0.	*	1	0805	98	0.	*	1	1420	173	0.	*	1	2035	

248	1	0. 0155	24	0.	*	1	0810	99	0.	*	1	1425	174	0.	*	1	2040
249	1	0. 0200	25	0.	*	1	0815	100	0.	*	1	1430	175	0.	*	1	2045
250	1	0. 0205	26	0.	*	1	0820	101	0.	*	1	1435	176	0.	*	1	2050
251	1	0. 0210	27	0.	*	1	0825	102	0.	*	1	1440	177	0.	*	1	2055
252	1	0. 0215	28	1.	*	1	0830	103	0.	*	1	1445	178	0.	*	1	2100
253	1	0. 0220	29	1.	*	1	0835	104	0.	*	1	1450	179	0.	*	1	2105
254	1	0. 0225	30	1.	*	1	0840	105	0.	*	1	1455	180	0.	*	1	2110
255	1	0. 0230	31	0.	*	1	0845	106	0.	*	1	1500	181	0.	*	1	2115
256	1	0. 0235	32	0.	*	1	0850	107	0.	*	1	1505	182	0.	*	1	2120
257	1	0. 0240	33	1.	*	1	0855	108	0.	*	1	1510	183	0.	*	1	2125
258	1	0. 0245	34	1.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130
259	1	0. 0250	35	0.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135
260	1	0. 0255	36	0.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140
261	1	0. 0300	37	0.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145
262	1	0. 0305	38	1.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150
263	1	0. 0310	39	2.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155
264	1	0. 0315	40	3.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200
265	1	0. 0320	41	4.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205
266	1	0. 0325	42	5.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210
267	1	0. 0330	43	6.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215
268	1	0. 0335	44	4.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220
269	1	0. 0340	45	2.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225
270	1	0. 0345	46	2.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230
271	1	0. 0350	47	1.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235
272	1	0. 0355	48	1.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240
273	1	0. 0400	49	1.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245
274	1	0. 0405	50	1.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250
275	1	0. 0410	51	0.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255
276	1	0. 0415	52	0.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300
277	1	0. 0420	53	0.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305
278	1	0. 0425	54	1.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310
279	1	0. 0430	55	1.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315
280	1	0. 0435	56	1.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320
281	1	0. 0440	57	1.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325
282		0.															

283	1	0445	58	1.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330
		0.															
	1	0450	59	1.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335
284		0.															
	1	0455	60	1.	*	1	1110	135	0.	*	1	1725	210	0.	*	1	2340
285		0.															
	1	0500	61	0.	*	1	1115	136	0.	*	1	1730	211	0.	*	1	2345
286		0.															
	1	0505	62	0.	*	1	1120	137	0.	*	1	1735	212	0.	*	1	2350
287		0.															
	1	0510	63	0.	*	1	1125	138	0.	*	1	1740	213	0.	*	1	2355
288		0.															
	1	0515	64	0.	*	1	1130	139	0.	*	1	1745	214	0.	*	2	0000
289		0.															
	1	0520	65	0.	*	1	1135	140	0.	*	1	1750	215	0.	*	2	0005
290		0.															
	1	0525	66	0.	*	1	1140	141	0.	*	1	1755	216	0.	*	2	0010
291		0.															
	1	0530	67	0.	*	1	1145	142	0.	*	1	1800	217	0.	*	2	0015
292		0.															
	1	0535	68	0.	*	1	1150	143	0.	*	1	1805	218	0.	*	2	0020
293		0.															
	1	0540	69	0.	*	1	1155	144	0.	*	1	1810	219	0.	*	2	0025
294		0.															
	1	0545	70	0.	*	1	1200	145	0.	*	1	1815	220	0.	*	2	0030
295		0.															
	1	0550	71	0.	*	1	1205	146	0.	*	1	1820	221	0.	*	2	0035
296		0.															
	1	0555	72	0.	*	1	1210	147	0.	*	1	1825	222	0.	*	2	0040
297		0.															
	1	0600	73	0.	*	1	1215	148	0.	*	1	1830	223	0.	*	2	0045
298		0.															
	1	0605	74	0.	*	1	1220	149	0.	*	1	1835	224	0.	*	2	0050
299		0.															
	1	0610	75	0.	*	1	1225	150	0.	*	1	1840	225	0.	*	2	0055
300		0.															

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
(CFS)	(HR)	6-HR	24-HR	72-HR	24.92-HR
+	6.	1.	0.	0.	0.
		(CFS)			
+	3.50	1.735	1.736	1.736	1.736
		(INCHES)			
		(AC-FT)	0.	0.	0.
CUMULATIVE AREA = .00 SQ MI					

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* *
79 KK * CP-SBD-N * A
* *

80 KO OUTPUT CONTROL VARIABLES
IPRNT 1 PRINT CONTROL
IPLOT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

81 HC

HYDROGRAPH COMBINATION
ICOMP

2 NUMBER OF HYDROGRAPHS TO COMBINE

*****HYDROGRAPH AT STATION CP-SBD-N
SUM OF 2 HYDROGRAPHS
PLAN 1, RATIO = .99*****

ORD	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN
						*						*						*			
						*						*						*			
226	1		0000	1	0.	*	1		0615	76	0.	*	1		1230	151	0.	*	1		1845
			0.																		
227	1		0005	2	0.	*	1		0620	77	0.	*	1		1235	152	0.	*	1		1850
			0.																		
228	1		0010	3	1.	*	1		0625	78	0.	*	1		1240	153	0.	*	1		1855
			0.																		
229	1		0015	4	1.	*	1		0630	79	0.	*	1		1245	154	0.	*	1		1900
			0.																		
230	1		0020	5	1.	*	1		0635	80	0.	*	1		1250	155	0.	*	1		1905
			0.																		
231	1		0025	6	1.	*	1		0640	81	0.	*	1		1255	156	0.	*	1		1910
			0.																		
232	1		0030	7	1.	*	1		0645	82	0.	*	1		1300	157	0.	*	1		1915
			0.																		
233	1		0035	8	1.	*	1		0650	83	0.	*	1		1305	158	0.	*	1		1920
			0.																		
234	1		0040	9	0.	*	1		0655	84	0.	*	1		1310	159	0.	*	1		1925
			0.																		
235	1		0045	10	0.	*	1		0700	85	0.	*	1		1315	160	0.	*	1		1930
			0.																		
236	1		0050	11	0.	*	1		0705	86	0.	*	1		1320	161	0.	*	1		1935
			0.																		
237	1		0055	12	0.	*	1		0710	87	0.	*	1		1325	162	0.	*	1		1940
			0.																		
238	1		0100	13	0.	*	1		0715	88	0.	*	1		1330	163	0.	*	1		1945
			0.																		
239	1		0105	14	0.	*	1		0720	89	0.	*	1		1335	164	0.	*	1		1950
			0.																		
240	1		0110	15	0.	*	1		0725	90	0.	*	1		1340	165	0.	*	1		1955
			0.																		
241	1		0115	16	0.	*	1		0730	91	0.	*	1		1345	166	0.	*	1		2000
			0.																		
242	1		0120	17	0.	*	1		0735	92	0.	*	1		1350	167	0.	*	1		2005
			0.																		
243	1		0125	18	1.	*	1		0740	93	0.	*	1		1355	168	0.	*	1		2010
			0.																		
244	1		0130	19	1.	*	1		0745	94	0.	*	1		1400	169	0.	*	1		2015
			0.																		
245	1		0135	20	1.	*	1		0750	95	0.	*	1		1405	170	0.	*	1		2020
			0.																		
246	1		0140	21	1.	*	1		0755	96	0.	*	1		1410	171	0.	*	1		2025
			0.																		
247	1		0145	22	1.	*	1		0800	97	0.	*	1		1415	172	0.	*	1		2030
			0.																		
248	1		0150	23	0.	*	1		0805	98	0.	*	1		1420	173	0.	*	1		2035
			0.																		
249	1		0155	24	0.	*	1		0810	99	0.	*	1		1425	174	0.	*	1		2040
			0.																		
	1		0200	25	0.	*	1		0815	100	0.	*	1		1430	175	0.	*	1		2045

250	1	0. 0205	26	0.	*	1	0820	101	0.	*	1	1435	176	0.	*	1	2050
251	1	0. 0210	27	1.	*	1	0825	102	0.	*	1	1440	177	0.	*	1	2055
252	1	0. 0215	28	1.	*	1	0830	103	0.	*	1	1445	178	0.	*	1	2100
253	1	0. 0220	29	1.	*	1	0835	104	0.	*	1	1450	179	0.	*	1	2105
254	1	0. 0225	30	1.	*	1	0840	105	0.	*	1	1455	180	0.	*	1	2110
255	1	0. 0230	31	0.	*	1	0845	106	0.	*	1	1500	181	0.	*	1	2115
256	1	0. 0235	32	0.	*	1	0850	107	0.	*	1	1505	182	0.	*	1	2120
257	1	0. 0240	33	1.	*	1	0855	108	0.	*	1	1510	183	0.	*	1	2125
258	1	0. 0245	34	1.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130
259	1	0. 0250	35	0.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135
260	1	0. 0255	36	0.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140
261	1	0. 0300	37	1.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145
262	1	0. 0305	38	1.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150
263	1	0. 0310	39	2.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155
264	1	0. 0315	40	3.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200
265	1	0. 0320	41	5.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205
266	1	0. 0325	42	6.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210
267	1	0. 0330	43	8.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215
268	1	0. 0335	44	4.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220
269	1	0. 0340	45	3.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225
270	1	0. 0345	46	2.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230
271	1	0. 0350	47	1.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235
272	1	0. 0355	48	1.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240
273	1	0. 0400	49	1.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245
274	1	0. 0405	50	1.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250
275	1	0. 0410	51	0.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255
276	1	0. 0415	52	0.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300
277	1	0. 0420	53	1.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305
278	1	0. 0425	54	1.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310
279	1	0. 0430	55	1.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315
280	1	0. 0435	56	1.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320
281	1	0. 0440	57	1.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325
282	1	0. 0445	58	1.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330
283	1	0. 0450	59	1.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335
284		0.															

229	1	0015 0.	4	0.	*	1	0630	79	0.	*	1	1245	154	0.	*	1	1900
230	1	0020 0.	5	0.	*	1	0635	80	0.	*	1	1250	155	0.	*	1	1905
231	1	0025 0.	6	1.	*	1	0640	81	0.	*	1	1255	156	0.	*	1	1910
232	1	0030 0.	7	0.	*	1	0645	82	0.	*	1	1300	157	0.	*	1	1915
233	1	0035 0.	8	0.	*	1	0650	83	0.	*	1	1305	158	0.	*	1	1920
234	1	0040 0.	9	0.	*	1	0655	84	0.	*	1	1310	159	0.	*	1	1925
235	1	0045 0.	10	0.	*	1	0700	85	0.	*	1	1315	160	0.	*	1	1930
236	1	0050 0.	11	0.	*	1	0705	86	0.	*	1	1320	161	0.	*	1	1935
237	1	0055 0.	12	0.	*	1	0710	87	0.	*	1	1325	162	0.	*	1	1940
238	1	0100 0.	13	0.	*	1	0715	88	0.	*	1	1330	163	0.	*	1	1945
239	1	0105 0.	14	0.	*	1	0720	89	0.	*	1	1335	164	0.	*	1	1950
240	1	0110 0.	15	0.	*	1	0725	90	0.	*	1	1340	165	0.	*	1	1955
241	1	0115 0.	16	0.	*	1	0730	91	0.	*	1	1345	166	0.	*	1	2000
242	1	0120 0.	17	0.	*	1	0735	92	0.	*	1	1350	167	0.	*	1	2005
243	1	0125 0.	18	0.	*	1	0740	93	0.	*	1	1355	168	0.	*	1	2010
244	1	0130 0.	19	0.	*	1	0745	94	0.	*	1	1400	169	0.	*	1	2015
245	1	0135 0.	20	0.	*	1	0750	95	0.	*	1	1405	170	0.	*	1	2020
246	1	0140 0.	21	0.	*	1	0755	96	0.	*	1	1410	171	0.	*	1	2025
247	1	0145 0.	22	0.	*	1	0800	97	0.	*	1	1415	172	0.	*	1	2030
248	1	0150 0.	23	0.	*	1	0805	98	0.	*	1	1420	173	0.	*	1	2035
249	1	0155 0.	24	0.	*	1	0810	99	0.	*	1	1425	174	0.	*	1	2040
250	1	0200 0.	25	0.	*	1	0815	100	0.	*	1	1430	175	0.	*	1	2045
251	1	0205 0.	26	0.	*	1	0820	101	0.	*	1	1435	176	0.	*	1	2050
252	1	0210 0.	27	0.	*	1	0825	102	0.	*	1	1440	177	0.	*	1	2055
253	1	0215 0.	28	0.	*	1	0830	103	0.	*	1	1445	178	0.	*	1	2100
254	1	0220 0.	29	0.	*	1	0835	104	0.	*	1	1450	179	0.	*	1	2105
255	1	0225 0.	30	0.	*	1	0840	105	0.	*	1	1455	180	0.	*	1	2110
256	1	0230 0.	31	0.	*	1	0845	106	0.	*	1	1500	181	0.	*	1	2115
257	1	0235 0.	32	0.	*	1	0850	107	0.	*	1	1505	182	0.	*	1	2120
258	1	0240 0.	33	0.	*	1	0855	108	0.	*	1	1510	183	0.	*	1	2125
259	1	0245 0.	34	0.	*	1	0900	109	0.	*	1	1515	184	0.	*	1	2130
260	1	0250 0.	35	0.	*	1	0905	110	0.	*	1	1520	185	0.	*	1	2135
261	1	0255 0.	36	0.	*	1	0910	111	0.	*	1	1525	186	0.	*	1	2140
262	1	0300 0.	37	0.	*	1	0915	112	0.	*	1	1530	187	0.	*	1	2145
	1	0305	38	1.	*	1	0920	113	0.	*	1	1535	188	0.	*	1	2150

263	1	0. 0310	39	1.	*	1	0925	114	0.	*	1	1540	189	0.	*	1	2155
264	1	0. 0315	40	2.	*	1	0930	115	0.	*	1	1545	190	0.	*	1	2200
265	1	0. 0320	41	3.	*	1	0935	116	0.	*	1	1550	191	0.	*	1	2205
266	1	0. 0325	42	3.	*	1	0940	117	0.	*	1	1555	192	0.	*	1	2210
267	1	0. 0330	43	4.	*	1	0945	118	0.	*	1	1600	193	0.	*	1	2215
268	1	0. 0335	44	2.	*	1	0950	119	0.	*	1	1605	194	0.	*	1	2220
269	1	0. 0340	45	2.	*	1	0955	120	0.	*	1	1610	195	0.	*	1	2225
270	1	0. 0345	46	1.	*	1	1000	121	0.	*	1	1615	196	0.	*	1	2230
271	1	0. 0350	47	1.	*	1	1005	122	0.	*	1	1620	197	0.	*	1	2235
272	1	0. 0355	48	1.	*	1	1010	123	0.	*	1	1625	198	0.	*	1	2240
273	1	0. 0400	49	1.	*	1	1015	124	0.	*	1	1630	199	0.	*	1	2245
274	1	0. 0405	50	0.	*	1	1020	125	0.	*	1	1635	200	0.	*	1	2250
275	1	0. 0410	51	0.	*	1	1025	126	0.	*	1	1640	201	0.	*	1	2255
276	1	0. 0415	52	0.	*	1	1030	127	0.	*	1	1645	202	0.	*	1	2300
277	1	0. 0420	53	0.	*	1	1035	128	0.	*	1	1650	203	0.	*	1	2305
278	1	0. 0425	54	0.	*	1	1040	129	0.	*	1	1655	204	0.	*	1	2310
279	1	0. 0430	55	1.	*	1	1045	130	0.	*	1	1700	205	0.	*	1	2315
280	1	0. 0435	56	1.	*	1	1050	131	0.	*	1	1705	206	0.	*	1	2320
281	1	0. 0440	57	1.	*	1	1055	132	0.	*	1	1710	207	0.	*	1	2325
282	1	0. 0445	58	1.	*	1	1100	133	0.	*	1	1715	208	0.	*	1	2330
283	1	0. 0450	59	1.	*	1	1105	134	0.	*	1	1720	209	0.	*	1	2335
284	1	0. 0455	60	0.	*	1	1110	135	0.	*	1	1725	210	0.	*	1	2340
285	1	0. 0500	61	0.	*	1	1115	136	0.	*	1	1730	211	0.	*	1	2345
286	1	0. 0505	62	0.	*	1	1120	137	0.	*	1	1735	212	0.	*	1	2350
287	1	0. 0510	63	0.	*	1	1125	138	0.	*	1	1740	213	0.	*	1	2355
288	1	0. 0515	64	0.	*	1	1130	139	0.	*	1	1745	214	0.	*	2	0000
289	1	0. 0520	65	0.	*	1	1135	140	0.	*	1	1750	215	0.	*	2	0005
290	1	0. 0525	66	0.	*	1	1140	141	0.	*	1	1755	216	0.	*	2	0010
291	1	0. 0530	67	0.	*	1	1145	142	0.	*	1	1800	217	0.	*	2	0015
292	1	0. 0535	68	0.	*	1	1150	143	0.	*	1	1805	218	0.	*	2	0020
293	1	0. 0540	69	0.	*	1	1155	144	0.	*	1	1810	219	0.	*	2	0025
294	1	0. 0545	70	0.	*	1	1200	145	0.	*	1	1815	220	0.	*	2	0030
295	1	0. 0550	71	0.	*	1	1205	146	0.	*	1	1820	221	0.	*	2	0035
296	1	0. 0555	72	0.	*	1	1210	147	0.	*	1	1825	222	0.	*	2	0040
297		0.															

298	1	0600	73	0.	*	1	1215	148	0.	*	1	1830	223	0.	*	2	0045
		0.															
299	1	0605	74	0.	*	1	1220	149	0.	*	1	1835	224	0.	*	2	0050
		0.															
300	1	0610	75	0.	*	1	1225	150	0.	*	1	1840	225	0.	*	2	0055
		0.															
					*					*					*		

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW
			6-HR 24-HR 72-HR 24.92-HR
+	(CFS)	(HR)	
		(CFS)	
+	4.	3.50	1. 0. 0. 0.
		(INCHES)	1.735 0. 1.736 0. 1.736 0.
		(AC-FT)	0. 0. 0. 0.
CUMULATIVE AREA =			.00 SQ MI

1

PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
FLOWS IN CUBIC FEET PER SECOND, AREA IN SQUARE MILES
TIME TO PEAK IN HOURS

OPERATION	STATION	AREA	PLAN	RATIOS APPLIED TO PRECIPITATION	
				RATIO 1	RATIO 2
				.99	.57
HYDROGRAPH AT					
+	SN2AW	.00	1	FLOW	4. 2.
				TIME	3.50 3.50
HYDROGRAPH AT					
+	SN2AE	.00	1	FLOW	4. 2.
				TIME	3.50 3.50
HYDROGRAPH AT					
+	INT-HS1-	.02	1	FLOW	24. 8.
				TIME	3.50 3.58
3 COMBINED AT					
+	CP-FRA	.02	1	FLOW	32. 13.
				TIME	3.50 3.50
HYDROGRAPH AT					
+	SN2BW	.00	1	FLOW	4. 2.
				TIME	3.50 3.50
HYDROGRAPH AT					
+	SN2BE	.00	1	FLOW	4. 2.
				TIME	3.50 3.50
2 COMBINED AT					
+	CP-DMH3	.00	1	FLOW	7. 4.
				TIME	3.50 3.50
HYDROGRAPH AT					
+	SN2CW	.00	1	FLOW	2. 1.
				TIME	3.50 3.50
HYDROGRAPH AT					
+	SN2CE	.00	1	FLOW	2. 1.
				TIME	3.50 3.50
3 COMBINED AT					

+	CP-STMH5	.00	1	FLOW TIME	11. 3.50	6. 3.50
HYDROGRAPH AT						
+	SN1AW	.00	1	FLOW TIME	4. 3.50	2. 3.50
HYDROGRAPH AT						
+	SN1AE	.00	1	FLOW TIME	4. 3.50	2. 3.50
2 COMBINED AT						
+	CP-SBD-N	.00	1	FLOW TIME	8. 3.50	4. 3.50
HYDROGRAPH AT						
+	SN1BW	.00	1	FLOW TIME	4. 3.50	2. 3.50
HYDROGRAPH AT						
+	SN1BE	.00	1	FLOW TIME	4. 3.50	2. 3.50
2 COMBINED AT						
+	CP-SBD-N	.00	1	FLOW TIME	8. 3.50	4. 3.50
HYDROGRAPH AT						
+	INT-HS-1	.11	1	FLOW TIME	214. 3.58	97. 3.58
HYDROGRAPH AT						
+	INTHS-1B	.03	1	FLOW TIME	55. 3.50	25. 3.50
2 COMBINED AT						
+	CP-INT-H	.14	1	FLOW TIME	265. 3.58	121. 3.58
3 COMBINED AT						
+	CP-SBD	.15	1	FLOW TIME	274. 3.58	126. 3.58

*** NORMAL END OF HEC-1 ***

*DIAGRAM

*FREE

IDTECHNICAL DRAINAGE STUDY

IDSUMMERLIN VILLAGE 25 West

IDSCURRY BEND DRIVE(STREET N): SUNSET RUN DRIVE (STREET Q) TO LAKE MEAD BOULEVARD

IDDESIGN STORM 100-YEAR 6 HOUR

ID

IDJR CARDS CONTAIN DARFS BASED ON THE FOLLOWING VALUES

ID

ID AREA (SQUARE MILES) DARF

ID

ID 0 - 0.5 0.99

ID Estimated 10-year 0.57

ID

IT5 0 0 300

IO5 0 0

IN5 0 0

JRPREC 0.99 0.57

*

KKSN2AW

BA0.00148

PB3.44

PC0.000 0.020 0.057 0.070 0.087 0.108 0.124 0.130 0.130 0.130

PC0.130 0.130 0.130 0.133 0.140 0.142 0.148 0.158 0.172 0.181

PC0.190 0.197 0.199 0.200 0.201 0.204 0.214 0.229 0.241 0.249

PC0.251 0.256 0.270 0.278 0.281 0.283 0.295 0.322 0.352 0.409

PC0.499 0.590 0.710 0.744 0.781 0.812 0.819 0.835 0.851 0.856

PC0.860 0.868 0.876 0.888 0.910 0.926 0.937 0.950 0.970 0.976

PC0.982 0.985 0.987 0.989 0.990 0.993 0.993 0.994 0.995 0.998

PC0.998 0.999 1.000

LS0 98.0

UD0.050

*

KKSN2AE

BA0.00148

PB3.44

LS0 98.0

UD0.050

*

KKINT-HS1-C

BA0.0170

PB3.46

LS0 79.2

UD0.100

*

KKCP-FRA

KO 1

HC 3

*

KKSN2BW

BA0.00126

PB3.44

LS0 98.0

UD0.050

*

KKSN2BE

BA0.00126

PB3.44

LS0 98.0

UD0.050

*

KKCP-DMH3

KO 1

HC 2

*

KKSN2CW

BA0.00073

PB3.44

LS0 98.0

UD0.050
*
KKS2CE
BA0.00073
PB3.44
LS0 98.0
UD0.050
*
KKCP-STMH5
KO 1
HC 3
*
KKS1AW
BA0.00135
PB3.44
LS0 98.0
UD0.050
*
KKS1AE
BA0.00135
PB3.44
LS0 98.0
UD0.050
*
KKCP-SBD-NA
KO 1
HC 2
*
KKS1BW
BA0.00136
PB3.44
LS0 98.0
UD0.050
*
KKS1BE
BA0.00136
PB3.44
LS0 98.0
UD0.050
*
KKCP-SBD-NB
HC 2
*
KKINT-HS-1A
BA0.1148
PB3.47
LS0 88.7
UD0.150
*
KKINTHS-1B
KMPART OF BASIN HS-1 FROM VTN VILLAGE 25 MCDS AND CONTRIBUTORY OFFSITE
BA0.0278
PB3.45
LS0 88.6
UD0.100
*
KKCP-INT-HSAB
KM COMBINE SUBBASINS HS-1a AND HS-1b
HC 2
*
KKCP-SBD
HC 3
*
ZZ

Appendix C. CD-ROM

Atkins

2270 Corporate Circle
Suite 200
Henderson, NV 89074-7755

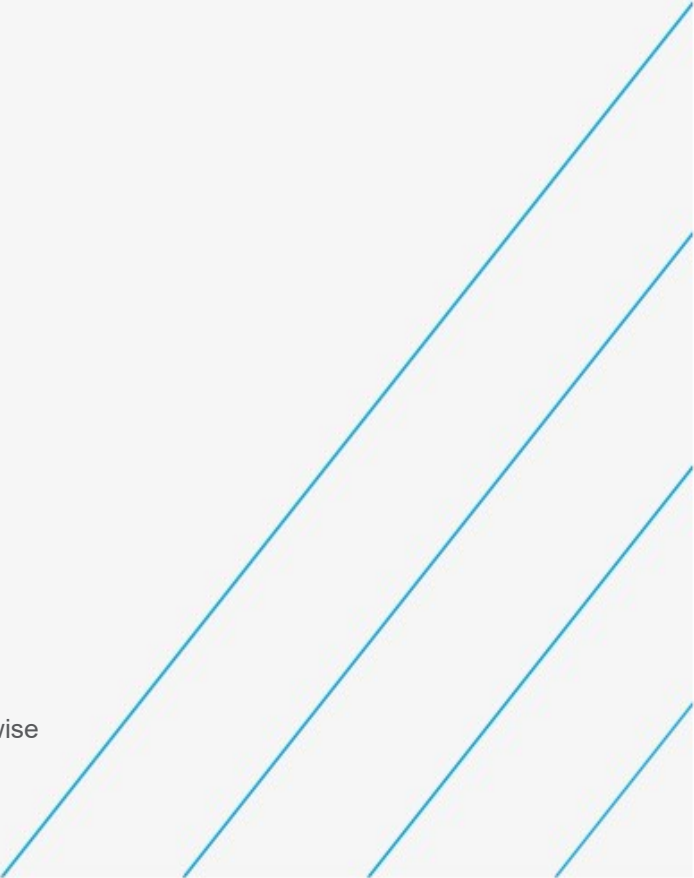
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7	MASTER SEWER PLAN	
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9	ROADWAY PLAN & PROFILE	BEGIN TO STA 13+00
10	ROADWAY GRADING PLAN	STA 13+00 TO STA 17+00
11	ROADWAY PLAN & PROFILE	STA 13+00 TO STA 17+00
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17	ROADWAY PLAN & PROFILE	STA 25+00 TO STA 29+00
18	ROADWAY GRAADING PLAN	STA 29+00 TO STA 33+00
19	ROADWAY PLAN & PROFILE	STA 29+00 TO STA 33+00
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29	STREETLIGHT PLAN	
30	STREETLIGHT PLAN	
31	TRAFFIC CONTROL PLAN	
32	TRAFFIC CONTROL PLAN	
33	TRAFFIC CONTROL PLAN	
34	TYPICAL SECTIONS	
35	STORM DRAIN DETAILS	
36	STREET LIGHT DETAILS	
37	WATER DETAILS	
38	FRA INTERSECTION DETAILS	
39	FWA INTERSECTION DETAILS	
40	HANDICAP PARKING DETAILS	
41	HANDICAP PARKING DETAILS	
42	HANDICAP PARKING DETAILS	

SUMMERLIN WEST VILLAGE 25

IMPROVEMENT PLANS FOR:

SCURRY BEND DRIVE (STREET N)

SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD

V22 SID #816 PROJECT

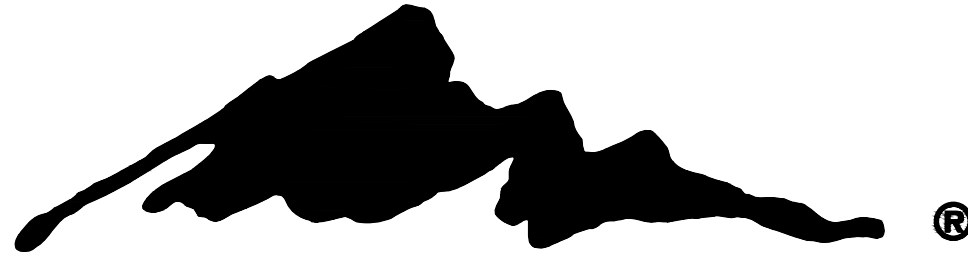
APN: 137-15-801-002, 137-15-810-008,
137-22-301-006 AND 137-23-210-001

UTILITY NOTE

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

CALL BEFORE YOU DIG: 1-800-642-2444

THIS PROPERTY MAY HAVE STATIC WATER PRESSURE IN EXCESS OF 80 PSI. THE UNIFORM PLUMBING CODE REQUIRES THAT INDIVIDUAL, ON-SITE (PRIVATE) PRESSURE REDUCING VALVES BE INSTALLED WHENEVER THE PRESSURE EXCEEDS 80 PSI. PRV'S ARE THE DEVELOPER'S RESPONSIBILITY AND WILL NOTE BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF THE LAS VEGAS VALLEY WATER DISTRICT FACILITIES.



SUMMERLIN®

OWNER /DEVELOPER

OWNER

CONTACT: BRIAN WALSH
HOWARD HUGHES COMPANY LLC, A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135

BRAIN WALSH, SR. VICE PRESIDENT

DATE

ENGINEER / CONSULTANT

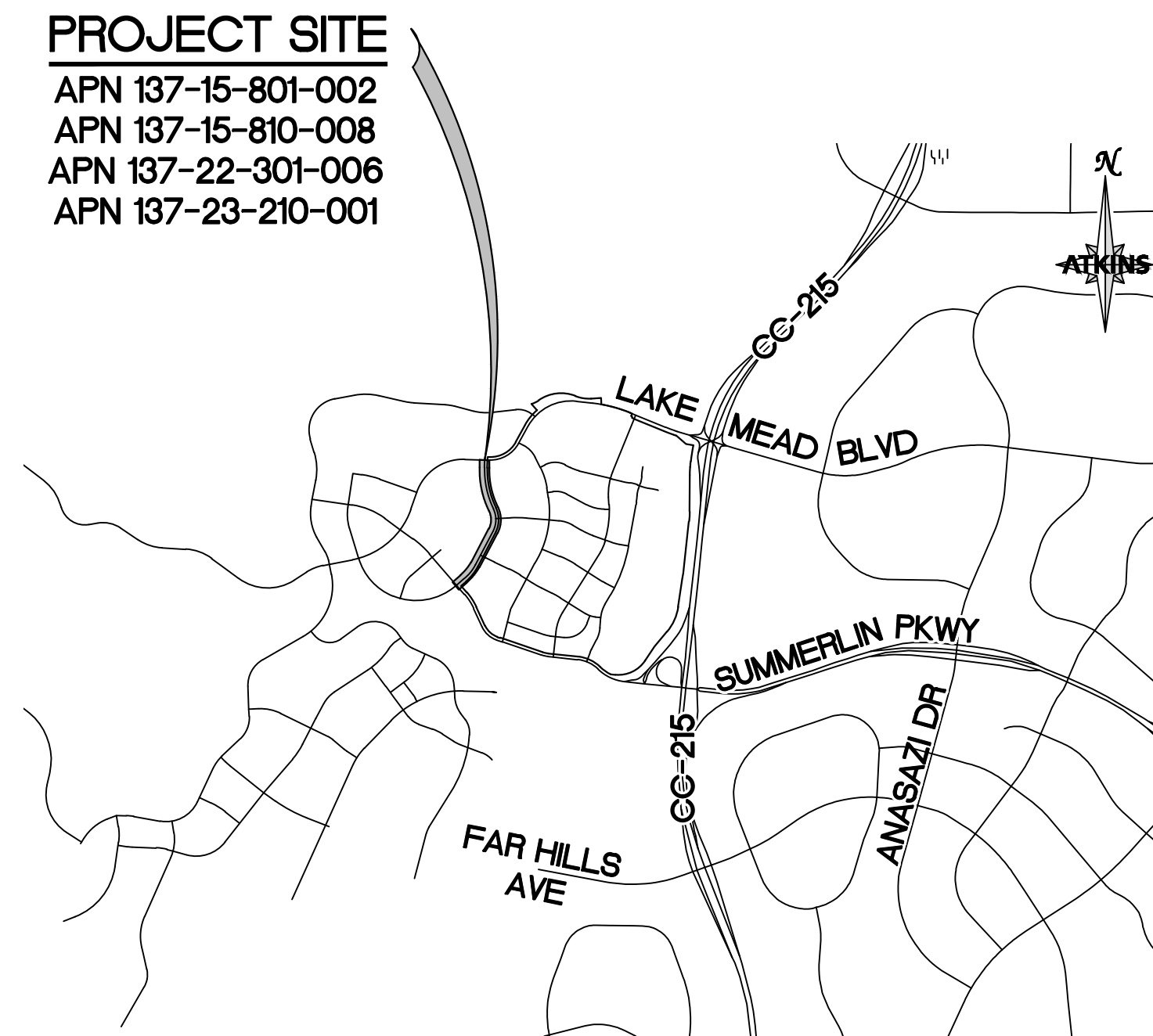
CIVIL

CONTACT: DAVID WILSON P.E.
ATKINS
2270 CORPORATE CIRCLE, SUITE 200
HENDERSON, NEVADA 89074
(702) 263-7275

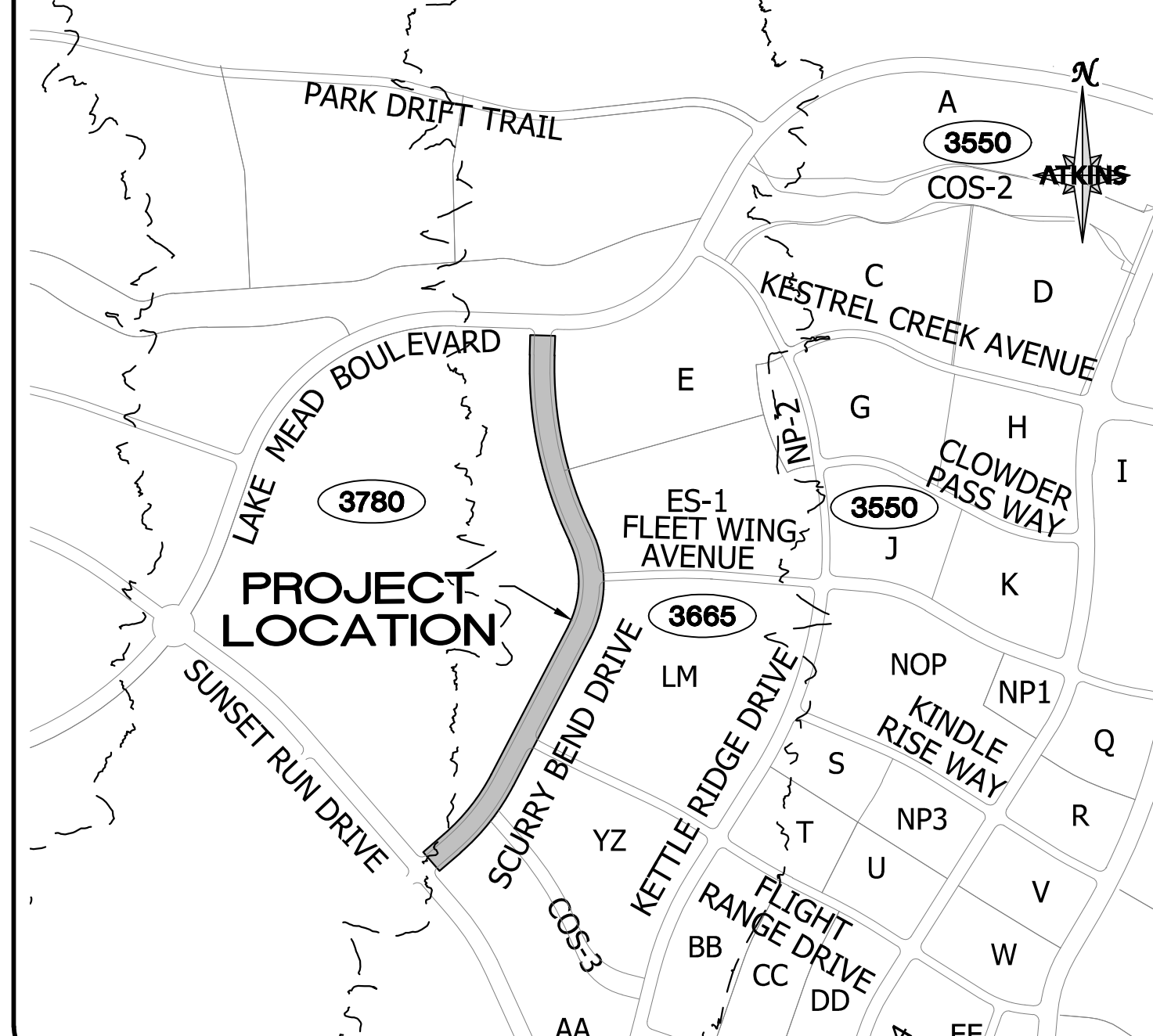
LOCATION MAP

PROJECT SITE

APN 137-15-801-002
APN 137-15-810-008
APN 137-22-301-006
APN 137-23-210-001



VICINITY MAP



APPROVALS

ENGINEERING APPROVAL STAMP

DEPARTMENT OF PLANNING

NOTE:
THIS PLAN CONFORMS TO THE APPLICABLE STANDARDS OF THE PLANNING DEPARTMENT.

LAS VEGAS FIRE AND RESCUE DATE

CENTRAL TELEPHONE COMPANY d/b/a CENTURYLINK DATE

THE AFFIXED CENTRAL TELEPHONE COMPANY d/b/a CENTURYLINK APPROVAL DOES NOT ASSUME OR GUARANTEE LIABILITY FOR KNOWN OR UNKNOWN CONFLICTS WITH EXISTING OR PROPOSED IMPROVEMENTS. RESOLUTION OF ANY CONFLICTS WILL BE ACCOMPLISHED PURSUANT TO LOCAL ORDINANCES, NEVADA REVISED STATUTES, AND/OR PUBLIC UTILITY COMMISSION RULES AND REGULATIONS.

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING & ENGINEERING SERVICES

PROJECT NO. _____ FIRST APPROVED DATE: _____

LVVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL

SHEETS: _____

NV ENERGY DATE

NV ENERGY HAS ACKNOWLEDGED 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 RESOLUTION OF ANY CONFLICTS WILL BE ACCOMPLISHED PURSUANT TO THE NEVADA UTILITY COMMISSION'S RULES AND REGULATIONS.

SOUTHWEST GAS CORPORATION DATE

COX COMMUNICATIONS OF LAS VEGAS, INC DATE

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 M (984,250.0000 FTUS)

SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)

NOTES:

- 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
- 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)

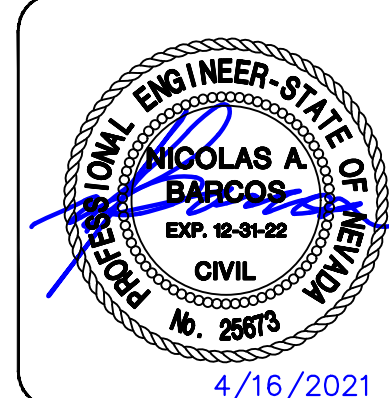
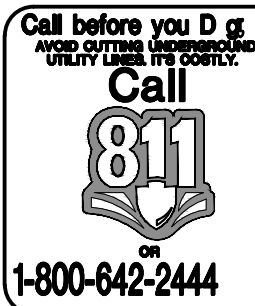
NAVD88 ELEVATION: 989.574 METERS (3,246.63 FEET)

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

T21S,R59E,S03

LEGAL DESCRIPTION

BEING A PORTION OF LOT 1 AS SHOWN ON THE MAP THEREOF IN BOOK 161 OF PLATS, PAGE 68, OFFICIAL RECORDS, CITY OF LAS VEGAS CLARK COUNTY, NEVADA



NOTICE OF INTENT NOTE

NOTE: ALL LAND SURFACE AREA DISTURBANCES OVER 1 ACRE REQUIRE A STORMWATER DISCHARGE PERMIT ISSUED BY THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION (NDEP). A PHASED CONSTRUCTION UNIT IN A CONTIGUOUS SUBDIVISION IS CONSIDERED UNDER CONSTRUCTION UNTIL ALL STRIPPED SURFACE AREAS HAVE BEEN COVERED BY PAVING, BUILDING CONSTRUCTION OR PLANTING. A STORMWATER DISCHARGE PERMIT APPLICATION AND ASSOCIATED INFORMATION MAY BE DOWNLOADED FROM THE WEB SITE: [HTTP://WWW.STATE.NV.US/BWPC/STORM01.HTM](http://www.state.nv.us/bwpc/storm01.htm) PROJECTS THAT DISTURB MORE THAN ONE ACRE OF LAND MUST SUBMIT TO NDEP A "NOTICE OF INTENT" FOR INCLUSION UNDER STORMWATER PERMIT NO. NVR100000 ALONG WITH APPROPRIATE FILLING FEE.

NPDES PERMIT NOTE

THE ENGINEER SHOULD CONTACT THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION (NDEP) TO OBTAIN A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT PRIOR TO CONSTRUCTION. ALL CONSTRUCTION PROJECTS ONE ACRE OR LARGER MUST APPLY FOR THE PERMIT THROUGH NDEP. ALL QUESTIONS REGARDING THE NPDES PERMIT REQUIREMENTS SHOULD BE DIRECTED TO THE NDEP AT (775) 687-9429.

DISCLAIMER NOTE

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

FEMA FLOOD ZONE INFORMATION

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE X (UNSHADED) AS DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANEL 32003C2150E, DATED 9/27/2002. A ZONE X (UNSHADED) IS DESCRIBED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.

PROPOSED RIGHT-OF-WAY ACREAGE
5.42 AC.

PROPOSED DISTURBED AREA ACREAGE
4.74 AC.

GEOTECHNICAL ENGINEER
PREPARED BY: NOVA GEOTECHNICAL & INSPECTION SERVICES
4480 W. HACIENDA AVENUE, SUITE 104, LAS VEGAS, NV 89118
PHONE: 702-873-3478
PROJECT NO.: G-19-026
DATED: JUNE 18, 2020

REVISIONS

DESCRIPTION

DATE

BY

APPROVAL

REV.

ATKINS

2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7275
Fax: +1702.263.7200

SUMMERLIN®

SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD

COVER SHEET

DESIGNED BY:
B. MOCHTAK

DRAWN BY:
K. HENDRY

CHECKED BY:
N. BARCOS

APRIL 2021

DRAWING NO.

1 / 42

JOB NO. 100069098

CITY OF LAS VEGAS GENERAL NOTES

- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENTS, CLARK COUNTY AREA NEVADA", LATEST EDITION, THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY AREA NEVADA", LATEST REVISED EDITION, THE "UNIFORM STANDARD SPECIFICATIONS FOR IMPROVEMENTS TO PUBLIC WORKS UTILITIES AND OTHER APPLICABLE APPROVED STANDARDS ISSUED BY THE CONTROLLING AGENCY, THE UNIFORM BUILDING CODE, AND ALL LOCAL CITY CODES AND ORDINANCES APPLICABLE, EXCEPT AS NOTED ON THIS SHEET AS "DEVIATIONS FROM STANDARDS".
- THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. EXISTING UTILITIES AS SHOWN FROM CLV PLANS LIBRARY ARE APPROXIMATE AND FOR RECORD PURPOSES. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR INFORMATION. THE EXISTENCE AND LOCATION OF ANY UTILITY LINES WHICH 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 EXISTING CONTRACTOR OR PUBLIC PROPERTY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE UTILITY LINES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH.
 - THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING UTILITY LINES, STRUCTURES AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED SATISFACTORILY TO THE CITY ENGINEER AND OWNING UTILITY COMPANY AT THE EXPENSE OF THE CONTRACTOR.
 - ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE PLANS, ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.
 - TYPE V CEMENT SHALL BE USED IN ALL OFF-SITE CONCRETE WORK. CONCRETE TO BE 3000 P.S.I. MINIMUM @ 28 DAYS, MIX DESIGNS TO BE APPROVED BY THE CITY, PRIOR TO THE USE ON THE PROJECT.
 - PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.
 - EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300' IN EXTRUDED 2" CURB.
 - AC PAVEMENT TO BE ONE-FOURTH INCH ($\frac{1}{4}$ ") ABOVE TOP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS AND CROSS GUTTERS.
 - CURB AND GUTTER DUTTER TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED PER STANDARD DRAWING 216.
 - SIDEWALK RAMPS SHALL BE ADJUSTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235.
 - EXISTING LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.
 - CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF THE TRANSITIONS TO BE AS SHOWN ON PLANS.
 - ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY THE (NOVA. C-18-176, 12/03/18) APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.
 - EXACT LOCATION OF ALL SAWCUT LINES MAY BE ADJUSTED OR DETERMINED IN THE FIELD BY A CITY OF LAS VEGAS ENGINEER IF LOCATION ON PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES RELOCATIONS.
 - THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEY MONUMENTS. ANY MONUMENTS DISTURBED SHALL BE REPLACED AND ADJUSTED PER AVAILABLE RECORDS IN ACCORDANCE WITH STATUTE NO. 625.380 & CITY OF LAS VEGAS TITLE 18, APPENDIX D.
 - UTILITY COMPANY METER BOXES, MANHOLE LIDS, VALVE COVERS, ETC., SHALL BE LOCATED OUT OF DRIVEWAYS, DRIVEWAY APRONS, FLOWLINES, AND CROSS GUTTERS UNLESS WRITTEN APPROVAL IS GRANTED BY THE UTILITY COMPANY AND THE CITY ENGINEER.
- WALL NOTES:
- ALL NEW, NEW OR EXISTING, ARE ONLY SHOWN ON CIVIL PLANS FOR THE PURPOSE OF REVIEWING GRADING RELATIONSHIPS; FLOOD CONTROL AND SIGHT DISTANCE AT INTERSECTIONS. NEW WALLS REQUIRE A SEPARATE PERMIT AND INSPECTION BY THE BUILDING DEPARTMENT.
 - ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT OF WAY.
 - CONTRACTOR SHALL ADJUST ALL NEW AND EXISTING INLETS, VALVE BOXES, MANHOLE RIMS, AND SEWER CLEAN OUTS, ETC. TO FINISH GRADE AS APPLICABLE WHETHER OR NOT THEY ARE SHOWN ON THE PLANS.
 - MATERIALS, HANDLING AND PLACEMENT OF PORTLAND CEMENT CONCRETE SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF DOT OR THE CLARK COUNTY AREA SPECIFICATIONS (AS APPLICABLE) AND THE PLANS AND DETAILS SHOWN HEREON.
 - WHEN INSTALLING UNDERGROUND FACILITIES THAT REQUIRE UNDERGROUND LOCATING DEVICES SUCH AS MARKER BALLS, LOCATING RIBBON, ETC, THE CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION TO OFFSITE INSPECTION AND TESTING CERTIFYING THAT ALL FACILITIES HAVE BEEN PLACED AND VERIFIED TO BE IN GOOD WORKING CONDITION PRIOR TO THE CONSTRUCTION OF ANY ROAD BASE.
 - SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S) SHALL BE PROVIDED TO THE CITY AND APPROVED PRIOR TO ACCEPTANCE OF FACTORY DRAIN FLOW 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; THE CONNECTION TO THE STORM DRAIN MAIN AND TO 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 OF THE CITY OF LAS VEGAS. FINAL LOCATION MAPS MUST BE SEALED AND CERTIFIED BY A NEVADA PROFESSIONAL LAND SURVEYOR TO HAVE POSITIONAL CERTAINITIES 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).
 - CCTV DRAIN INSPECTION IS REQUIRED FOR ALL SEWER AND STORM DRAINS. THE CCTV DRAIN INSPECTIONS NEED TO BE PERFORMED PER THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS LATEST EDITION.
 - A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.

CITY OF LAS VEGAS TRAFFIC NOTES

1. ALL CONSTRUCTION SIGNING, BARRICADING, AND TRAFFIC DELINEATION SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.
2. THE STREET SIGN CONTRACTOR SHALL OBTAIN DESERT FOOTHILLS DRIVE NAMES AND BLOCK NUMBERING FROM THE PLANNING DEPARTMENT PRIOR TO CONSTRUCTION.
3. BEFORE ANY WORK IS STARTED IN THE RIGHT-OF-WAY, THE CONTRACTOR SHALL INSTALL ALL ADVANCE WARNING SIGNS FOR THE CONSTRUCTION ZONE. THE CONTRACTOR SHALL INSTALL TEMPORARY STOP SIGNS AT ALL NEW STREET ENCROACHMENTS INTO EXISTING CITY STREETS WHERE WARRANTED IMMEDIATELY AFTER FIRST GRADING WORK IS ACCOMPLISHED, AND SHALL MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED.
4. WHEN A DESIGNATED "SUGGESTED ROUTE TO SCHOOL" IS ENCHANCED UPON BY A CONSTRUCTION WORK ZONE AND PUBLIC WORKS STAFF IDENTIFIES A NEED FOR STUDENTS TO BE ASSISTED IN THE SAFE CROSSING THROUGH THAT WORK ZONE, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE A QUALIFIED "CROSSING GUARD". THE GUARD SHALL BE PRESENT FOR THE FULL DURATION OF TIME THAT CHILDREN ARE LIKELY TO BE PRESENT.
5. IF THE IMPROVEMENTS NECESSITATE THE OBLITERATION, TEMPORARY OBSTRUCTION, TEMPORARY REMOVAL OR RELOCATION OF ANY EXISTING TRAFFIC PAVEMENT MARKING, SUCH PAVEMENT MARKING SHALL BE RESTORED OR REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE CITY TRAFFIC ENGINEER.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL PERMANENT SIGNS SHOWN ON THE PLANS, ALL NEW TRAFFIC SIGNS SHALL UTILIZE TYPE X RETROREFLECTIVE SHEETING IN ACCORDANCE WITH CCAUSS 627 AND 716 AND SHALL HAVE AN ANTI-GRAFFITI PROTECTIVE OVERLAY FILM THAT IS A MATCHING COMPONENT TO, AND OF THE SAME MANUFACTURER AS THE RETROREFLECTIVE SHEETING TO WHICH IT IS APPLIED. DESERT FOOTHILLS DRIVE NAMES SHALL BE IN THEIR OWN CATEGORY OF CITY STANDARDS. ALL OTHER SIGNS SHALL BE STANDARD SIZE UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL SIGN POSTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT CITY STANDARDS.
7. WHEN A PROPOSED STREET LIGHT STANDARD IS LOCATED WITHIN FIVE (5') FEET OF ANY PROPOSED SIGN SHOWN ON THE PLANS TO BE MOUNTED ON A SIGNPOST, THE SIGN SHALL BE MOUNTED ON THE STREET LIGHT STANDARD AND THE SIGNPOST SHALL BE ELIMINATED.
8. ALL PERMANENT TRAFFIC CONTROL DEVICES CALLED FOR HEREON SHALL BE IN PLACE AND IN FINAL POSITION PRIOR TO ALLOWING ANY PART OF THE PORTIONS OF THE ROAD(S) BEING IMPROVED HERE UNDER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.
9. STREET SIGNS AND STOP SIGNS SHALL BE INSTALLED PER CITY STANDARD SPECIFICATIONS FOR PLACEMENT OF DESERT FOOTHILLS DRIVE NAMES 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. THE CONTRACTOR SHALL HAVE A CERTIFIED ATTRAFFIC CONTROL TECHNICIAN OR A TRAFFIC CONTROL 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 REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA (RTC), 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 METROPOLITAN POLICE OFFICERS SHALL 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 PROJECT'S OFFSITE INSPECTOR PRIOR TO INITIATING PAVING TO RECEIVE DIRECTION FOR ANY PERMANENT OR TEMPORARY MODIFICATIONS TO THE APPROVED DRAWINGS REGARDING FINAL PAVEMENT TRANSITIONS, MARKINGS AND SIGNING THAT ARE REQUIRED TO MATCH ADJACENT ROADWAY SEGMENTS. THE CONTRACTOR SHALL PROVIDE A DETAILED APPROVAL BY THE TRAFFIC ENGINEERING DIVISION IDENTIFYING 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.

CITY OF LAS VEGAS FIRE DEPARTMENT 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 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 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 § 507.5.1
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 WIDES MEAS PROTECTOR OF CURES STRUCTURES, FIRE HYDRANTS SHALL BE SPACED 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 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 CLEARANCE BOTH SIDES OF ROAD TO FACE OF CURB. NO 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 DEADENDS 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 LINES, 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 LANE. SIGNS TO BE PLACED ON BOTH SIDES OF AN ACCESS ROADWAY IF NEEDED TO PREVENT PARKING ON EITHER SIDE SIGNS TO BE INSTALLED ON HIGHER THAN 10 FT OR LESS THAN 8 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 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 ROADWAYS SHALL BE 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

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 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:

	HORIZONTAL	VERTICAL	COMPACTION
A. PAVEMENT AREA SUBGRADE	0.1"+	+0.0' TO -0.1'	SEE SOILS REPORT
B. EMPAVEMENT FILL	0.5"+	+0.1' TO -0.1'	SEE SOILS REPORT
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. THE CONTRACTOR SHALL MAINTAIN A CLEAN, SAFE AND USABLE CONSTRUCTION SITE.
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.

REVISÉ 04/15/10

DEVIATIONS FROM STANDARDS

NONE

CITY OF LAS VEGAS SEWER NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS AND THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONTRACTS, BOTH IN EFFECT IN CLARK COUNTY AREA, NEVADA. AS AMENDED, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE SPECIFICATIONS.
2. IT SHALL BE THE CONTRACTOR'S OBLIGATION TO PERFORM CONSTRUCTION AS PER PLANS, ANY ADDITIONS, DELETIONS, OR CHANGES SHALL FIRST MEET WITH THE APPROVAL OF THE CITY ENGINEER.
3. CHASE "S" OR "G" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
4. POLYVINYL (PVC) SEWER PIPE SHALL MEET ASTM D-3034 SDR 35 SPECIFICATIONS, INSTALLED WITH SAND BEDDING AND BACKFILL OF TYPE II AGGREGATE BASE.
5. ALL MANHOLES PAVED IN STREETS EIGHTY (80) FOOT R/W AND LARGER SHALL HAVE CONCRETE COLLARS. STREETS LESS THAN EIGHTY (80) FOOT R/W WILL REQUIRE RETROFIT IF PAVING DOES NOT CONFORM TO CITY STANDARDS AT THE MANHOLE.
6. TEE SADDLES SHALL BE USED TO CONNECT SEWER LATERALS TO EXISTING MAIN LINES UP TO TWELVE INCH (12") DIAMETER. CONNECTIONS TO FIFTEEN INCH (15") OR LARGER MAINS SHALL REQUIRE SPECIAL PROCEDURES. IN LINE "Y" SHALL BE USED ON LINES TWELVE INCHES (12") OR ABOVE.
7. WATER MAINS SHALL BE PROTECTED IN ACCORDANCE WITH LVWD STANDARDS WHENEVER A SEWER MAIN CROSSES OVER A WATER MAIN OR THE SEWER IS LESS THAN EIGHTEEN INCH (18") UNDER A WATER MAIN.
8. ALL CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CITY OF LAS VEGAS MUST BE STATE OF NEVADA CLASS "A" CONTRACTORS.
9. THE CITY OF LAS VEGAS WILL NOT ACCEPT ANY SEWER MAINS WHICH HAVE A VERTICAL DEFLECTION OF MORE THAN ONE TENTH (0.1) OF A FOOT FROM THE APPROVED CONSTRUCTION PLANS AT ANY LOCATION. SEWER MAINS FOUND TO BE IN THIS CATEGORY MUST BE REPAIRED OR REMOVED OR REPLACED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO ACCEPTANCE BY THE CITY OF LAS VEGAS.
10. INSTALLATION OF CURVED SEWER REQUIRES THE USE OF C-900 PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.

REVISED 04/15/10

CITY OF LAS VEGAS STREET LIGHT NOTES

4. 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 EDITION AND THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA" (U/S/D), LATEST REVISION.
5. DESIGN PROFESSIONAL AND CONTRACTOR SHALL VERIFY CITY'S LATEST LED FIXTURE SPECIFICATIONS AND APPROVED FIXTURES PER CLV WEBSITE, UNDER BUILDING AND SAFETY FORMS, PRIOR TO ORDERING MATERIALS.
6. 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.
7. ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION IN ACCORDANCE WITH SECTION 623 G.03.01 OF THE USS.
8. ALL EMPTY CONDUIT SHALL HAVE AT LEAST ONE GREEN NO. #8 AWG WIRE INSTALLED AS TRACER WIRE IN ACCORDANCE WITH SECTION 623 G.02.01 OF THE USS PRIOR TO BACKFILLING AND FINAL INSPECTION.
9. ANY STRUCTURE SUCH AS BLOCK WALLS, CHAIN LINK FENCES, RETAINING WALLS, 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.
10. 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.
11. 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.
12. WHEREVER THERE IS AN OVERHEAD UTILITY THAT MAY CONFLICT WITH THE INSTALLATION OF STREETLIGHTING CIRCUITS AND/OR POLES, THE SAME SHALL BE RESOLVED BY THE DEVELOPER AND THE UTILITIES INVOLVED BEFORE STREETLIGHT BASES ARE INSTALLED AT NO EXPENSE TO THE CITY OF LAS VEGAS.
13. THE CONTRACTOR SHALL FURNISH COMPLETE CONDUIT, WIRE, ETC. FROM SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON THE PLANS.

REVISED 6/4/2018 (LD VERSION)

LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDELINES

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, OR PULSED IN ANY MANNER BY CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.
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 CLARK COUNTY TITLE 24.40 AND IN 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 NVRI00000, SECTION II.A.5.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS, AND AREAS OF UNDESIRABLE DEPOSITED MATERIALS, VEGETATION 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 NVRI00000, SECTION II.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.

SOUTHWEST NEVADA - SOUTHWEST GAS CORPORATION

GENERAL NOTES

1. IN THE EVENT OF NATURAL GAS EMERGENCIES CALL 911 AND 1-877-860-6020.
2. MINIMUM HORIZONTAL AND VERTICAL CLEARANCES BETWEEN NATURAL GAS FACILITIES AND ANY UNDERGROUND UTILITIES AND/OR STRUCTURES, INCLUDING BUT NOT LIMITED TO WATER, SEWER, STORM DRAIN, COMMUNICATIONS, AND ELECTRIC SHALL BE AT LEAST 12-INCHES OR GREATER AS DICTATED BY LOCAL CODES AND STANDARDS.
 - a) ANY VALVE ADJUSTMENT FROM SPECIFIED MINIMUM CLEARANCES MUST BE APPROVED BY ALL AFFECTED UTILITIES AND/OR MUNICIPALITIES.
3. FOR DELAYED CONSTRUCTION CONTACT 702-528-7881 14 DAYS PRIOR TO CONSTRUCTION.
4. IN THE EVENT OF A NATURAL GAS CONFLICT WITH PROPOSED UTILITIES AND STRUCTURES CONTACT 702-365-2099.

ALL CIVIL IMPROVEMENT PLANS MUST INCLUDE SOUTHWEST GAS CORPORATION HIGH PRESSURE NOTES ON THE NOTES SHEET AND ALL SHEETS DEPICTING HIGH PRESSURE NATURAL GAS MAINS AS INDICATED BELOW:

CAUTION: HIGH PRESSURE GAS!!
CALL SOUTHWEST GAS AT 702-278-8451 FOR STANDBY WHEN EXCAVATING OVER OR
NEAR HIGH PRESSURE GAS LINES 48 HOURS PRIOR TO CONSTRUCTION

SOUTHWEST GAS CORPORATION

GRADING NOTES

1. INDICATED GRADES OTHER THAN TO, FG & GUTTER FL ARE ROUGH GRADES.
2. THE ROUGH GRADING PLANS SHALL BE ON THE JOB SITE AT ALL TIMES. THE ROUGH GRADING SHALL BE FINISHED IN CONFORMANCE WITH THE LINES AND GRADES SHOWN ON THE PLANS. THE GRADING QUANTITIES ARE BASED ON THE ELEVATION AND DETAILS SHOWN ON THE PLANS. ANY DEVIATIONS FROM THE PLAN WILL RESULT IN QUANTITY CHANGES.
3. SOILS REPORT PREPARED BY: NOVA GEOTECHNICAL & INSPECTION SERVICES 4480 W. HACIENDA AVENUE, SUITE 104, LAS VEGAS, NV 89116, PHONE: 702-873-3478, PROJECT NO. : G-19-026, DATED: DATED: JUNE 18, 2020.
4. EARTHWORK QUANTITIES (RAW):
 - CUT = 100 CUBIC YARDS
 - FILL = 5,200 CUBIC YARDS
- A. THE ABOVE QUANTITIES DO NOT REFLECT LOSSES DUE TO SUBSIDENCE OR SHRINKAGE.
- B. THE ABOVE QUANTITIES DO REFLECT USING NATIVE MATERIAL IN LIEU OF TYPE 1 GRAVEL BASE MATERIAL FOR STREET SECTIONS.
- C. THE ABOVE QUANTITIES DO NOT REFLECT ANY EARTHWORK WHICH MAY BE REQUIRED BY THE ENGINEER TO CONSTRUCT ADDITIONAL PROTECTIVE DITCHES OR BERMS NOT SHOWN ON THESE DRAWINGS.

CONSTRUCTION CONCURRENCY NOTE

THE FOLLOWING SEPARATE VILLAGE 22 ROADWAY IMPROVEMENT PLANS ARE TO BE CONSTRUCTED CONCURRENTLY AND ARE SHOWN AS FUTURE (BY OTHERS):

1. 30" MLCWTP (3665 PZ) LVWD CONTRACT No. 1590 SUMMERLIN NORTH PIPELINES PHASE 3
2. SUMMERLIN WEST VALLEY 22 IMPROVEMENT PLANS FOR FLIGHT RANGE AVENUE (STREET E) SCURRY BEND (STREET N) TO KETTLE RIDGE DRIVE (STREET J)
3. SUMMERLIN WEST VALLEY 22 IMPROVEMENT PLANS FOR FLEET WING AVENUE (STREET G) KETTLE RIDGE DRIVE (STREET J) TO SCURRY BEND DRIVE (STREET N)

GENERAL NOTES

- THE CONTRACTOR SHALL NOTIFY ALL AFFECTED PUBLIC ENTITIES, THE PROJECT ENGINEER AND CITY OF LAS VEGAS AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF WORK.
- ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE CONTRACT DRAWINGS. ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE PROJECT ENGINEER.
- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA NEVADA", LATEST ISSUE; THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY AREA NEVADA", LATEST ISSUE; AND OTHER APPLICABLE APPROVED STANDARDS ISSUED BY THE CONTROLLING AGENCY; THE UNIFORM BUILDING CODE; AND ALL LOCAL CITY CODES AND ORDINANCES APPLICABLE.
- LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THE DRAWINGS WERE OBTAINED FROM INFORMATION RECEIVED FROM THE APPLICABLE UTILITY COMPANIES. NEITHER THE OWNER NOR ENGINEER ASSUMES ANY RESPONSIBILITY FOR UTILITIES OR STRUCTURES NOT SHOWN, OR NOT IN THE LOCATION SHOWN ON THE DRAWINGS. CONTRACTOR TO VERIFY EXISTING LOCATION OF UTILITIES AND STRUCTURES PRIOR TO CONSTRUCTION. THE CONTRACTOR'S RESPONSIBILITY REGARDING UTILITIES SHALL BE AS REQUIRED UNDER SECTION 1017.7 OF THE "UNIFORM STANDARD SPECIFICATIONS FOR CLARK COUNTY AREA, NEVADA" AND AS PROVIDED IN THE SPECIFICATIONS.
- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES TO PROTECT EXISTING UTILITY LINES, STRUCTURES, AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE. ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE COUNTY ENGINEER OR OWNING UTILITY COMPANY AT THE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR SHALL NOT REMOVE TREES, SHRUBS, LAWN, WALLS, FENCES, SIGNS, STRUCTURES, LIGHTS, OR ANY OTHER EXISTING IMPROVEMENTS OUTSIDE OF CONSTRUCTION. THE CONTRACTOR SHALL BE REQUIRED TO DO SO BY THE CONTRACT DRAWINGS OR THE PROJECT ENGINEER. REPLACEMENT, RELOCATION OR RECONSTRUCTION OF ALL EXISTING IMPROVEMENTS INCLUDING SPRINKLER SYSTEMS, LAWNS, FENCES, WALLS, SIGNS, STEPS, SIDEWALKS, DRIVEWAYS, LAWN LIGHTS, AND ALL OTHER ITEMS APPLICABLE TO THIS CONTRACT SHALL BE REQUIRED BY THE PROJECT ENGINEER.
- THE CONTRACTOR SHALL BACKFILL AND FINE GRADE ALL CUT OR FILL SLOPES TO MATCH EXISTING CONDITIONS TO THE SATISFACTION OF THE PROJECT ENGINEER. WHERE EXISTING LAWNS ARE DAMAGED BY THE CONTRACTOR'S OPERATIONS THE CONTRACTOR WILL SOD THE AFFECTED AREA TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO CONSTRUCTION.
- THE 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 TRANSITIONS TO BE AS SHOWN PER CONTRACT DRAWINGS.
- 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. 57A.010 (N.R.S. 57A.010, N.R.S. 625.010).
- THE ACTUAL LOCATIONS OF SAW CUT LINES, LIMITS OF COLD MILLING, LIMITS OF DRIVEWAY TRANSITIONS, AND LANDSCAPE REPAIR SHALL BE DETERMINED IN THE FIELD BY THE RESIDENT PROJECT REPRESENTATIVE.
- THE ACTUAL LIMITS OF EXISTING OPEN GRADE REMOVAL AND UDACS APPLICATION SHALL BE DETERMINED IN THE FIELD BY THE RESIDENT PROJECT REPRESENTATIVE.
- ALL STANDARD DRAWINGS REFERENCED IN THIS SET ARE BASED ON THE CURRENT "UNIFORM STANDARD DRAWINGS REVISION SET II-1997" RELEASE.
- UNLESS OTHERWISE SHOWN ON THE CONTRACT DRAWINGS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF ALL WATER SERVICES AND METERS WHICH INTERFERE WITH IMPROVEMENTS SHOWN ON THE CONTRACT DRAWINGS.
- THE CONTRACTOR SHALL MAINTAIN AN ONGOING REMOVAL PROCESS OF ALL SPILLAGE OF EXCAVATION MATERIAL ON ALL PAVED STREETS.
- CURB AND GUTTER OF A GRADE OF LESS THAN 4/10 OF ONE PERCENT SHALL BE CONSTRUCTED BY FORMING, EACH JOINT SHALL BE CHECKED FOR GRADE PRIOR TO CONSTRUCTION AND WATER TESTED AS SOON AS POSSIBLE AFTER CONSTRUCTION.
- THE CONTRACTOR SHALL VERIFY IN THE FIELD ALL DIMENSIONS, EXISTING CONDITIONS AND POINTS OF CONNECTION WITH ADJOINING PROPERTY (PUBLIC AND PRIVATE). ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE PROJECT ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
- REMOVAL OR RELOCATION OF POWER POLES, TELEPHONE POLES, JOINTLY-OWNED POLES, AND APPURTENANCES WHICH INTERFERE WITH IMPROVEMENTS REQUIRED TO BE CONSTRUCTED UNDER THIS CONTRACT, SHALL BE THE RESPONSIBILITY OF THE UTILITY COMPANY. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH THE UTILITY COMPANIES PRIOR TO INGRESS IN ADVANCE SO AS TO NOT IMPACT THE SCHEDULE.
- COX COMMUNICATIONS SHALL BE RESPONSIBLE FOR THE VERTICAL OR HORIZONTAL ADJUSTMENT OF ALL CATV FACILITIES WHICH INTERFERE WITH IMPROVEMENTS SHOWN ON THE CONTRACT DRAWINGS, UNLESS NOTED OTHERWISE.
- NV ENERGY SHALL BE RESPONSIBLE FOR THE RELOCATION OF UNDERGROUND OR OVERHEAD POWER LINES THAT INTERFERE WITH THE REQUIRED IMPROVEMENTS AS SHOWN ON THE CONTRACT DRAWINGS.
- EMBARGO SHALL BE RESPONSIBLE FOR THE VERTICAL OR HORIZONTAL ADJUSTMENT OF ALL TELEPHONE FACILITIES WHICH INTERFERE WITH IMPROVEMENTS SHOWN ON CONTRACT DRAWINGS, UNLESS NOTED OTHERWISE.

LAS VEGAS VALLEY WATER DISTRICT (LVWD) NOTES

LVVWD PROJECT #-----

- NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN APPROVED FOR CONSTRUCTION BY THE LVVMD. FOLLOWING WATER PLAN APPROVAL, NOTICE SHALL BE GIVEN TO THE LVVMD COMMUNICATION SUPPORT CENTER (258-7171) TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. FOR FUTURE INSPECTIONS, NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO THE REQUESTED LVVMD INSPECTION. **WHEN REQUESTING INSPECTIONS, PLEASE REFER TO THE PROJECT # IDENTIFIED ABOVE.**
- ALL WORK SHALL CONFORM TO LVVMD STANDARD PLATES, DRAWINGS, AND SPECIFICATIONS, AND TO THE **2010 EDITION** OF LVVMD DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS). **THE LATEST EDITION OF UDACS SHALL SUPERCEDE ANY CONFLICTS CONTAINED IN THE APPROVED DRAWINGS AND/OR SPECIFICATIONS.**
- NO WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2 ABOVE, SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE UDACS STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENT, CLARK COUNTY AREA.
- A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVVMD.
- ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING WITH LVVMD APPROVED SERVICE SADDLES.
- ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
- ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS, VALLEY AND CURB GUTTERS.
- ALL WATER AND STORM DRAIN OR SANITARY SEWER CROSSINGS SHALL CONFORM TO SECTION 2.22 OF THE **2010 EDITION** OF THE UDACS.
- ALL WATER FACILITIES AND APPURTENANCES SHALL BE DISINFECTED, PRESSURE TESTED, AND HAVE AN ACCEPTABLE PASSING HEALTH WATER SAMPLE OBTAINED, PRIOR TO OPERATION AND USE.
- THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVVMD CENTRAL STORES. TELEPHONE 258-3152 OR 258-3802 TWO (2) WORKING DAYS PRIOR TO METER PICKUP.
- ANY INTERRUPTION OF SERVICE MUST BE PERFORMED IN ACCORDANCE WITH UDACS SECTION 3.14:01 AND APPROVED BY THE LVVMD INSPECTION DIVISION PRIOR TO SHUTDOWN. PROPER WRITTEN NOTIFICATION MUST BE GIVEN TO ALL AFFECTED CUSTOMERS.
- ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE AS LISTED ON THE LVVMD APPROVED PRODUCT'S LIST FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS BY SUBMITTING SHOP DRAWINGS.
- TELEPHONE "CALL BEFORE YOU DIG" AT "811" OR 1-800-227-2600.

14. THE INSTALLATION OF LAS VEGAS VALLEY WATER DISTRICT (LVVWD) MUNICIPAL WATER FACILITIES WITHIN ALL STREETS IS ASSUMED TO BE IN COMPLIANCE WITH THE UNIFORM STANDARD, INCLUDING THE PLACEMENT OF ASPHALT PAVING STREET SURFACES. ANY REPAIR WORK DONE BY THE LVVWD TO THE MUNICIPAL WATER FACILITIES WILL INCLUDE THE PLACEMENT OF AN APPROPRIATELY SIZED ASPHALT REPAIR PATCH ON THE STREET SURFACE.

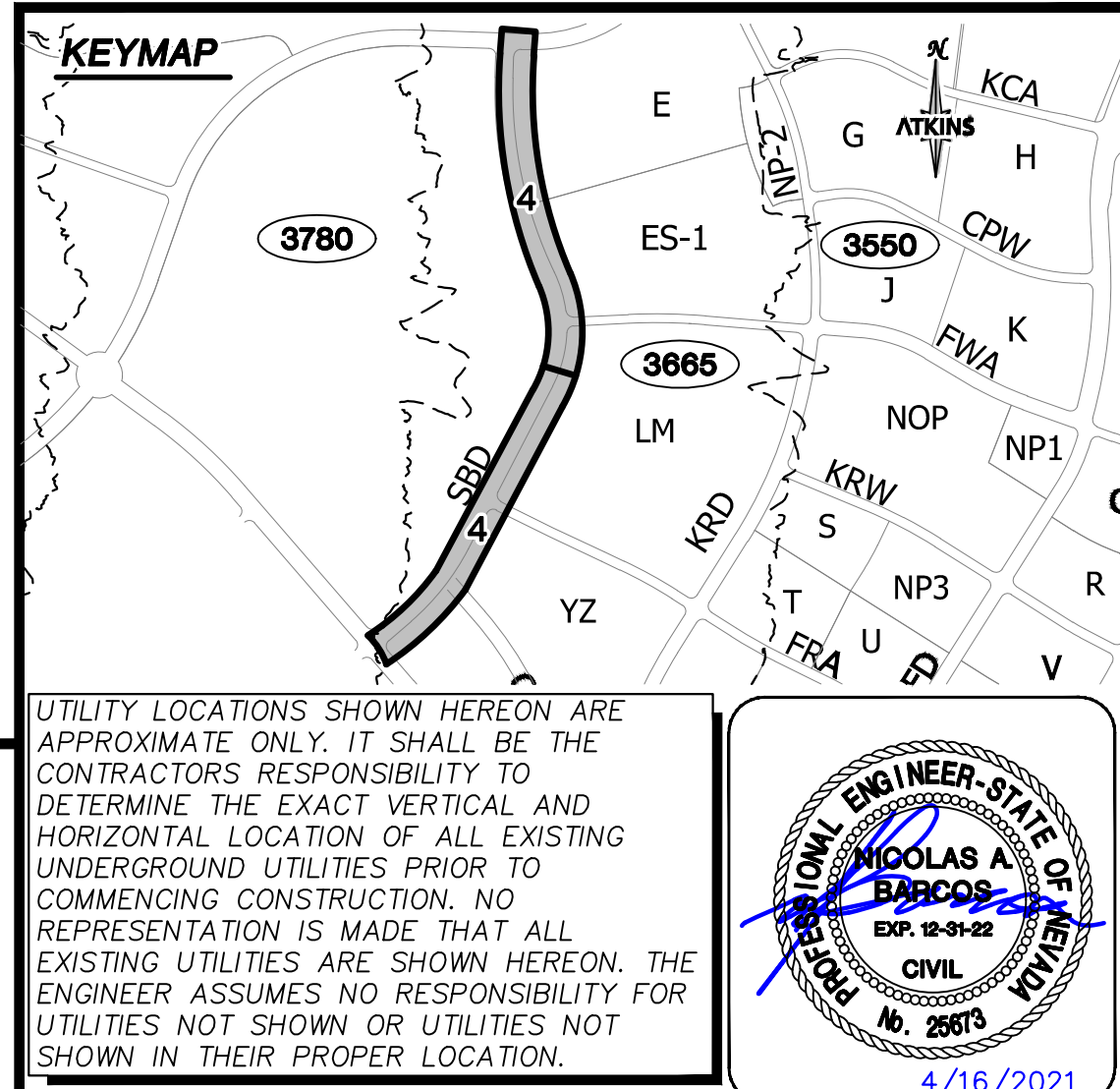
ANY DECORATIVE PAVING SURFACE WITHIN THE STREET IS THE RESPONSIBILITY OF THE OWNER'S ASSOCIATION, OR THE INDIVIDUAL PROPERTY OWNERS IF NO OWNER'S ASSOCIATION IS IN EXISTENCE, OR THE AGENCY HAVING JURISDICTION. DECORATIVE SURFACE MATERIALS PLACED WITHIN THE TEN FOOT EASEMENT ADJUTING A PUBLIC OR PRIVATE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

15. NO LEAD COMPLIANCE NOTE:
TO COMPLY WITH THE FEDERAL SAFE DRINKING WATER ACT, ALL WATER WORKS
BRASS PRODUCTS PROPOSED TO BE RELOCATED, OR INSTALLED AS NEW MUST
BE INSTALLED WITH THE LEAD FREE APPROVED PRODUCT. THE OLD LEADED
PRODUCT MAY NOT BE REUSED.

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
LVVWD APPROVED FIRE FLOW 1500 GPM AT 20 PSI RESIDUAL
PROJECT NO. ----- FIRST APPROVED DATE: _____

[illegible]

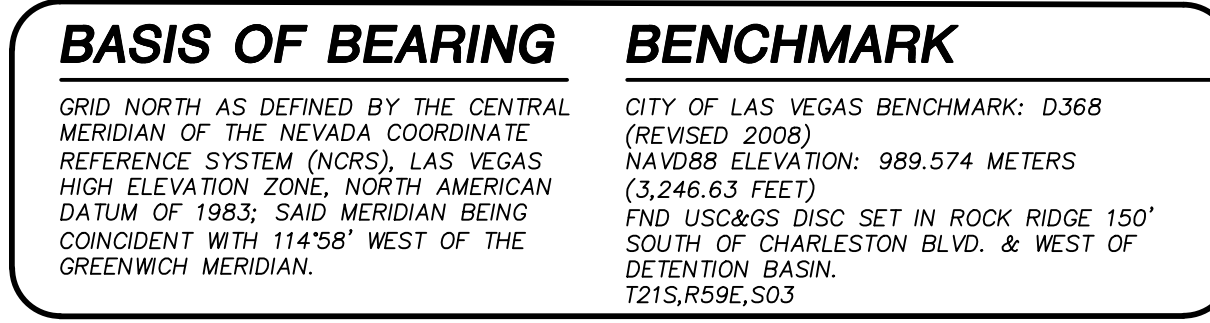


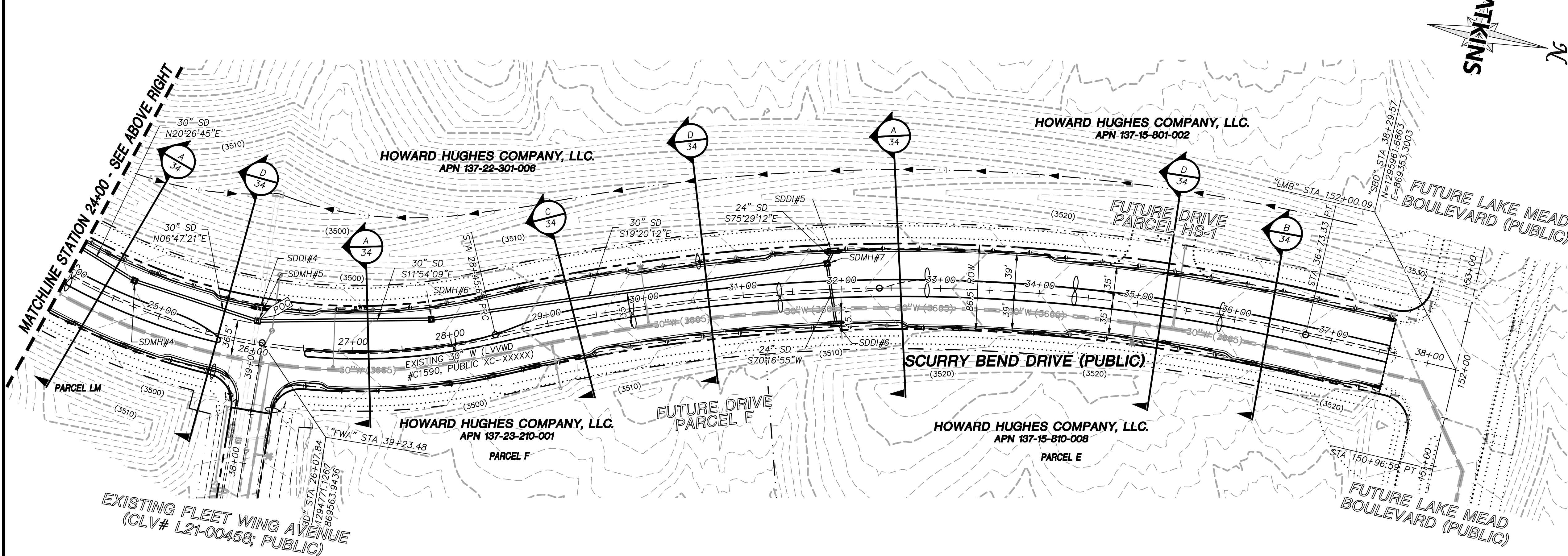
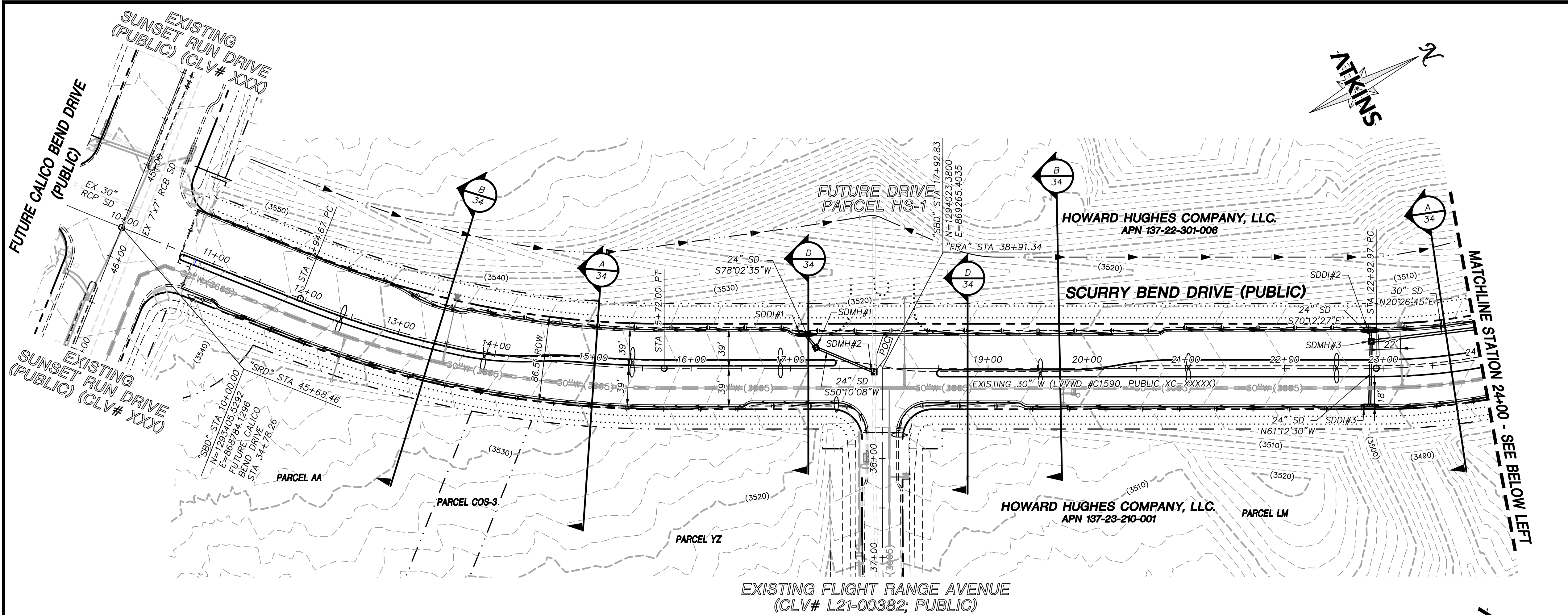
NO.	RADIUS	DELTA	LENGTH	TANGENT
C4	951.50'	4°23'34"	72.95'	36.49'
C5	100.00'	16°24'30"	28.64'	14.42'
C6	100.00'	20°10'07"	35.20'	17.78'
C7	961.50'	1°10'54"	19.83'	9.92'
C8	10.86'	33°31'35"	6.36'	3.27'
C9	9.85'	37°09'46"	6.39'	3.31'
C10	957.50'	11°39'02"	194.70'	97.69'
C11	10.00'	36°52'12"	6.44'	3.33'
C12	10.00'	36°52'12"	6.44'	3.33'
C13	10.00'	36°52'11"	6.43'	3.33'
C14	10.00'	36°52'12"	6.44'	3.33'
C15	571.00'	23°36'29"	235.27'	119.33'
C16	2.83'	180°00'04"	8.89'	328262.98'
C17	999.17'	9°47'09"	170.65'	85.53'
C18	300.00'	14°57'59"	78.36'	39.41'
C19	300.00'	8°03'27"	42.19'	21.13'
C20	988.17'	5°00'03"	86.25'	43.15'
C21	2.83'	178°58'44"	8.84'	317.59'
C22	3.33'	180°48'07"	10.51'	475.76'
C23	300.00'	10°28'31"	54.85'	27.50'
C24	300.00'	10°28'27"	54.84'	27.50'
C25	601.67'	19°33'13"	205.33'	103.68'
C26	1004.83'	9°47'09"	171.62'	86.02'
C27	305.66'	14°57'59"	79.84'	40.15'
C28	294.34'	8°03'27"	41.39'	20.73'
C29	993.83'	5°00'03"	86.74'	43.40'
C30	618.33'	24°23'49"	263.29'	133.67'
C31	10.00'	36°52'12"	6.44'	3.33'
C32	10.00'	36°52'12"	6.44'	3.33'
C33	1035.50'	21°41'43"	392.09'	198.42'

BACK OF CURB CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C89	1768.50'	5°25'34"	167.48'	83.80'
C90	1768.50'	1°21'31"	41.94'	20.97'
C91	1768.50'	3°04'44"	95.03'	47.53'
C92	9.94'	36°58'36"	6.42'	3.33'
C93	9.92'	37°00'57"	6.41'	3.32'

BACK OF CURB CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C49	9.99'	36°53'19"	6.43'	3.33'
C50	1843.74'	4°05'45"	131.80'	65.93'
C51	10.00'	36°51'05"	6.43'	3.33'
C52	10.00'	36°48'52"	6.43'	3.33'
C53	1930.56'	1°54'04"	64.06'	32.03'

BACK OF CURB CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C99	9.92'	37°07'22"	6.43'	3.33'
C100	1764.50'	2°07'06"	65.24'	32.62'
C101	10.00'	36°52'12"	6.44'	3.33'
C102	10.00'	36°52'12"	6.44'	3.33'





SUMMARY OF QUANTITIES		
DESCRIPTION	QUANTITY	UNIT
DRAINAGE		
24" CLASS III RCP	246	LF
30" CLASS III RCP	887	LF
48" TYPE III SD MANHOLE	7	EA
7.5' TYPE CM2 DROP INLET	6	EA

- STORM DRAIN NOTES**
- SEE PROFILE SHEETS FOR CONSTRUCTION NOTES AND INFORMATION RELATED TO PIPE SIZE (INNER DIAMETER), MANHOLE BASE SIZE (INSIDE DIMENSIONS), AND DROP INLET LENGTHS (CURB OPENING).
 - ALL STORM DRAIN MATERIAL TO BE CLASS III REINFORCED CONCRETE PIPE, UNLESS OTHERWISE NOTED IN PROFILES.
 - CONTRACTOR TO PROVIDE 6" MINIMUM OF CLEARANCE BETWEEN OUTSIDE OF PIPE TO INSIDE WALL OF STORM DRAIN STRUCTURES.

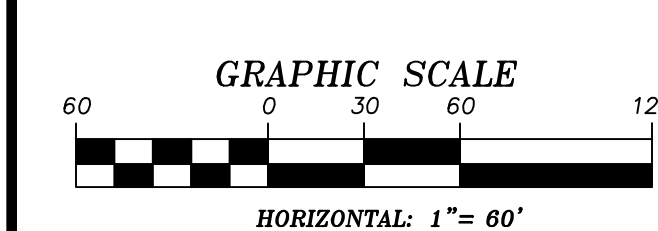
REVISIONS		DESCRIPTION	REV.	DATE	APPROVAL

ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7755
Fax: +1702.263.7200

SUMMERLIN

SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD
MASTER DRAINAGE PLAN

DESIGNED BY: B. MOCHTYAK
DRAWN BY: K. HENDRY
CHECKED BY: N. BARCOS
DATE: APRIL 2021
DRAWING NO. 5/42
JOB NO. 100069098



SOILS REPORT
BY NOVA GEOTECHNICAL
PROJECT NO. G-13-026
DATED 6/18/2020
EARTHWORK QUANTITIES (RAW):
CUT= 100 CU YDS
FILL= 5,200 CU YDS

GRADING PLAN CERTIFICATION
NICOLAS BARCOS PE#25673 DATE
CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY FOR THIS SITE ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT.
DS#XXX-0000

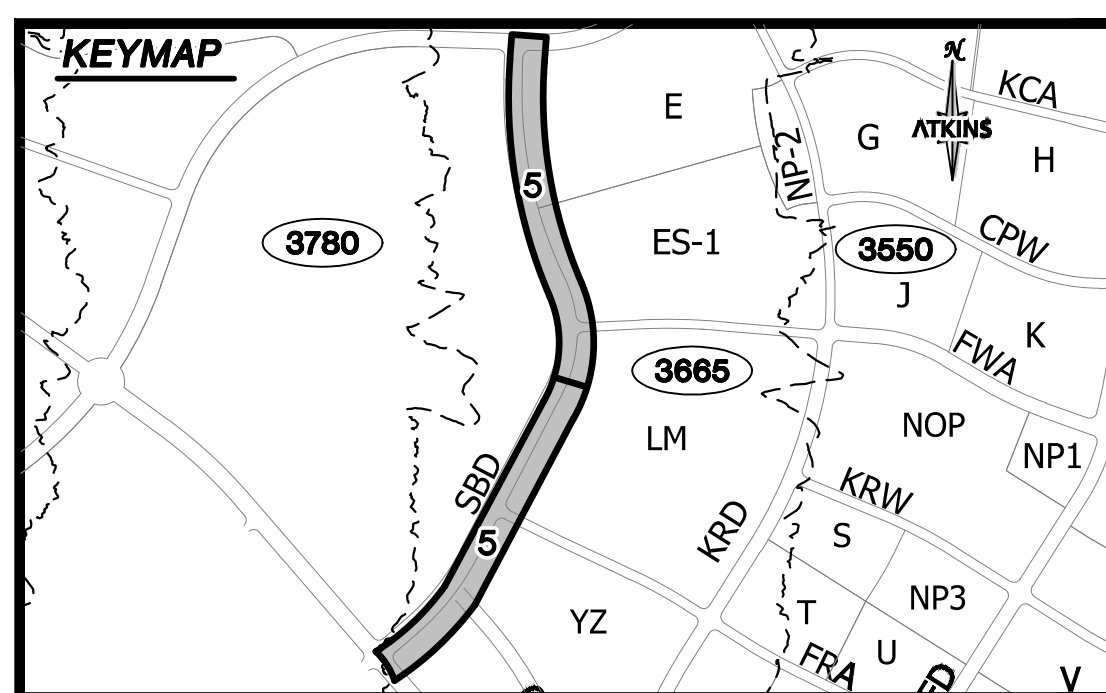
BASIS OF BEARING
GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NORS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

BENCHMARK
CITY OF LAS VEGAS 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,R59E,S03

FAST
Call before you Dig
UnderGround
1-702-432-5300

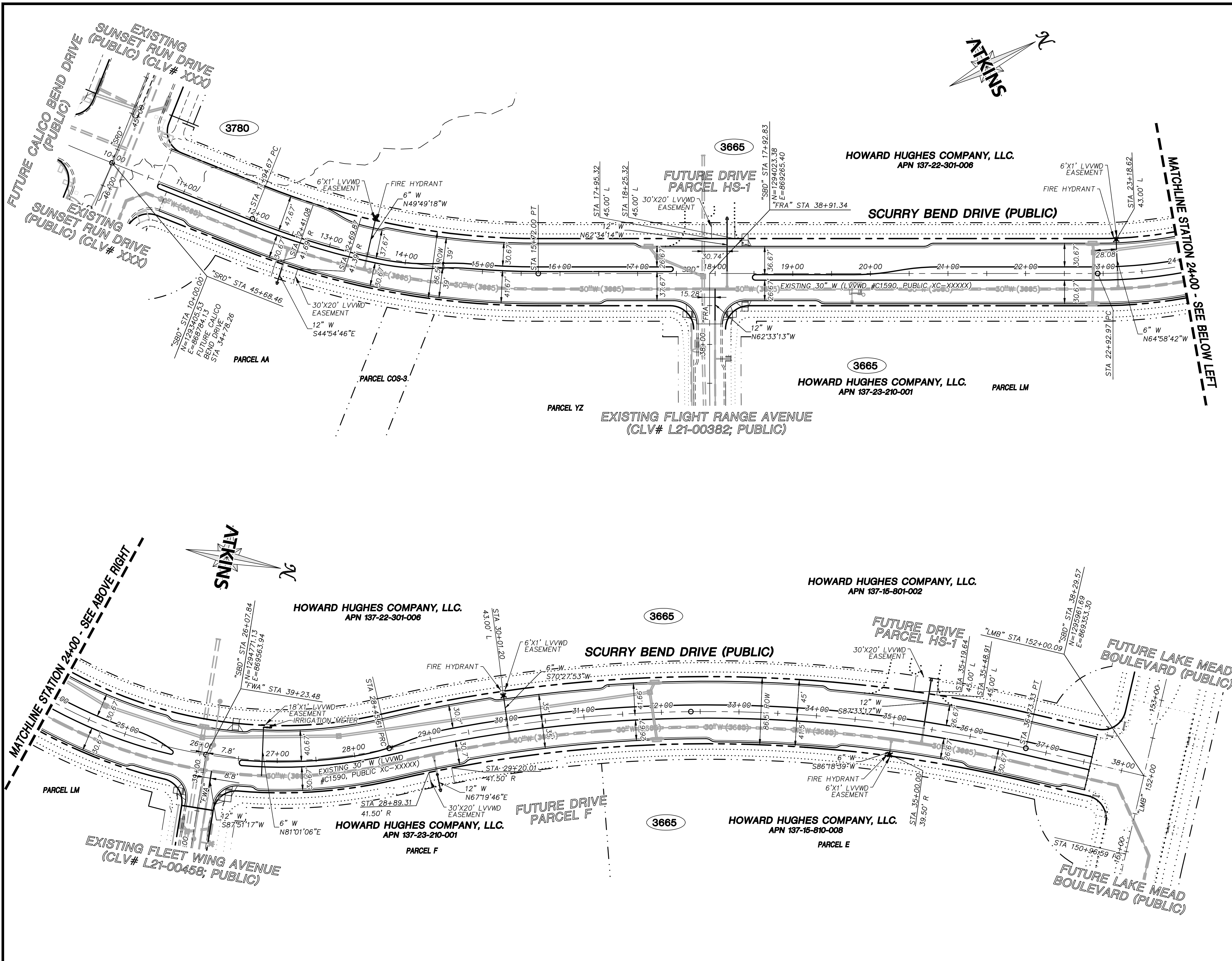
Call before you Dig
UnderGround
1-800-642-2444

CALL BEFORE YOU DIG
UNDERGROUND
1-702-227-2929



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

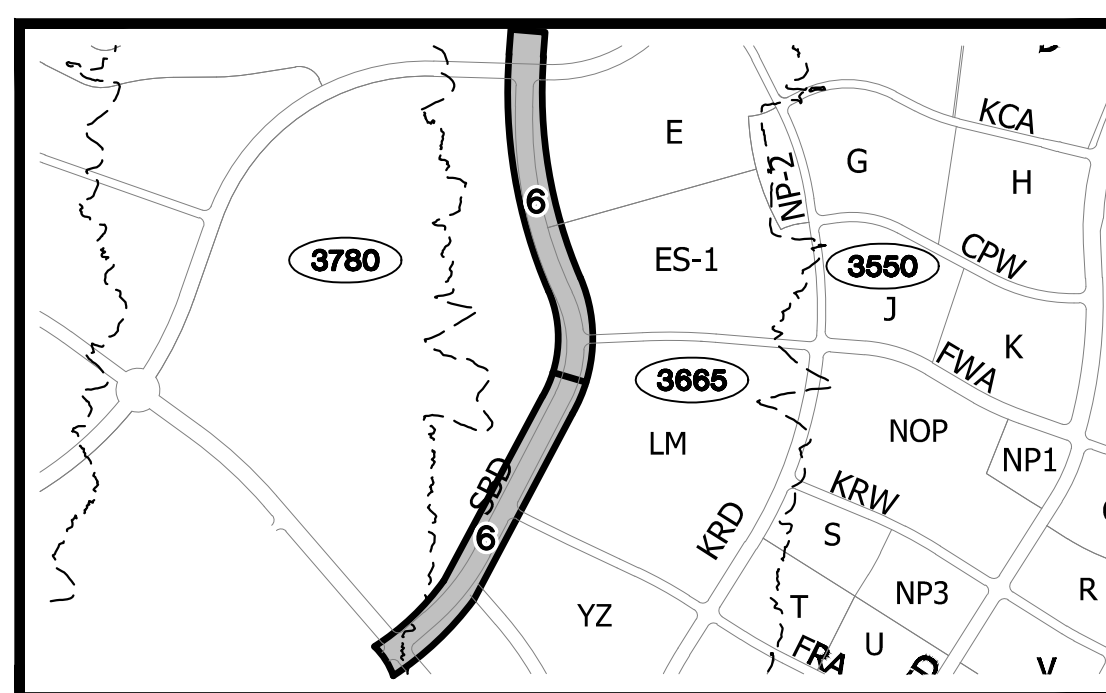
ENGINEER'S SEAL
NICOLAS BARCOS
PE#25673
4/16/2021



SUMMARY OF QUANTITIES		
DESCRIPTION	QUANTITY	UNIT
WATER		
12" DIP WATER PIPE	174	LF
6" DIP WATER PIPE	138	LF
6" C-900 WATER PIPE	63	LF
12" CAP W/ 2" BLOWOFF	5	EA
6" FIRE HYDRANT ASSEMBLY	4	EA
IRRIGATION METER	1	EA

MASTER PLAN NOTE
THIS SHEET IS FOR INFORMATIONAL PURPOSES ONLY. IT IS AN OVERALL REPRESENTATION OF THE UTILITY FOR REVIEW AND COORDINATION WITH OTHER PROJECT DETAILS WITHIN THIS PLAN SET.

- WATER NOTES**
- SEE ROAD PLAN AND PROFILE SHEETS FOR CONSTRUCTION NOTES AND INFORMATION RELATED TO PIPE SIZE, LENGTH, AND SIZE OF FITTINGS.
 - ALL WATER PIPE MATERIAL TO BE WATER QUALITY RATED C-900 PVC, UNLESS OTHERWISE NOTED IN PROFILES.
 - INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING PER UDACS PLATE #15.
 - PROTECT IN PLACE AND ADJUST LVVWD EXISTING FACILITIES TO FINISHED GRADE. ALL LVVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.
 - SEE SHEET 37 FOR WATER DETAILS.
 - CONTRACTOR TO INSTALL PIPE BENDS AS NECESSARY IN ORDER TO ACHIEVE EQUIVALENT PIPE CENTERLINE RADIUS PER UDACS SECTION 2.07 WATER MAIN JOINT DEFLECTION.
 - ALL MEASUREMENTS ARE FROM CENTER OF FITTING TO CENTER OF FITTING.
 - THIS PROJECT PROVIDES FOR THE INSTALLATION OF OFF-SITE WATER MAINS ONLY, AND DOES NOT PROVIDE OR IMPLY ANY WATER COMMITMENT.
 - ALL SEWER AND STORM DRAIN UTILITY CROSSINGS TO COMPLY WITH UDACS SECTION 2.22.
 - IN ROUGH GRADING AREAS, RIM ELEVATIONS FOR STRUCTURES IS SET AT 8.5" ABOVE ROUGH GRADE.



GRAPHIC SCALE
0 30 60 120
HORIZONTAL: 1" = 60'

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
LVVWD APPROVED FIRE FLOW 1500 GPM AT 20 PSI RESIDUAL
PROJECT NO. LVVWD FIRST APPROVED DATE: _____

BASIS OF BEARING
GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NORS), 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 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,R59E,S03

FAST
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UnderGround
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1-800-642-2444

Call before you Dig
Call 811
1-800-642-2444

CALL BEFORE YOU DIG
OVERHEAD
1-702-227-2929

DESIGNED BY: B. MOCHTAK
DRAWN BY: K. HENDRY
CHECKED BY: N. BARCOS
HORIZ.: 1" = 60'
VERT.: NONE

XXXXXX
LXX-XXXXX
DATE: APRIL 2021
DRAWING NO. 6/42

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ENGINEER-STATE OF NEVADA
NICHOLAS BARCOS
No. 25673
4/16/2021

ATKINS
2270 Corporate Circle Suite 200
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Telephone: +1702.263.7755
Fax: +1702.263.7200

SUMMERLIN

MASTER WATER PLAN

DESIGNER
B. MOCHTAK
DRAWN BY: K. HENDRY
CHECKED BY: N. BARCOS
HORIZ.: 1" = 60'
VERT.: NONE

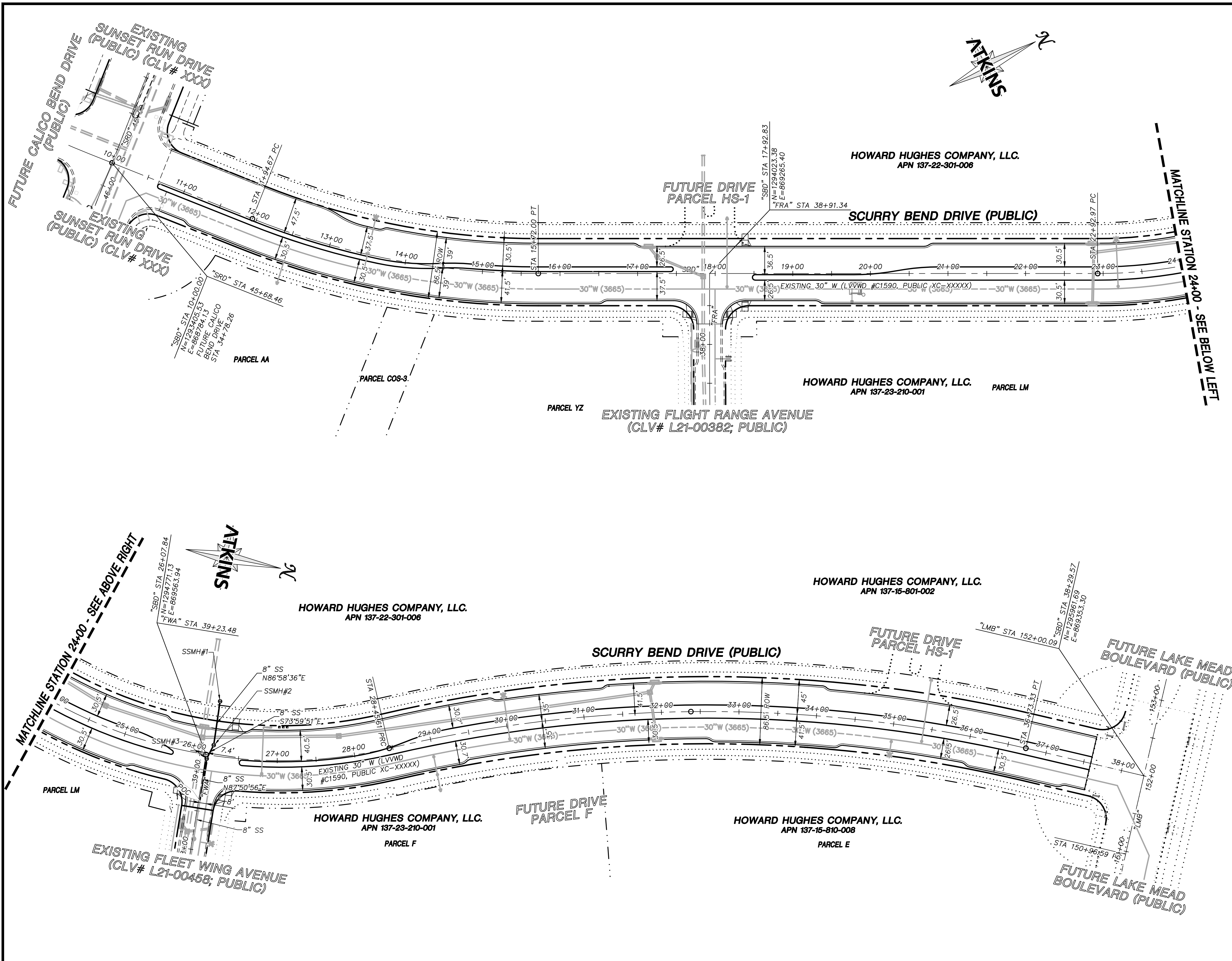
REVISIONS

REV.	DESCRIPTION	DATE	APPROVAL

SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD

MASTER WATER PLAN

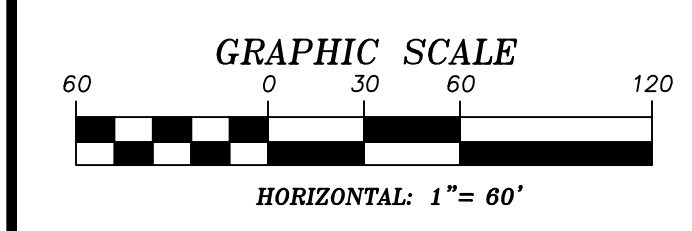
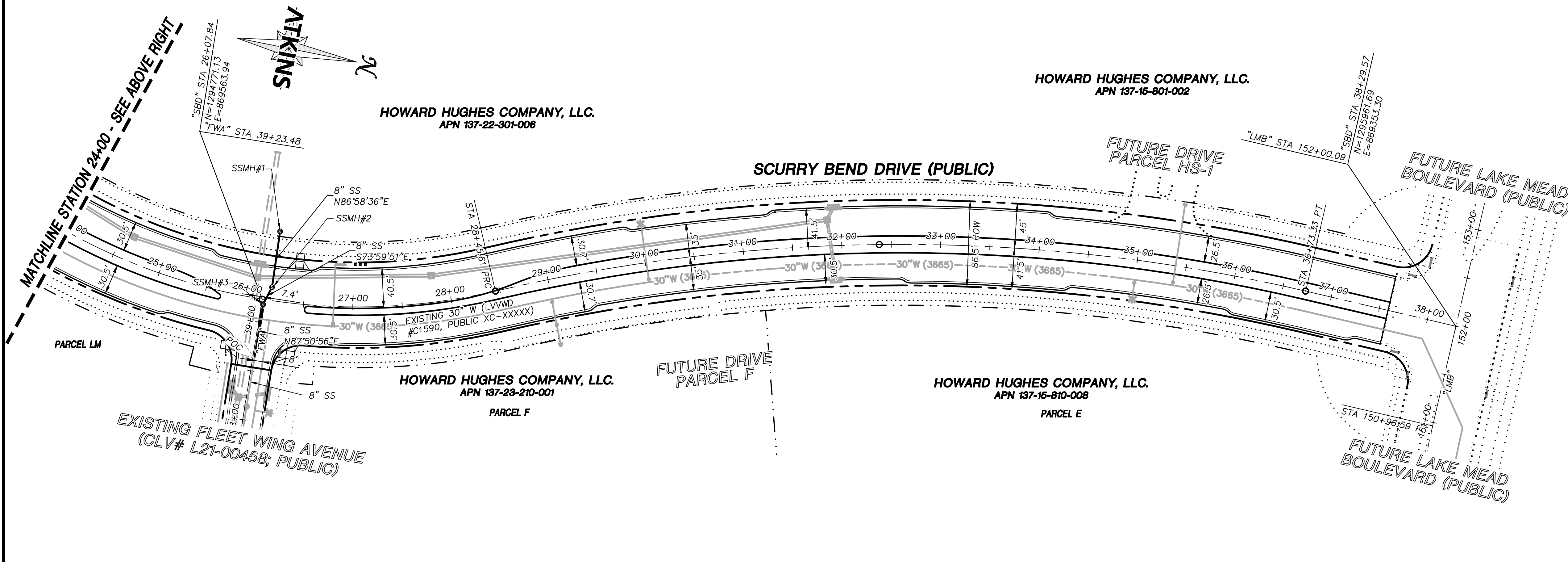
Job No. 100069098



SUMMARY OF QUANTITIES		
DESCRIPTION	QUANTITY	UNIT
SEWER		
8" C-900 SEWER PIPE	121	LF
48" SEWER MANHOLE	2	EA
SEWER CAP	1	EA

MASTER PLAN NOTE
THIS SHEET IS FOR INFORMATIONAL PURPOSES ONLY. IT IS AN OVERALL REPRESENTATION OF THE UTILITY FOR REVIEW AND COORDINATION WITH OTHER PROJECT DETAILS WITHIN THIS PLAN SET.

- SEWER NOTES**
- SEE ROADWAY PLAN AND PROFILE SHEETS FOR CONSTRUCTION NOTES AND INFORMATION RELATED TO PIPE SIZE, SLOPE, INVERT, RIM INFORMATION, AND MANHOLE BASE SIZE.
 - ALL SEWER PIPE MATERIAL TO BE WATER QUALITY RATED AWWA C-900, UNLESS OTHERWISE NOTED IN PROFILES.
 - ALL SEWER MANHOLES TO BE POLYMER LINED AND ALL JOINTS TO HAVE SIKAFLEX 2C NS SEALANT BETWEEN COMPONENTS.
 - ALL SEWER MANHOLES GREATER THAN 20' DEEP TO BE LINED WITH CORROSION PROTECTION PER DCSGS STANDARD PLATE SD-1.



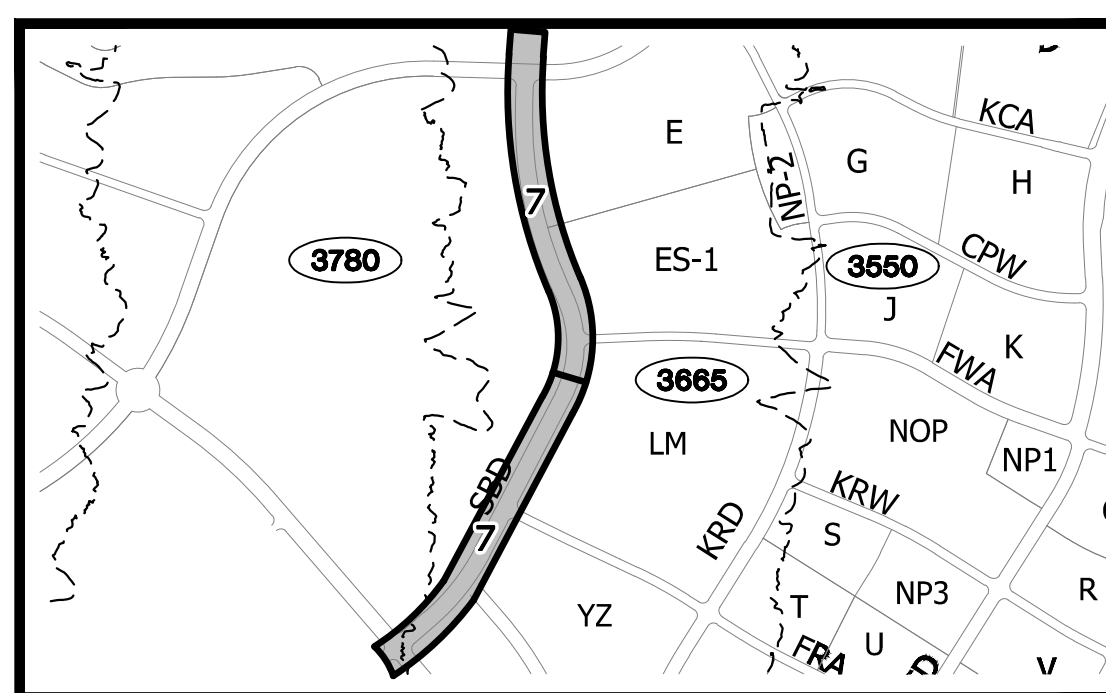
BASIS OF BEARING
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BENCHMARK
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FND USC&GS DISC SET IN ROCK RIDGE 150' SOUTH OF CHARLESTON BLVD. & WEST OF DETENTION BASIN.
T21S,R59E,S03

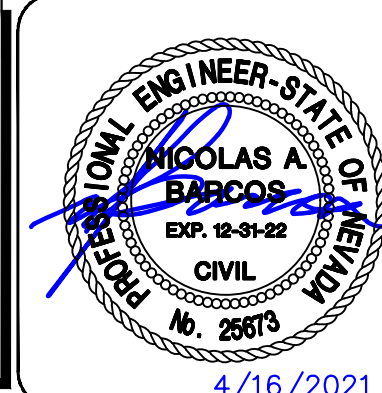
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ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7755
Fax: +1702.263.7200

SUMMERLIN

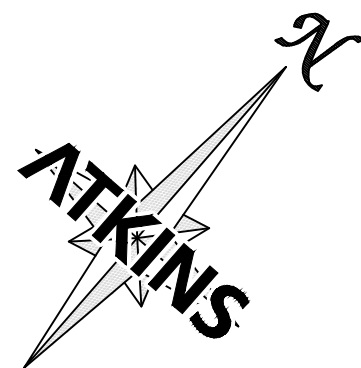
DESIGNED BY: B. MOCHTYAK
DRAWN BY: K. HENDRY
CHECKED BY: N. BARCOS
DATE: APRIL 2021
DRAWING NO.: 7/42
VERT.: NONE

REVISIONS

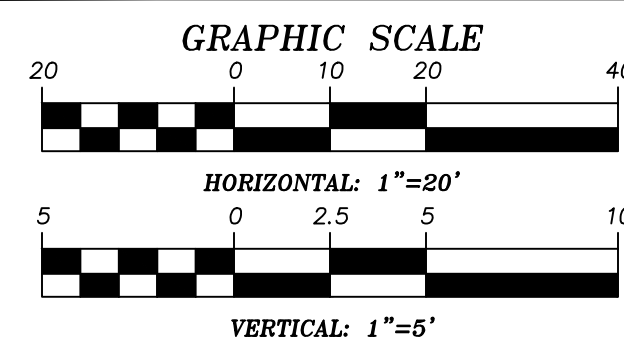
REV.	DESCRIPTION	DATE	APPROVAL

MASTER SEWER PLAN
SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD

MASTER SEWER PLAN
LAYOUT: 7 MASTER SEWER PLAN Apr. 19, 2021 - 9:59AM



C:\pw_work\atknanv01\mars4393\dms56326\69098-08-GRAD-G1.dwg LAYOUT: 8 ROADWAY GRADING PLAN Apr 19, 2021 - 10:01AM



LAS VEGAS VALLEY WATER DISTRICT ENGINEERING
AND PLANNING SERVICES

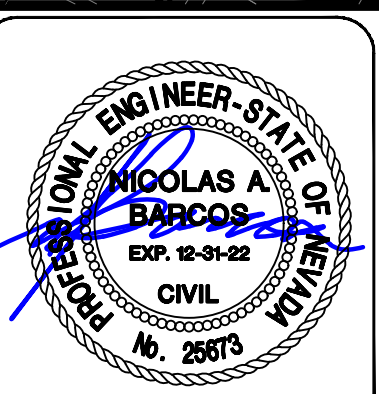
PROJECT NO. 000000 FIRST APPROVED DATE:

LVWD APPROVED FIRE FLOW 1500 GPM AT 20 PSI RESIDUAL

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 R59E S03

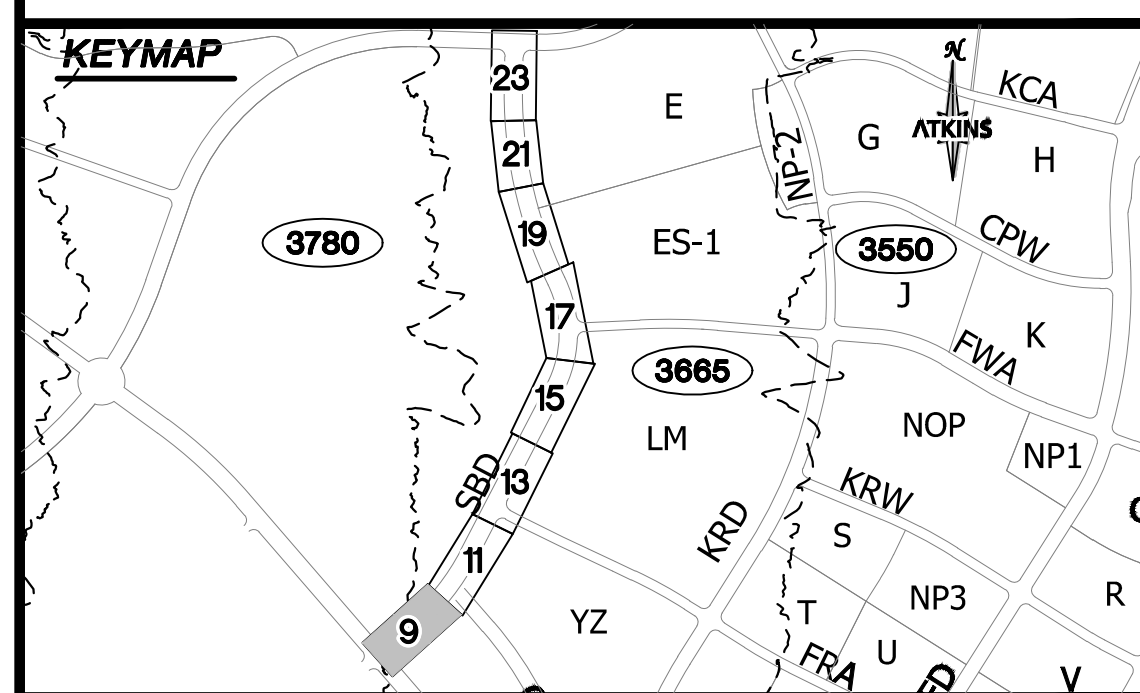


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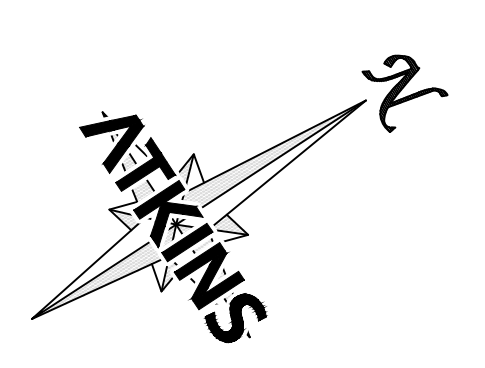
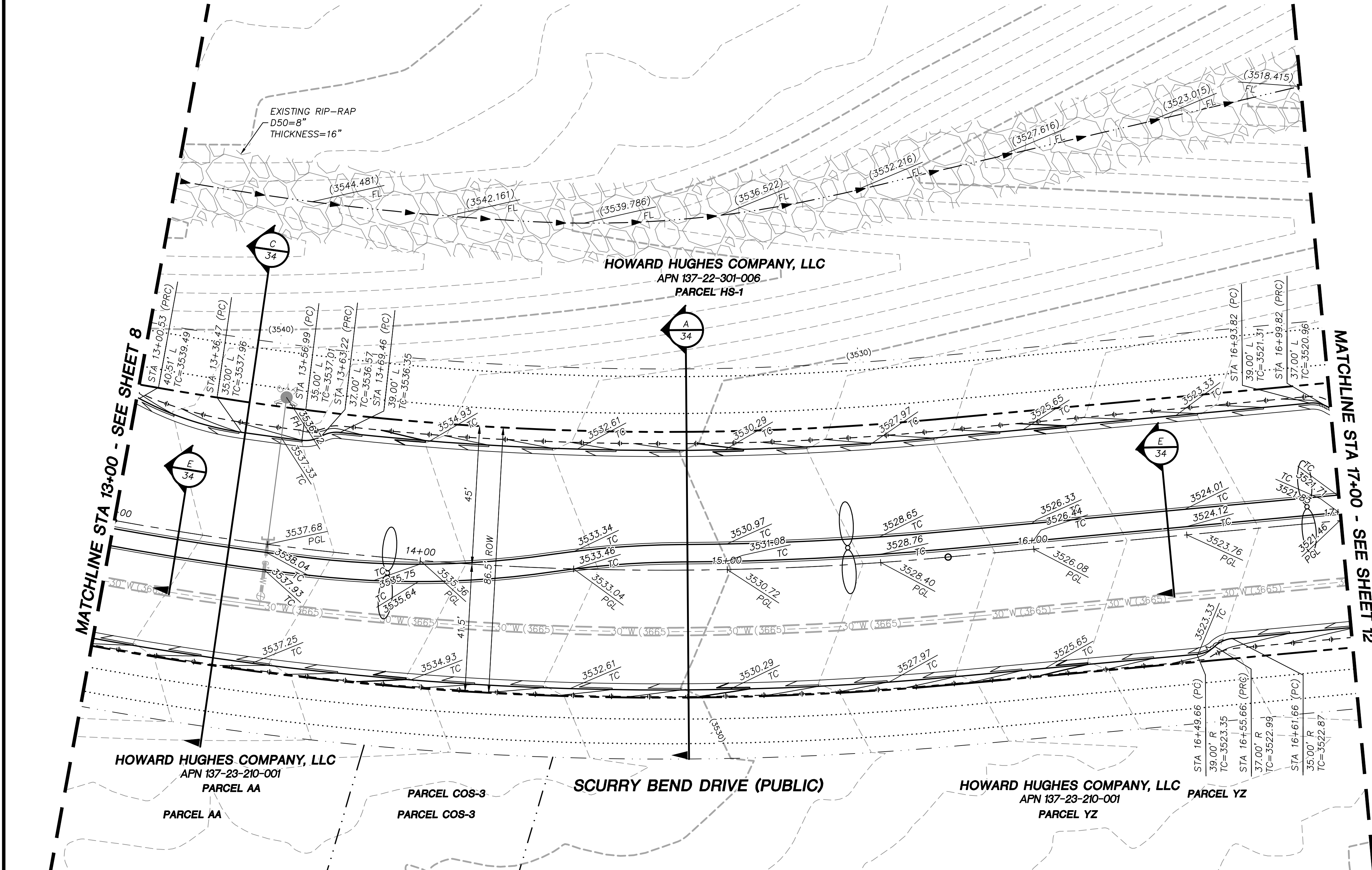
DESIGNED BY: B. MOCHTYAK DRAWN BY: K. HENDRY CHECKED BY: N. BARCOS HORIZ.: 1"=20' VERT.: NONE	XXXXXXXX LXX-XXXX DATE: APRIL, 2021 DRAWING NO. 9/42
JOB NO. 100069098	

- (1) CONSTRUCT PLANTMIX BITUMINOUS SURFACE OVER TYPE II AGGREGATE BASE PER SOILS REPORT. SEE SHEET 34 FOR TYPICAL PAVEMENT SECTION.
- (2) CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD #216
- (3) FUTURE SIDEWALK BY OTHERS
- (4) CONSTRUCT CURB RAMP, TYPE A, PER NDOT STANDARD PLAN R-5.2.1.
- (5) CONSTRUCT 0" FLUSH CURB
- (6) TRANSITION CURB FROM FULL HEIGHT (6") TO FLUSH (0")
- (7) INSTALL SCHEDULE 40 PVC IRRIGATION SLEEVES (2'-4", 1'-6") PER DETAIL C ON SHEET 37.
- (8) CONSTRUCT "A" TYPE ISLAND CURB PER CCAUSD #219



SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD

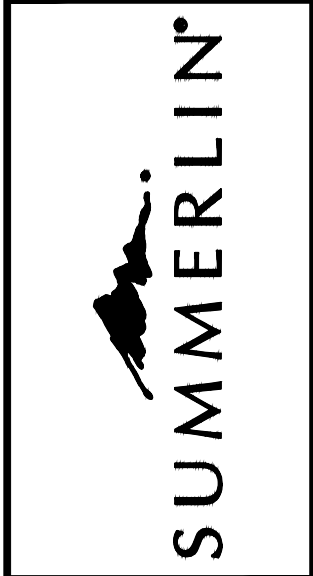
ROADWAY PLAN + PROFILE
BEGIN TO STA 13+00



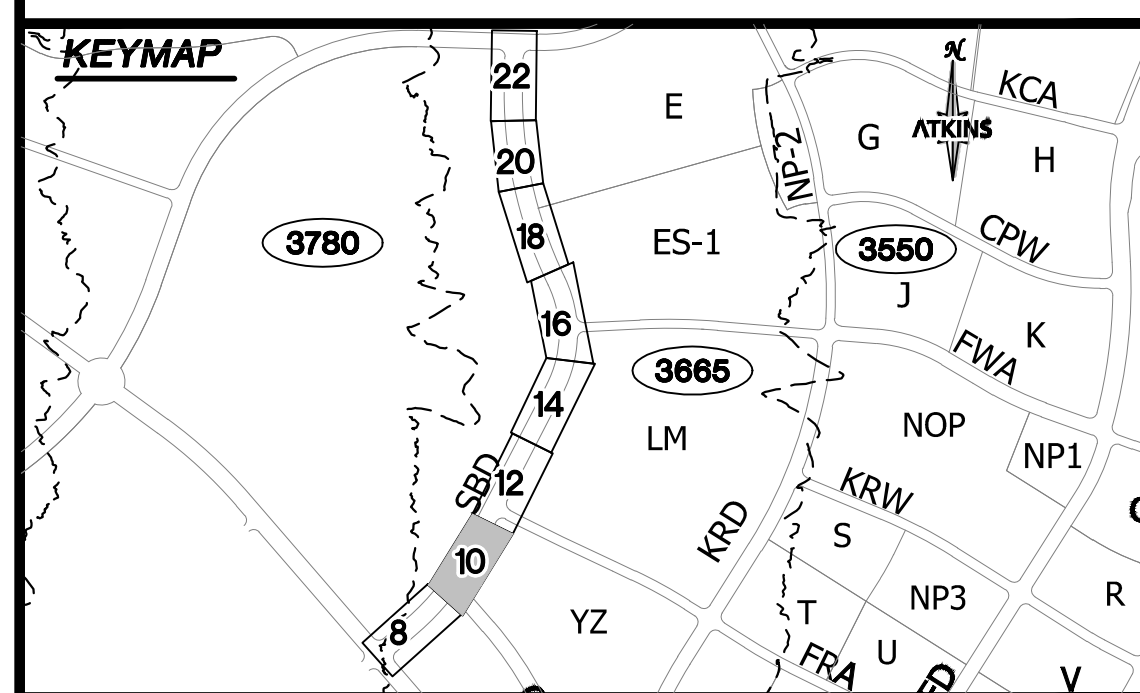
- ### STORM DRAIN CONSTRUCTION NOTES
- 1. INSTALL STORM DRAIN. SEE SHEET 3 FOR ADDITIONAL STORM DRAIN NOTES AND INFORMATION.
 - 2. INSTALL TYPE "CM2" DROP INLET PER CCAUSD #412.1 & #421
 - 3. INSTALL TYPE II SD MANHOLE PER CCAUSD #405.2
 - 4. INSTALL TYPE III SD MANHOLE PER CCAUSD #406
 - 5. INSTALL NDOT TYPE 2 DROP INLET PER NDOT R-4.2.1 (SEE SHEET 29)
 - 6. STUB & PLUG STORM DRAIN FOR FUTURE CONNECTION PER MANUFACTURER'S PLUG, OR APPROVED EQUAL (SEE SHEET 35)
 - 7. NOT USED
 - 8. INSTALL SD JUNCTION STRUCTURE
 - 9. DIRECT CONNECTION INTO RCB SEE SHEET 35 FOR DETAIL
 - 10. INSTALL TYPE I SD RISER PER CCAUSD #403.1
 - 11. INSTALL TYPE "CM" DROP INLET PER CCAUSD #421 & #422
 - 12. INSTALL PRECAST REINFORCED CONCRETE BOX PER NDOT STANDARD 502 AND 503 SEE SHEET 35 FOR RCB INFORMATION

REVISIONS		BY	DATE	APPROVAL
	DESCRIPTION			
REV.				

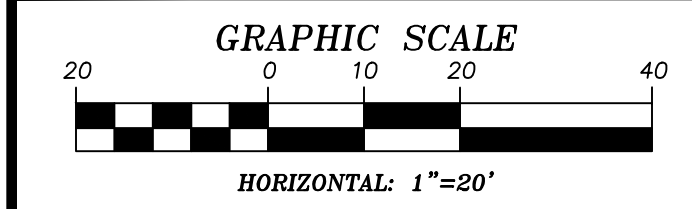
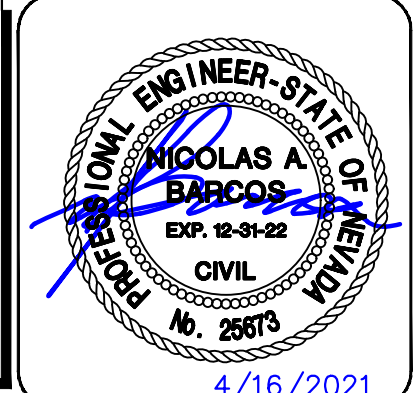
ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7755
Fax: +1702.263.7200



SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD
ROADWAY GRADING PLAN
STA 13+00 TO STA 17+00



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GRADING PLAN CERTIFICATION

NICOLAS BARCOS PE#25673 DATE _____

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

DS#XXX-0000

BASIS OF BEARING

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

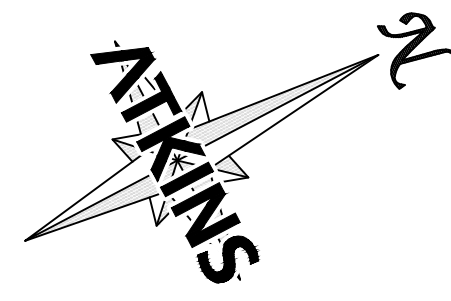
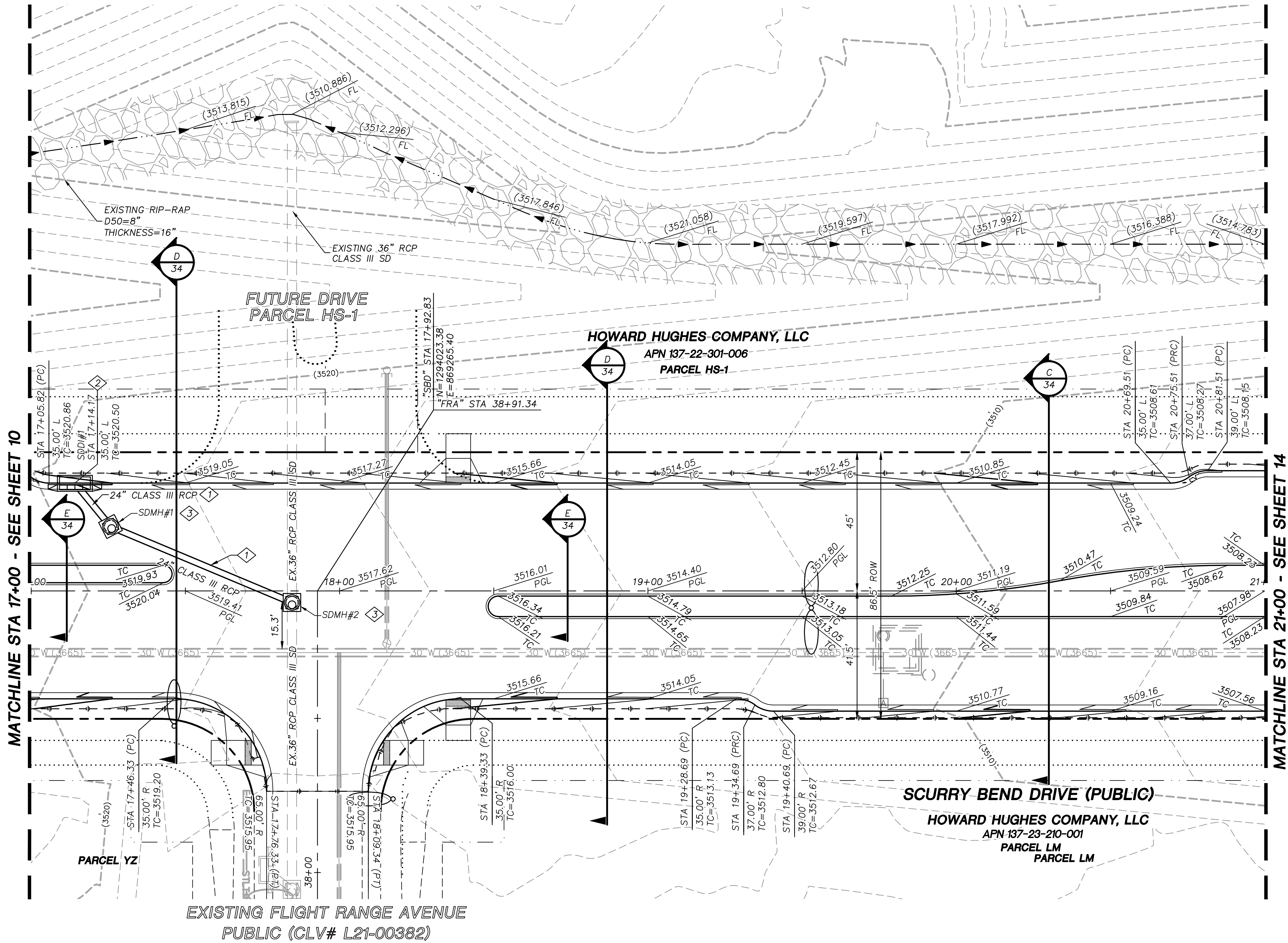
BENCHMARK

CITY OF LAS VEGAS 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,R59E,S03

Call before you Dig
Call 811
UnderGround
1-702-432-5300
1-800-642-2444

CALL BEFORE YOU DIG
UNDERGROUND
1-702-227-2929

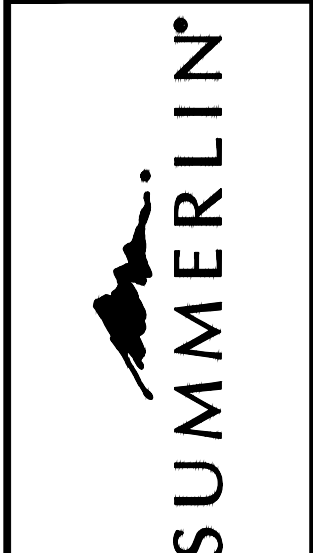
DESIGNED BY: B. MOCHTYAK	DATE: APRIL 2021	DRAWING NO. 10/42
DRAWN BY: K. HENDRY	DATE: APRIL 2021	DATE: 4/16/2021
CHECKED BY: N. BARCOS	DATE: APRIL 2021	DATE: 4/16/2021
APPROVED BY: N. BARCOS	DATE: APRIL 2021	DATE: 4/16/2021
NO. 25673	DATE: APRIL 2021	DATE: 4/16/2021
NO. 25673	DATE: APRIL 2021	DATE: 4/16/2021



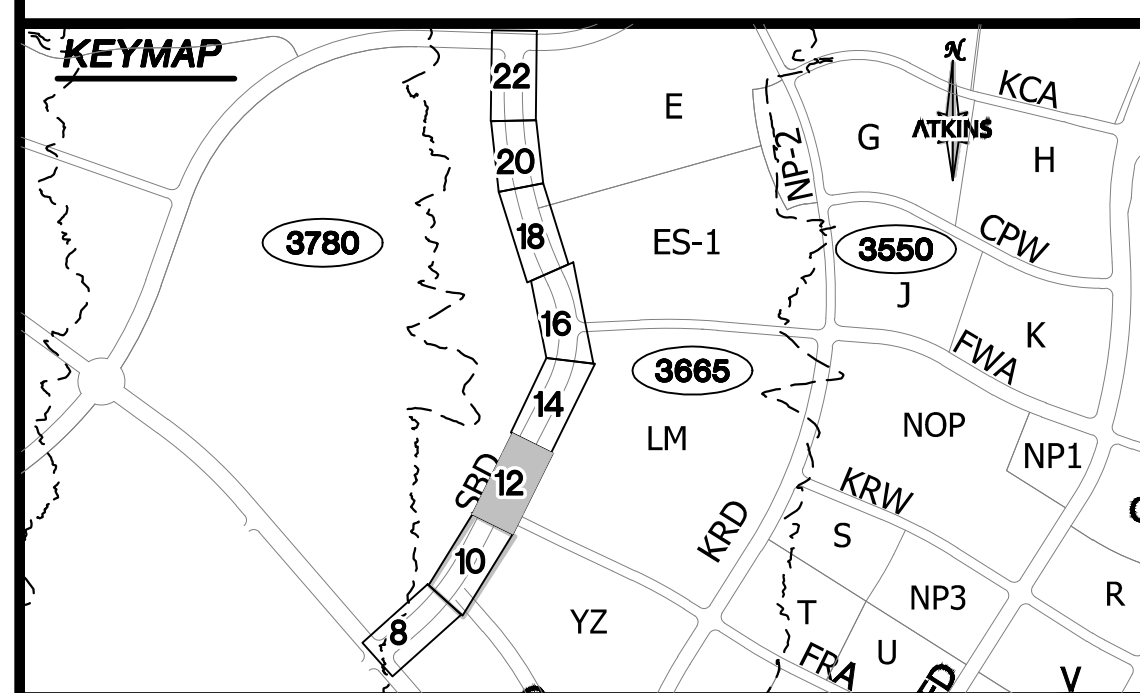
- STORM DRAIN CONSTRUCTION NOTES**
- 1. INSTALL STORM DRAIN. SEE SHEET 3 FOR ADDITIONAL STORM DRAIN NOTES AND INFORMATION.
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 - 4. INSTALL TYPE III SD MANHOLE PER CCAUSD #406
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 - 6. STUB & PLUG STORM DRAIN FOR FUTURE CONNECTION PER MANUFACTURER'S PLUG, OR APPROVED EQUAL (SEE SHEET 35)
 - 7. NOT USED
 - 8. INSTALL SD JUNCTION STRUCTURE
 - 9. DIRECT CONNECTION INTO RCB SEE SHEET 35 FOR DETAIL
 - 10. INSTALL TYPE I SD RISER PER CCAUSD #403.1
 - 11. INSTALL TYPE "CM" DROP INLET PER CCAUSD #421 & #422
 - 12. INSTALL PRECAST REINFORCED CONCRETE BOX PER NDOT STANDARD 502 AND 503 SEE SHEET 35 FOR RCB INFORMATION

REVISIONS	
REV.	DESCRIPTION

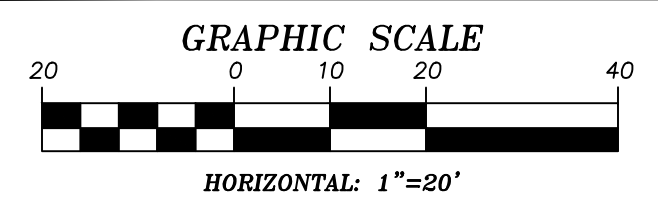
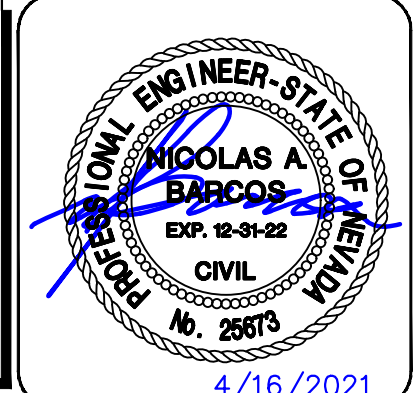
ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7275
Fax: +1702.263.7200



SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD
ROADWAY GRADING PLAN
STA 17+00 TO STA 21+00



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GRADING PLAN CERTIFICATION

NICOLAS BARCOS PE#25673 DATE _____

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

DS#XXX-0000

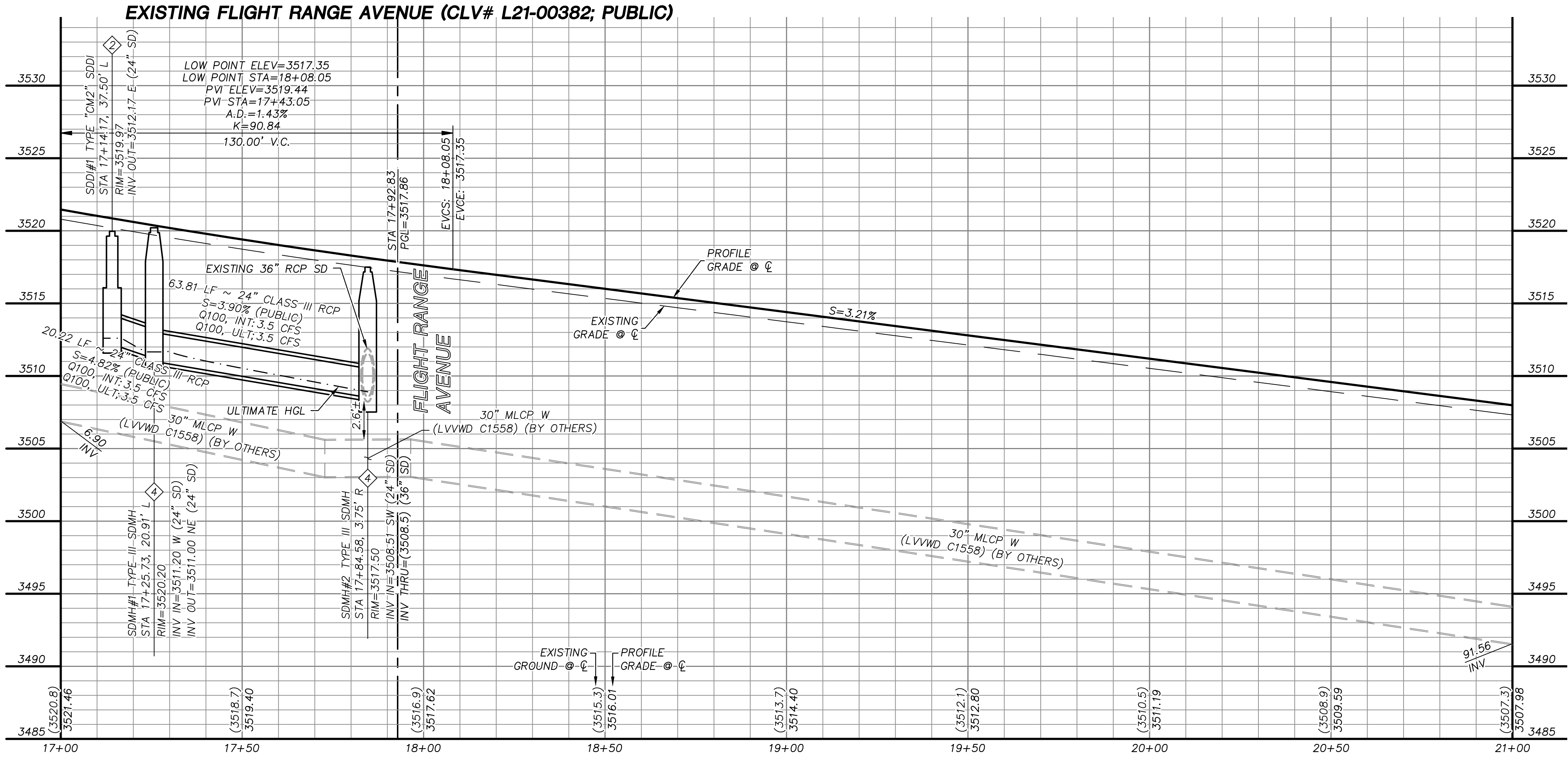
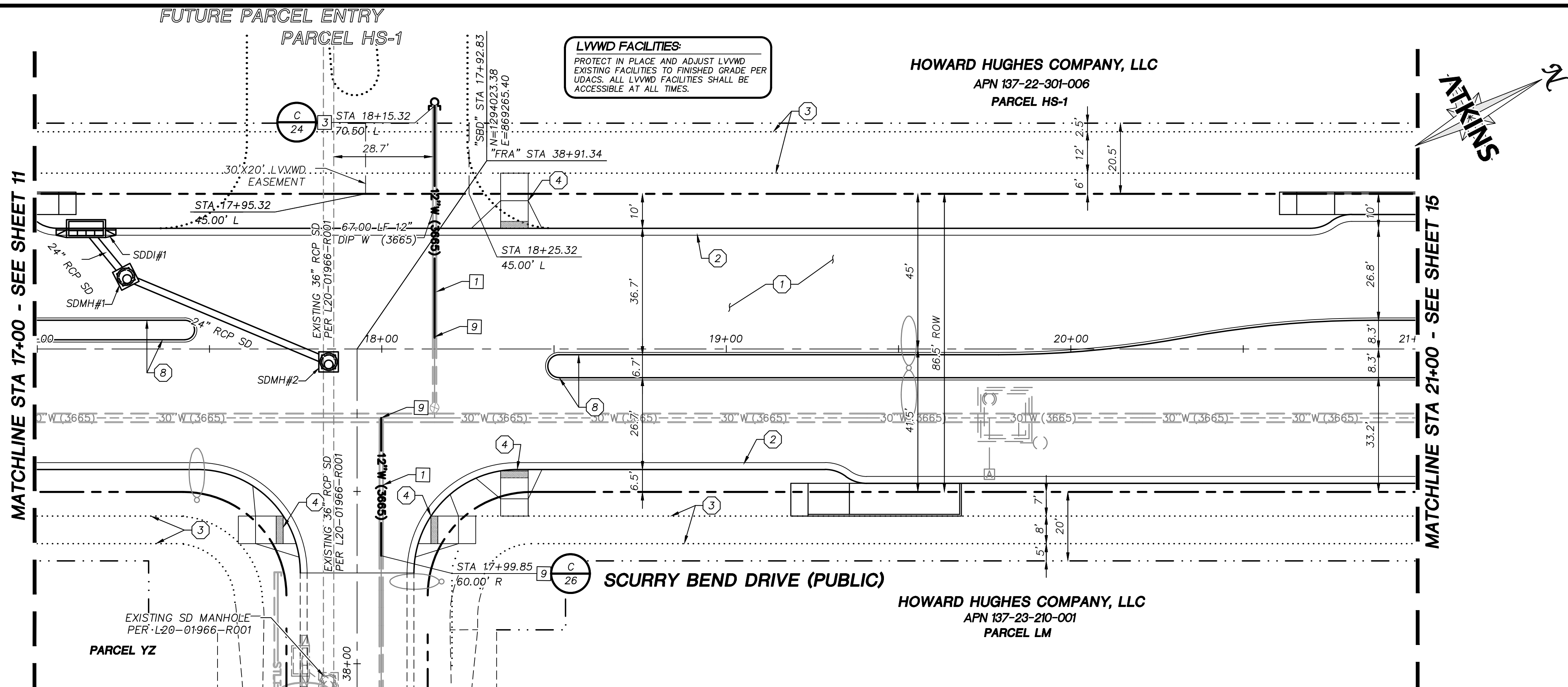
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BENCHMARK
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T21S,R59E,S03

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UnderGround
1-702-432-5300
1-800-642-2444

CALL BEFORE YOU DIG
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1-702-227-2829

DESIGNED BY: B. MOCHTYAK	DATE: APRIL 2021	DRAWING NO. 12/42
DRAWN BY: K. HENDRY	DATE: APRIL 2021	DRAWING NO. 12/42
CHECKED BY: N. BARCOS	DATE: APRIL 2021	DRAWING NO. 12/42
APPROVED BY: NICOLAS BARCOS	DATE: APRIL 2021	DRAWING NO. 12/42



STORM DRAIN CONSTRUCTION NOTES

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12. INSTALL PRECAST REINFORCED CONCRETE BOX PER NDOT STANDARD 502 AND 503 SEE SHEET 35 FOR RCB INFORMATION

SEWER CONSTRUCTION NOTES

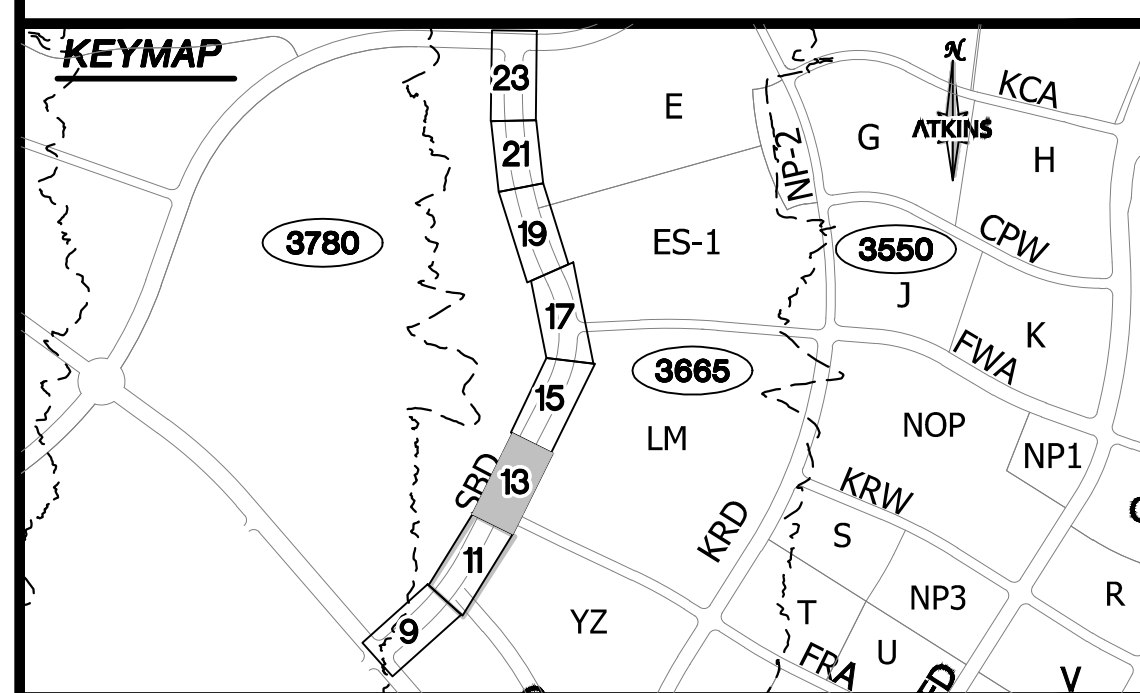
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2. INSTALL SEWER MAIN PER DCSWCS SD-17
3. STUB AND CAP SEWER PIPE. PLACE MARKER BALL AND 4"x4" POST, DOUGLAS FIR, OVER END OF PIPE AND INSTALL THRUST BLOCK (1 CUBIC FT. MINIMUM).
4. CONNECT TO EXISTING SEWER MAIN

WATERLINE CONSTRUCTION NOTES

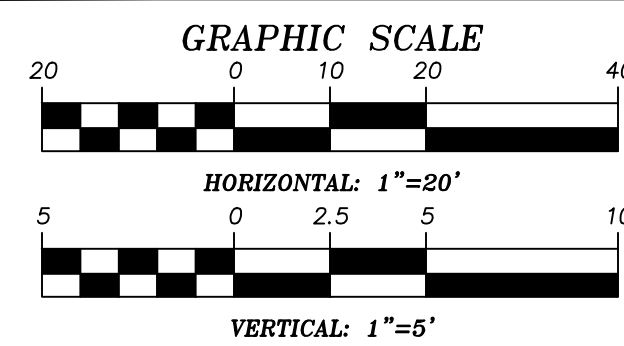
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2. CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD #216
3. FUTURE SIDEWALK BY OTHERS
4. CONSTRUCT CURB RAMP, TYPE A, PER NDOT STANDARD PLAN R-5.2.1.
5. CONSTRUCT 0" FLUSH CURB
6. TRANSITION CURB FROM FULL HEIGHT (6") TO FLUSH (0")
7. INSTALL SCHEDULE 40 PVC IRRIGATION SLEEVES (2-4", 1-6") PER DETAIL C ON SHEET 37.
8. CONSTRUCT "A" TYPE ISLAND CURB PER CCAUSD #219



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APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING AND PLANNING SERVICES

PROJECT NO. 000000 FIRST APPROVED DATE: _____

LVVWD APPROVED FIRE FLOW 1500 GPM AT 20 PSI RESIDUAL

BASIS OF BEARING

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

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1-800-642-2444

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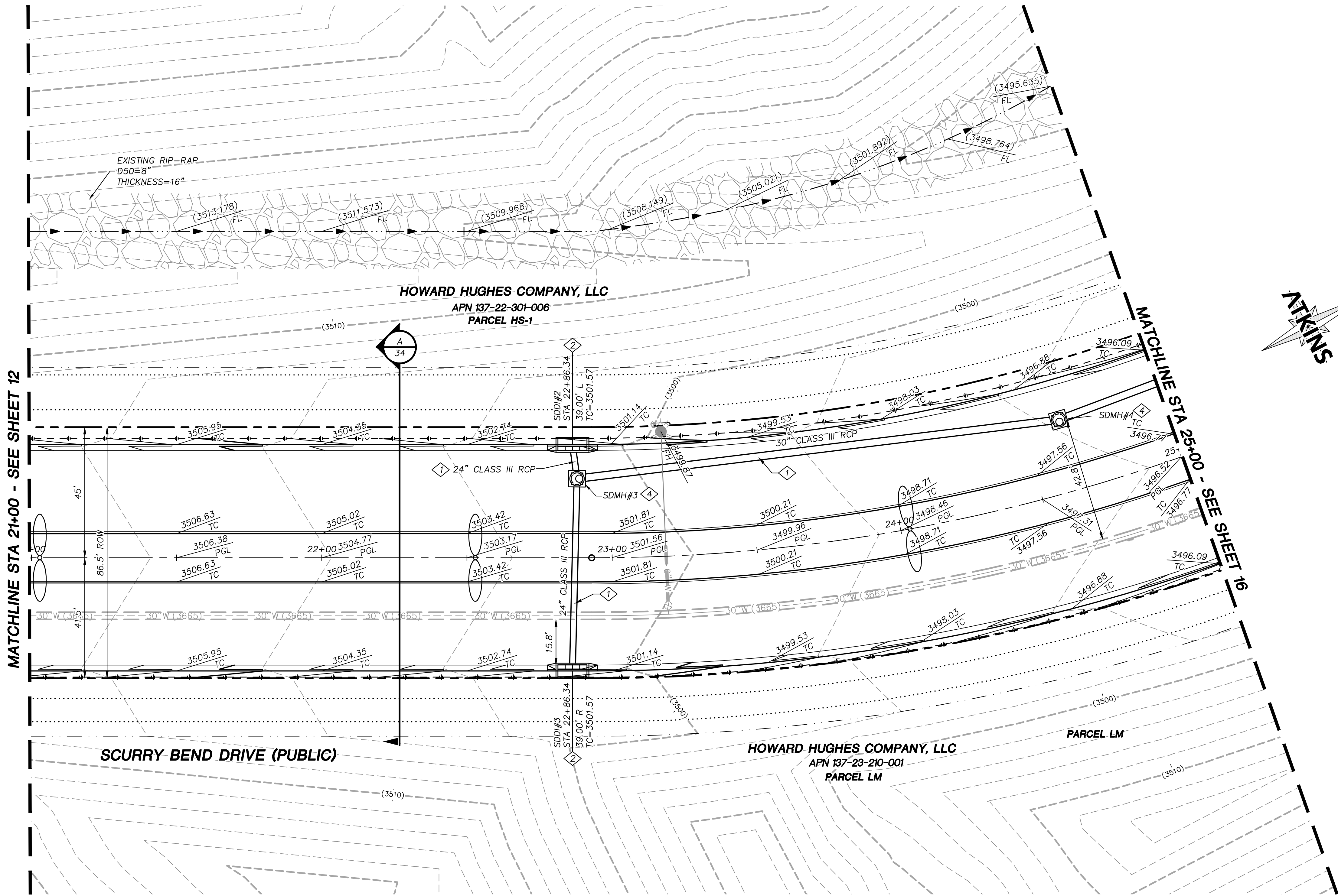
DESIGNED BY: B. MOCHTAK
DRAWN BY: K. HENDRY
CHECKED BY: N. BARCOS
DATE: APRIL 2021
DRAWING NO. 13/42
VERT.: NONE

2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7755
Fax: +1702.263.7200

SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD
ROADWAY PLAN + PROFILE
STA 17+00 TO STA 21+00

DESIGNED BY: B. MOCHTAK
DRAWN BY: K. HENDRY
CHECKED BY: N. BARCOS
DATE: APRIL 2021
DRAWING NO. 13/42
VERT.: NONE

XXXXXX
LXX-XXXX
DATE: APRIL 2021
DRAWING NO. 13/42
VERT.: NONE



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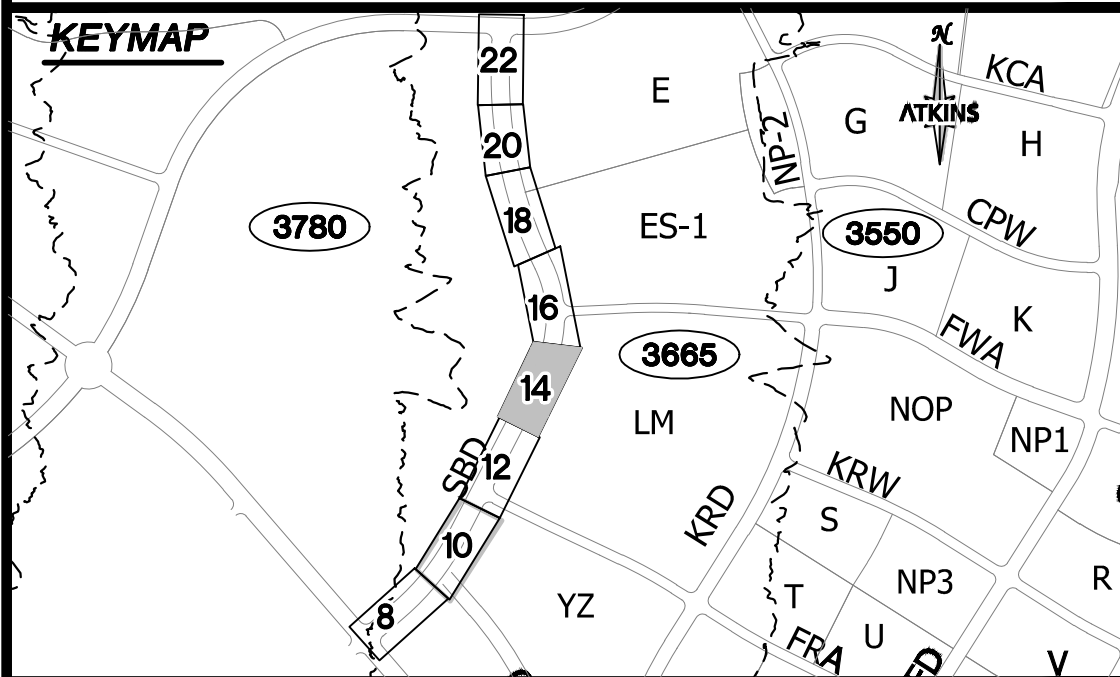
REV.	DESCRIPTION	REVISIONS		
		BY	DATE	APPROVAL

ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7275
Fax: +1702.263.7200

SUMMERLIN

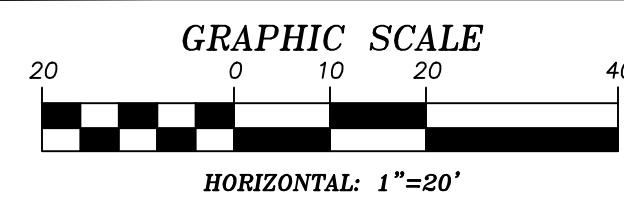
SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD
ROADWAY GRADING PLAN
STA 21+00 TO STA 25+00

DESIGNED BY: B. MOCHTYAK
DRAWN BY: K. HENDRY
CHECKED BY: N. BARCOS
DATE: APRIL 2021
DRAWING NO. 14/42
JOB NO. 100069098



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PROFESSIONAL ENGINEER - STATE OF NEVADA
NICOLAS BARCOS
No. 25873
4/16/2021



GRADING PLAN CERTIFICATION

NICOLAS BARCOS PE#25673 DATE _____

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

DS#XXX-0000

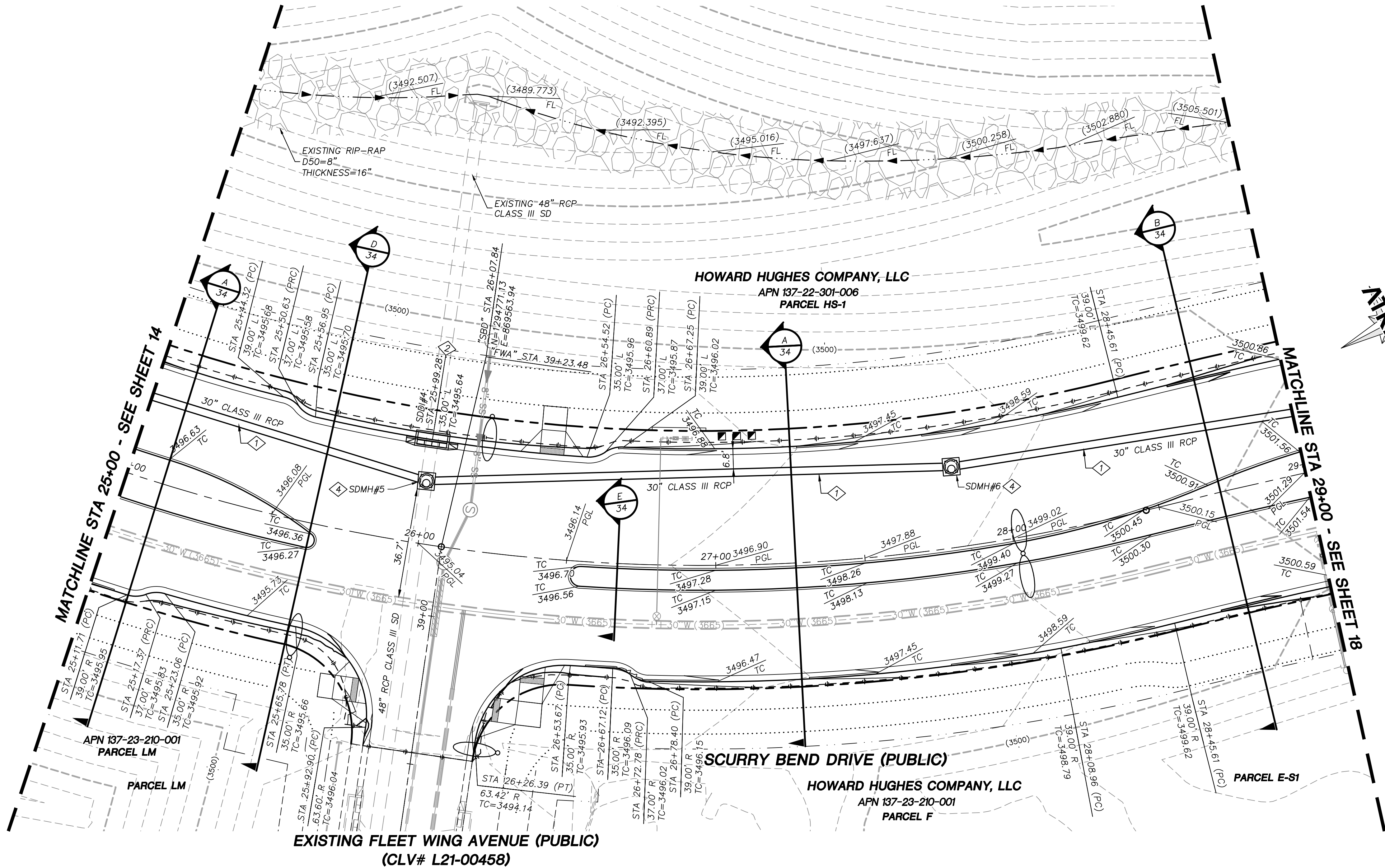
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T21S,R59E,S03

FAST
Call before you Dig
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1-800-642-2444

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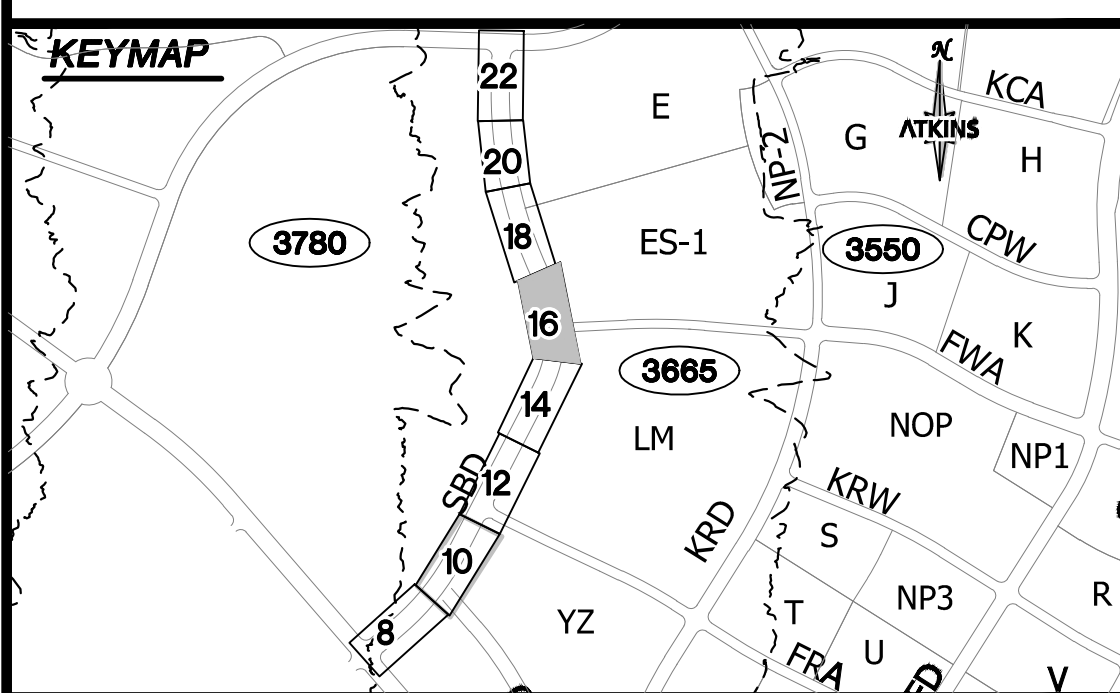
REVISIONS	
REV.	DESCRIPTION

ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7725
Fax: +1702.263.7200

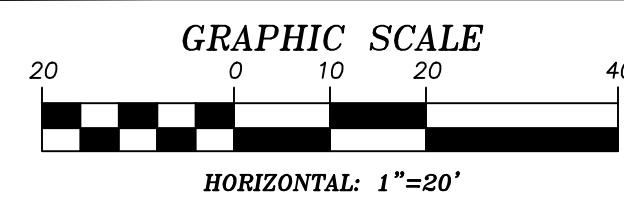
SUMMERLIN

SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD
ROADWAY GRADING PLAN
STA 25+00 TO STA 29+00

DESIGNED BY: B. MOCHTYAK
DRAWN BY: K. HENDRY
CHECKED BY: N. BARCOS
DATE: APRIL 2021
DRAWING NO.: 16/42
JOB NO.: 100069098



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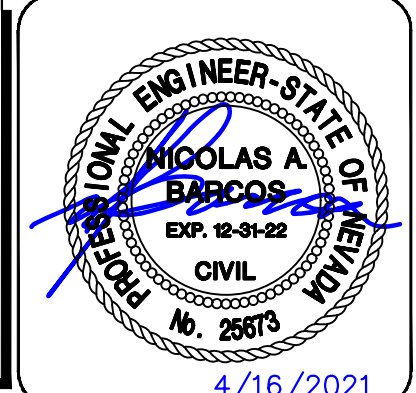
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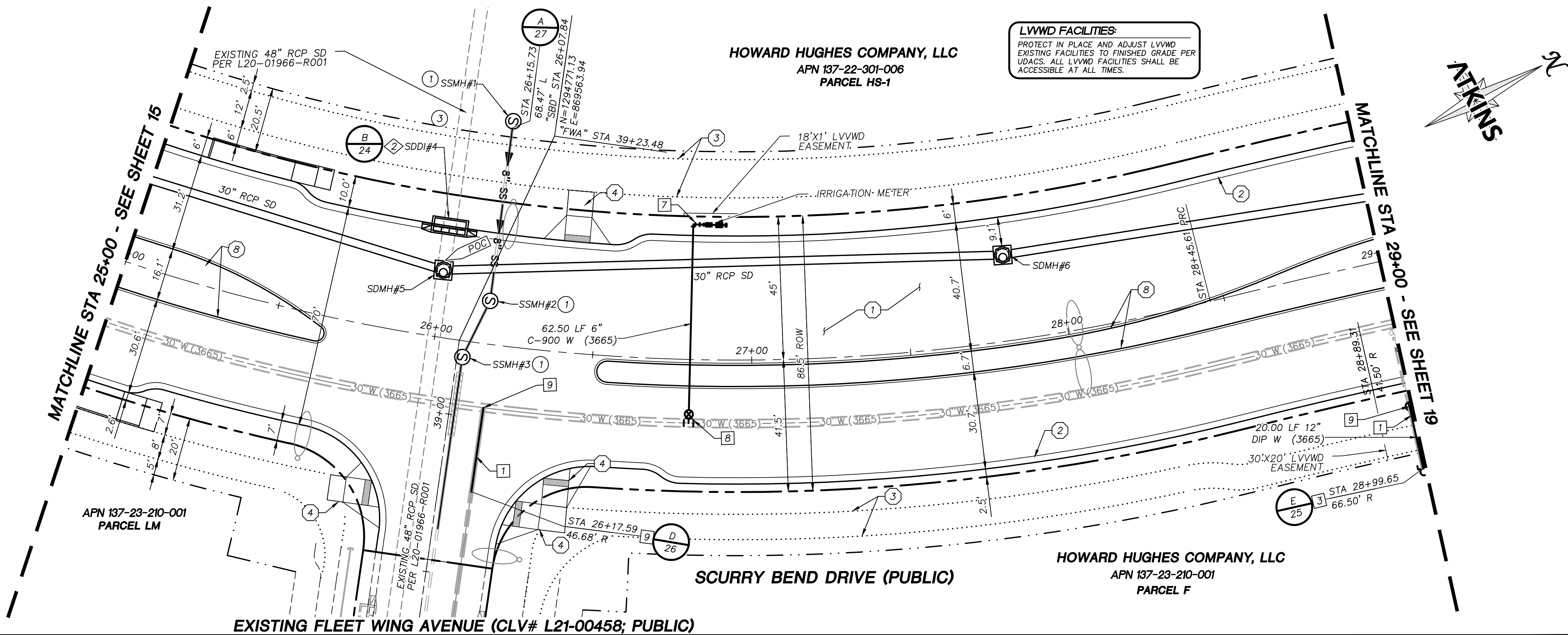
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SEWER CONSTRUCTION NOTES

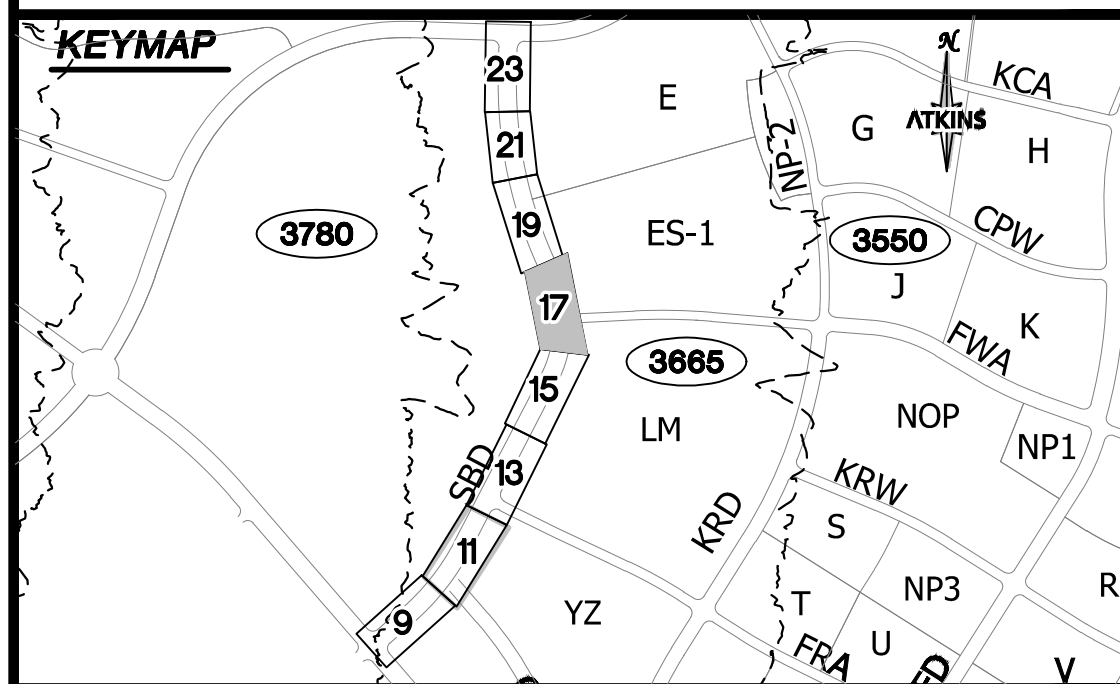
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2. INSTALL SEWER MAIN PER DCSWCS SD-17
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4. CONNECT TO EXISTING SEWER MAIN

WATERLINE CONSTRUCTION NOTES

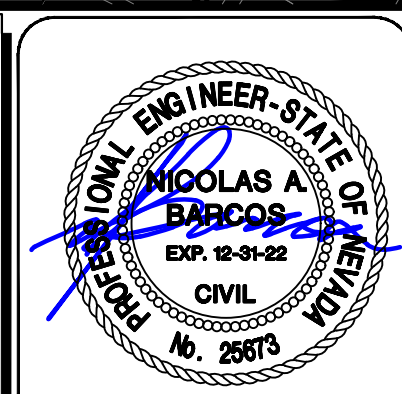
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7. INSTALL 1.5" METER WITH 1.5" RPPA PER UDACS PLATES #4 AND #8
8. INSTALL 1.5" SERVICE SADDLE PER UDACS PLATE #4
9. REMOVE CAP AND 2" BLOWOFF AND CONNECT TO EXISTING WATERLINE STUB
10. INSTALL VERTICAL BEND PER UDACS PLATE #31
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ROADWAY CONSTRUCTION NOTES

1. CONSTRUCT PLANTMIX BITUMINOUS SURFACE OVER TYPE II AGGREGATE BASE PER SOILS REPORT. SEE SHEET 34 FOR TYPICAL PAVEMENT SECTION.
2. CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD #216
3. FUTURE SIDEWALK BY OTHERS
4. CONSTRUCT CURB RAMP, TYPE A, PER NDOT STANDARD PLAN R-5.2.1.
5. CONSTRUCT 0" FLUSH CURB
6. TRANSITION CURB FROM FULL HEIGHT (6") TO FLUSH (0")
7. INSTALL SCHEDULE 40 PVC IRRIGATION SLEEVES (2-4", 1-6") PER DETAIL C ON SHEET 37.
8. CONSTRUCT "A" TYPE ISLAND CURB PER CCAUSD #219



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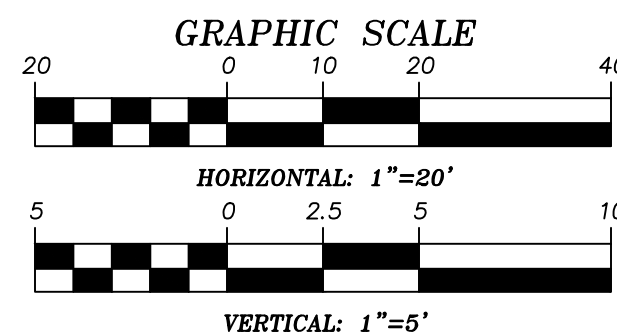
DESIGNED BY: B. MOCHTAK
DRAWN BY: K. HENDRY
CHECKED BY: N. BARCOS
DATE: APRIL 2021
DRAWING NO.: 17/42
VERT.: NONE

SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD
ROADWAY PLAN + PROFILE
STA 25+00 TO STA 29+00



ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7275
Fax: +1702.263.7200

REV.	DESCRIPTION	DATE	APPROVAL



APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING
AND PLANNING SERVICES
PROJECT NO. 0000000 FIRST APPROVED DATE: _____
LVVWD APPROVED FIRE FLOW 1500 GPM AT 20 PSI RESIDUAL

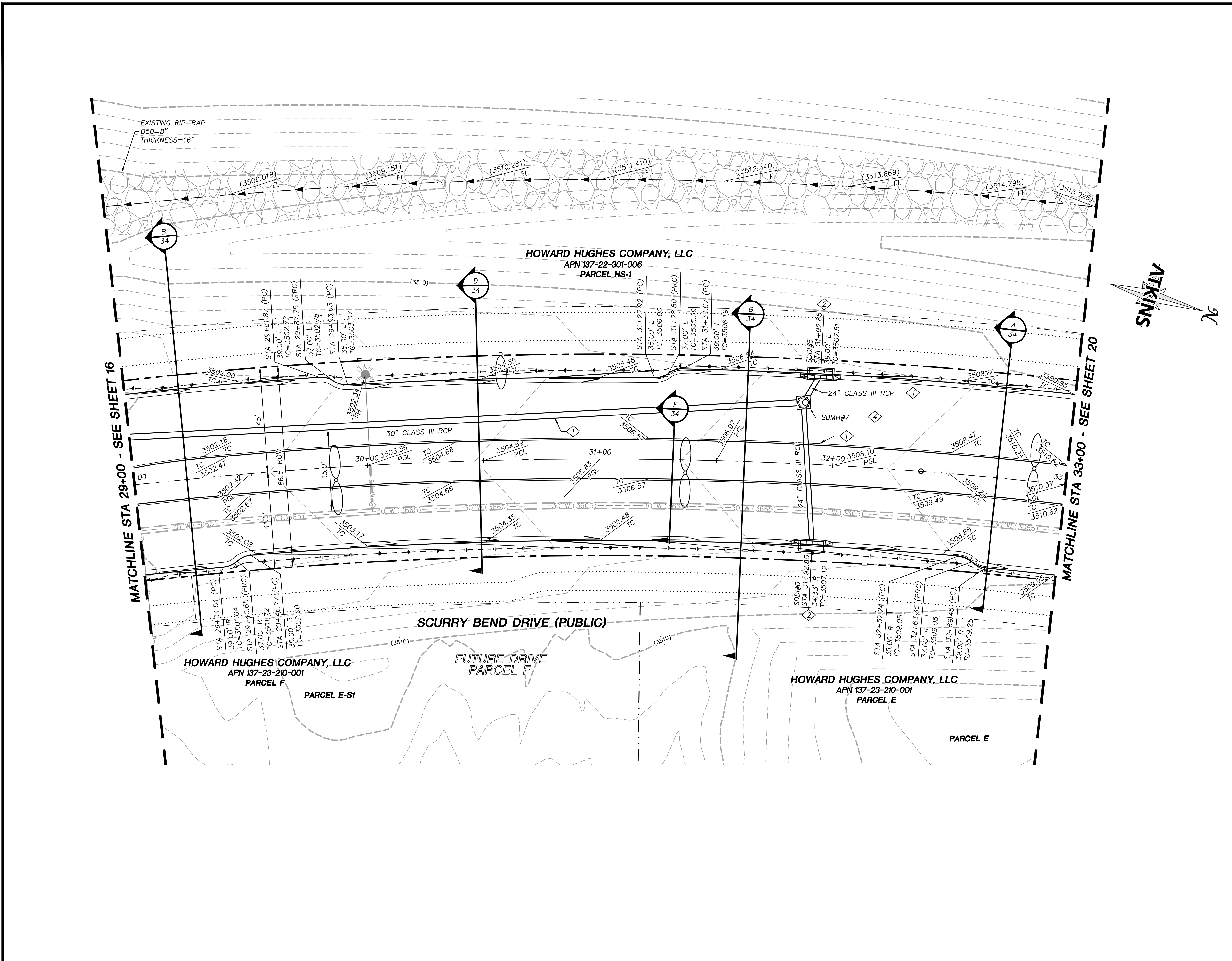
BASIS OF BEARING

GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NORS), 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 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,R59E,S03





- ### STORM DRAIN CONSTRUCTION NOTES
1. INSTALL STORM DRAIN. SEE SHEET 3 FOR ADDITIONAL STORM DRAIN NOTES AND INFORMATION.
 2. INSTALL TYPE "CM2" DROP INLET PER CCAUSD #412.1 & #421
 3. INSTALL TYPE II SD MANHOLE PER CCAUSD #405.2
 4. INSTALL TYPE III SD MANHOLE PER CCAUSD #406
 5. INSTALL NDOT TYPE 2 DROP INLET PER NDOT R-4.2.1 (SEE SHEET 29)
 6. STUB & PLUG STORM DRAIN FOR FUTURE CONNECTION PER MANUFACTURER'S PLUG, OR APPROVED EQUAL (SEE SHEET 35)
 7. NOT USED
 8. INSTALL SD JUNCTION STRUCTURE
 9. DIRECT CONNECTION INTO RCB SEE SHEET 35 FOR DETAIL
 10. INSTALL TYPE I SD RISER PER CCAUSD #403.1
 11. INSTALL TYPE "CM" DROP INLET PER CCAUSD #421 & #422
 12. INSTALL PRECAST REINFORCED CONCRETE BOX PER NDOT STANDARD 502 AND 503 SEE SHEET 35 FOR RCB INFORMATION

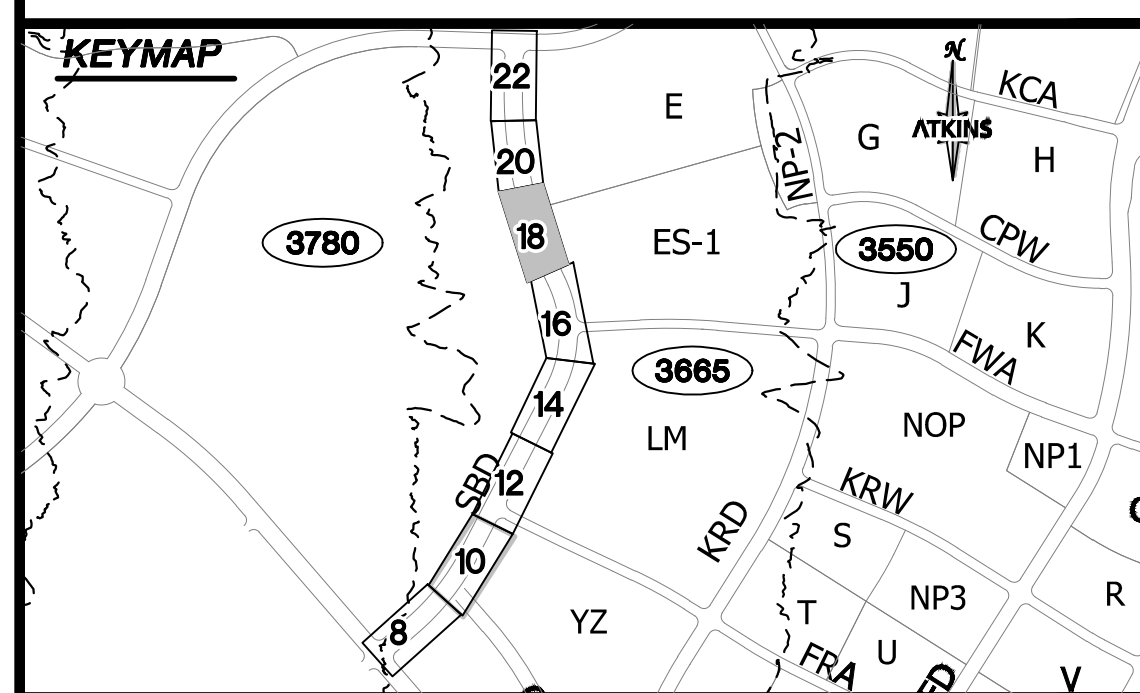
REVISIONS	
REV.	DESCRIPTION

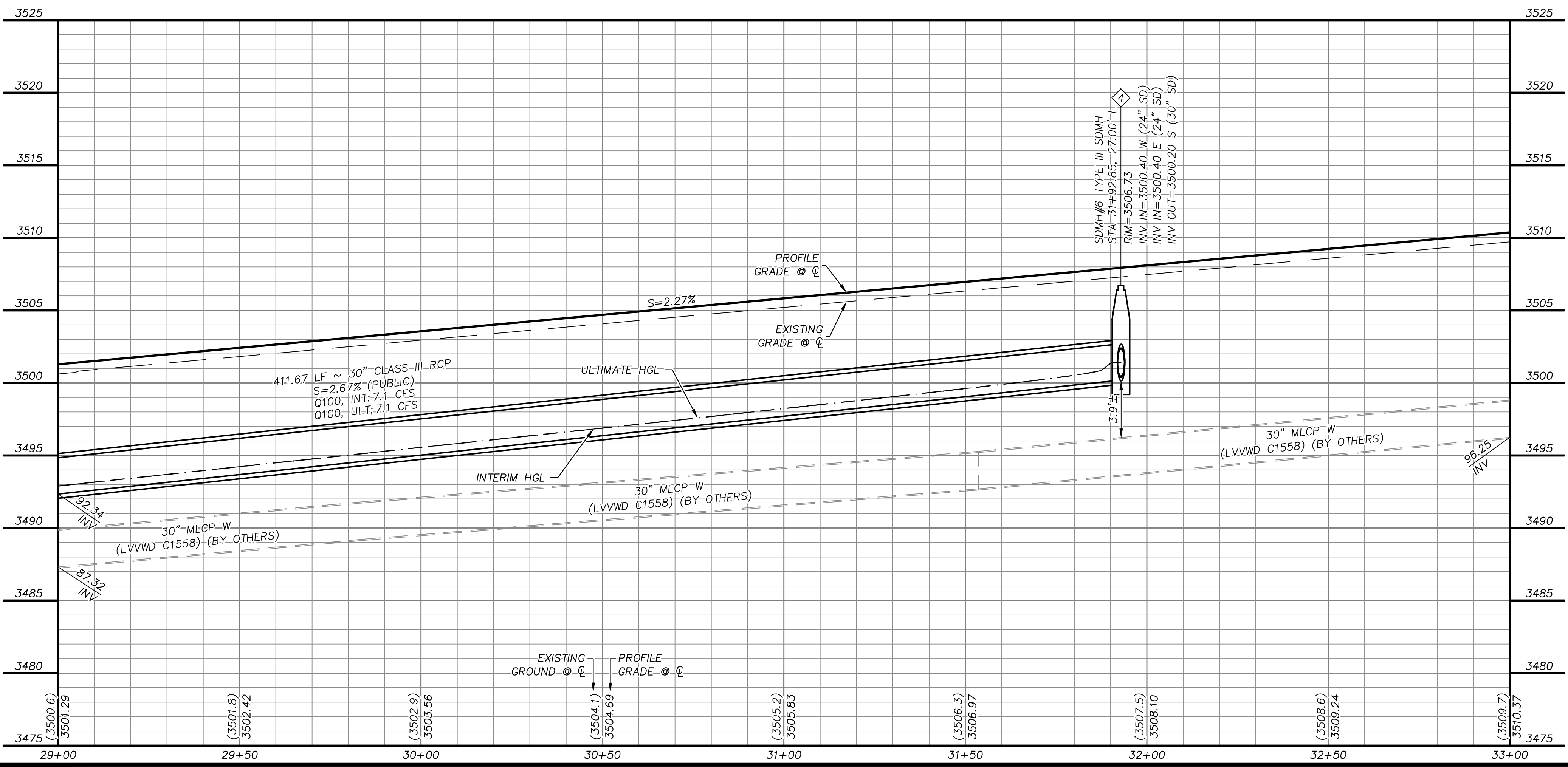
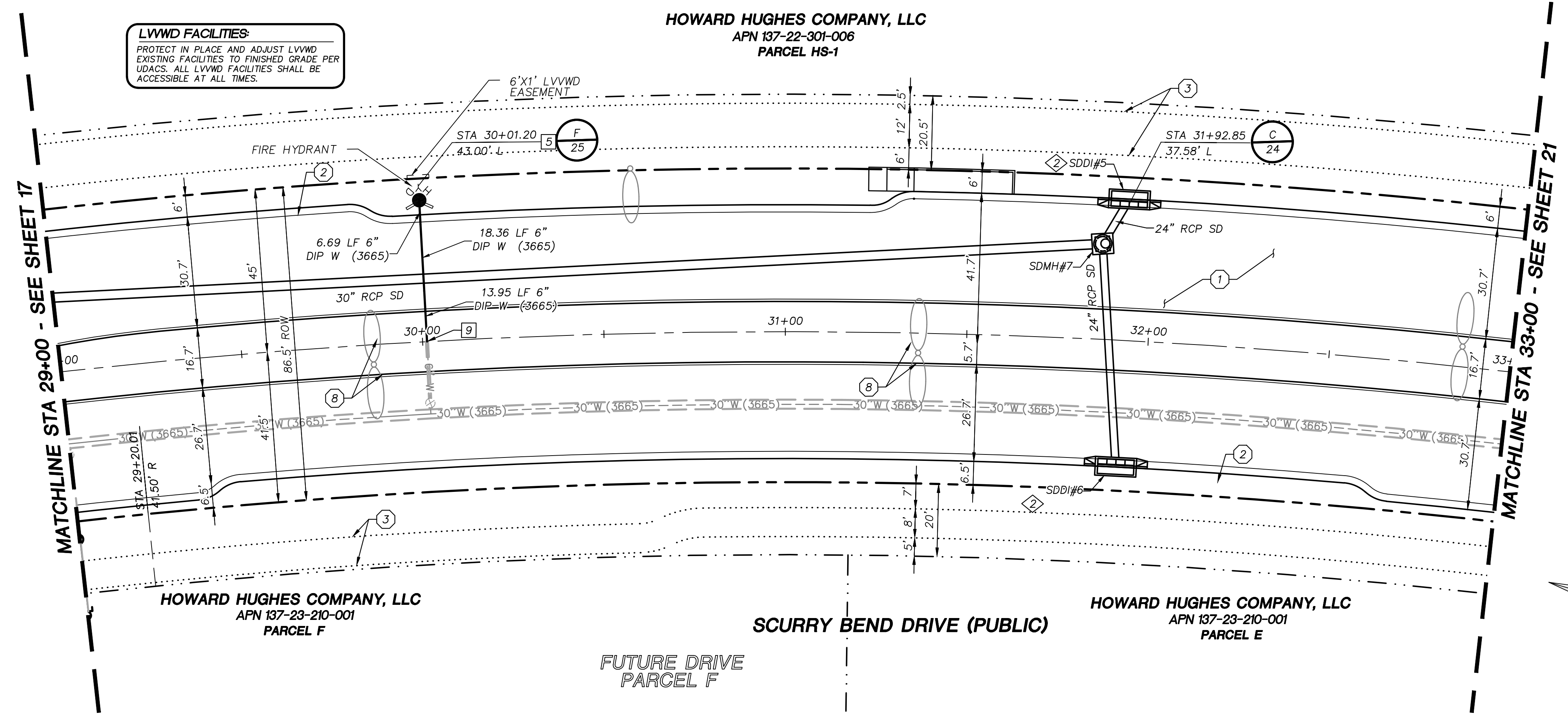
ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7275
Fax: +1702.263.7200

SUMMERLIN

SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD
ROADWAY GRAADING PLAN
STA 29+00 TO STA 33+00

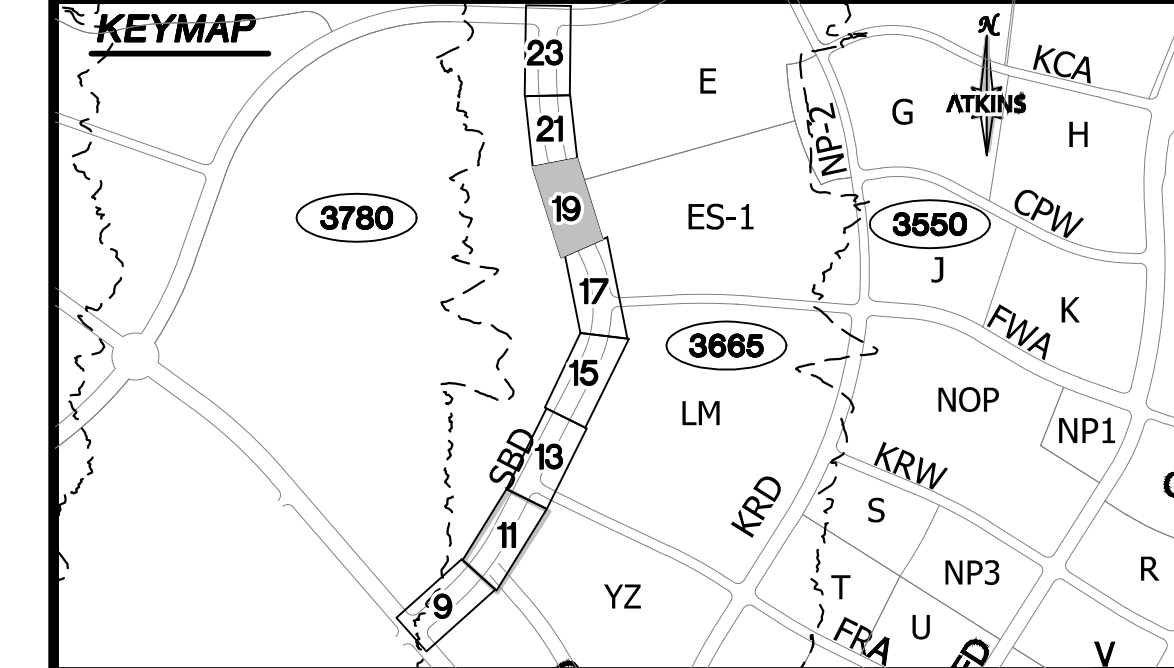
DESIGNED BY: B. MOCHTYAK
DRAWN BY: K. HENDRY
CHECKED BY: N. BARCOS
DATE: APRIL 2021
DRAWING NO.: 18/42
JOB NO.: 100069098





- ### STORM DRAIN CONSTRUCTION NOTES
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 3. INSTALL TYPE II SD MANHOLE PER CCAUSD #405.2
 4. INSTALL TYPE III SD MANHOLE PER CCAUSD #406
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 7. NOT USED
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 9. DIRECT CONNECTION INTO RCB SEE SHEET 35 FOR DETAIL
 10. INSTALL TYPE I SD RISER PER CCAUSD #403.1
 11. INSTALL TYPE "CM" DROP INLET PER CCAUSD #421 & #422
 12. INSTALL PRECAST REINFORCED CONCRETE BOX PER NDOT STANDARD 502 AND 503 SEE SHEET 35 FOR RCB INFORMATION
- ### SEWER CONSTRUCTION NOTES
1. INSTALL SEWER MANHOLE PER DCSWCS SD-1A, SD-1B, AND SD-4
 2. INSTALL SEWER MAIN PER DCSWCS SD-17
 3. STUB AND CAP SEWER PIPE. PLACE MARKER BALL AND 4"x4" POST, DOUGLAS FIR, OVER END OF PIPE AND INSTALL THRUST BLOCK (1 CUBIC FT. MINIMUM).
 4. CONNECT TO EXISTING SEWER MAIN
- ### WATERLINE CONSTRUCTION NOTES
1. INSTALL WATER MAIN PER UDACS PLATES #17 AND PLATE #19
 2. INSTALL GATE VALVE PER UDACS PLATES #30 AND #39
 3. INSTALL CAP AND 2" MANUAL BLOWOFF ASSEMBLY PER UDACS PLATE #36
 4. INSTALL TEE W/ VALVE AND LATERAL PER UDACS PLATES #17, #19, #30, #31 AND #39
 5. INSTALL FIRE HYDRANT WITH APPURTENANCES (CONCRETE PAD, LATERAL, VALVE, AND TEE) PER UDACS PLATES #30, #31, #39, AND #40.
 6. INSTALL DEFLECTION AT PIPE JOINTS (MAXIMUM OF 1")
 7. INSTALL 1.5" METER WITH 1.5" RPPA PER UDACS PLATES #4 AND #8
 8. INSTALL 1.5" SERVICE SADDLE PER UDACS PLATE #4
 9. REMOVE CAP AND 2" BLOWOFF AND CONNECT TO EXISTING WATERLINE STUB
 10. INSTALL VERTICAL BEND PER UDACS PLATE #31
 11. ADJUST MANHOLE RIM AND BLOW OFF VALVE TO FINISH GRADE

- ### ROADWAY CONSTRUCTION NOTES
1. CONSTRUCT PLANTMIX BITUMINOUS SURFACE OVER TYPE II AGGREGATE BASE PER SOILS REPORT. SEE SHEET 34 FOR TYPICAL PAVEMENT SECTION.
 2. CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD #216
 3. FUTURE SIDEWALK BY OTHERS
 4. CONSTRUCT CURB RAMP, TYPE A, PER NDOT STANDARD PLAN R-5.2.1.
 5. CONSTRUCT 0" FLUSH CURB
 6. TRANSITION CURB FROM FULL HEIGHT (6") TO FLUSH (0")
 7. INSTALL SCHEDULE 40 PVC IRRIGATION SLEEVES (2-4", 1-6") PER DETAIL C ON SHEET 37.
 8. CONSTRUCT "A" TYPE ISLAND CURB PER CCAUSD #219



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

REVISIONS	
NO.	DESCRIPTION

BY	DATE	APPROVAL

ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7275
Fax: +1702.263.7200

SUMMERLIN

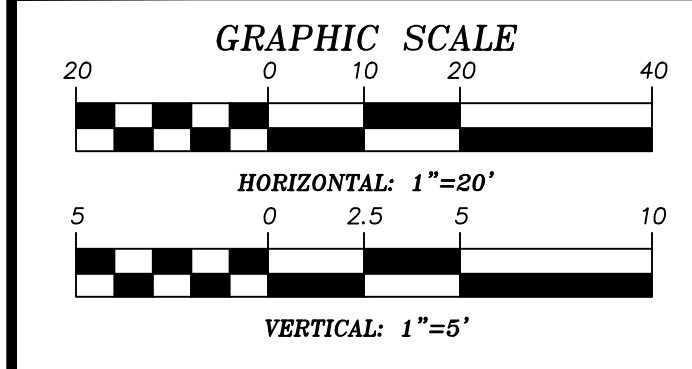
SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD
ROADWAY PLAN + PROFILE
STA 29+00 TO STA 33+00

DESIGNED BY: B. MOCHTYAK
DRAWN BY: K. HENDRY
CHECKED BY: N. BARCOS
HORIZ: 1"=20'
VERT: NONE

XXXXXX
LXX-XXXX
DATE: APRIL 2021
DRAWING NO.
19/42

4/16/2021

JOB NO. 100069098



APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING AND PLANNING SERVICES

PROJECT NO. 0000000 FIRST APPROVED DATE: _____

LVVWD APPROVED FIRE FLOW 1500 GPM AT 20 PSI RESIDUAL

BASIS OF BEARING

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

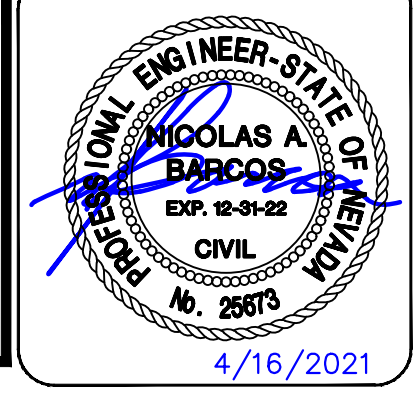
BENCHMARK

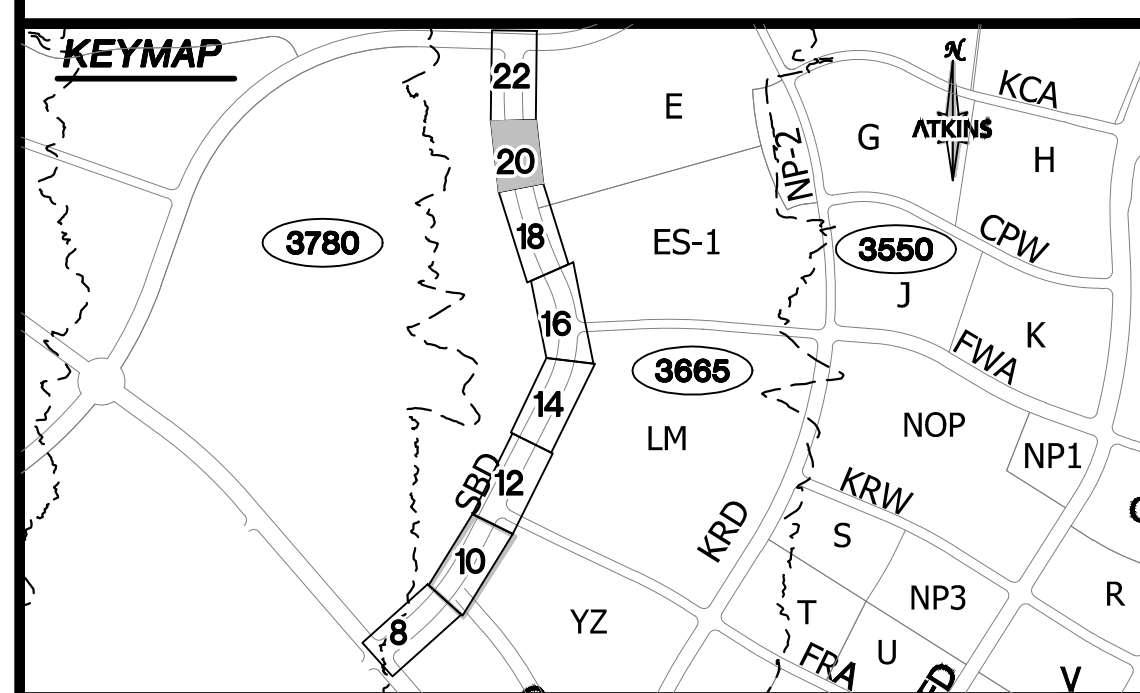
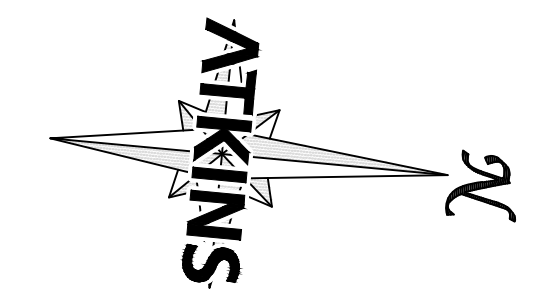
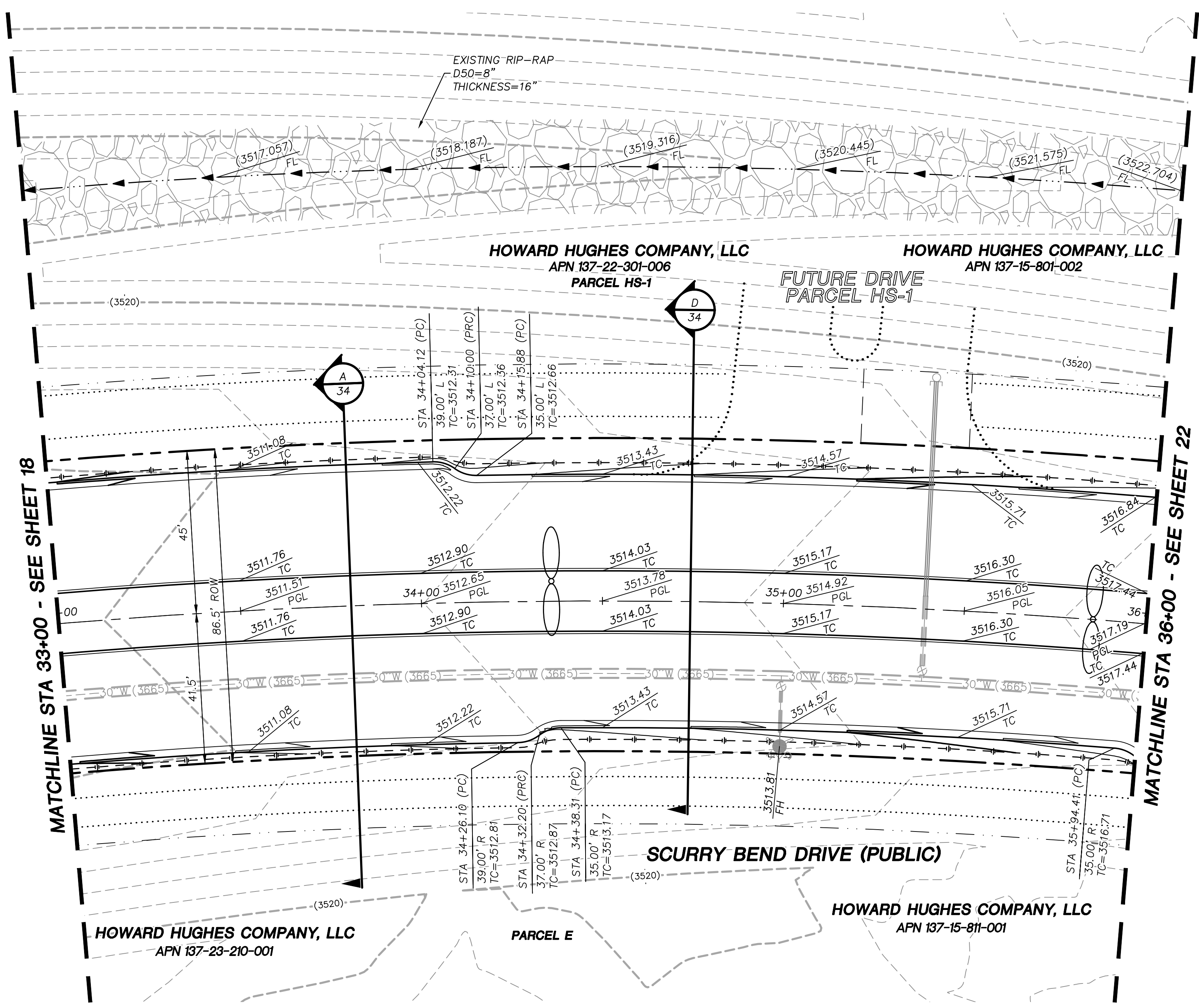
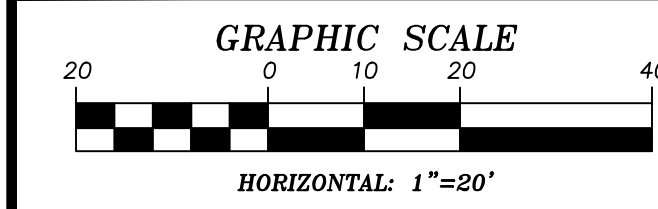
CITY OF LAS VEGAS BENCHMARK: D368 (REVISED 2008)
NAVD88 ELEVATION: 989.574 METERS (3,246.63 FEET)
FND USC&GS DISC SET IN ROCK RIDGE 150' SOUTH OF CHARLESTON BLVD. & WEST OF DETENTION BASIN.
T21S.R59E.S03

FAST
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1-800-642-2444

Call before you Dig
811
1-800-642-2444

CALL BEFORE YOU DIG
1-702-227-2929





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

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1. INSTALL STORM DRAIN. SEE SHEET 3 FOR ADDITIONAL STORM DRAIN NOTES AND INFORMATION.
 2. INSTALL TYPE "CM2" DROP INLET PER CCAUSD #412.1 & #421
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 4. INSTALL TYPE III SD MANHOLE PER CCAUSD #406
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 6. STUB & PLUG STORM DRAIN FOR FUTURE CONNECTION PER MANUFACTURER'S PLUG, OR APPROVED EQUAL (SEE SHEET 35)
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 9. DIRECT CONNECTION INTO RCB SEE SHEET 35 FOR DETAIL
 10. INSTALL TYPE I SD RISER PER CCAUSD #403.1
 11. INSTALL TYPE "CM" DROP INLET PER CCAUSD #421 & #422
 12. INSTALL PRECAST REINFORCED CONCRETE BOX PER NDOT STANDARD 502 AND 503 SEE SHEET 35 FOR RCB INFORMATION

GRADING PLAN CERTIFICATION

NICOLAS BARCOS PE#25673 DATE _____

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

DS#XXX-0000

BASIS OF BEARING

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

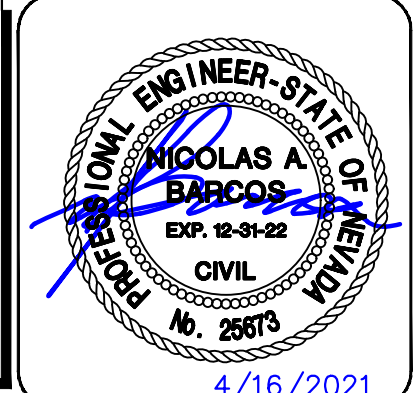
BENCHMARK

CITY OF LAS VEGAS 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,R59E,S03

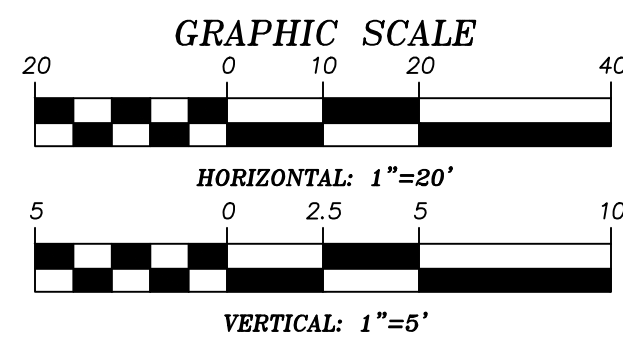
Call before you Dig
Call 811
UnderGround
1-702-432-5300

Call before you Dig
Call 811
UnderGround
1-702-432-5300

Call before you Dig
Call 811
UnderGround
1-702-432-5300

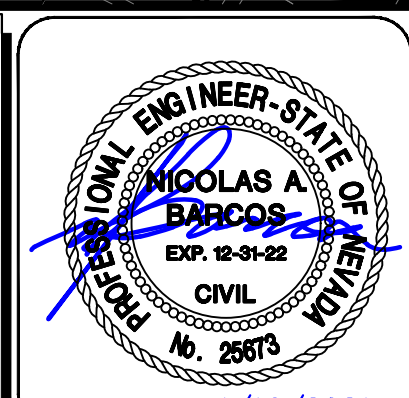


DESIGNED BY: B. MOCHTYAK		DRAWN BY: K. HENDRY		CHECKED BY: N. BARCOS		DATE: APRIL 2021		DRAWING NO. 20/42		JOB NO. 100069098	
SUMMERLIN WEST VILLAGE 25		SCURRY BEND DRIVE (STREET N)		SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD		ROADWAY GRADING PLAN		STA 33+00 TO STA 37+00		C:\pwwork\atkins\01\mrs4393\drns56326\69098-08-BRAD-GI.dwg LAYOUT: 20 ROADWAY GRADING PLAN Apr 19, 2021 - 10:42AM	
ATKINS		SUMMERLIN		ATKINS		ATKINS		ATKINS		ATKINS	
2270 Corporate Circle Suite 200 Henderson, Nevada 89074 Telephone: +1702.263.7275 Fax: +1702.263.7200											

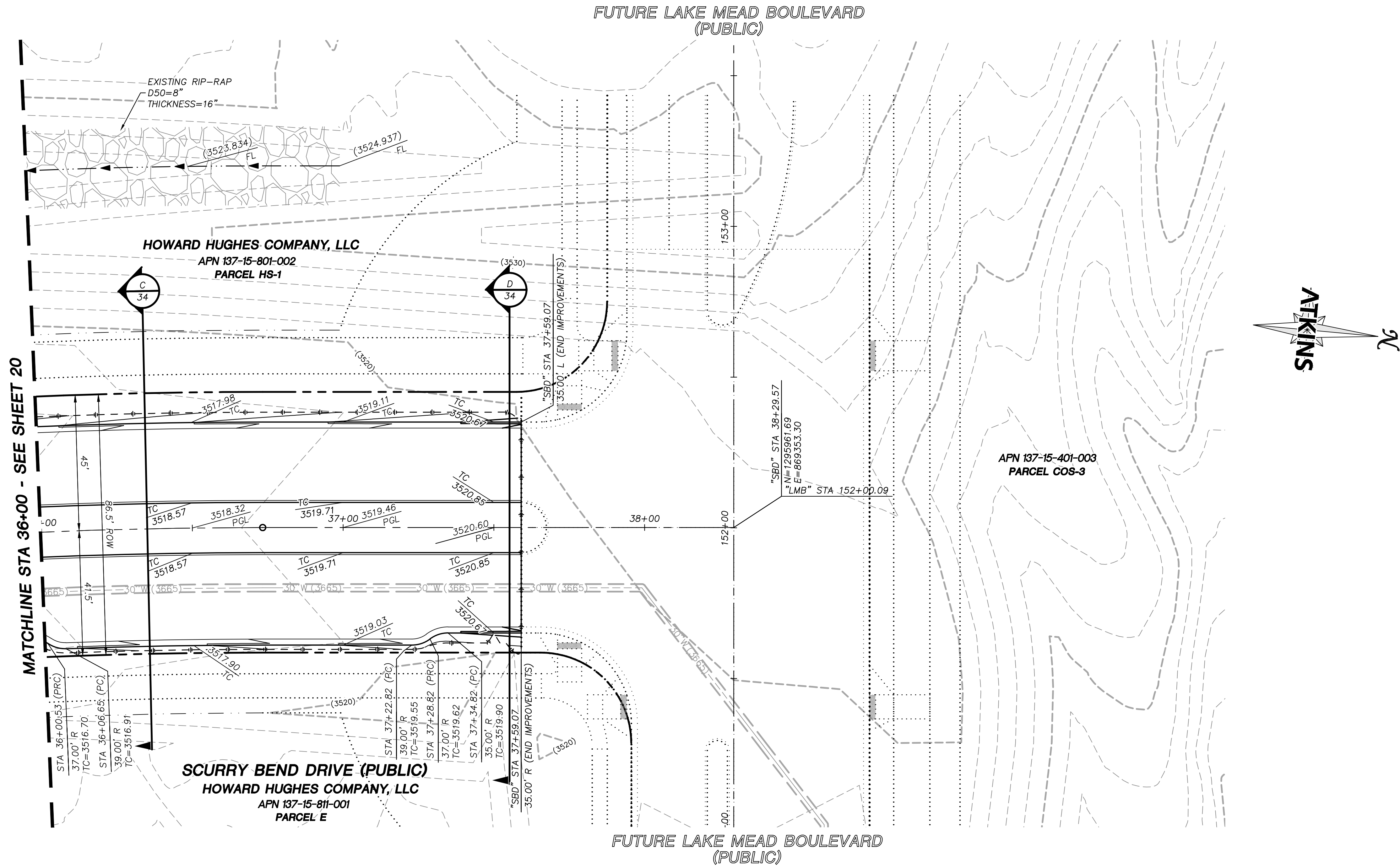


PROJECT NO. 000000 FIRST APPROVED DATE: _____
LVVWD APPROVED FIRE FLOW 1500 GPM AT 20 PSI RESIDUAL

CITY OF LAS VEGAS BENCHMARK: D368
(REVISED 2008)
NAVDS8 ELEVATION: 989.574 METERS
(3,246.63 FEET)
FIND USC&GS DISC SET IN ROCK RIDGE 150
SOUTH OF CHARLESTON BLVD. & WEST OF
DETENTION BASIN.
T21S,R59E,S03



XXXXXX
LXX-XXXX
DATE: APRIL, 2021
DRAWING NO.
21/42



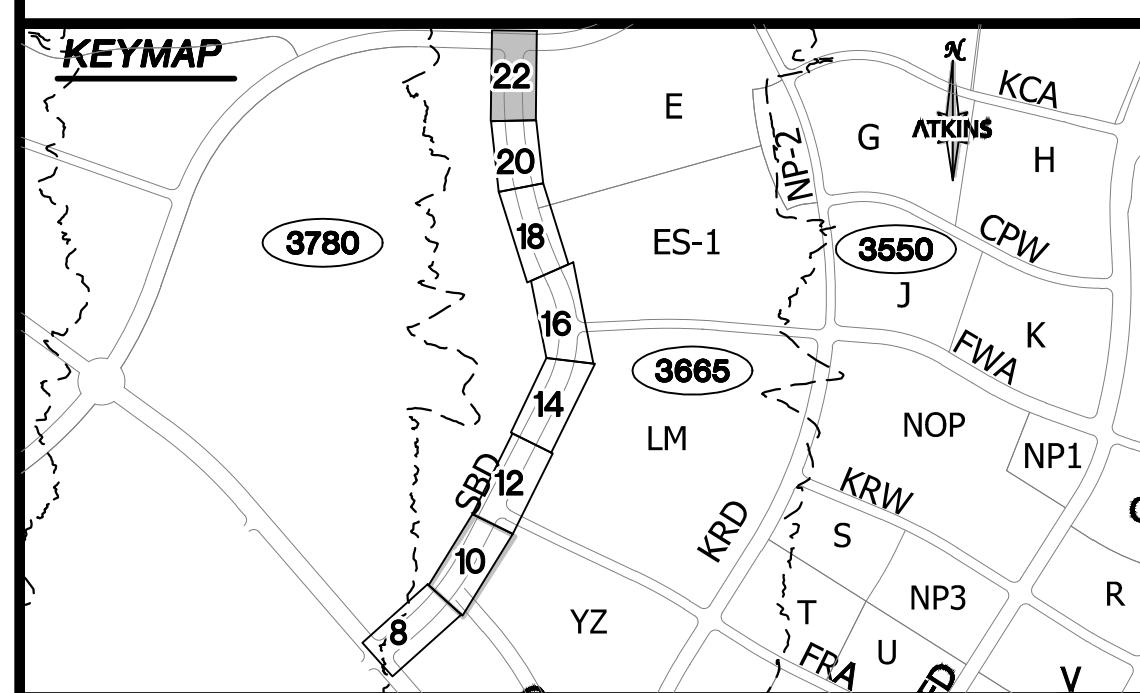
- STORM DRAIN CONSTRUCTION NOTES**
- 1. INSTALL STORM DRAIN. SEE SHEET 3 FOR ADDITIONAL STORM DRAIN NOTES AND INFORMATION.
 - 2. INSTALL TYPE "CM2" DROP INLET PER CCAUSD #412.1 & #421
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 - 7. NOT USED
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 - 9. DIRECT CONNECTION INTO RCB SEE SHEET 35 FOR DETAIL
 - 10. INSTALL TYPE I SD RISER PER CCAUSD #403.1
 - 11. INSTALL TYPE "CM" DROP INLET PER CCAUSD #421 & #422
 - 12. INSTALL PRECAST REINFORCED CONCRETE BOX PER NDOT STANDARD 502 AND 503 SEE SHEET 35 FOR RCB INFORMATION

REV.		DESCRIPTION	BY	DATE	APPROVAL

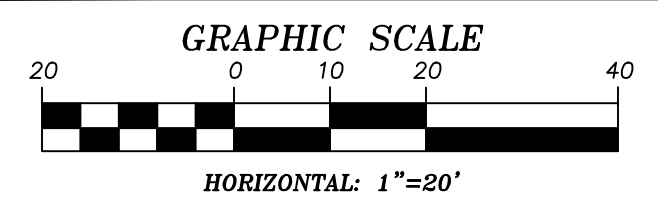
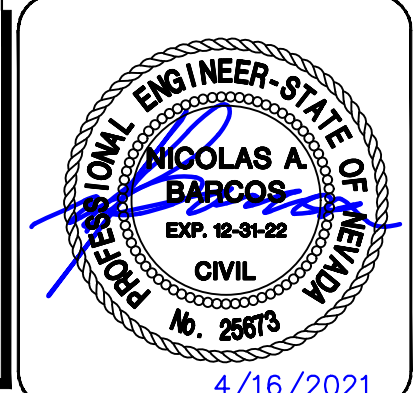
ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7755
Fax: +1702.263.7200

SUMMERLIN

SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD
ROADWAY GRADING PLAN
STA 37+00 TO END



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



GRADING PLAN CERTIFICATION

NICOLAS BARCOS PE#25673 DATE _____

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

DS#XXX-0000

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

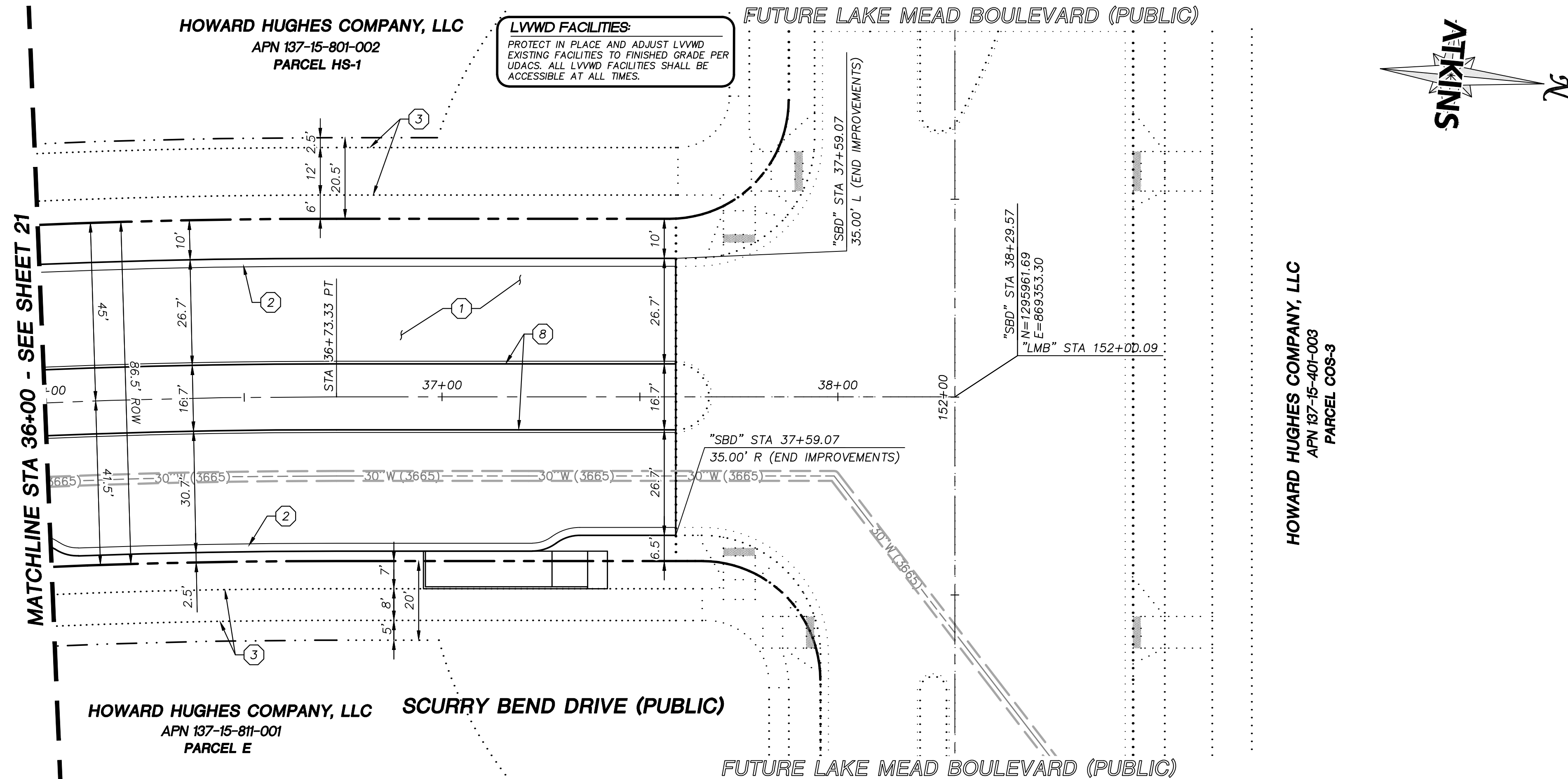
BENCHMARK
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T21S,R59E,S03

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1-800-642-2444

Call before you Dig
811
1-800-642-2444

CALL BEFORE YOU DIG
OVERHEAD
1-702-227-2829

DESIGNED BY: B. MOCHTYAK	DATE: APRIL 2021	DRAWING NO. 22/42
DRAWN BY: K. HENDRY	DATE: APRIL 2021	VERT.: NONE
CHECKED BY: N. BARCOS	DATE: APRIL 2021	
APPROVED BY: NICOLAS BARCOS	DATE: APRIL 2021	



STORM DRAIN CONSTRUCTION NOTES

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SEWER CONSTRUCTION NOTES

- INSTALL SEWER MANHOLE PER DCSWCS SD-1A, SD-1B, AND SD-4
- INSTALL SEWER MAIN PER DCSWCS SD-17
- STUB AND CAP SEWER PIPE. PLACE MARKER BALL AND 4"x4" POST, DOUGLAS FIR, OVER END OF PIPE AND INSTALL THRUST BLOCK (1 CUBIC FT. MINIMUM).
- CONNECT TO EXISTING SEWER MAIN

WATERLINE CONSTRUCTION NOTES

- INSTALL WATER MAIN PER UDACS PLATES #17 AND PLATE #19
- INSTALL GATE VALVE PER UDACS PLATES #30 AND #39
- INSTALL CAP AND 2" MANUAL BLOWOFF ASSEMBLY PER UDACS PLATE #36
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- INSTALL 1.5" SERVICE SADDLE PER UDACS PLATE #4
- REMOVE CAP AND 2" BLOWOFF AND CONNECT TO EXISTING WATERLINE STUB
- INSTALL VERTICAL BEND PER UDACS PLATE #31
- ADJUST MANHOLE RIM AND BLOW OFF VALVE TO FINISH GRADE

ROADWAY CONSTRUCTION NOTES

- CONSTRUCT PLANTMIX BITUMINOUS SURFACE OVER TYPE II AGGREGATE BASE PER SOILS REPORT. SEE SHEET 34 FOR TYPICAL PAVEMENT SECTION.
- CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD #216
- FUTURE SIDEWALK BY OTHERS
- CONSTRUCT CURB RAMP, TYPE A, PER NDOT STANDARD PLAN R-5.2.1.
- CONSTRUCT 0" FLUSH CURB
- TRANSITION CURB FROM FULL HEIGHT (6") TO FLUSH (0")
- INSTALL SCHEDULE 40 PVC IRRIGATION SLEEVES (2-4",1-6") PER DETAIL C ON SHEET 37.
- CONSTRUCT "A" TYPE ISLAND CURB PER CCAUSD #219

KEYMAP

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2270 Corporate Circle Suite 200
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Telephone: +1702.263.7275
Fax: +1702.263.7200

SUMMERLIN

SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD

ROADWAY PLAN + PROFILE
STA 37+00 TO END

DESIGNED BY: B. MOCHTYAK
DRAWN BY: K. HENDRY
CHECKED BY: N. BARCOS
HORIZ.: 1"=20'
VERT.: NONE

ENGINEER-STATE OF NEVADA
N. BARCOS
No. 25873
4/16/2021

XXXXXX
LXX-XXXX
DATE: APRIL, 2021
DRAWING NO.
23/42

JOB NO. 100069098

GRAPHIC SCALE
HORIZONTAL: 1"=20'
VERTICAL: 1"=5'

APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING AND PLANNING SERVICES
PROJECT NO. 000000 FIRST APPROVED DATE: _____
LVVWD APPROVED FIRE FLOW 1500 GPM AT 20 PSI RESIDUAL

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CITY OF LAS VEGAS BENCHMARK: D368 (REVISED 2008)
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FND USC&GS DISC SET IN ROCK RIDGE 150' SOUTH OF CHARLESTON BLVD. & WEST OF DETENTION BASIN.
T21S,R59E,S03

FAST
Call before you Dig
UnderGround
1-702-432-5300

Call before you Dig
Call 811
1-800-642-2444

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DIG OVERHEAD
1-702-227-2829

ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7275
Fax: +1702.263.7200

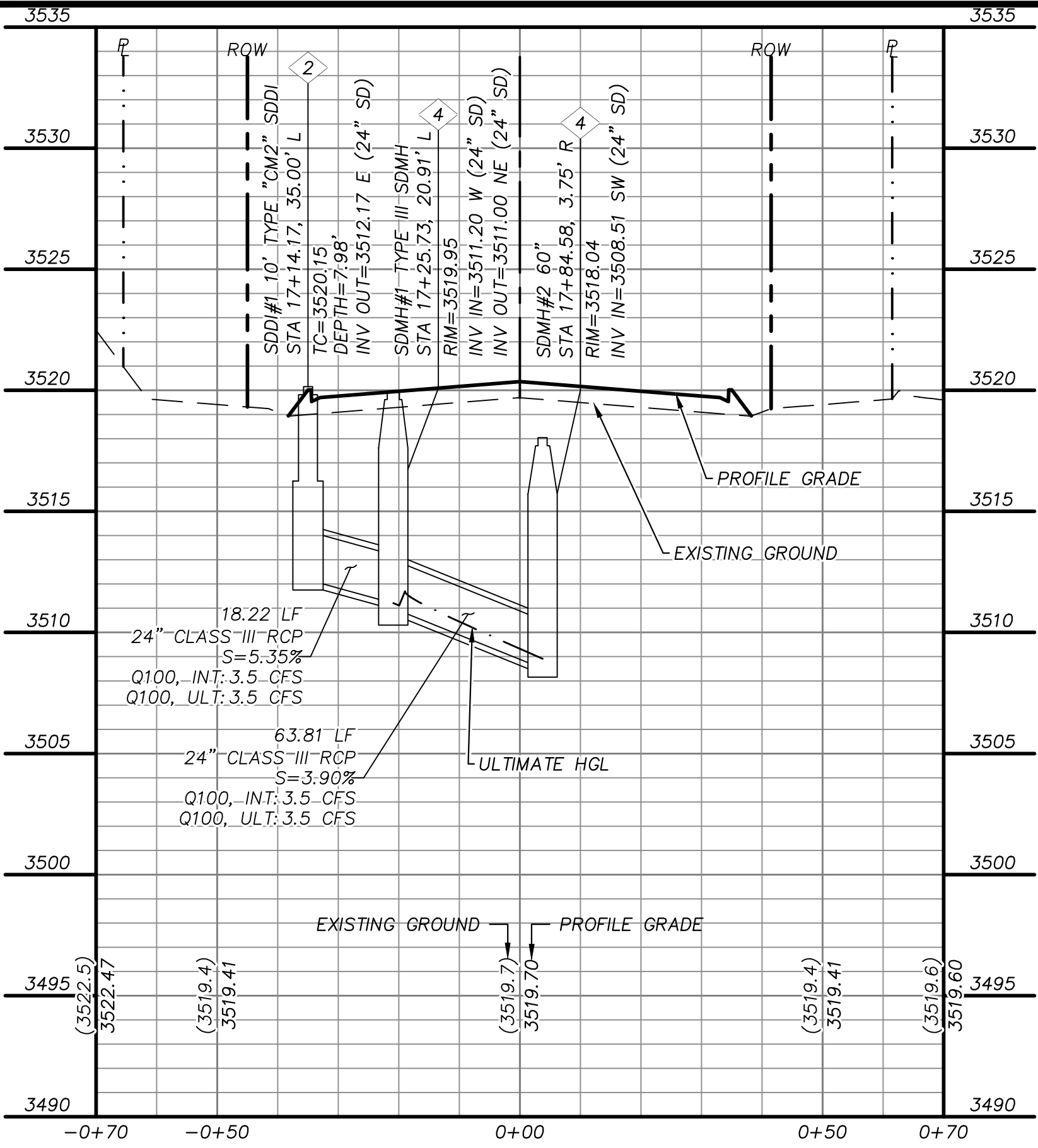
SUMMERLIN

DESIGNED BY: B. MOCHTYAK
DRAWN BY: K. HENDRY
CHECKED BY: N. BARCOS
HORIZ.: 1"=20'
VERT.: NONE

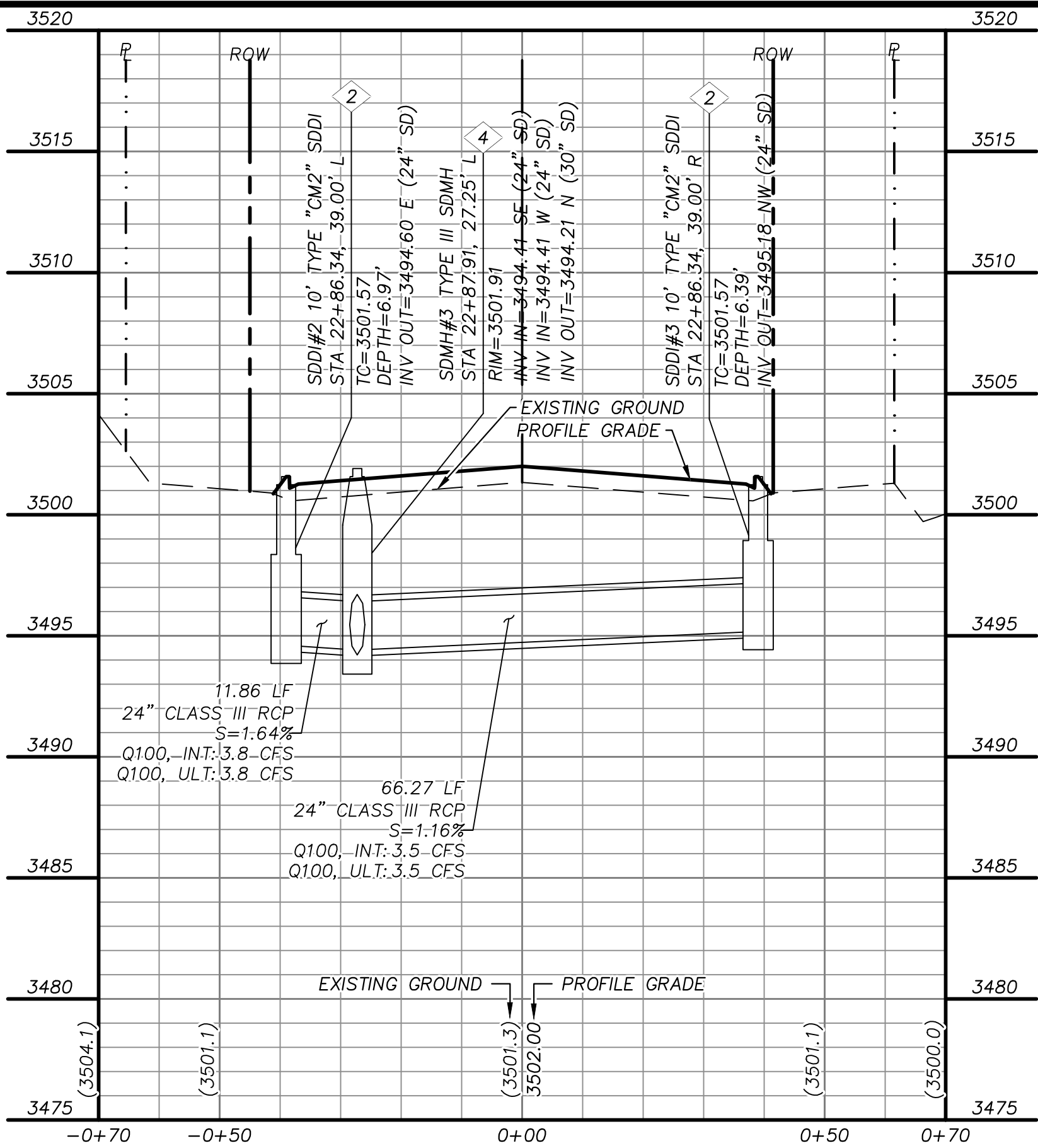
ENGINEER-STATE OF NEVADA
N. BARCOS
No. 25873
4/16/2021

XXXXXX
LXX-XXXX
DATE: APRIL, 2021
DRAWING NO.
23/42

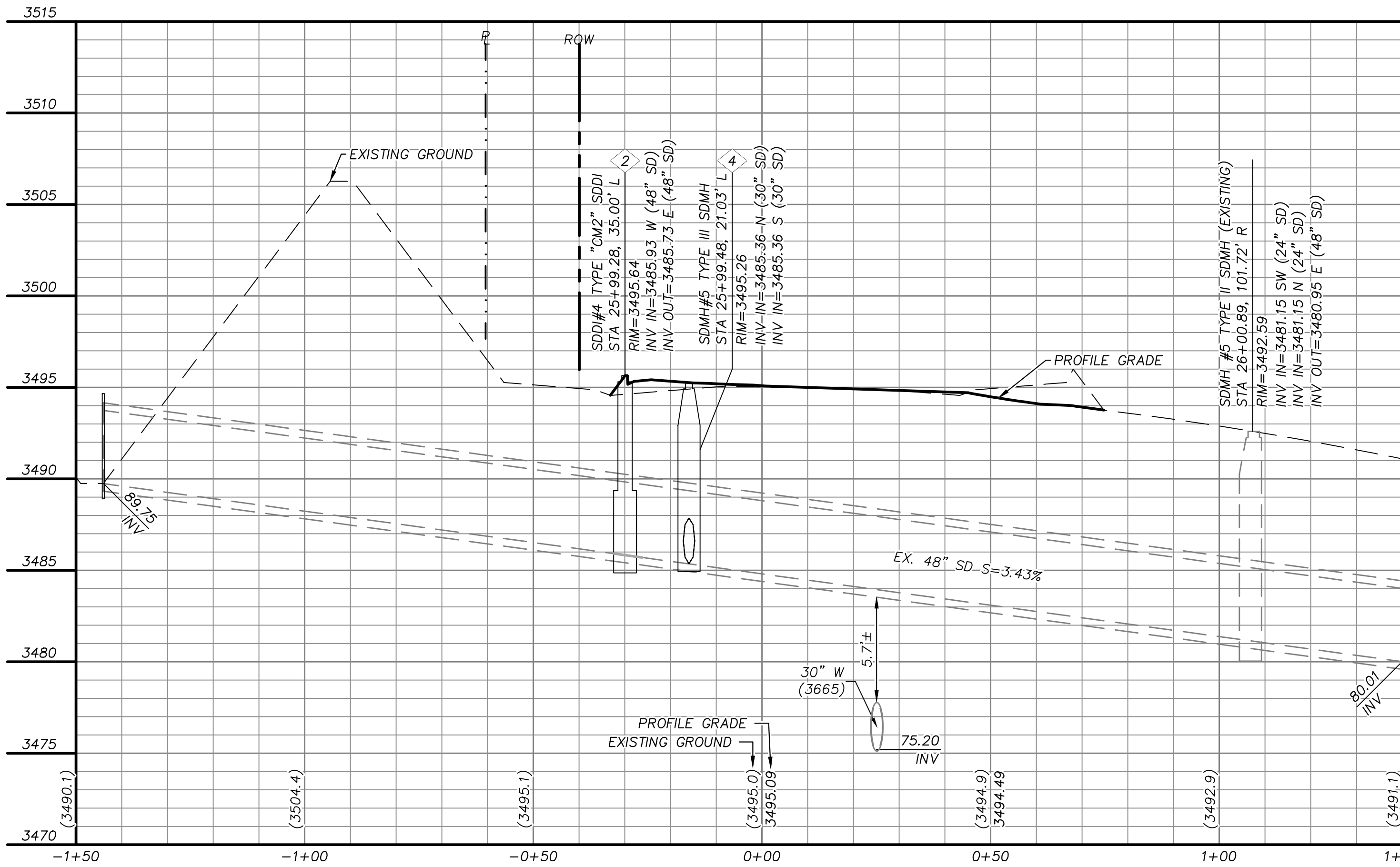
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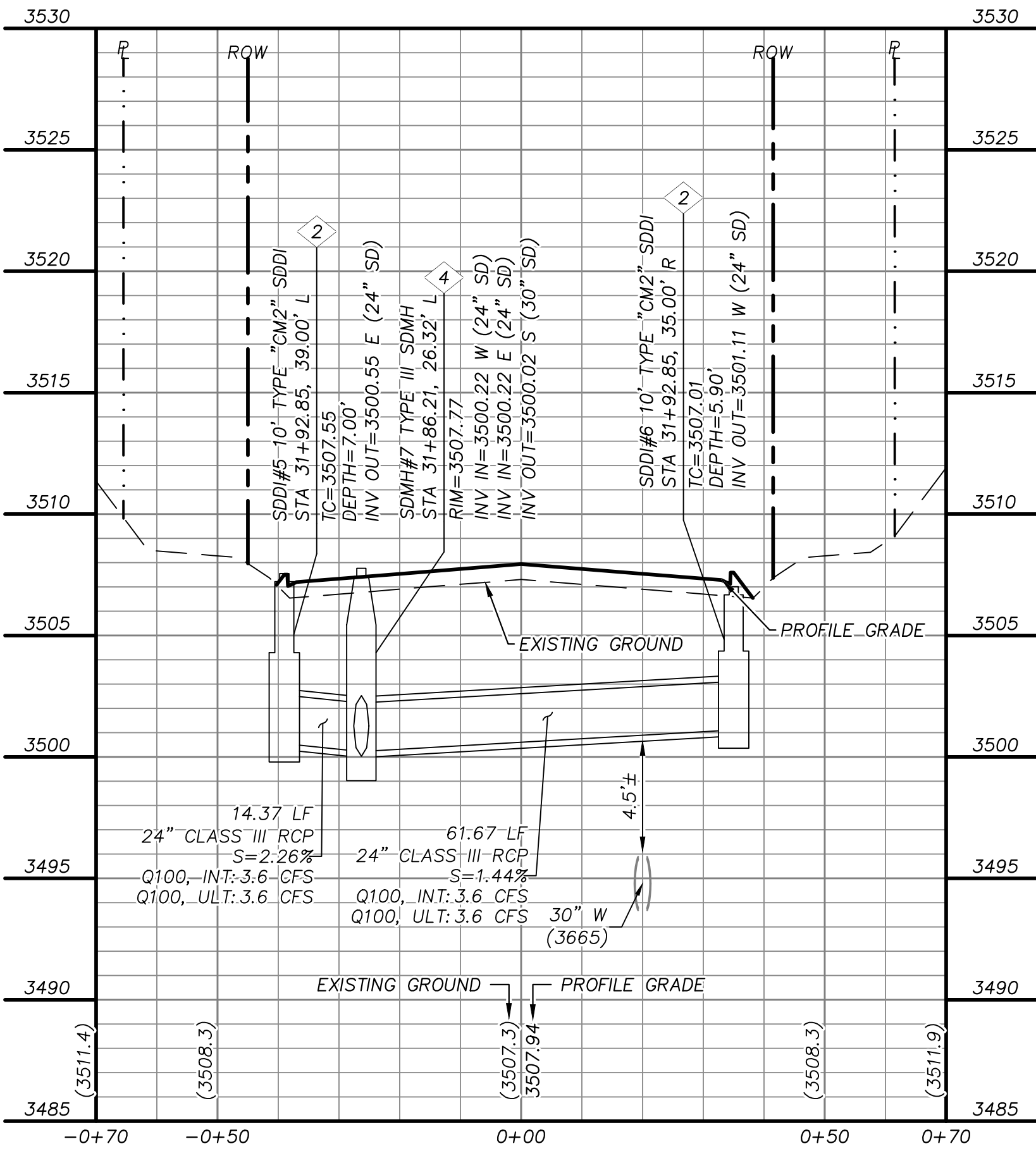
STORM DRAIN LATERAL 1
"SBD" STA. 17+25.85 SEE SHEET 13



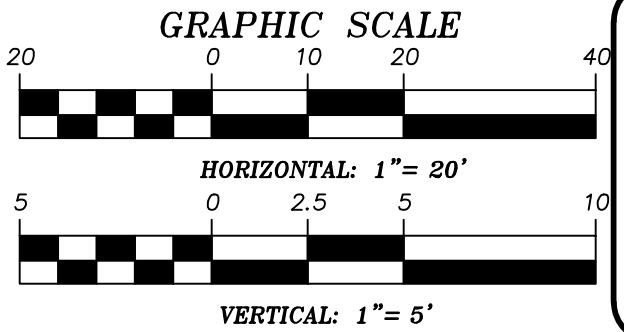
STORM DRAIN LATERAL 2
"SBD" STA. 22+86.34 SEE SHEET 15



STORM DRAIN LATERAL 3
"SBD" STA. 25+99.76 SEE SHEET 17



STORM DRAIN LATERAL 4
"SBD" STA. 31+92.85 SEE SHEET 19



APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING
AND PLANNING SERVICES

PROJECT NO. 000000 FIRST APPROVED DATE: _____
LVVWD APPROVED FIRE FLOW 1500 GPM AT 20 PSI RESIDUAL

BASIS OF BEARING

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

BENCHMARK

CITY OF LAS VEGAS BENCHMARK: D368
(REVISED 2008)
NAV088 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,R59E,S03



STORM DRAIN CONSTRUCTION NOTES

1. INSTALL STORM DRAIN. SEE SHEET 3 FOR ADDITIONAL STORM DRAIN NOTES AND INFORMATION.
2. INSTALL TYPE "CM2" DROP INLET PER CCAUSD #412.1 & #421
3. INSTALL TYPE II SD MANHOLE PER CCAUSD #405.2
4. INSTALL TYPE III SD MANHOLE PER CCAUSD #406
5. INSTALL NDOT TYPE 2 DROP INLET PER NDOT R-4.2.1 (SEE SHEET 29)
6. STUB & PLUG STORM DRAIN FOR FUTURE CONNECTION PER MANUFACTURER'S PLUG, OR APPROVED EQUAL (SEE SHEET 35)
7. NOT USED
8. INSTALL SD JUNCTION STRUCTURE
9. DIRECT CONNECTION INTO RCB SEE SHEET 35 FOR DETAIL
10. INSTALL TYPE I SD RISER PER CCAUSD #403.1
11. INSTALL TYPE "CM" DROP INLET PER CCAUSD #421 & #422
12. INSTALL PRECAST REINFORCED CONCRETE BOX PER NDOT STANDARD 502 AND 503 SEE SHEET 35 FOR RCB INFORMATION

REVISIONS

REV.	DESCRIPTION	BY	DATE	APPROVAL

ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7775
Fax: +1702.263.7700

SUMMERLIN

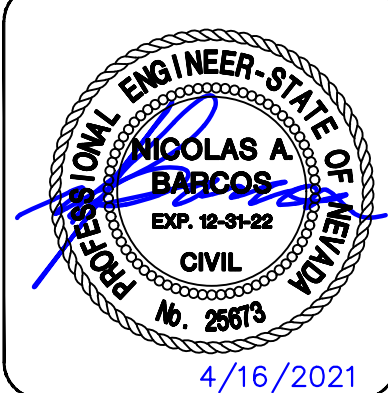
SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD

STORM DRAIN LATERAL PROFILES

DESIGNED BY:
B. MOCHTAK
DRAWN BY:
K. HENDRY
CHECKED BY:
N. BARCOS
HORIZ.: 1"=20'
VERT.: 1"=5'

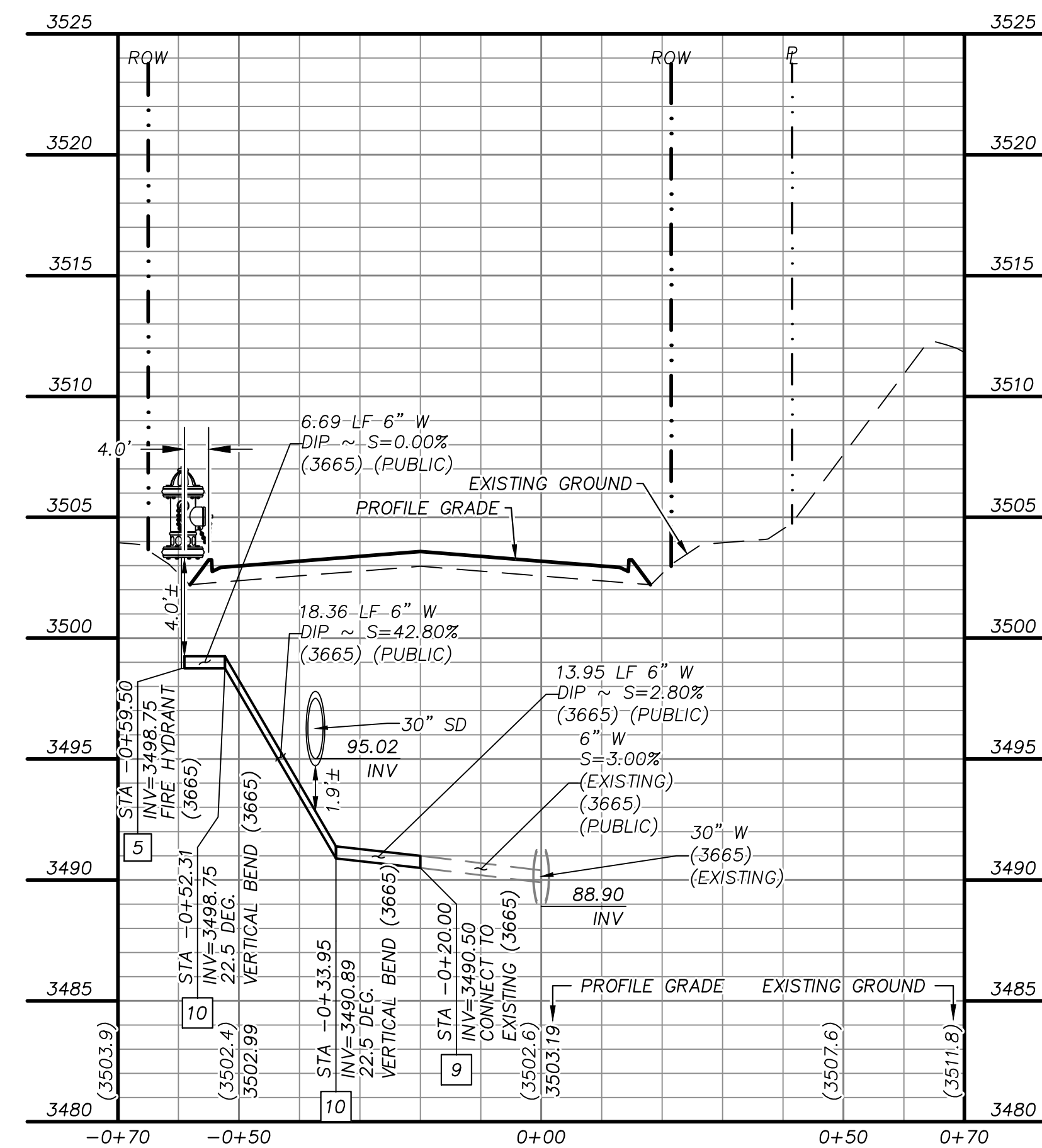
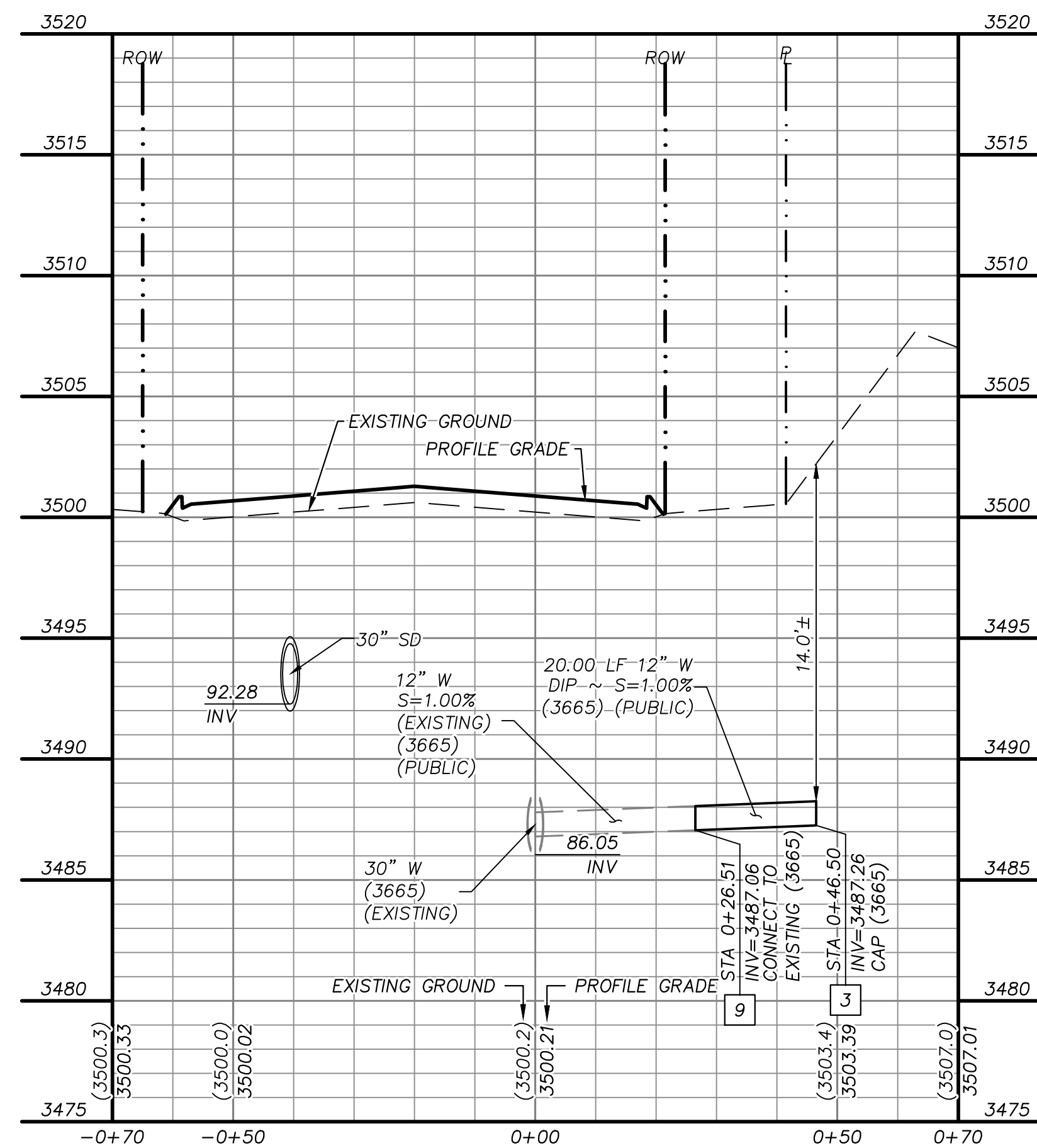
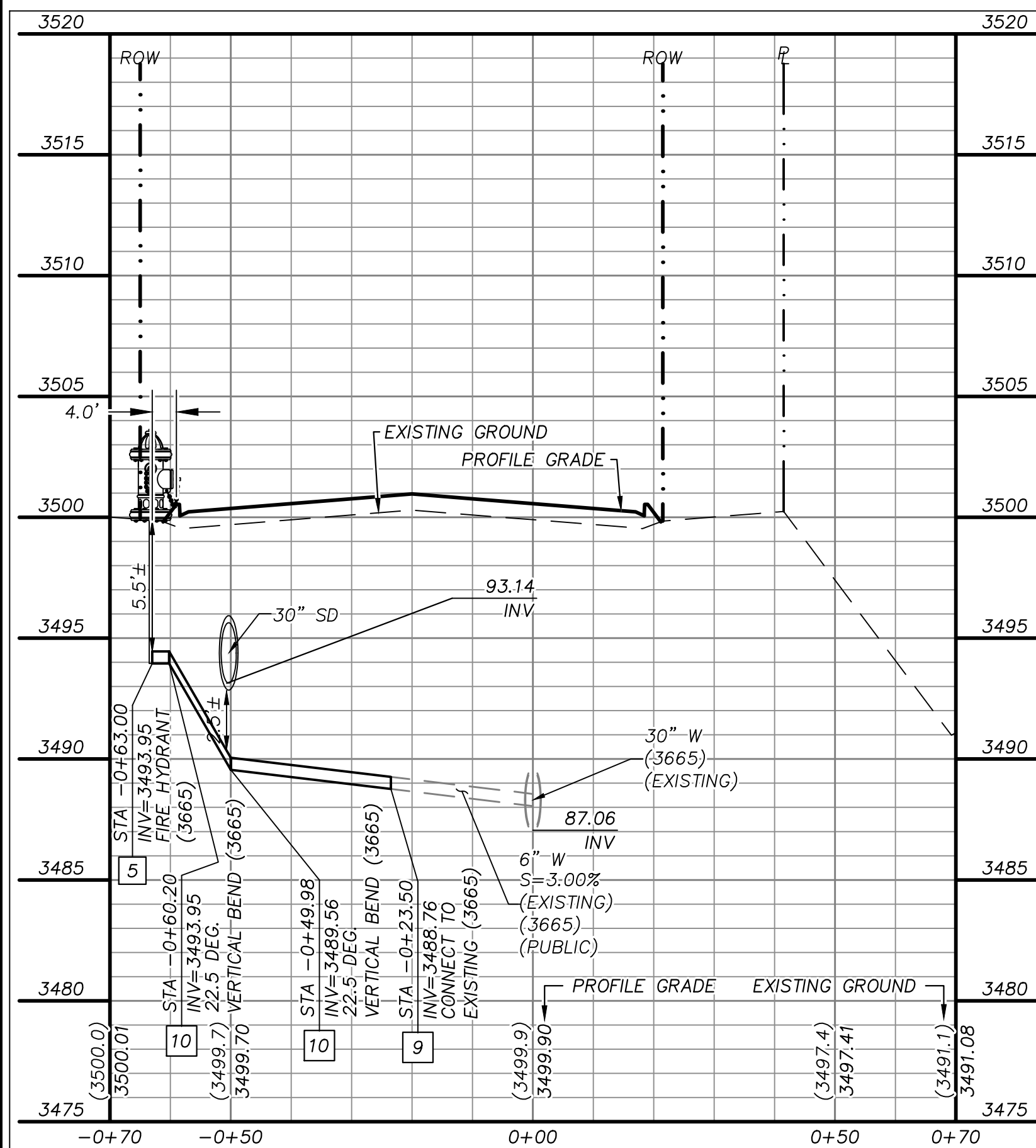
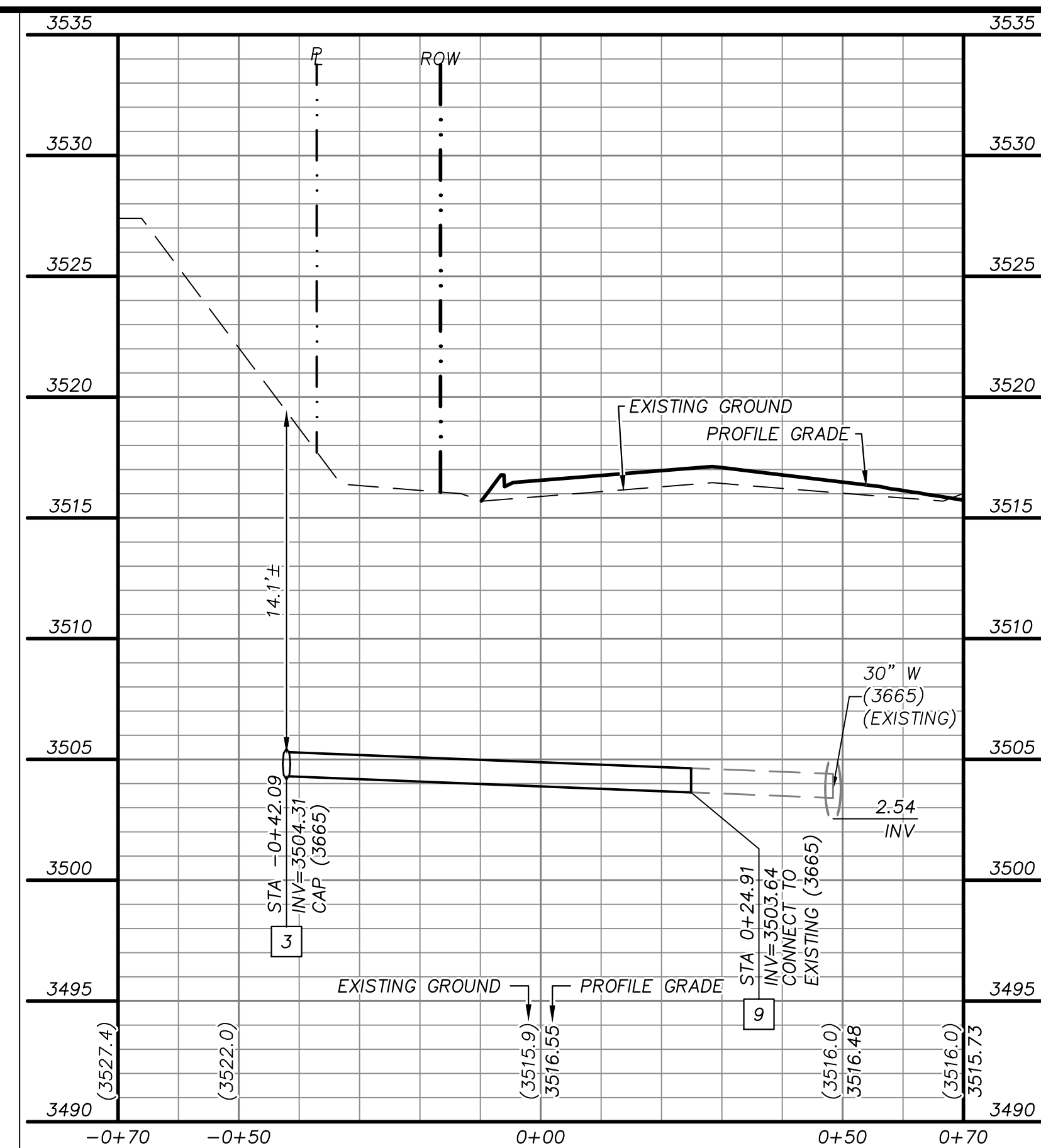
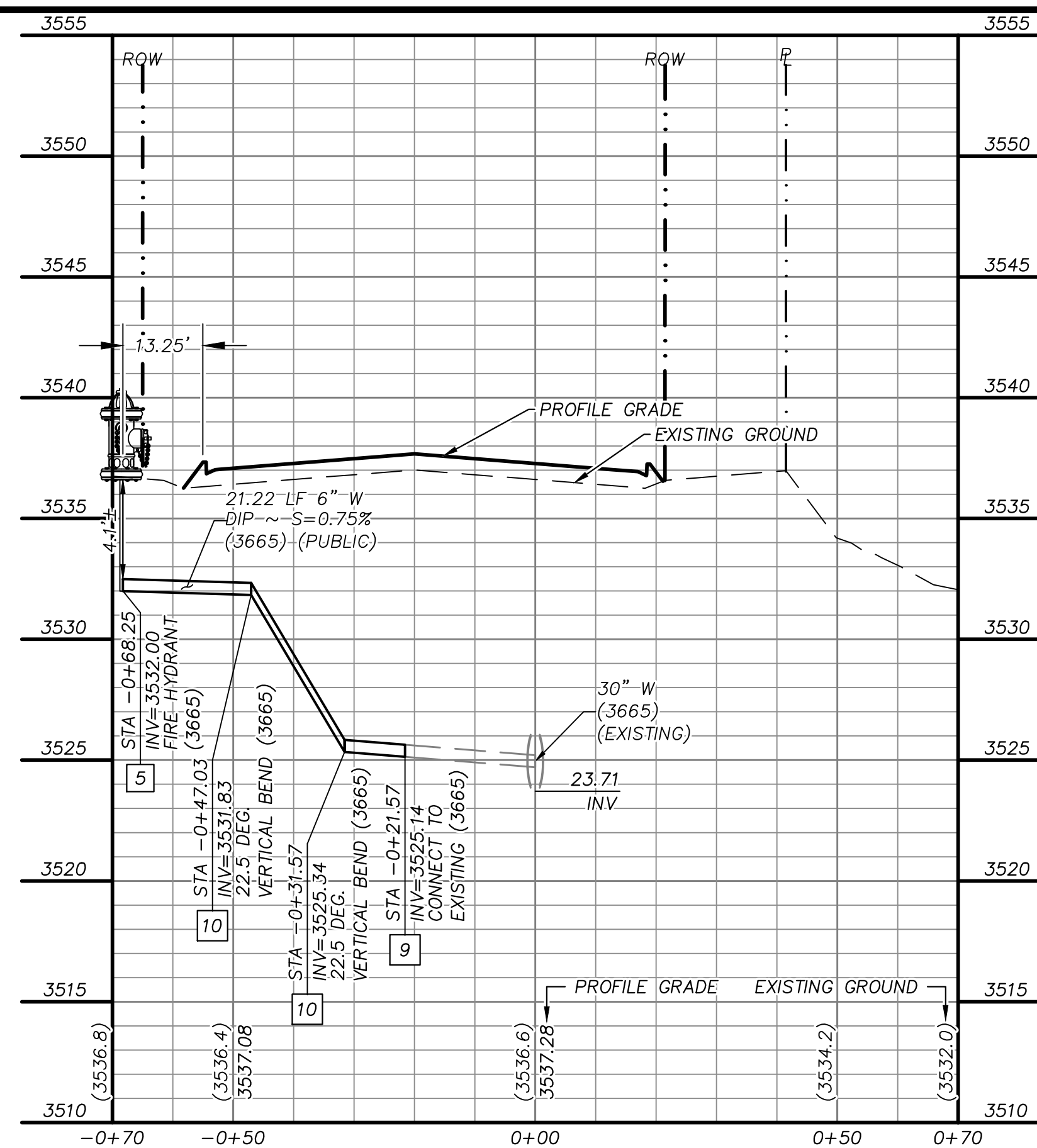
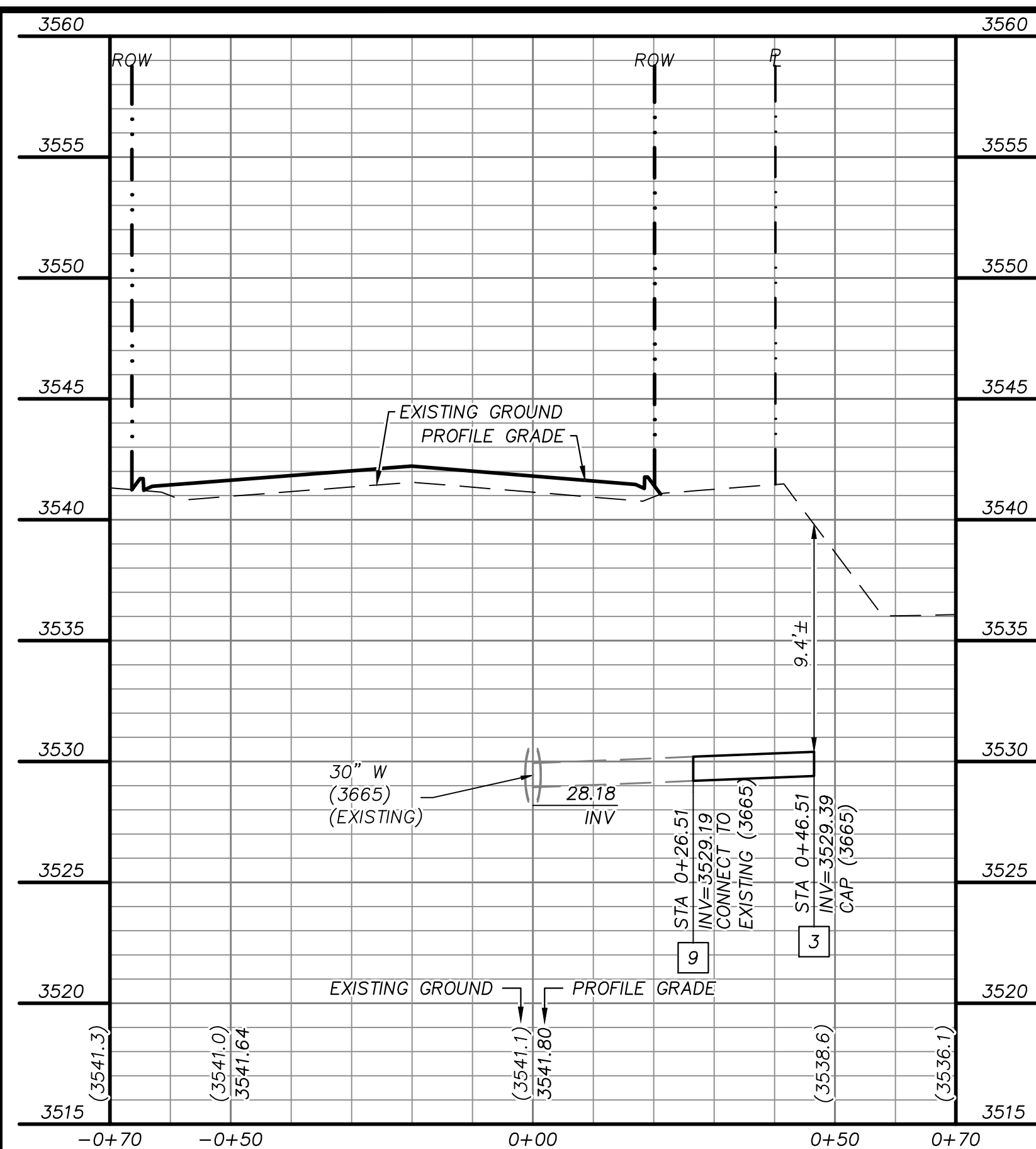
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LXX-XXXX
DATE: APRIL 2021
DRAWING NO.
24/42

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4/16/2021

JOB NO. 100069098



WATERLINE CONSTRUCTION NOTES

- 1 INSTALL WATER MAIN PER UDACS PLATES #17 AND PLATE #19
- 2 INSTALL GATE VALVE PER UDACS PLATES #30 AND #39
- 3 INSTALL CAP AND 2" MANUAL BLOWOFF ASSEMBLY PER UDACS PLATE #36
- 4 INSTALL TEE W/ VALVE AND LATERAL PER UDACS PLATES #17, #19, #30, #31 AND #39
- 5 INSTALL FIRE HYDRANT WITH APPURTENANCES (CONCRETE PAD, LATERAL, VALVE, AND TEE) PER UDACS PLATES #30, #31, #39, AND #40.
- 6 INSTALL DEFLECTION AT PIPE JOINTS (MAXIMUM OF 1")
- 7 INSTALL 1.5" METER WITH 1.5" RPPA PER UDACS PLATES #4 AND #8
- 8 INSTALL 1.5" SERVICE SADDLE PER UDACS PLATE #4
- 9 REMOVE CAP AND 2" BLOWOFF AND CONNECT TO EXISTING WATERLINE STUB
- 10 INSTALL VERTICAL BEND PER UDACS PLATE #31

[illegible]

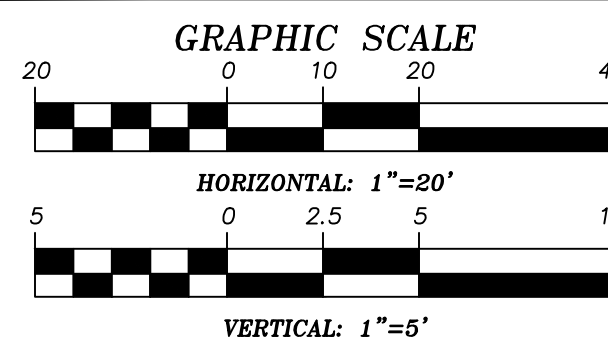
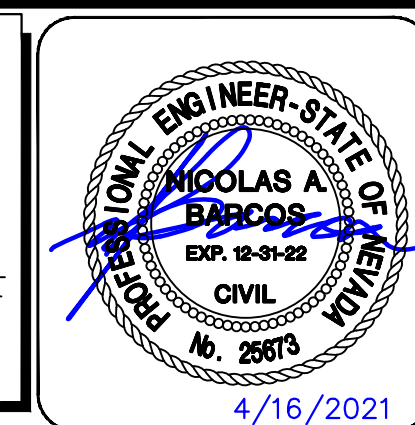
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22270 Corporate Circle Suite
Henderson, Nevada 89074
Telephone: +1.702.263.7275
Fax: +1.702.263.7200



WATER LATERAL PROFILES

XXXXXX	DESIGNED BY: B. MOCHTYAK
LXX-XXXXX	DRAWN BY: K. HENDRY
DATE: APRIL, 2021	CHECKED BY: N. BARCOS
DRAWING NO.	HORIZ.: 1" = 20'
	VERT.: 1" = 5'
25/42	

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APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING
AND PLANNING SERVICES

PROJECT NO. 000000 FIRST APPROVED DATE: _____

LVVWD APPROVED FIRE FLOW 1500 GPM AT 20 PSI RESIDUAL

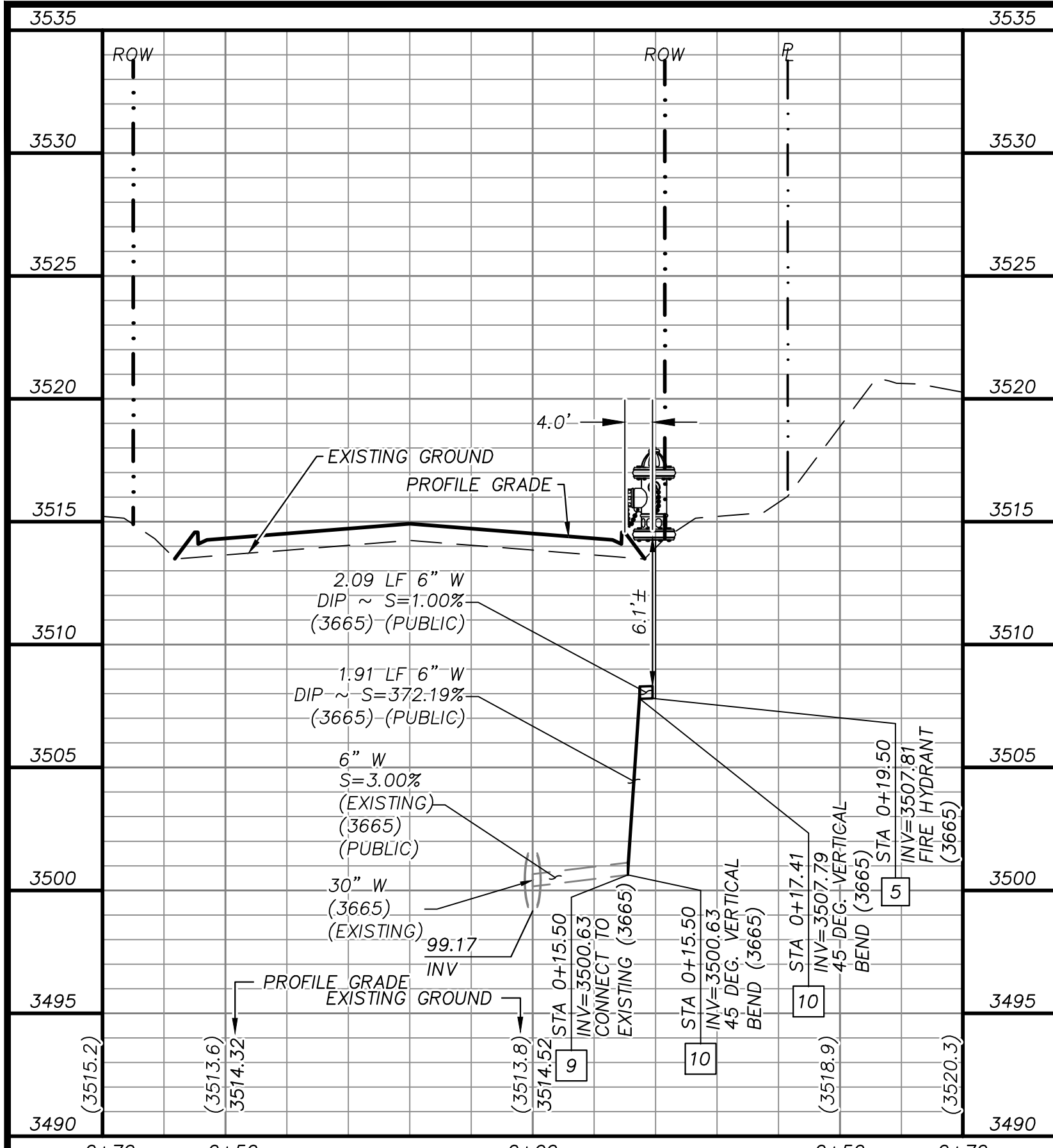
BASIS OF BEARING

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.

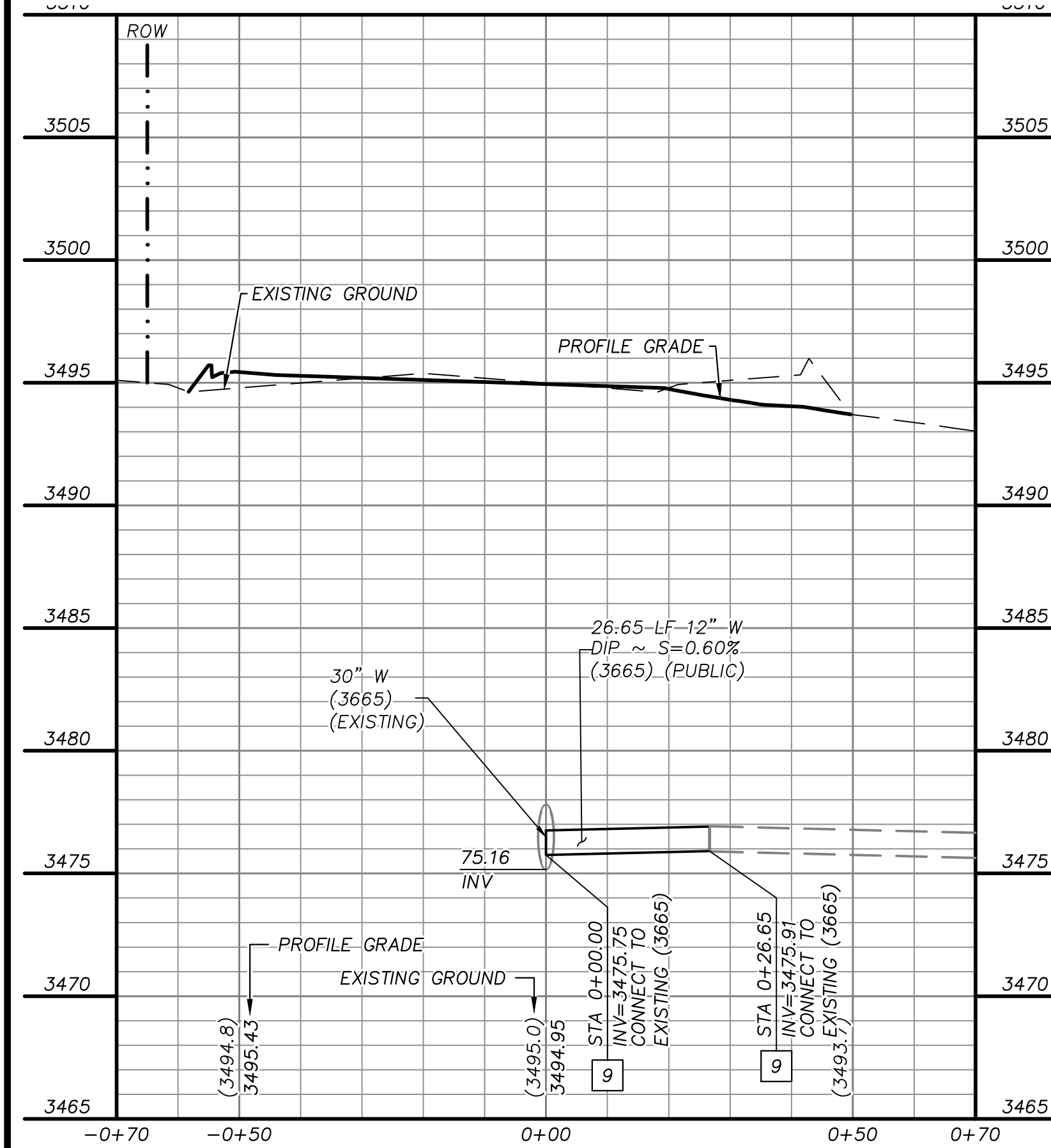
BENCHMARK

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 R59E S03

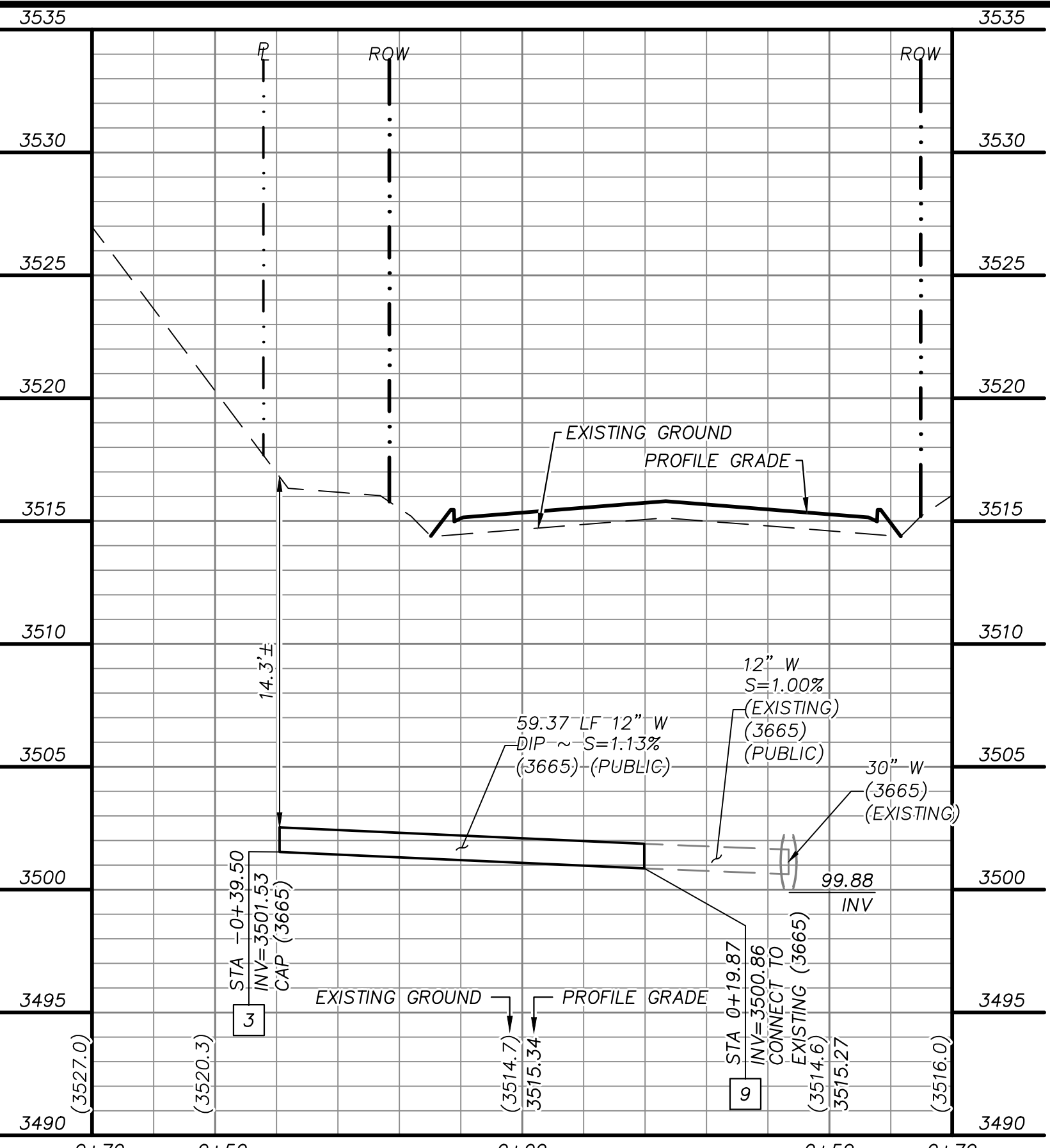




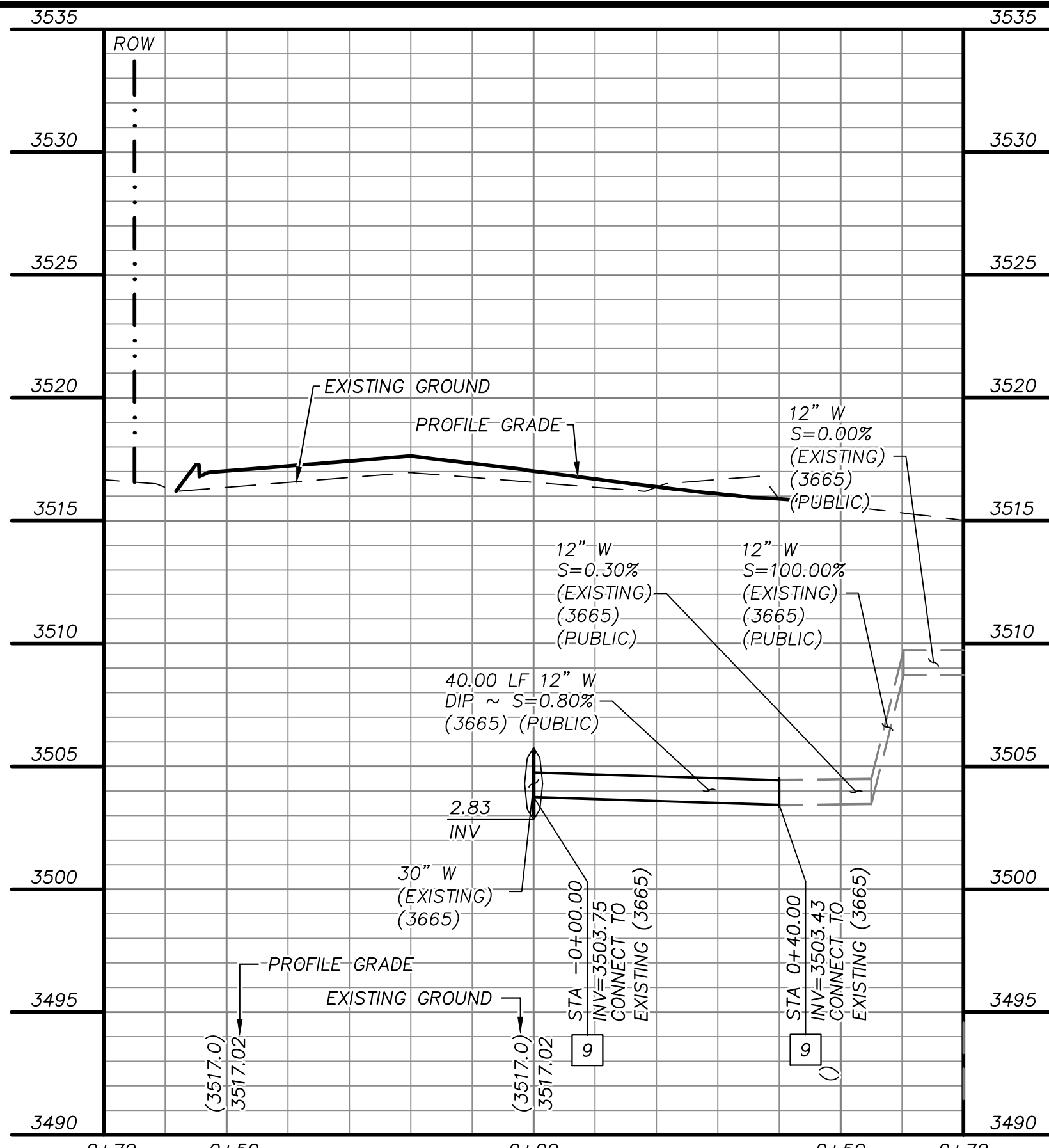
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"SBD" STA. 35+00.00 SEE SHEET 21



WATER LATERAL 4
"SBD" STA. 26+17.59 SEE SHEET 17

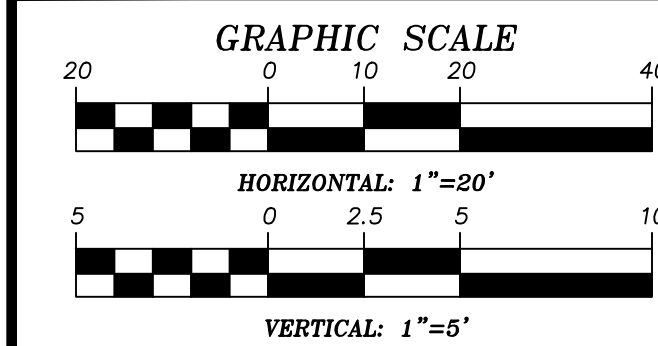


WATER LATERAL 2
"SBD" STA. 35+39.15 SEE SHEET 21



WATER LATERAL 3
"SBD" STA. 17+99.85 SEE SHEET 13

- WATERLINE CONSTRUCTION NOTES**
1. INSTALL WATER MAIN PER UDACS PLATES #17 AND PLATE #19
 2. INSTALL GATE VALVE PER UDACS PLATES #30 AND #39
 3. INSTALL CAP AND 2" MANUAL BLOWOFF ASSEMBLY PER UDACS PLATE #36
 4. INSTALL TEE W/ VALVE AND LATERAL PER UDACS PLATES #17, #19, #30, #31 AND #39
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 9. REMOVE CAP AND 2" BLOWOFF AND CONNECT TO EXISTING WATERLINE STUB
 10. INSTALL VERTICAL BEND PER UDACS PLATE #31



APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING
AND PLANNING SERVICES

PROJECT NO. 000000 FIRST APPROVED DATE: _____

LVVWD APPROVED FIRE FLOW 1500 GPM AT 20 PSI RESIDUAL

BASIS OF BEARING

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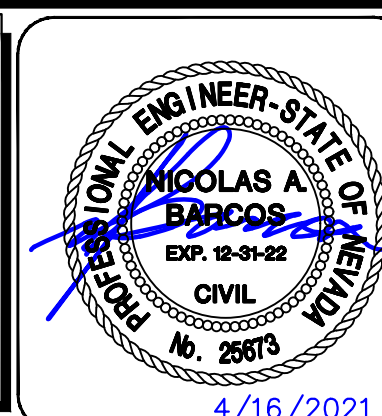
BENCHMARK

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,R59E,S03

FAST
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CALL BEFORE YOU DIG
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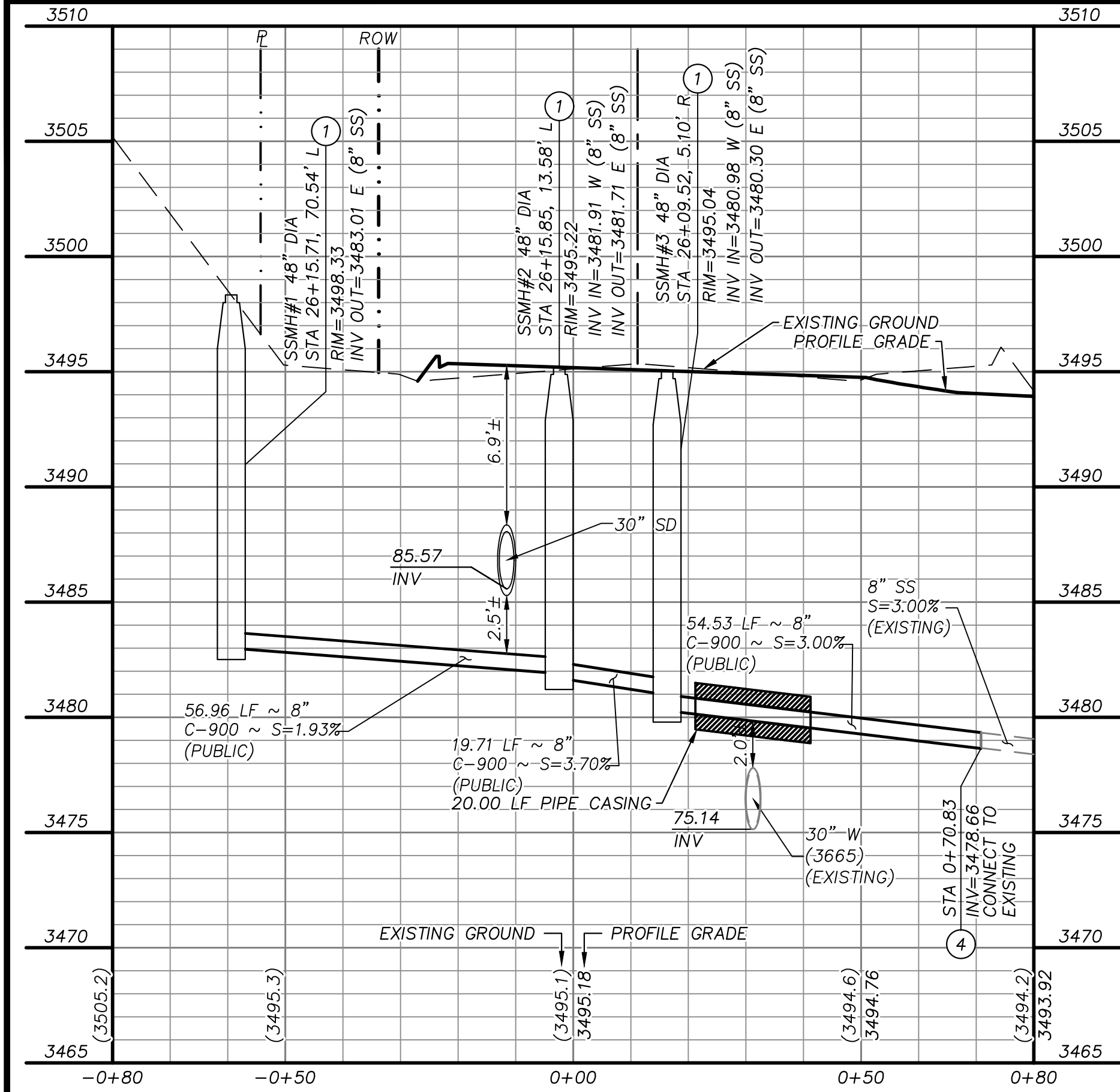
SUMMERLIN

SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD

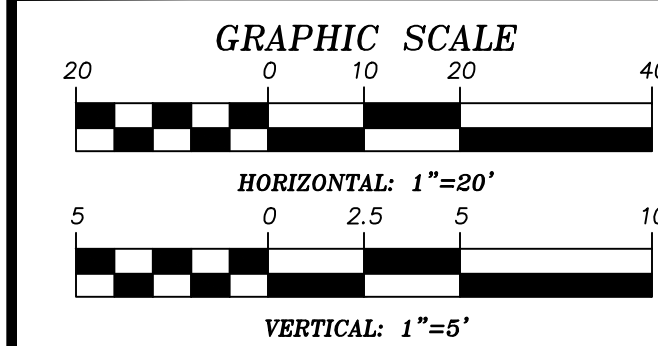
WATER LATERAL PROFILES

DESIGNED BY: B. MOCHTYAK
DRAWN BY: K. HENDRY
CHECKED BY: N. BARCOS
DATE: APRIL, 2021
DRAWING NO. 26/42
JOB NO. 100069098

REVISIONS
DESCRIPTION
BY
DATE
APPROVAL



SEWER LATERAL 1
"SBD" STA. 26+09.53 SEE SHEET 17



APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING
AND PLANNING SERVICES
PROJECT NO. 000000 FIRST APPROVED DATE: _____
LVVWD APPROVED FIRE FLOW 1500 GPM AT 20 PSI RESIDUAL

BASIS OF BEARING
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MERIDIAN OF THE NEVADA COORDINATE
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HIGH ELEVATION ZONE, NORTH AMERICAN
DATUM OF 1983; SAID MERIDIAN BEING
COINCIDENT WITH 114°58' WEST OF THE
GREENWICH MERIDIAN.

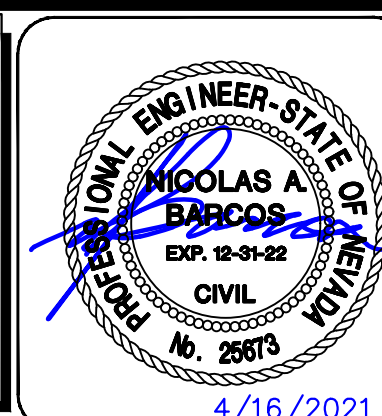
BENCHMARK
CITY OF LAS VEGAS BENCHMARK: D368
(REVISED 2008)
NAVD88 ELEVATION: 989.574 METERS
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FND USC&GS DISC SET IN ROCK RIDGE 150'
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DETENTION BASIN.
T21S,R59E,S03

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DESIGNED BY: B. MOCHTYAK	XXXXXX
DRAWN BY: K. HENDRY	LXX-XXXX
CHECKED BY: N. BARCOS	DATE: APRIL, 2021
HORIZ.: 1"=20'	DRAWING NO.
VERT.: 1"=5'	27/42

JOB NO. 100069098

SEWER CONSTRUCTION NOTES

1. INSTALL SEWER MANHOLE PER DCSWCS SD-1A, SD-1B, AND SD-4
2. INSTALL SEWER MAIN PER DCSWCS SD-17
3. STUB AND CAP SEWER PIPE. PLACE MARKER BALL AND 4"x4" POST, DOUGLAS FIR, OVER END OF PIPE AND INSTALL THRUST BLOCK (1 CUBIC FT. MINIMUM).
4. CONNECT TO EXISTING SEWER MAIN

REVISIONS		
REV.	DESCRIPTION	BY DATE APPROVAL

2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7755
Fax: +1702.263.7200

SUMMERLIN

SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD

SEWER LATERAL PROFILES

DESIGNED BY:
B. MOCHTYAK

DRAWN BY:
K. HENDRY

CHECKED BY:
N. BARCOS

HORIZ.: 1"=20'

VERT.: 1"=5'

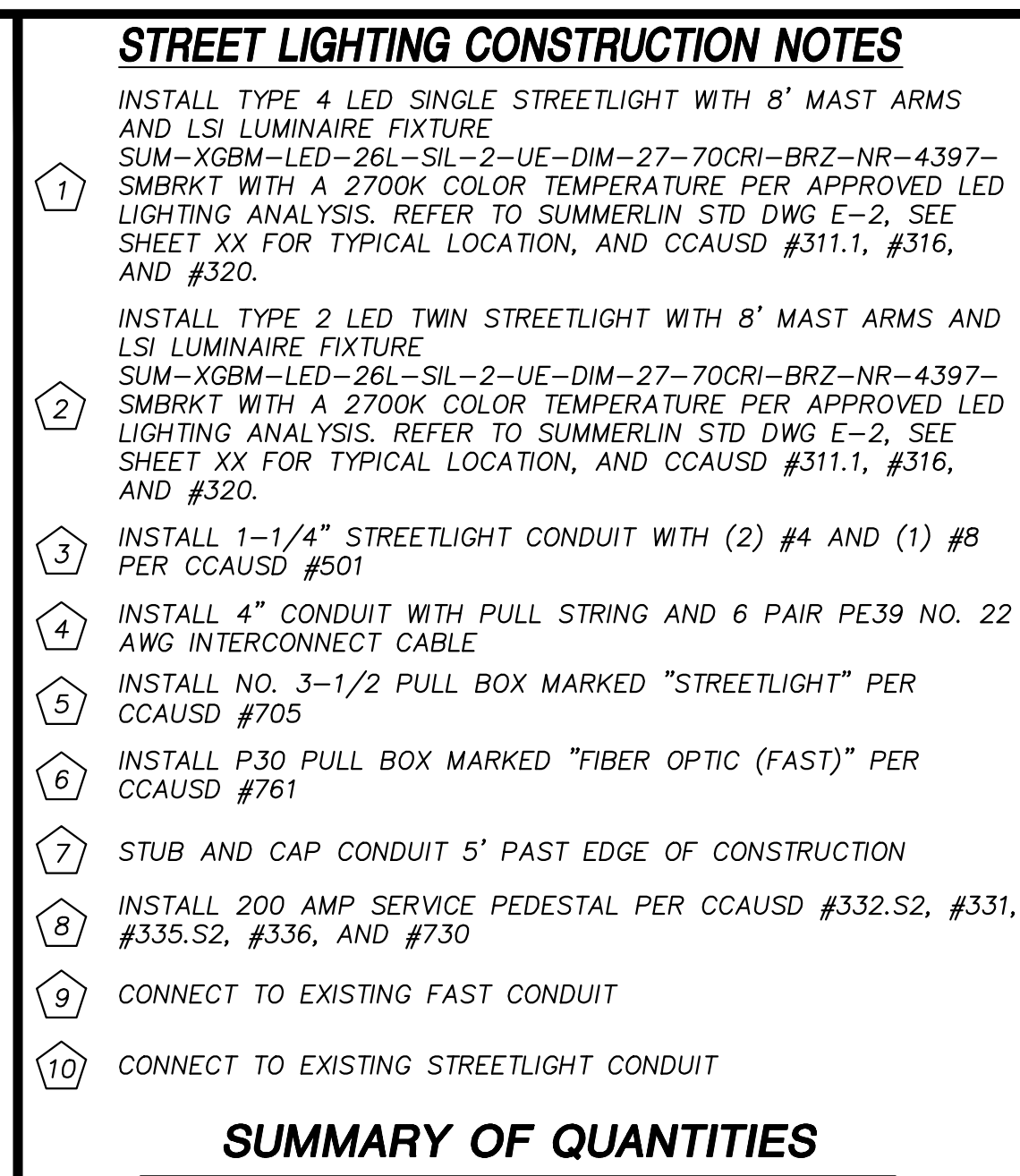
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LXX-XXXX

DATE: APRIL, 2021

DRAWING NO.

27/42

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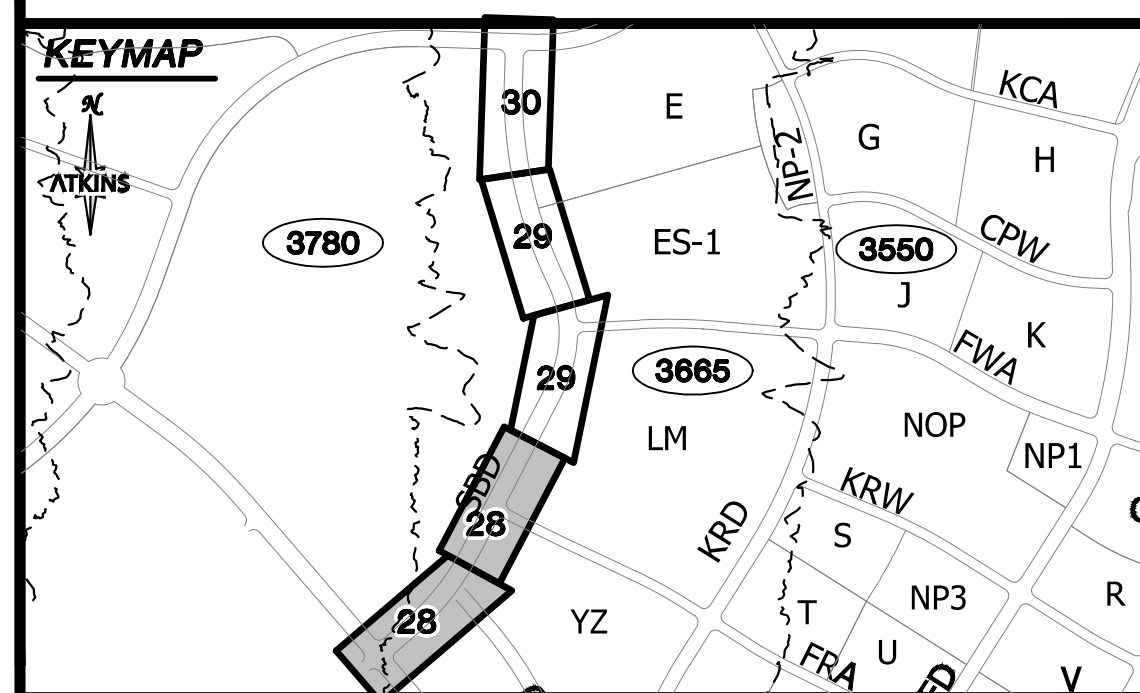
ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1.702.263.7275
Fax: +1.702.263.7200



SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD

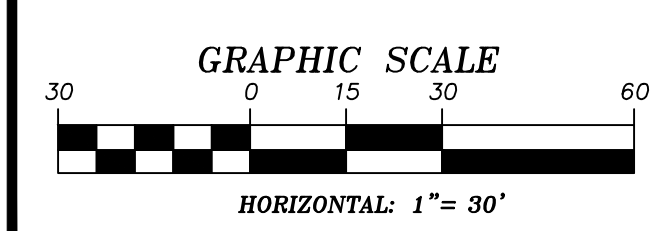
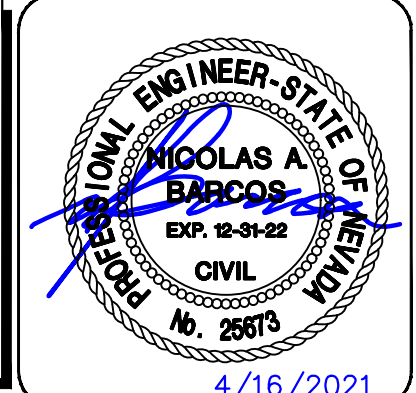
STREETLIGHT PLAN
BEGIN TO STA 21+50

XXXXXXXX LXX-XXXXX DATE: APRIL, 2021 DRAWING NO. 28/42	DESIGNED BY: B. MOCHTAYAK DRAWN BY: K. HENDRY CHECKED BY: N. BARCOS HORIZ.: 1"=30' VERT.: NONE
--	---



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 4/16/2021



BASIS OF BEARING	BENCHMARK
GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM. LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.	LOCATION: LAS VEGAS BENCHMARK: D368 (REVISED 2008) ELEVATION: 989.574 METERS (3,246.63 FEET) DISC SET IN ROCK RIDGE 150' CHARLESTON BLVD. & WEST OF DETENTION BASIN. T21S,R99E,S03

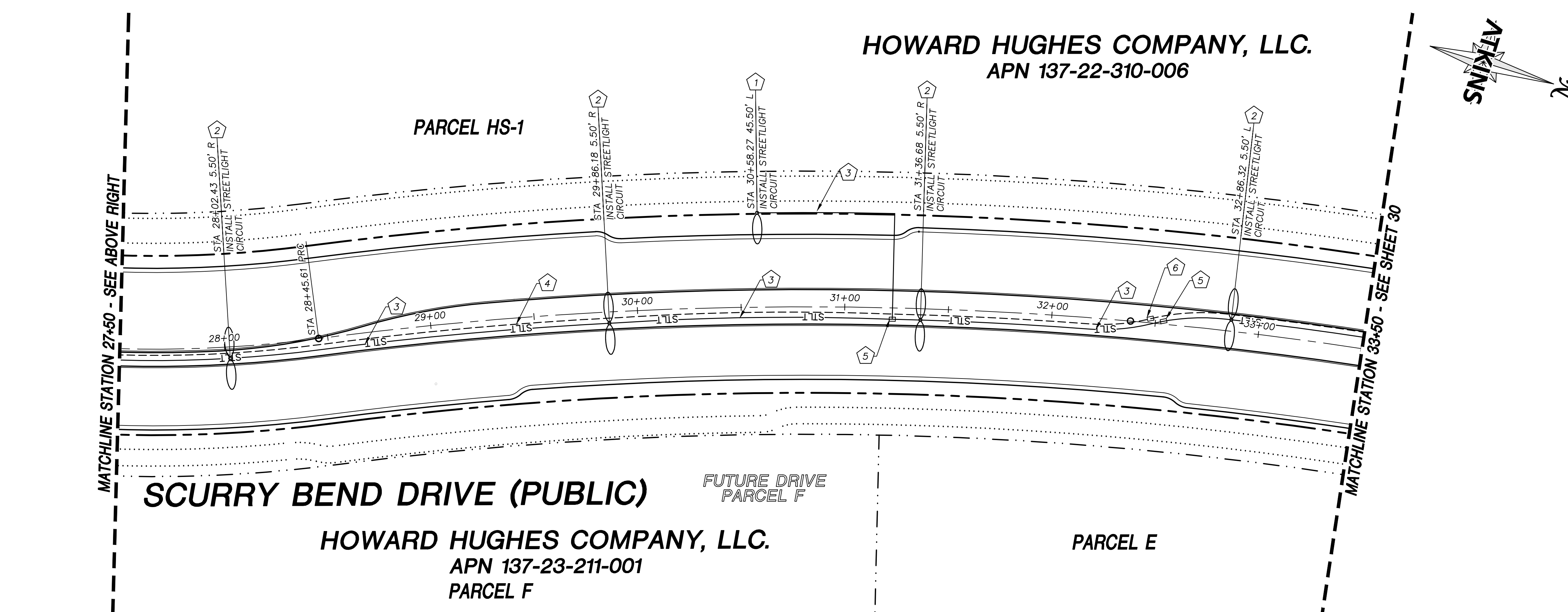
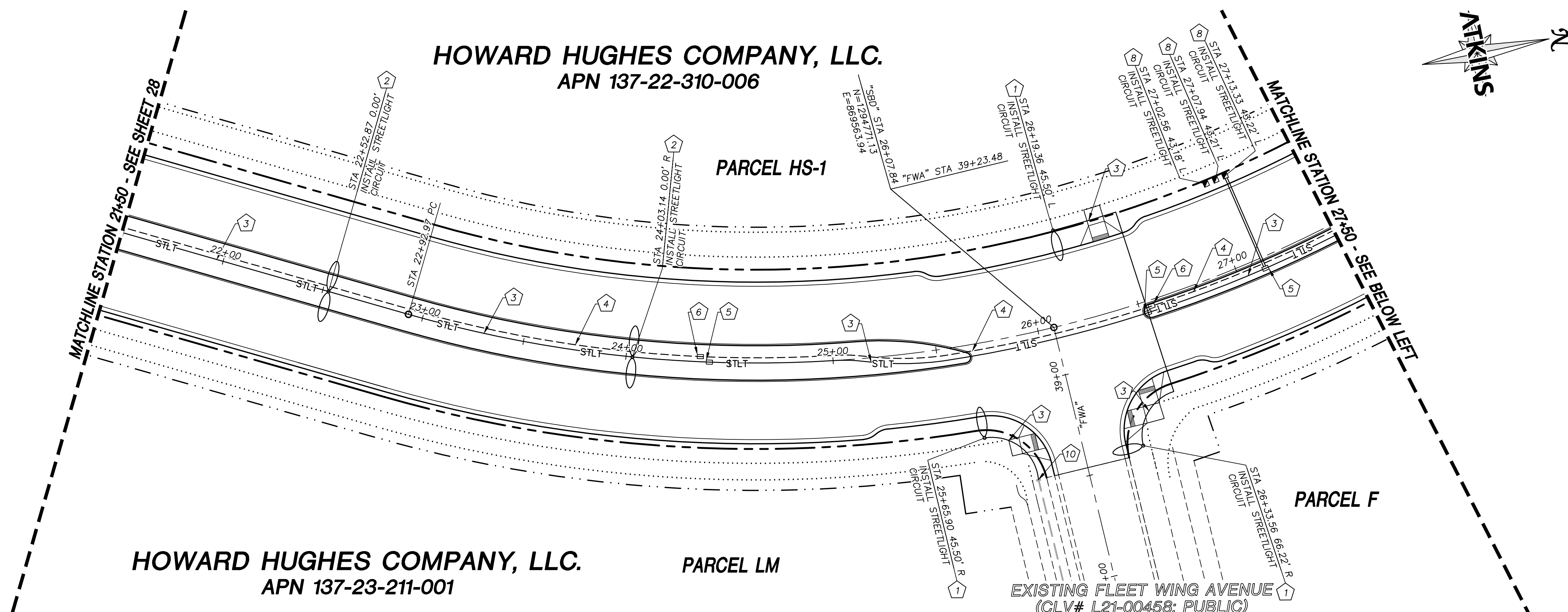


Call before you Dig
AVOID CUTTING UNDERGROUND
UTILITY LINES. IT'S COSTLY.

Call

OR
1-800-642-2444





STREET LIGHTING CONSTRUCTION NOTES

1. INSTALL TYPE 4 LED SINGLE STREETLIGHT WITH 8' MAST ARMS AND LSI LUMINAIRE FIXTURE
SUM-XGBM-LED-26L-SIL-2-UE-DIM-27-70CRI-BRZ-NR-4397-SMBRKT WITH A 2700K COLOR TEMPERATURE PER APPROVED LED LIGHTING ANALYSIS. REFER TO SUMMERLIN STD DWG E-2, SEE SHEET XX FOR TYPICAL LOCATION, AND CCAUSD #311.1, #316, AND #320.

2. INSTALL TYPE 2 LED TWIN STREETLIGHT WITH 8' MAST ARMS AND LSI LUMINAIRE FIXTURE
SUM-XGBM-LED-26L-SIL-2-UE-DIM-27-70CRI-BRZ-NR-4397-SMBRKT WITH A 2700K COLOR TEMPERATURE PER APPROVED LED LIGHTING ANALYSIS. REFER TO SUMMERLIN STD DWG E-2, SEE SHEET XX FOR TYPICAL LOCATION, AND CCAUSD #311.1, #316, AND #320.

3. INSTALL 1-1/4" STREETLIGHT CONDUIT WITH (2) #4 AND (1) #8 PER CCAUSD #501

4. INSTALL 4" CONDUIT WITH PULL STRING AND 6 PAIR PE39 NO. 22 AWG INTERCONNECT CABLE

5. INSTALL NO. 3-1/2 PULL BOX MARKED "STREETLIGHT" PER CCAUSD #705

6. INSTALL P30 PULL BOX MARKED "FIBER OPTIC (FAST)" PER CCAUSD #761

7. STUB AND CAP CONDUIT 5' PAST EDGE OF CONSTRUCTION

8. INSTALL 200 AMP SERVICE PEDESTAL PER CCAUSD #332.S2, #331, #335.S2, #336, AND #730

9. CONNECT TO EXISTING FAST CONDUIT

10. CONNECT TO EXISTING STREETLIGHT CONDUIT

ATKINS

2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7275
Fax: +1702.263.7200

SUMMERLIN

KEYMAP

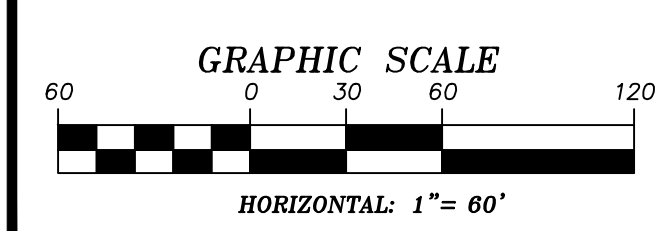
DESIGNED BY: B. MOCHTYAK
DRAWN BY: K. HENDRY
CHECKED BY: N. BARCOS
DATE: APRIL 2021
DRAWING NO.: 29/42
VERT.: NONE

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XXXXXX
LXX-XXXX
DATE: APRIL 2021
DRAWING NO.: 29/42
VERT.: NONE

4/16/2021

100069098

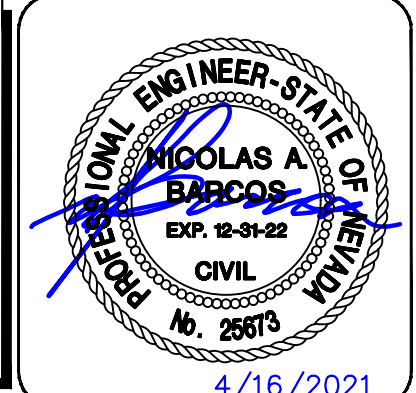


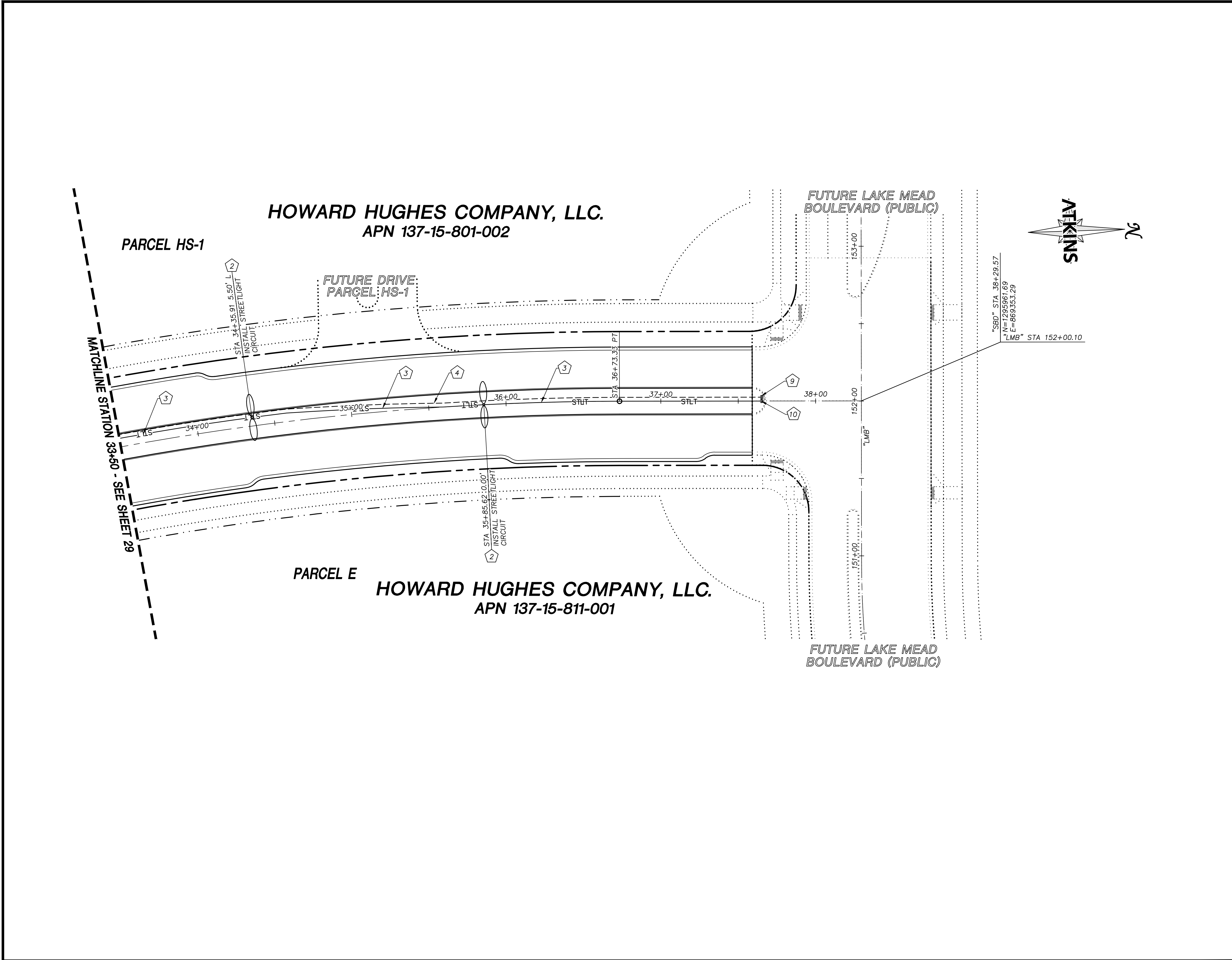
BASIS OF BEARING
GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NORS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

BENCHMARK
CITY OF LAS VEGAS 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,R59E,S03

FAST
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1-800-642-2444

CALL BEFORE YOU DIG OVERHEAD
1-702-227-2929





STREET LIGHTING CONSTRUCTION NOTES

- 1. INSTALL TYPE 4 LED SINGLE STREETLIGHT WITH 8' MAST ARMS AND LSI LUMINAIRE FIXTURE
SUM-XGBM-LED-26L-SIL-2-UE-DIM-27-70CRI-BRZ-NR-4397-SMBRKT WITH A 2700K COLOR TEMPERATURE PER APPROVED LED LIGHTING ANALYSIS. REFER TO SUMMERLIN STD DWG E-2, SEE SHEET XX FOR TYPICAL LOCATION, AND CCAUSD #311.1, #316, AND #320.
- 2. INSTALL TYPE 2 LED TWIN STREETLIGHT WITH 8' MAST ARMS AND LSI LUMINAIRE FIXTURE
SUM-XGBM-LED-26L-SIL-2-UE-DIM-27-70CRI-BRZ-NR-4397-SMBRKT WITH A 2700K COLOR TEMPERATURE PER APPROVED LED LIGHTING ANALYSIS. REFER TO SUMMERLIN STD DWG E-2, SEE SHEET XX FOR TYPICAL LOCATION, AND CCAUSD #311.1, #316, AND #320.
- 3. INSTALL 1-1/4" STREETLIGHT CONDUIT WITH (2) #4 AND (1) #8 PER CCAUSD #501
- 4. INSTALL 4" CONDUIT WITH PULL STRING AND 6 PAIR PE39 NO. 22 AWG INTERCONNECT CABLE
- 5. INSTALL NO. 3-1/2 PULL BOX MARKED "STREETLIGHT" PER CCAUSD #705
- 6. INSTALL P30 PULL BOX MARKED "FIBER OPTIC (FAST)" PER CCAUSD #761
- 7. STUB AND CAP CONDUIT 5' PAST EDGE OF CONSTRUCTION
- 8. INSTALL 200 AMP SERVICE PEDESTAL PER CCAUSD #332.S2, #331, #335.S2, #336, AND #730
- 9. CONNECT TO EXISTING FAST CONDUIT
- 10. CONNECT TO EXISTING STREETLIGHT CONDUIT

REV.	DESCRIPTION	BY	DATE	APPROVAL

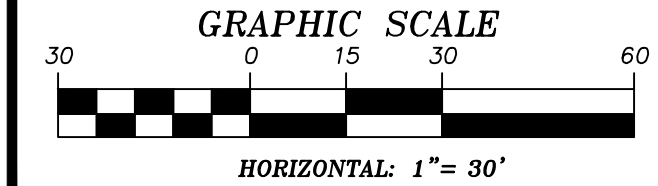
ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7275
Fax: +1702.263.7200

SUMMERLIN

SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD

STREETLIGHT PLAN
STA 33+50 TO END

DESIGNED BY: B. MOCHTYAK
DRAWN BY: K. HENDRY
CHECKED BY: N. BARCOS
DATE: APRIL 2021
DRAWING NO. 30/42
VERT.: NONE



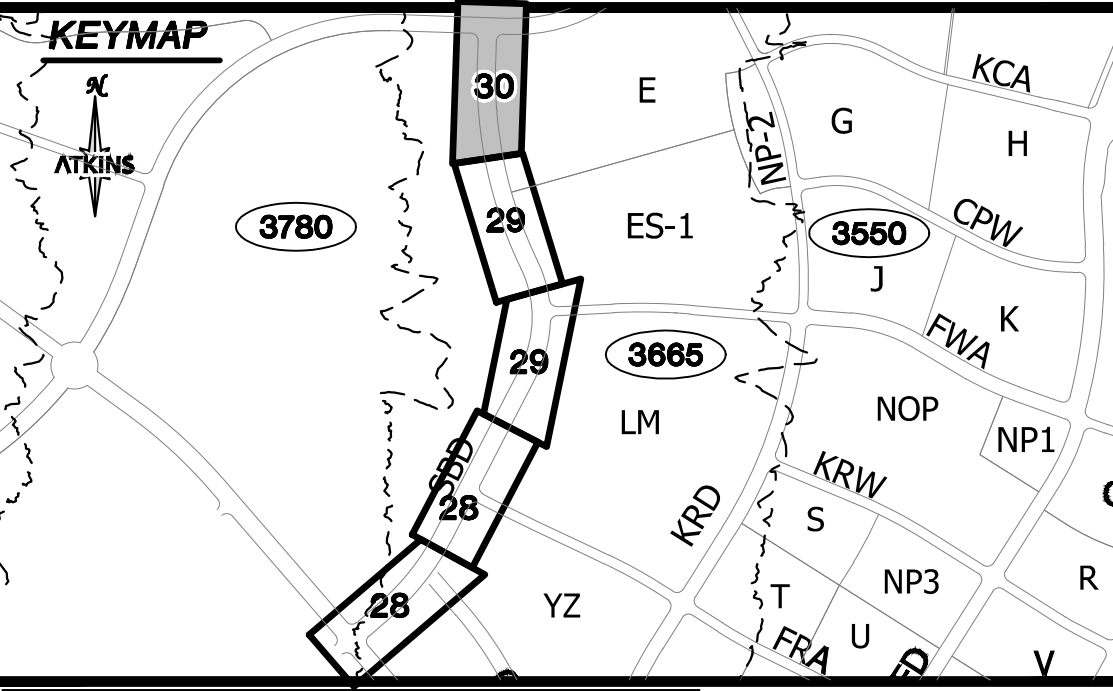
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T21S,R59E,S03

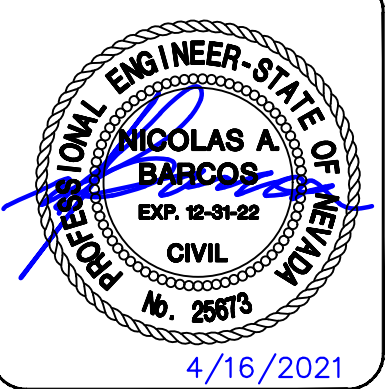
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Call before you Dig
UnderGround
1-702-432-5300
1-800-642-2444

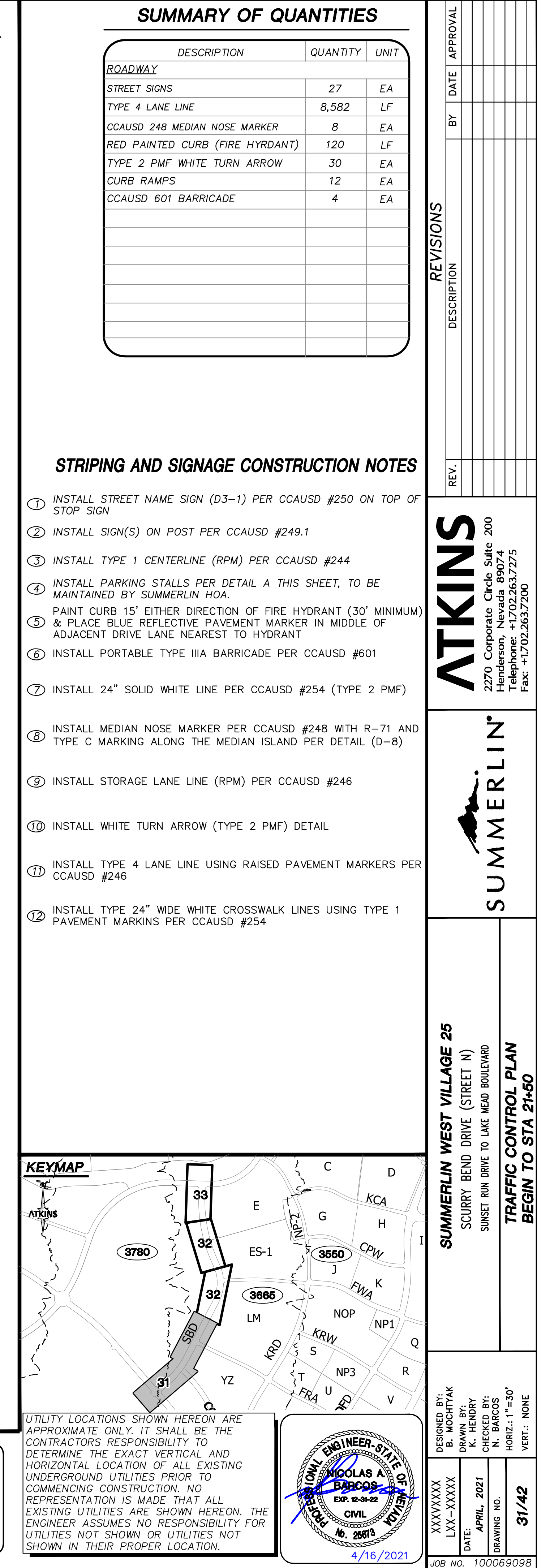
Call before you Dig
Call 811
1-800-642-2444

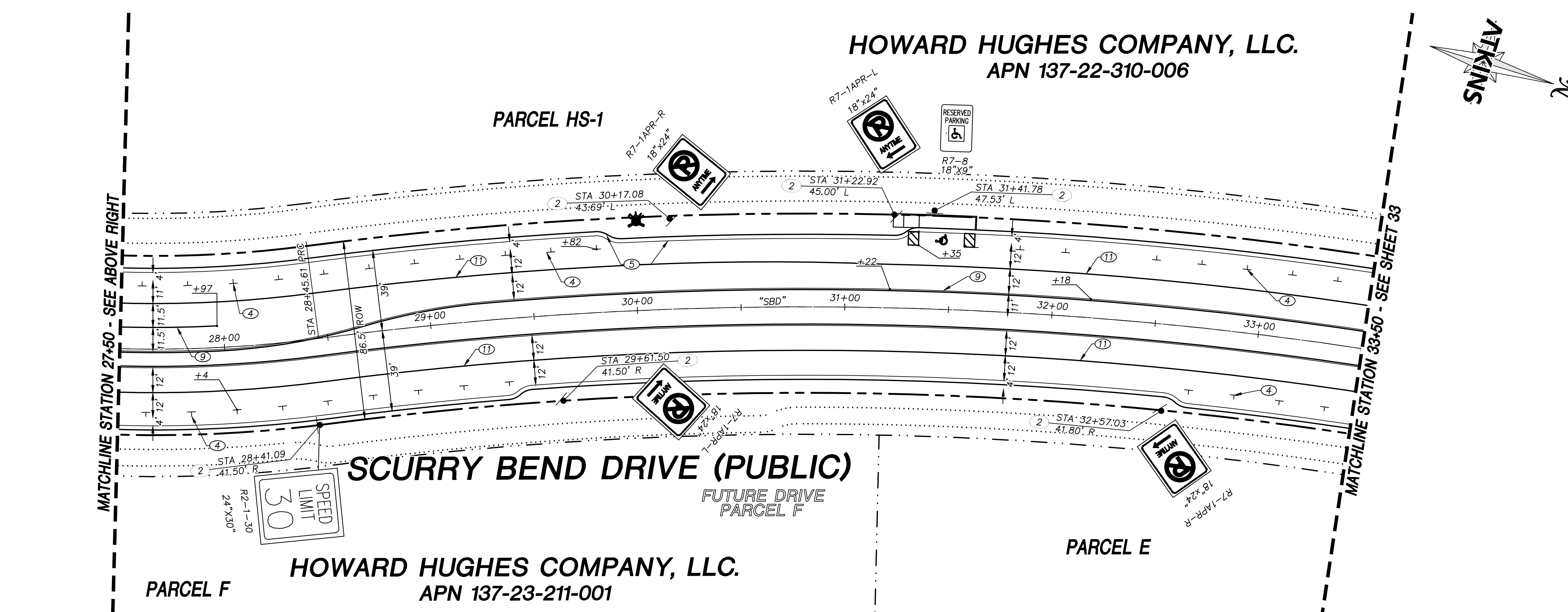
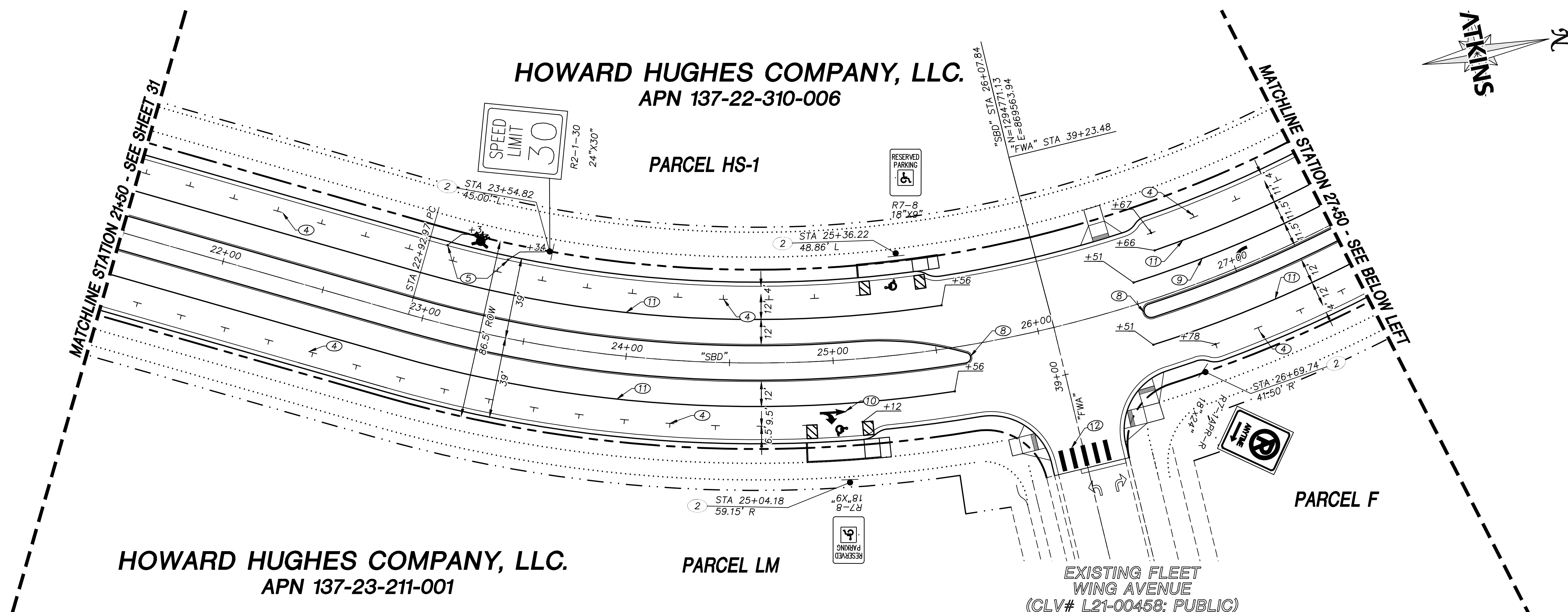
AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DIG OVERHEAD
1-702-227-2829



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- STRIPING AND SIGNAGE CONSTRUCTION NOTES**
1. INSTALL STREET NAME SIGN (D3-1) PER CCAUSD #250 ON TOP OF STOP SIGN
 2. INSTALL SIGN(S) ON POST PER CCAUSD #249.1
 3. INSTALL TYPE 1 CENTERLINE (RPM) PER CCAUSD #244
 4. INSTALL PARKING STALLS PER DETAIL A THIS SHEET, TO BE MAINTAINED BY SUMMERLIN HOA.
 5. PAINT CURB 15' EITHER DIRECTION OF FIRE HYDRANT (30' MINIMUM) & PLACE BLUE REFLECTIVE PAVEMENT MARKER IN MIDDLE OF ADJACENT DRIVE LANE NEAREST TO HYDRANT
 6. INSTALL PORTABLE TYPE IIIA BARRICADE PER CCAUSD #601
 7. INSTALL 24" SOLID WHITE LINE PER CCAUSD #254 (TYPE 2 PMF)
 8. INSTALL MEDIAN NOSE MARKER PER CCAUSD #248 WITH R-71 AND TYPE C MARKING ALONG THE MEDIAN ISLAND PER DETAIL (D-8)
 9. INSTALL STORAGE LANE LINE (RPM) PER CCAUSD #246
 10. INSTALL WHITE TURN ARROW (TYPE 2 PMF) DETAIL
 11. INSTALL TYPE 4 LANE LINE USING RAISED PAVEMENT MARKERS PER CCAUSD #246

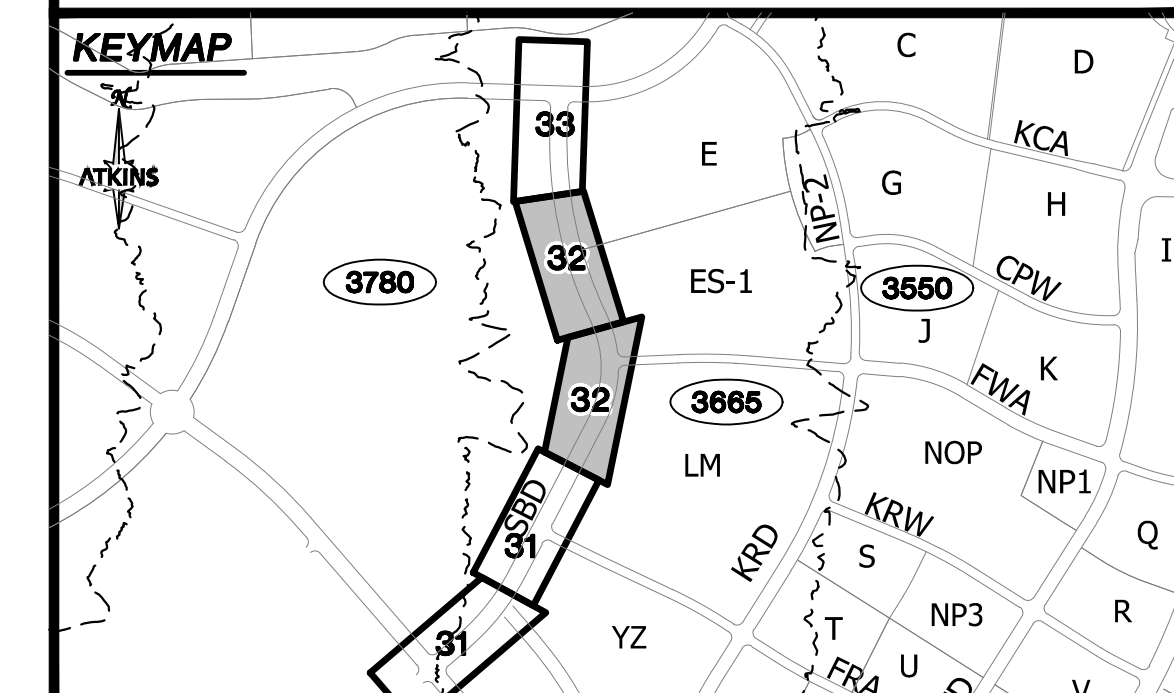
REVISIONS		DESCRIPTION	REV.

ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7755
Fax: +1702.263.7200

SUMMERLIN

SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD
TRAFFIC CONTROL PLAN
STA 21+50 TO STA 33+50

DESIGNED BY: B. MOCHTAK
DRAWN BY: K. HENDRY
CHECKED BY: N. BARCOS
DATE: APRIL 2021
DRAWING NO. 32/42
JOB NO. 100069098

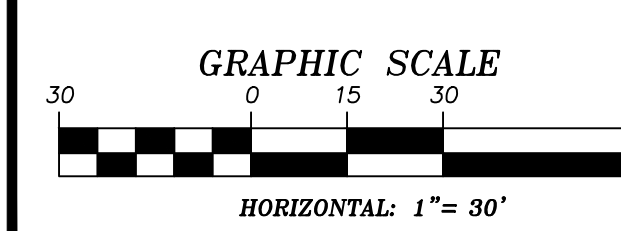


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4/16/2021



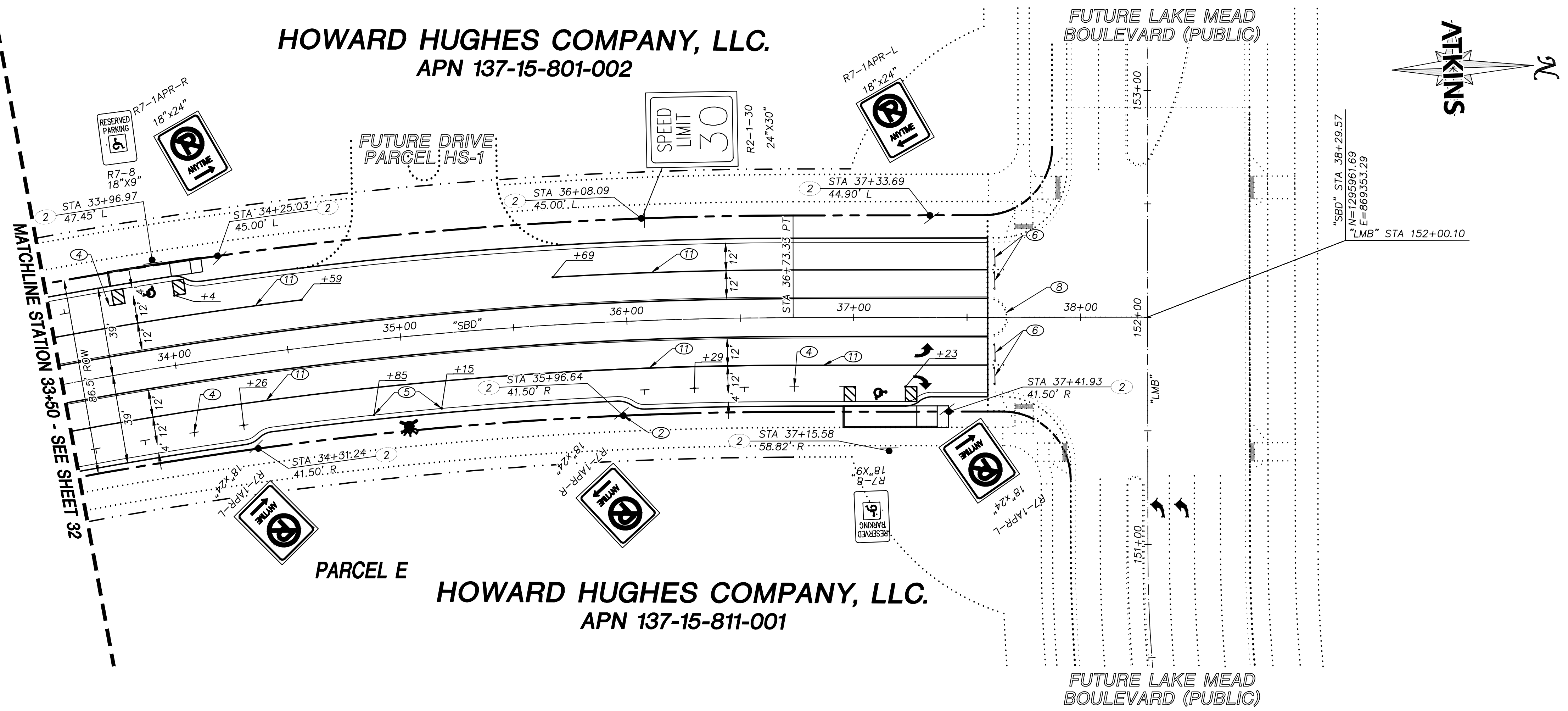
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4/16/2021



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 12. INSTALL 6" SOLID WHITE LINE PER CCAUSD #244.9 (POLUREA LPM)

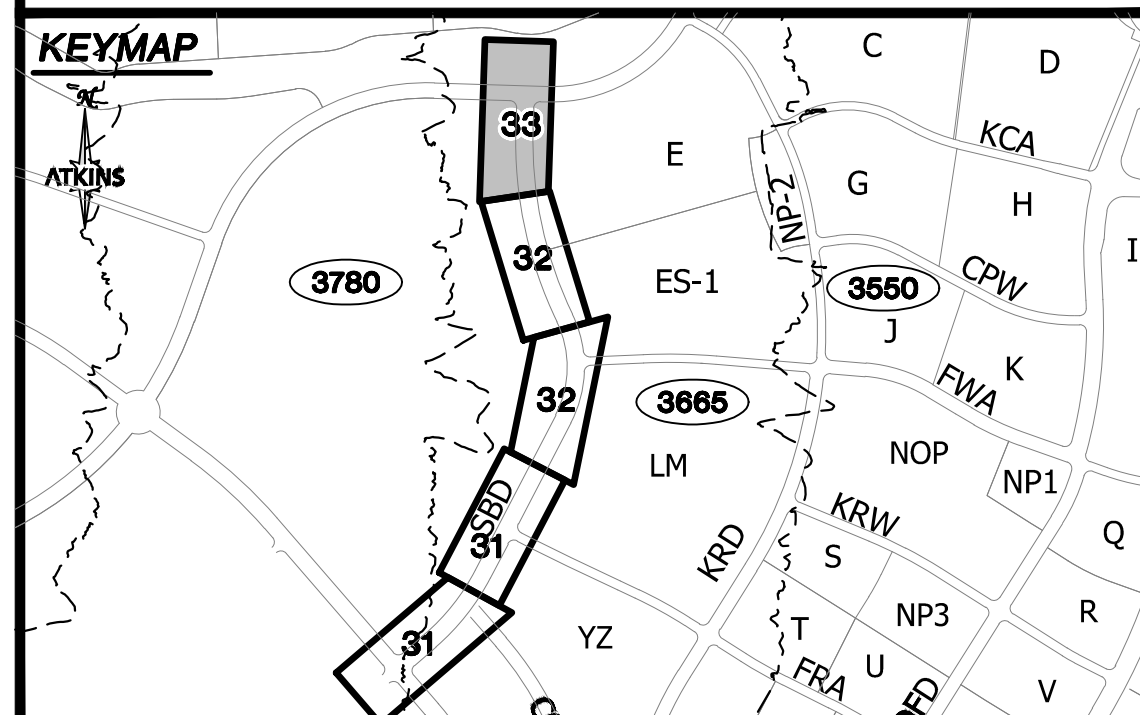
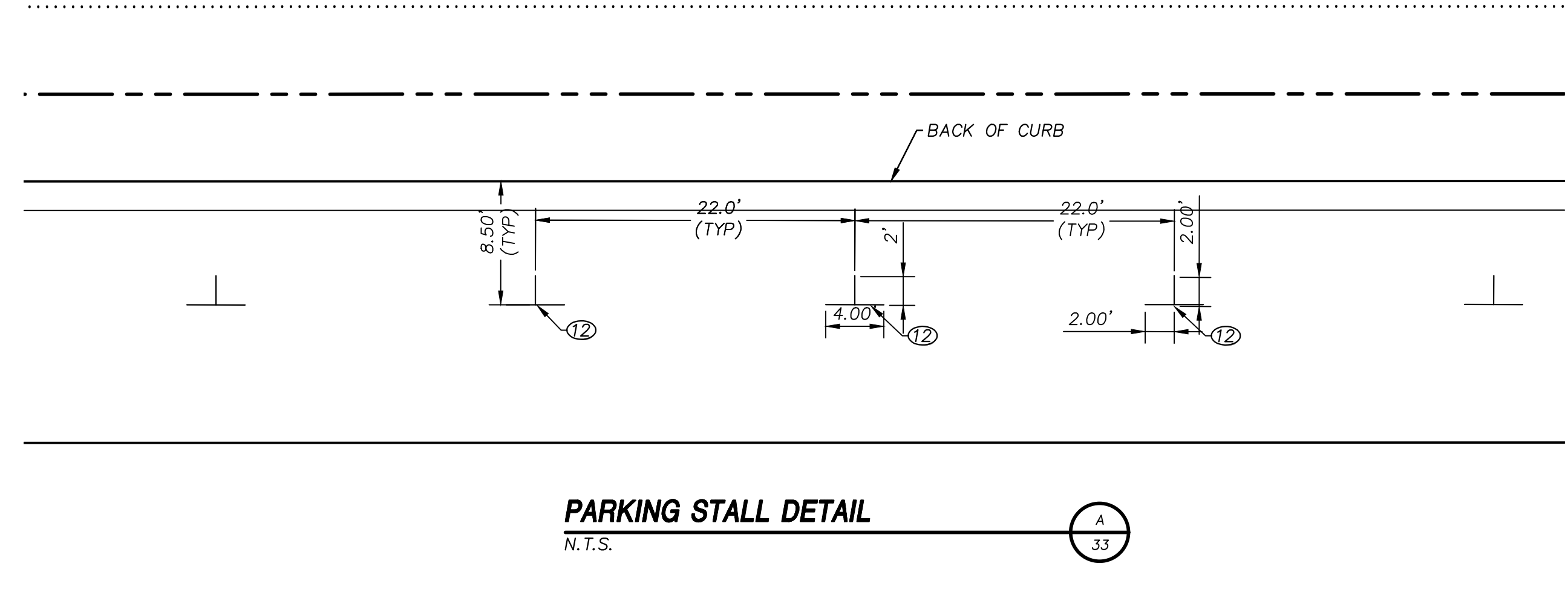
REVISIONS	
REV.	DESCRIPTION

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Henderson, Nevada 89074
Telephone: +1702.263.7275
Fax: +1702.263.7200

SUMMERLIN

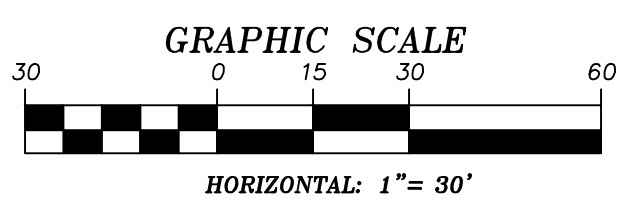
SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD
TRAFFIC CONTROL PLAN
STA 33+50 TO END

DESIGNED BY: B. MOCHTAK
DRAWN BY: K. HENDRY
CHECKED BY: N. BARCOS
DATE: APRIL 2021
DRAWING NO. 33/42
JOB NO. 100069098



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PROFESSIONAL ENGINEER - STATE OF NEVADA
NICHOLAS A. BARCOS
No. 25873
4/16/2021



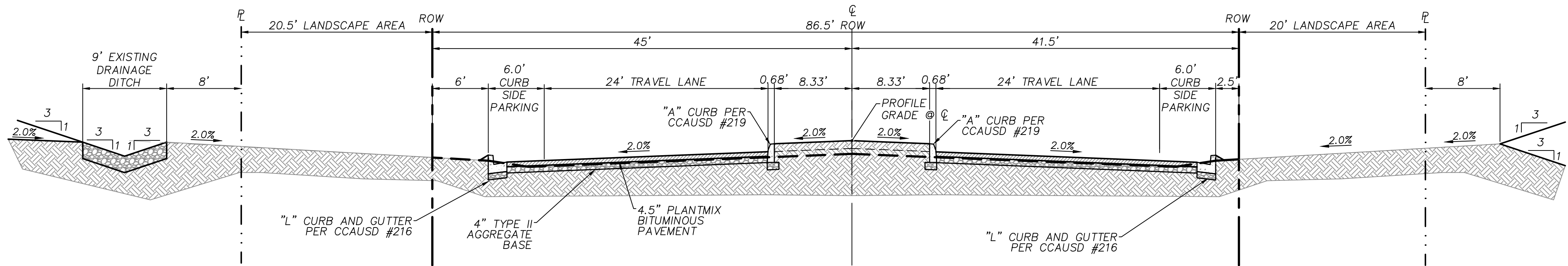
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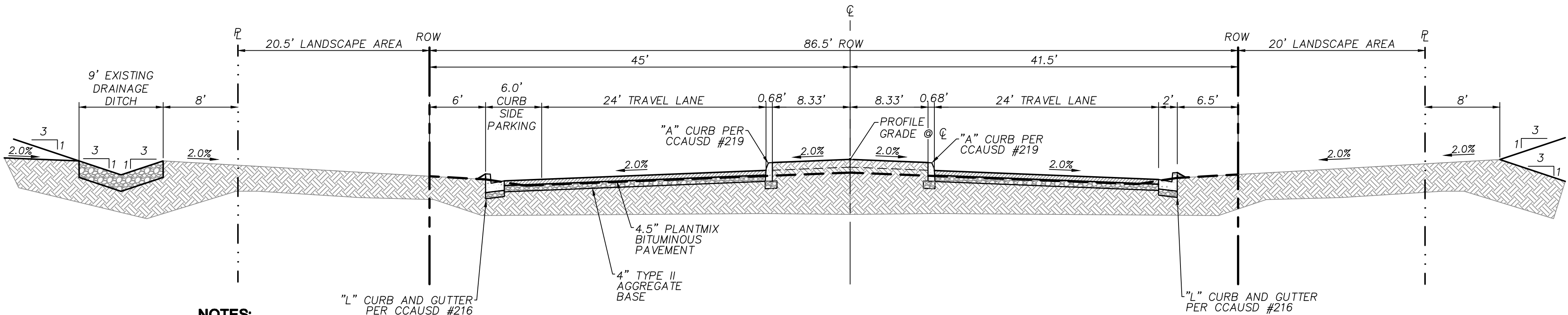
NOTES:

1. EXCAVATE BOTH SIDES TO DEPTH INDICATED PRIOR TO STREET IMPROVEMENTS. SIFT/SCREEN OUT ROCK AND DEBRIS GREATER THAN 6" FROM EXCAVATED MATERIAL, THEN BACKFILL TO 85% COMPACTION. FILL AS NECESSARY TO 2" BELOW THE FINISHED GRADE.

SCURRY BEND DRIVE - TYPICAL SECTION W/PARKING (BOTH SIDES)

N.T.S.

34



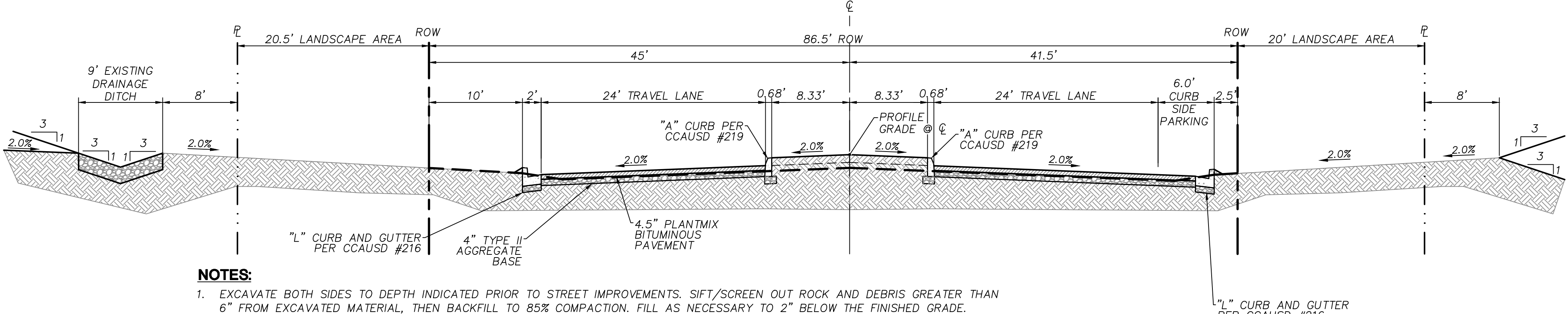
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SCURRY BEND DRIVE - TYPICAL SECTION W/PARKING (LEFT SIDE)

N.T.S.

34



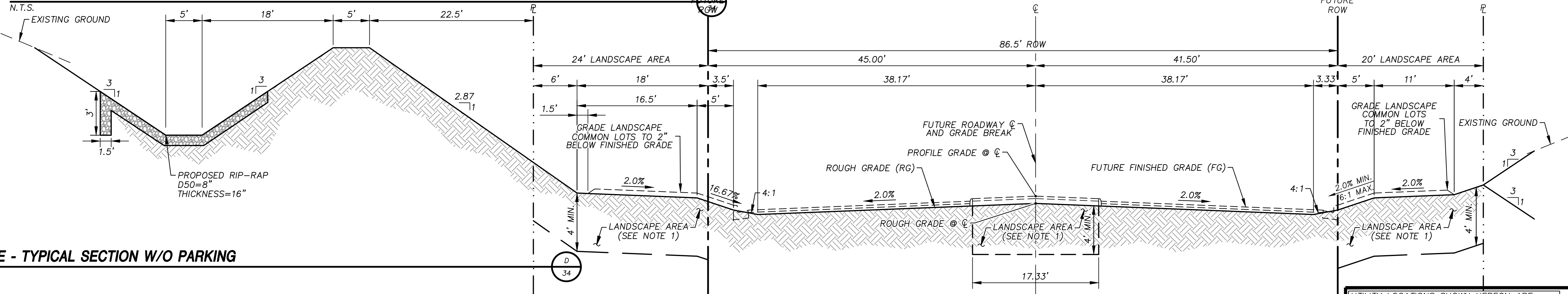
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SCURRY BEND DRIVE - TYPICAL SECTION W/PARKING (RIGHT SIDE)

N.T.S.

34



SCURRY BEND DRIVE - TYPICAL SECTION W/O PARKING

N.T.S.

BASIS OF BEARING

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

BENCHMARK

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T215R59E.S03



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DESIGNED BY: B. MOCHTYAK
DRAWN BY: K. HENDRY
CHECKED BY: N. BARCOS
HORIZ.: NONE
VERT.: NONE

SUMMERLIN WEST VILLAGE 25

SCURRY BEND DRIVE (STREET N)

SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD

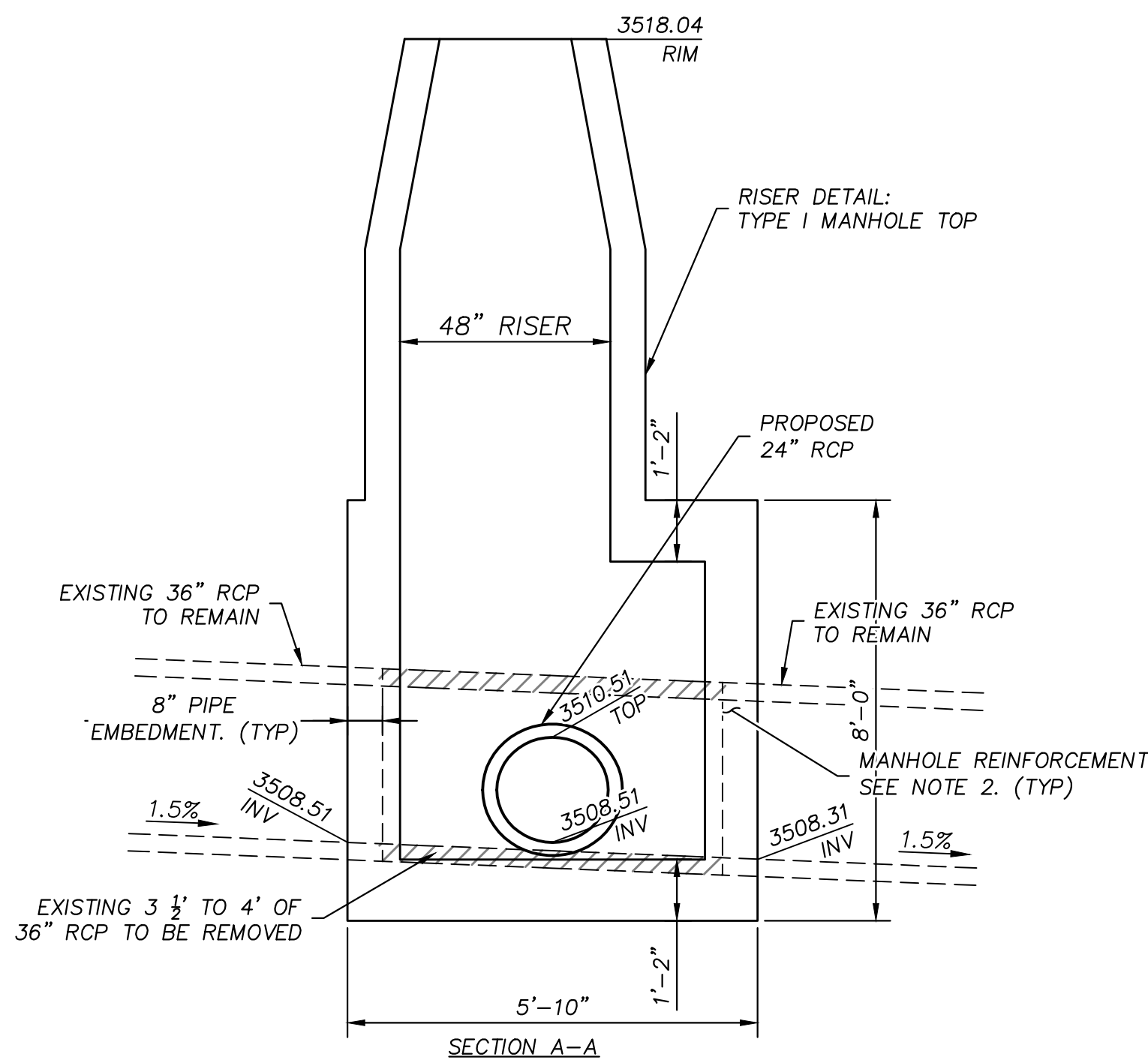
TYPICAL SECTIONS



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REVISIONS

REV.	DESCRIPTION	BY	DATE	APPROVAL

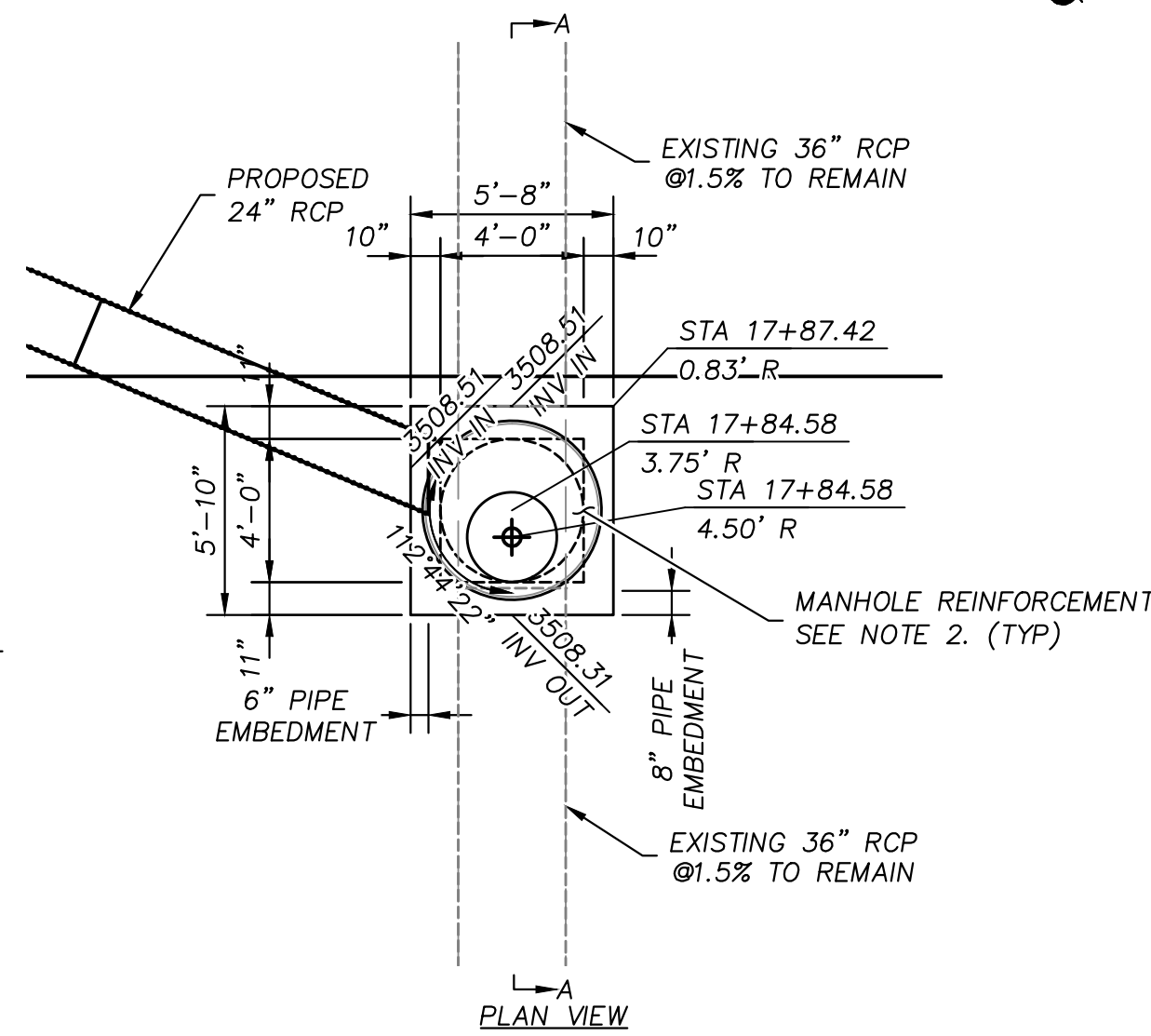


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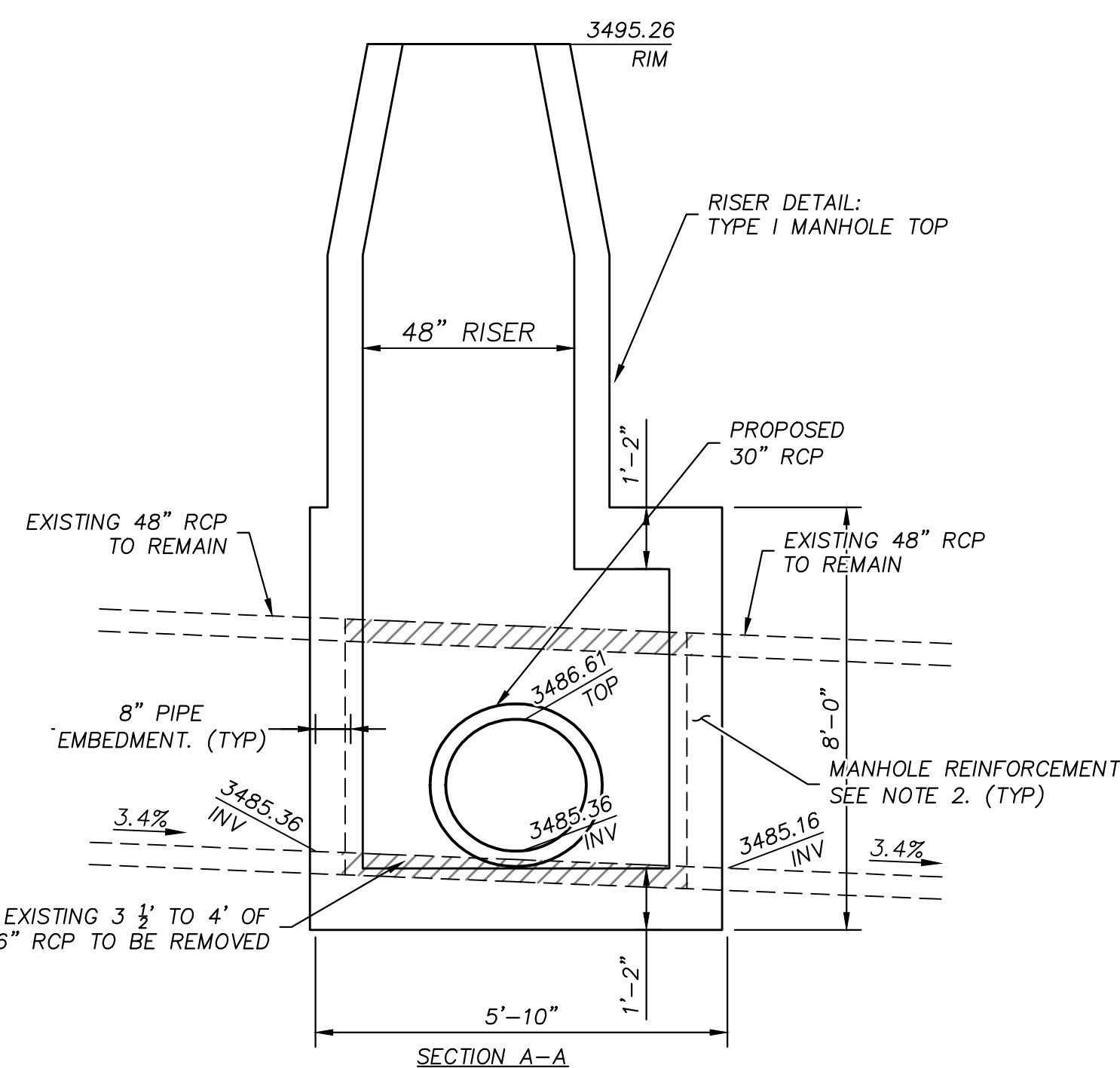
N.T.S.

NOTES:

1. SEE NOTES ON CLARK COUNTY UNIFORM STANDARD DRAWINGS 405.2 SHEET 2 OF 3.
2. FOR REINFORCEMENT LAYOUT FOR MANHOLE STRUCTURES, SEE CLARK COUNTY UNIFORM STANDARD DRAWINGS 405.2 SHEET 2 OF 3 FOR SINGLE SIDE DRAIN.
3. ALL STATION/OFFSETS REFERENCE "DFD" CENTERLINE.



PLAN VIEW

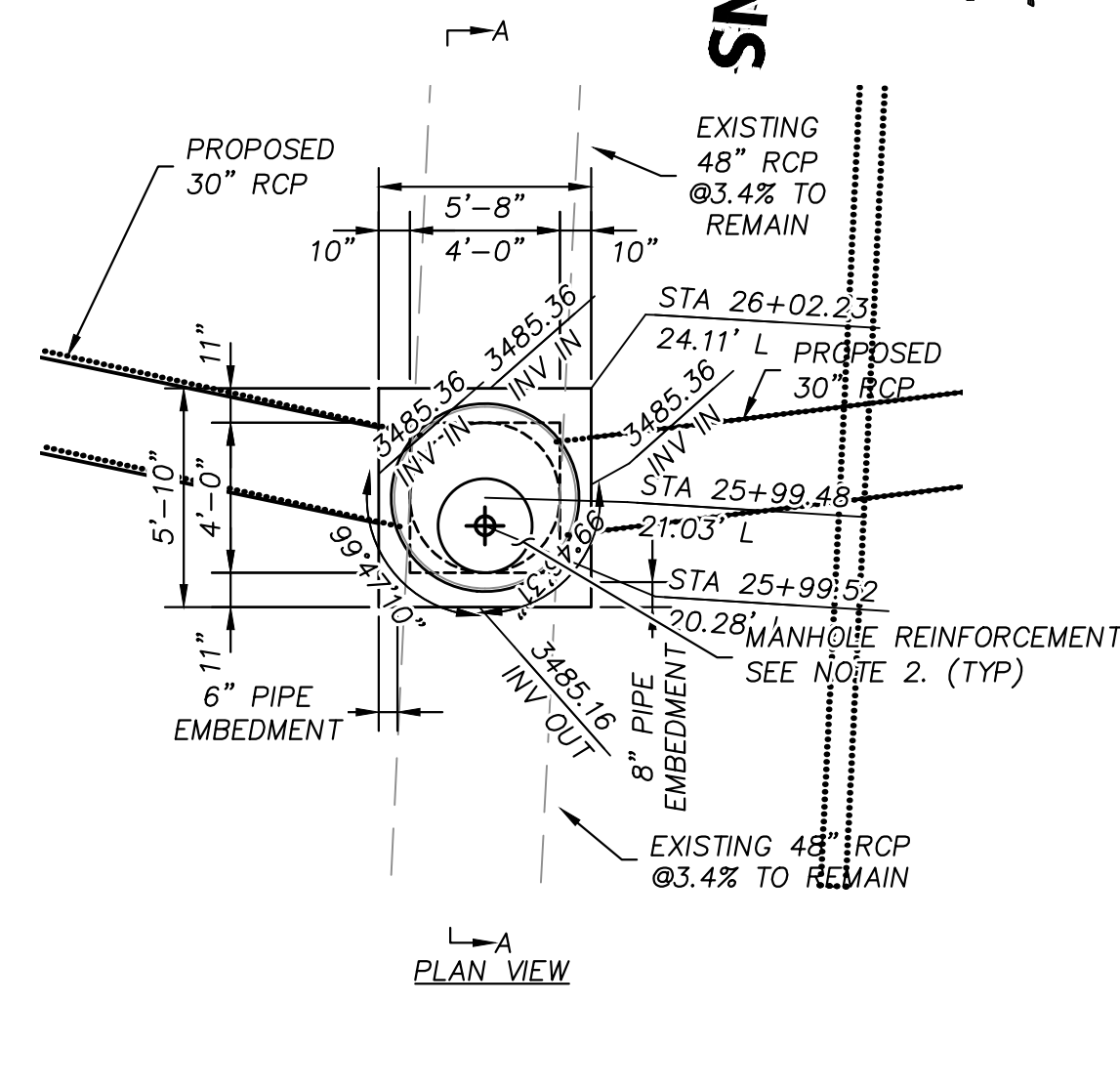


STORM DRAIN MANHOLE #2 CONNECTION DETAIL

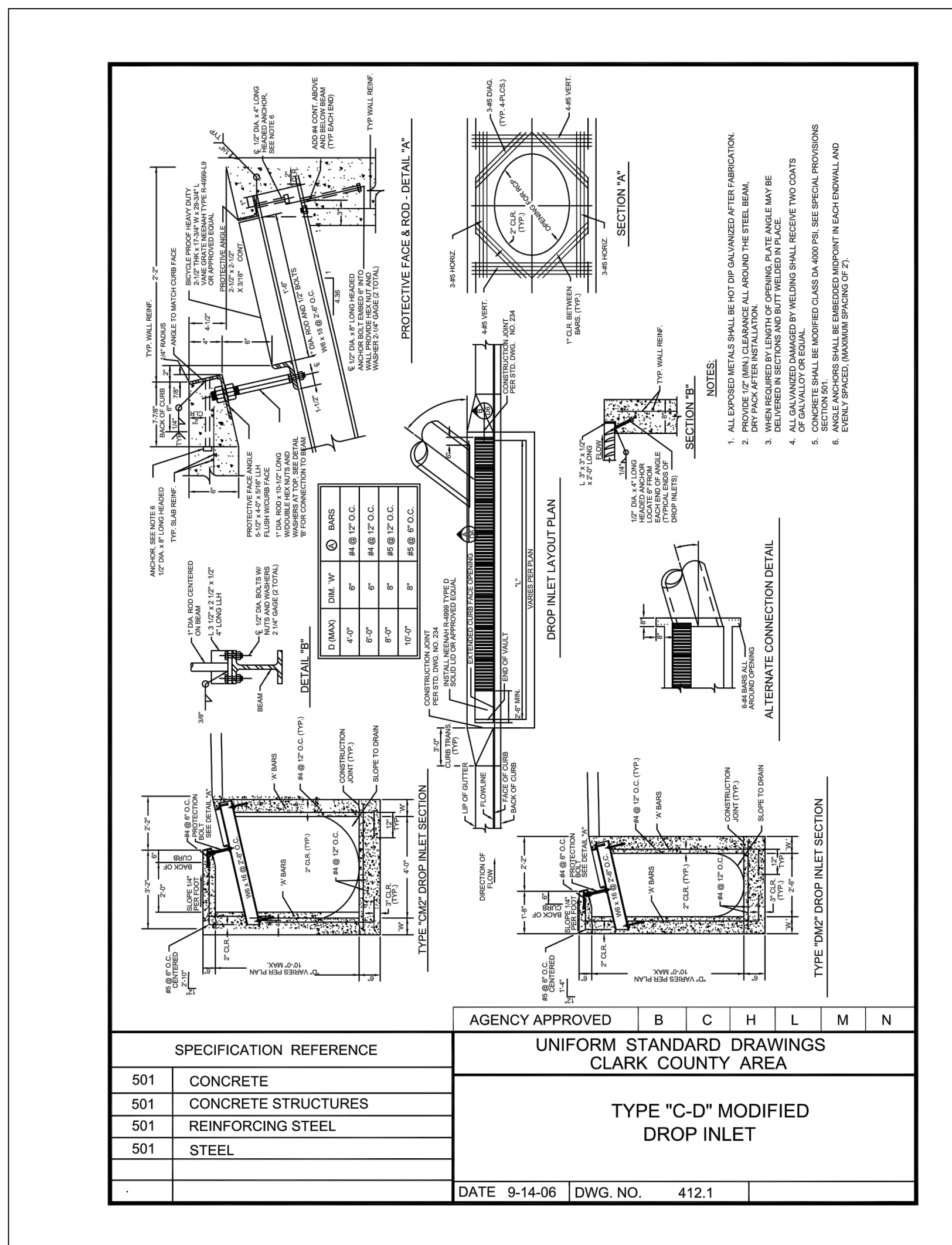
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PLAN VIEW



SPECIFICATION REFERENCE		AGENCY APPROVED					
501	CONCRETE	B	C	H	L	M	N
501	CONCRETE STRUCTURES	UNIFORM STANDARD DRAWINGS					
501	REINFORCING STEEL	CLARK COUNTY AREA					
501	STEEL	TYPE "C-D" MODIFIED					
		DROP INLET					
		DATE 9-14-06 DWG. NO. 412.1					

BASIS OF BEARING

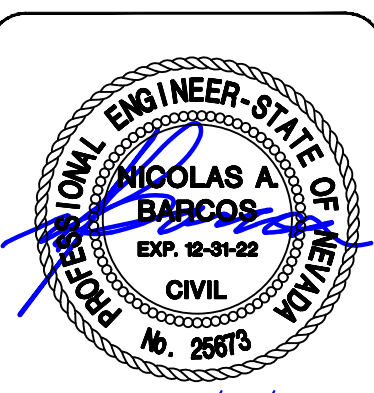
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T21S.R59E.S03



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DESIGNED BY:	XXXXXX
DRAWN BY:	LX-XXXX
CHECKED BY:	K. HENDRY
DATE:	APRIL 2021
DRAWING NO.:	36/42
HORIZ.: NONE	
VERT.: NONE	

JOB NO. 100069098

SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD
STORM DRAIN DETAILS

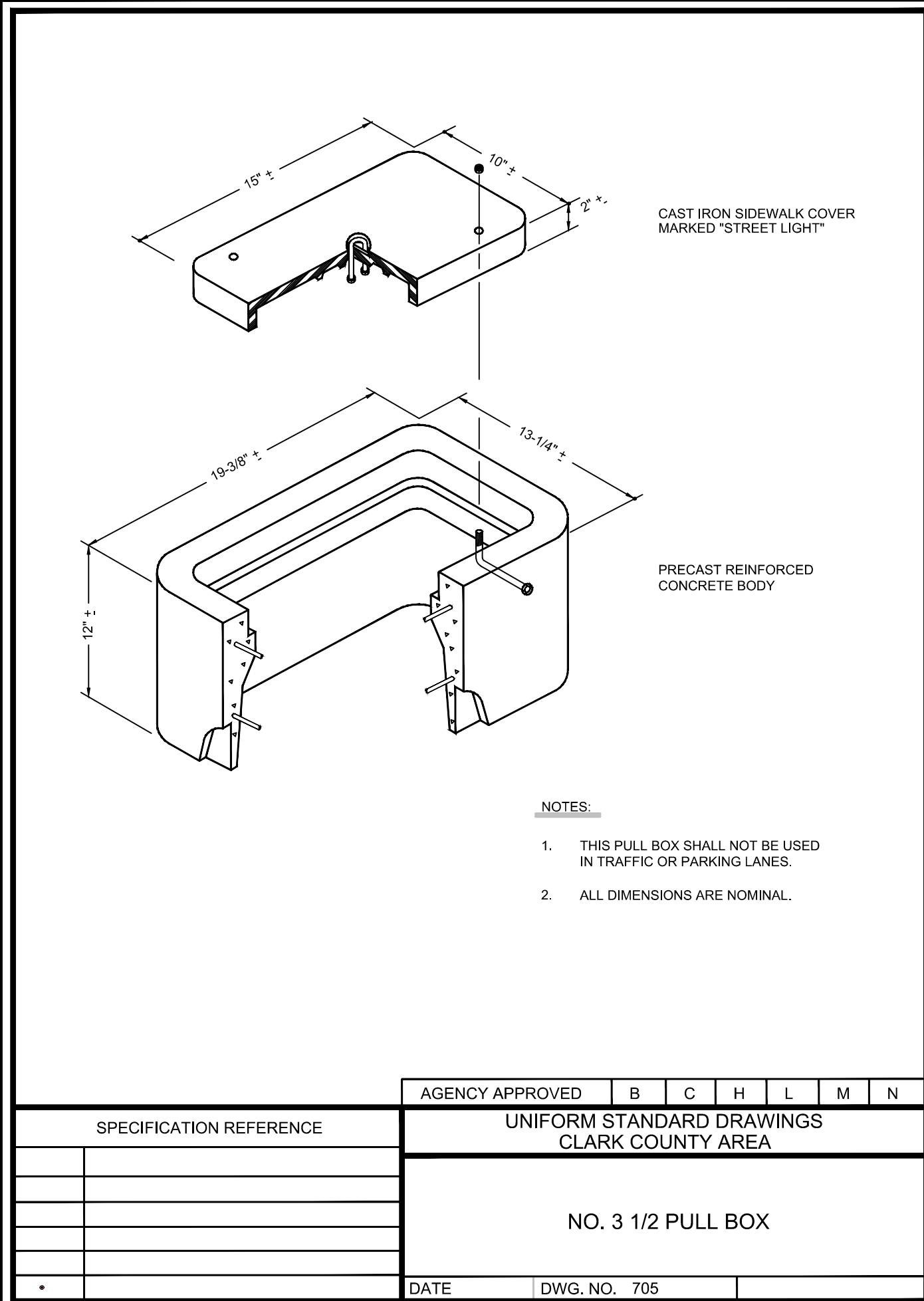


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Telephone: +1702.263.775
Fax: +1702.263.7200

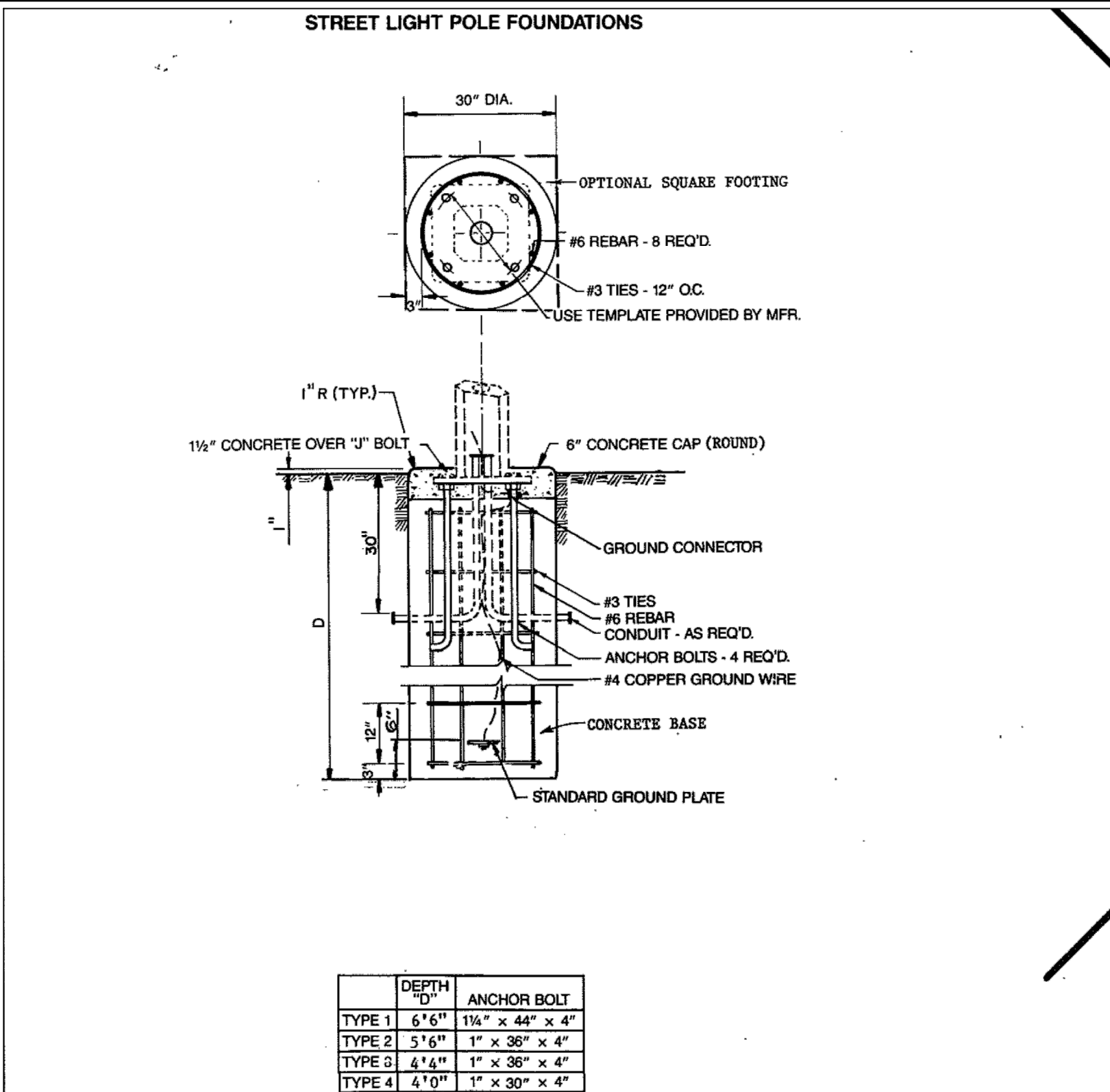
REV.	DESCRIPTION	BY	DATE	APPROVAL

REVISIONS

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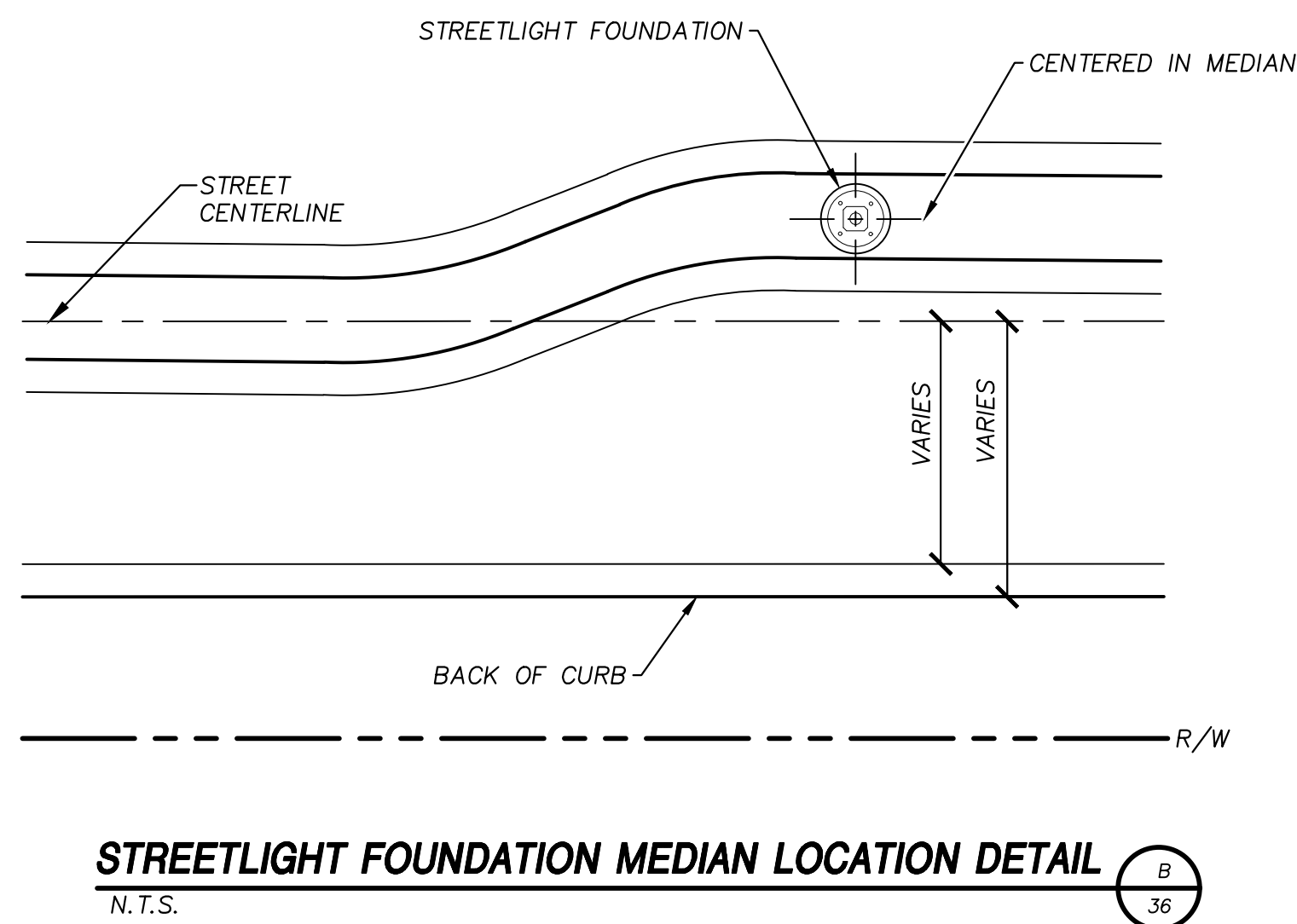
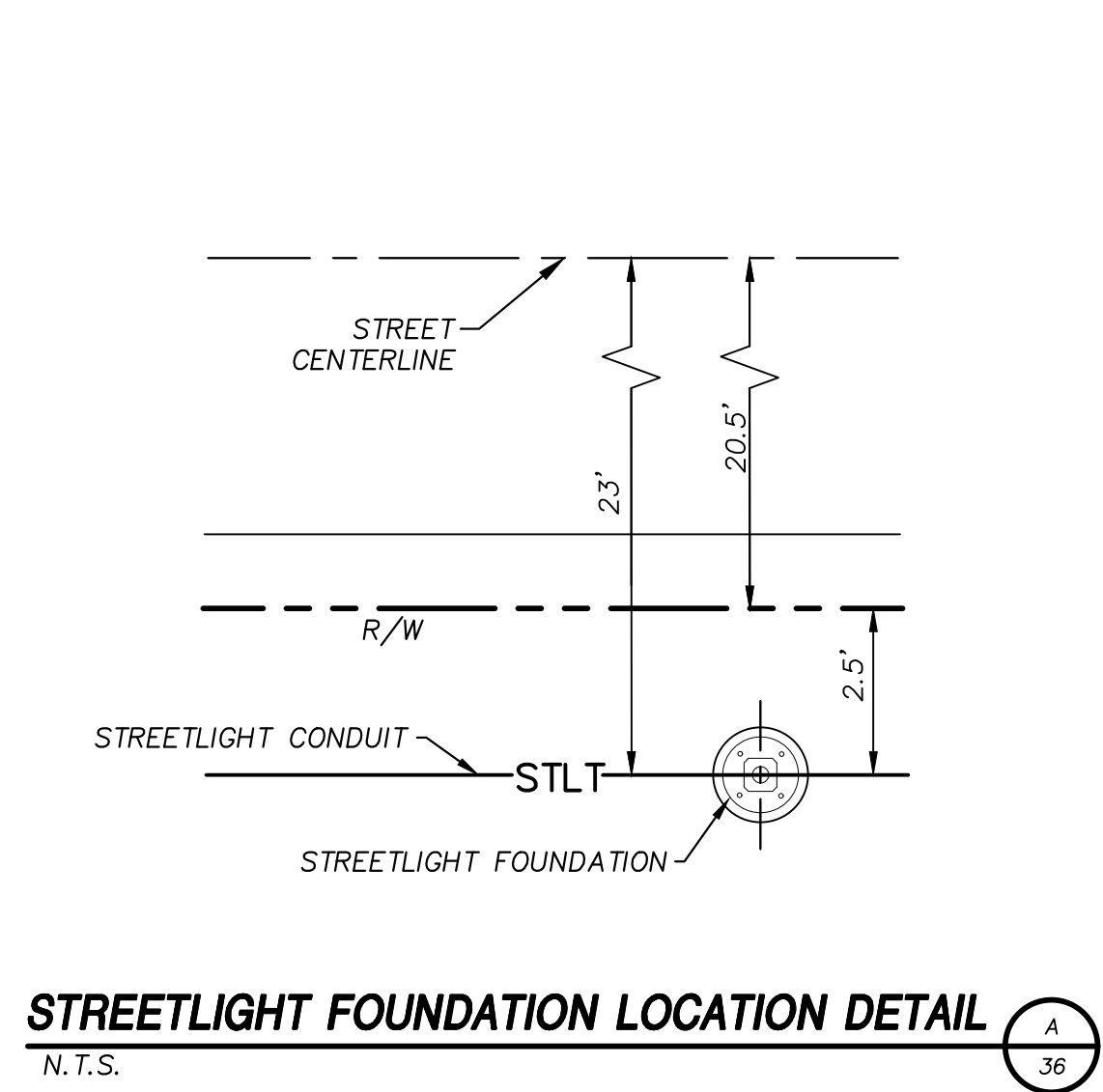
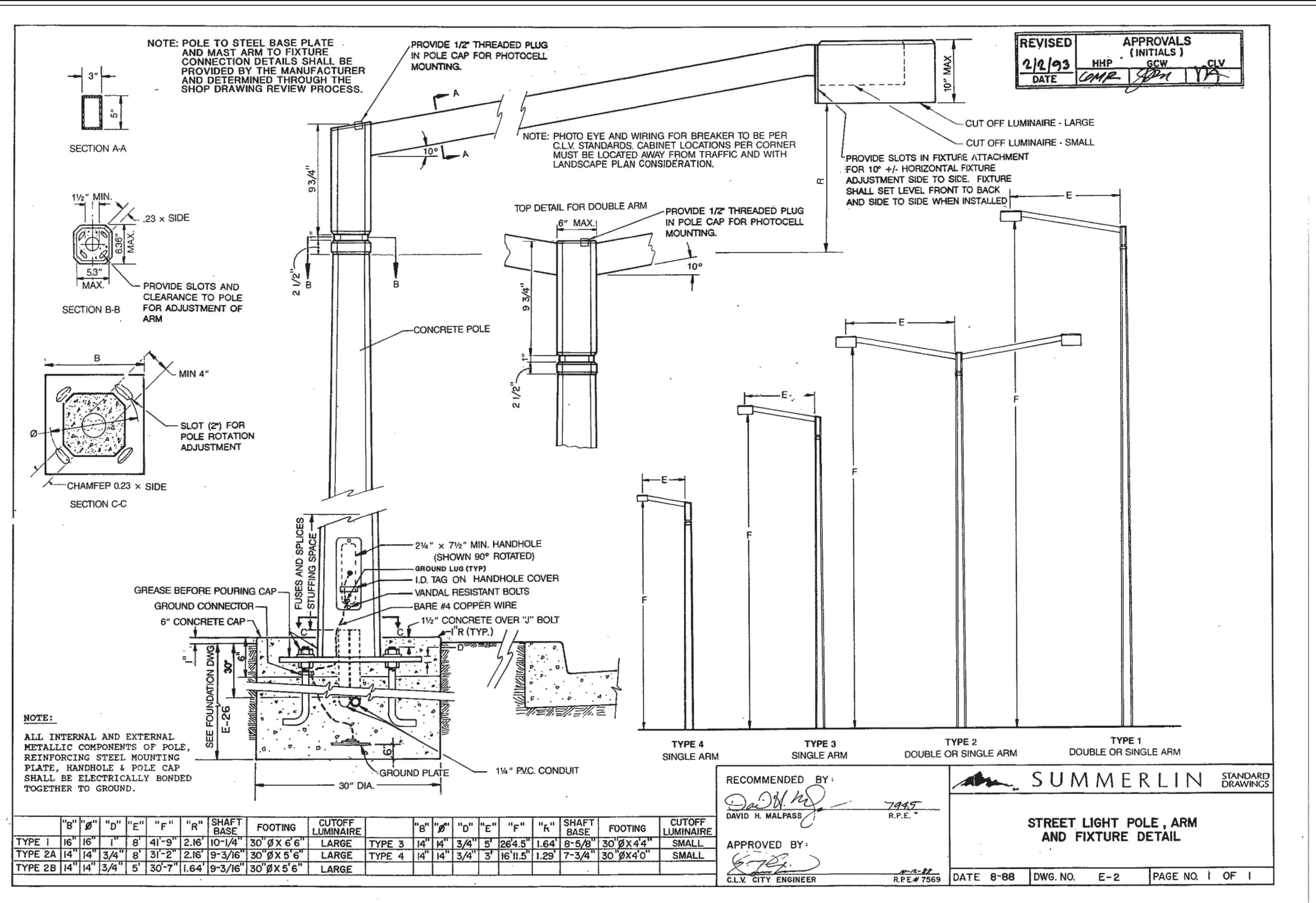


AGENCY APPROVED	B	C	H	L	M	N
SPECIFICATION REFERENCE	UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA					
	NO. 3 1/2 PULL BOX					
DATE	DWG. NO.	705				



- NOTE:**
- ALL CONCRETE SHALL BE TYPE V CONCRETE CLASS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA.
 - PLACE CONCRETE AGAINST UNDISTURBED EARTH OR 95% COMPACTED BACKFILL. (10' MIN. RADIUS AROUND FOUNDATION)
 - CALCULATION SHEETS AND DETAILS WILL BE SUBMITTED, SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER. TO CLV FOR REVIEW AND APPROVAL FOR FOUNDATION DESIGNS OTHER THAN SHOWN PER THIS STANDARD.

RECOMMENDED BY: DAVID H. MALPASS 7/24/5 R.P.E.	APPROVED BY: CLV CITY ENGINEER R.P.E.# 7565	DATE: 8-88	DWG. NO.: E-26	PAGE NO. 1 OF 1
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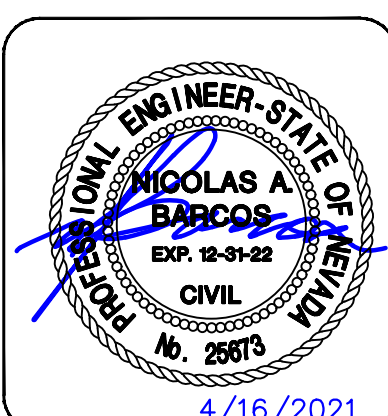
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1-800-642-2444

811
Call before you Dig
UnderGround
1-800-642-2444

CALL BEFORE YOU DIG
1-702-227-2929

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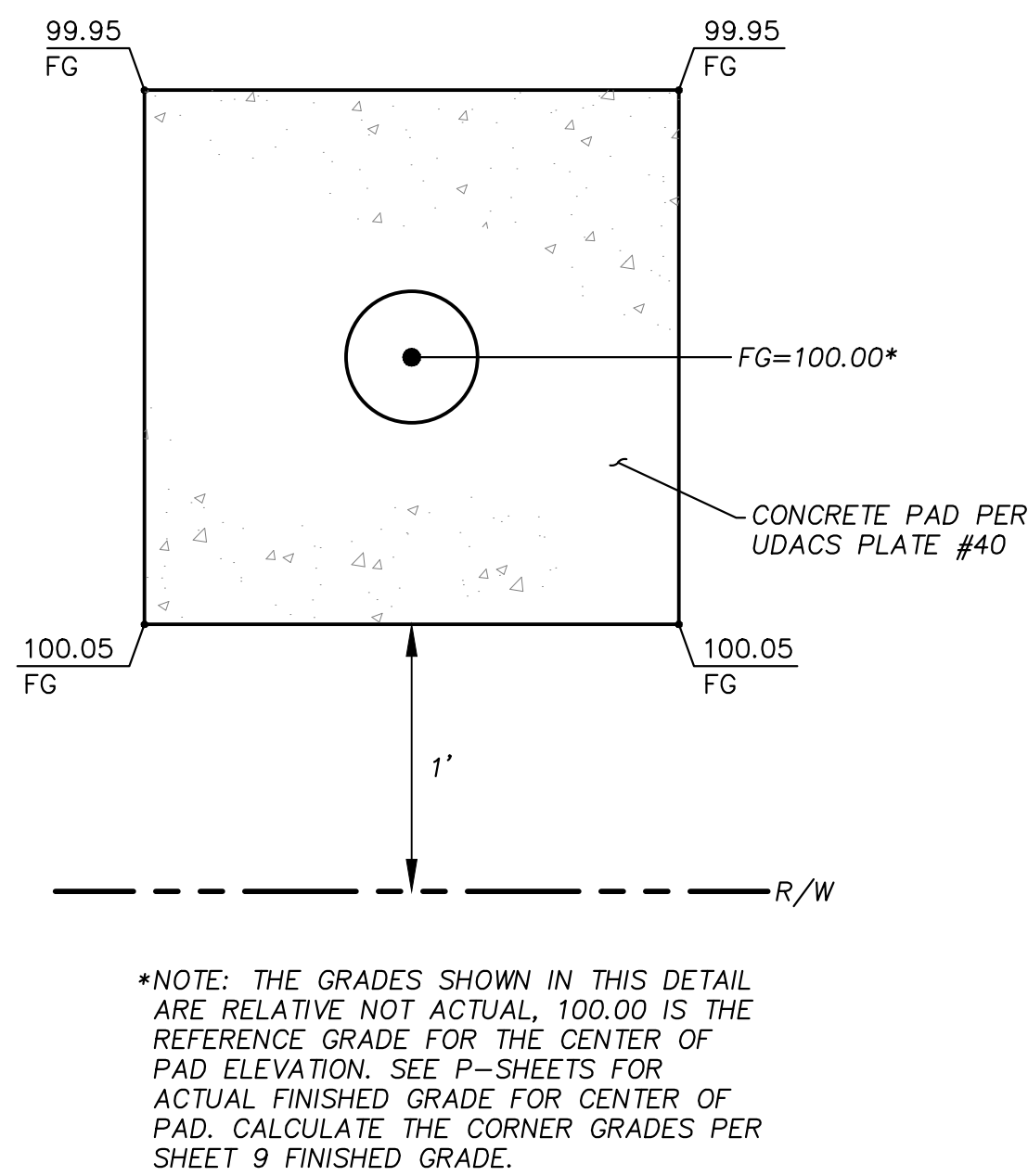
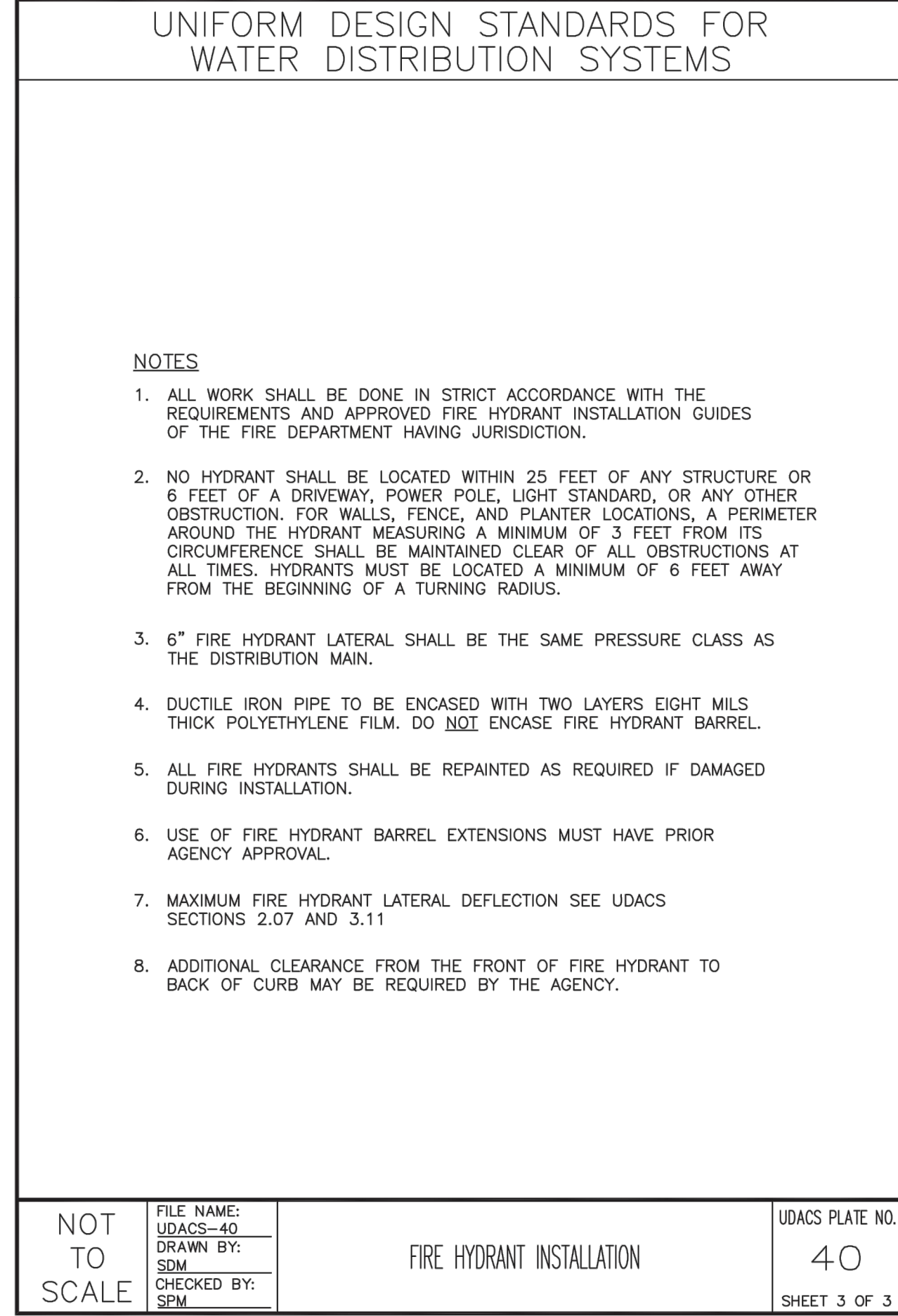
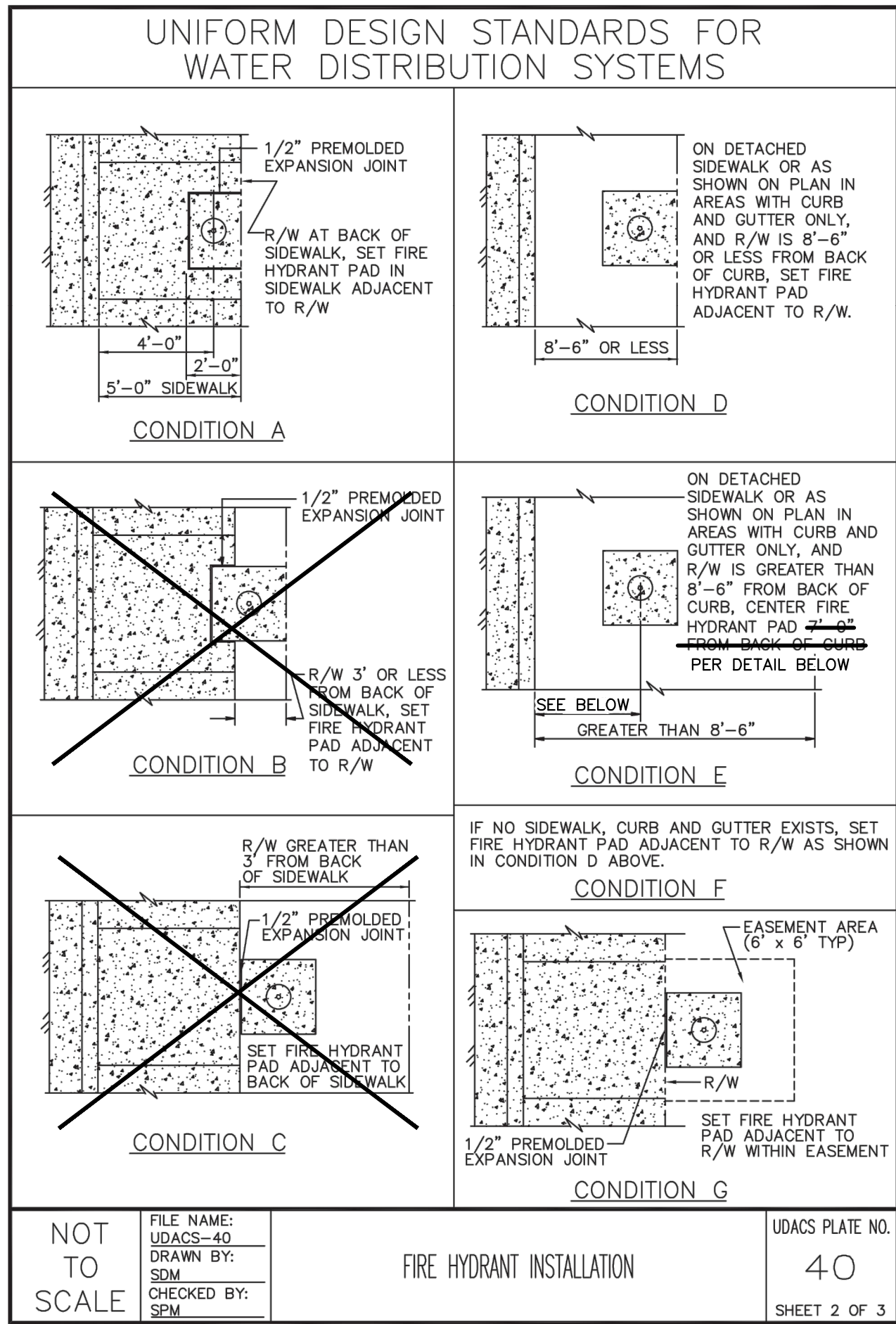
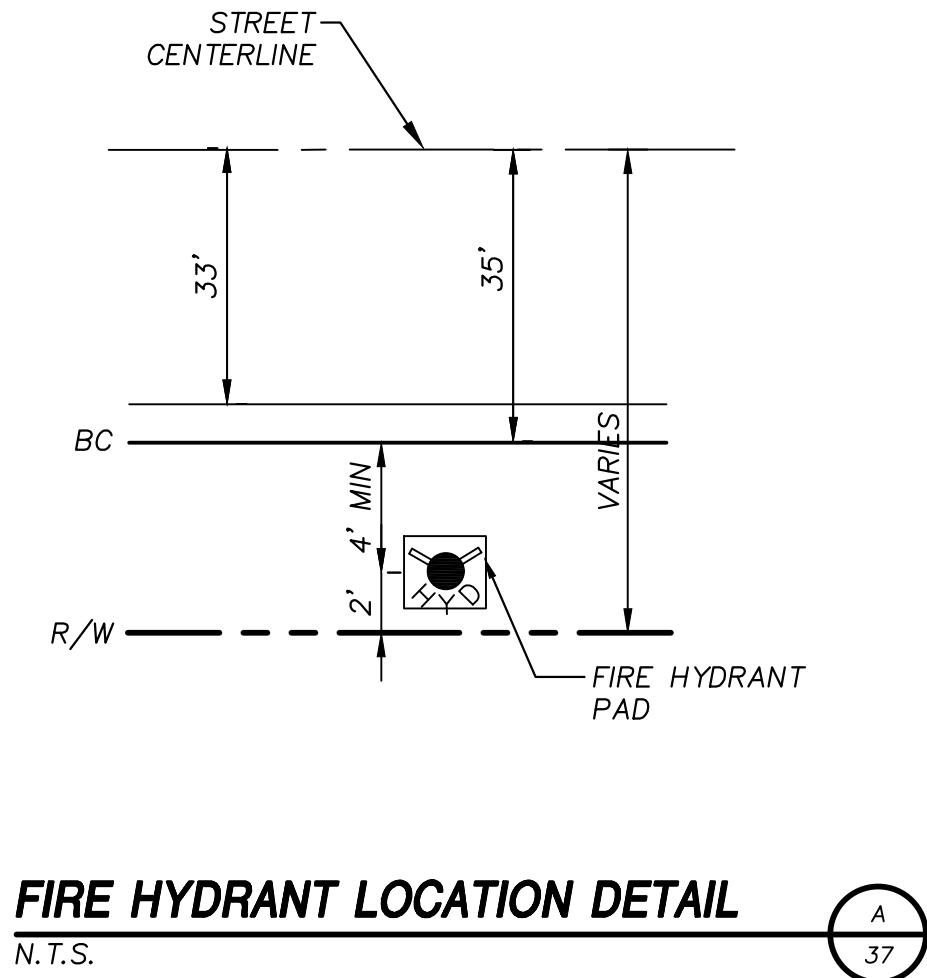
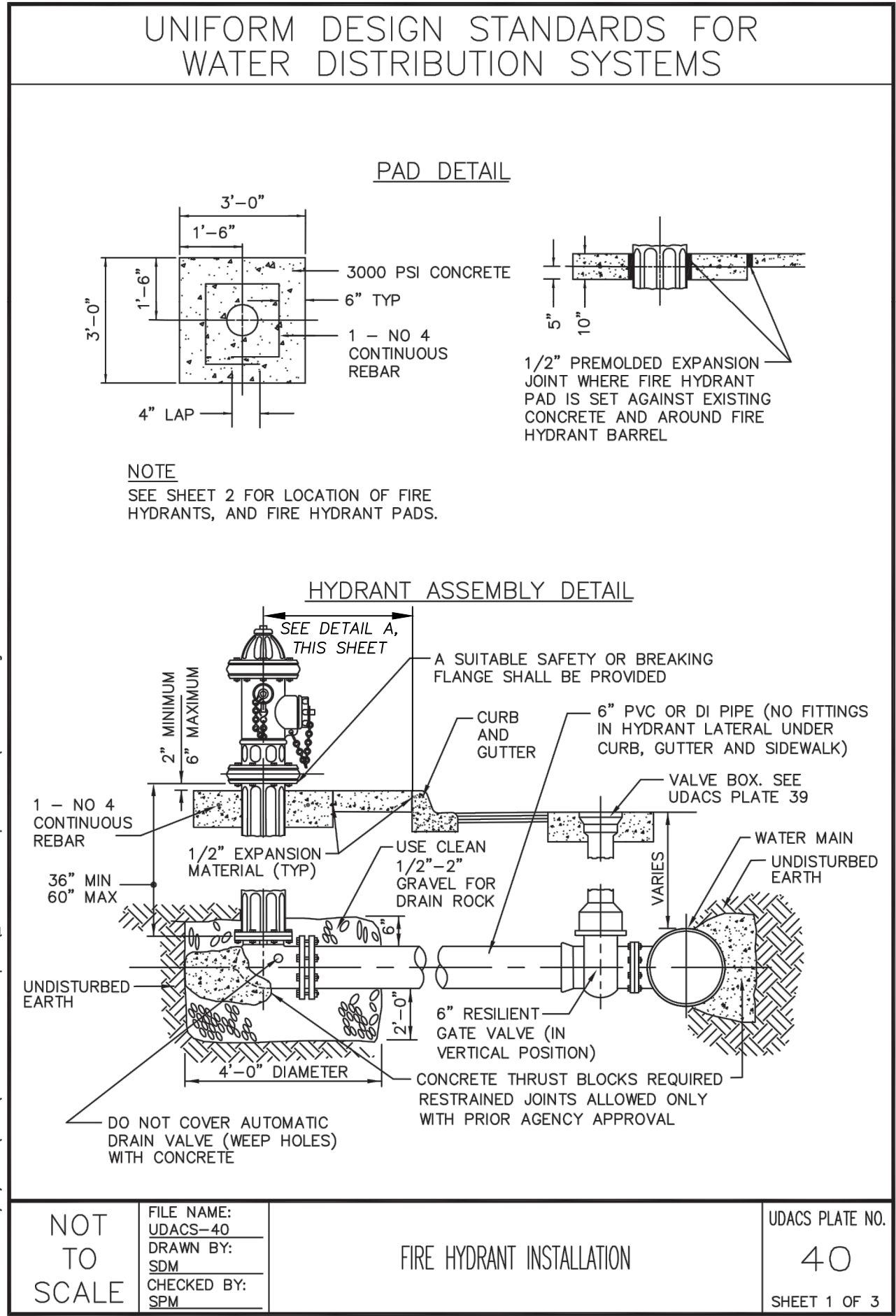


DESIGNED BY: B. MOCHTYAK	DRAWN BY: K. HENDRY	CHECKED BY: N. BARCOS	HORIZ.: NONE	VERT.: NONE
DATE: APRIL, 2021	DRAWING NO. 36/42	JOB NO. 100069098	ATKINS 2270 Corporate Circle Suite 200 Henderson, Nevada 89074 Telephone: +1702.263.7755 Fax: +1702.263.7200	
SUMMERLIN SUMMERLIN WEST VILLAGE 25 SCURRY BEND DRIVE (STREET N) SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD STREETLIGHT DETAILS				

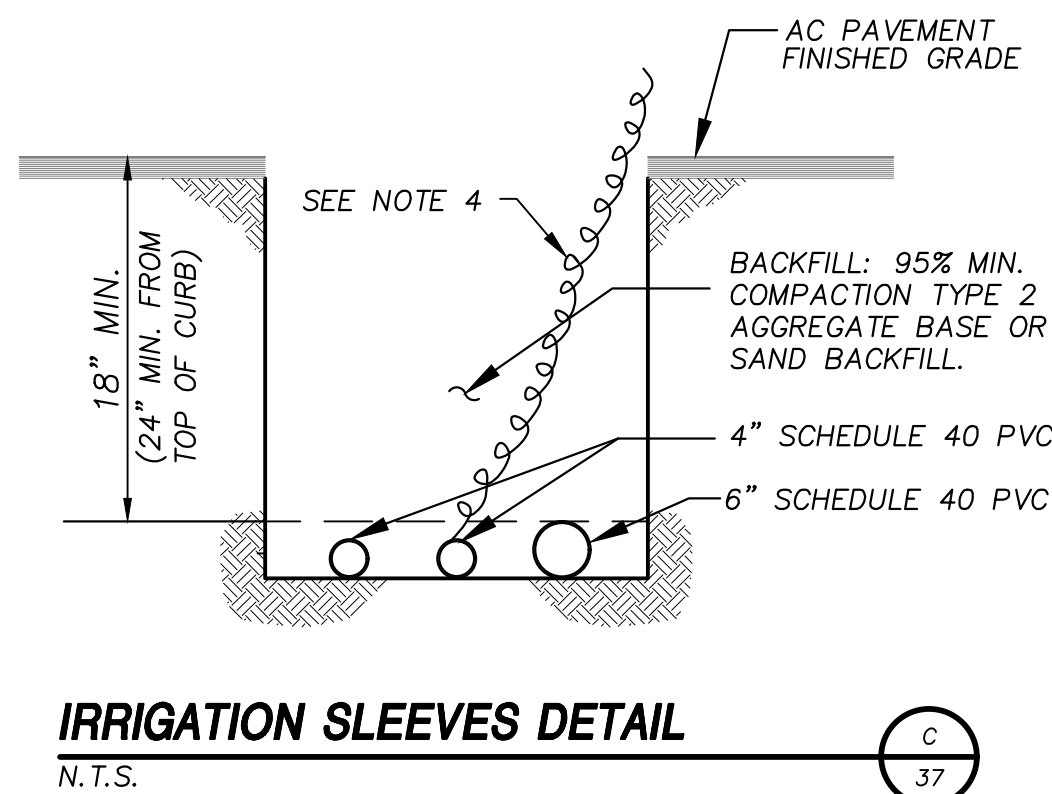


REV.	DESCRIPTION	DATE	APPROVAL

REV.	DESCRIPTION	DATE	APPROVAL



- NOTES:**
- SLEEVES AND CONDUITS SHALL BE INSTALLED 18" BELOW FINISHED GRADE AND SHALL EXTEND 5' BEYOND BACK OF CURBS, WALLS AND PAVING.
 - CONTRACTOR SHALL RECORD LOCATIONS OF INSTALLED SLEEVES: A COPY OF THE FILED NOTES SHALL BE GIVEN TO SUMMERLIN'S ENGINEER FOLLOWING CONSTRUCTION.
 - HORIZONTAL LOCATION OF SLEEVES SHOWN ON P-SHEETS.
 - THE CONTRACTOR TO PROVIDE A WIRE THROUGH THE SLEEVE TO GRADE LEVEL (FOR FUTURE SLEEVE LOCATION).
 - CONTRACTOR TO IDENTIFY SLEEVE LOCATION ON TOP OF CURB.



APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT
PLANNING AND ENGINEERING SERVICES

PROJECT NO. 0000 FIRST APPROVED DATE: _____
LVVWD APPROVED FIRE FLOW 1500 GPM AT 20 PSI RESIDUAL

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.

BENCHMARK

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,R59E,S03

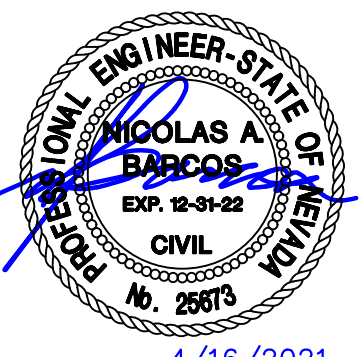
FAST

Call before you Dig
UnderGround
1-702-432-5300
FEDERAL AND STATE AGENCIES
OF TRANSPORTATION

Call before you Dig
Call 811
1-800-642-2444

AVOID HITTING OVERHEAD
POWER LINES. IT'S COSTLY.
CALL BEFORE YOU GO OVERHEAD
1-702-227-2929

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DESIGNED BY: B. MOCHTYAK
DRAWN BY: K. HENDRY
CHECKED BY: N. BARCOS
HORIZ.: NONE
VERT.: NONE

XXXXXX
LX-XXXXX
DATE: APRIL, 2021
DRAWING NO. 37/42

SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD

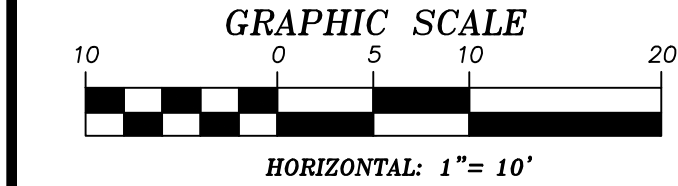
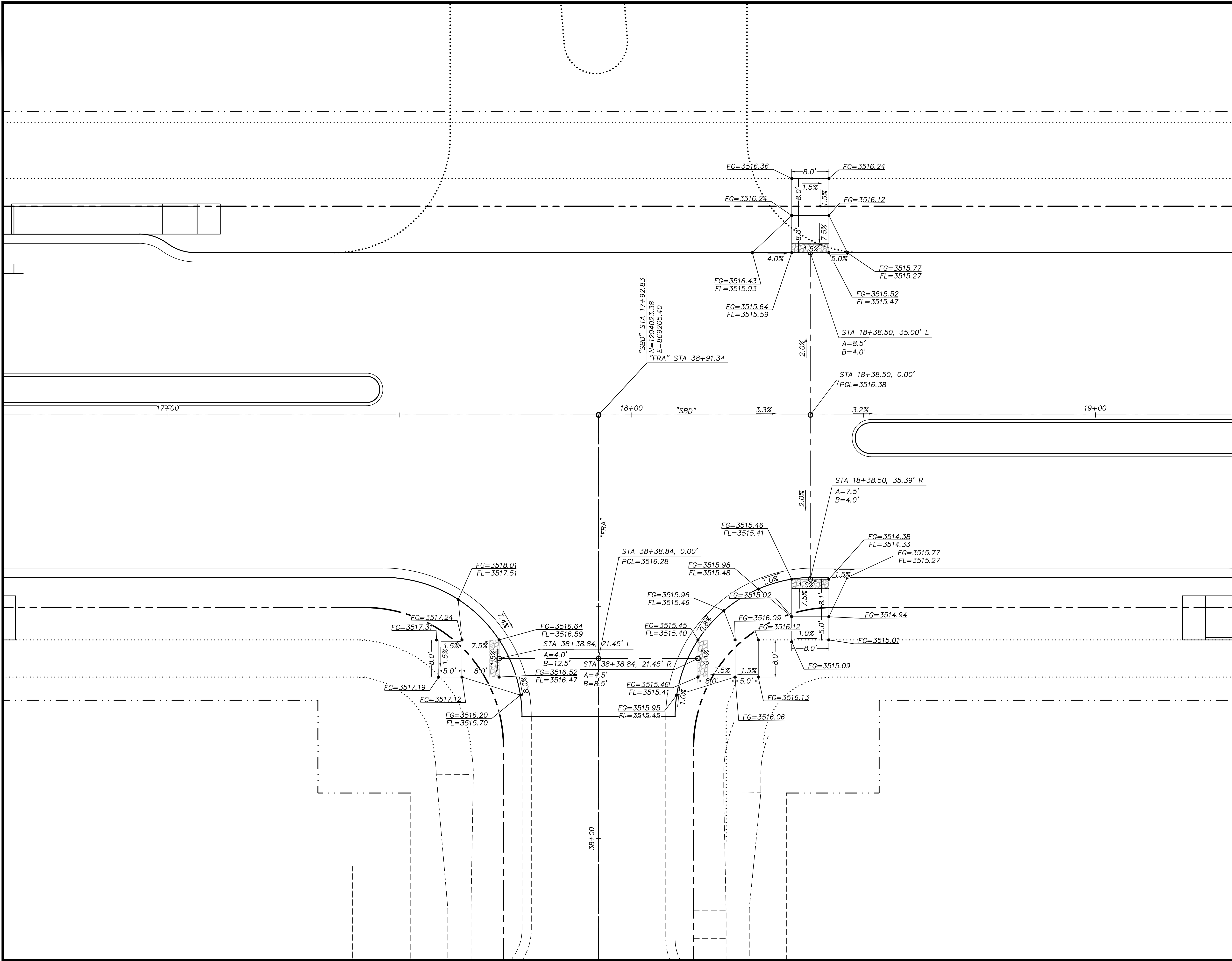
WATER DETAILS



ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7755
Fax: +1702.263.7200

REVISIONS

REV.	DESCRIPTION	BY	DATE	APPROVAL



BASIS OF BEARING

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T215.R59E.S03



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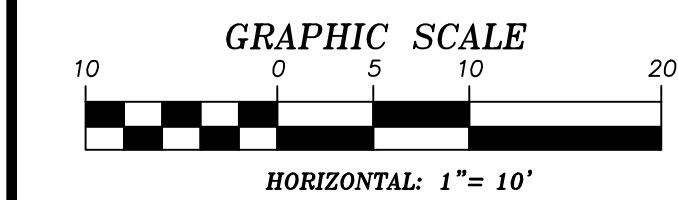
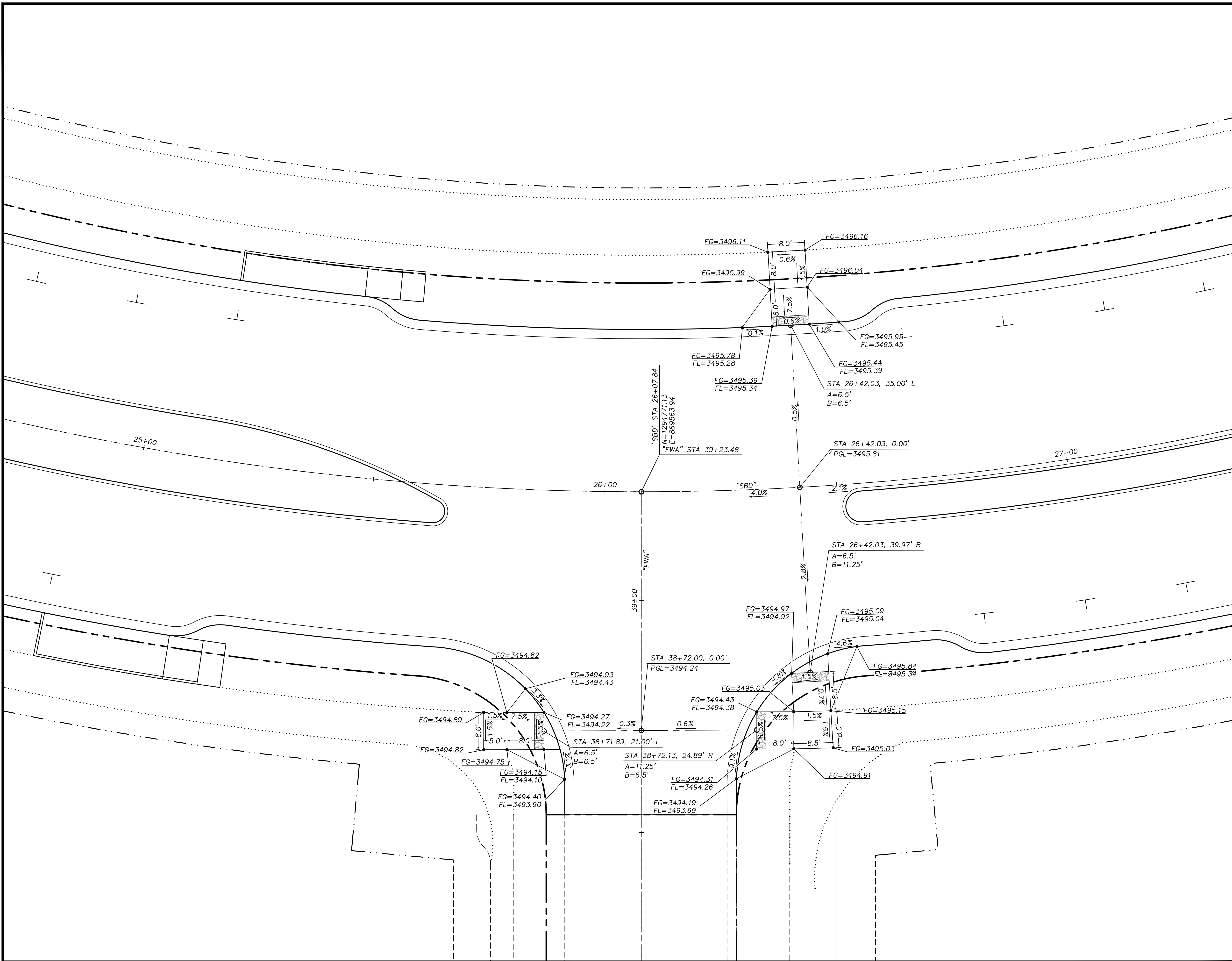
DESIGNED BY:	XXXXXX	DATE:	APRIL, 2021	DRAWING NO.	38/42
DRAWN BY:	LXX-XXXXX	CHECKED BY:	K. HENDRY	VERT.:	NONE
CHECKED BY:	N. BARCOS	HORIZ.:	1"=10'		

SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD
FRA INTERSECTION DETAILS



ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.775
Fax: +1702.263.700

REV.	DESCRIPTION	BY	DATE	APPROVAL



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

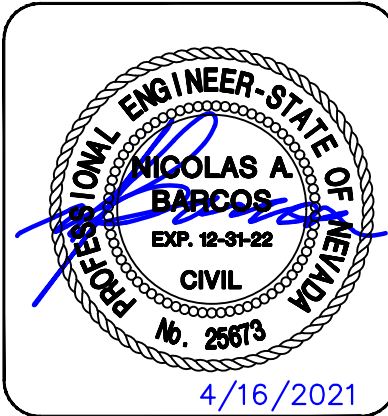
BENCHMARK
CITY OF LAS VEGAS BENCHMARK: D368 (REVISED 2008)
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T215R59E,S03

Call before you Dig
UnderGround
1-702-432-5300

Call before you Dig
UnderGround
1-800-642-2444

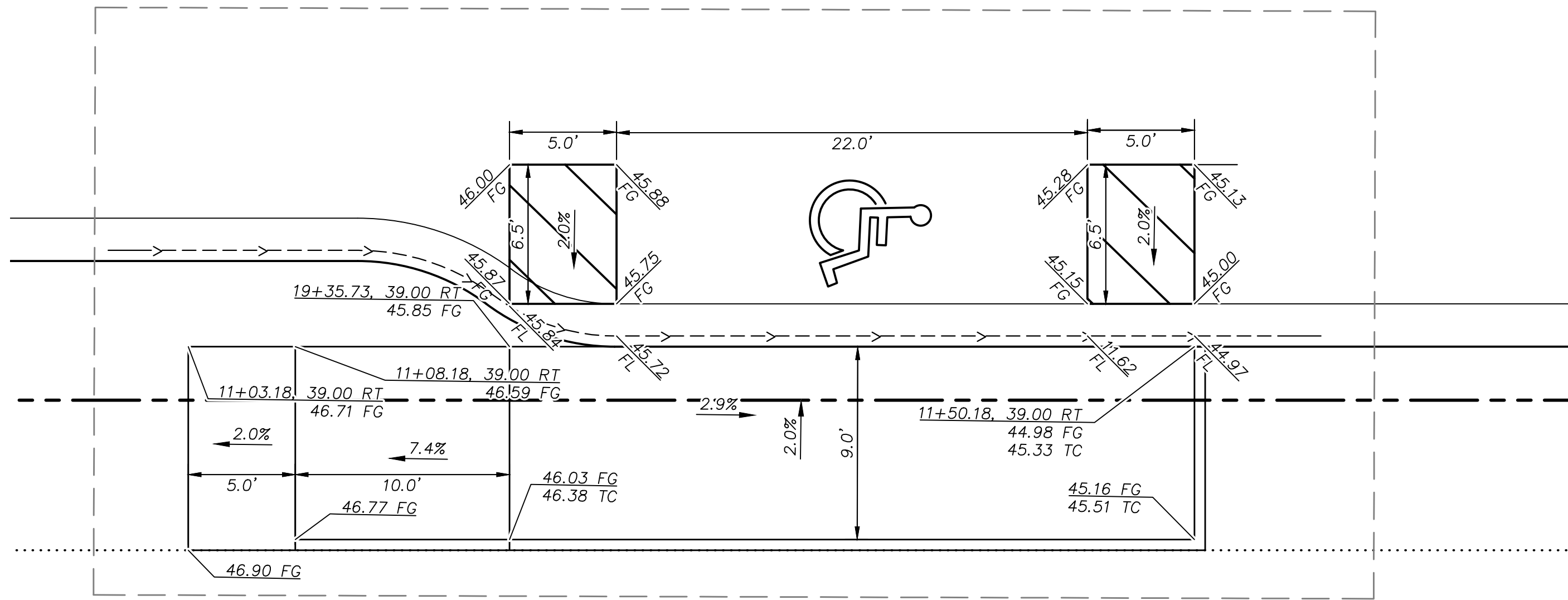
CALL BEFORE YOU DIG OVERHEAD
AVOID HITTING OVERHEAD POWER LINES. IT COULD BE YOUR LAST.
1-702-227-2929

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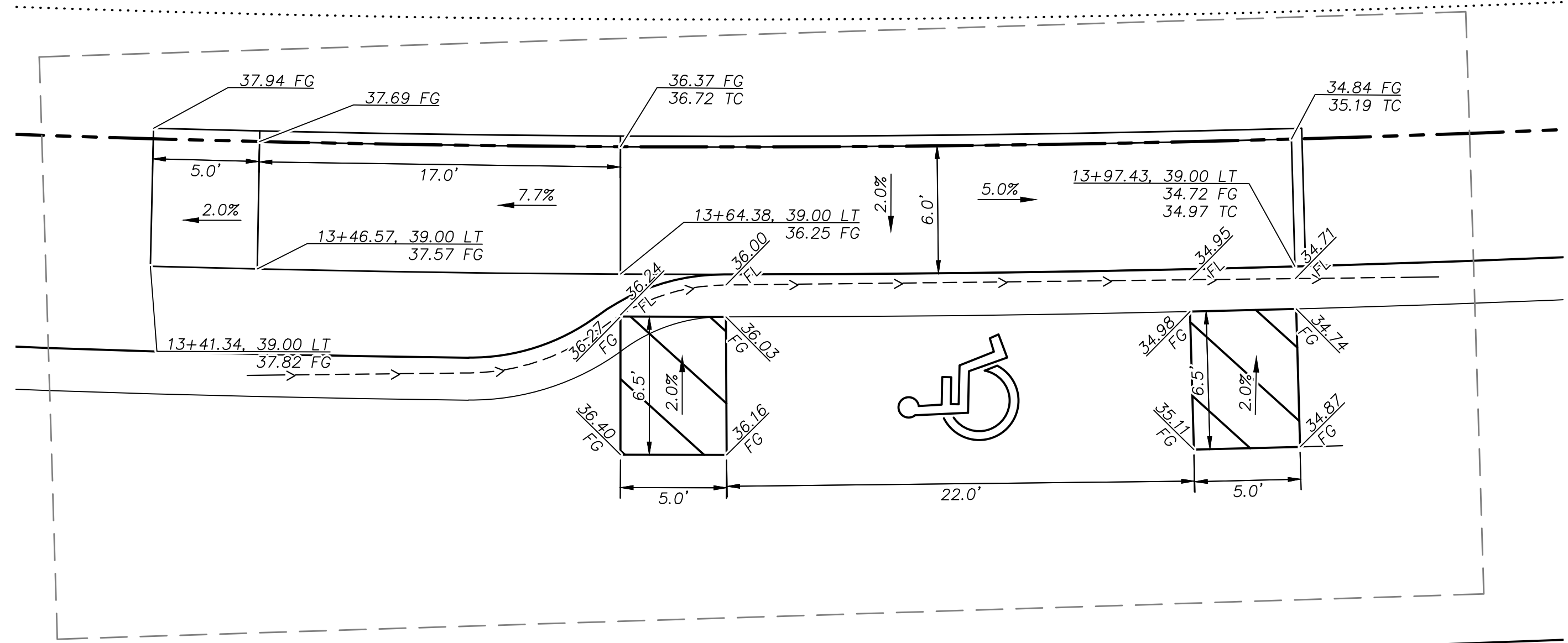
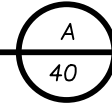
XXXXXX LXX-XXXX		DESIGNED BY: MOCHTYAK		ATKINS 2270 Corporate Circle Suite 200 Henderson, Nevada 89074 Telephone: +1702.263.7275 Fax: +1702.263.7200 SUMMERLIN SUMMERLIN WEST VILLAGE 25 SCURRY BEND DRIVE (STREET N) SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD FWA INTERSECTION DETAILS	
DATE:	APRIL, 2021	CHECKED BY:	N. BARCOS		
DRAWING NO.	39/42	HORIZ.: 1"=10'	VERT.: NONE		
JOB NO. 100069098					

REVISIONS				
REV.	DESCRIPTION	BY	DATE	APPROVAL



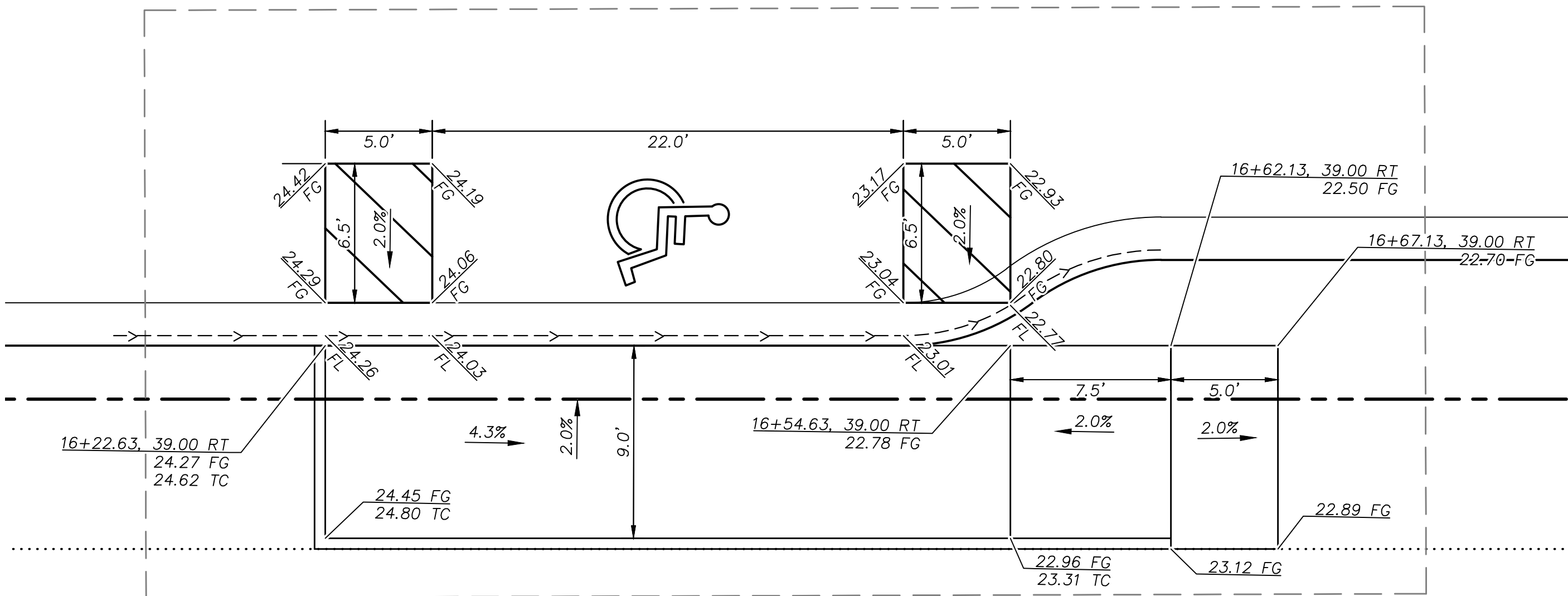
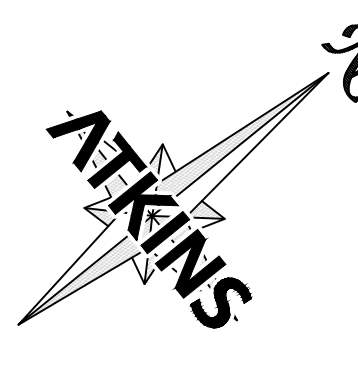
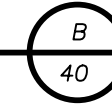
ADA PARKING GRADING DETAIL STA 11+35

1"=5'



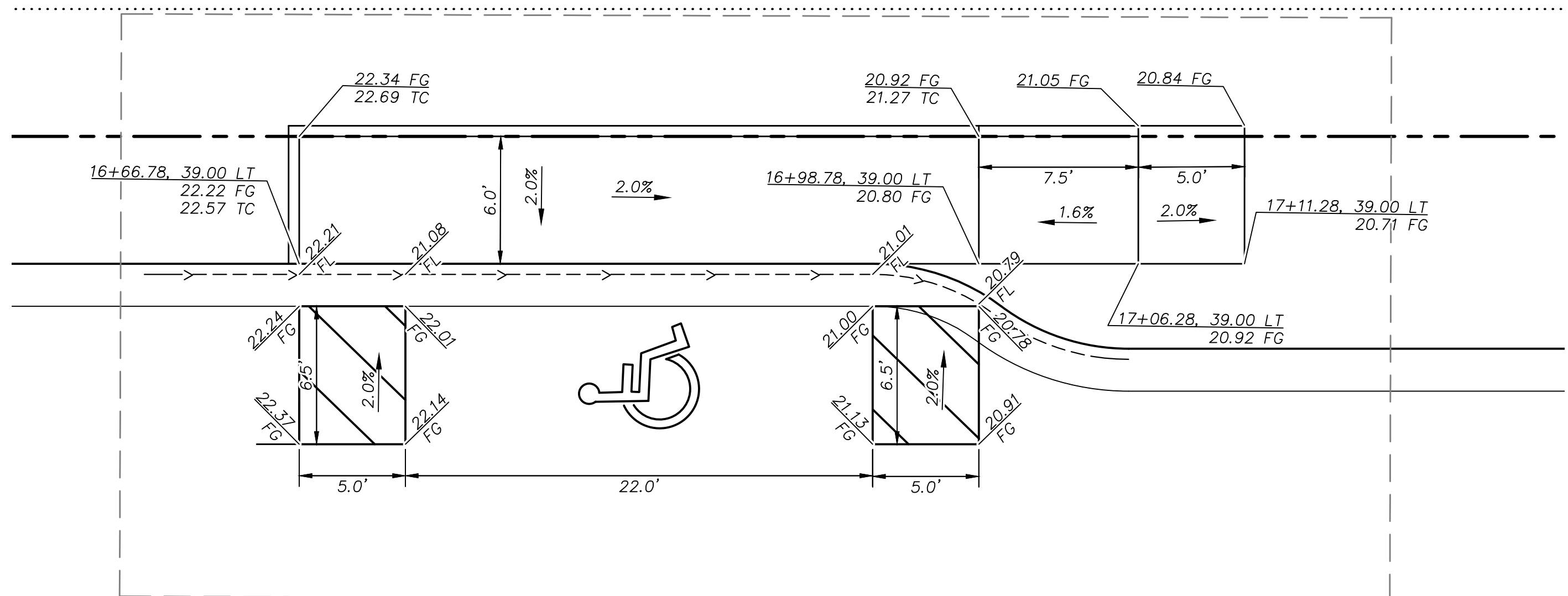
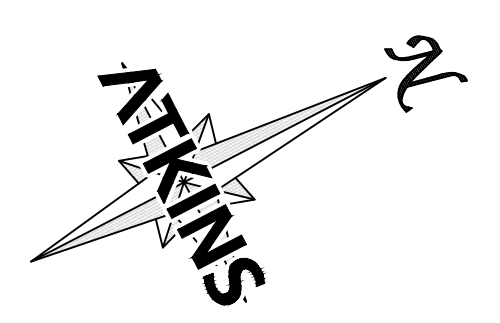
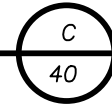
ADA PARKING GRADING DETAIL STA 13+81

1"=5'



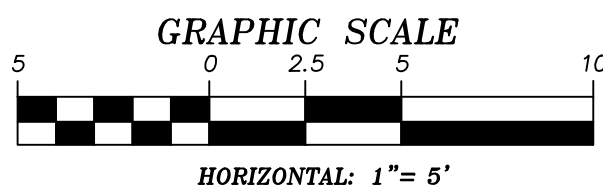
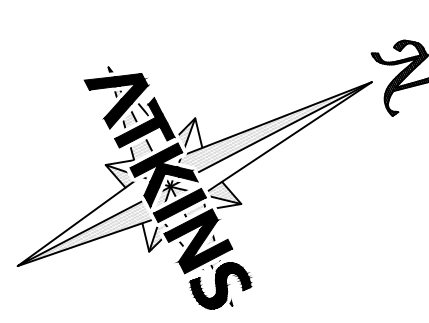
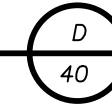
ADA PARKING GRADING DETAIL STA 16+38

1"=5'



ADA PARKING GRADING DETAIL STA 16+83

1"=5'



BASIS OF BEARING

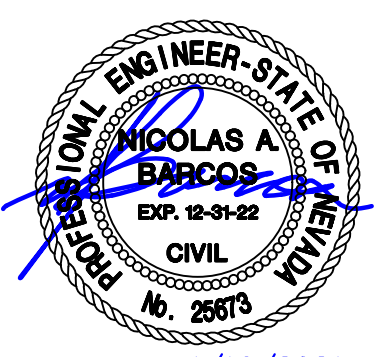
GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NORS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

BENCHMARK

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T21S,R59E,S03

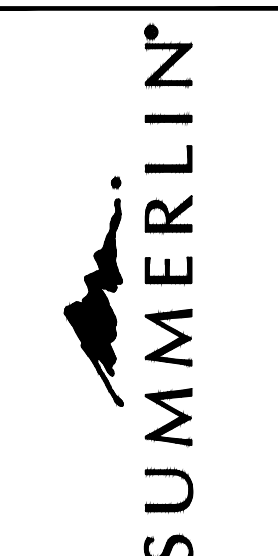


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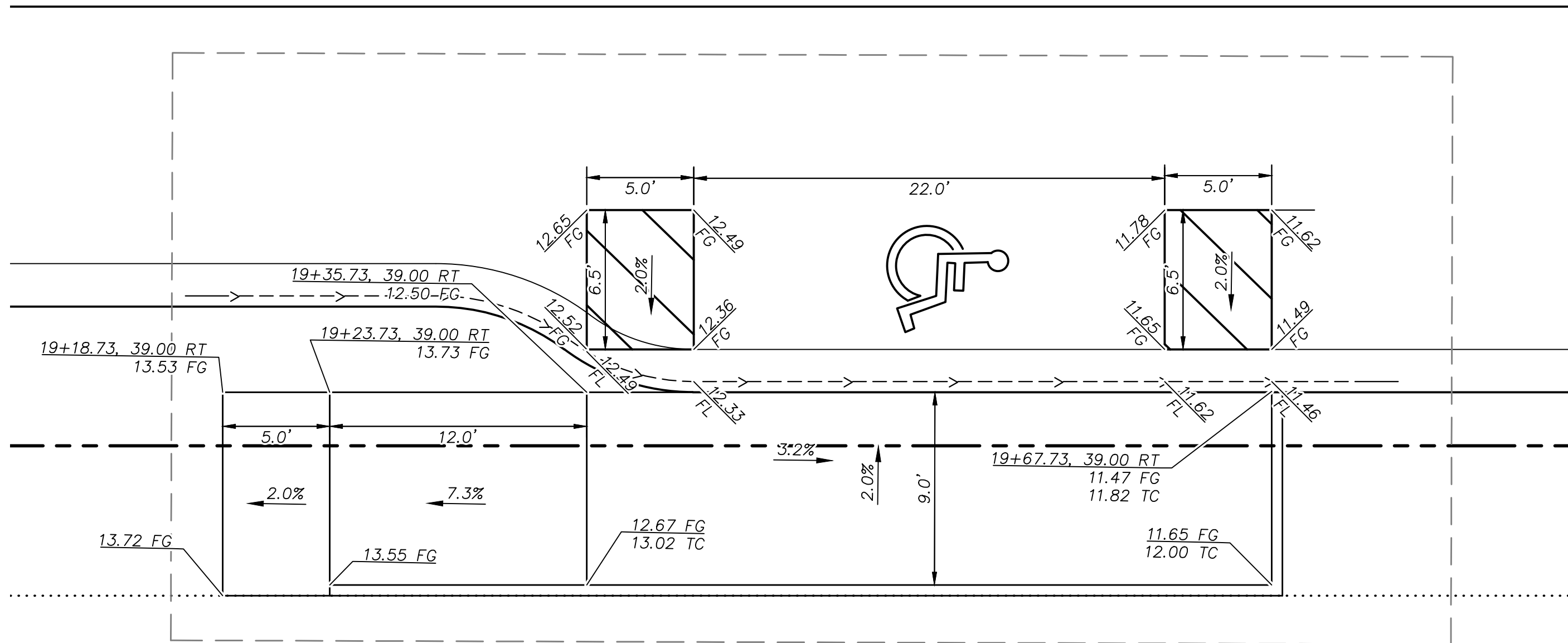
DESIGNED BY:	B. MOCHTYAK
DRAWN BY:	K. HENDRY
CHECKED BY:	N. BARCOS
HORIZ. 1" = 5'	
VERT. 1" = 5'	

SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD
HANDICAP PARKING DETAILS



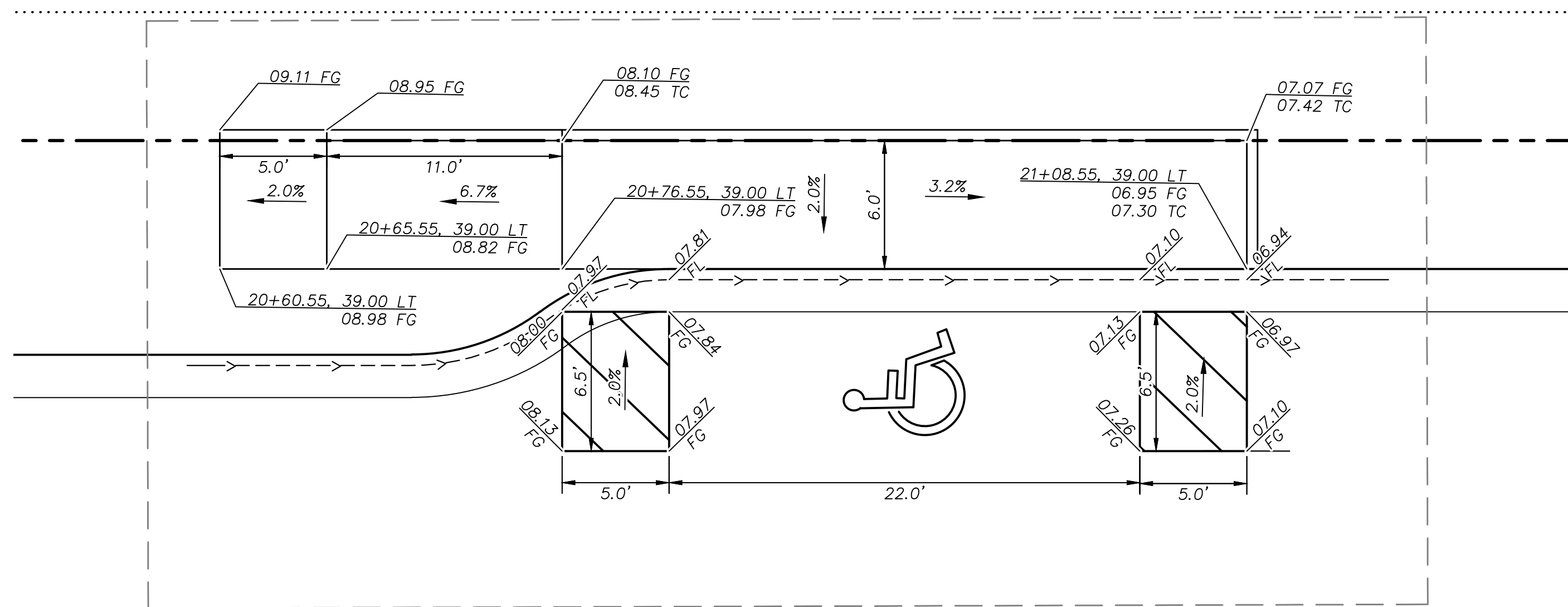
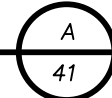
ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7755
Fax: +1702.263.7200

REV.	DESCRIPTION	BY	DATE	APPROVAL



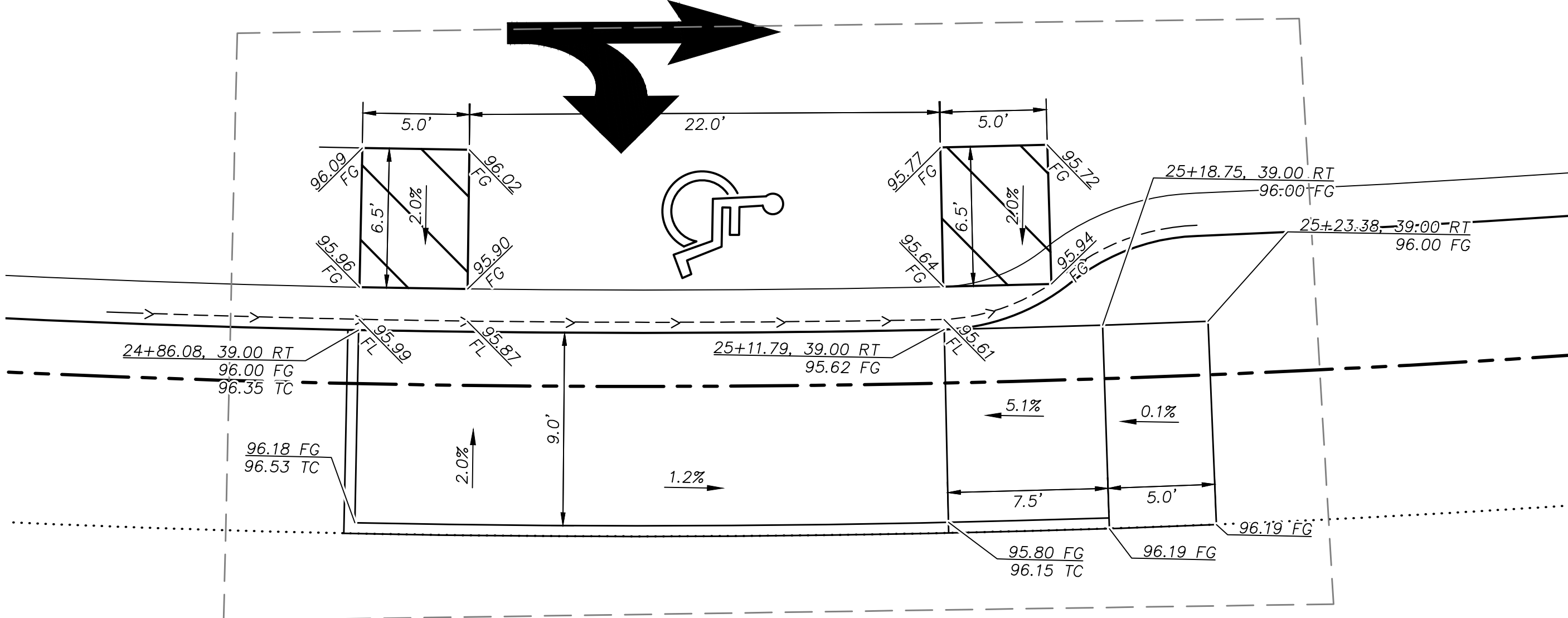
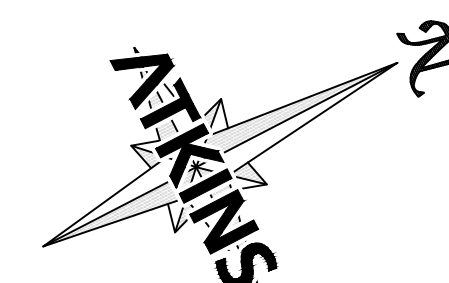
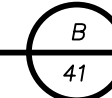
ADA PARKING GRADING DETAIL STA 19+52

1"=5'



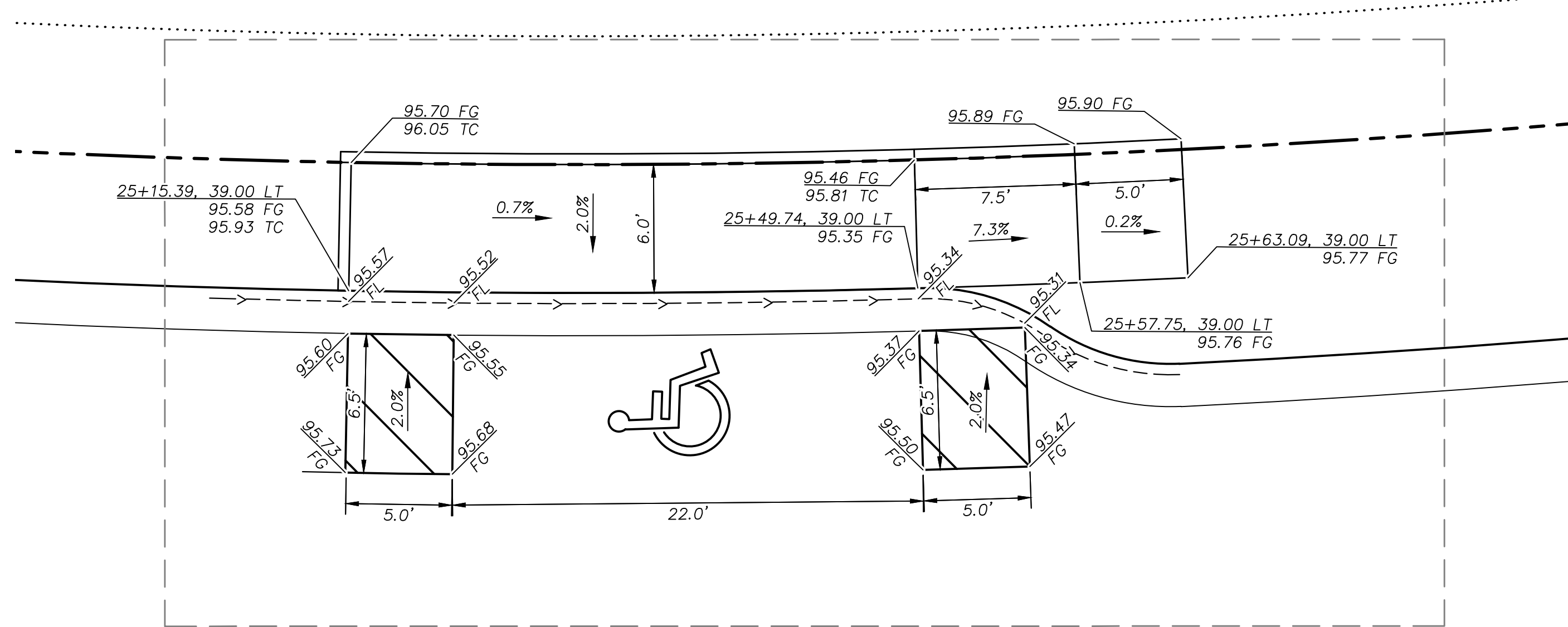
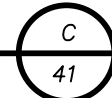
ADA PARKING GRADING DETAIL STA 20+92

1"=5'



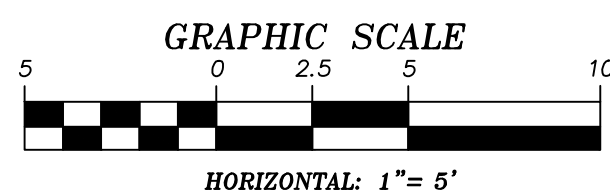
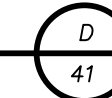
ADA PARKING GRADING DETAIL STA 25+01

1"=5'



ADA PARKING GRADING DETAIL STA 25+32

1"=5'



BASIS OF BEARING

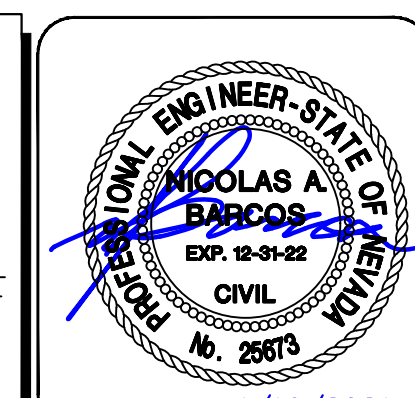
GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NORS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

BENCHMARK

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T21S,R59E,S03



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DRAWN BY:	K. HENDRY
CHECKED BY:	N. BARCOS
HORIZ.: 1" = 5'	
VERT.: NONE	
DATE:	APRIL 2021
DRAWING NO.	41/42

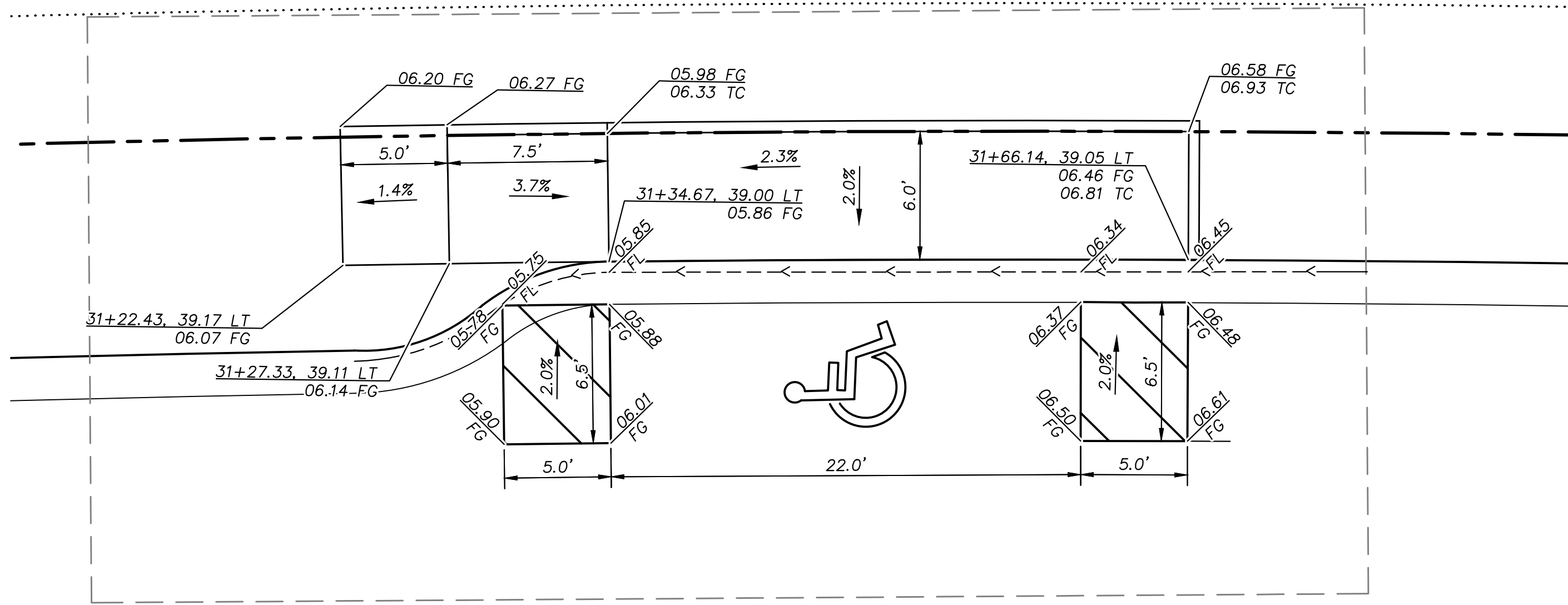
SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD

HANDICAP PARKING DETAILS



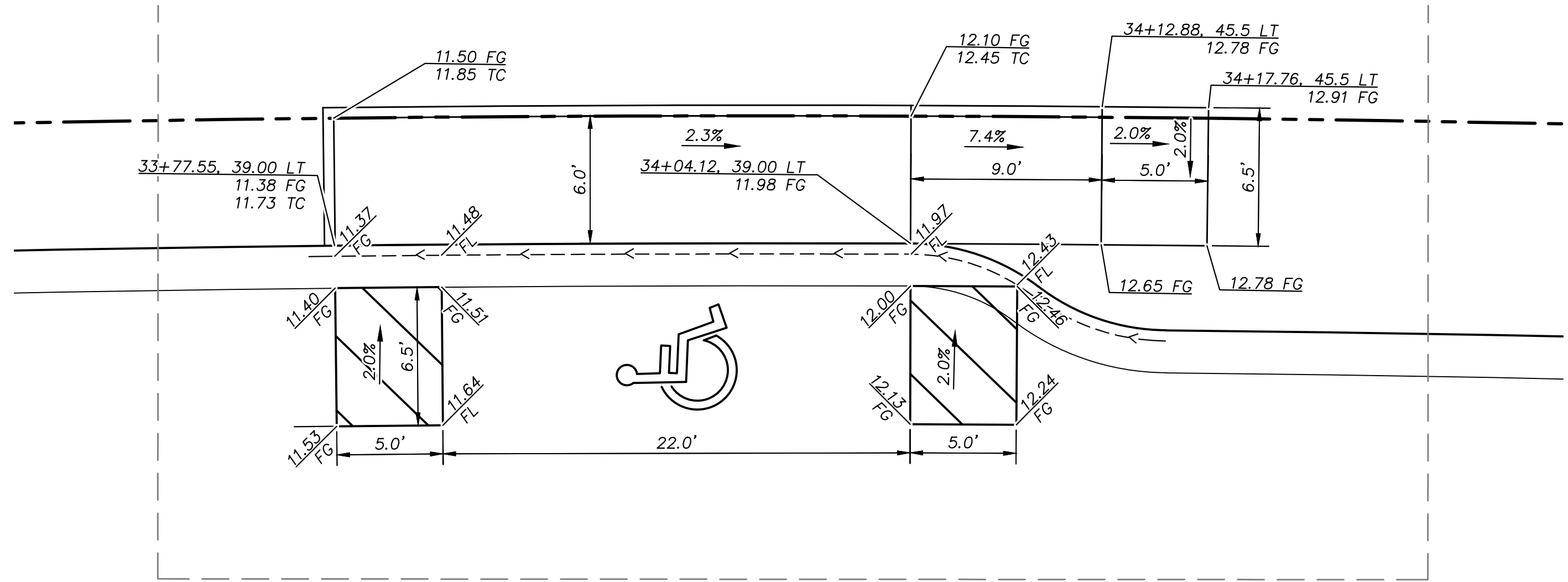
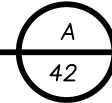
ATKINS
2270 Corporate Circle Suite 200
Henderson, Nevada 89074
Telephone: +1702.263.7755
Fax: +1702.263.7200

REV.	DESCRIPTION	BY	DATE	APPROVAL



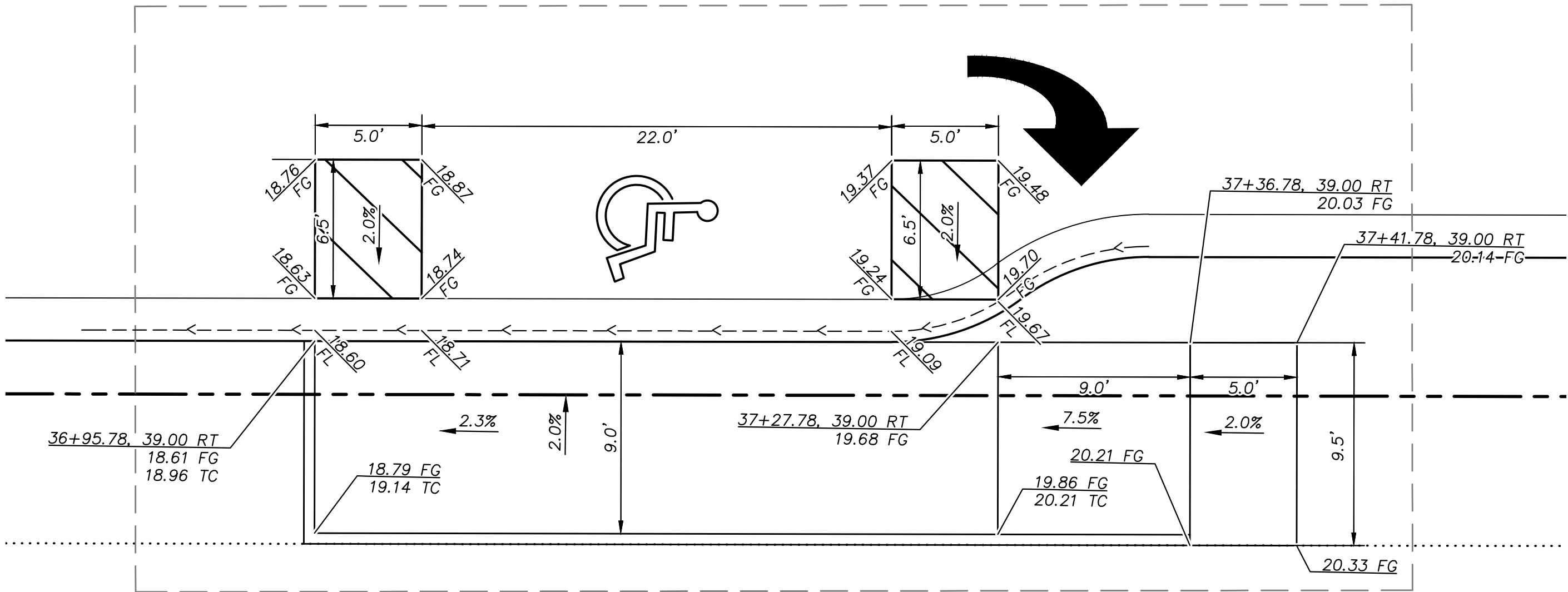
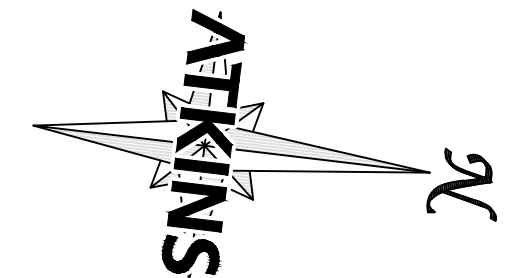
ADA PARKING GRADING DETAIL STA 31+46

1"=5'



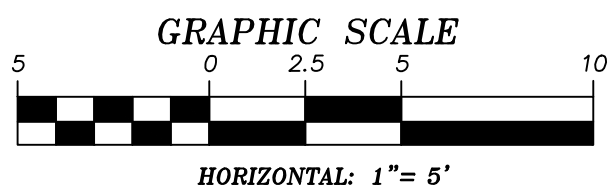
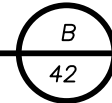
ADA PARKING GRADING DETAIL STA 31+92

1"=5'



ADA PARKING GRADING DETAIL STA 37+11

1"=5'



BASIS OF BEARING

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DRAWN BY: K. HENDRY
CHECKED BY: N. BARCOS
HORIZ.: 1" = 5'
VERT.: NONE

SUMMERLIN WEST VILLAGE 25
SCURRY BEND DRIVE (STREET N)
SUNSET RUN DRIVE TO LAKE MEAD BOULEVARD

#####



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REVISIONS

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