DS #: 4952

APN: 126.12.101.002

PROJECT: Sheep Mountain Pkwy at Skyc Canyon

SUBMITTAL: 2nd

SCANNED BY/DATE:

CHECKED BY/DATE:

CITY OF LAS VEGAS NEVADA

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM				DATE: June 20, 2018
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: **Sheep Mountain Parkway at Skye Canyon**			**COPIES TO:** Slater Hanifan Group
Cross Streets:	Grand Teton Boulevard at Puli to Iron Mountain Road			M F Land LLC / Ninety-Five Management LLC
File Number:	F:\Depot\DSMemos\DS4952B.doc			Bart Anderson, P.E., DevCo
Parcel Number:	126-12-101-002			CCRFCD
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 #
1st Submittal	2/8/2018	2/26/2018	Not Approved	$400.00	493316: $400
2nd Submittal	6/5/2018	6/19/ 2018	See Comments Below	$400.00	496458: $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.

1. The site is adjacent to or crosses an existing or proposed *Clark County Regional Flood Control District* (CCRFCD) master planned facility. Therefore, CCRFCD concurrence is required prior to final approval of the drainage study.

2. The proposed improvement plans show drainage facilities that must be reviewed for maintenance and access concerns. The engineer must submit an extra set of improvement plans to City of Las Vegas Operations and Maintenance Department (Contact Mr. Matthew Meyer, Streets & Sanitation Manager at 702-229-1688) for review and their acceptance must be obtained prior to the subject drainage study approval.

3. The improvement plans show super-elevation slope of 6% and short transition distance from super-elevation to normal crown. Coordinate with City Traffic, Mr. Victor Bolanos for acceptable design. Obtain approval from Traffic prior to the final acceptance of the drainage study.

4. Provide a 24"x36" full size plan of *Sheep Mountain Parkway* right-of-way exhibit clearly including center line, both right-of-way lines with roadway stationings in the next submittal.

5. Provide a 24"x36" full size plan for the *Best Management Plan Exhibit* (BMP) with the layout of DB#2 which was missing in the last exhibit.

6. **Sheet C-01**: Construction Note #13 indicated relocating an existing gate but the plan didn't show where the new gate is. Also, a previous required "End of Road" marker was nowhere to be found on the plan. Review and revise accordingly.

   Show and label existing concrete curb & gutter, sidewalk and amenity zone in the *Grand Teton Boulevard* right-of-way on the plan.

7. Label all existing storm drains with *City of Las Vegas* recorded drawing numbers in all pertinent sheets, except for DB #2 (plans not approved yet).

8. As a general comment, the plans show existing improvement drawings as "H#xxxxx". However, this is not a *City of Las Vegas* recorded drawing number. Consult with *City of Las Vegas* plans library for the correct recorded drawing numbers in the next addendum.

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

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

END OF REMARKS

ays

T/R/S: T19S/R59E/12

AREA F-12

TRANSACTION REPORT

JUN/21/2018/THU 04:21 PM

FAX(TX)

#	DATE	START T.	RECEIVER	COM.TIME	PAGE	TYPE/NOTE	FILE
001	JUN/21	04:20PM	7022845399	0:00:38	2	MEMORY OK SG3	1551

CITY OF LAS VEGAS **INTER-OFFICE MEMORANDUM**			**DATE:** **June 20, 2018**
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: **Sheep Mountain Parkway at Skye Canyon**			**COPIES TO:** Slater Hanifan Group
Cross Streets:	Grand Teton Boulevard at Puli to Iron Mountain Road		M F Land LLC / Ninety-Five Management LLC
File Number:	F:\Depot\DSMemos\DS4952B.doc		Bart Anderson, P.E., DevCo
Parcel Number:	126-12-101-002		CCRFCD
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 #
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3. The improvement plans show super-elevation slope of 6% and short transition distance from super-elevation to normal crown. Coordinate with City Traffic, Mr. Victor Bolanos for acceptable design. Obtain approval from Traffic prior to the final acceptance of the drainage study.

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TRANSMITTAL

To: **Albert Sung, P.E.**
City of Las Vegas
333 N. Rancho Drive
Las Vegas, NV 89106

Date: June 5, 2018
Project No.: OLY1720.000

From: **Lant Leavitt, P.E.**

Subject: **TDS Addendum No. 1 for Sheep Mountain Parkway at Skye Canyon**

CC: Mark Failla, SHG
CC: Chelsea Peltier, SHG
CC: Jerrod Ratcliffe, SHG
CC: Jerry Slater, SHG
CC: Rhonda Miller, SHG
CC:

Transmitting Via:
☐ Mail
☒ Messenger / MDS
☐ Federal Express
☐ Pickup

For:
☒ Review & Comment
☐ Per your Request
☐ Information/File

Acknowledgement of Receipt:
☐ Not Required
☒ Acknowledgement Required
Received By:_____
Date:_____ Time:_____

Copies	Description
1	Subject Study
1	Stamped and Signed Standard Form 1
1	24" x 36" Drainage and Grading Plans
1	Electronic Copy (CD)
1	Submittal Fee Check

Comments:
Enclosed please find the above listed items in support of our application of the *Technical Drainage Study for Skye Canyon – Sheep Mountain Parkway.*

Please contact us if there are any questions at 702-284-5300. Thank you.

Signed:_____
Lant Leavitt
Flood Control Division

LEGEND	
	PAVED ROADWAY AREA BOUNDARY
ID	PAVED AREA ID
	FLOW DIRECTION

PAVED ROADWAY AREAS

Area ID	Area (sqft)	Area (ac)	BMP Solution
BMP1	16080	0.37	Area sheet flows across pervious ground to the east.
BMP2	16605	0.38	Area drains to roadside ditch. 40' length of rock swale provided to settle out pollutants.
BMP3	28603	0.66	Area sheet flows across pervious ground to the east.
BMP4	66064	1.52	Area drains to roadside ditch. 40' length of rock swale provided to settle out pollutants.
BMP5	64525	1.48	Area sheet flows across pervious ground to the east.

N

NTS

IRON MOUNTAIN ROAD

SHEEP MOUNTAIN PARKWAY

SHAUMBER ROAD

GRAND TETON DRIVE

BMP5

BMP4

BMP3

BMP2

BMP1

40-FT ROCK SWALE

40-FT ROCK SWALE

40-FT ROCK SWALE

40-FT ROCK SWALE

40-FT ROCK SWALE

SKYE CANYON DETENTION BASIN 2

SKYE CANYON DETENTION BASIN 1

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300
FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

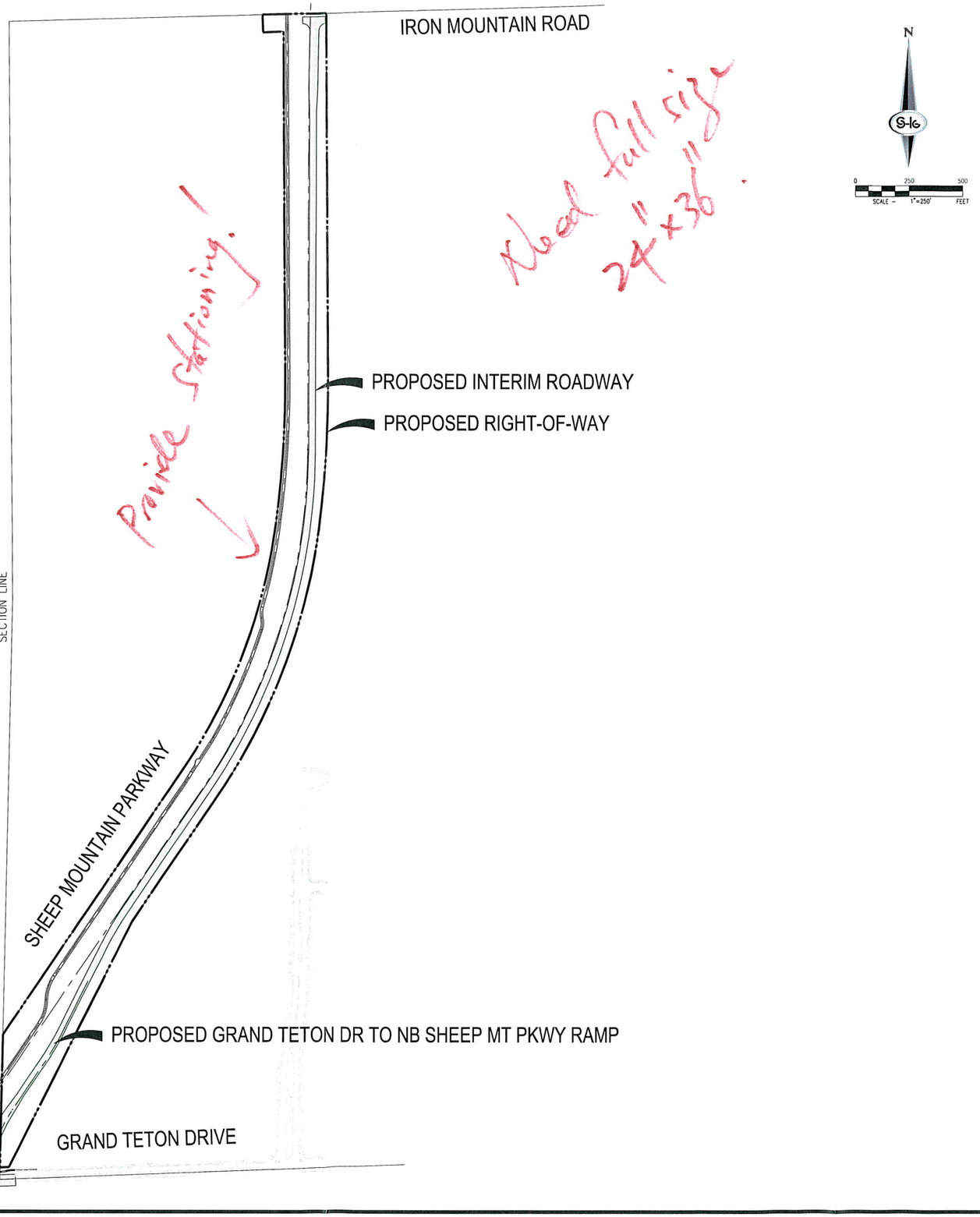
NINETY-FIVE MANAGEMENT, LLC.

SKYE CANYON - SHEEP MOUNTAIN PARKWAY

BEST MANAGEMENT PLAN EXHIBIT

DATE: MAY 2018
DRAFTER:
DESIGNER: LKL
CHECKED:
PROJECT NO.
OLY1720.000

\Oly1720.000 sheep mountain parkway access road\drawings\technical study\additional\figures\temp.dwg 6/1/2018 9:46 AM Lori Lewis



SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300
FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY RIGHT-OF-WAY EXHIBIT

DATE: 05/30/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED:
PROJECT NO.
OLY1720.000

TECHNICAL DRAINAGE STUDY
ADDENDUM No. 1

Sheep Mountain Parkway at Skye Canyon

City of Las Vegas, Nevada
Job No.: OLY1720.000
Date: June 2018

Prepared By:
Slater Hanifan Group, Inc.
5740 S. Arville Street, Suite 216
Las Vegas, Nevada 89118
Phone: 702-284-5300 ▪ Fax: 702-284-5399

Prepared For:
Ninety-Five Management, LLC
11411 Southern Highlands Parkway, Suite 300
Las Vegas, NV 89141
Phone: 702-220-6565 ▪ Fax: 702-220-6566



Lant Leavitt, P.E.
NV Professional Engineer No. 18287

Assisted by: Nicholas Stafford, P.E. (AZ), CFM

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE STUDY INFORMATION FORM

Name of Development: Skye Canyon – Sheep Mountain Parkway Date: June 2018

Location of Development: a) Descriptive (Cross Streets): North/South: Sheep Mountain Parkway

East/West: Grand Teton Drive to Iron Mountain Road

b) Section: 12 Township: 19 South Range: 59 East

c) APN: 126-12-101-002

Name of Owner/Developer: M F Land, LLC / Ninety-Five Management, LLC

Telephone No.: 702-220-6565 Fax No.: 702-220-6566 E-mail Address: mbolduc@olympiacompanies.com

Address: 11411 Southern Highlands Parkway, Suite 300; Las Vegas, NV 89141

Contact Person – Name: Lant Leavitt, P.E. Telephone No.: 702-284-5300

*E-mail Address: lleavitt@shg-inc.com Fax No.: 702-284-5399

Firm: Slater Hanifan Group

Address: 5740 S. Arville Street, Suite 216; Las Vegas, NV 89118

Type of Land Development/Land Disturbance Process:

☐	Rezoning	☐	Subdivision Map	☐	Clearing and grading Only
☐	Parcel Map	☐	Planned Unit Development	☐	Other (Please specify below)
☐	Large Parcel Map	☐	Building Permit	☒	Roadway & Storm Drain Infrastructure

1. Total Owned Land Area: At Site: 665 Acres Being Developed/Disturbed: 20 Acres +/-

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

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

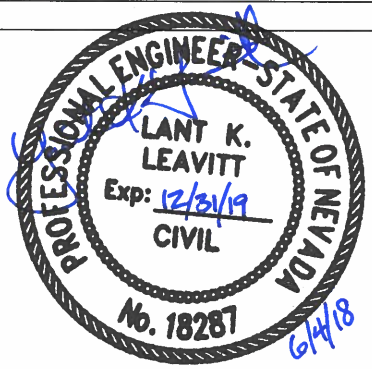
4. Proposed type of development (Residential, Commercial, Etc.): Roadway & Storm Drain Infrastructure

5. Approximate upstream land area which drains to the subject site: 1300 acre +/-

6. Has the site drainage been evaluated in the past? ☒ Yes** ☐ No If yes, please identify documentation: *Master Drainage Study for Skye Canyon Update #4* (SHG, DS4420)

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: Skye Canyon Detention Basin 1 Outfall, Existing Wash near Brent Lane alignment, and Skye Canyon Detention Basin 2 Outfall.

8. Briefly describe your proposed schedule for the subject project: ASAP Upon Substantial Completion of Detention Basin 2 Facilities.



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.

*Newly Required Field

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

Local Entity File No.

Revision	Date

REFERENCE: ***SHG Job No. OLY1609.000***

STANDARD FORM 1

Updated 05/01/2008

OLY1720.000

June 4, 2018

Albert Sung, P.E.
Flood Control Project Engineer
City of Las Vegas Department of Public Works
333 N. Rancho Drive
Las Vegas, Nevada 89106

Subject: Addendum No.1 to the Technical Drainage Study for Sheep Mountain Parkway at Skye Canyon (CLV DS4952)

Dear Mr. Sung:

This letter is submitted in response to comments contained in the March 4, 2018 review memorandum, regarding the above referenced project. A copy of the City of Las Vegas (CLV) Department of Public Works comment letter has been provided in Appendix A.

The comments in the review memorandum have been individually addressed as follows:

1. **Comment:** *The site is adjacent to or crosses an existing or proposed Clark County Regional Flood Control District (CCRFCD) master planned facility. Therefore, CCRFCD concurrence is required prior to final approval of the drainage study.*

   Response: Noted.

2. **Comment:** *The proposed improvement plans show drainage facilities that must be reviewed for maintenance and access concerns. The engineer must submit an extra set of improvement plans to City of Las Vegas Operations and Maintenance Department (Contact Mr. Matthew Meyer, Street & Sanitation Manager at 702-229-1688) for review and their acceptance must be obtained prior to the subject drainage study approval.*

   Response: Noted. Improvement plans are being submitted to CLV Operations and Maintenance Department concurrently with this TDS addendum.

3. **Comment:** *Provide an exhibit to show the overall right-of-way (ROW) lines (east and west) and the centerline of **Sheep Mountain Parkway**. Identify the proposed ramp and interim pavement location.*

   Response: Right-of-way exhibit included in Appendix B.

4. **Comment:** *Provide a Best Management Plan (BMP) to address the permanent erosion protection and dust control aspects of the subject site.*

   Response: The guidelines from Section 1503 of the CCRFCD Manual for non-residential sites larger than 1 acre have been used to prepare a BMP for Sheep Mountain Parkway. The

plan is based on Section 1503.4 which provides design criteria for swales to treat urban runoff from parking lots. The Manual recommends a rock lined swale with a minimum 40-ft length to settle out sediment and urban pollutants. Based on this, a 40-ft rock-lined swale is proposed at the discharge point of each earthen ditch. This will provide for sediment and pollutants to drop out prior to discharging to conveyance facilities and leaving the roadway corridor. The subarea delineations and recommended BMP solution for each area are included on the BMP Exhibit in Appendix B. Although the paved roadway surface is the only anticipated source of pollutants, rock swales have been provided for all ditches approaching a storm drain facility, regardless of whether there is paved roadway in its tributary area.
To address dust control, graded areas of the project will be treated with a dust palliative, see note added to typical sections.

5. **Comment:** *The improvement plans show super-elevation slope of 6% and short transition distance from superelevation to normal crown. Coordinate with City Traffic, Mr. Victor Bolanos for acceptable design. Obtain approval from Traffic prior to the final acceptance of the drainage study.*

   Response: Overall concept plans were prepared by Horrocks for the Sheep Mountain Parkway corridor from south of Grand Teton Drive to north of Kyle Canyon Road in February 2016 (included on CD in Appendix D.) The roadway geometries planned with that project have been followed so that the subject project conforms to the overall roadway design. This will be coordinated with City Traffic during the improvement plan review process.

6. **Comment:** *Sheet C-01: Identify an existing gate for Kyle Canyon Detention Basin at the west end of Grand Teton Boulevard. Protect the gate in place and provide an access to the gate. Provide "End of Road" markers at the end of Grand Teton Boulevard. Provide access to Skye Canyon Detention Basin 1.*

   Response: The existing gate to Kyle Canyon Detention Basin is located within the proposed roadway and is therefore proposed to be relocated. Grading is proposed to provide access to this existing maintenance road. “End of Road” markers have been provided at the end of Grand Teton Boulevard. Access to Skye Canyon Detention Basin 1 is being perpetuated.

7. **Comment:** *It appears that in general the proposed grading designs outside of the Sheep Mountain Parkway are shown on the "GR-xx" grading plans. Show the grading design and finished contours also on the "C-xx" sheets in the next submittal. The grading or finished contours shall clearly provide roadside swales for drainage purposes.*

   Response: Proposed grading information is now shown on “C” and “GR” sheets.

8. **Comment:** *Same comment applies to the trail improvement plans. Show grading design on the trail plan and profile sheets, C-13 to C-22. Clearly show proposed swales adjacent to the trail path for drainage purposes.*

   Response: Proposed grading information is also shown on trail improvement plans.

9. **Comment:** *Sheet C-06: Show and identify an existing Skye Canyon DB1 outfall facility on the plan.*

   Response: Existing Skye Canyon DB1 outfall facility is shown and identified on Sheet C-06.

10. **Comment:** *Sheet C-09: Show and identify proposed storm drain facilities crossing the trail and **Sheep Mountain Parkway** on the plan.*

    Response: Proposed storm drain facilities crossing the trail and Sheep Mountain Parkway are shown and identified on Sheet C-09.

11. **Comment:** *Sheet C-11: Show and identify an existing Skye Canyon DB2 outfall facility on the plan.*

    Response: Existing Skye Canyon DB2 outfall facility is shown and identified on Sheet C-11.

12. **Comment:** *Sheet C-17: Show and identify an existing Skye Canyon DB1 outfall facility on the plan.*

    Response: Sheets have been renumbered and Sheet C-17 is now C-16. Existing Skye Canyon DB1 outfall facility is shown and identified on Sheet C-16.

13. **Comment:** *Sheet C-20: Show and identify proposed storm drain facilities crossing the trail on the plan.*

    Response: Sheets have been renumbered and Sheet C-20 is now C-19. Proposed storm drain facilities crossing the trail are shown and identified on Sheet C-19.

14. **Comment:** *Sheet C-22: Show and identify an existing Skye Canyon DB2 outfall facility on the plan.*

    Response: Sheets have been renumbered and Sheet C-22 is now C-21. Existing Skye Canyon DB2 outfall facility is shown and identified on Sheet C-21.

15. **Comment:** *Sheet GR-01: Detail Section 1/TY-01 shows swales on both sides of the paved **Sheep Mountain Parkway**. The plan shows flow line elevations at regular intervals on the west side of **Sheep Mountain Parkway**. However, there is no information of the swale on the east side of the roadway. Show flow line elevations accordingly in the next submittal.*

    Also, the cross slope of the access path along the east ROW shall be 2% maximum. Revise the detail section accordingly.

    The same comment shall apply for Sheet GR-01 through Sheet GR-09 wherever it is applicable.

    Response: Flow line elevations have been added to the east side of the roadway as well.

Access path cross slope has been revised on detail sheet to 2% max.

Flow line elevations added to flow lines on east side of roadway for all grading sheets.

16. *Sheet GR-01: Detail Section 1/TY-02 shows ditches on both sides of the proposed trail. Show flow line elevations at regular intervals on both sides of the trail on the plan.*

    The same comment shall apply for Sheet GR-01 through Sheet GR-09 wherever it is applicable.

    Response: In locations where ditches are parallel to adjacent trail/roadway at the same slope, ditches will be constructed by grading per typical section. In locations where ditch alignment or slope is not uniform, more information is needed to construct the ditches. In these instances, elevations tags have been added to the ditch flow lines.

17. **Comment:** *Sheet GR-02: A notation line "----F is shown along the east ROW line which presumably means "fill" to the reviewer. However, a simple "fill" to the contractor without any grading design such as finished contours is not acceptable. Provide grading design in the next submittal. Note that the fill slope must not be greater than 2:1 or per the approved geotechnical report. Revise the plan and pertinent detail sections accordingly.*

    Response: Grading design has been provided in locations previously notated with a fill line.

18. **Comment:** *Sheet GR-04: Construction Note #13 proposes a 3'-concrete cutoff wall to the west side of the trail. Provide cross section to reflect the wall and the related drainage facilities.*

    The roadway section shown on this sheet is super-elevated. However, Detail Section 3/TY-01 shows normal crown. Review and revise accordingly.

    Identify the existing DB1 outfall pipe with City of Las Vegas recorded drawing number on the plan.

    Response: A 3-ft concrete cutoff wall was constructed in this location with the Skye Canyon Detention Basin 1 project to provide protection against a PMF spillway overtopping event. This alignment is being altered with the subject project, and although a trail facility would not typically be protected against a PMF overtopping event, this cutoff wall is being reconstructed to perpetuate the level of protection provided with the detention basin project. The cutoff wall has been shown on Lateral Profile 1 on Sheet GR-10, and the limits are called out on Sheet C-15 and C-16.

    Detail Section 3/TY-01 has been revised to show the appropriate cross slope.

    The existing DB1 outfall pipe has been shown and identified on Sheet GR-04.

19. **Comment:** *Sheet GR-05 and Sheet GR-06: Same as in Comment #18, the roadway section on both sheets is super-elevated and not matching Detail Section 3/TY-01. Review and revise accordingly.*

    Response: Detail Section 3/TY-01 has been revised to show the appropriate cross slope.

20. **Comment:** *Sheet GR-07: Construction Note #14 proposes CMP pipe which is not acceptable. Use RCP.*

    Provide maintenance paths to the three access points of the proposed storm drain facility.

    Response: The 54-inch CMP culvert proposed on Sheet GR-07 has been revised to RCP. Due to the decrease in interior roughness in changing from corrugated metal to concrete, the hydraulic performance of the culvert has increased, and the size was able to be reduced to 48-inch. See Appendix C for revised HY-8 calculation.

    Maintenance paths have been provided to the three access points of the proposed storm drain facility. The upstream-most culvert entrance is accessed through the 12-ft wide ditch upstream of it. The 40-ft long rock-lined BMP swale approaching this facility has been proposed as 3-inch minus rock to provide for pollutants to drop out while still enabling maintenance vehicles to cross it.

21. **Comment:** *Sheet GR-09: It appears that the proposed intersection of Sheep Mountain Parkway and Iron Mountain Road is at an elevation, ie, not matching the existing grade. Revise to match existing grade as possible.*

    Label the size of existing Skye Canyon DB2 outfall pipes on the plan.

    Provide concrete pad connecting the outfall pipe and the access ramp.

    The trail stops at Station 67+55 at a 3:1 scarp which is not acceptable. Extend the trail to the future Iron Mountain Road for future connection.

    Provide maintenance access to a proposed drop inlet adjacent to the northern end of the trail.

    Identify all existing power poles.

    Response: The proposed intersection of Sheep Mountain Parkway and Iron Mountain Road is at the elevation provided with the overall concept plans prepared by Horrocks in February 2016. Those plans set the planned profile of Sheep Mountain Parkway beyond the extents of the subject project, and therefore are the appropriate document to ensure the geometry for the subject project works together with surrounding reaches of Sheep Mountain Parkway. Additionally, the concept plans show the future Iron Mountain Road alignment crossing under Sheep Mountain Parkway, which may have been a factor in setting the Sheep Mountain Parkway elevation above existing grade at this location.

Skye Canyon DB2 outfall pipe sizes are now labeled on this sheet.

Concrete pad connecting DB2 outfall with proposed access road is provided.

Proposed trail alignment has been extended north to Iron Mountain Road centerline. To accommodate extension of the trail, the drop inlet proposed at this location has been extended west out of the trail alignment and revised to be a culvert entrance. Due to the lower invert of the culvert, the slope of the ditch approaching this facility was revised, and riprap lining was required (see riprap calculation, Appendix C.) Also, the ditch between the roadway and trail was previously graded west around the end of the trail to be collected by the drop inlet. Now that the trail has been extended, this ditch requires its own collection facility. A drop inlet is proposed to collect this flow and discharge it to the existing 60-inch storm drain in Iron Mountain Road (see drop inlet calculation, Appendix C.)
Maintenance access to the proposed facility at the northern end of the trail (now a culvert instead of a drop inlet) has been provided.

Existing power poles have been identified and called out to be protected in place.

22. **Comment:** *Detail Section Sheets: Address permanent dust control measures at the roadside ditches. Use rock mulch same size per the Beltway sections as an acceptable solution.*

    Response: Per discussion with Greg McDermott, dust mitigation will be accomplished by applying a dust palliative to graded surfaces.

23. **Comment:** *Provide structural detail or standard drawings of all proposed headwall and culvert structures.*

    Response: Structural details will be provided with improvement plan submittal.

24. **Comment:** *Provide enough bench width to install sound walls on both sides of Sheep Mountain Parkway. It appears that a minimum bench width of 15' will be required. Coordinate with Mr. Greg McDermott, P.E. at (702) 229-2143 for the exact locations and guidelines for the installation of sound walls.*

    Response: After discussion with Greg McDermott, it was agreed that a 20-ft bench would be provided on both sides of the future soundwall alignment. The east side of the corridor previously had a daylight slope adjacent to the east side of the future soundwall location. This has been revised to provide the 20-ft bench.

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

    Response: Stormwater Quality Management Stamp and Sign Detail note provided on grading sheets.

The revised plan, profile and detail sheets adopting the revisions addressed in this letter are included with this submittal, and electronic copies are included on the CD in Appendix D. If you have any questions or require additional information, please do not hesitate to contact us at 702-284-5300.

Respectfully Submitted,

SLATER HANIFAN GROUP

Lant Leavitt, P.E.
Flood Control Division

cc: Mark Failla, P.E., CFM – SHG
Jerry Slater, P.E. – SHG
Jerrod Ratcliffe – SHG

APPENDIX

Appendix A CLV Comment Letter

Appendix B Exhibits
- Right-of-Way Exhibit
- BMP Exhibit

Appendix C Hydraulics
- HY8 Calculation - 48" RCP at Sta "SMP" 215+10
- HY8 Calculation - 42" RCP at Iron Mountain Rd
- Drop Inlet Calculation - Iron Mountain Rd
- Riprap Calculation - Iron Mountain Rd

Appendix D Electronic Files CD
- TDS Addendum #1
- Improvement Plans
- Horrocks Sheep Mountain Parkway Concept Plans

APPENDIX A

CLV Comment Letter

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM				DATE: March 4, 2018
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: **Sheep Mountain Parkway at Skye Canyon**			**COPIES TO:** Slater Hanifan Group
Cross Streets:	Grand Teton Boulevard from Puli to Iron Mountain Road			M F Land LLC / Ninety-Five Management LLC
File Number:	F:\Depot\DSMemos\DS4952A.doc			Bart Anderson, P.E., DevCo
Parcel Number:	126-12-101-002			CCRFCD
Zoning Action:				
FEMA Flood Zone	YES	NO	X	
Proposed Storm Drain	YES	NO	X	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1st Submittal	2/8/2018	2/26/2018	See Comments Below	$400.00	493316: $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.

1. The site is adjacent to or crosses an existing or proposed *Clark County Regional Flood Control District* (CCRFCD) master planned facility. Therefore, CCRFCD concurrence is required prior to final approval of the drainage study.

2. The proposed improvement plans show drainage facilities that must be reviewed for maintenance and access concerns. The engineer must submit an extra set of improvement plans to City of Las Vegas Operations and Maintenance Department (Contact Mr. Matthew Meyer, Streets & Sanitation Manager at 702-229-1688) for review and their acceptance must be obtained prior to the subject drainage study approval.

3. Provide an exhibit to show the overall right-of-way (ROW) lines (east and west) and the centerline of ***Sheep Mountain Parkway***. Identify the proposed ramp and interim pavement location.

4. Provide a Best Management Plan (BMP) to address the permanent erosion protection and dust control aspects of the subject site.

5. The improvement plans show super-elevation slope of 6% and short transition distance from super-elevation to normal crown. Coordinate with City Traffic, Mr. Victor Bolanos for acceptable design. Obtain approval from Traffic prior to the final acceptance of the drainage study.

6. Sheet C-01: Identify an existing gate for *Kyle Canyon Detention Basin* at the west end of *Grand Teton Boulevard*. Protect the gate in place and provide an access to the gate. Provide "End of Road" markers at the end of *Grand Teton Boulevard*. Provide access to *Skye Canyon Detention Basin 1*.

7. It appears that in general the proposed grading designs outside of the ***Sheep Mountain Parkway*** are shown on the "GR-xx" grading plans. Show the grading design and finished contours also on the "C-xx" sheets in the next submittal. The grading or finished contours shall clearly provide roadside swales for drainage purposes.

8. Same comment applies to the trail improvement plans. Show grading design on the trail plan and profile sheets, C-13 to C-22. Clearly show proposed swales adjacent to the trail path for drainage purposes.

9. Sheet C-06: Show and identify an existing *Skye Canyon DB1* outfall facility on the plan.

10. Sheet C-09: Show and identify proposed storm drain facilities crossing the trail and ***Sheep Mountain Parkway*** on the plan.

11. Sheet C-11: Show and identify an existing *Skye Canyon DB2* outfall facility on the plan.

12. Sheet C-17: Show and identify an existing *Skye Canyon DB1* outfall facility on the plan.

13. Sheet C-20: Show and identify proposed storm drain facilities crossing the trail on the plan.

14. Sheet C-22: Show and identify an existing *Skye Canyon DB2* outfall facility on the plan.

15. Sheet GR-01: *Detail Section 1/TY-01* shows swales on both sides of the paved ***Sheep Mountain Parkway***. The plan shows flow line elevations at regular intervals on the west side of ***Sheep Mountain Parkway***. However, there is no information of the swale on the east side of the roadway. Show flow line elevations accordingly in the next submittal.

    Also, the cross slope of the access path along the east ROW shall be 2% maximum. Revise the detail section accordingly.

    The same comment shall apply for Sheet GR-01 through Sheet GR-09 wherever it is applicable.

16. Sheet GR-01: *Detail Section 1/TY-02* shows ditches on both sides of the proposed trail. Show flow line elevations at regular intervals on both sides of the trail on the plan.

    The same comment shall apply for Sheet GR-01 through Sheet GR-09 wherever it is applicable.

17. Sheet GR-02: A notation line "----F-----F----" is shown along the east ROW line which presumably means "fill" to the reviewer. However, a simple "fill" to the contractor without any grading design such as finished contours is not acceptable. Provide grading design in the next submittal. Note that the fill slope must not be greater than 2:1 or per the approved geotechnical report. Revise the plan and pertinent detail sections accordingly.

18. Sheet GR-04: Construction Note #13 proposes a 3'-concrete cutoff wall to the west side of the trail. Provide cross section to reflect the wall and the related drainage facilities.

    The roadway section shown on this sheet is super-elevated. However, *Detail Section 3/TY-01* shows normal crown. Review and revise accordingly.

    Identify the existing DB1 outfall pipe with *City of Las Vegas* recorded drawing number on the plan.

19. Sheet GR-05 and Sheet GR-06: Same as in Comment #18, the roadway section on both sheets is super-elevated and not matching *Detail Section 3/TY-01*. Review and revise accordingly.

20. Sheet GR-07: Construction Note #14 proposes CMP pipe which is not acceptable. Use RCP.

    Provide maintenance paths to the three access points of the proposed storm drain facility.

21. Sheet GR-09: It appears that the proposed intersection of *Sheep Mountain Parkway* and *Iron Mountain Road* is at an elevation, ie, not matching the existing grade. Revise to match existing grade as possible.

    Label the size of existing *Skye Canyon DB2* outfall pipes on the plan.

    Provide concrete pad connecting the outfall pipe and the access ramp.

    The trail stops at Station 67+55 at a 3:1 scarp which is not acceptable. Extend the trail to the future *Iron Mountain Road* for future connection.

    Provide maintenance access to a proposed drop inlet adjacent to the northern end of the trail.

    Identify all existing power poles.

22. Detail Section Sheets: Address permanent dust control measures at the roadside ditches. Use rock mulch same size per the Beltway sections as an acceptable solution.

23. Provide structural detail or standard drawings of all proposed headwall and culvert structures.

24. Provide enough bench width to install sound walls on both sides of ***Sheep Mountain Parkway***. It appears that a minimum bench width of 15' will be required. Coordinate with Mr. Greg McDermott, P.E. at (702) 229-2143 for the exact locations and guidelines for the installation of sound walls.

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

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

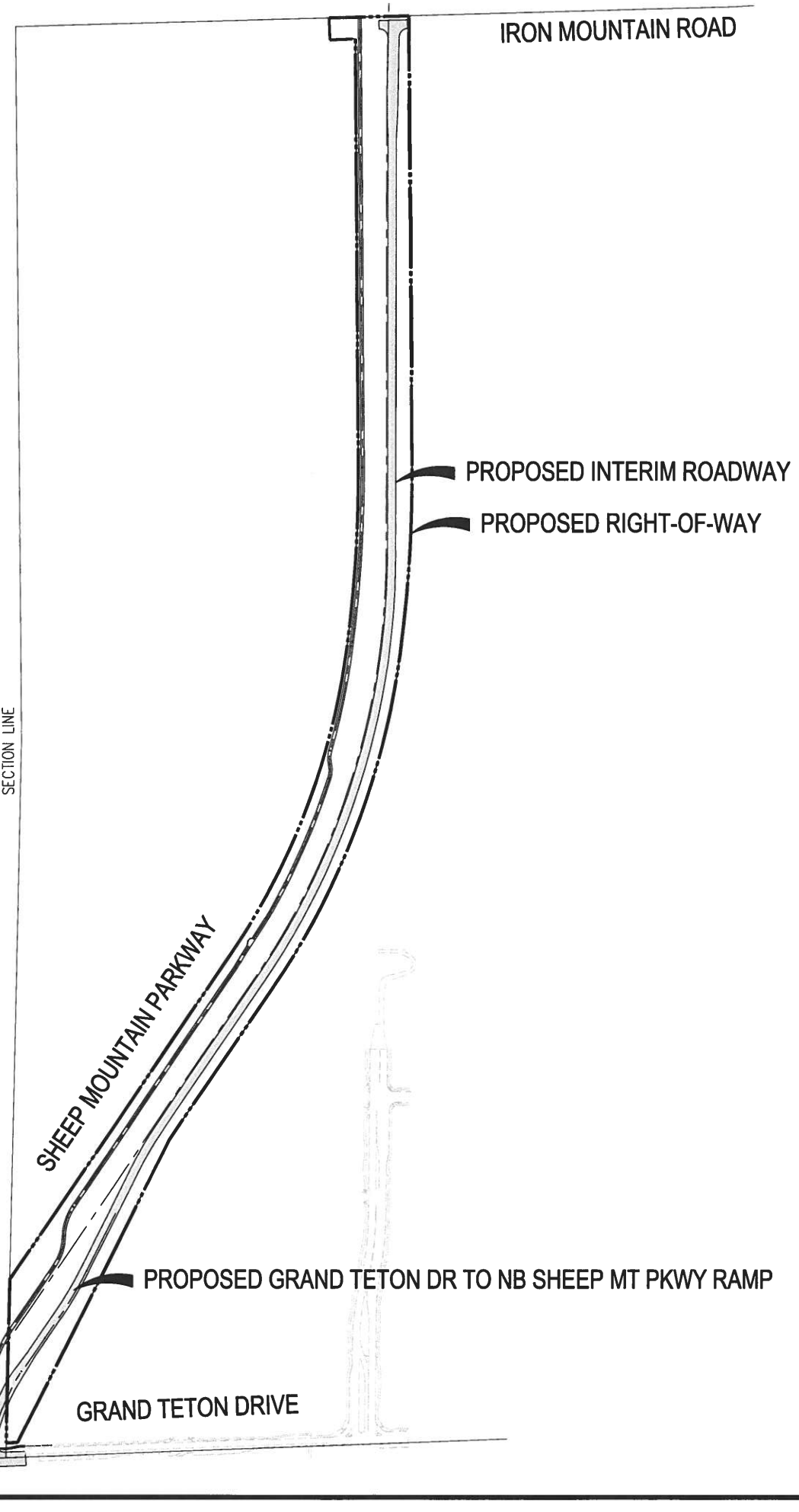
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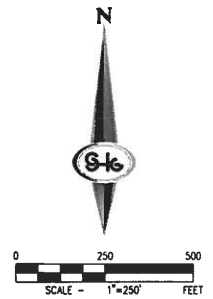
T/R/S: T19S/R59E/12

AREA F-12

APPENDIX B

Exhibits





SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY
RIGHT-OF-WAY EXHIBIT

DATE: 05/30/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED:
PROJECT NO.
OLY1720.000

SHEET 1 OF 1

LEGEND

- PAVED ROADWAY AREA BOUNDARY
- ID — PAVED AREA ID
- FLOW DIRECTION

PAVED ROADWAY AREAS

Area ID	Area (sqft)	Area (ac)	BMP Solution
BMP1	16080	0.37	Area sheet flows across pervious ground to the east.
BMP2	16605	0.38	Area drains to roadside ditch. 40' length of rock swale provided to settle out pollutants.
BMP3	28603	0.66	Area sheet flows across pervious ground to the east.
BMP4	66064	1.52	Area drains to roadside ditch. 40' length of rock swale provided to settle out pollutants.
BMP5	64525	1.48	Area sheet flows across pervious ground to the east.

N

NTS

IRON MOUNTAIN ROAD

SHEEP MOUNTAIN PARKWAY

SHAUMBER ROAD

GRAND TETON DRIVE

BMP5

BMP4

BMP3

BMP2

BMP1

40-FT ROCK SWALE

40-FT ROCK SWALE

40-FT ROCK SWALE

40-FT ROCK SWALE

40-FT ROCK SWALE

40-FT ROCK SWALE

SKYE CANYON DETENTION BASIN 2

SKYE CANYON DETENTION BASIN 1

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT, LLC.

SKYE CANYON - SHEEP MOUNTAIN PARKWAY

BEST MANAGEMENT PLAN EXHIBIT

DATE: MAY 2018
DRAFTER:
DESIGNER: LKL
CHECKED:
PROJECT NO.
OLY1720.000

I:\olv1720.000 sheep mountain parkway access roads\drainage\technical study\addendum\figures\bmp.dwg 5/1/2018 9:46 AM Lori Lazar

APPENDIX C

Hydraulic Computations

48" RCP HY-8 Calculation - Sta "SMP" 215+10

HY-8 Analysis Results

Crossing Summary Table

Culvert Crossing: Lateral Profile #3 at SMP Sta 215+10

Headwater Elevation (ft)	Total Discharge (cfs)	48 inch RCP Discharge (cfs)	Roadway Discharge (cfs)	Iterations
2996.00	0.00	0.00	0.00	1
2997.13	10.00	10.00	0.00	1
2997.63	20.00	20.00	0.00	1
2998.03	30.00	30.00	0.00	1
2998.48	40.00	40.00	0.00	1
2998.88	50.00	50.00	0.00	1
2999.26	60.00	60.00	0.00	1
2999.64	70.00	70.00	0.00	1
2999.68	71.00	71.00	0.00	1
3000.46	90.00	90.00	0.00	1
3000.92	100.00	100.00	0.00	1
3003.00	135.76	135.76	0.00	Overtopping

HY-8 Analysis Results

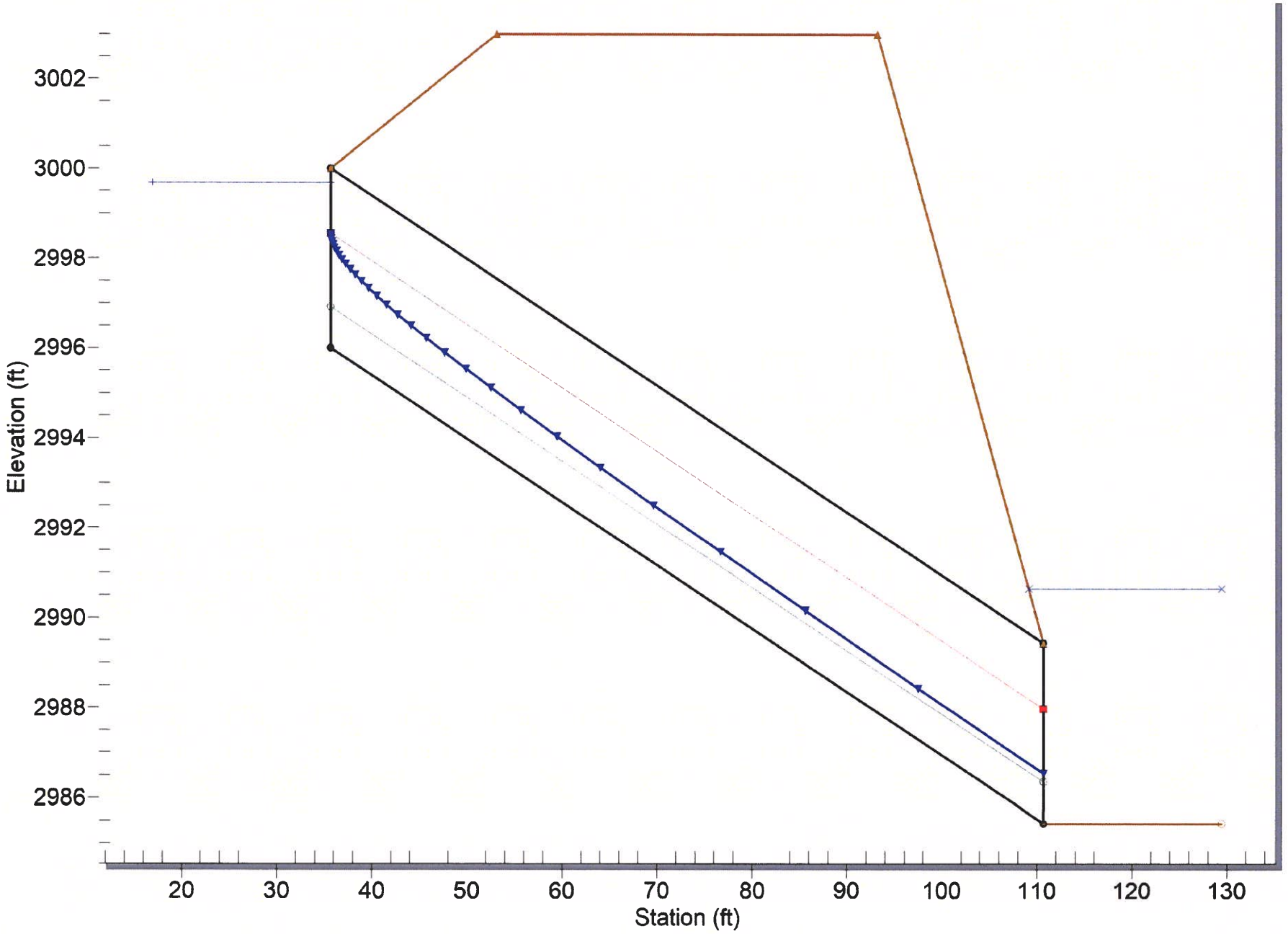
Culvert Summary Table - 48 inch RCP

Culvert Crossing: Lateral Profile #3 at SMP Sta 215+10

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth(ft)	Outlet Control Depth(ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
0.00	0.00	2996.00	0.00	0.0	0-NF	0.00	0.00	4.00	5.21	0.00	0.00
10.00	10.00	2997.13	1.13	0.0*	1-JS1f	0.35	0.92	4.00	5.21	0.80	0.00
20.00	20.00	2997.63	1.63	0.0*	1-JS1f	0.49	1.31	4.00	5.21	1.59	0.00
30.00	30.00	2998.03	2.03	0.0*	1-S2n	0.60	1.62	0.67	5.21	20.95	0.00
40.00	40.00	2998.48	2.48	0.0*	1-S2n	0.69	1.89	0.78	5.21	22.17	0.00
50.00	50.00	2998.88	2.88	0.0*	1-S2n	0.77	2.12	0.89	5.21	22.95	0.00
60.00	60.00	2999.26	3.26	0.0*	1-S2n	0.84	2.33	1.00	5.21	23.64	0.00
70.00	70.00	2999.64	3.64	0.0*	1-S2n	0.91	2.52	1.09	5.21	24.20	0.00
71.00	71.00	2999.68	3.68	0.0*	1-S2n	0.92	2.54	1.10	5.21	24.28	0.00
90.00	90.00	3000.46	4.46	0.0*	5-S2n	1.03	2.87	1.28	5.21	25.17	0.00
100.00	100.00	3000.92	4.92	0.0*	5-S2n	1.09	3.03	1.36	5.21	25.52	0.00

Crossing - Lateral Profile #3 at SMP Sta 215+10, Design Discharge - 71.0 cfs

Culvert - 48 inch RCP, Culvert Discharge - 71.0 cfs



42" RCP HY-8 Calculation - Iron Mountain Rd

HY-8 Analysis Results

Crossing Summary Table

Culvert Crossing: Lateral Profile #4 at Iron Mt Rd

Headwater Elevation (ft)	Total Discharge (cfs)	42 inch RCP Discharge (cfs)	Roadway Discharge (cfs)	Iterations
2983.38	0.00	0.00	0.00	1
2983.42	10.00	10.00	0.00	1
2983.56	20.00	20.00	0.00	1
2983.78	30.00	30.00	0.00	1
2984.09	40.00	40.00	0.00	1
2984.52	50.00	50.00	0.00	1
2984.83	60.00	60.00	0.00	1
2985.37	70.00	70.00	0.00	1
2986.00	80.00	80.00	0.00	1
2986.71	90.00	90.00	0.00	1
2987.52	100.00	100.00	0.00	1
2990.00	125.40	125.40	0.00	Overtopping

HY-8 Analysis Results

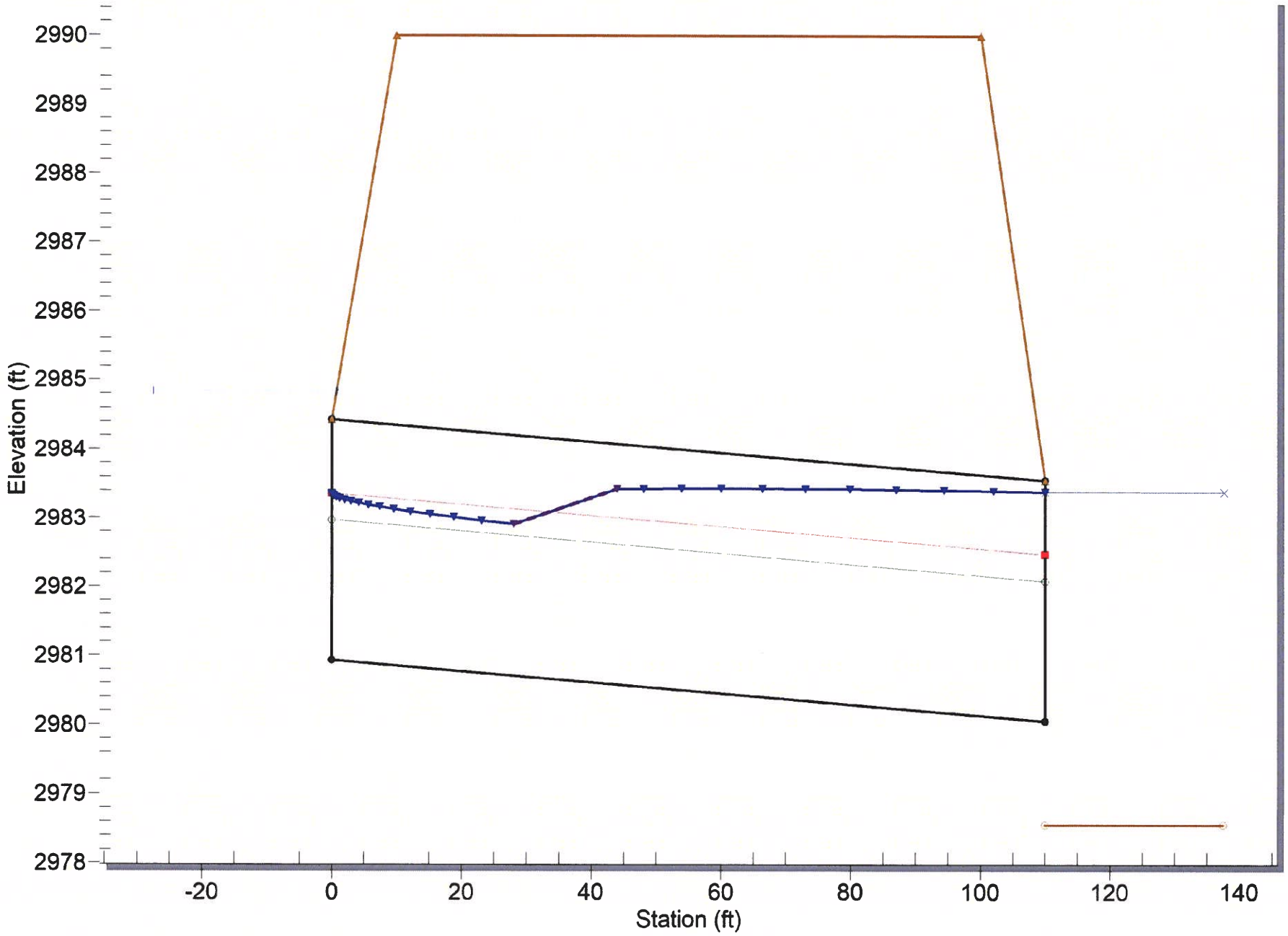
Culvert Summary Table - 42 inch RCP

Culvert Crossing: Lateral Profile #4 at Iron Mt Rd

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth(ft)	Outlet Control Depth(ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
0.00	0.00	2983.38	0.00	2.45	0-NF	0.00	0.00	3.33	4.83	0.00	0.00
10.00	10.00	2983.42	1.30	2.49	1-S1t	0.77	0.95	3.33	4.83	1.05	0.00
20.00	20.00	2983.56	1.92	2.63	1-S1t	1.09	1.37	3.33	4.83	2.09	0.00
30.00	30.00	2983.78	2.47	2.85	1-S1t	1.35	1.69	3.33	4.83	3.14	0.00
40.00	40.00	2984.09	2.95	3.16	1-S1t	1.59	1.96	3.33	4.83	4.18	0.00
50.00	50.00	2984.52	3.41	3.59	1-S1t	1.81	2.21	3.33	4.83	5.23	0.00
60.00	60.00	2984.83	3.90	2.45	5-JS1t	2.03	2.42	3.33	4.83	6.27	0.00
70.00	70.00	2985.37	4.44	4.21	5-JS1t	2.26	2.62	3.33	4.83	7.32	0.00
80.00	80.00	2986.00	5.07	4.75	5-JS1t	2.50	2.79	3.33	4.83	8.36	0.00
90.00	90.00	2986.71	5.78	5.45	5-S1t	2.79	2.94	3.33	4.83	9.41	0.00
100.00	100.00	2987.52	6.59~	5.99	3-M2t	3.50	3.07	3.33	4.83	10.58	0.00

Crossing - Lateral Profile #4 at Iron Mt Rd, Design Discharge - 60.0 cfs

Culvert - 42 inch RCP, Culvert Discharge - 60.0 cfs



Drop Inlet Calculation - Iron Mountain Rd

Grate Inlet Sizing Computation

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS

Project Name & Number: Sheep Mountain Parkway Access Road - OLY1720.000
Date: 5/25/2018
By: LKL

Notes:

Facility ID:	SDDI#3
Drainage Condition:	Proposed
Source of Flow:	Q100= Basin PON01
Inlet Type:	Grated Drop Inlet
Inlet Size:	3'x2'

Known Information:

Q =	Flow (cfs)	9.0
W =	Width of Grate (ft)	3.00
L =	Length of Grate (ft)	2.00
D =	Diameter of Circle (in)	
Cf =	Clogging Factor (%)	50

Weir Conditions:

$$HW = (Q/(Cw*Pc))^{2/3}$$

Cw =	Weir Coefficient	3.30
P =	Perimeter of grate (ft)	10.0
Pc =	Perimeter (w/clogging) (ft)	5.0
HW =	Headwater depth (ft)	0.67

Orifice Conditions:

$$HW = (Q/(Co*Ac))^2/2*g$$

Co =	Orifice Coefficient	0.67
Ag =	Grate Area (ft^2)	6.00
Gf =	Grate Opening Factor	0.67
Ac =	Grate Open Area (w/ clogging) (ft^2)	2.01
g =	Gravity (fps)	32.20
HW =	Headwater depth (ft)	0.69

Output:

Worst Case Scenario Occurs Under Orifice Conditions

Headwater Depth = 0.69 ft with grate

Riprap Ditch Calculation - Iron Mountain Rd

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS

Rip Rap Sizing Computation

Project Name & Number: OLY1720.000
Date: 5/31/2018
By: LKL

Location: Riprap Ditch at 42" Culvert at Iron Mountain Road

Known Information:

Reference:

Rip Rap protection at

V =	Velocity (fps)	7.2	WSPG Hydraulic / Flowmaster Calculations
S_g =	Specific Gravity of Rock (typ=2.5)	2.5	Use Typical
s =	Longitudinal Channel Slope (ft/ft)	0.089	Grading Plan

Solve For:

d_{50} = 1.12 ft - Average Rock Size

d_{50} = 13 in - Average Rock Size
Thickness = 26 in - Thickness of Rip Rap protection
Manning's 'n' = 0.040 - Roughness Coefficient

Equations:

Based upon a Stable Channel Lining

$d_{50} = ((vel*S^{0.17})/(3*(S_g-1)))^2$ Equation 734*

$n = 0.0395(d_{50})^{1/6}$ Equation 732*

Recommendations:

* Provide 18-in Riprap, Thickness = 36-in.

* Equations taken from the Clark County Regional Flood Control District - Hydrologic Criteria and Drainage Design Manual

5740 S. Arville St., Suite 216 - Las Vegas, NV 89118
Ph. 702-284-5300 - Fx. 702-284-5399

Ditch at 42in RCP at Iron Mt Rd

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.040	
Channel Slope	8.90	%
Left Side Slope	3.00	ft/ft (H:V)
Right Side Slope	3.00	ft/ft (H:V)
Bottom Width	12.00	ft
Discharge	60.00	ft^3/s

Results

Normal Depth	0.60	ft
Flow Area	8.31	ft^2
Wetted Perimeter	15.81	ft
Hydraulic Radius	0.53	ft
Top Width	15.61	ft
Critical Depth	0.85	ft
Critical Slope	0.02651	ft/ft
Velocity	7.22	ft/s
Velocity Head	0.81	ft
Specific Energy	1.41	ft
Froude Number	1.74	
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.60	ft
Critical Depth	0.85	ft
Channel Slope	8.90	%

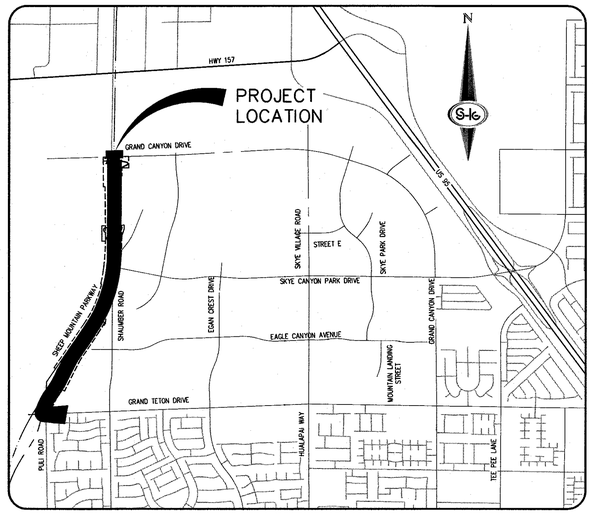
Ditch at 42in RCP at Iron Mt Rd

GVF Output Data

Critical Slope	0.02651	ft/ft

APPENDIX D

Electronic Files CD



VICINITY MAP

IMPROVEMENT PLANS
FOR
SKYE CANYON PHASE II
SHEEP MOUNTAIN PARKWAY

BENCHMARK

MONUMENT ID: USDA (1934) 19

U.S. DEPARTMENT OF AGRICULTURE BRASS DISC AT SOUTHWEST CORNER OF U.S. 95 AND KYLE CANYON ROAD

ELEVATION = 2817.61 FEET, 858.810 METERS
NAVD 88 DATUM

PER THE CITY OF LAS VEGAS BENCHMARK BOOK – 2008 ADJUSTMENT (UPDATED 05/24/2010)

BASIS OF BEARING

NORTH 89°16'30" WEST, BEING THE BEARING OF THE SOUTH LINE OF THE NORTHWEST QUARTER (NW1/4) OF SECTION 7, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE 147, PAGE 71 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

OWNER

M F LAND LLC
% OLYMPIA COMPANIES LLC
11411 SOUTHERN HIGHLANDS
PARKWAY, SUITE 300
LAS VEGAS, NV 89141

DEVELOPER

NINETY–FIVE MANAGEMENT LLC
% OLYMPIA COMPANIES LLC
11411 SOUTHERN HIGHLANDS
PARKWAY, SUITE 300
LAS VEGAS, NV 89141
PH (702) 220–6565
FX (702) 220–6566

ENGINEER

SLATER HANIFAN GROUP
5740 S. ARVILLE STREET #216
LAS VEGAS, NV 89118
(702) 284–5300

APPROVALS

CITY ENGINEER–ALLEN E. PAVELKA PE #9029 DATE

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

CHRIS KNIGHT DATE
DIRECTOR, BUILDING AND SAFETY

THIS PLAN MEETS THE APPLICABLE STANDARDS OF THE PLANNING DEPARTMENT.

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. _____ DATE:_____
SHEETS:

APPROVAL BY THE FIRE DEPARTMENT HAVING JURISDICTION IS REQUIRED PRIOR TO OBTAINING FINAL APPROVAL FROM THE LAS VEGAS VALLEY WATER DISTRICT.

LAS VEGAS FIRE AND RESCUE DATE

NV ENERGY – TRANSMISSION DATE

CENTRAL TELEPHONE CO, DBA CENTURYLINK DATE

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

SOUTHWEST GAS CORPORATION DATE

COX COMMUNICATIONS LAS VEGAS, INC. DATE

DRY UTILITY SUPPLEMENTAL INDEX

SOUTHWEST GAS	

INDEX OF DRAWINGS (STRUCTURAL)

SHT. NO.	DWG. NO.	DESCRIPTION

INDEX OF DRAWINGS

SHT. NO.	DWG. NO.	DESCRIPTION
1	G–01	COVER SHEET
2	G–02	GENERAL NOTES
3	G–03	ABBREVIATIONS, KEY MAP, LEGEND AND QUANTITIES
4	H–01	HORIZONTAL CONTROL PLAN 1
5	H–02	HORIZONTAL CONTROL PLAN 2
6	H–03	HORIZONTAL CONTROL PLAN 3
7	C–01	CONSTRUCTION PLAN – "GTD" 17+00.00 TO "GTD" 23+50.00
8	C–02	CONSTRUCTION PLAN – "GTRB" 0+00.00 TO "GTRB" 6+50.00
9	C–03	CONSTRUCTION PLAN – "GTRB" 6+50.00 TO "GTRB" 10+34.64
10	C–04	CONSTRUCTION PLAN – "SMP" 184+84.15 TO "SMP" 188+00.00
11	C–05	CONSTRUCTION PLAN – "SMP" 188+00.00 TO "SMP" 194+50.00
12	C–06	CONSTRUCTION PLAN – "SMP" 194+50.00 TO "SMP" 201+00.00
13	C–07	CONSTRUCTION PLAN – "SMP" 201+00.00 TO "SMP" 207+50.00
14	C–08	CONSTRUCTION PLAN – "SMP" 207+50.00 TO "SMP" 214+00.00
15	C–09	CONSTRUCTION PLAN – "SMP" 214+00.00 TO "SMP" 220+50.00
16	C–10	CONSTRUCTION PLAN – "SMP" 220+50.00 TO "SMP" 227+50.00
17	C–11	CONSTRUCTION PLAN – "SMP" 227+50.00 TO "SMP" 233+50.00
18	C–12	CONSTRUCTION PLAN – "TRL" 10+00.00 TO "TRL" 12+00.00
19	C–13	CONSTRUCTION PLAN – "TRL" 12+00.00 TO "TRL" 18+00.00
20	C–14	CONSTRUCTION PLAN – "TRL" 18+00.00 TO "TRL" 24+50.00
21	C–15	CONSTRUCTION PLAN – "TRL" 24+50.00 TO "TRL" 31+00.00
22	C–16	CONSTRUCTION PLAN – "TRL" 31+00.00 TO "TRL" 37+50.00
23	C–17	CONSTRUCTION PLAN – "TRL" 37+50.00 TO "TRL" 44+00.00
24	C–18	CONSTRUCTION PLAN – "TRL" 44+00.00 TO "TRL" 50+50.00
25	C–19	CONSTRUCTION PLAN – "TRL" 50+50.00 TO "TRL" 57+00.00
26	C–20	CONSTRUCTION PLAN – "TRL" 57+00.00 TO "TRL" 63+50.00
27	C–21	CONSTRUCTION PLAN – "TRL" 63+50.00 TO "TRL" 70+00.00
28	GR–01	GRADING PLAN – "GTRB" 0+00.00 TO "GTRB" 6+50.00
29	GR–02	GRADING PLAN – "GTRB" 6+50.00 TO "GTRB" 12+00.00
30	GR–03	GRADING PLAN – "SMP" 188+00.00 TO "SMP" 194+50.00
31	GR–04	GRADING PLAN – "SMP" 194+50.00 TO "SMP" 201+00.00
32	GR–05	GRADING PLAN – "SMP" 201+00.00 TO "SMP" 207+50.00
33	GR–06	GRADING PLAN – "SMP" 207+50.00 TO "SMP" 214+00.00
34	GR–07	GRADING PLAN – "SMP" 214+00.00 TO "SMP" 220+50.00
35	GR–08	GRADING PLAN – "SMP" 220+50.00 TO "SMP" 227+50.00
36	GR–09	GRADING PLAN – "SMP" 227+50.00 TO "SMP" 233+50.00
37	GR–10	STORM DRAIN LATERAL PROFILES
38	TY–01	TYPICAL SECTIONS 1
39	TY–02	TYPICAL SECTIONS 2
40	TY–03	DETAILS 1
41	TY–04	DETAILS 2
42	TY–05	DETAILS 3
43	TY–06	DRAINAGE SWALE SECTIONS 1
44	TY–07	DRAINAGE SWALE SECTIONS 2
45	TY–08	NDOT DETAILS
46	ST–01	SIGNING AND STRIPING – "GTRB" 2+00.00 TO "SMP"188+00.00
47	ST–02	SIGNING AND STRIPING –"SMP" 188+00.00 TO "SMP" 201+00.00
48	ST–03	SIGNING AND STRIPING – "SMP" 201+00.00 TO "SMP" 214+00.00
49	ST–04	SIGNING AND STRIPING – "SMP" 214+00.00 TO "SMP" 227+50.00
50	ST–05	SIGNING AND STRIPING – "SMP" 227+50.00 TO "SMP" 231+18.05

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

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

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SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY–FIVE MANAGEMENT LLC
SHEEP MOUNTAIN PARKWAY
COVER SHEET

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

PROJECT NO.
OLY1720.000

PROFESSIONAL ENGINEER – STATE OF NEVADA – JERRY J. SLATER – Exp.06/30/2018 – CIVIL – No. 14167

G-01
SHEET 1 OF 50

DWG NO. _____

HANSEN NO. _____

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' CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA, AS AMENDED. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE SPECIFICATIONS.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM CONSTRUCTION AS PER PLANS. ANY ADDITIONS, DELETIONS, OR CHANGES SHALL FIRST MEET WITH THE APPROVAL OF THE CITY ENGINEER.
3. CHISEL "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" 'S SHALL BE USED ON LINES TWELVE INCHES (12") OR ABOVE.
7. WATER MAINS SHALL BE PROTECTED IN ACCORDANCE WITH LVVWD STANDARDS WHENEVER A SEWER MAIN CROSSES OVER A WATER MAIN OR THE SEWER IS LESS THAN EIGHTEEN INCH (18") UNDER A WATER MAIN.
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 EXCEED THIS TOLERANCE WILL HAVE TO BE REPAIRED OR REMOVED OR REPLACED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO ACCEPTANCE BY THE CITY OF LAS VEGAS.
10. INSTALLATION OF CURVED SEWER REQUIRES THE USE OF C-900 PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.

REVISED 04/15/10

STORMWATER MANAGEMENT NOTES

1. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATED IN, THE PUBLIC RIGHTS OF WAY OF 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 IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARD IN THE USDCCA AND THE LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.5.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS, AND ALL BMPs WEEKLY, AND WITHIN 24 HOURS AFTER ANY RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR 100000, SECTION III.A.12.
5. THE DEVELOPER SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL ALL PERMANENT SIGNS SHOWN ON THE PLANS. STREET NAME SIGNS SHALL CONFORM IN THEIR ENTIRETY TO CLARK COUNTY AREA STANDARDS. ALL OTHER SIGNS SHALL BE STANDARD SIZE UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL SIGN POSTS SHALL BE INSTALLED IN ACCORDANCE WITH CLARK COUNTY AREA STANDARDS. ALL SIGNS SHALL USE TYPE III SHEETING.

LAS VEGAS VALLEY WATER DISTRICT (LVVWD) STANDARD NOTES

LVVWD PROJECT #_____

1. NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN APPROVED FOR CONSTRUCTION BY THE LVVWD. FOLLOWING WATER PLAN APPROVAL, NOTICE SHALL BE GIVEN TO THE LVVWD COMMUNICATION SUPPORT CENTER (258-7171) TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. FOR FUTURE INSPECTIONS, NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO THE REQUESTED LVVWD INSPECTION. **WHEN REQUESTING INSPECTIONS, PLEASE REFER TO THE PROJECT # IDENTIFIED ABOVE.**
2. ALL WORK SHALL CONFORM TO LVVWD STANDARD PLATES, DRAWINGS, AND SPECIFICATIONS, AND TO THE **2010** EDITION OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS). **THE LATEST EDITION OF UDACS SHALL SUPERSEDE ANY CONFLICTS CONTAINED IN THE APPROVED DRAWINGS AND/OR SPECIFICATIONS.**
3. ALL WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2 ABOVE, SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT DRAFT OR EDITION OF THE UNIFORM SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENT, CLARK COUNTY AREA.
4. A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVVWD.
5. ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING WITH LVVWD APPROVED SERVICE SADDLES.
6. ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
7. ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS, VALLEY AND CURB GUTTERS.
8. ALL WATER AND STORM DRAIN OR SANITARY SEWER CROSSINGS SHALL CONFORM TO SECTION 2.22 OF THE **2010** EDITION OF THE UDACS
9. ALL WATER FACILITIES SHALL BE FILLED, DISINFECTED, PRESSURE TESTED, FLUSHED, FILLED, AND AN ACCEPTABLE WATER SAMPLE OBTAINED, PRIOR TO CONNECTION TO THE LVVWD DISTRIBUTION SYSTEM.
10. THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 OR 258-3802, TWO (2) WORKING DAYS PRIOR TO METER PICKUP.
11. ANY INTERRUPTION OF SERVICE MUST BE PERFORMED IN ACCORDANCE WITH UDACS SECTION 3.14.01, AND APPROVED BY THE LVVWD INSPECTION DIVISION PRIOR TO SHUTDOWN. PROPER WRITTEN NOTIFICATION MUST BE GIVEN TO ALL AFFECTED CUSTOMERS.
12. ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE LISTED ON THE LVVWD PRE-APPROVED MATERIALS AND MANUFACTURER'S LISTING FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS.
13. 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 STANDARDS, INCLUDING THE PLACEMENT OF ASPHALT PAVING STREET SURFACES. ANY REPAIR WORK DONE BY THE LVVWD TO THE MUNICIPAL WATER FACILITIES WILL INCLUDE THE PLACEMENT OF 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 ABUTTING A PUBLIC OF PRIVATE STREET, IF DISTURBED BY THE LVVWD DURING THE REPAIR OR OPERATION OF ITS FACILITIES, WILL BE REPLACED BY LVVWD WITH AN APPROPRIATELY SIZED PLAIN FINISH CONCRETE PATCH. THE LVVWD WILL NOT RESTORE, AND WILL NOT BE RESPONSIBLE FOR THE RESTORATION OF ANY DECORATIVE PAVING SURFACE WITH THE STREET. THE LVVWD WILL NOT ATTEMPT TO MATCH COLOR OR FINISH OF ANY ADJACENT MATERIALS.

APPROVED FOR CONSTRUCTION

_____

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

DATE_____ LVVWD PROJECT #_____

CITY OF LAS VEGAS GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA NEVADA", LATEST ISSUE; THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY AREA NEVADA", LATEST REVISED EDITION; THE "SUMMERLIN IMPROVEMENT STANDARDS" FOR WORK IN THE SUMMERLIN AREA; AND OTHER APPLICABLE APPROVED STANDARDS ISSUED BY THE CONTROLLING AGENCY; THE UNIFORM BUILDING CODE; AND ALL LOCAL CITY CODES AND ORDINANCES APPLICABLE, EXCEPT AS NOTED ON THIS SHEET AS "DEVIATIONS FROM STANDARDS".
2. THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. EXISTING UTILITIES AS SHOWN FROM CLV PLANS LIBRARY ARE APPROXIMATE AND FOR RECORD PURPOSES. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. EXISTING UTILITY SERVICE LATERALS MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND AND OVERHEAD INTERFERENCES WHICH MAY AFFECT HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH.
3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING UTILITY LINES, STRUCTURES AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED SATISFACTORY TO THE CITY ENGINEER AND OWNING UTILITY COMPANY AT THE EXPENSE OF THE CONTRACTOR.
4. ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE PLANS, ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.
5. TYPE V CEMENT SHALL BE USED IN ALL OFF-SITE CONCRETE WORK. CONCRETE TO BE 3000 P.S.I. MINIMUM @ 28 DAYS. MIX DESIGNS TO BE APPROVED BY THE CITY, PRIOR TO THE USE ON THE PROJECT.
6. PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.
7. EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300' IN EXTRUDED-TYPE CURB.
8. AC PAVEMENT TO BE ONE-HALF INCH (½") ABOVE LIP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS AND CROSS GUTTERS.
9. CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED PER STANDARD DRAWING 216.
10. SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.
11. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF THE TRANSITIONS TO BE AS SHOWN ON PLANS.
12. ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY WRIGHT ENGINEERS, REPORT #160165, MAY 20, 2016 APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.
13. EXACT LOCATION OF ALL SAWCUT LINES MAY BE ADJUSTED OR DETERMINED IN THE FIELD BY A CITY OF LAS VEGAS ENGINEER IF LOCATION ON PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES RELOCATIONS.
14. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEY MONUMENTS. ANY MONUMENTS DISTURBED SHALL BE REPLACED AND ADJUSTED PER AVAILABLE RECORDS IN ACCORDANCE WITH N.R.S. STATUTE NO. 625.380 & CITY OF LAS VEGAS TITLE 18, APPENDIX D.
15. UTILITY COMPANY METER BOXES, MANHOLE LIDS, VALVE COVERS, ETC., SHALL BE LOCATED OUT OF DRIVEWAYS, DRIVEWAY APRONS, FLOWLINES, AND CROSS GUTTERS UNLESS WRITTEN APPROVAL IS GRANTED BY THE UTILITY COMPANY AND THE CITY ENGINEER. ALL ABOVE GROUND UTILITY APPERTANANCES SHALL CONFORM TO THE REQUIREMENTS OF 19.12.040.

WALL NOTES:

16. ALL WALLS, NEW OR EXISTING, ARE ONLY SHOWN ON CIVIL PLANS FOR THE PURPOSE OF REVIEWING GRADING RELATIONSHIPS; FLOOD CONTROL AND SIGHT DISTANCE AT INTERSECTIONS. NEW WALLS REQUIRE A SEPARATE PERMIT AND INSPECTION BY THE BUILDING DEPARTMENT.
17. ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT OF WAY.
18. CONTRACTOR SHALL ADJUST ALL NEW AND EXISTING INLETS, VALVE BOXES, MANHOLE RIMS, AND SEWER CLEAN OUTS, ETC. TO FINISH GRADE AS APPLICABLE WHETHER OR NOT THEY ARE SHOWN ON THE PLANS.
19. MATERIALS, HANDLING AND PLACEMENT OF PORTLAND CEMENT CONCRETE SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF NDOT OR THE CLARK COUNTY AREA SPECIFICATIONS (AS APPLICABLE) AND THE PLANS AND DETAILS SHOWN HEREON.
20. WHEN INSTALLING UNDERGROUND FACILITIES THAT REQUIRE UNDERGROUND LOCATING DEVICES SUCH AS MARKER BALLS, LOCATING RIBBON, ETC, THE CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION TO OFFSITE INSPECTION AND TESTING CERTIFYING THAT ALL DEVICES HAVE BEEN PLACED AND VERIFIED TO BE IN GOOD WORKING CONDITION PRIOR TO THE CONSTRUCTION OF ANY ROAD BASE.
21. SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S) SHALL BE PROVIDED TO THE CITY AND APPROVED PRIOR TO ACCEPTANCE OF FACILITY VIDEO INSPECTION. THE MAP(S) SHALL INCLUDE THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES AND TRANSITION STRUCTURES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND AT THE CONNECTION TO A DROP INLET, THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS EXIT THE PUBLIC RIGHT-OF-WAY, AND STORM DRAIN MAIN ALIGNMENT, INCLUDING DEFLECTION POINTS. THE LOCATION SHALL BE DESCRIBED BY COORDINATES WHICH SHALL BE BASED ON THE OFFICIAL HORIZONTAL AND VERTICAL CONTROL NETWORKS OF THE CITY OF LAS VEGAS. FINAL DRAWINGS MUST BE SEALED AND CERTIFIED BY A NEVADA PROFESSIONAL LAND SURVEYOR TO HAVE POSITIONAL CERTAINTIES OF ±0.09 METERS (±0.3 FEET) HORIZONTALLY AND VERTICALLY. A SEPARATE ELECTRONIC COMMA DELIMITED FILE FOR THE SANITARY SEWER AND STORM DRAIN COORDINATES SHALL ALSO ACCOMPANY THE SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S).

OR

~~SANITARY SEWER AND STORM DRAIN FACILITIES SHOWN ON THESE PLANS SHALL BE USED TO MEET THE REQUIREMENTS OF NRS 455 AND SHALL SHOW AT A MINIMUM THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF PUBLIC MANHOLES, STORM DRAIN MANHOLES, STORM DRAIN LATERALS AND THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS EXIT THE PUBLIC RIGHT-OF-WAY. ANY DEVIATIONS FROM THE INFORMATION SHOWN SHALL BE NOTED AND SUBMITTED AS A REVISION TO THE PLANS AND APPROVED PRIOR TO ACCEPTANCE OF FACILITY VIDEO INSPECTION.~~

22. CCTV VIDEO INSPECTION IS REQUIRED FOR ALL SEWER AND STORM DRAINS. THE CCTV VIDEO INSPECTIONS NEED TO BE PERFORMED PER THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS LATEST ADDITION.
23. A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.

REVISED 02/03/15

CITY OF LAS VEGAS STREETLIGHT NOTES

1. ALL STREET LIGHTING INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE STREET LIGHTING PLANS, THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST REVISION, AND THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST REVISION, AND ANY ADOPTED SPECIAL AREA STANDARDS.
2. NO DEVIATION OF STREET LIGHT, PULL BOX, CONDUITS (ETC.) LOCATIONS SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF TRAFFIC ENGINEERING AND THE CITY ENGINEER.
3. ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION.
4. ALL STREET LIGHTING CONDUITS STUB SHALL HAVE AT LEAST ONE GREEN #8 THW WIRE INSTALLED, AS TRACER WIRE. WHEN "EMPTY" CONDUIT IS COMPLETELY INSTALLED FROM PB TO PB, IT SHALL HAVE MINIMUM OF 2 #4 AND 1 #8 THW WIRE WITH THE ENDS TAPED OR "SAFE OFF" PRIOR TO FINAL INSPECTION.
5. ANY STRUCTURE SUCH AS BLOCK WALLS, CHAIN LINK FENCES, RETAINING WALLS, ETC., SHALL LEAVE A MINIMUM CLEARANCE IN ACCORDANCE WITH THE USD NO. 320A.
6. AS-BUILT DRAWINGS SHALL BE SUPPLIED TO THE TEFO PRIOR TO ANY PRE-FINAL INSPECTION. THE AS-BUILT DRAWING NEEDS TO BE STAMPED AS-BUILT AND SIGNED BY THE PREPARER.
7. SERVICE POINT SHALL BE COORDINATED WITH NV ENERGY COMPANY, AND WHEREVER POSSIBLE, BE LOCATED NEAR THE CENTER OF THE CIRCUIT. SERVICE POINTS SHALL BE SHOWN ON THE CIVIL PLANS.
8. IT SHALL BE ASSUMED THAT IN THE ABSENCE OF AN EXISTING, WORKABLE CIRCUIT TO ATTACH TO, ALL INSTALLATIONS SHALL REQUIRE A NEW SERVICE FOR OPERATION OF THE CIRCUIT.
9. WHEREVER THERE IS AN OVERHEAD UTILITY THAT MAY CONFLICT WITH THE INSTALLATION OF STREET LIGHTING CIRCUITS AND/OR POLES, THESE CONFLICTS MUST BE RESOLVED BETWEEN THE DEVELOPER AND THE UTILITIES INVOLVED, AT NO EXPENSE TO THE CITY OF LAS VEGAS, BEFORE STREETLIGHT BASES ARE INSTALLED.
10. THE CONTRACTOR SHALL FURNISH COMPLETE SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON PLANS.
11. THE DEVELOPER/OWNER WILL BE REQUIRED TO SUPPLY POWER TO ALL NEW PUBLIC STREET LIGHTS INSTALLED UNDER THIS DESIGN PRIOR TO BOND RELEASE OR PROJECT COMPLETION. THE DEVELOPER/OWNER WILL BE RESPONSIBLE FOR ALL ITEMS ASSOCIATED WITH THE INSTALLATION, CONSTRUCTION, ENERGIZING, MAINTENANCE AND OPERATIONAL COST OF SAID STREET LIGHTS PRIOR TO PROJECT COMPLETION. REFER TO THE PLAN FOR ANY NEW SERVICE REQUIREMENTS. THE TRANSFER OF OWNERSHIP FROM THE DEVELOPER/OWNER TO THE CITY OF LAS VEGAS FOR ALL NEW PUBLIC STREET LIGHT/S AND/OR SERVICE/S INSTALLED UNDER THIS PLAN DESIGN WILL BE IN CONJUNCTION WITH THIS PROJECT COMPLETION. COORDINATE ALL MAINTENANCE AND OPERATIONAL TRANSFERS WITH THE CITY OF LAS VEGAS TRAFFIC ENGINEERING DEPARTMENT (TEFO) AT (702) 229-6331.

REVISED 04/15/10

LAS VEGAS FIRE AND RESCUE GENERAL NOTES

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LAS VEGAS FIRE AND RESCUE ADOPTED FIRE CODE ORDINANCE # 6325 FOR HYDRANT SPECIFICATIONS AND HYDRANT INSTALLATION SPECIFICATIONS.
2. ONLY FIRE HYDRANTS THAT ARE ON THE LAS VEGAS VALLEY WATER DISTRICT'S- APPROVED PRODUCTS LIST ARE ALLOWED TO BE INSTALLED.
3. A PERMIT IS REQUIRED FROM LAS VEGAS FIRE AND RESCUE FOR THE INSTALLATION OF ON-SITE WATER LINES AND FIRE HYDRANTS. THE PERMIT AND CONTRACTORS MATERIAL TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER BEFORE COMMENCEMENT OF WORK. [IFC § 105.7.12]
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 ORDERAND 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 NECESSARYPER PLANS SHALL BE COMPLETED BEFORE APPROVAL BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION. [IFC § 507]
9. PRIVATE HYDRANTS SHALL BE PAINTED RED. [IFC § 507.5.7.1]
10. PRIOR TO THE FINAL OCCUPANCY, A FIRE FLOW TEST SHALL BE WITNESSED BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW. [IFC § 507]
11. FIRE HYDRANT SPACING SHALL BE AS FOLLOWS; [IFC § C102]
    - RESIDENTIAL -500 FT UNSPRINKLERED; 600 FT SPRINKLERED.
    - COMMERCIAL -300 FT UNSPRINKLERED; 400 FT SPRINKLERED.
12. WHERE THE WATER MAINS ARE EXTENDED ALONG STREETS OR NEW STREETS ARE INSTALLED WHERE FIRE HYDRANTS ARE NOT NEEDED FOR PROTECTION OF THE STRUCTURES, FIRE HYDRANTS SHALL BE INSTALLED AT A MAXIMUM OF 1000 FT SPACING, TO PROVIDE FOR TRANSPORTATION HAZARDS. WHERE STREETS ARE PROVIDED WITH MEDIAN DIVIDERS OR HAVE FOUR (4) OR MORE TRAFFIC LANES AND HAVE A TRAFFIC COUNT OF MORE THAN 30,000 PER DAY, HYDRANTS ARE REQUIRED ON EACH SIDE OF THE STREET SPACED AT 500 FT ON AN ALTERNATING BASIS. [IFC § C102.8]
13. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE RADIUS OF A CUL-DE-SAC OR WITHIN 20 FT OF THE PERIMETER OF THE RADIUS OF THE CUL-DE-SAC.
14. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN 6 FT OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREETLIGHT OR ANY OTHER OBSTRUCTION. [IFC § C102.12]
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 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. SECTIONAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 2 FIRE HYDRANTS CAN BE OUT OF SERVICE DUE TO A BREAK IN A WATER MAIN. [IFC § C104]
19. ALL FIRE APPARATUS ACCESS ROADS SHALL BE PAVED TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES, AND SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF THE FIRE APPARATUS. [IFC § 503.2.3]
20. THE GRADIENT FOR THE FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 12% ANGLES OF APPROACH AND ANGLES OF DEPARTURE SHALL NOT EXCEED 6% FOR 25 FT PRIOR TO OR AFTER THE GRADE CHANGE. ADJACENT TO THE STRUCTURES GRADIENT SHALL NOT EXCEED 6% [IFC § 503.2.7, § 503.2.8]
21. THE TURNING RADIUS OF THE FIRE APPARATUS ACCESS ROADS SHALL BE NO LESS THAN 52 FT OUTSIDE AND 28 FT INSIDE TURNING RADIUS. [IFC § 503.2.4]
22. VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL NOT BE LESS THAN 13FT 6 INS. [IFC § 503.2.1]
23. FIRE DEPARTMENT ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF NOT LESS THAN 40 FT FLOW LINE TO FLOW LINE WITH PARALLEL PARKING PERMITTED ON BOTH SIDES. NOT LESS THAN 32 FT WIDE, FLOW-LINE TO FLOW-LINE, WHERE PARKING IS PERMITTED ONLY ON ONE SIDE OF THE FIRE APPARATUS ACCESS ROAD. NOT LESS THAN 24 FT WIDE, FLOW-LINE TO FLOW-LINE, WHERE NO PARKING IS PERMITTED ON EITHER SIDE. FIRE LANES THROUGH PARKING LOTS SHALL BE NOT LESS THAN 24 FT. [IFC § 503.2.1.1]
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. THIS DISTANCE COULD BE INCREASED TO 250 FT IF THE BUILDING IS SPRINKLERED. [IFC § 503.1.1]
25. APPROVED SECONDARY FIRE APPARATUS ACCESS SHALL BE PROVIDED FOR 100 OR MORE DWELLING UNITS, ROAD(S) WITH DEAD-ENDS OR WITH A SINGLE POINT OF ACCESS IN EXCESS OF 600 FT. COMMERCIAL AND INDUSTRIAL DEVELOPMENTS WHERE BUILDINGS EXCEED 2 STORIES OR 30 FEET IN HEIGHT, OR EXCEEDING 62,000 SQUARE FEET IN AREA. [IFC § 503.1.2]
26. ALL DEAD-END FIRE APPARATUS ROADS AND/OR FIRE LANES, PUBLIC OR PRIVATE, IN EXCESS OF 150 FT IN LENGTH SHALL BE PROVIDED WITH AN APPROVED TURN AROUND HAVING A MINIMUM DIAMETER OF 81 FT. [IFC § 503.2.5]
27. ALL FIRE APPARATUS ACCESS ROADS SHALL BE MARKED BY PLACING APPROVED SIGNS AT THE START OF THE DESIGNATED FIRE LANE, ONE SIGN AT THE END OF THE FIRE LANE AND WITH SIGNS AT INTERVALS OF 100 FT ALONG THE DESIGNATED FIRE LANES. SIGNS TO BE PLACED ON BOTH SIDES OF AN ACCESS ROADWAY IF NEEDED TO PREVENT PARKING ON EITHER SIDE. SIGNS TO BE INSTALLED NO HIGHER THAN 10 FT OR LESS THAN 6 FT FROM THE ROADWAY LEVEL. THE CURB ALONG OR ON THE P

LEGEND

— — —TEL 5-4"— — —	EXISTING TELEPHONE CABLE
— — —12" SS— — —	EXISTING SANITARY SEWER LINE
— — —12" W— — —	EXISTING WATER LINE
— — —18" SD— — —	EXISTING STORM DRAIN LINE
≡≡≡≡≡≡≡≡≡≡≡≡≡	EXISTING STORM DRAIN (SIZE PER PLAN)
— — —ELE UG 1-4"— — —	EXISTING UNDERGROUND ELECTRICAL LINE
— — — —OHP— — — —	EXISTING OVERHEAD POWER LINE
— — — —OHP/TEL— — — —	EXISTING OVERHEAD POWER AND TELEPHONE LINE
— — —4" PE GAS— — —	EXISTING GAS LINE
— — — —CATV— — — —	EXISTING CABLE TELEVISION LINE
≡≡≡≡≡≡≡≡≡≡≡≡≡	EXISTING CURB & GUTTER
——— - - - ———	EXISTING RIGHT-OF-WAY LINE
——— — — ———	EXISTING PROPERTY LINE
——x——x——x——	EXISTING CHAIN-LINK FENCE
····· SL ·····	EXISTING STREET LIGHT CONDUIT
MH	EXISTING MANHOLE OR VAULT
	EXISTING VALVE (GAS OR WATER)
FH	EXISTING FIRE HYDRANT
PP	EXISTING POWER OR TELEPHONE POLE
	EXISTING PADMOUNTED SERVICE PEDESTAL
	EXISTING NV ENERGY TRANSFORMER
	EXISTING SWING GATE
	CENTERLINE
	EASEMENT LINE
	AEP
	PROPOSED SIGN
	MAINTENANCE ACCESS PATH
	CONCRETE OR PAVED SURFACE
	RIPRAP
	FLOWLINE
	SAWCUT LINE
1875	CONTOUR LINE
12.3 TC	ELEVATION
D	STORM DRAIN MANHOLE
S	SANITARY SEWER MANHOLE
	100 WATT STREET LIGHT
	250 WATT STREET LIGHT
— — —4" ITS— — —	FAST ITS CONDUIT
FP30	FAST P30 PULLBOX
FT200	FAST TYPE 200 SPLICE VAULT
	EXISTING STREET LIGHT
	EXISTING ON-SITE LIGHT

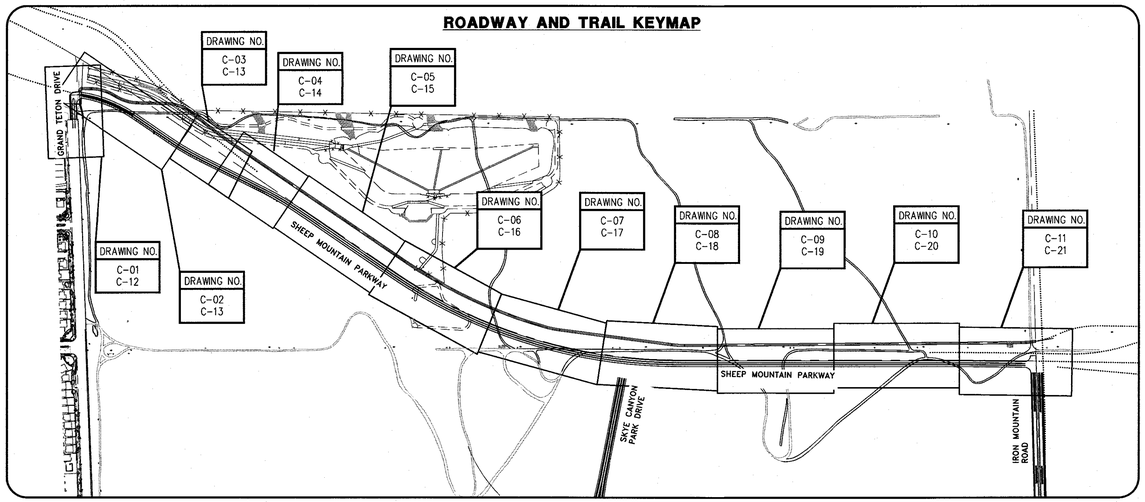
QUANTITIES

DESCRIPTION	UNIT	TOTAL QUANTITY
8" SEWER	LF	" "
SEWER MANHOLE 6 TO 18 FEET	EA	" "
SEWER MANHOLE > 18'	EA	" "
8" PVC WATER MAIN	LF	" "
8" PVC WATER LATERAL	LF	" "
8" DIP WATER LATERAL	LF	" "
10" PVC WATER MAIN	LF	" "
10" DIP WATER MAIN	LF	" "
10" DIP WATER LATERAL	LF	" "
8" GATE VALVE	EA	" "
10" GATE VALVE	EA	" "
8" 45° BEND	EA	" "
8" 5° BEND	EA	" "
8" X 8" TEE	EA	" "
10" 45° BEND	EA	" "
10" 5° BEND	EA	" "
10" X 10" TEE	EA	" "
CAP WITH 2" BLOW-OFF ASSEMBLY	EA	" "
FIRE HYDRANT	EA	" "
16" X 8" REDUCER	EA	" "
10" X 8" REDUCER	EA	" "
CURB & GUTTER (TYPE "L" & "A")	LF	" "
CROSS GUTTER	SF	" "
SIDEWALK 4"	LF	" "
SIDEWALK RAMP	EA	" "
TYPE II GRAVEL BASE	CY	" "
3" ASPHALTIC CONCRETE PAVING	SY	" "
4" ASPHALTIC CONCRETE PAVING	SY	" "
5" ASPHALTIC CONCRETE PAVING	SY	" "

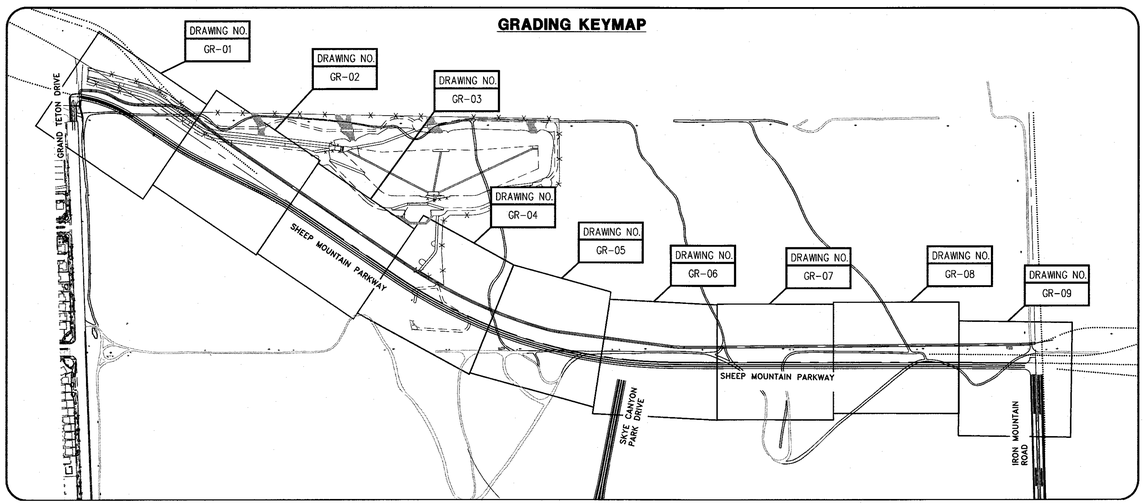
QUANTITIES

DESCRIPTION	UNIT	TOTAL QUANTITY
24" STORM DRAIN	LF	24'
36" STORM DRAIN	LF	56'
42" STORM DRAIN	LF	70'
48" STORM DRAIN	LF	398'
HEADWALL (STRUCTURAL)	EA	2
NDOT TYPE 2B STORM DRAIN DROP INLET WITH CONCRETE APRON	EA	3
NDOT RCP END SECTION	EA	2
RIPRAP (D50=3", T=6")	SF	1933
RIPRAP (D50=18", T=36")	SF	4000
3" MINUS GRAVEL ACCESS	SF	840
6" THICK CONCRETE MAINTENANCE ACCESS	SF	2865
6" THICK CONCRETE PAD WITH 3-FT DEEP CUTOFF WALL (STRUCTURAL)	SF	1163
3-FT DEEP CUTOFF WALL	LF	317
60" TYPE III STORM DRAIN MANHOLE	EA	1

ROADWAY AND TRAIL KEYMAP



GRADING KEYMAP



ABBREVIATIONS

ABUT	ABUTMENT
AC	ALUMINUM CAP/ASPHALTIC CONCRETE
AEP	AUTHORIZATION TO ENTER PROPERTY
AP	ANGLE POINT
APN	ASSESSORS PARCEL NUMBER
AVE	AVENUE
BC	BEGIN CURVE/BRASS CAP/BACK OF CURB
BCR	BEGIN CURB RETURN
BLVD	BOULEVARD
BM	BENCHMARK
BOT	BOTTOM
BRG	BEARING
BSW	BACK OF SIDEWALK
BVCE	BEGIN VERTICAL CURVE ELEVATION
BVCS	BEGIN VERTICAL CURVE STATION
CATV	UNDERGROUND CABLE TV
CG	CURB AND GUTTER
CCSD	DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS
CKT	CIRCUIT
CLR	CLEAR/CLEARANCE
CLBM	CITY OF LAS VEGAS BENCHMARK
CLV	CITY OF LAS VEGAS
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
℄ C/L	CENTERLINE
COB	CENTER OF BOLLARD
COL	COLUMN
CONST	CONSTRUCT/CONSTRUCTION
COORD	COORDINATE
COR	CORNER
CY	CUBIC YARD(S)
Δ	DELTA
DB	DIRECT BURY
DBL	DOUBLE
DI	DROP INLET
DIA	DIAMETER
DIST	DISTANCE
DR	DRIVE
DW	DRIVEWAY
DWG	DRAWING
ECR	END CURB RETURN
E	EAST
EA	EACH
ESMT	EASEMENT
ECR	END CURB RETURN
ELEC	ELECTRICAL
ELEV/EL	ELEVATION
EP/EOP	EDGE OF PAVEMENT
EQ	EQUAL
EST	ESTIMATED
EVC	END VERTICAL CURVE
EX./EXIST	EXISTING
EXP	EXPANSION JOINT
EW	EACH WAY
FC	FACE OF CURB
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FO	FIBER OPTIC
FS	FINISH SURFACE
FT	FOOT/FEET
FTG	FOOTING
FW	FACE OF WALL
FYA	FLASHING YELLOW ARROW
G	GAS
GA	GAUGE
GB	GRADE BREAK
GND	GROUND
H	HEIGHT
HGL	HYDRAULIC GRADE LINE
HORIZ	HORIZONTAL
HWY	HIGHWAY
INV	INVERT
ITS	INTELLIGENT TRANSPORTATION SYSTEM
JT	JOINT
LF	LINEAR (LINEAL) FEET
LIP	LIP OF GUTTER
LT	LEFT
LUM	LUMINAIRE
LVVWD	LAS VEGAS VALLEY WATER DISTRICT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MLCP	MULTI-LAYERED COMPOSITE PIPE
MOD	MODIFY/MODIFIED
MON	MONUMENT
MPH	MILES PER HOUR
N	NORTH
NDOT	NEVADA DEPARTMENT OF TRANSPORTATION
NO	NUMBER
NVE	NV ENERGY
NTS	NOT TO SCALE
OC	ON CENTER
OHP	OVERHEAD POWER LINE
PAT	PATENT
PB	PULL BOX
PBS	PLANTMIX BITUMINOUS SURFACE
PC	POINT OF CURVE, PHOTO CELL
PCC	POINT OF COMPOUND CURVE
PD	PONDING DEPTH
PE	PROJECT ENGINEER/POLYETHYLENE
PED	PEDESTRIAN
PG	PROFILE GRADE (FG ON CONTROL LINE)
PGL	PROFILE GRADE LINE
PH	POTHOLE
PI	POINT OF INTERSECTION
PKWY	PARKWAY
PL	PROPERTY LINE
PMF	PAVEMENT MARKING FILM
POB	POINT OF BEGINNING
POC	POINT ON CURVE
POE	POINT OF ENDING
POT	POINT ON TANGENT
PP	POWER POLE
PPCBR	PORTABLE PRECAST CONCRETE BARRIER RAIL
PPM	POLYUREA PAVEMENT MARKINGS
PR	PAIR
PROP	PROPOSED
PRC	POINT OF REVERSE CURVE
PRVC	POINT REVERSE VERTICAL CURVE
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
R	RADIUS
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REC	RECTANGULAR
REINF	REINFORCED
REQD	REQUIRED
RND	ROUND
RP	RADIUS POINT
RPM	RAISED PAVEMENT MARKERS
R/W	RIGHT-OF-WAY
RT	RIGHT
S	SOUTH
SCH	SCHEDULE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SECT	SECTION
SF	SQUARE FOOT/FEET
SHLDR	SHOULDER
SHT	SHEET
SIM	SIMILAR
SP	SERVICE POINT
SPA	SPACING
SQ	SQUARE
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
STA	STATION
STD	STANDARD
ST	STREET
STL	STEEL
SL	STREET LIGHT
STRUCT	STRUCTURE
SW	SIDEWALK
SNBORS	SOUTHERN NEVADA BUILDING OFFICIALS REGIONAL STANDARDS
SWG	SOUTHWEST GAS
T	TELEPHONE/TOP
TAN	TANGENT
TC	TOP OF CURB
TEMP	TEMPORARY
TF	TOP OF FOOTING
TG	TOP OF GRATE
TMH	TOP OF MANHOLE
TRANS	TRANSITION STRUCTURE
THW	TOP OF HEADWALL
TRW	TOP OF RETAINING WALL
TW	TOP OF WALL
TS	TRAFFIC SIGNAL
TYP	TYPICAL
UDACS	UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS
USDCCA	UNIFORM STD. DRAWINGS FOR PUBLIC WORKS' CONSTRUCTION OFF-SITE IMPROVEMENTS CLARK COUNTY AREA, NEVADA
UT	UNDERGROUND TELEPHONE
VAR	VARIABLE/VARIES
VC	VERTICAL CURVE
VERT	VERTICAL
VG	VALLEY GUTTER
W	WEST
WY	WAY
WT	WEIGHT
XING	CROSSING

ALIGNMENT ABBREVIATIONS

"GTD"	GRAND CANYON DRIVE
"GTRB"	GRAND TETON RAMP B
"SMP"	SHEEP MOUNTAIN PARKWAY
"TRL"	TRAIL
"IM"	IRON MOUNTAIN ROAD

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

ABBREVIATIONS, KEY MAP, LEGEND AND QUANTITIES

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

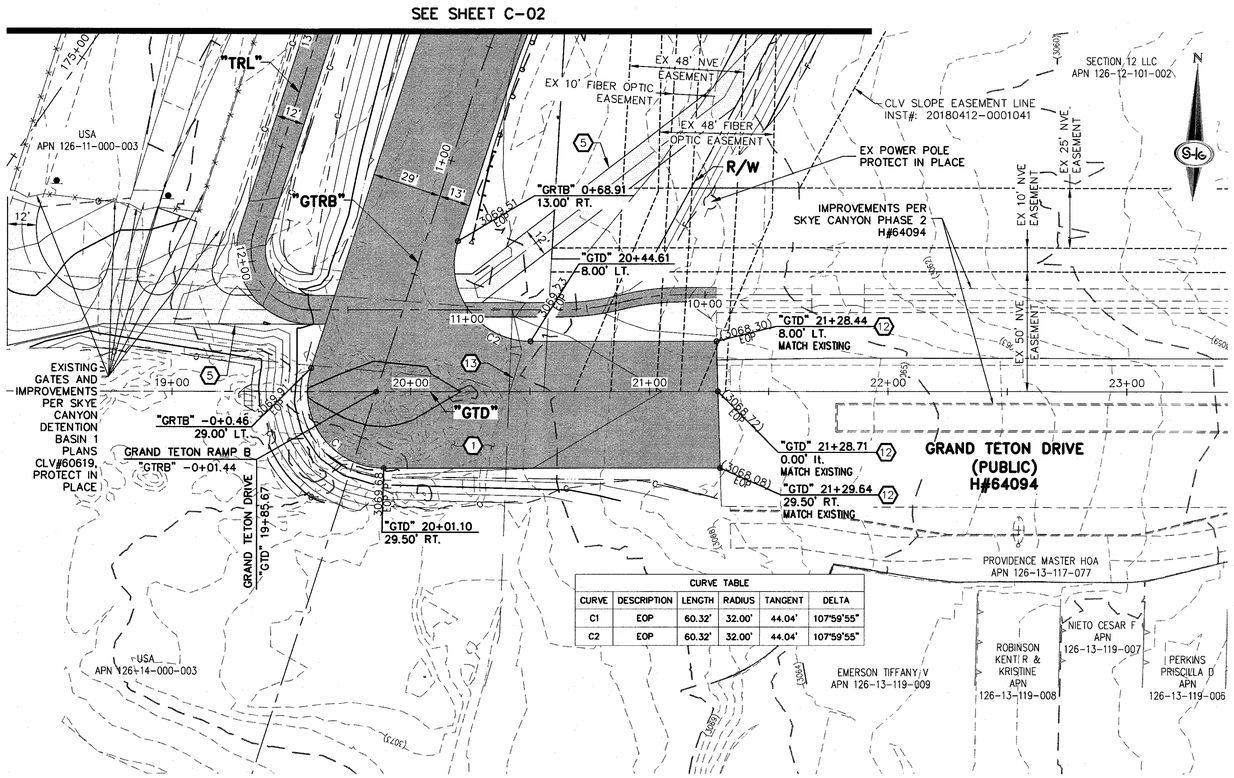
PROJECT NO.
OLY1720.000

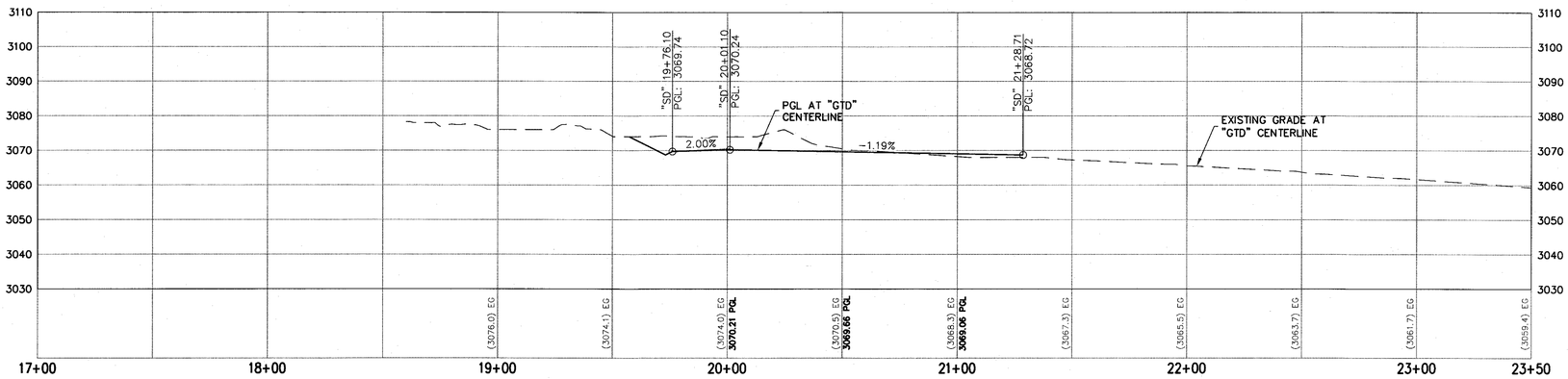
PROFESSIONAL ENGINEER STATE OF NEVADA JERRY C. SLATER Exp. 06/30/2018 CIVIL No. 14167

G-03
SHEET 3 OF 50

DWG NO. _____

HANSEN NO. _____





CONSTRUCTION NOTES

1. CONSTRUCT OVER 3-INCH PBS OVER 4-INCH TYPE II AGGREGATE BASE (SEE TY-SHEETS FOR TYPICAL SECTIONS)
2. SAWCUT AND MATCH EXISTING CONCRETE ACCESS ROAD
3. INSTALL GUARDRAIL (TRIPLE CORRUGATION) (NDOT STD. PLAN R-8.4.1)
4. INSTALL TANGENT END TERMINAL FOR GUARDRAIL (NDOT STD. PLAN R-8.1.1)
5. CONSTRUCT 12-FOOT WIDE MINIMUM ACCESS ROAD (DETAIL 3, SHEET TY-02)
6. CONSTRUCT 2-INCH PBS SIDEWALK OVER 4-INCH TYPE II AGGREGATE BASE (SEE SHEETS C-12 THROUGH C-21 FOR PLAN AND PROFILE)
7. CONSTRUCT 3-FOOT DEEP CONCRETE CUTOFF WALL (DETAIL 4, SHEET TY-02)
8. INSTALL CHAINLINK FENCE (USDCCA STD. DWG. 252)
9. INSTALL 12-FOOT WIDE CHAINLINK GATE
10. ADJUST EXISTING CABLE VAULT TO FINISH GRADE
11. ADJUST EXISTING POWER VAULT TO FINISH GRADE
12. SAWCUT AND MATCH EXISTING PAVEMENT
13. RELOCATE AND RESET EXISTING GATE ON CONCRETE FOUNDATION (PER STRUCTURAL PLANS)

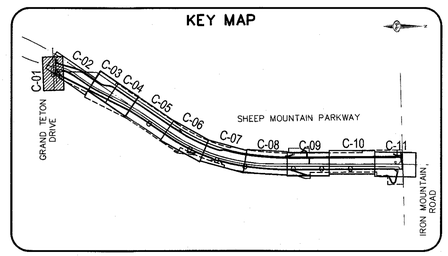
NOTES

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2. SEE SD-SHEETS FOR STORM PROFILES.
3. SEE UT-SHEETS FOR WATER AND SEWER PLAN AND PROFILES.
4. SEE GR-SHEETS FOR GRADING AND STORM DRAIN PLAN.

LEGEND

- PLANTMIX BITUMINOUS SURFACE
- MAINTENANCE ACCESS PATH

KEY MAP



SCALE 30 0 30 60 FEET

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

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

Call before you Dig. Avoid cutting underground utility lines. It's costly. Call 811 or 1-800-227-2600

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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

CONSTRUCTION PLAN - "GTD" 17+00.00 TO "GTD" 23+50.00

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

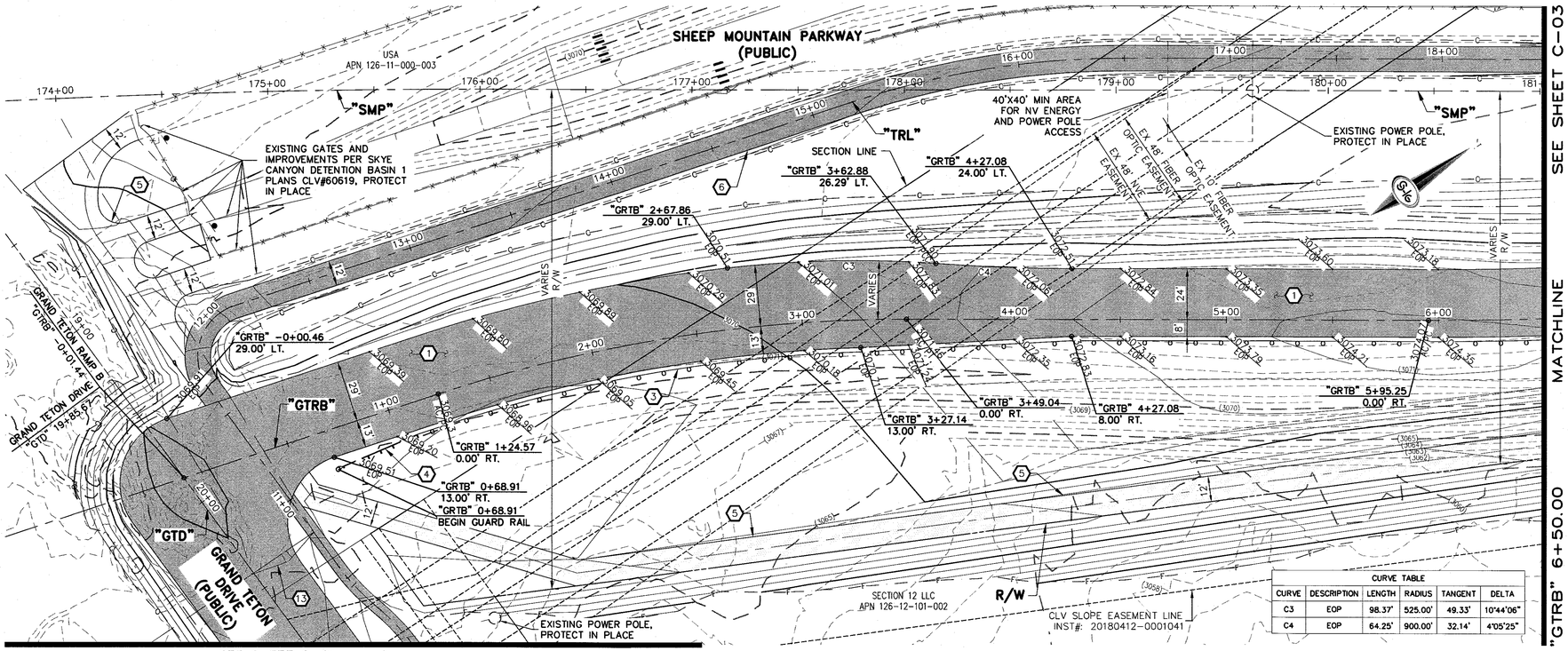
PROJECT NO.
OLY1720.000

PROFESSIONAL ENGINEER STATE OF NEVADA JERRY SLATER Exp. 06/30/2018 CIVIL No. 14167

C-01
SHEET 7 OF 50

DWG NO. _____

HANSEN NO. _____



CURVE TABLE					
CURVE	DESCRIPTION	LENGTH	RADIUS	TANGENT	DELTA
C3	EOP	98.37'	525.00'	49.33'	10°44'06"
C4	EOP	64.25'	900.00'	32.14'	4°05'25"

CONSTRUCTION NOTES

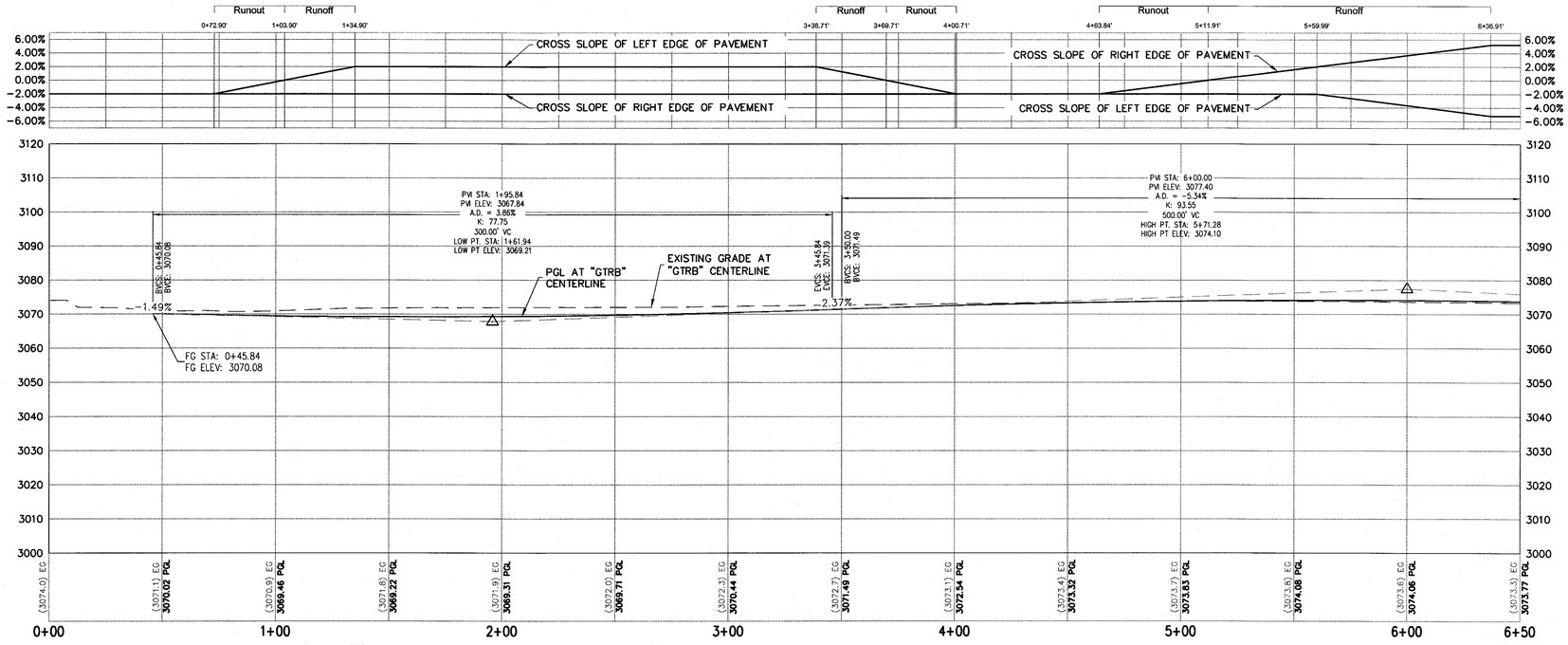
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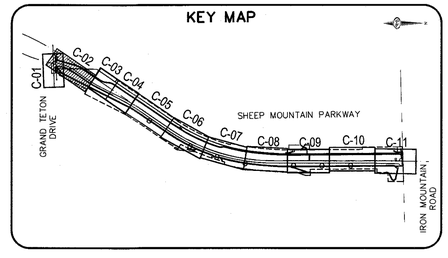
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LEGEND

- PLANTMIX BITUMINOUS SURFACE
- MAINTENANCE ACCESS PATH





SCALE 30 0 30 60 FEET

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

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

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5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

CONSTRUCTION PLAN - "GTRB" 0+00.00 TO "GTRB" 6+50.00

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

PROJECT NO.
OLY1720.000

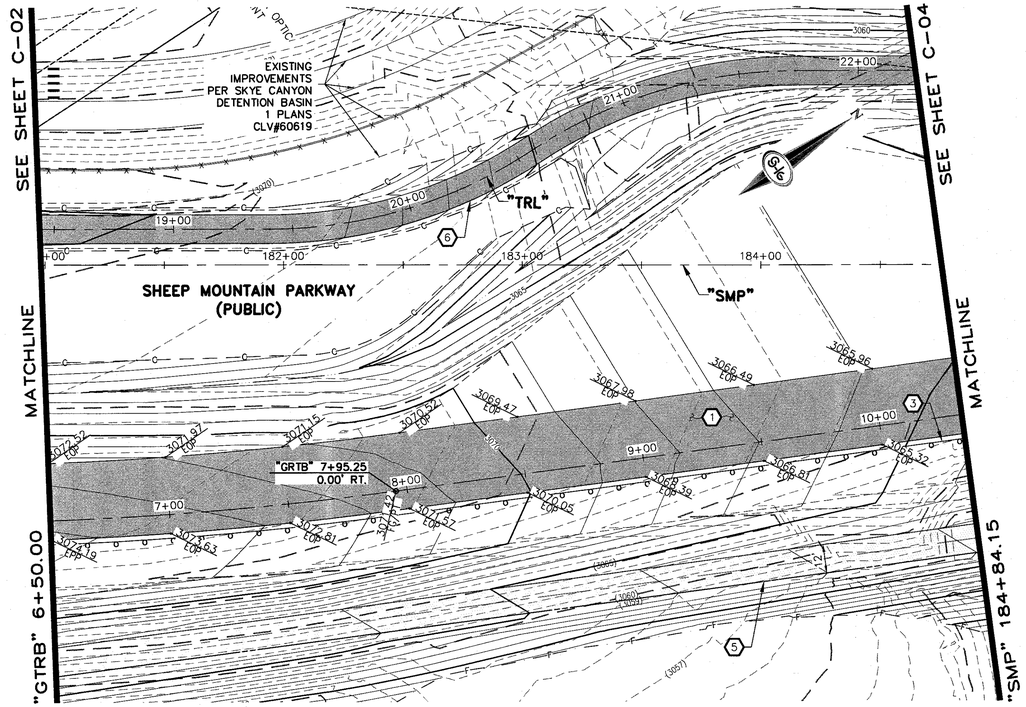
PROFESSIONAL ENGINEER - STATE OF NEVADA - JERRY A. SLATER - Exp. 06/30/2018 - CIVIL - No. 14167

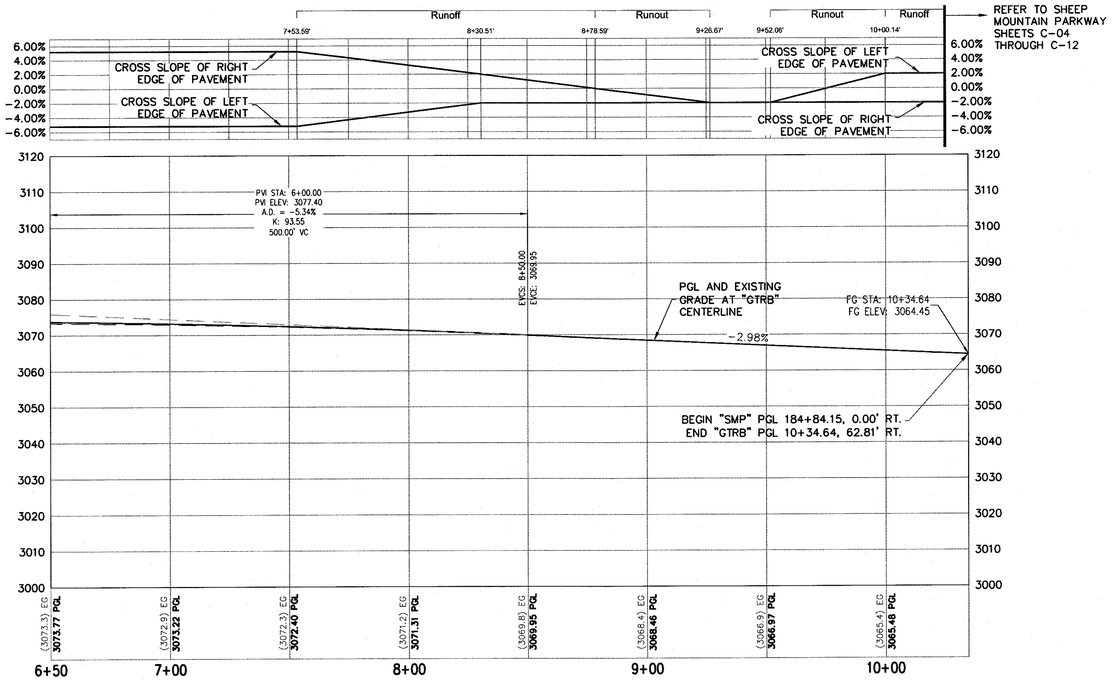
6.5.18

C-02
SHEET 8 OF 50

DWG NO. _____

HANSEN NO. _____





CONSTRUCTION NOTES

1. CONSTRUCT OVER 3-INCH PBS OVER 4-INCH TYPE II AGGREGATE BASE (SEE TY-SHEETS FOR TYPICAL SECTIONS)
2. SAWCUT AND MATCH EXISTING CONCRETE ACCESS ROAD
3. INSTALL GUARDRAIL (TRIPLE CORRUGATION) (NDOT STD. PLAN R-8.4.1)
4. INSTALL TANGENT END TERMINAL FOR GUARDRAIL (NDOT STD. PLAN R-8.1.1)
5. CONSTRUCT 12-FOOT WIDE MINIMUM ACCESS ROAD (DETAIL 3, SHEET TY-02)
6. CONSTRUCT 2-INCH PBS SIDEWALK OVER 4-INCH TYPE II AGGREGATE BASE (SEE SHEETS C-12 THROUGH C-21 FOR PLAN AND PROFILE)
7. CONSTRUCT 3-FOOT DEEP CONCRETE CUTOFF WALL (DETAIL 4, SHEET TY-02)
8. INSTALL CHAINLINK FENCE (USDCCA STD. DWG. 252)
9. INSTALL 12-FOOT WIDE CHAINLINK GATE
10. ADJUST EXISTING CABLE VAULT TO FINISH GRADE
11. ADJUST EXISTING POWER VAULT TO FINISH GRADE
12. SAWCUT AND MATCH EXISTING PAVEMENT
13. RELOCATE AND RESET EXISTING GATE ON CONCRETE FOUNDATION (PER STRUCTURAL PLANS)

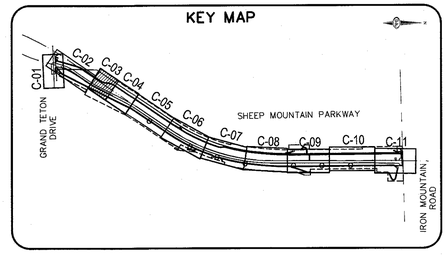
NOTES

1. SEE TY-SHEETS FOR TYPICAL SECTIONS.
2. SEE SD-SHEETS FOR STORM PROFILES.
3. SEE UT-SHEETS FOR WATER AND SEWER PLAN AND PROFILES.
4. SEE GR-SHEETS FOR GRADING AND STORM DRAIN PLAN.

LEGEND

- PLANTMIX BITUMINOUS SURFACE
- MAINTENANCE ACCESS PATH

KEY MAP



30 0 30 60
SCALE FEET

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

FAST Call before you UnderGround. 1-702-432-5300 FRIDAY AND ARSENAL SYSTEM OF TRANSPORTATION

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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

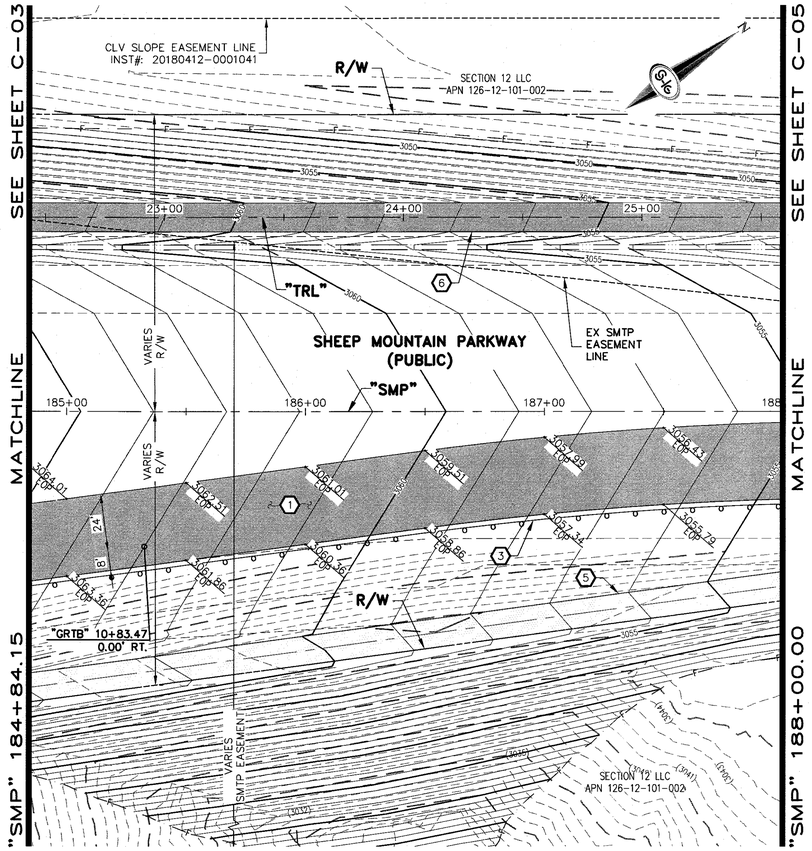
CONSTRUCTION PLAN - "GTRB" 6+50.00 TO "GTRB" 10+34.64

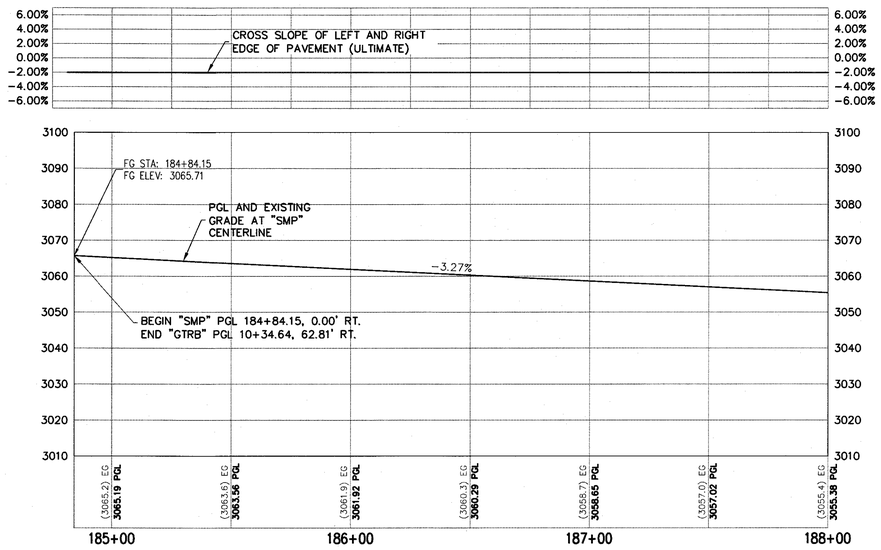
DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR
PROJECT NO. OLY1720.000

PROFESSIONAL ENGINEER - STATE OF NEVADA - JERRY D. SLATER - Exp. 06/30/2018 - CIVIL - No. 14167

C-03
SHEET 9 OF 50
DWG NO. _____

HANSEN NO. _____





CONSTRUCTION NOTES

1. CONSTRUCT OVER 3-INCH PBS OVER 4-INCH TYPE II AGGREGATE BASE (SEE TY-SHEETS FOR TYPICAL SECTIONS)
2. SAWCUT AND MATCH EXISTING CONCRETE ACCESS ROAD
3. INSTALL GUARDRAIL (TRIPLE CORRUGATION) (NDOT STD. PLAN R-8.4.1)
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13. RELOCATE AND RESET EXISTING GATE ON CONCRETE FOUNDATION (PER STRUCTURAL PLANS)

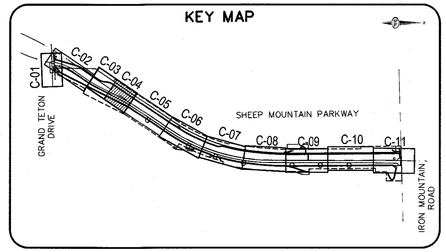
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4. SEE GR-SHEETS FOR GRADING AND STORM DRAIN PLAN.

LEGEND

- PLANTMIX BITUMINOUS SURFACE
- MAINTENANCE ACCESS PATH

KEY MAP



SCALE 30 0 30 60 FEET

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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

CONSTRUCTION PLAN - "SMP" 184+84.15 TO "SMP" 188+00.00

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

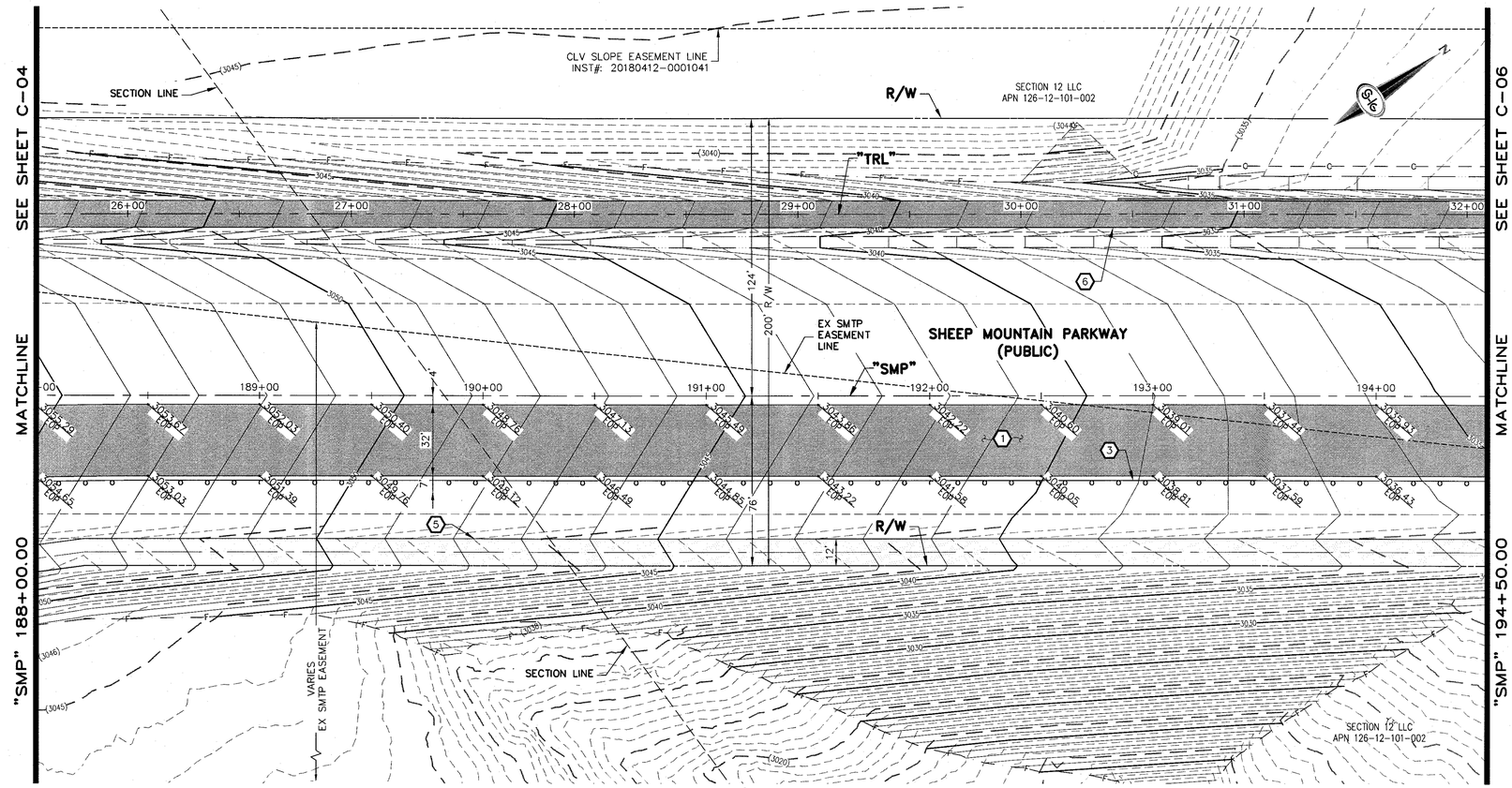
PROJECT NO.
OLY1720.000

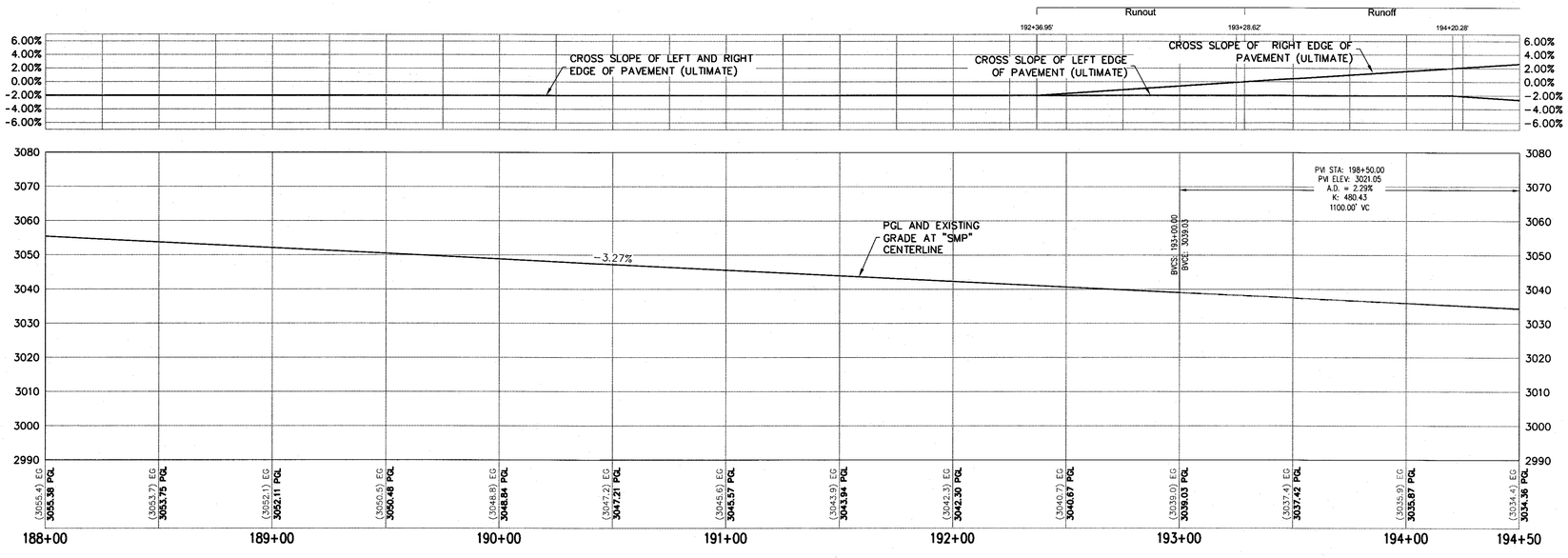
PROFESSIONAL ENGINEER - STATE OF NEVADA
JERRY C. SLATER
Exp. 06/30/2018
CIVIL
No. 14167

C-04
SHEET 10 OF 50

DWG NO. _____

HANSEN NO. _____





CONSTRUCTION NOTES

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2. SAWCUT AND MATCH EXISTING CONCRETE ACCESS ROAD
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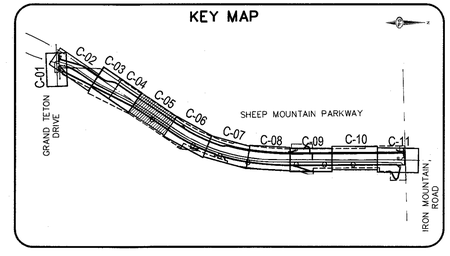
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LEGEND

PLANTMIX BITUMINOUS SURFACE

MAINTENANCE ACCESS PATH



30 0 30 60
SCALE FEET

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FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

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CONSULTING ENGINEERS & PLANNERS
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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

CONSTRUCTION PLAN - "SMP" 188+00.00 TO "SMP" 194+50.00

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

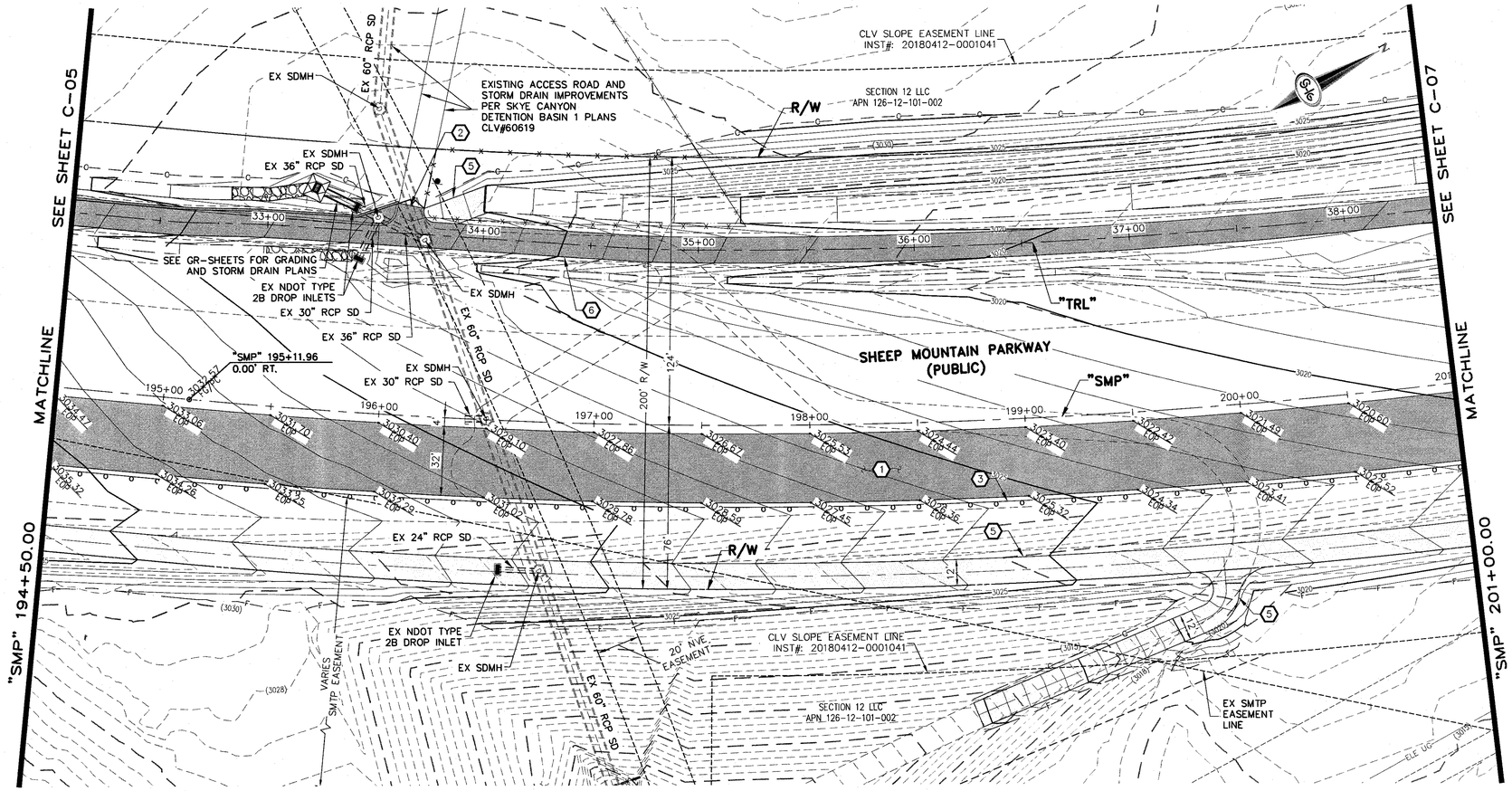
PROJECT NO.
OLY1720.000

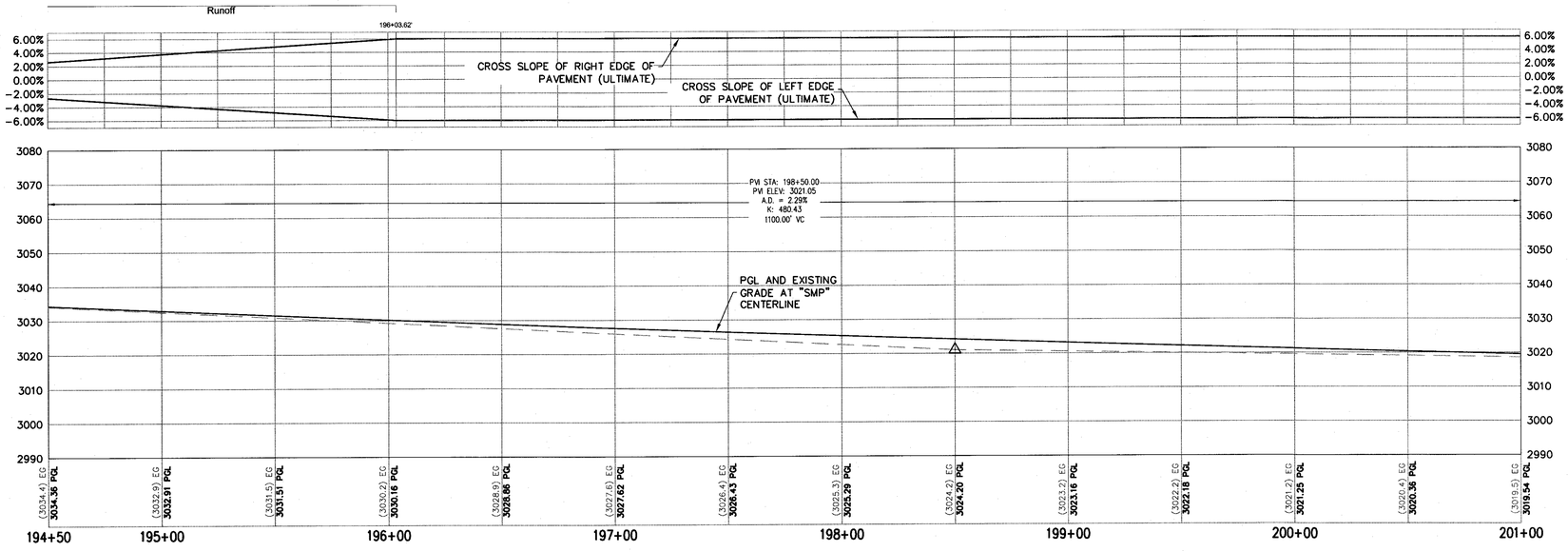
PROFESSIONAL ENGINEER STATE OF NEVADA
JERRY SLATER
Exp. 06/30/2018
CIVIL
No. 14167

C-05
SHEET 11 OF 50

DWG NO. _____

HANSEN NO. _____





CONSTRUCTION NOTES

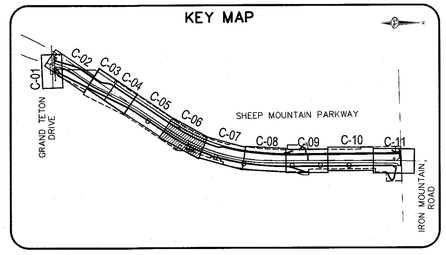
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LEGEND

- PLANTMIX BITUMINOUS SURFACE
- MAINTENANCE ACCESS PATH



SCALE: 30 0 30 60 FEET

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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

CONSTRUCTION PLAN - "SMP" 194+50.00 TO "SMP" 201+00.00

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

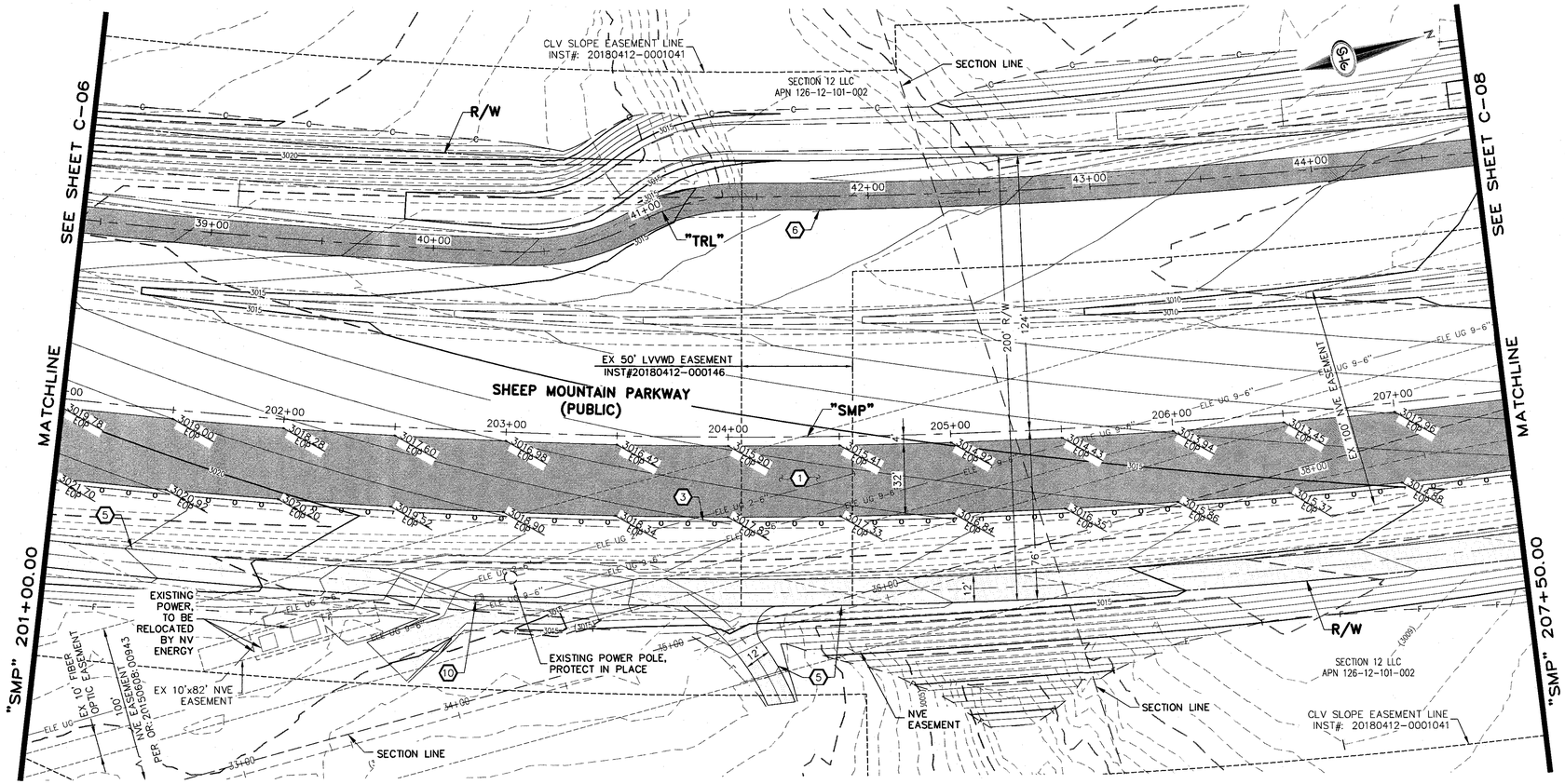
PROJECT NO.
OLY1720.000

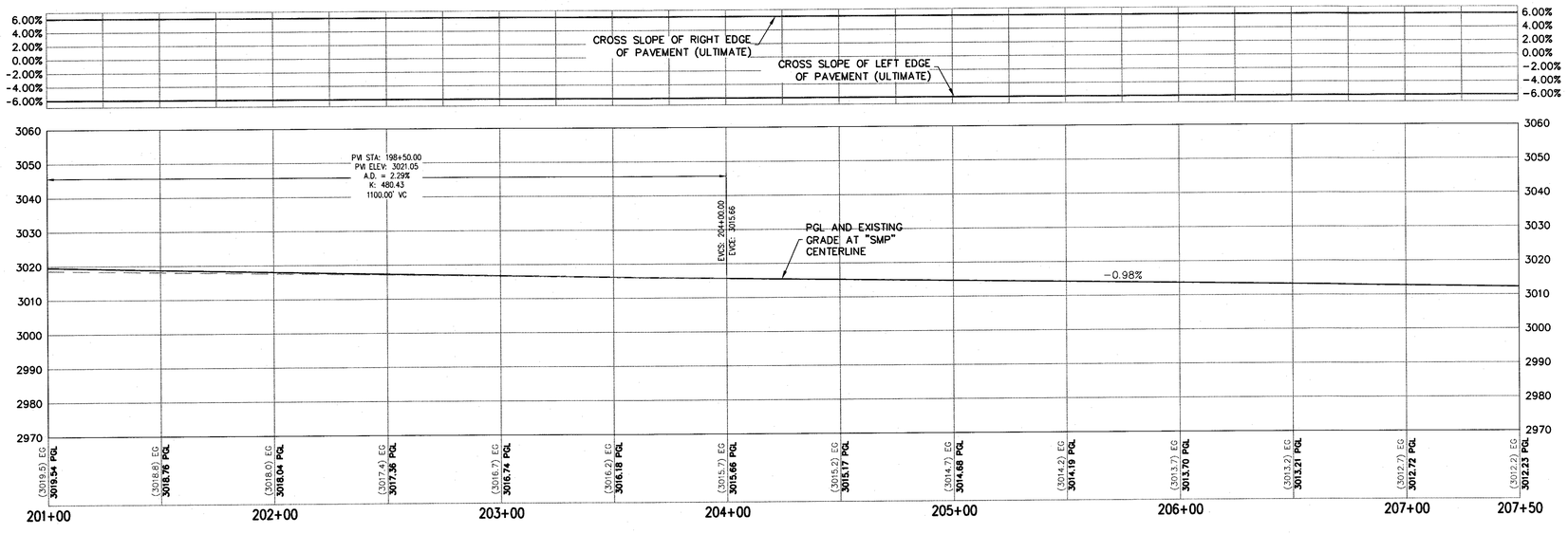
PROFESSIONAL ENGINEER - STATE OF NEVADA
JERRY C. SLATER
Exp. 06/30/2018
CIVIL
No. 14167

C-06
SHEET 12 OF 50

DWG NO. _____

HANSEN NO. _____





CONSTRUCTION NOTES

1. CONSTRUCT OVER 3-INCH PBS OVER 4-INCH TYPE II AGGREGATE BASE (SEE TY-SHEETS FOR TYPICAL SECTIONS)
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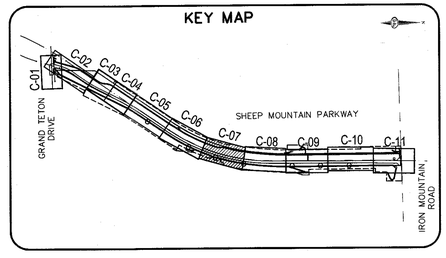
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LEGEND

- PLANTMIX BITUMINOUS SURFACE
- MAINTENANCE ACCESS PATH

KEY MAP



SCALE 30 0 30 60 FEET

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PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

CONSTRUCTION PLAN - "SMP" 201+00.00 TO "SMP" 207+50.00

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

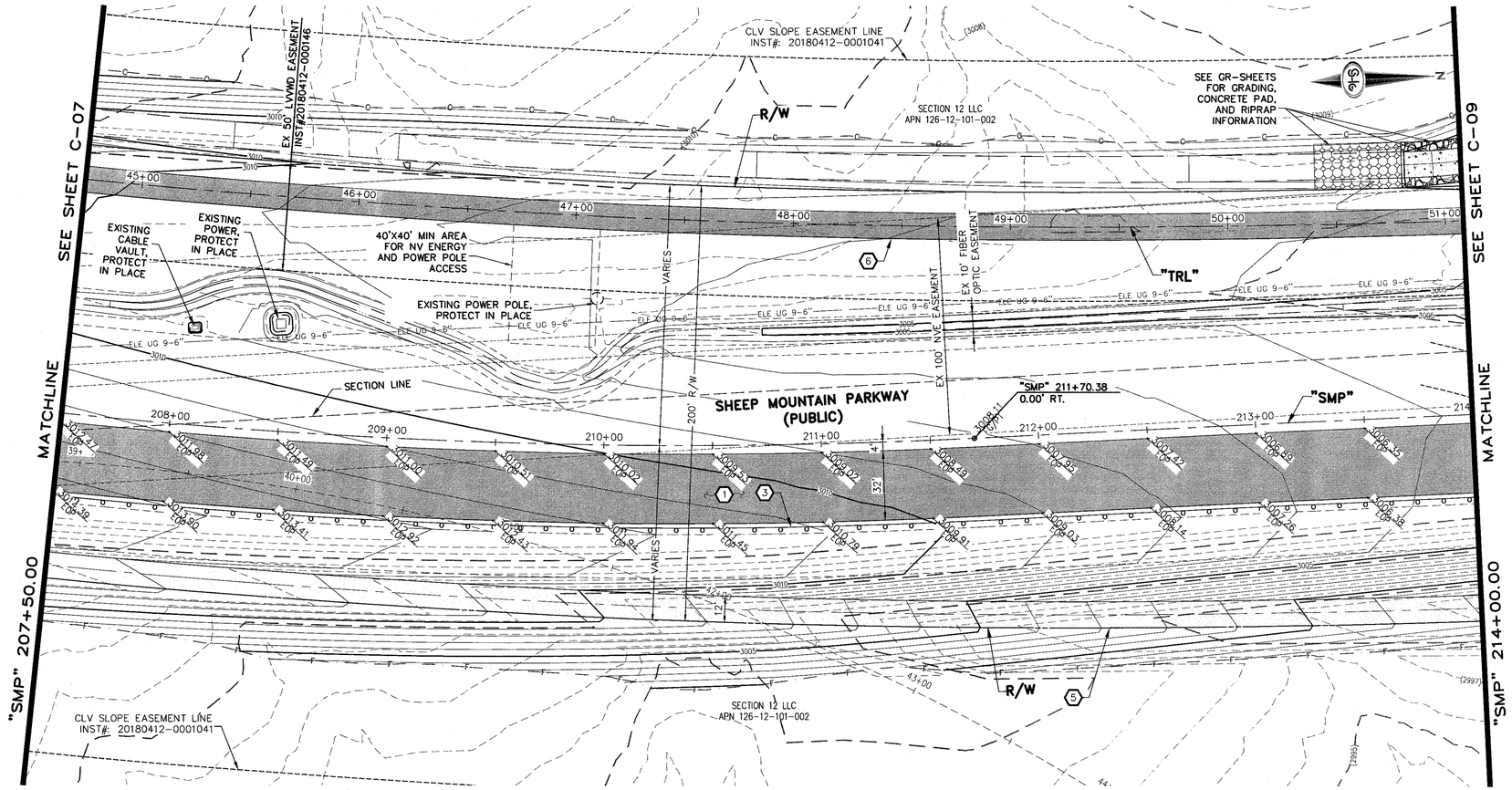
PROJECT NO.
OLY1720.000

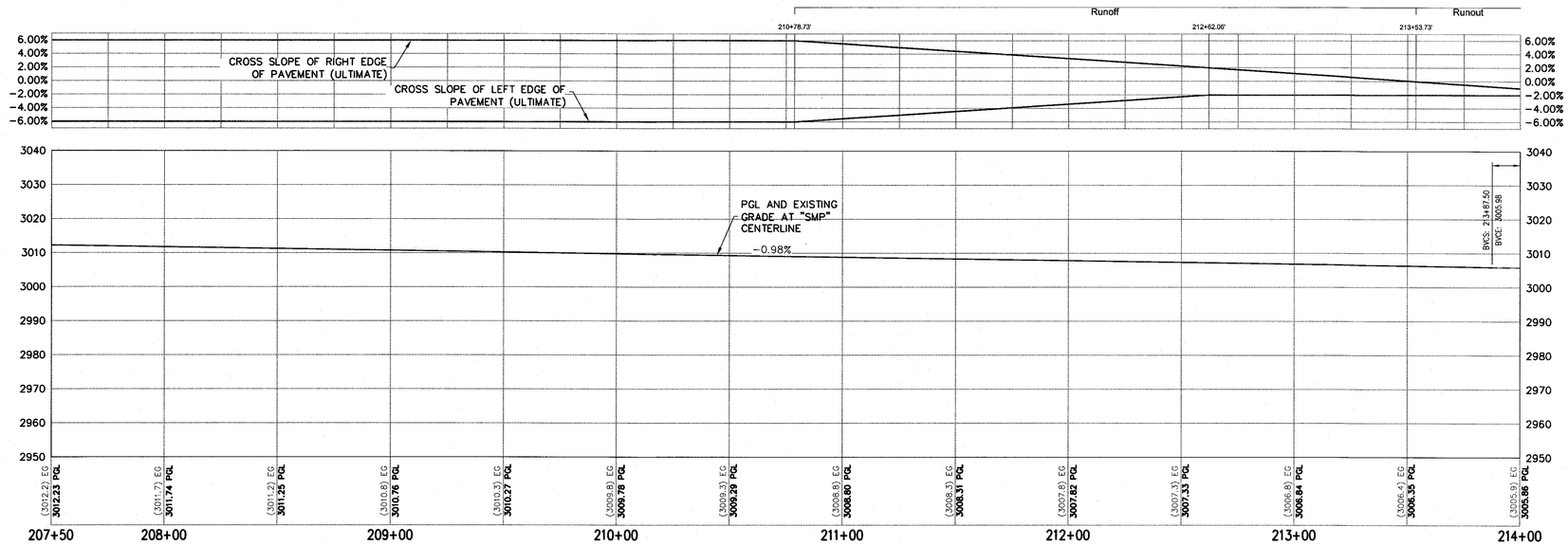
PROFESSIONAL ENGINEER STATE OF NEVADA
JERRY SLATER
Exp. 06/30/2018
CIVIL
No. 14167
6.5.18

C-07
SHEET 13 OF 50

DWG NO. _____

HANSEN NO. _____





CONSTRUCTION NOTES

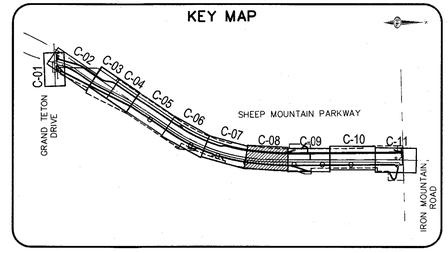
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LEGEND

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- MAINTENANCE ACCESS PATH



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PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

CONSTRUCTION PLAN - "SMP" 207+50.00 TO "SMP" 214+00.00

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

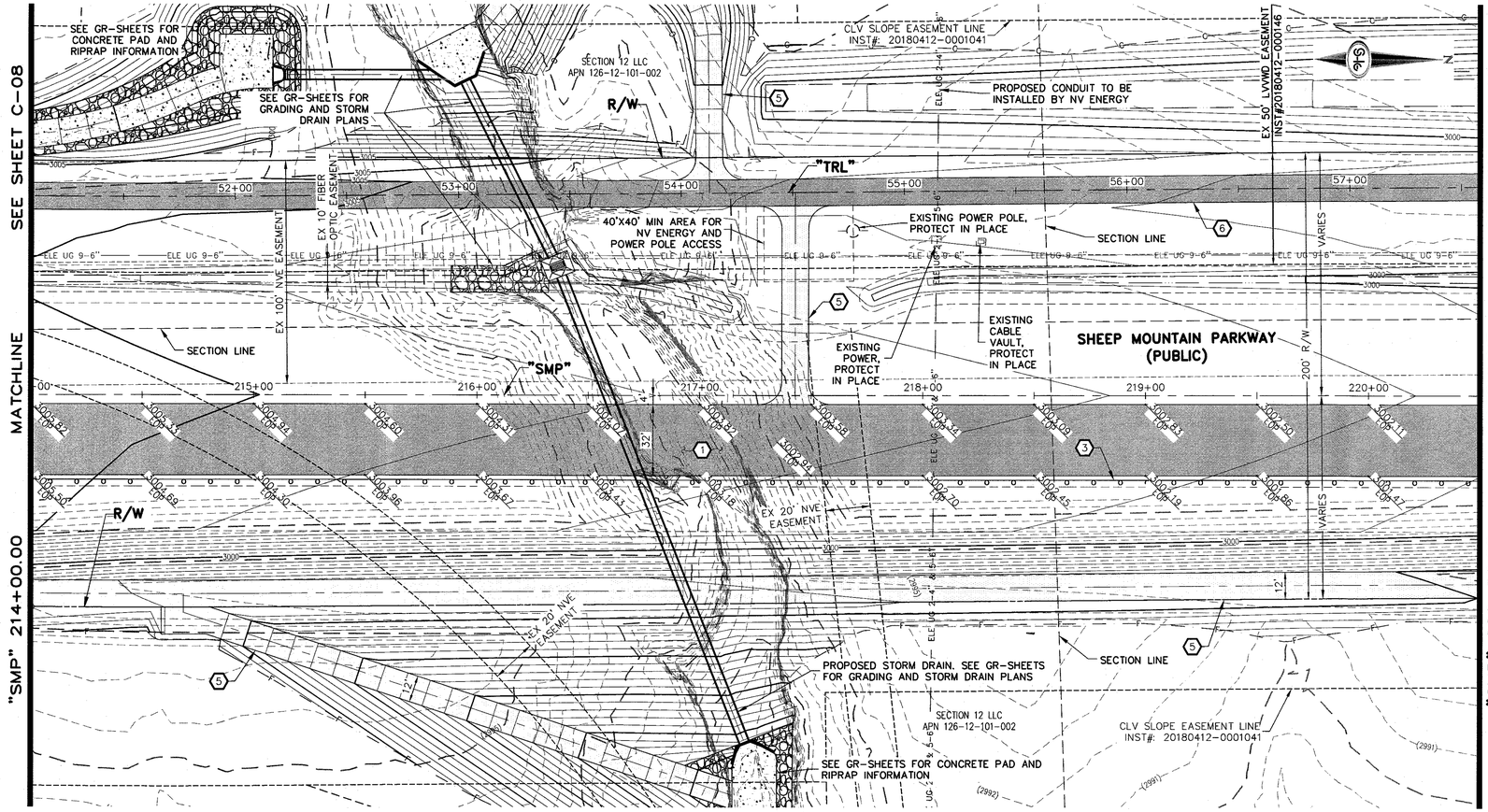
PROJECT NO. OLY1720.000

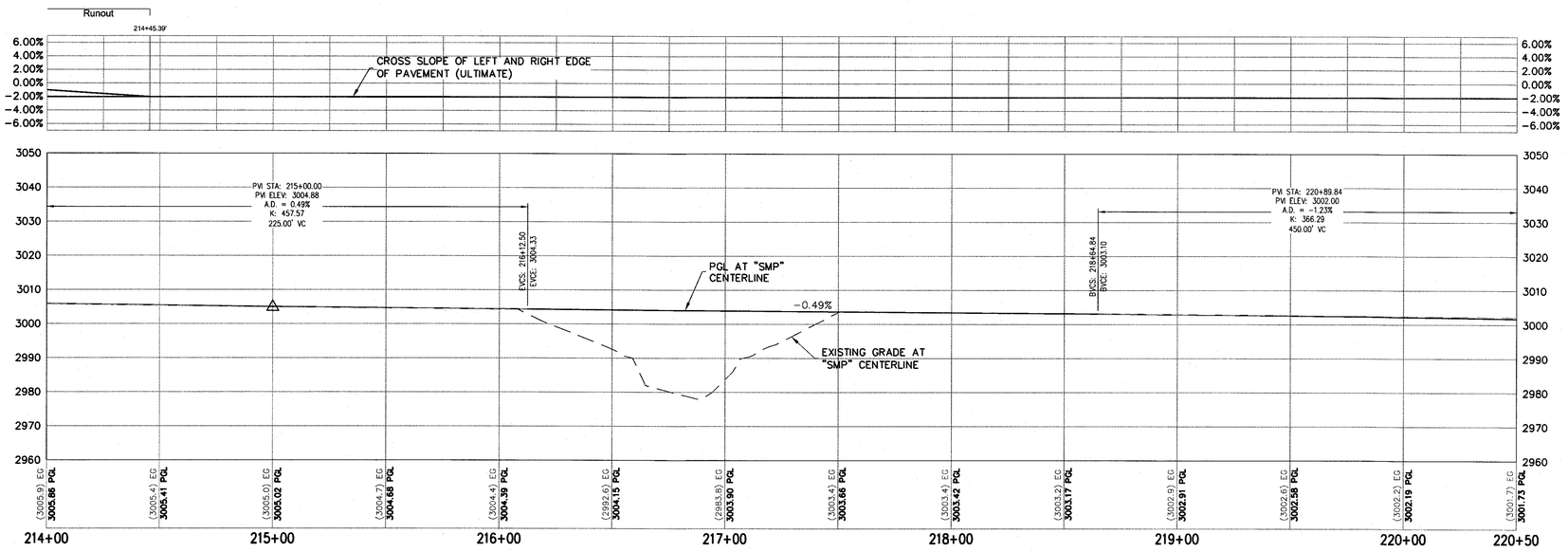
PROFESSIONAL ENGINEER STATE OF NEVADA JERRY SLATER Exp. 06/30/2018 CIVIL No. 14167

C-08
SHEET 14 OF 50

DWG NO. _____

HANSEN NO. _____





CONSTRUCTION NOTES

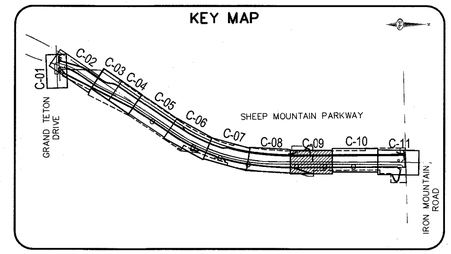
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2. SAWCUT AND MATCH EXISTING CONCRETE ACCESS ROAD
3. INSTALL GUARDRAIL (TRIPLE CORRUGATION) (NDOT STD. PLAN R-8.4.1)
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8. INSTALL CHAINLINK FENCE (USDCCA STD. DWG. 252)
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11. ADJUST EXISTING POWER VAULT TO FINISH GRADE
12. SAWCUT AND MATCH EXISTING PAVEMENT
13. RELOCATE AND RESET EXISTING GATE ON CONCRETE FOUNDATION (PER STRUCTURAL PLANS)

NOTES

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2. SEE SD-SHEETS FOR STORM PROFILES.
3. SEE UT-SHEETS FOR WATER AND SEWER PLAN AND PROFILES.
4. SEE GR-SHEETS FOR GRADING AND STORM DRAIN PLAN.

LEGEND

- PLANTMIX BITUMINOUS SURFACE
- MAINTENANCE ACCESS PATH



30 0 30 60
SCALE FEET

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

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

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SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

CONSTRUCTION PLAN - "SMP" 214+00.00 TO "SMP" 220+50.00

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

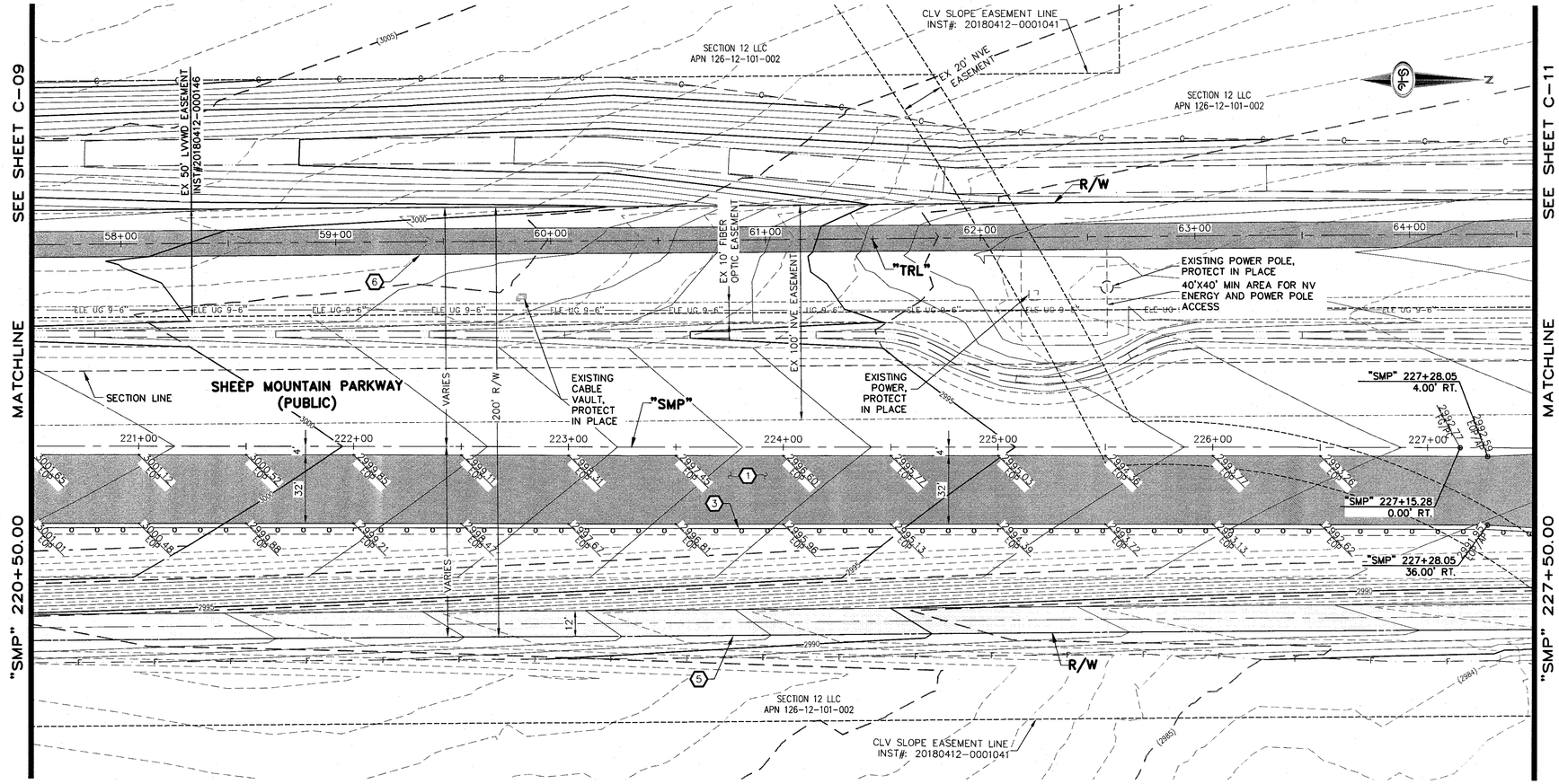
PROJECT NO.
OLY1720.000

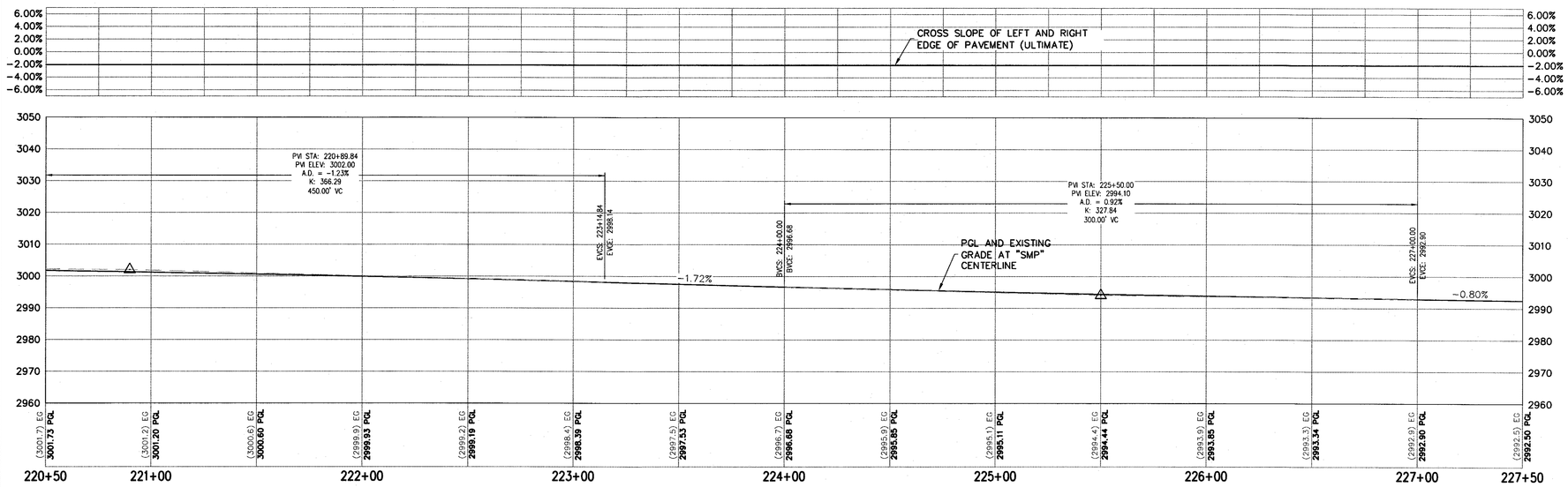
PROFESSIONAL ENGINEER STATE OF NEVADA JERRY A. SLATER Exp. 06/30/2018 CIVIL No. 14167

C-09
SHEET 15 OF 50

DWG NO. _____

HANSEN NO. _____





CONSTRUCTION NOTES

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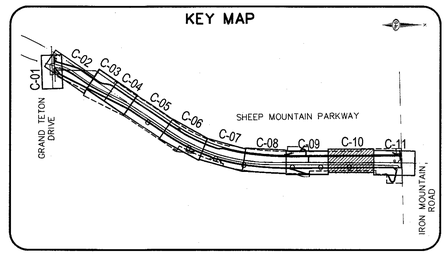
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LEGEND

- PLANTMIX BITUMINOUS SURFACE
- MAINTENANCE ACCESS PATH

KEY MAP



SCALE 30 0 30 60 FEET

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

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FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

CONSTRUCTION PLAN - "SMP" 220+50.00 TO "SMP" 227+50.00

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

PROJECT NO.
OLY1720.000

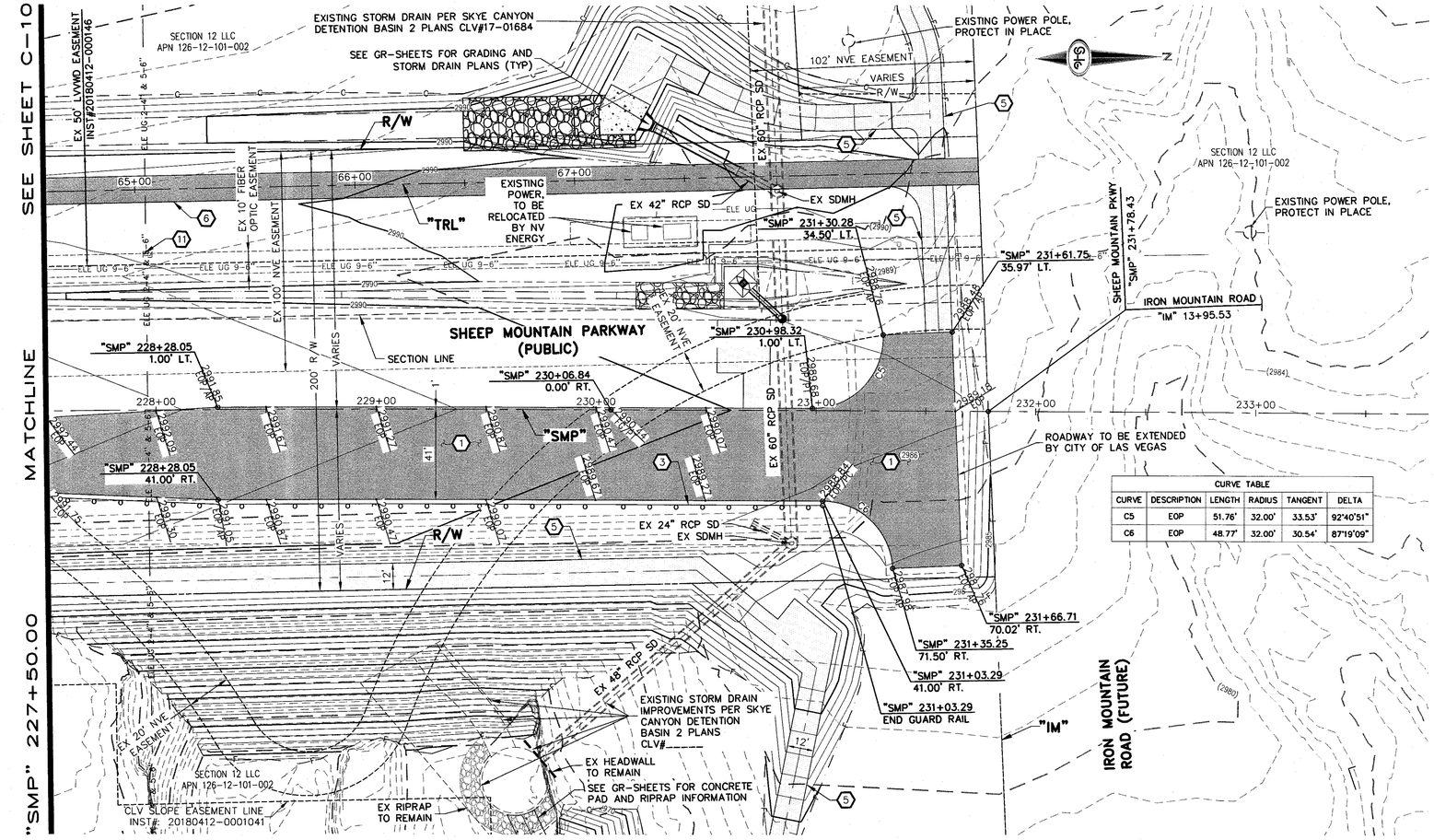
PROFESSIONAL ENGINEER STATE OF NEVADA JERRY SLATER Exp. 06/30/2018 CIVIL No. 14167

S-4

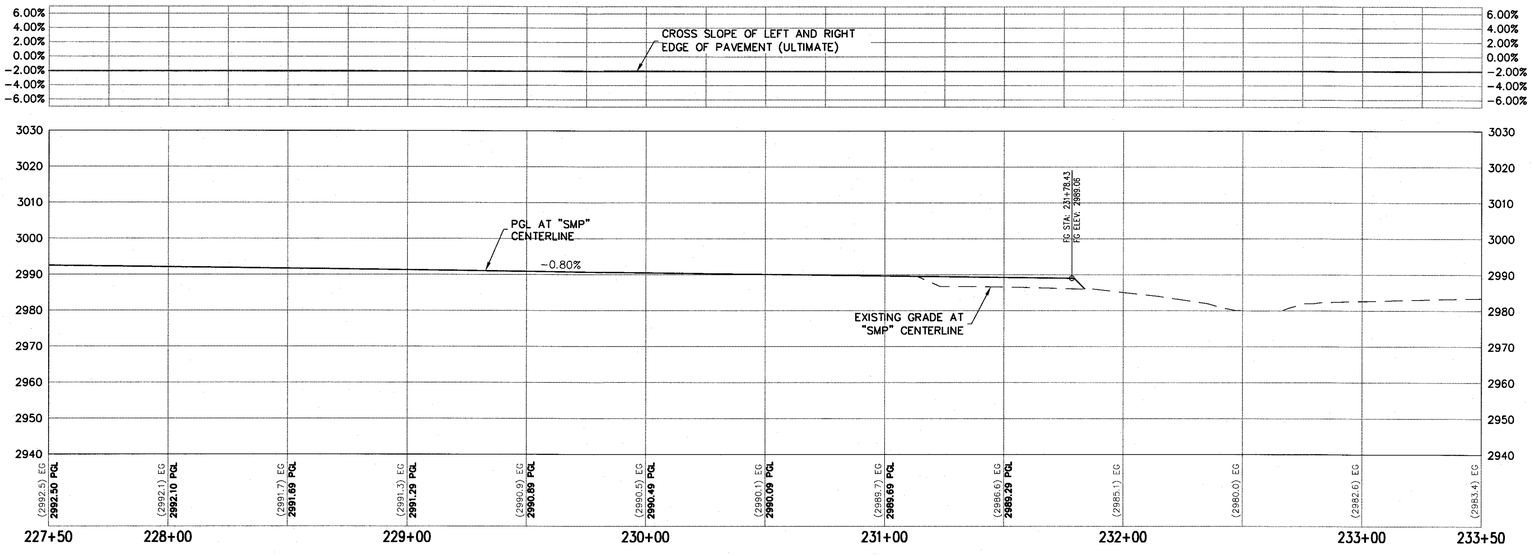
C-10
SHEET 16 OF 50

DWG NO. _____

HANSEN NO. _____



CURVE TABLE					
CURVE	DESCRIPTION	LENGTH	RADIUS	TANGENT	DELTA
C5	EOP	51.76'	32.00'	33.53'	92°40'51"
C6	EOP	48.77'	32.00'	30.54'	87°19'09"



CONSTRUCTION NOTES

1. CONSTRUCT OVER 3-INCH PBS OVER 4-INCH TYPE II AGGREGATE BASE (SEE TY-SHEETS FOR TYPICAL SECTIONS)
2. SAWCUT AND MATCH EXISTING CONCRETE ACCESS ROAD
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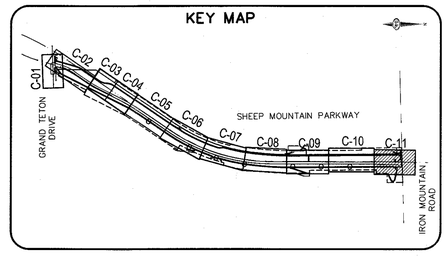
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LEGEND

- PLANTMIX BITUMINOUS SURFACE
- MAINTENANCE ACCESS PATH

KEY MAP



30 0 30 60
SCALE FEET

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PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

CONSTRUCTION PLAN - "SMP" 227+50.00 TO "SMP" 233+50.00

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

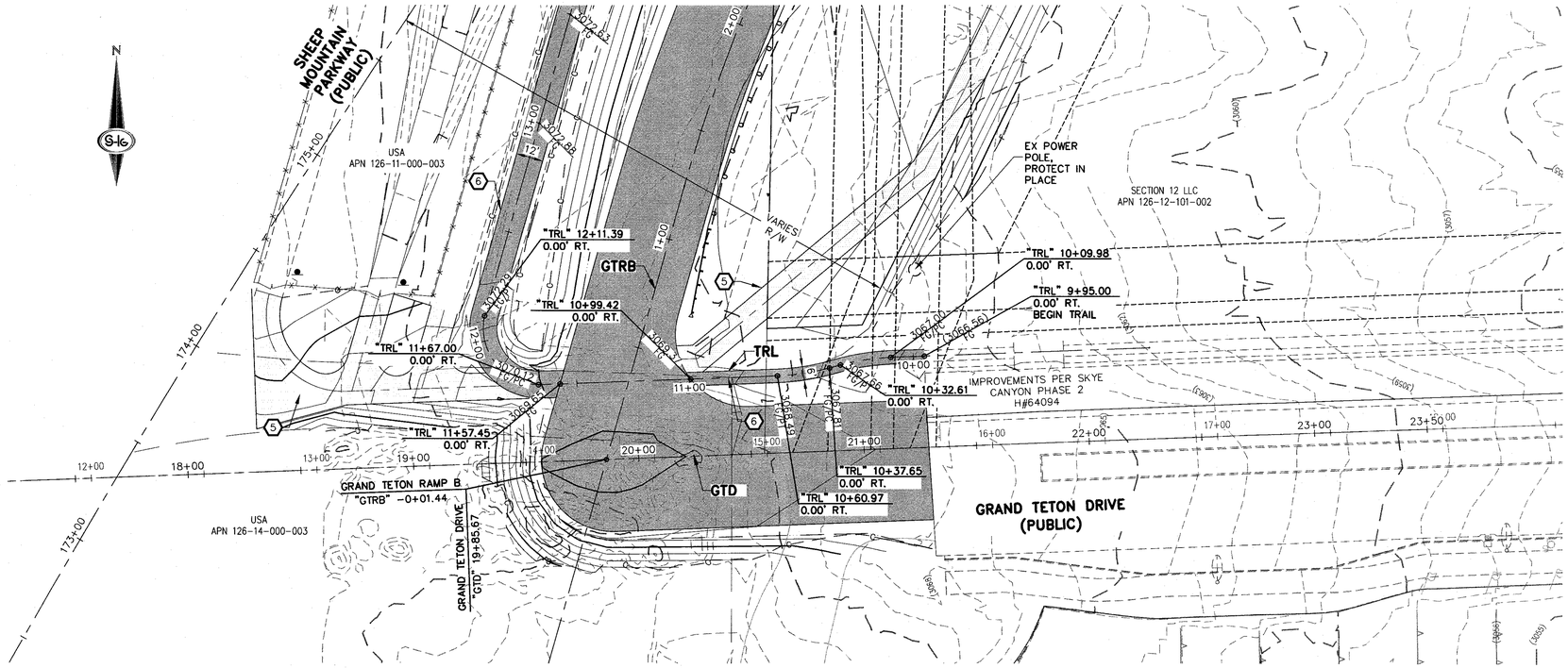
PROJECT NO.
OLY1720.000

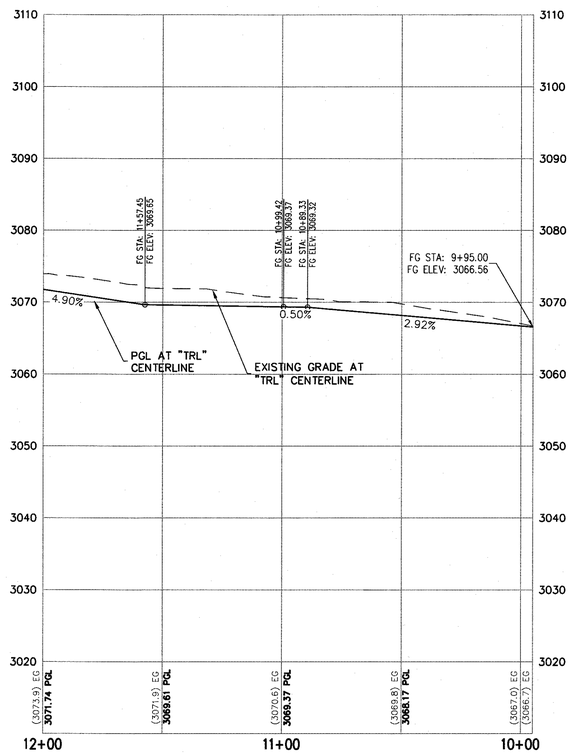
PROFESSIONAL ENGINEER STATE OF NEVADA JERRY SLATER Exp: 06/30/2018 CIVIL No. 14167

C-11
SHEET 17 OF 50

DWG NO. _____

HANSEN NO. _____





CONSTRUCTION NOTES

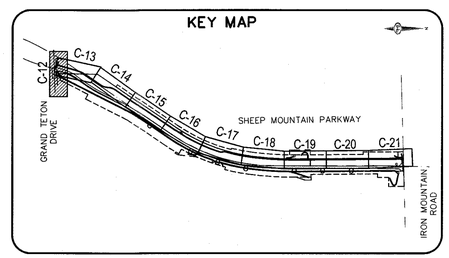
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LEGEND

- PLANTMIX BITUMINOUS SURFACE
- MAINTENANCE ACCESS PATH



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PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY
CONSTRUCTION PLAN - "TRL" 10+00.00 TO "TRL" 12+00.00

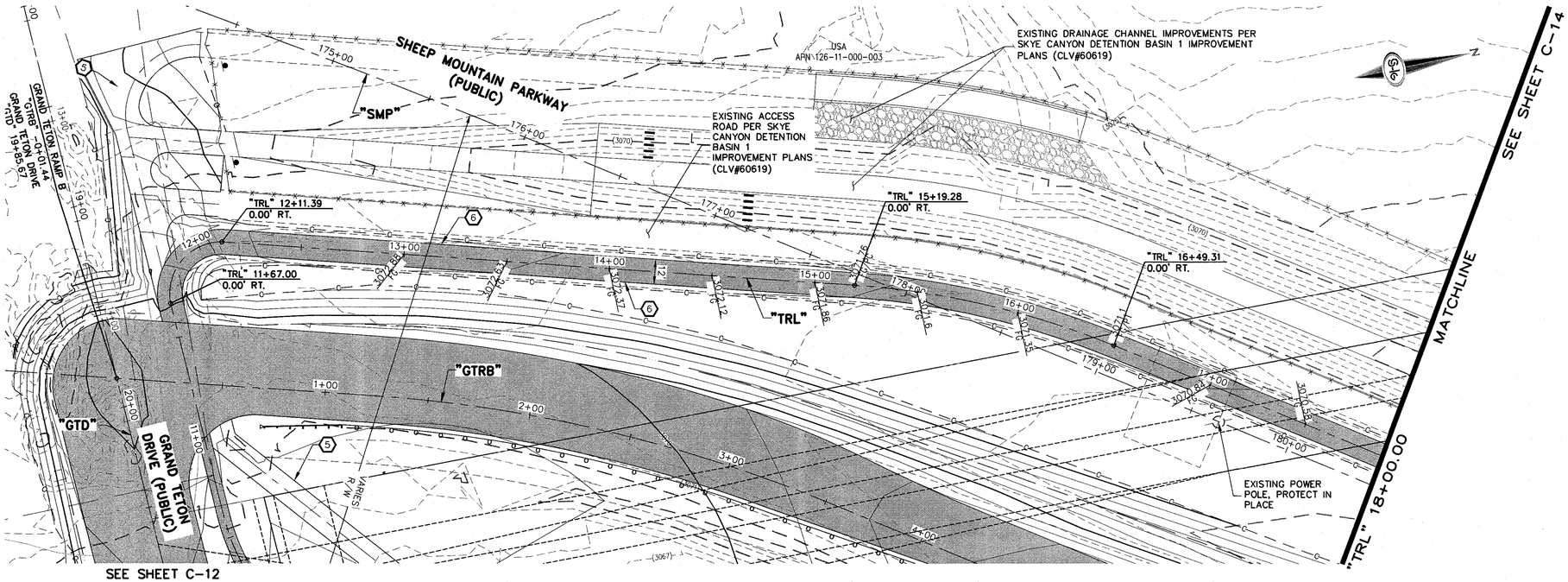
DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR
PROJECT NO. OLY1720.000

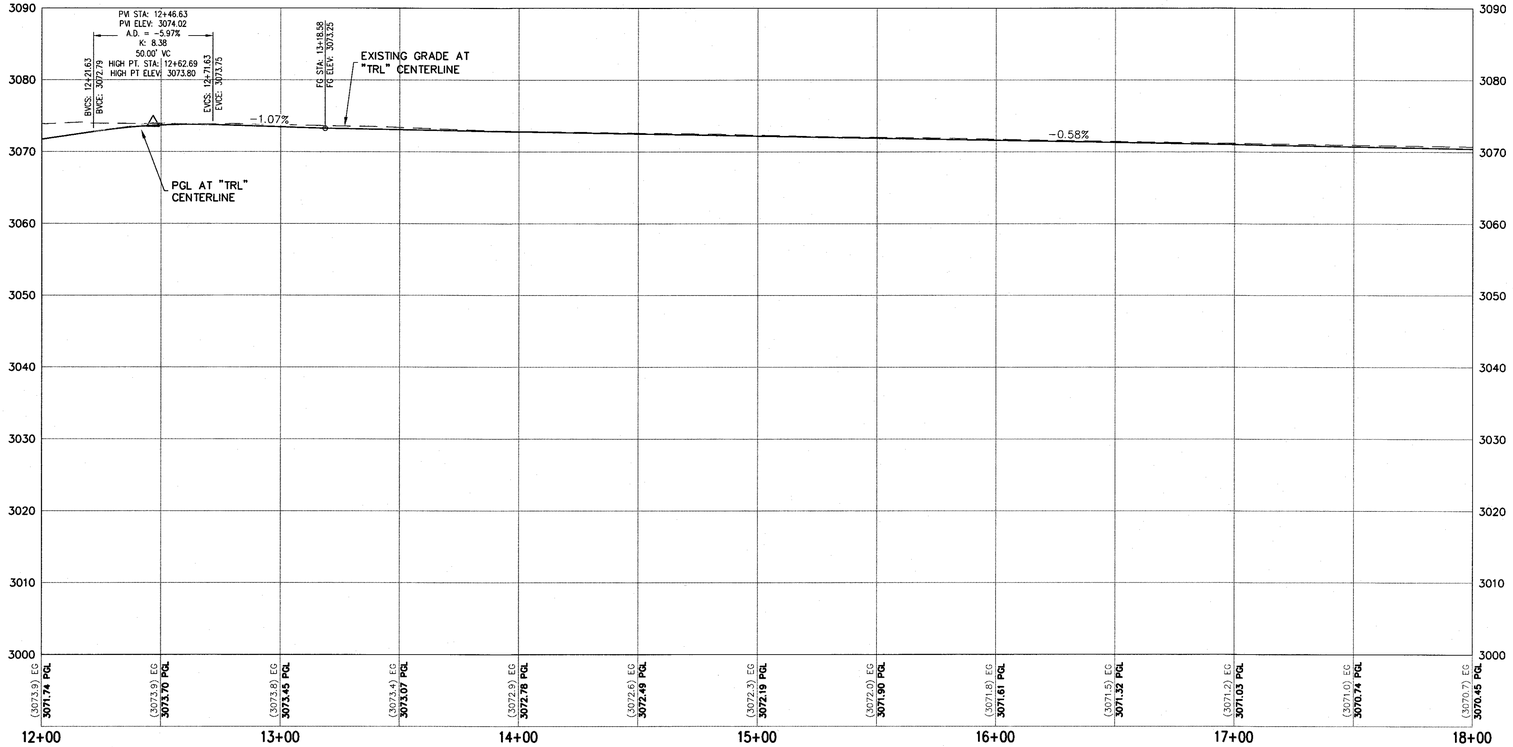
PROFESSIONAL ENGINEER - STATE OF NEVADA - JERRY A. SLATER - Exp. 06/30/2018 - CIVIL - No. 14167

C-12
SHEET 18 OF 50

DWG NO. _____

HANSEN NO. _____





CONSTRUCTION NOTES

1. CONSTRUCT OVER 3-INCH PBS OVER 4-INCH TYPE II AGGREGATE BASE (SEE TY-SHEETS FOR TYPICAL SECTIONS)
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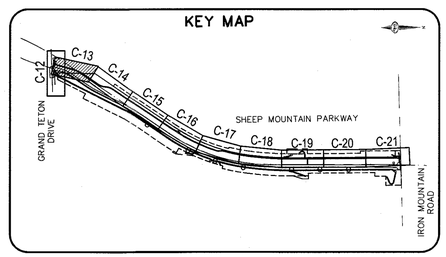
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LEGEND

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KEY MAP



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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

CONSTRUCTION PLAN - "TRL" 12+00.00 TO "TRL" 18+00.00

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

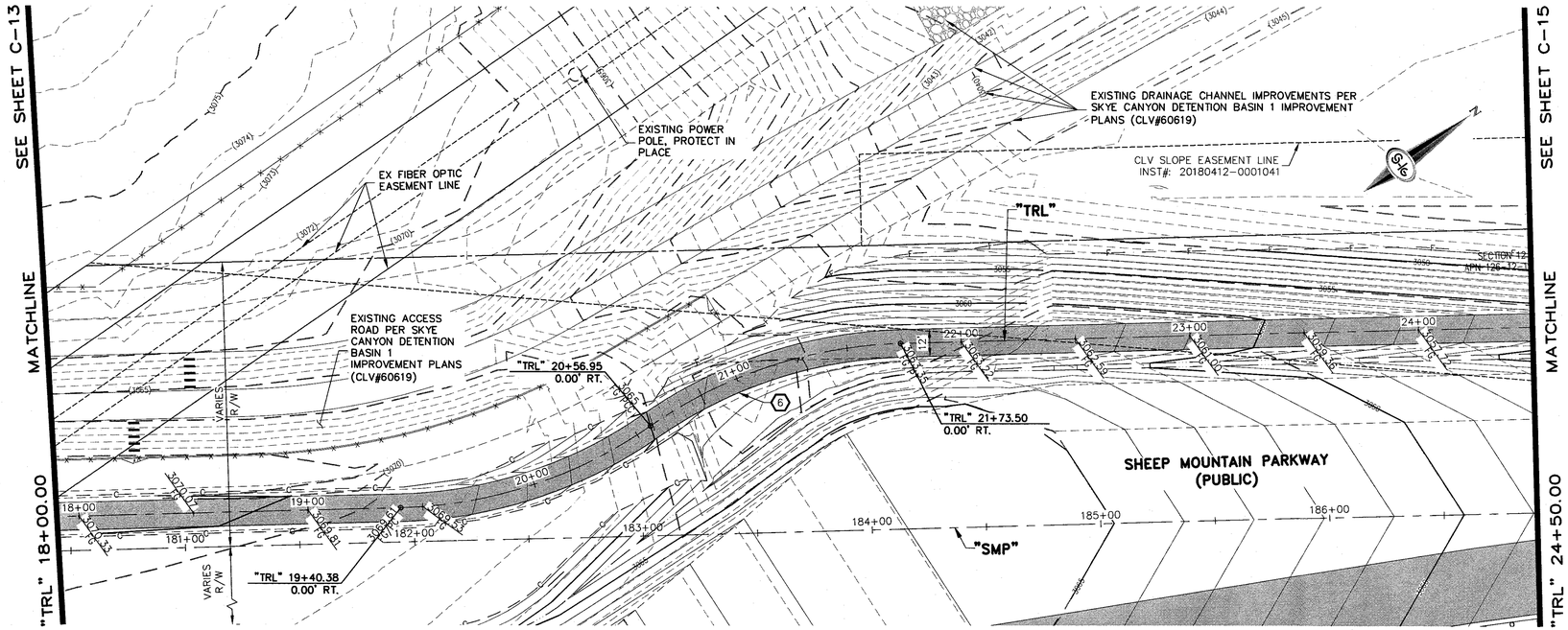
PROJECT NO.
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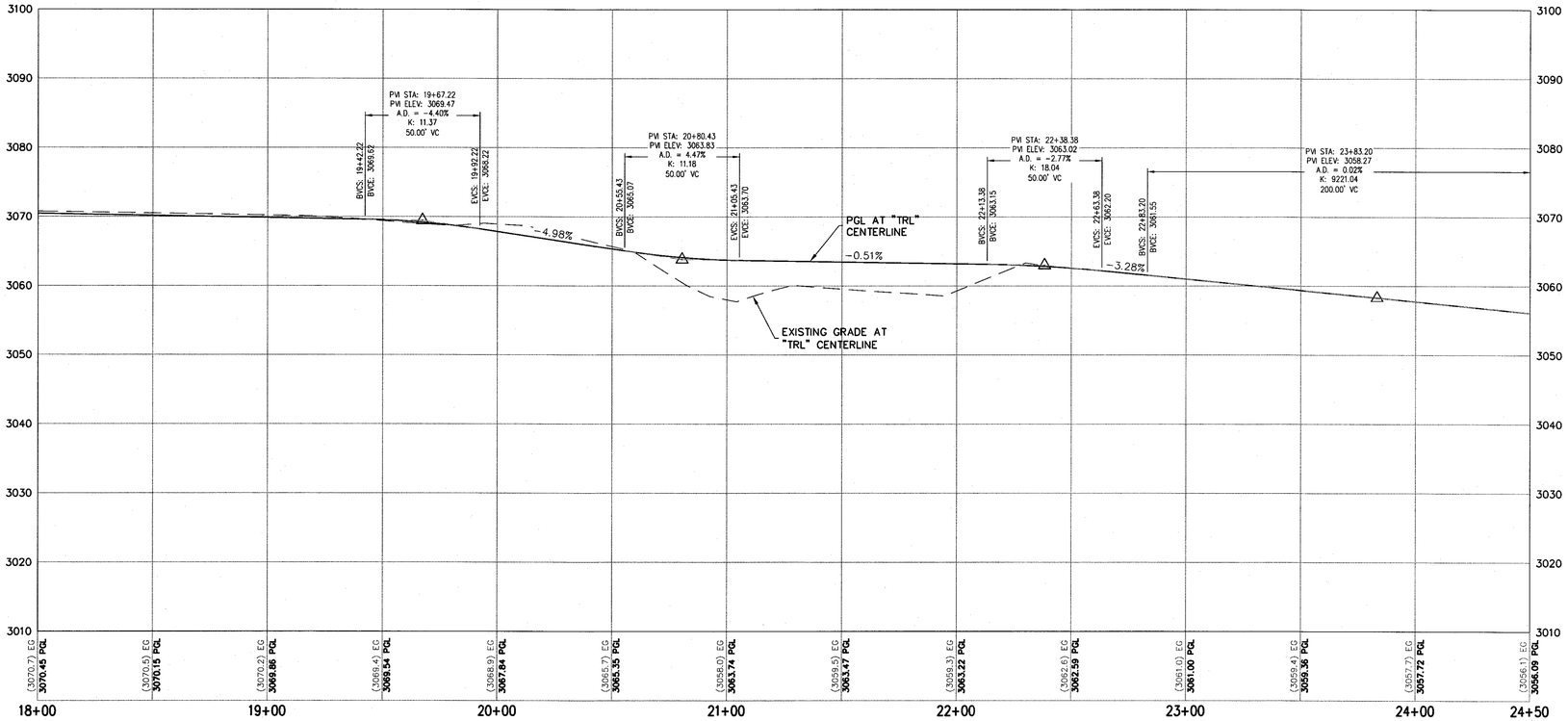
PROFESSIONAL ENGINEER - STATE OF NEVADA
JERRY A. SLATER
Exp. 06/30/2018
CIVIL
No. 14167

C-13
SHEET 19 OF 50

DWG NO. _____

HANSEN NO. _____





CONSTRUCTION NOTES

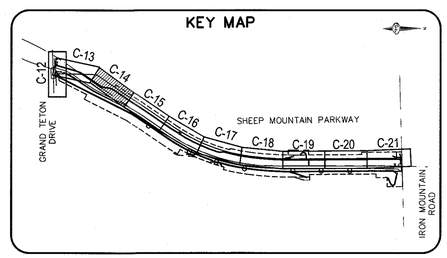
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PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP DATE	APP

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

CONSTRUCTION PLAN - "TRL" 18+00.00 TO "TRL" 24+50.00

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

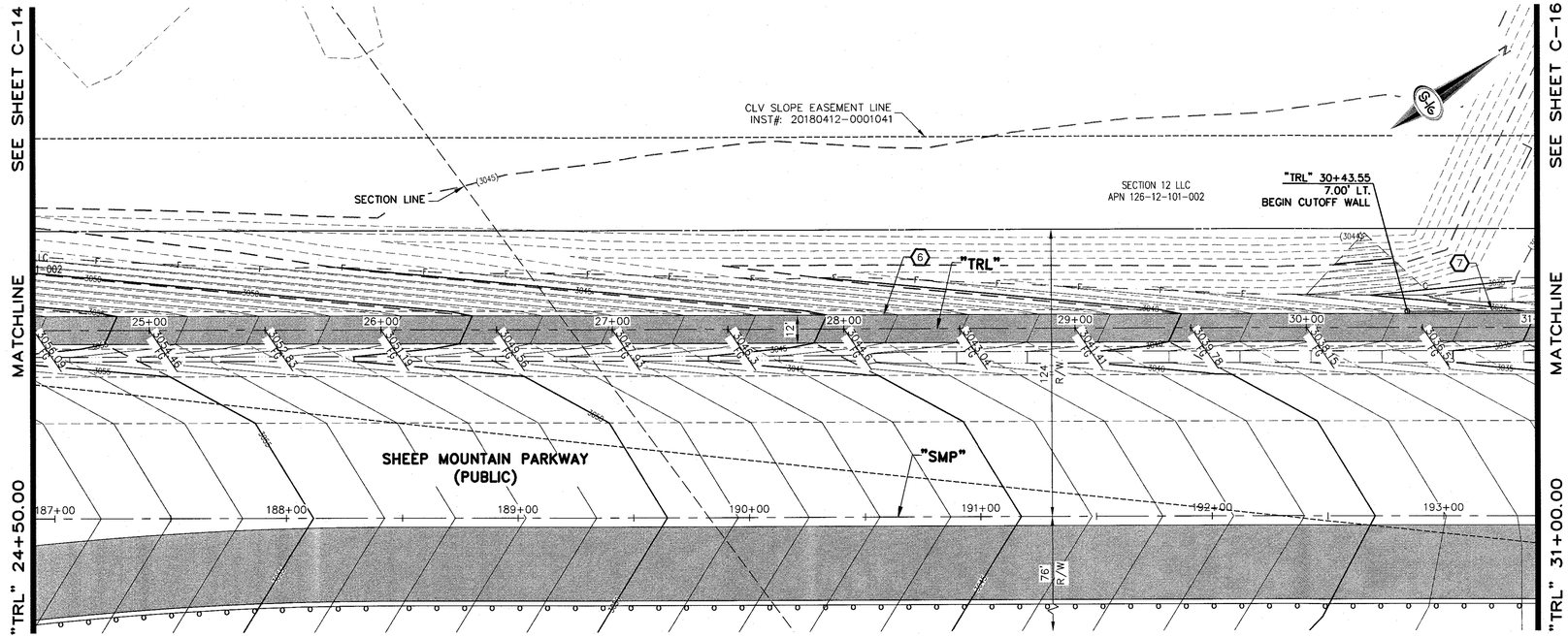
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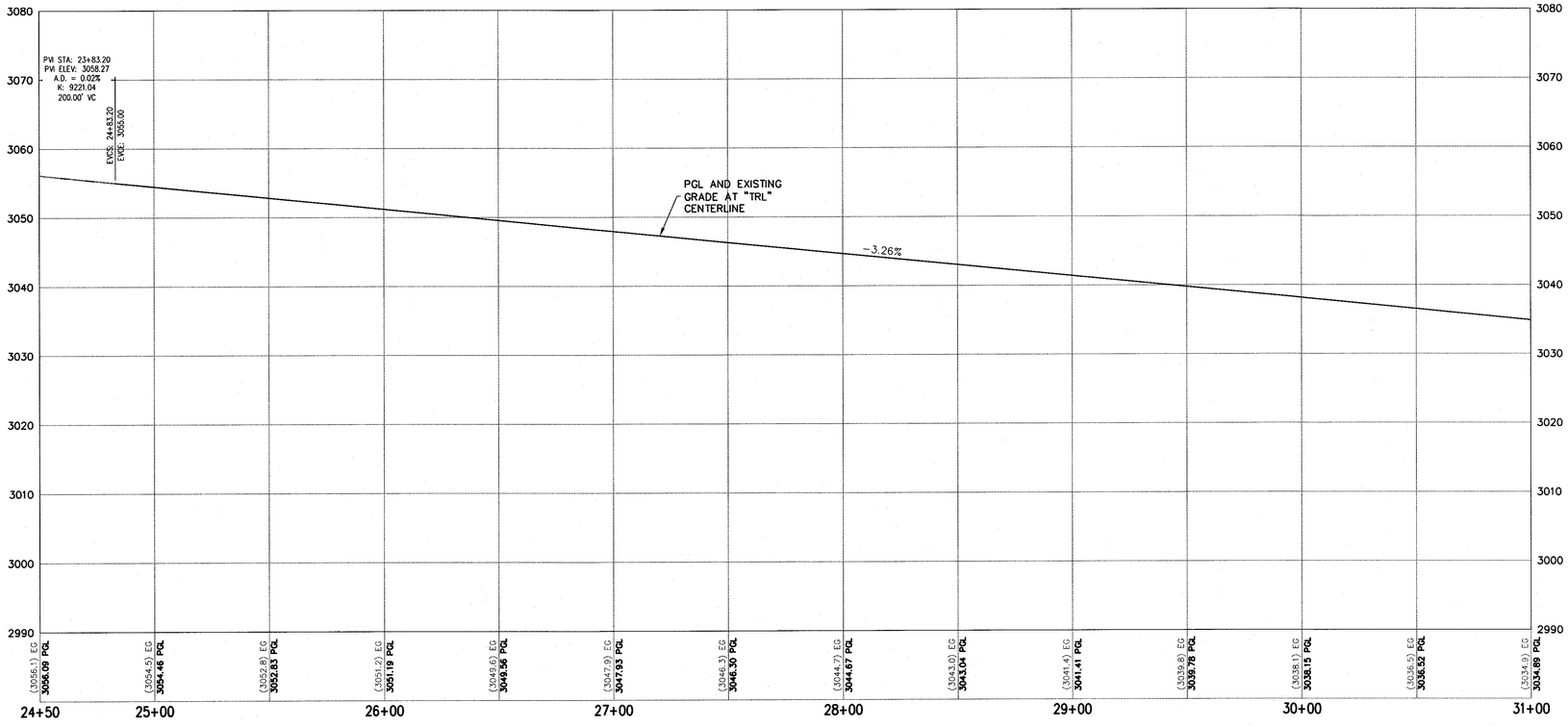
PROFESSIONAL ENGINEER STATE OF NEVADA JERRY C. SLATER Exp:06/30/2018 CIVIL No. 14167

C-14
SHEET 20 OF 50

DWG NO. _____

HANSEN NO. _____





CONSTRUCTION NOTES

1. CONSTRUCT OVER 3-INCH PBS OVER 4-INCH TYPE II AGGREGATE BASE (SEE TY-SHEETS FOR TYPICAL SECTIONS)
2. SAWCUT AND MATCH EXISTING CONCRETE ACCESS ROAD
3. INSTALL GUARDRAIL (TRIPLE CORRUGATION) (NDOT STD. PLAN R-8.4.1)
4. INSTALL TANGENT END TERMINAL FOR GUARDRAIL (NDOT STD. PLAN R-8.1.1)
5. CONSTRUCT 12-FOOT WIDE MINIMUM ACCESS ROAD (DETAIL 3, SHEET TY-02)
6. CONSTRUCT 2-INCH PBS SIDEWALK OVER 4-INCH TYPE II AGGREGATE BASE (SEE SHEETS C-12 THROUGH C-21 FOR PLAN AND PROFILE)
7. CONSTRUCT 3-FOOT DEEP CONCRETE CUTOFF WALL (DETAIL 4, SHEET TY-02)
8. INSTALL CHAINLINK FENCE (USDCCA STD. DWG. 252)
9. INSTALL 12-FOOT WIDE CHAINLINK GATE
10. ADJUST EXISTING CABLE VAULT TO FINISH GRADE
11. ADJUST EXISTING POWER VAULT TO FINISH GRADE
12. SAWCUT AND MATCH EXISTING PAVEMENT
13. RELOCATE AND RESET EXISTING GATE ON CONCRETE FOUNDATION (PER STRUCTURAL PLANS)

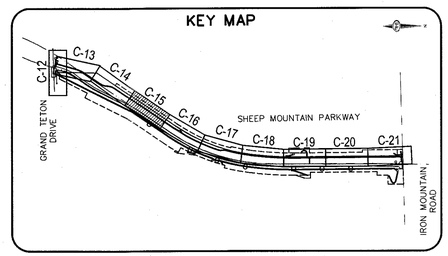
NOTES

1. SEE TY-SHEETS FOR TYPICAL SECTIONS.
2. SEE SD-SHEETS FOR STORM PROFILES.
3. SEE UT-SHEETS FOR WATER AND SEWER PLAN AND PROFILES.
4. SEE GR-SHEETS FOR GRADING AND STORM DRAIN PLAN.

LEGEND

- PLANTMIX BITUMINOUS SURFACE
- MAINTENANCE ACCESS PATH

KEY MAP



30 0 30 60
SCALE FEET

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

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

Call before you Dig Avoid cutting underground utility lines. It's costly. Call 811 or 1-800-227-2600

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

CONSTRUCTION PLAN - "TRL" 24+50.00 TO "TRL" 31+00.00

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

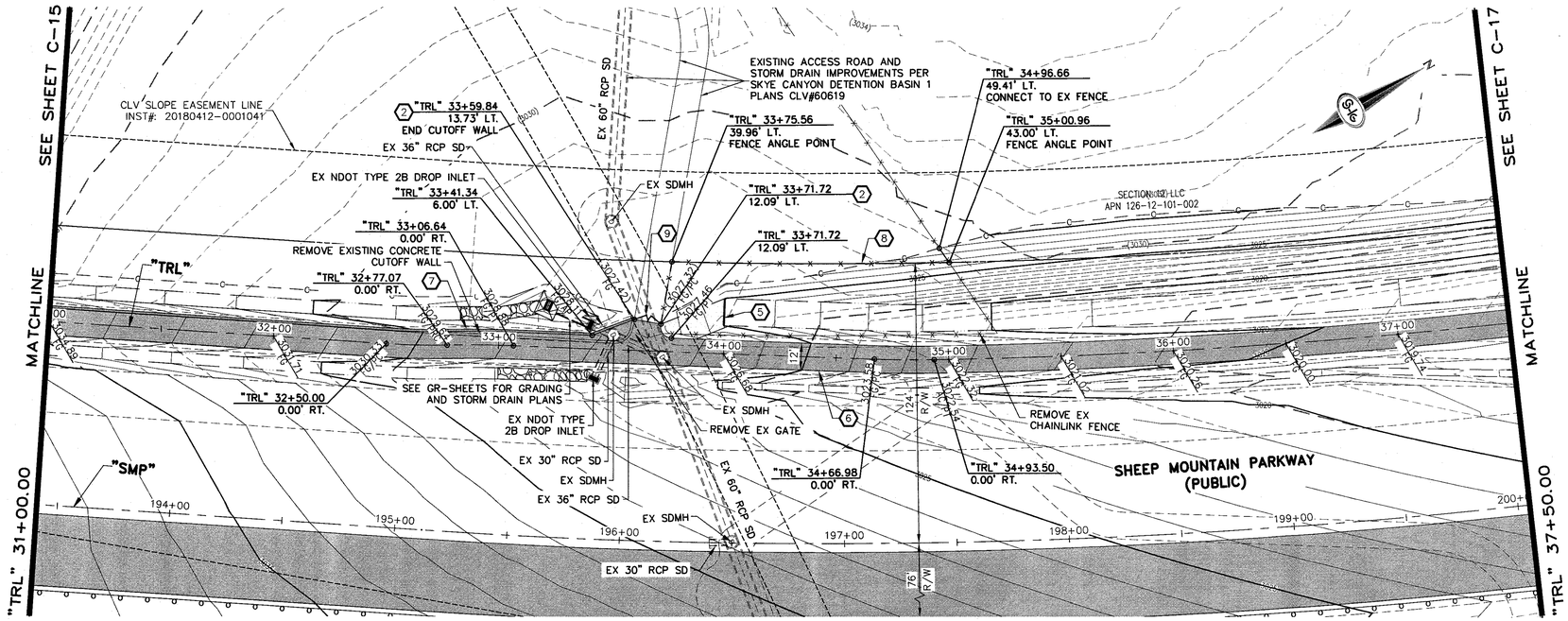
PROJECT NO.
OLY1720.000

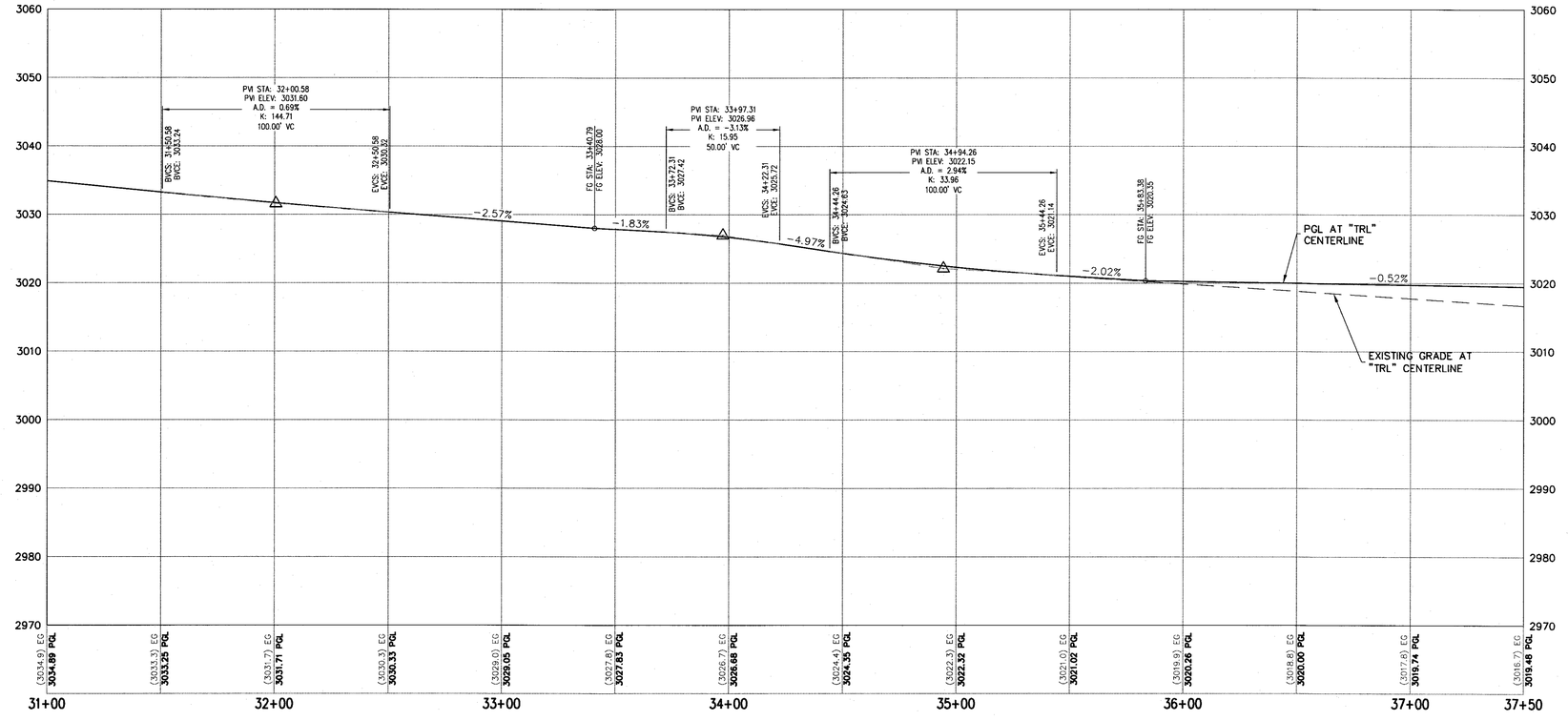
PROFESSIONAL ENGINEER - STATE OF NEVADA - JERRY S. SLATER - Exp. 08/30/2019 - CIVIL - No. 14167

C-15
SHEET 21 OF 50

DWG NO. _____

HANSEN NO. _____





CONSTRUCTION NOTES

1. CONSTRUCT OVER 3-INCH PBS OVER 4-INCH TYPE II AGGREGATE BASE (SEE TY-SHEETS FOR TYPICAL SECTIONS)
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12. SAWCUT AND MATCH EXISTING PAVEMENT
13. RELOCATE AND RESET EXISTING GATE ON CONCRETE FOUNDATION (PER STRUCTURAL PLANS)

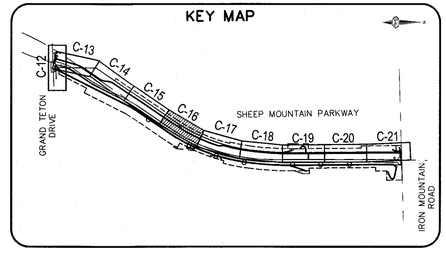
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LEGEND

- PLANTMIX BITUMINOUS SURFACE
- MAINTENANCE ACCESS PATH

KEY MAP



30 0 30 60
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PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

CONSTRUCTION PLAN - "TRL" 31+00.00 TO "TRL" 37+50.00

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

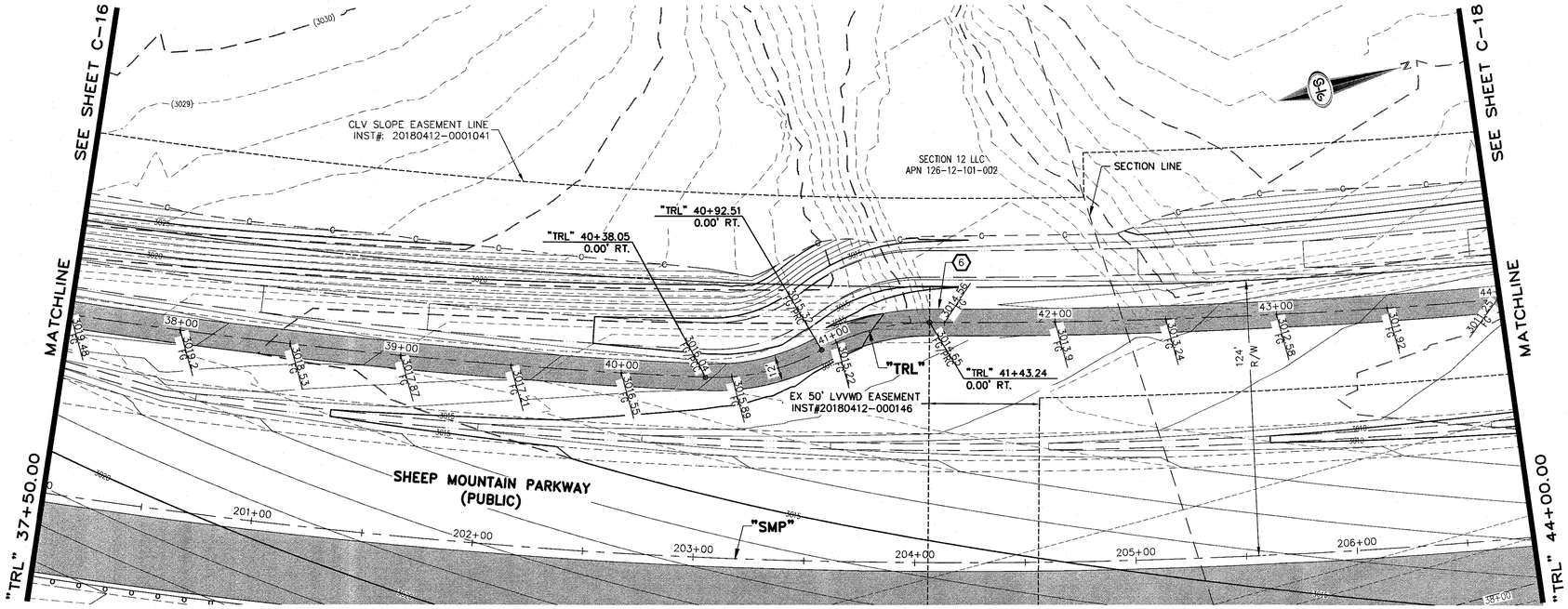
PROJECT NO.
OLY1720.000

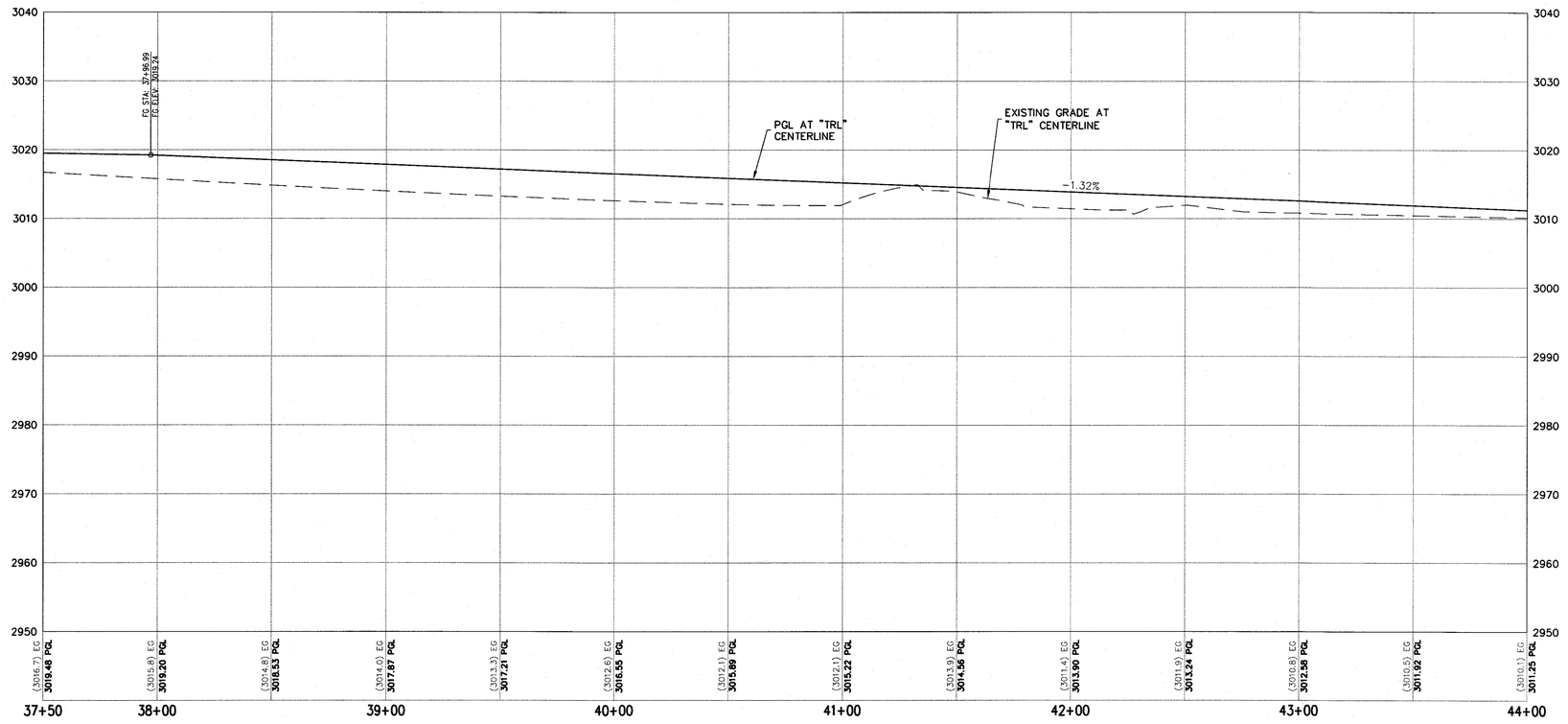
PROFESSIONAL ENGINEER STATE OF NEVADA
JERRY A. SLATER
Exp. 06/30/2018
CIVIL
No. 14167

C-16
SHEET 22 OF 50

DWG NO. _____

HANSEN NO. _____





CONSTRUCTION NOTES

1. CONSTRUCT OVER 3-INCH PBS OVER 4-INCH TYPE II AGGREGATE BASE (SEE TY-SHEETS FOR TYPICAL SECTIONS)
2. SAWCUT AND MATCH EXISTING CONCRETE ACCESS ROAD
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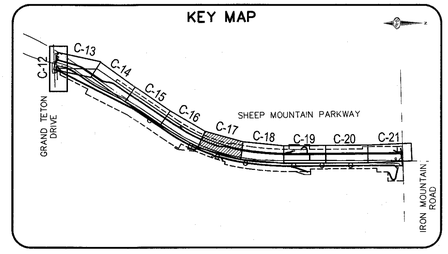
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4. SEE GR-SHEETS FOR GRADING AND STORM DRAIN PLAN.

LEGEND

- PLANTMIX BITUMINOUS SURFACE
- MAINTENANCE ACCESS PATH

KEY MAP



30 0 30 60
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PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

CONSTRUCTION PLAN - "TRL" 37+50.00 TO "TRL" 44+00.00

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

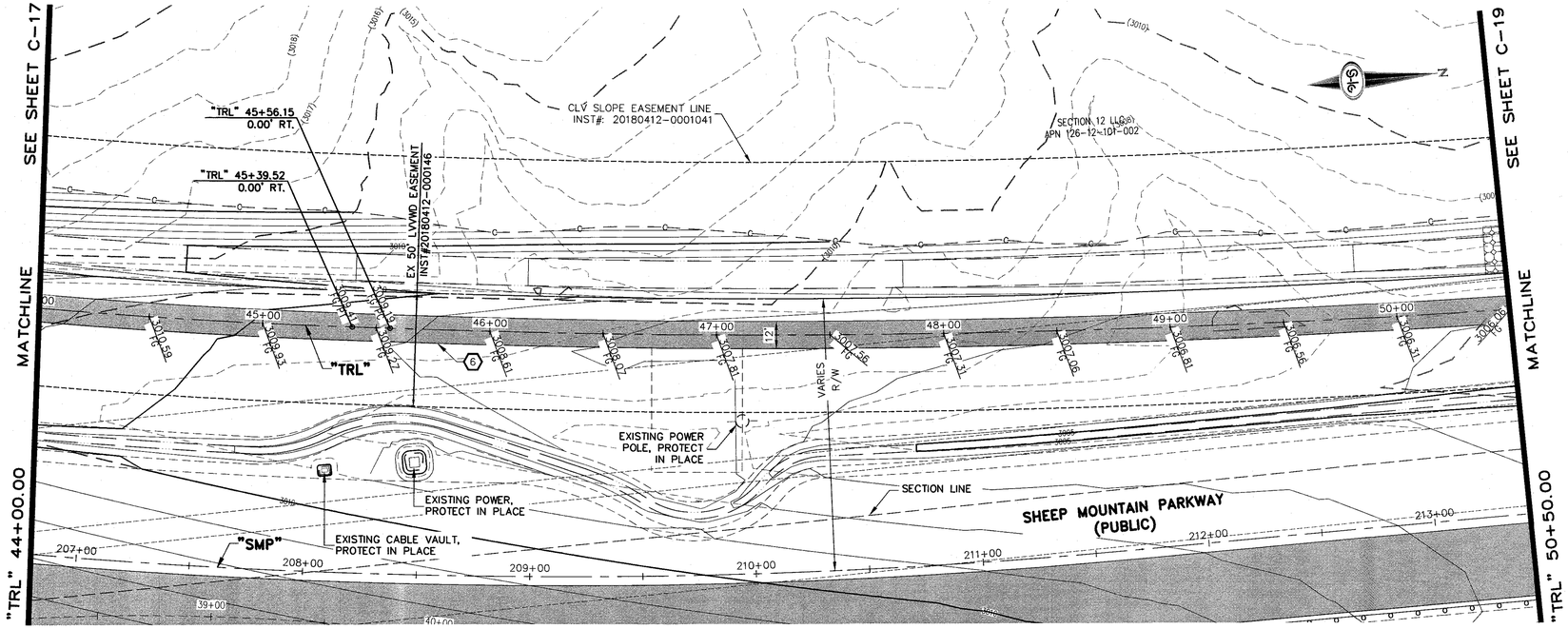
PROJECT NO.
OLY1720.000

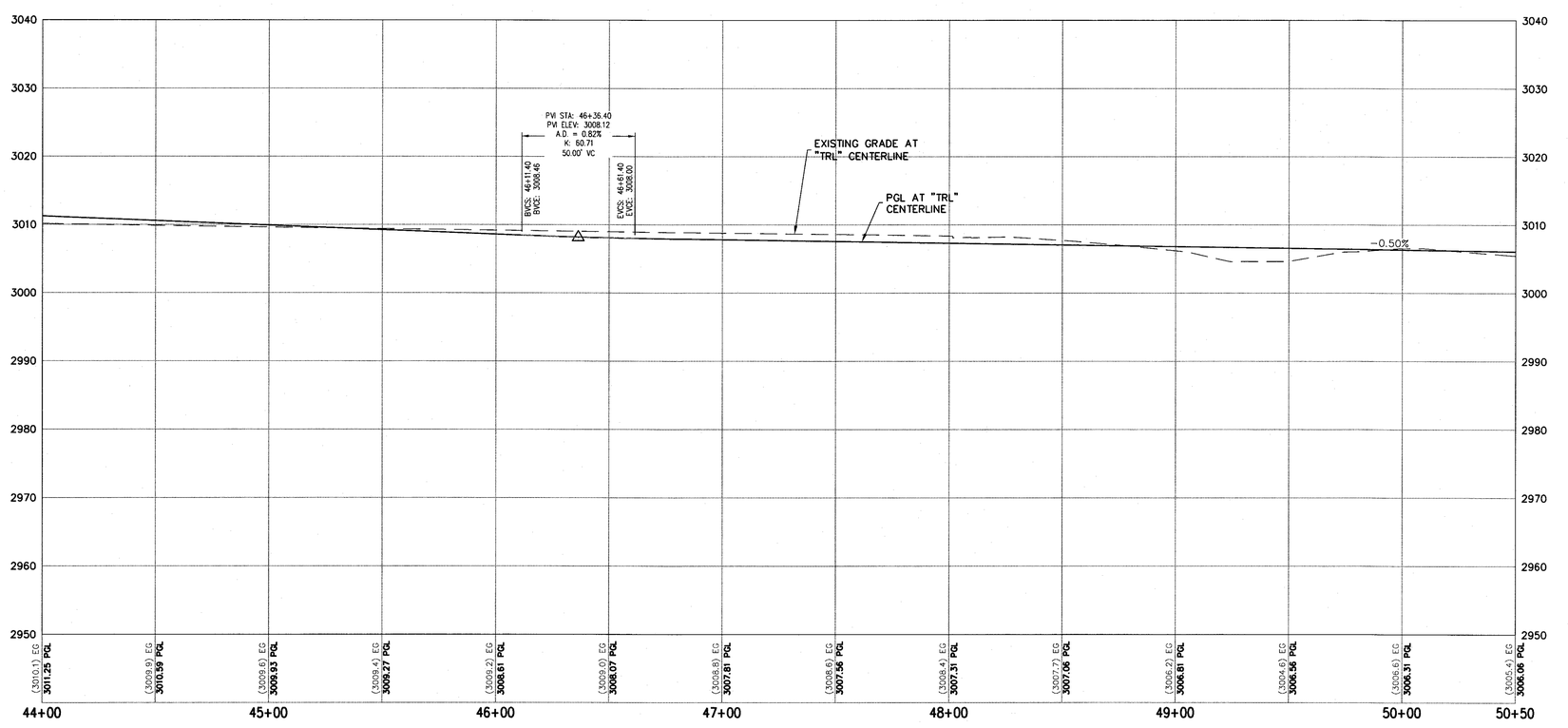
PROFESSIONAL ENGINEER - STATE OF NEVADA
JERRY SLATER
Exp 06/30/2018
CIVIL
No. 14167

C-17
SHEET 23 OF 50

DWG NO. _____

HANSEN NO. _____





CONSTRUCTION NOTES

1. CONSTRUCT OVER 3-INCH PBS OVER 4-INCH TYPE II AGGREGATE BASE (SEE TY-SHEETS FOR TYPICAL SECTIONS)
2. SAWCUT AND MATCH EXISTING CONCRETE ACCESS ROAD
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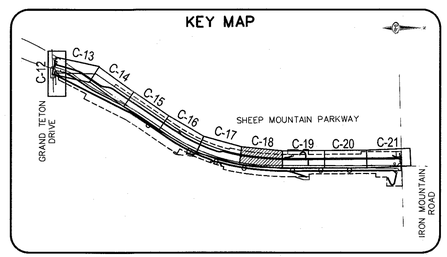
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LEGEND

- PLANTMIX BITUMINOUS SURFACE
- MAINTENANCE ACCESS PATH

KEY MAP



30 0 30 60
SCALE FEET

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5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

CONSTRUCTION PLAN - "TRL" 44+00.00 TO "TRL" 50+50.00

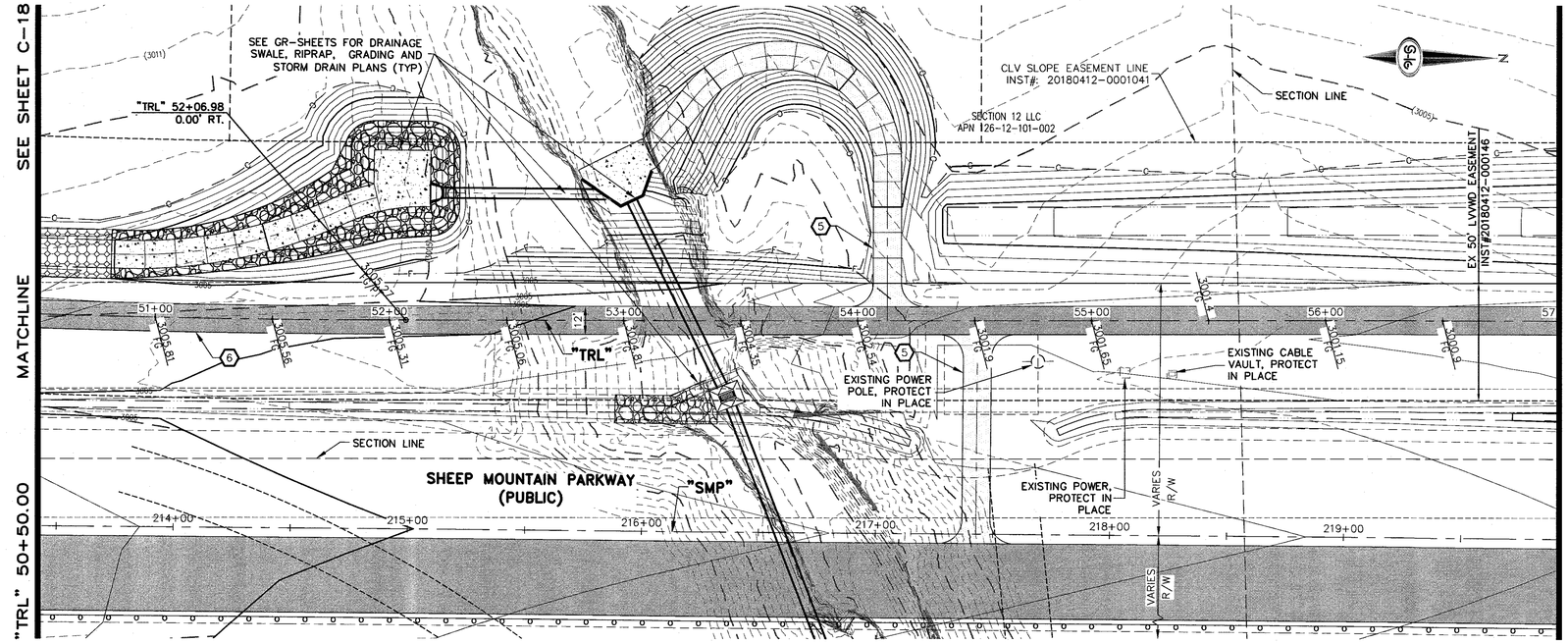
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DESIGNER: BCC
CHECKED: JSR
PROJECT NO.
OLY1720.000

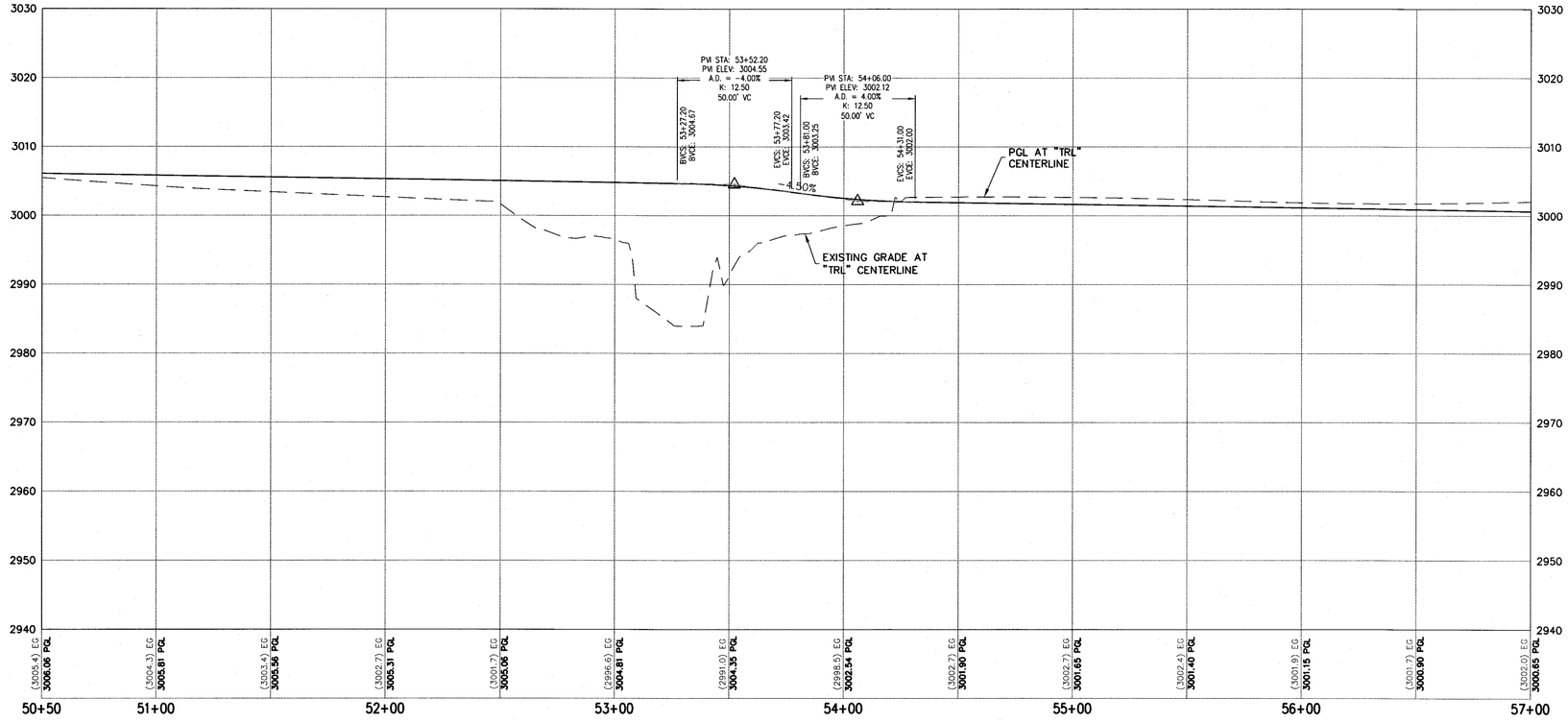
PROFESSIONAL ENGINEER - STATE OF NEVADA
JERRY A. SLATER
Exp. 06/30/2018
CIVIL
No. 14167

C-18
SHEET 24 OF 50

DWG NO. _____

HANSEN NO. _____





CONSTRUCTION NOTES

1. CONSTRUCT OVER 3-INCH PBS OVER 4-INCH TYPE II AGGREGATE BASE (SEE TY-SHEETS FOR TYPICAL SECTIONS)
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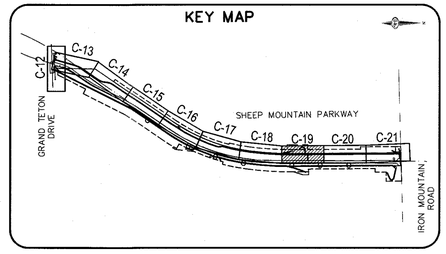
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LEGEND

- PLANTMIX BITUMINOUS SURFACE
- MAINTENANCE ACCESS PATH

KEY MAP



SCALE: 30 0 30 60 FEET

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SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP DATE	APP

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

CONSTRUCTION PLAN - "TRL" 50+50.00 TO "TRL" 57+00.00

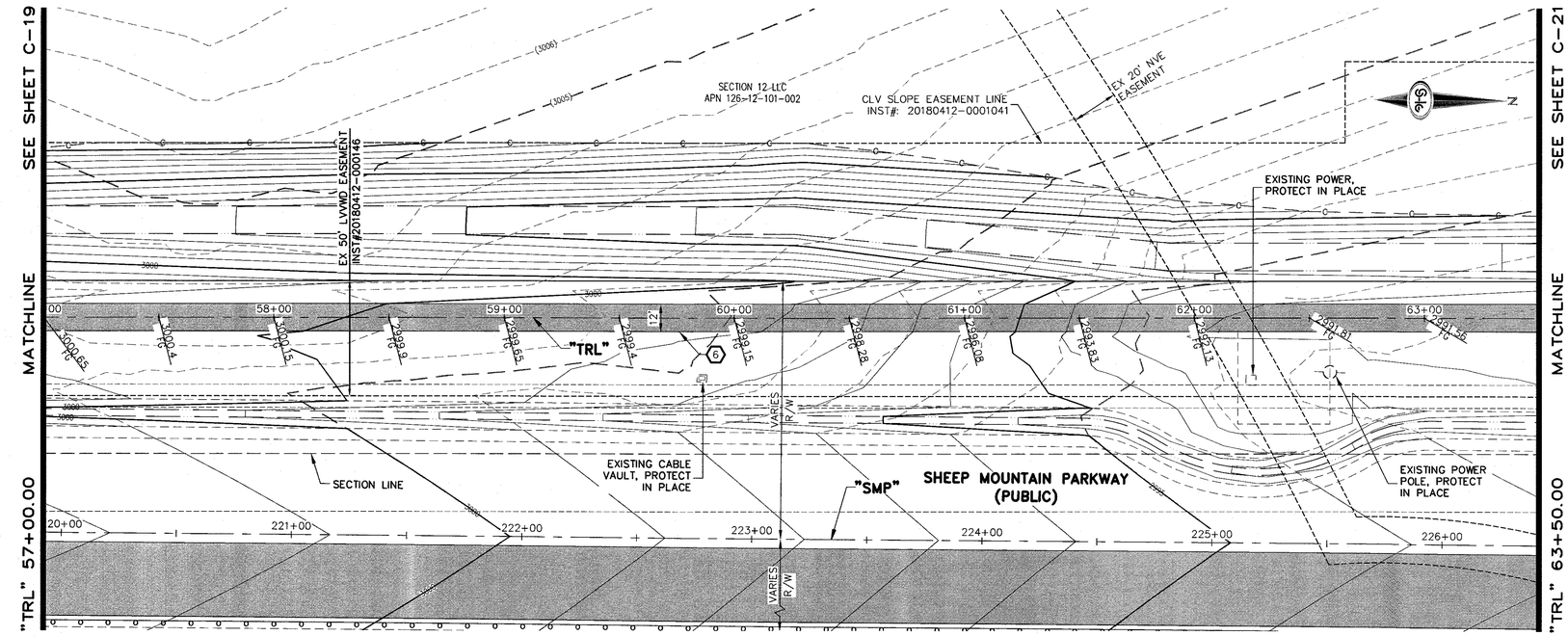
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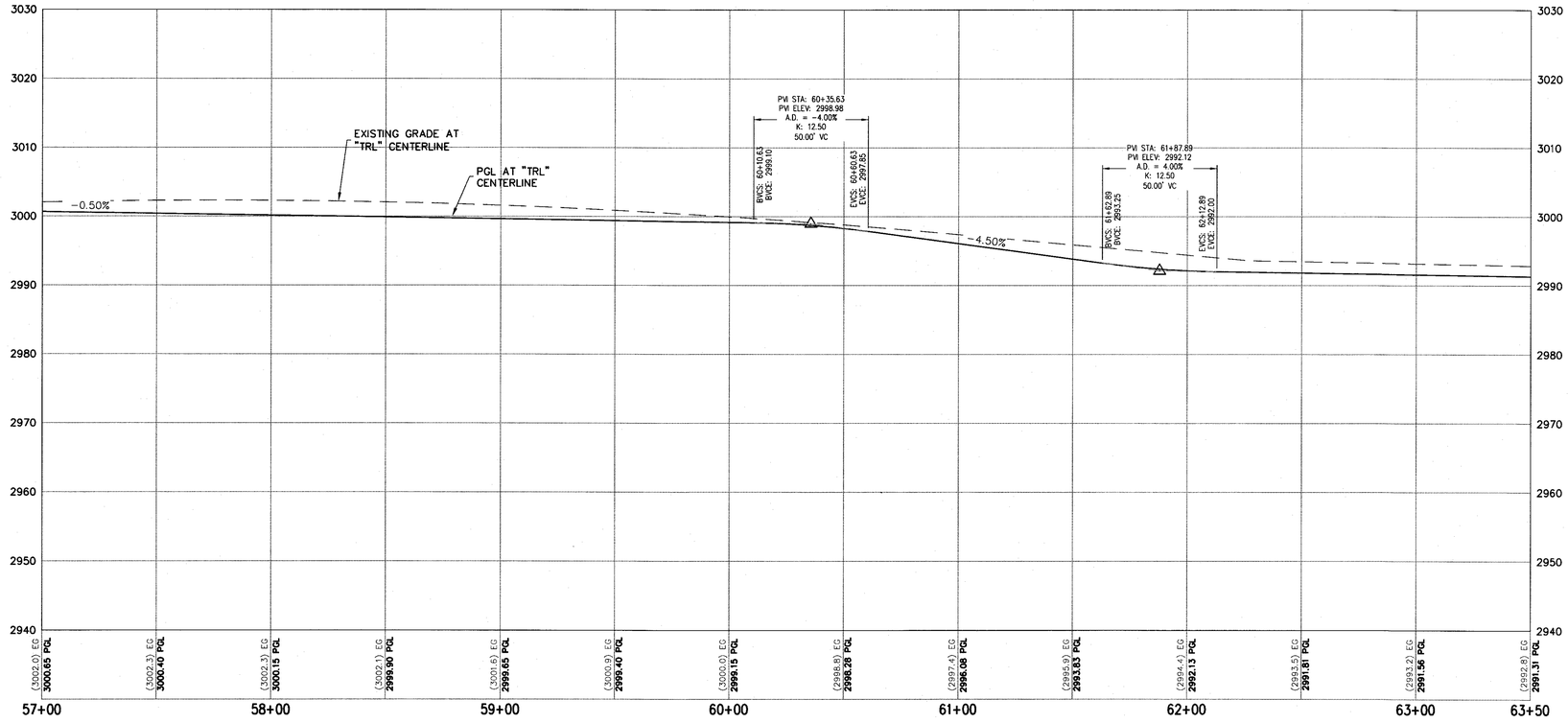
PROFESSIONAL ENGINEER - STATE OF NEVADA
JERRY A. SLATER
Exp. 06/30/2018
CIVIL
No. 14167

C-19
SHEET 25 OF 50

DWG NO. _____

HANSEN NO. _____





CONSTRUCTION NOTES

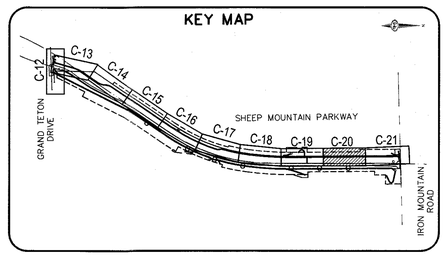
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LEGEND

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- MAINTENANCE ACCESS PATH



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CONSULTING ENGINEERS & PLANNERS
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PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

CONSTRUCTION PLAN - "TRL" 57+00.00 TO "TRL" 63+50.00

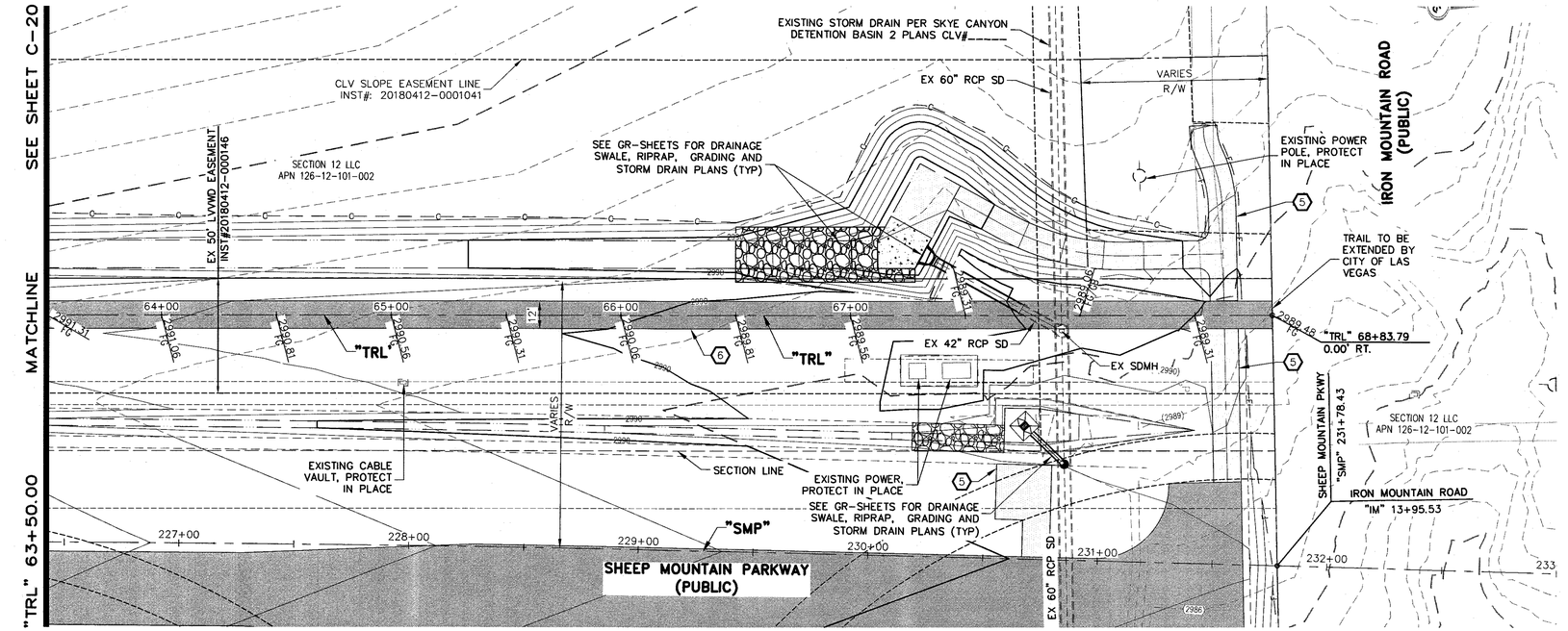
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PROJECT NO.
OLY1720.000

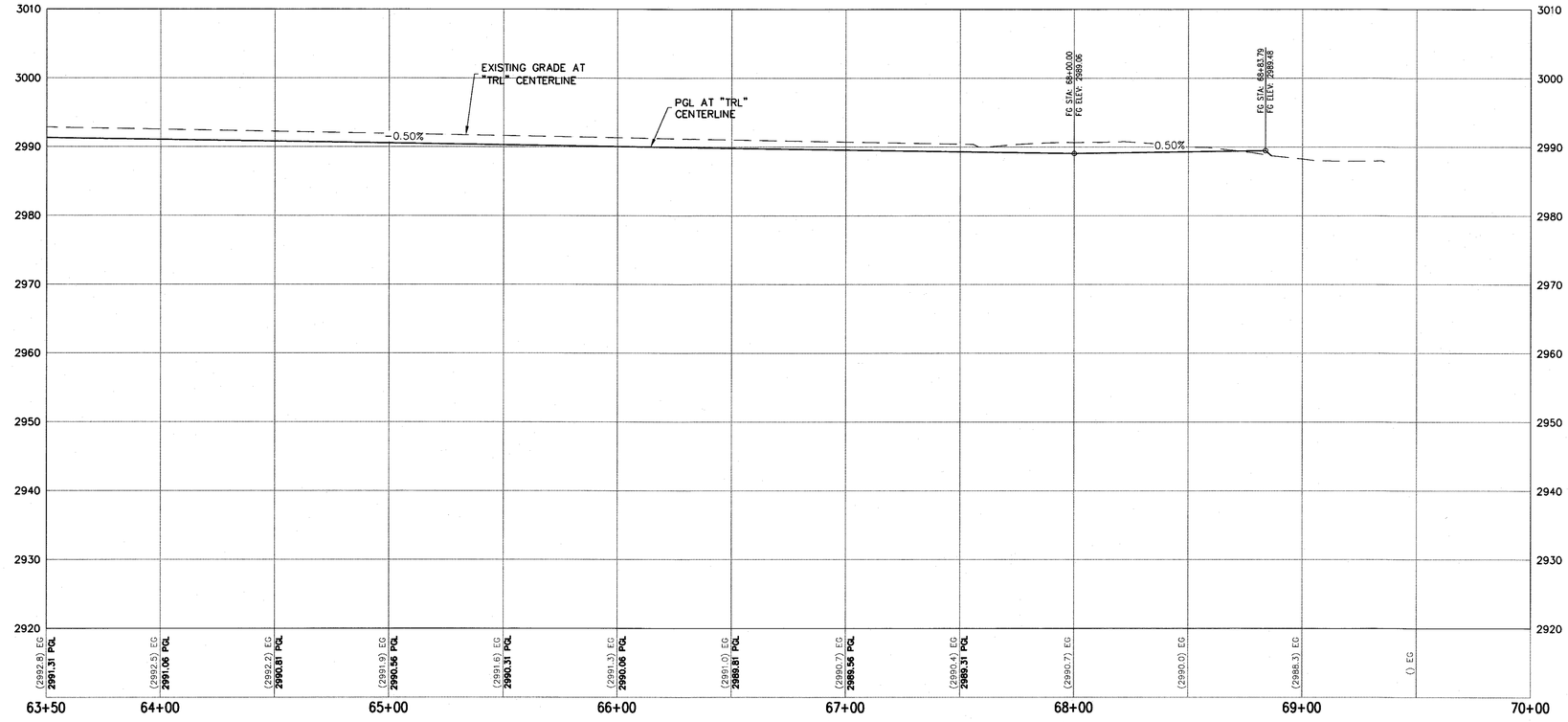
PROFESSIONAL ENGINEER - STATE OF NEVADA
JERRY C. SLATER
Exp. 06/30/2018
CIVIL
No. 14167
6-5-14

C-20
SHEET 26 OF 50

DWG NO. _____

HANSEN NO. _____





CONSTRUCTION NOTES

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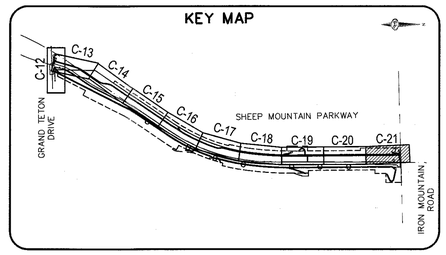
NOTES

1. SEE TY-SHEETS FOR TYPICAL SECTIONS.
2. SEE SD-SHEETS FOR STORM PROFILES.
3. SEE UT-SHEETS FOR WATER AND SEWER PLAN AND PROFILES.
4. SEE GR-SHEETS FOR GRADING AND STORM DRAIN PLAN.

LEGEND

- PLANTMIX BITUMINOUS SURFACE
- MAINTENANCE ACCESS PATH

KEY MAP



SCALE 30 0 30 60 FEET

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

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

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SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP DATE	APP

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

CONSTRUCTION PLAN - "TRL" 63+50.00 TO "TRL" 70+00.00

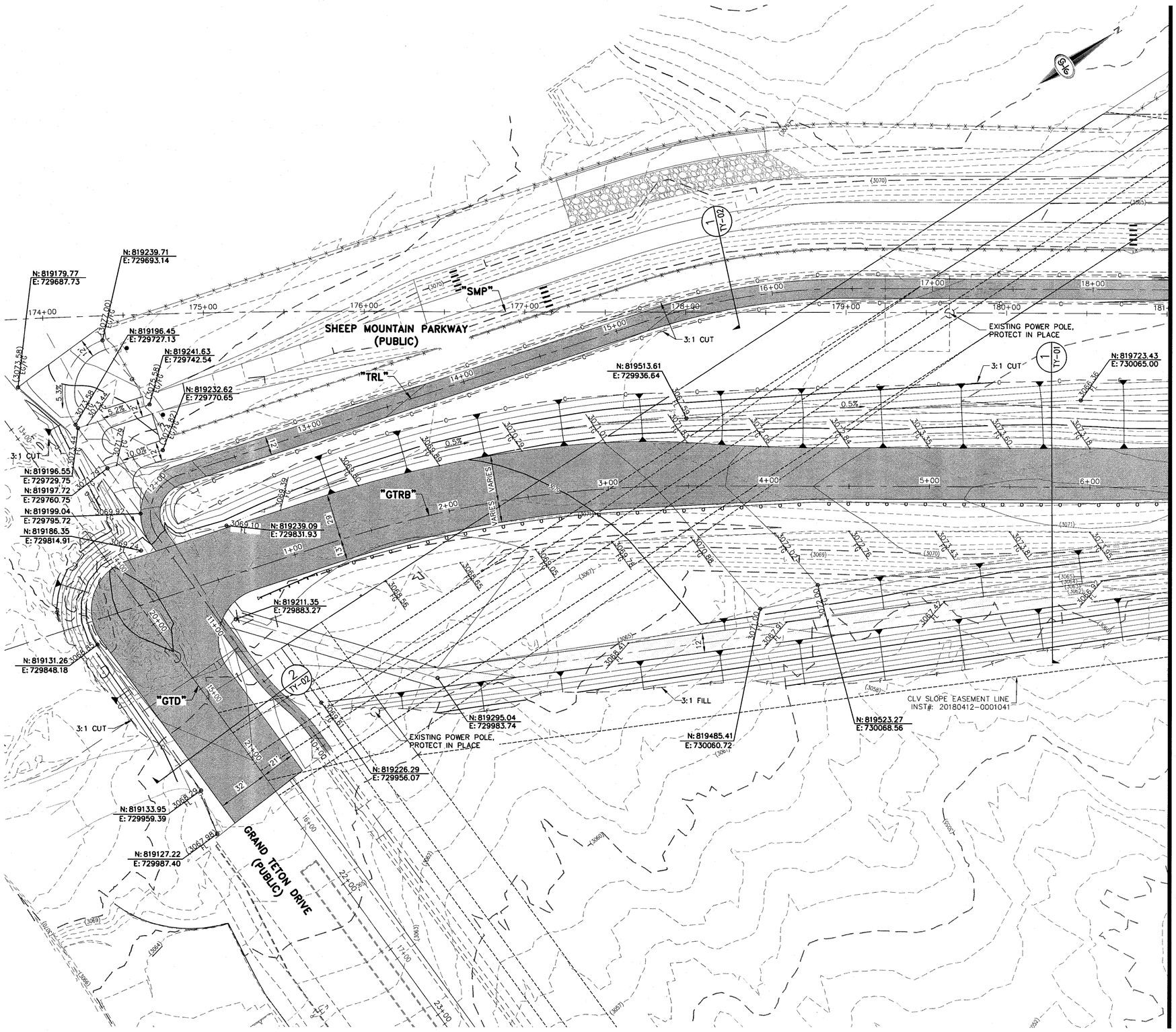
DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR
PROJECT NO. OLY1720.000

PROFESSIONAL ENGINEER - STATE OF NEVADA - JERRY J. SLATER - EXP. 06/30/2018 - CIVIL - No. 14167

C-21
SHEET 27 OF 50

DWG NO. _____

HANSEN NO. _____



GRADING AND STORM DRAIN NOTES

1. INSTALL NDOT TYPE 2B STORM DRAIN DROP INLET WITH CONCRETE APRON (NDOT DETAIL R-4.2.2 AND R-4.2.7) (SEE SHEET TY-08)
2. ADJUST EXISTING STORM DRAIN DROP INLET TO FINISH GRADE (PER STRUCTURAL PLANS)
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7. ADJUST 72-INCH NDOT TYPE IV STORM DRAIN MANHOLE TO FINISH GRADE (NDOT DETAIL R-4.3.2) (SEE SHEET TY-08)
8. CONSTRUCT HEADWALL (PER STRUCTURAL DETAIL)
9. CONSTRUCT 6-INCH THICK CONCRETE PAD OVER 6-INCH TYPE II AGGREGATE BASE WITH 3-FOOT DEEP CUTOFF WALL (DETAIL 1, TY-04)
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11. CONNECT TO EXISTING RCP STORM DRAIN WITH CONCRETE COLLAR (DETAIL 5, SHEET TY-02)
12. REMOVE 120 SF EXISTING RIPRAP FOR INSTALLATION OF CONCRETE ACCESS ROAD
13. INSTALL 3-FT DEEP CONCRETE CUTOFF WALL (SEE DETAIL 4 ON TY-02)
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15. INSTALL RCP END SECTION (NDOT R-2.3.1) (SEE SHEET TY-08)
16. CONSTRUCT 6-INCH THICK CONCRETE PAD OVER 6-INCH TYPE II AGGREGATE BASE WITH 3-FOOT DEEP CUTOFF WALL (DETAIL 1, SHEET TY-03)
17. INSTALL RIPRAP (D50=18-INCH, T=36-INCH)
18. INSTALL 60-INCH TYPE III STORM DRAIN MANHOLE (USDCCA STD. DWG. NO. 406)
19. INSTALL 3-INCH MINUS, 6-INCH THICK GRAVEL OVER 6-INCH TYPE II AGGREGATE BASE
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21. INSTALL 24-INCH RCP STORM DRAIN (USDCCA STD. DWG. NO. 503.2)

NOTES

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5. ALL PIPE LENGTHS ARE MEASURED ALONG PIPE CENTERLINE TO CENTER OF MANHOLE OR INSIDE EDGE OF DI OR RCB/RCA.
6. ALL DROP INLETS SHALL INCLUDE STORM WATER MANAGEMENT STAMP AND DETAIL PER USDCCA STD. DWG. NO. 421.
7. SEE STRUCTURAL PLANS FOR ADDITIONAL STRUCTURAL DETAILS AND CONNECTIONS.
8. ALL PIPES ARE PUBLICLY MAINTAINED.

LEGEND

- PLANTMIX BITUMINOUS SURFACE
- MAINTENANCE ACCESS PATH
- RIPRAP (SIZE PER PLAN)
- (1) STORM DRAIN LATERAL # (SEE SHEET GR-10)

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY DS-4952 ON FILE AT THE CITY OF LAS VEGAS FOR THE SUBJECT PROJECT

JERRY SLATER, P.E. 14167 DATE

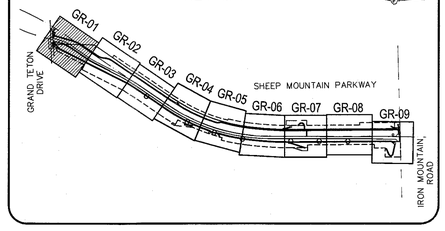
FLOOD ZONE

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE 'X' (OUTSIDE THE 500-YEAR FLOOD PLAIN) ON THE FLOOD INSURANCE RATE MAP (FIRM) PANEL: 32003C1735E, DATED SEPTEMBER 27, 2002

NOTE:

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KEY MAP



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SCALE FEET

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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

GRADING PLAN - "GTRB" 0+00.00 TO "GTRB" 6+50.00

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

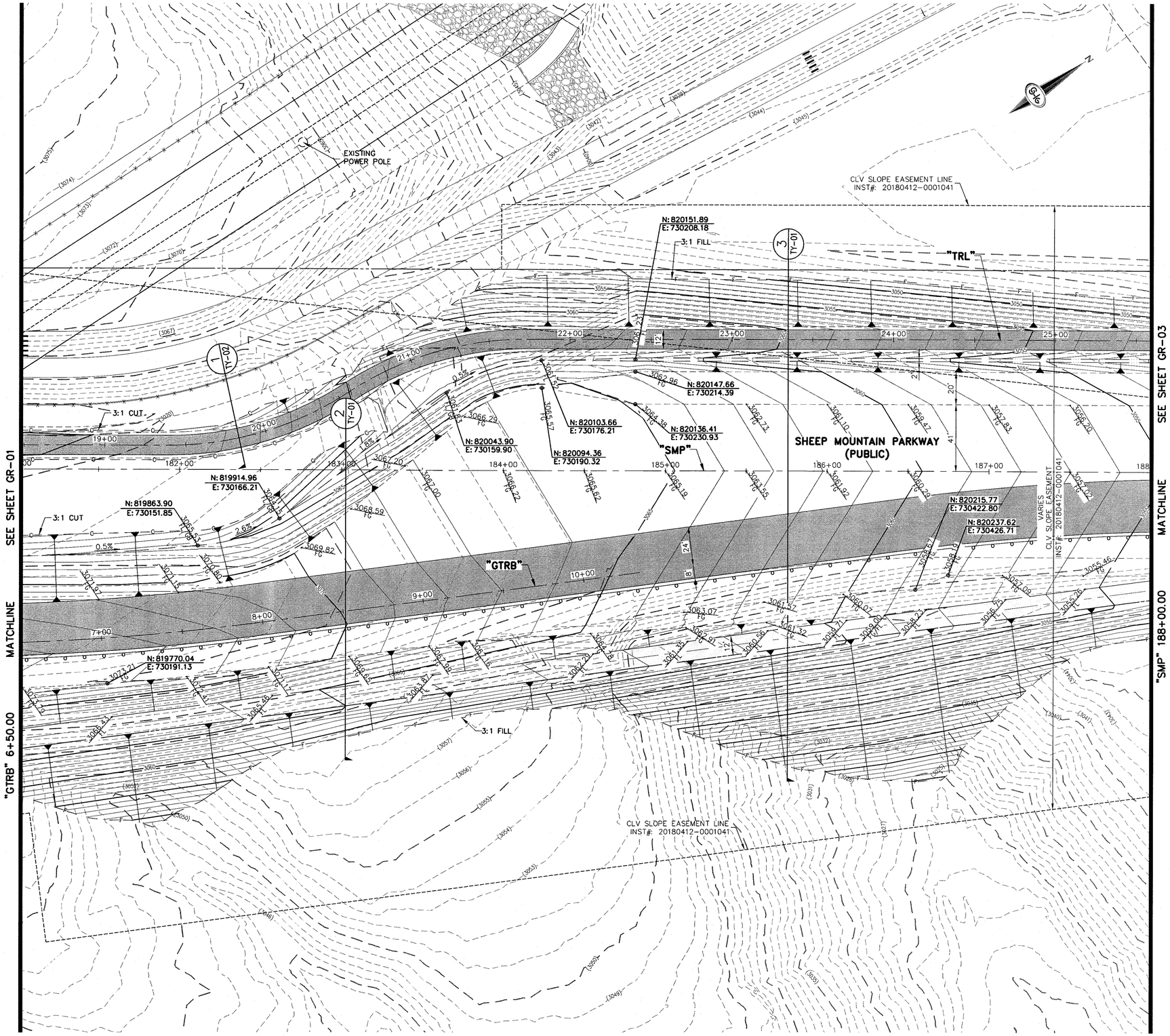
PROJECT NO.
OLY1720.000

PROFESSIONAL ENGINEER - STATE OF NEVADA
JERRY J. SLATER
Exp. 06/30/2018
CIVIL
No. 14167
6-5-18

GR-01
SHEET 28 OF 50

DWG NO. _____

HANSEN NO. _____



GRADING AND STORM DRAIN NOTES

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LEGEND

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- MAINTENANCE ACCESS PATH
- RIPRAP (SIZE PER PLAN)
- (1) STORM DRAIN LATERAL # (SEE SHEET GR-10)

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY DS-4952 ON FILE AT THE CITY OF LAS VEGAS FOR THE SUBJECT PROJECT

JERRY SLATER, P.E. 14167 — DATE

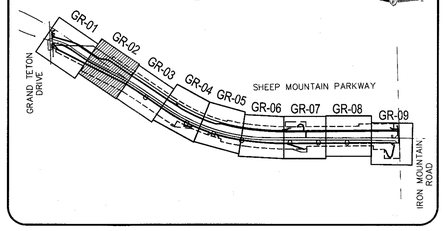
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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

GRADING PLAN - "GTRB" 6+50.00 TO "GTRB" 12+00.00

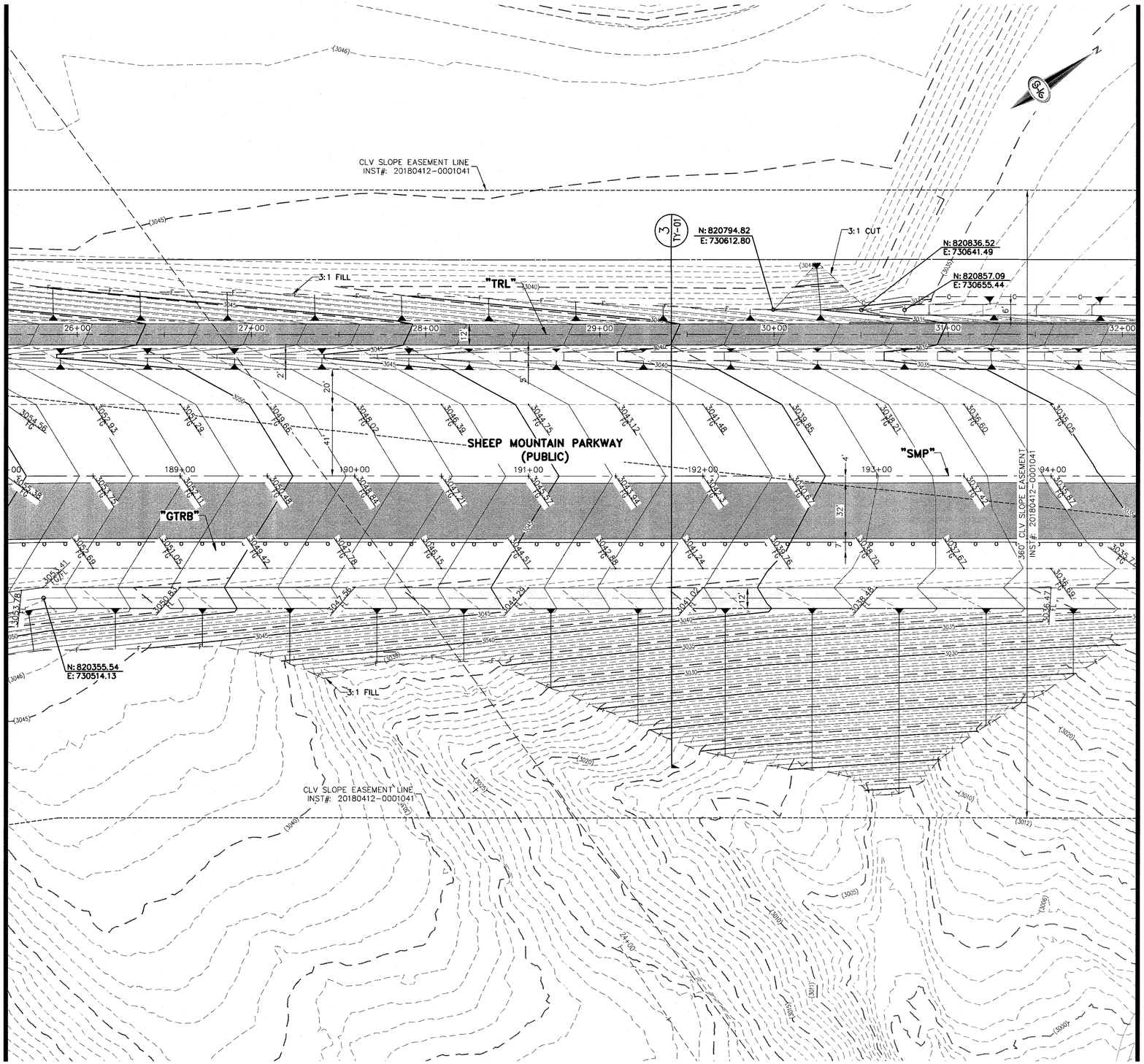
DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR
PROJECT NO. OLY1720.000

PROFESSIONAL ENGINEER - STATE OF NEVADA
JERRY SLATER
Exp. 06/30/2018
CIVIL
No. 14167

GR-02
SHEET 29 OF 50

DWG NO. _____

HANSEN NO. _____



GRADING AND STORM DRAIN NOTES

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LEGEND

- PLANTMIX BITUMINOUS SURFACE
- MAINTENANCE ACCESS PATH
- RIPRAP (SIZE PER PLAN)
- (1) STORM DRAIN LATERAL # (SEE SHEET GR-10)

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY DS-4952 ON FILE AT THE CITY OF LAS VEGAS FOR THE SUBJECT PROJECT

JERRY SLATER, P.E. 14167 — DATE

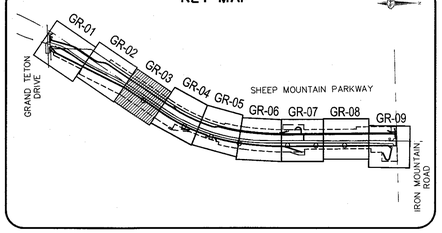
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KEY MAP



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NO.	DESCRIPTION	DATE	BY	APP DATE	APP

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

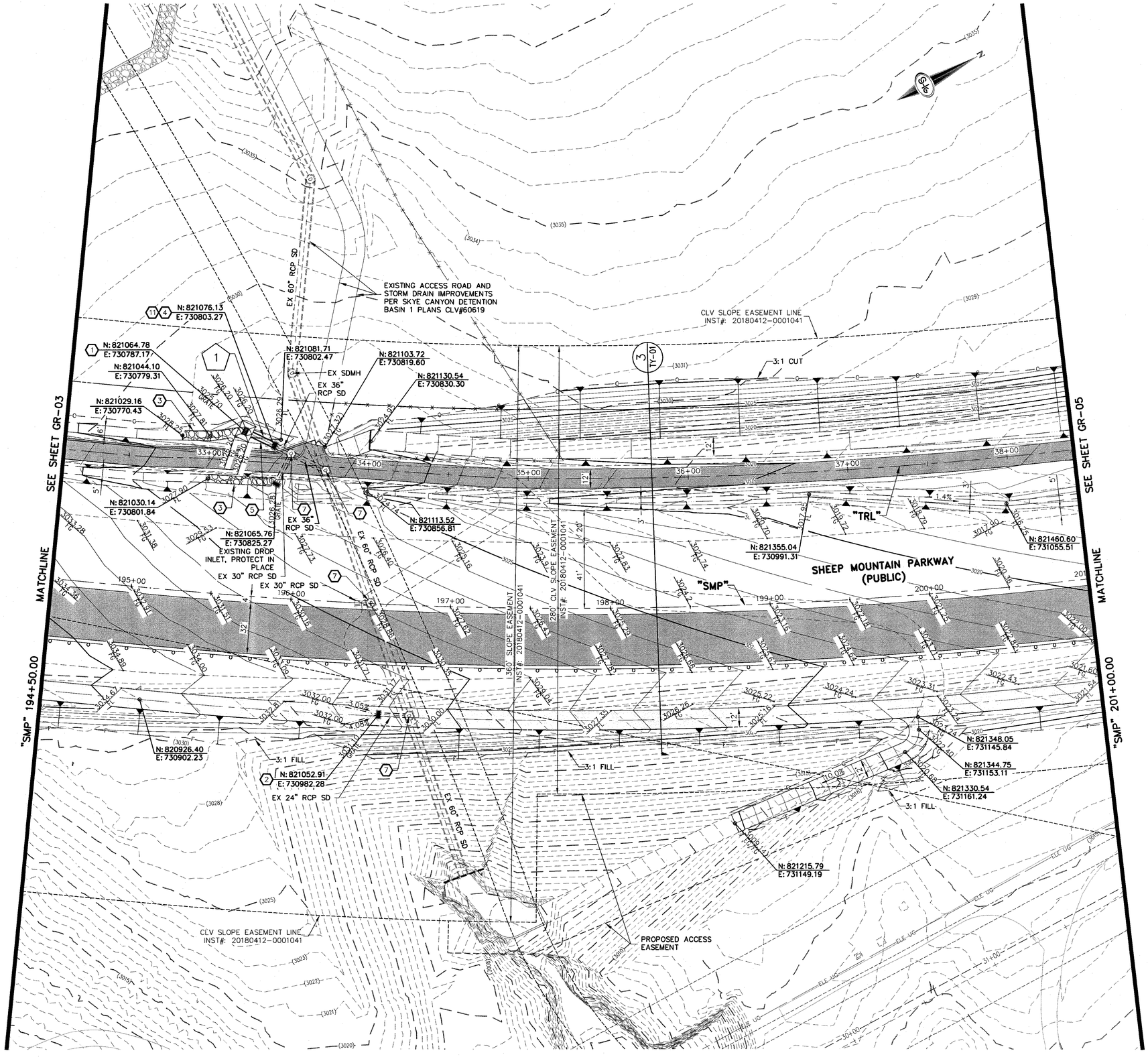
GRADING PLAN - "SMP" 188+00.00 TO "SMP" 194+50.00

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR
PROJECT NO.
OLY1720.000

PROFESSIONAL ENGINEER - STATE OF NEVADA - JERRY SLATER - Exp: 06/30/2018 - CIVIL - No. 14167

GR-03
SHEET 30 OF 50
DWG NO. ———

HANSEN NO. ———



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- RIPRAP (SIZE PER PLAN)
- (1) STORM DRAIN LATERAL # (SEE SHEET GR-10)

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JERRY SLATER, P.E. 14167 DATE

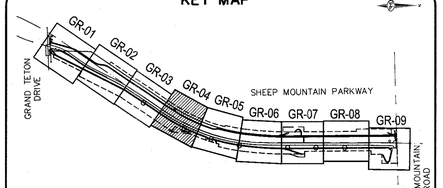
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NO.	DESCRIPTION	DATE	BY	APP DATE	APP

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

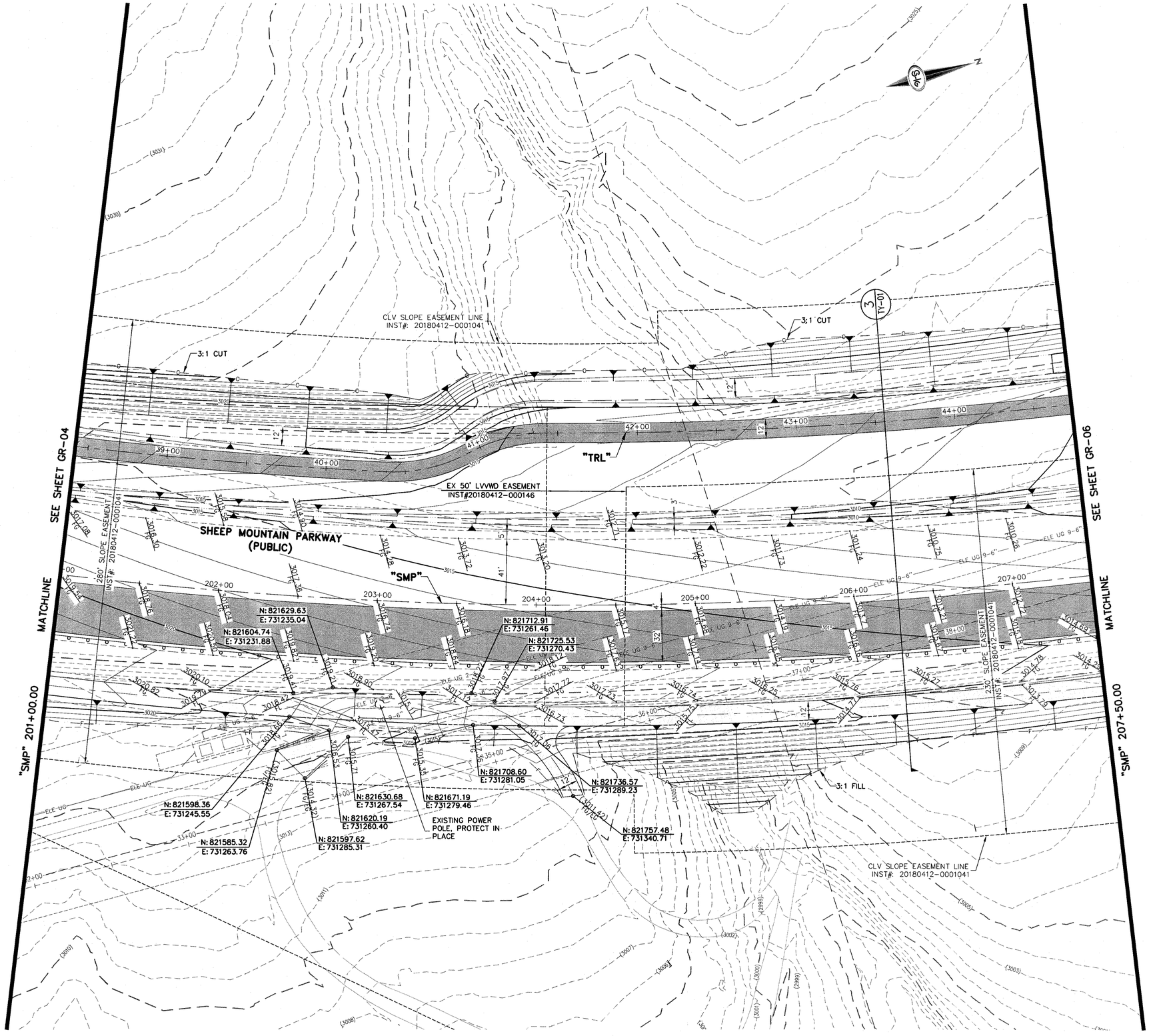
GRADING PLAN - "SMP" 194+50.00 TO "SMP" 201+00.00

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR
PROJECT NO. OLY1720.000

PROFESSIONAL ENGINEER - STATE OF NEVADA - JERRY SLATER - Exp. 06/30/2018 - CIVIL - No. 14167 - 6.5.18

GR-04
SHEET 31 OF 50
DWG NO. _____

HANSEN NO. _____



GRADING AND STORM DRAIN NOTES

1. INSTALL NDOT TYPE 2B STORM DRAIN DROP INLET WITH CONCRETE APRON (NDOT DETAIL R-4.2.2 AND R-4.2.7) (SEE SHEET TY-08)
2. ADJUST EXISTING STORM DRAIN DROP INLET TO FINISH GRADE (PER STRUCTURAL PLANS)
3. INSTALL RIPRAP (D50=3-INCH, T=12-INCH)
4. REMOVE EXISTING DROP INLET
5. INSTALL 36-INCH RCP STORM DRAIN (USDCCA STD. DWG. NO. 503.2)
6. INSTALL 48-INCH RCP STORM DRAIN (USDCCA STD. DWG. NO. 503.2)
7. ADJUST 72-INCH NDOT TYPE IV STORM DRAIN MANHOLE TO FINISH GRADE (NDOT DETAIL R-4.3.2) (SEE SHEET TY-08)
8. CONSTRUCT HEADWALL (PER STRUCTURAL DETAIL)
9. CONSTRUCT 6-INCH THICK CONCRETE PAD OVER 6-INCH TYPE II AGGREGATE BASE WITH 3-FOOT DEEP CUTOFF WALL (DETAIL 1, TY-04)
10. CONSTRUCT 6-INCH THICK CONCRETE PAD OVER 6-INCH TYPE II AGGREGATE BASE
11. CONNECT TO EXISTING RCP STORM DRAIN WITH CONCRETE COLLAR (DETAIL 5, SHEET TY-02)
12. REMOVE 120 SF EXISTING RIPRAP FOR INSTALLATION OF CONCRETE ACCESS ROAD
13. INSTALL 3-FT DEEP CONCRETE CUTOFF WALL (SEE DETAIL 4 ON TY-02)
14. INSTALL 42-INCH RCP STORM DRAIN (USDCCA STD. DWG. NO. 503.2)
15. INSTALL RCP END SECTION (NDOT R-2.3.1) (SEE SHEET TY-08)
16. CONSTRUCT 6-INCH THICK CONCRETE PAD OVER 6-INCH TYPE II AGGREGATE BASE WITH 3-FOOT DEEP CUTOFF WALL (DETAIL 1, SHEET TY-03)
17. INSTALL RIPRAP (D50=18-INCH, T=36-INCH)
18. INSTALL 60-INCH TYPE III STORM DRAIN MANHOLE (USDCCA STD. DWG. NO. 406)
19. INSTALL 3-INCH MINUS, 6-INCH THICK GRAVEL OVER 6-INCH TYPE II AGGREGATE BASE
20. ADJUST 60-INCH TYPE III MANHOLE TO FINISH GRADE (CCAUSD NO. 406)
21. INSTALL 24-INCH RCP STORM DRAIN (USDCCA STD. DWG. NO. 503.2)

NOTES

1. SEE TY-SHEETS FOR TYPICAL SECTIONS.
2. SEE SD-SHEETS FOR STORM PROFILES.
3. SEE UT-SHEETS FOR WATER AND SEWER PLAN AND PROFILES.
4. ALL RCP SHALL BE CLASS III UNLESS OTHERWISE SHOWN IN PROFILE.
5. ALL PIPE LENGTHS ARE MEASURED ALONG PIPE CENTERLINE TO CENTER OF MANHOLE OR INSIDE EDGE OF DI OR RCB/RCA.
6. ALL DROP INLETS SHALL INCLUDE STORM WATER MANAGEMENT STAMP AND DETAIL PER USDCCA STD. DWG. NO. 421.
7. SEE STRUCTURAL PLANS FOR ADDITIONAL STRUCTURAL DETAILS AND CONNECTIONS.
8. ALL PIPES ARE PUBLICLY MAINTAINED.

LEGEND

- PLANTMIX BITUMINOUS SURFACE
- MAINTENANCE ACCESS PATH
- RIPRAP (SIZE PER PLAN)
- (1) STORM DRAIN LATERAL # (SEE SHEET GR-10)

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY DS-4952 ON FILE AT THE CITY OF LAS VEGAS FOR THE SUBJECT PROJECT

JERRY SLATER, P.E. 14167 — DATE

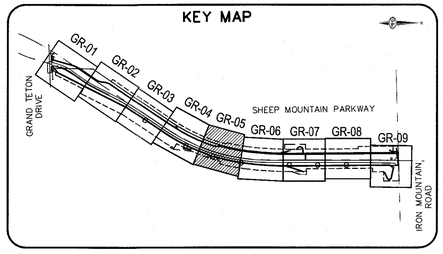
FLOOD ZONE

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE 'X' (OUTSIDE THE 500-YEAR FLOOD PLAIN) ON THE FLOOD INSURANCE RATE MAP (FIRM) PANEL: 32003C1735E, DATED SEPTEMBER 27, 2002

NOTE:

PROPERTY OWNER IS RESPONSIBLE TO MAINTAIN THE BEST MANAGEMENT PRACTICES, SUCH AS BUT NOT LIMITED TO, THE REMOVAL OF ACCUMULATED SEDIMENT AND DEBRIS AND CARE OF VEGETATION.

KEY MAP



30 0 30 60
SCALE FEET

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

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

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SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

GRADING PLAN - "SMP" 201+00.00 TO "SMP" 207+50.00

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

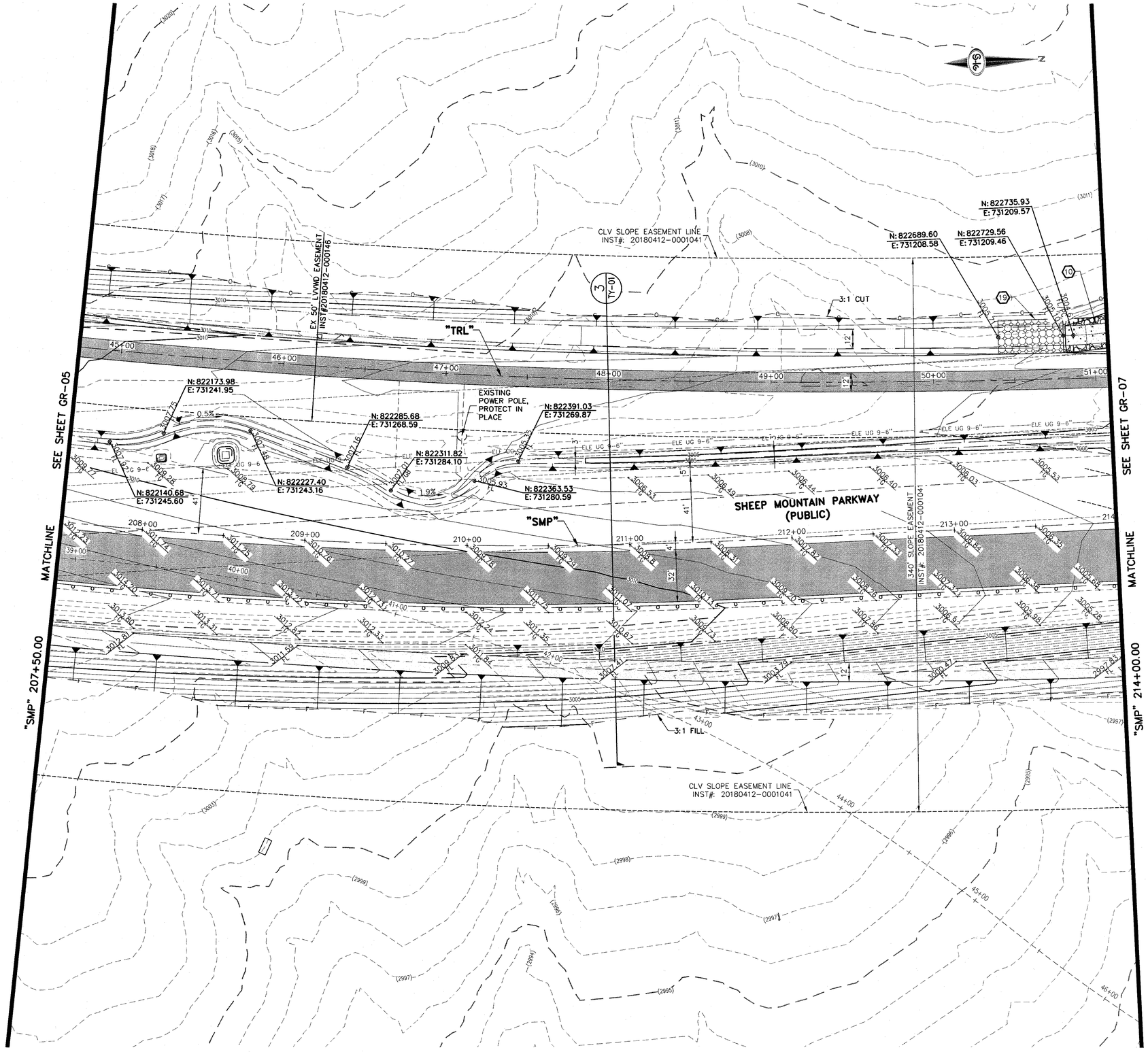
PROJECT NO.
OLY1720.000

PROFESSIONAL ENGINEER - STATE OF NEVADA
JERRY J. SLATER
Exp. 06/30/2018
CIVIL
No. 14167

GR-05
SHEET 32 OF 50

DWG NO. _____

HANSEN NO. _____



GRADING AND STORM DRAIN NOTES

1. INSTALL NDOT TYPE 2B STORM DRAIN DROP INLET WITH CONCRETE APRON (NDOT DETAIL R-4.2.2 AND R-4.2.7) (SEE SHEET TY-08)
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NOTES

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LEGEND

- PLANTMIX BITUMINOUS SURFACE
- MAINTENANCE ACCESS PATH
- RIPRAP (SIZE PER PLAN)
- (1) STORM DRAIN LATERAL # (SEE SHEET GR-10)

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JERRY SLATER, P.E. 14167 — DATE

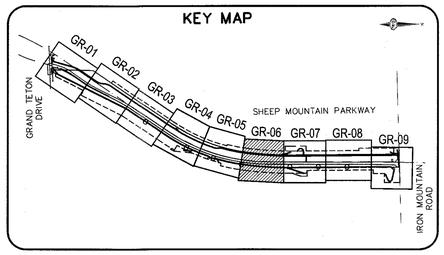
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KEY MAP



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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

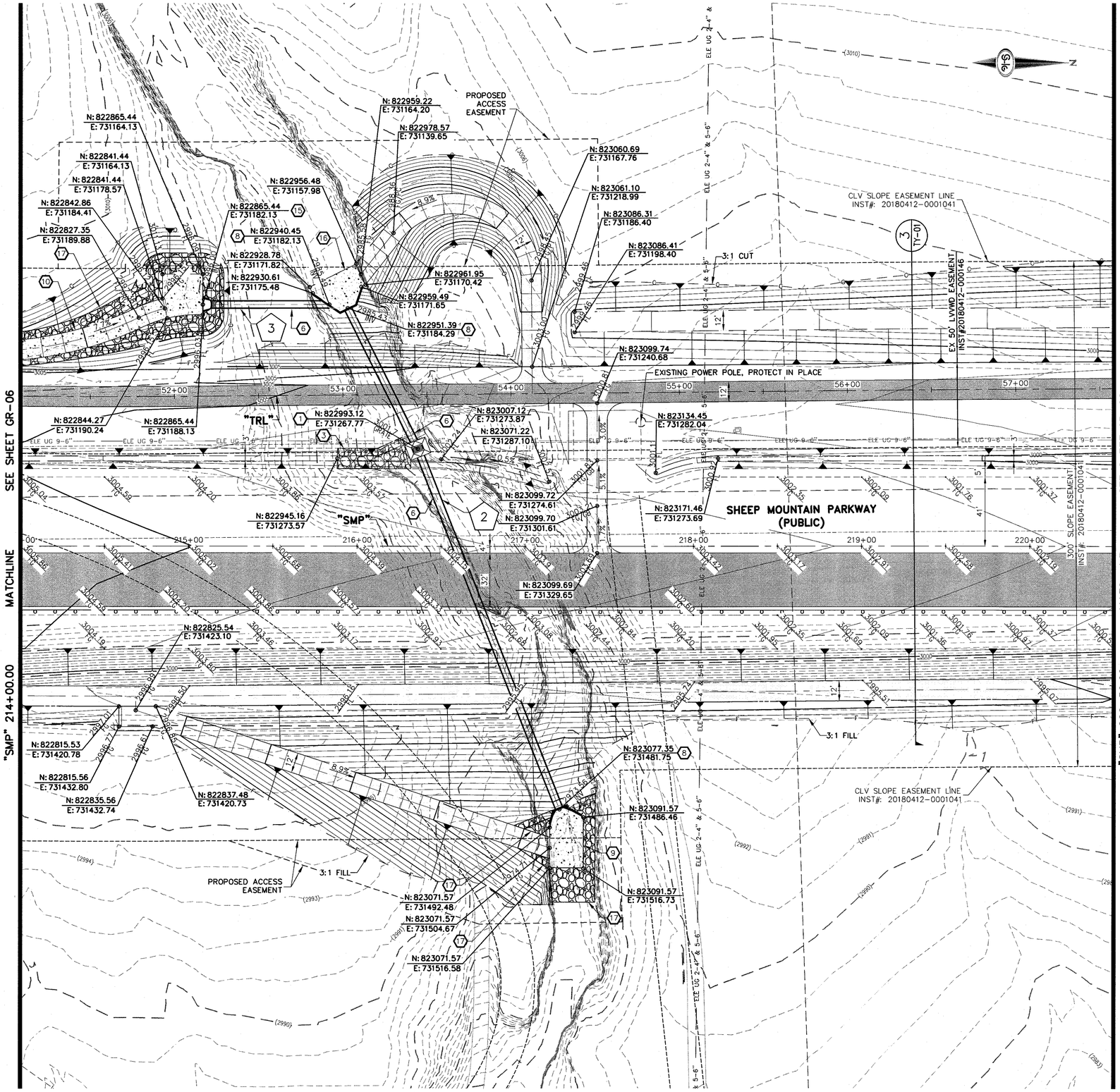
GRADING PLAN - "SMP" 207+50.00 TO "SMP" 214+00.00

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR
PROJECT NO. OLY1720.000

PROFESSIONAL ENGINEER STATE OF NEVADA JERRY SLATER Exp. 06/30/2018 CIVIL No. 14167

GR-06
SHEET 33 OF 50
DWG NO. _____

HANSEN NO. _____



GRADING AND STORM DRAIN NOTES

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LEGEND

- PLANTMIX BITUMINOUS SURFACE
- MAINTENANCE ACCESS PATH
- RIPRAP (SIZE PER PLAN)
- (1) STORM DRAIN LATERAL # (SEE SHEET GR-10)

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JERRY SLATER, P.E. 14167 — DATE

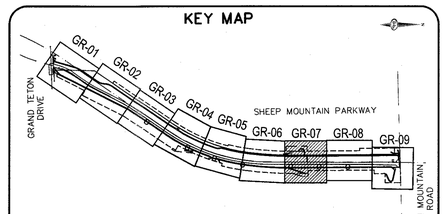
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KEY MAP



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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

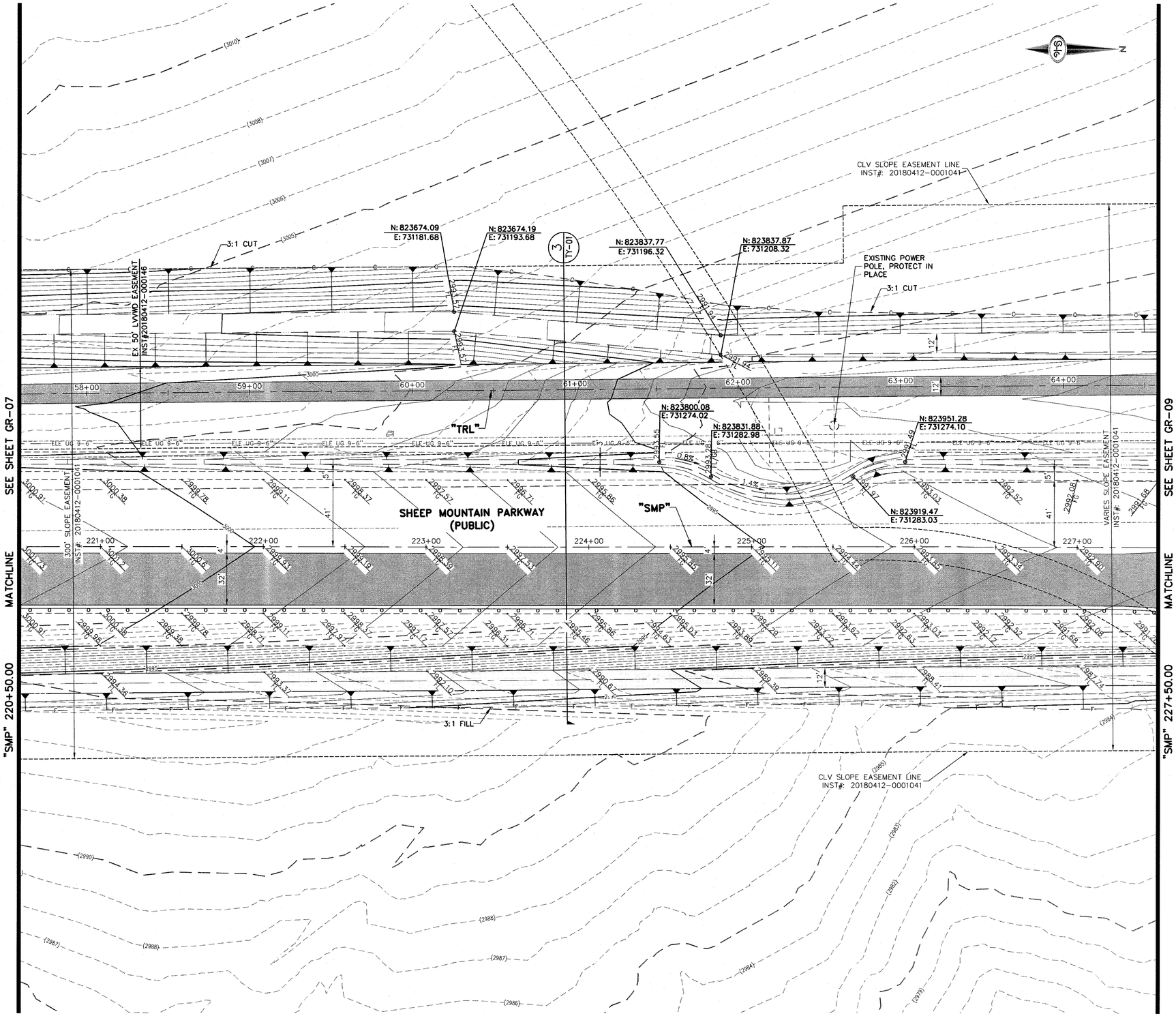
GRADING PLAN - "SMP" 214+00.00 TO "SMP" 220+50.00

DATE: 05/29/18
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CHECKED: JSR
PROJECT NO. OLY1720.000

PROFESSIONAL ENGINEER - STATE OF NEVADA - JERRY SLATER - Exp. 06/30/2018 - CIVIL - No. 14167

GR-07
SHEET 34 OF 50
DWG NO. _____

HANSEN NO. _____



GRADING AND STORM DRAIN NOTES

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LEGEND

- PLANTMIX BITUMINOUS SURFACE
- MAINTENANCE ACCESS PATH
- RIPRAP (SIZE PER PLAN)
- (1) STORM DRAIN LATERAL # (SEE SHEET GR-10)

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JERRY SLATER, P.E. 14167 DATE

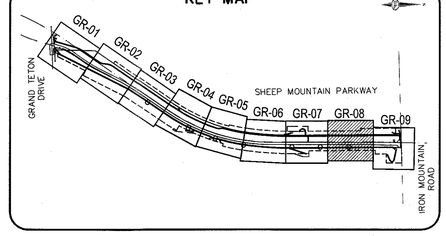
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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

GRADING PLAN - "SMP" 220+50.00 TO "SMP" 227+50.00

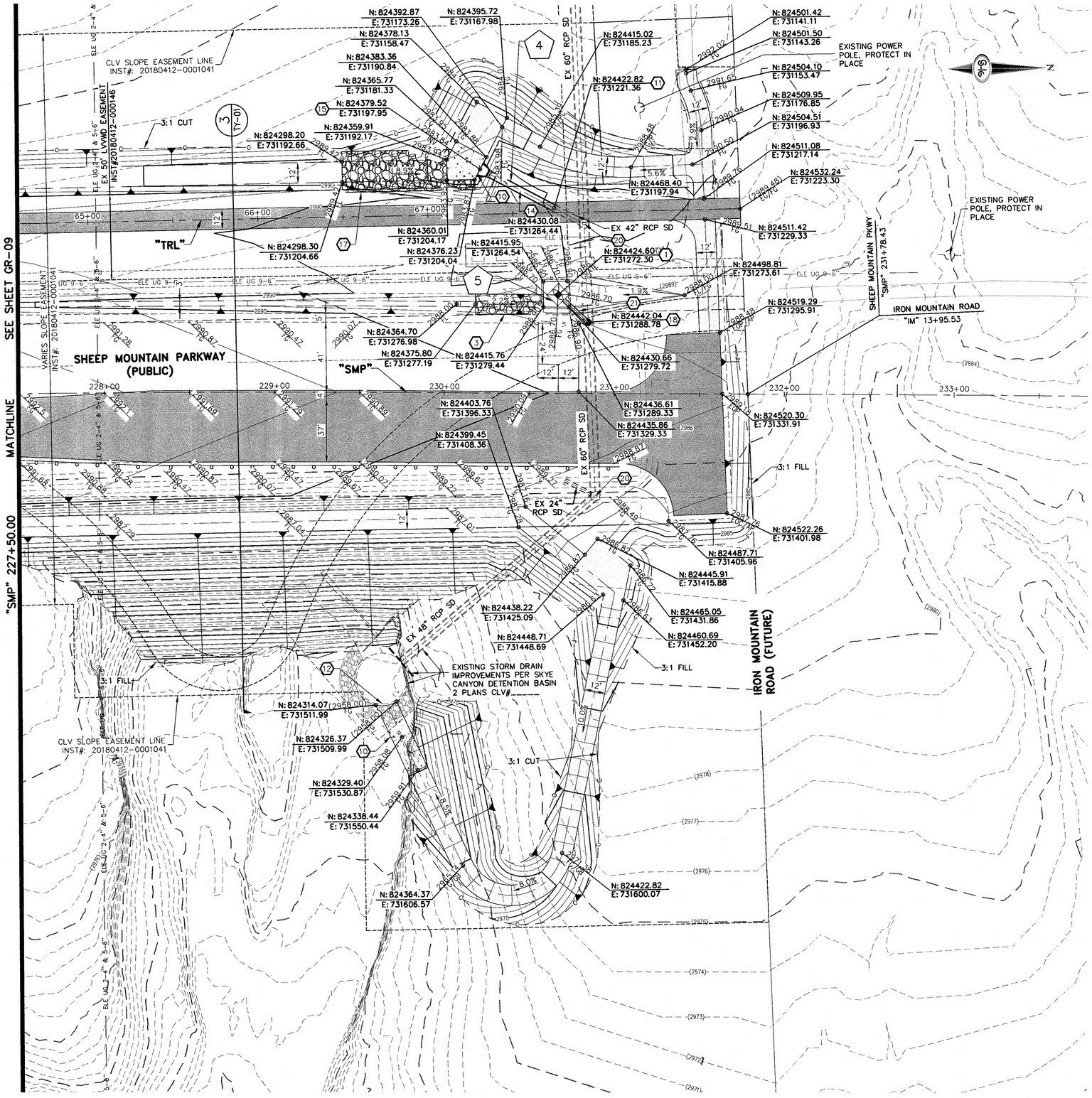
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PROFESSIONAL ENGINEER STATE OF NEVADA JERRY SLATER Exp. 06/30/2018 CIVIL No. 14167

GR-08
SHEET 35 OF 50
DWG NO. _____
HANSEN NO. _____

BCC
BCC
JSR

GR-08
35



GRADING AND STORM DRAIN NOTES

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16. CONSTRUCT 6-INCH THICK CONCRETE PAD OVER 6-INCH TYPE II AGGREGATE BASE WITH 3-FOOT DEEP CUTOFF WALL (DETAIL 1, SHEET TY-03)
17. INSTALL RIPRAP (D50=18-INCH, T=36-INCH)
18. INSTALL 60-INCH TYPE III STORM DRAIN MANHOLE (USDCCA STD. DWG. NO. 406)
19. INSTALL 3-INCH MINUS, 6-INCH THICK GRAVEL OVER 6-INCH TYPE II AGGREGATE BASE
20. ADJUST 60-INCH TYPE III MANHOLE TO FINISH GRADE (CCAUSD NO. 406)
21. INSTALL 24-INCH RCP STORM DRAIN (USDCCA STD. DWG. NO. 503.2)

NOTES

1. SEE TY-SHEETS FOR TYPICAL SECTIONS.
2. SEE SD-SHEETS FOR STORM PROFILES.
3. SEE UT-SHEETS FOR WATER AND SEWER PLAN AND PROFILES.
4. ALL RCP SHALL BE CLASS III UNLESS OTHERWISE SHOWN IN PROFILE.
5. ALL PIPE LENGTHS ARE MEASURED ALONG PIPE CENTERLINE TO CENTER OF MANHOLE OR INSIDE EDGE OF DI OR RCB/RCA.
6. ALL DROP INLETS SHALL INCLUDE STORM WATER MANAGEMENT STAMP AND DETAIL PER USDCCA STD. DWG. NO. 421.
7. SEE STRUCTURAL PLANS FOR ADDITIONAL STRUCTURAL DETAILS AND CONNECTIONS.
8. ALL PIPES ARE PUBLICLY MAINTAINED.

LEGEND

- PLANTMIX BITUMINOUS SURFACE
- MAINTENANCE ACCESS PATH
- RIPRAP (SIZE PER PLAN)
- (1) STORM DRAIN LATERAL # (SEE SHEET GR-10)

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY DS-4952 ON FILE AT THE CITY OF LAS VEGAS FOR THE SUBJECT PROJECT

JERRY SLATER, P.E. 14167 — DATE

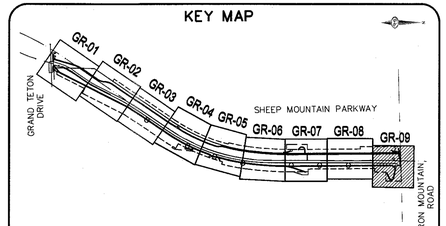
FLOOD ZONE

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE 'X' (OUTSIDE THE 500-YEAR FLOOD PLAIN) ON THE FLOOD INSURANCE RATE MAP (FIRM) PANEL: 32003C1735E, DATED SEPTEMBER 27, 2002

NOTE:

PROPERTY OWNER IS RESPONSIBLE TO MAINTAIN THE BEST MANAGEMENT PRACTICES, SUCH AS BUT NOT LIMITED TO, THE REMOVAL OF ACCUMULATED SEDIMENT AND DEBRIS AND CARE OF VEGETATION.

KEY MAP



30 0 30 60
SCALE FEET

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

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

Call before you Dig Avoid cutting underground utility lines. Call 811 or 1-800-227-2600

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

GRADING PLAN - "SMP" 227+50.00 TO "SMP" 233+50.00

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

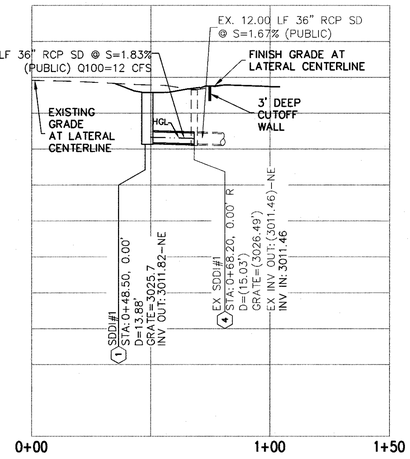
PROJECT NO.
OLY1720.000

PROFESSIONAL ENGINEER STATE OF NEVADA JERRY J. SLATER Exp. 06/30/2018 CIVIL No. 14167

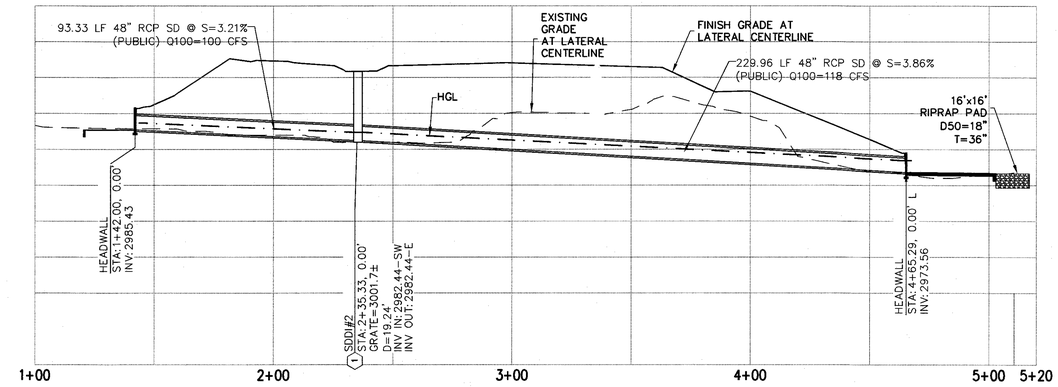
GR-09
SHEET 36 OF 50

DWG NO. _____

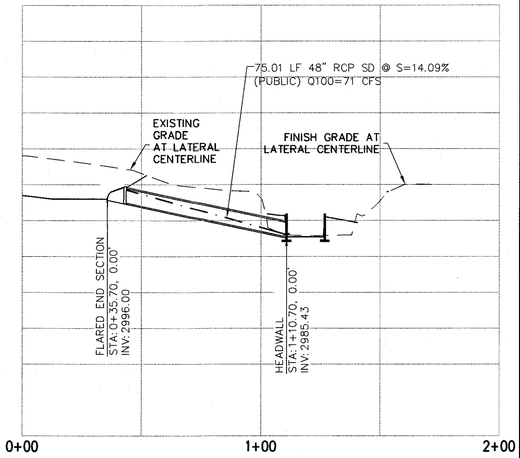
HANSEN NO. _____



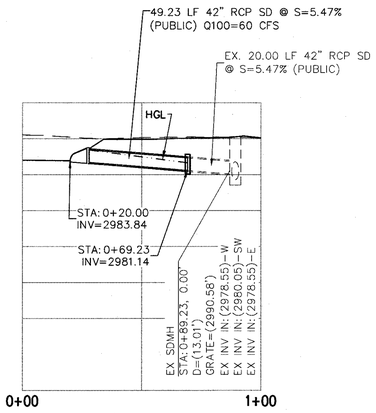
LATERAL PROFILE 1
SCALE HORIZ: 1" = 30'
SCALE VERT: 1" = 20'



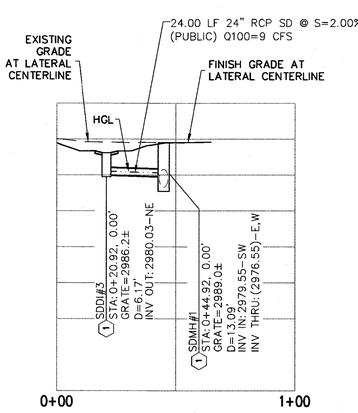
LATERAL PROFILE 2
SCALE HORIZ: 1" = 30'
SCALE VERT: 1" = 20'



LATERAL PROFILE 3
SCALE HORIZ: 1" = 30'
SCALE VERT: 1" = 20'



LATERAL PROFILE 4
SCALE HORIZ: 1" = 30'
SCALE VERT: 1" = 20'



LATERAL PROFILE 5
SCALE HORIZ: 1" = 30'
SCALE VERT: 1" = 20'

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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

STORM DRAIN LATERAL PROFILES

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

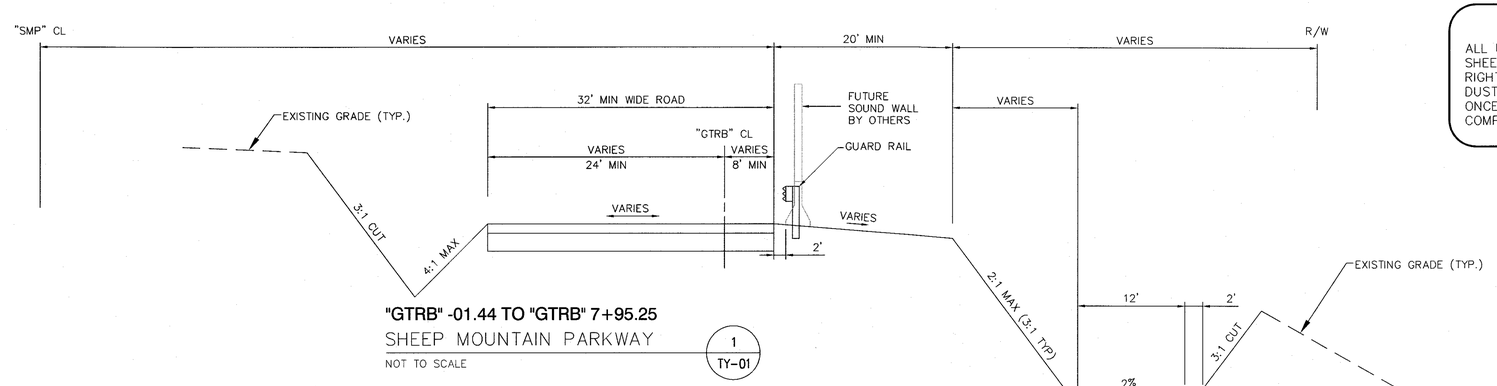
PROJECT NO.
OLY1720.000

PROFESSIONAL ENGINEER – STATE OF NEVADA
JERRY SLATER
Exp. 06/30/2018
CIVIL
No. 14167

GR-10
SHEET 37 OF 50

DWG NO. _____

HANSEN NO. _____

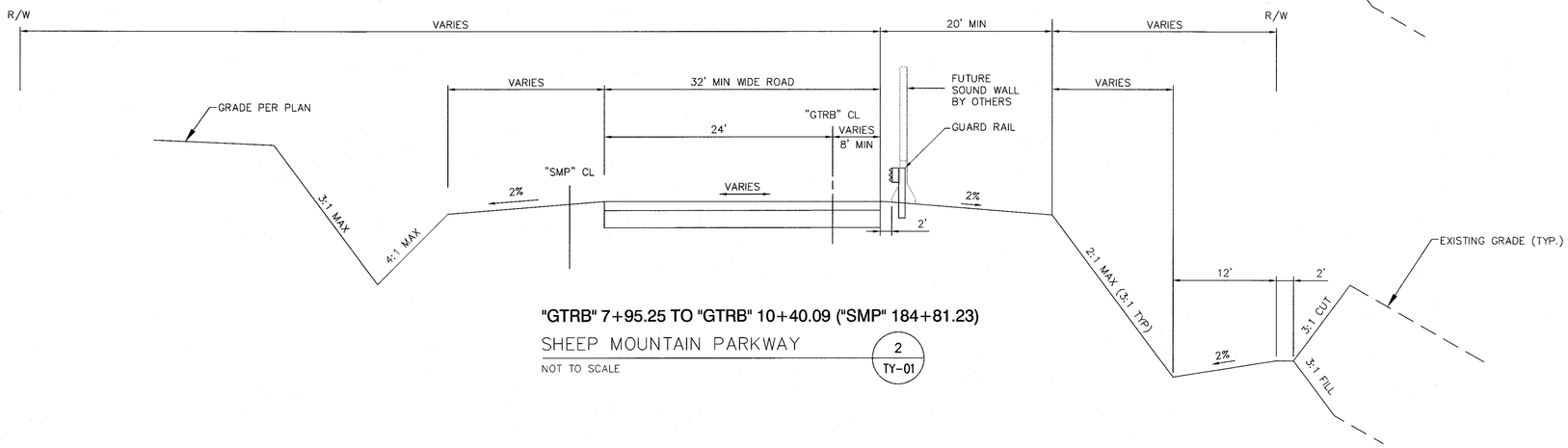


"GTRB" -01.44 TO "GTRB" 7+95.25

SHEEP MOUNTAIN PARKWAY

NOT TO SCALE

1 TY-01

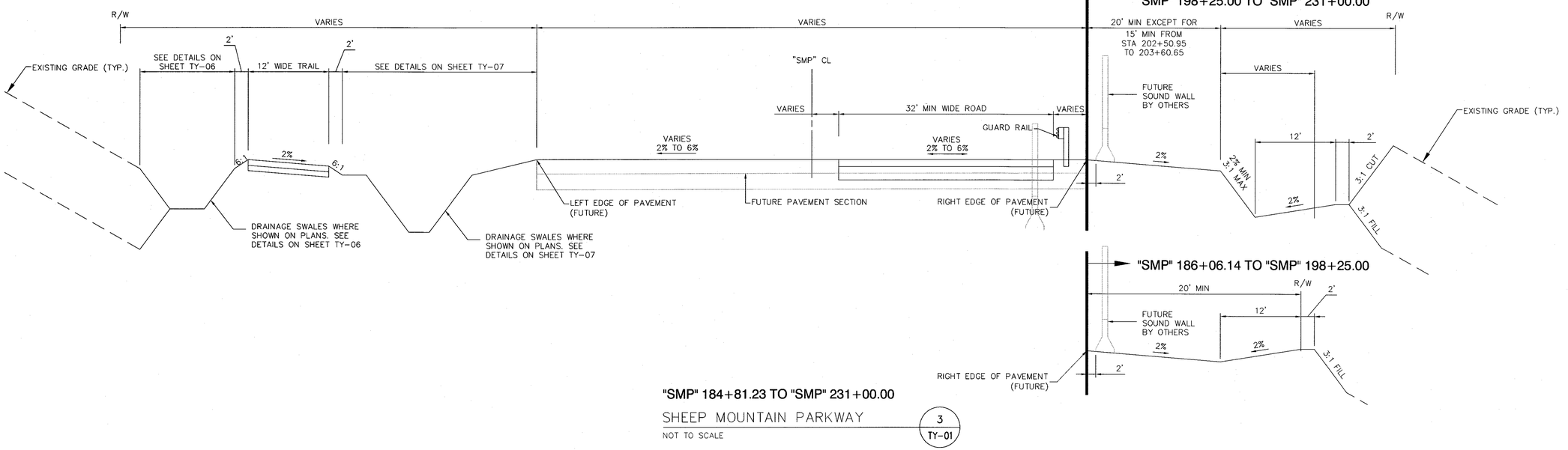


"GTRB" 7+95.25 TO "GTRB" 10+40.09 ("SMP" 184+81.23)

SHEEP MOUNTAIN PARKWAY

NOT TO SCALE

2 TY-01



"SMP" 186+06.14 TO "SMP" 198+25.00

"SMP" 184+81.23 TO "SMP" 231+00.00

SHEEP MOUNTAIN PARKWAY

NOT TO SCALE

3 TY-01

NOTE

ALL UNPAVED AREAS WITHIN THE SHEEP MOUNTAIN PARKWAY RIGHT-OF-WAY SHALL RECEIVE A DUST PALLIATIVE APPLICATION ONCE CONSTRUCTION IS COMPLETE

SLATER HANIFAN GROUP
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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

TYPICAL SECTIONS 1

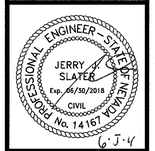
DATE: 05/29/18

DRAFTER: BCC

DESIGNER: BCC

CHECKED: JSR

PROJECT NO.
OLY1720.000

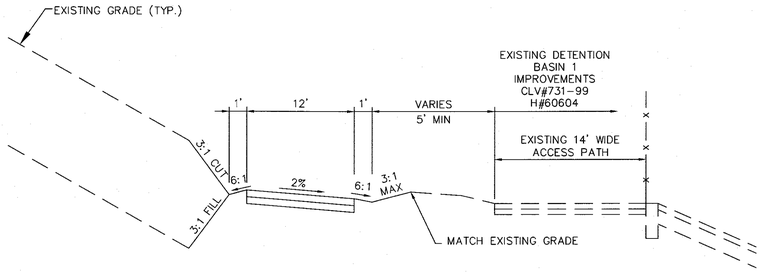


TY-01

SHEET 38 OF 50

DWG NO. _____

HANSEN NO. _____

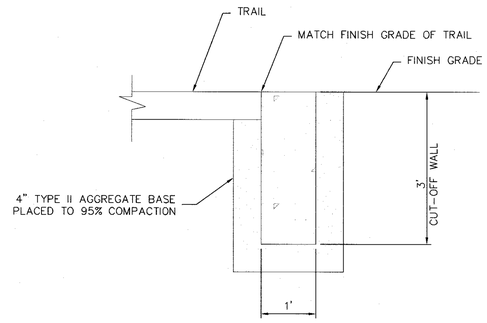


"TRL" 11+55.96 TO "TRL" 21+73.50

TRAIL SECTION

NOT TO SCALE

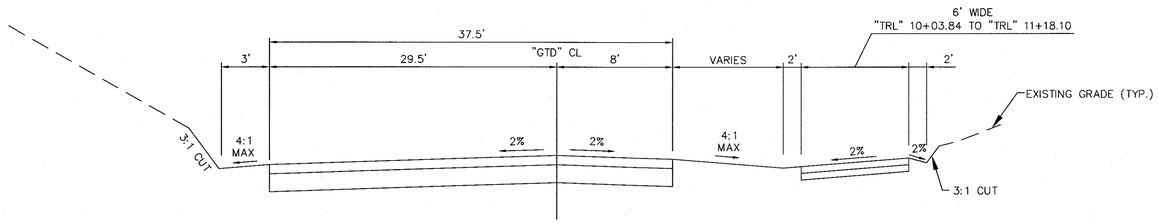
1 TY-02



CONCRETE CUTOFF WALL

NOT TO SCALE

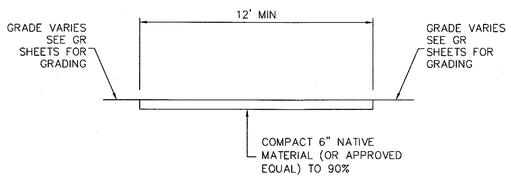
4 TY-02



GRAND TETON DRIVE

NOT TO SCALE

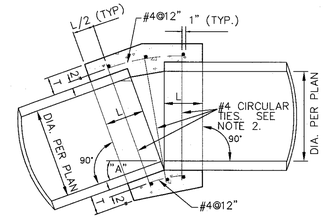
2 TY-02



MAINTENANCE ACCESS PATH

NOT TO SCALE

3 TY-02



PLAN

NOTES:

1. WHERE THE SLOPE OF THE UPSTREAM PIPE IS GREATER THAN THE SLOPE OF THE DOWNSTREAM PIPE, JOIN SOFFITS. WHERE THE SLOPE OF THE UPSTREAM PIPE IS LESS THAN THE SLOPE OF THE DOWNSTREAM PIPE, JOIN INVERTS.
2. WHERE THE SPACE BETWEEN THE PIPE EXTREMITIES EXCEEDS 2 1/2 INCHES, THE NUMBER OF CIRCULAR TIES SHALL BE INCREASED TO MAINTAIN A MAXIMUM SPACING OF 6 INCHES CENTER TO CENTER. CIRCULAR TIES SHALL HAVE A DIAMETER 5 INCHES GREATER THAN THE OUTSIDE DIAMETER OF THE LARGER PIPE.

CIRCULAR TIES

PIPE DIAMETER	SPACE BETWEEN PIPE EXTREMITIES	NO. OF CIRCULAR TIES	L	T
18"	2 1/2"	3	12"	5"
24"	2 1/2"	3	12"	6"
30"	2 1/2"	3	12"	7"
36"	2 1/2" or less	4	18"	9"
60"	2 1/2" or less	5	21"	11"

CONCRETE COLLAR

NOT TO SCALE

5 TY-02

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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

TYPICAL SECTIONS 2

DATE: 05/29/18

DRAFTER: BCC

DESIGNER: BCC

CHECKED: JSR

PROJECT NO. OLY1720.000

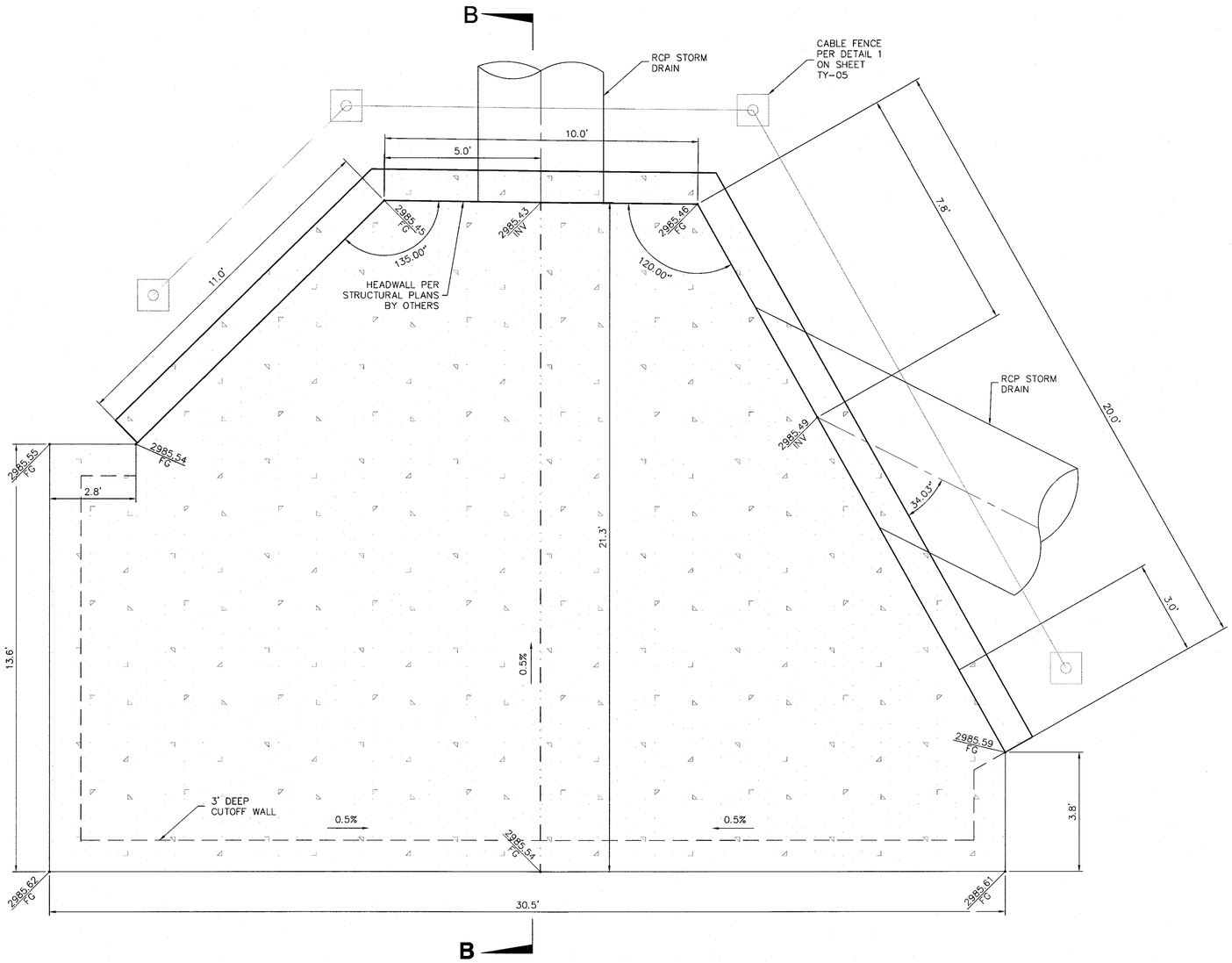
PROFESSIONAL ENGINEER STATE OF NEVADA JERRY A. SLATER Exp 06/30/2018 CIVIL No. 14167

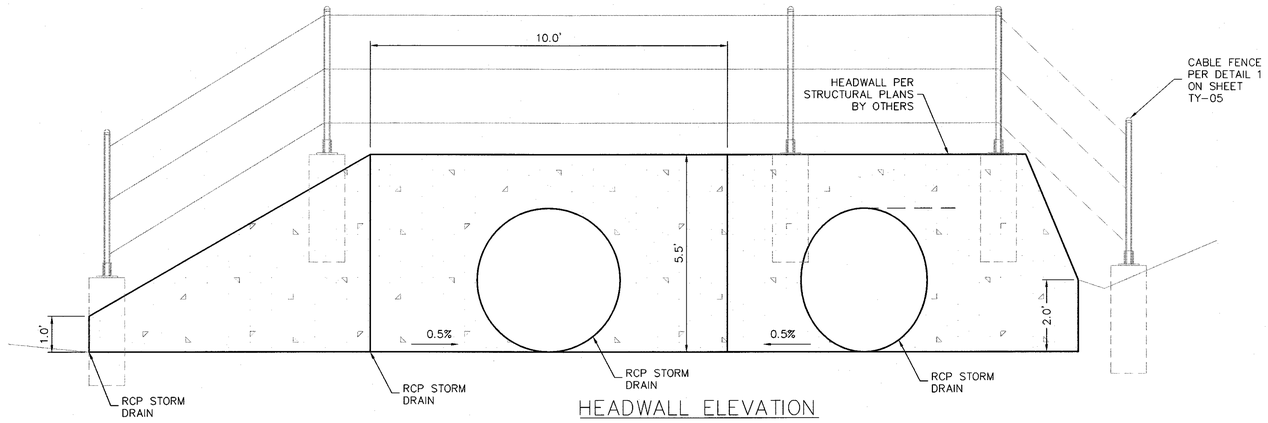
TY-02

SHEET 39 OF 50

DWG NO. _____

HANSEN NO. _____

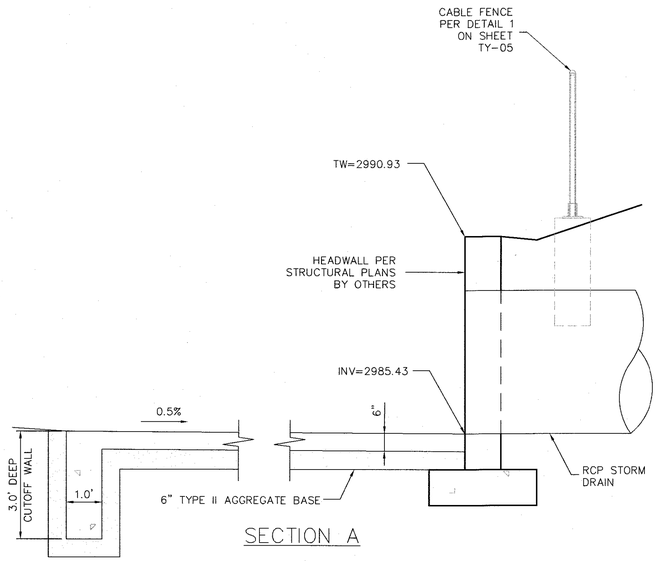




HEADWALL ELEVATION

CONCRETE AND HEADWALL DETAIL 1 TY-03

NOT TO SCALE



SECTION A

SLATER HANIFAN GROUP
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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

DETAILS 1

DATE: 05/29/18

DRAFTER: BCC

DESIGNER: BCC

CHECKED: JSR

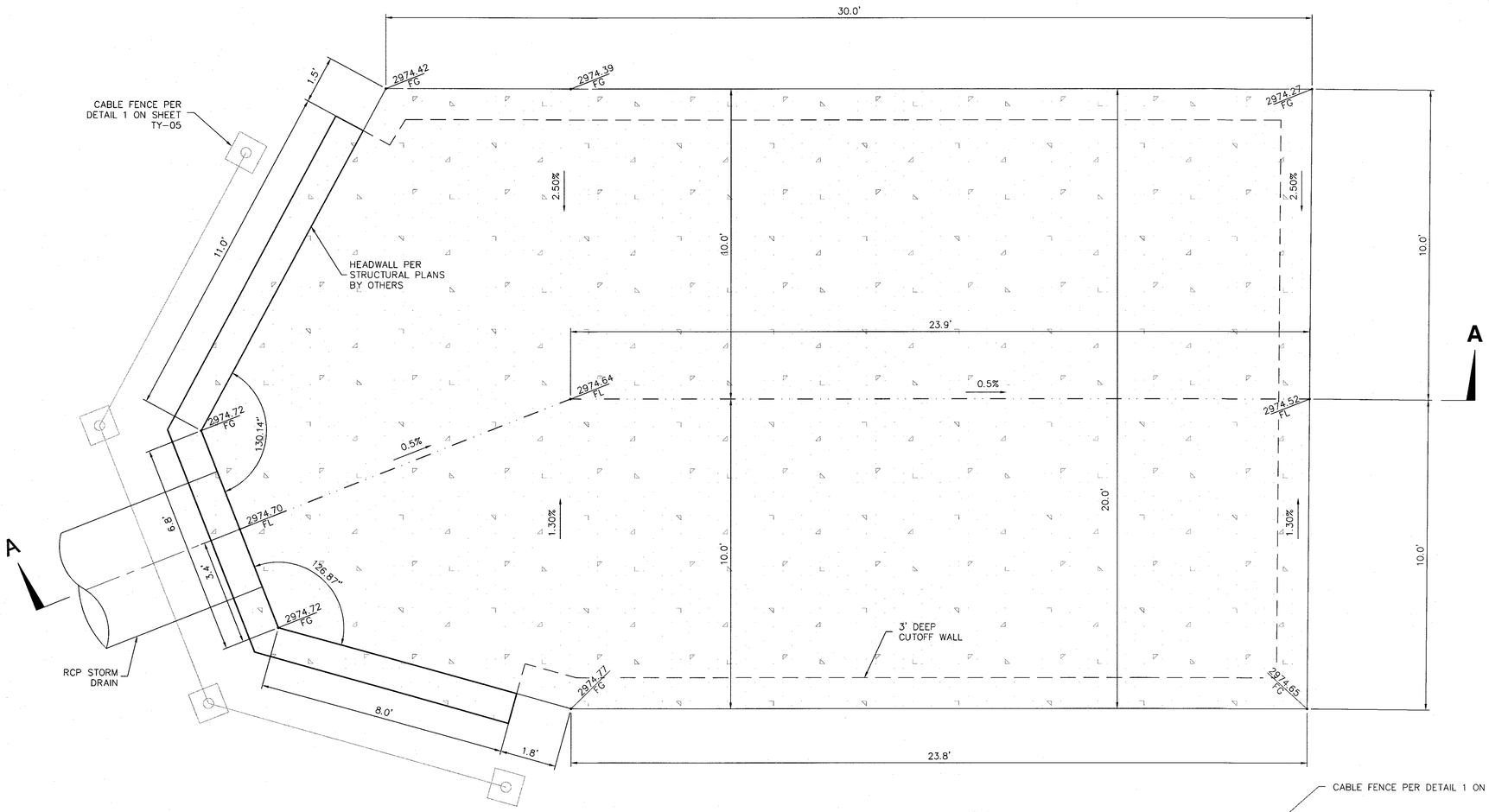
PROJECT NO.
OLY1720.000

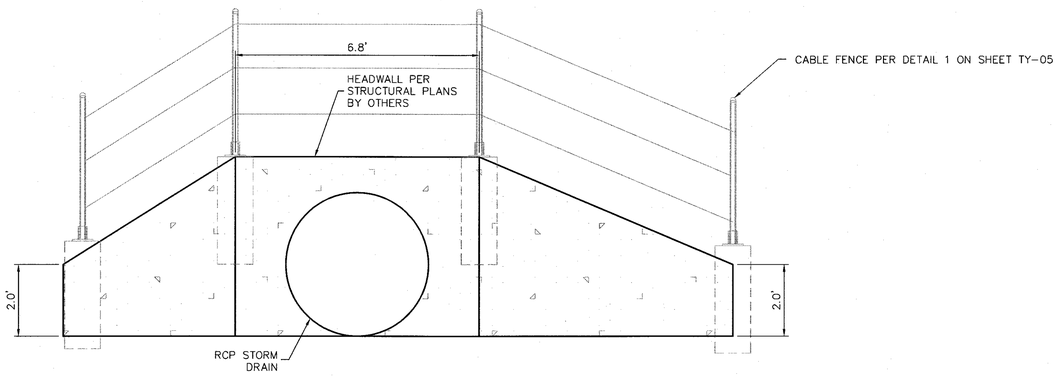
PROFESSIONAL ENGINEER STATE OF NEVADA
JERRY A. SLATER
Exp. 06/30/2018
CIVIL
No. 14167
6.3.18

TY-03
SHEET 40 OF 50

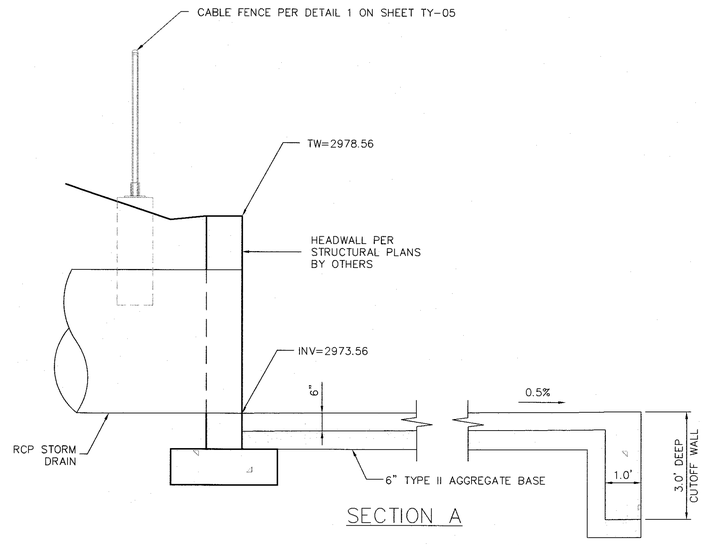
DWG NO. _____

HANSEN NO. _____





HEADWALL ELEVATION



SECTION A

CONCRETE AND HEADWALL DETAIL 1 TY-04

NOT TO SCALE

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
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PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

DETAILS 2

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

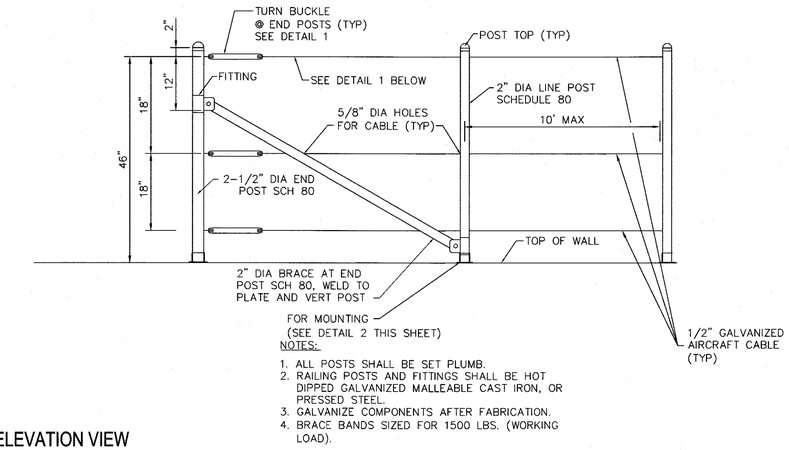
PROJECT NO.
OLY1720.000

PROFESSIONAL ENGINEER - STATE OF NEVADA
JERRY SLATER
Exp. 06/30/2018
CIVIL
No. 14167

TY-04
SHEET 41 OF 50

DWG NO. _____

HANSEN NO. _____

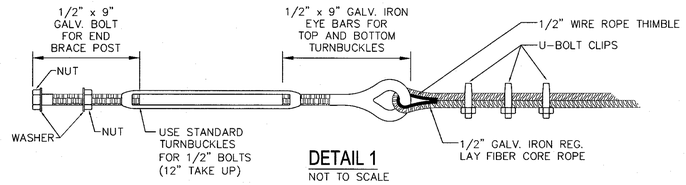


NOTES:

1. ALL POSTS SHALL BE SET PLUMB.
2. RAILING POSTS AND FITTINGS SHALL BE HOT DIPPED GALVANIZED MALLEABLE CAST IRON, OR PRESSED STEEL.
3. GALVANIZE COMPONENTS AFTER FABRICATION.
4. BRACE BANDS SIZED FOR 1500 LBS. (WORKING LOAD).

ELEVATION VIEW

NOT TO SCALE



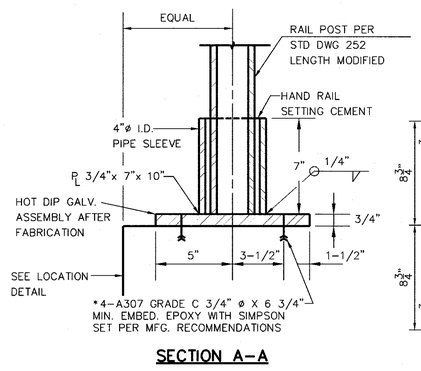
DETAIL 1

NOT TO SCALE

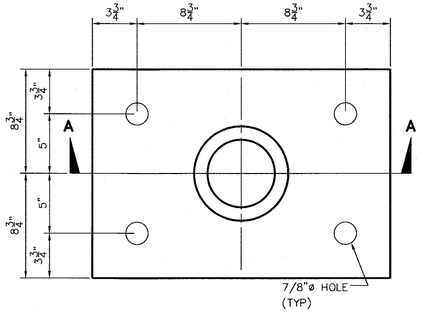
POST AND CABLE RAILING

NOT TO SCALE

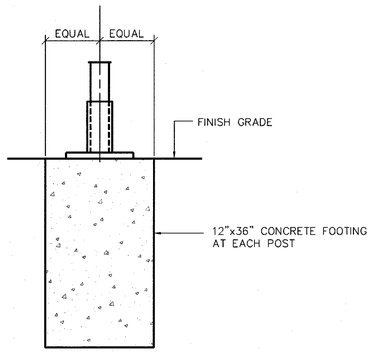
1 / DT-01



SECTION A-A



* NOTE:
FOR 8" WALLS - ROTATE PLATE AND USE (4) BOLTS. POLE MOUNTS SHALL NOT BE LOCATED WITHIN 1-FOOT OF CONTRACTION OR EXPANSION JOINTS



FOUNDATION

POST, CABLE MOUNT POLE

NOT TO SCALE

1 / TY-05

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

DETAILS 3

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

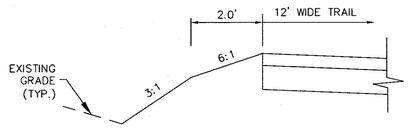
PROJECT NO.
OLY1720.000

PROFESSIONAL ENGINEER - STATE OF NEVADA
JERRY SLATER
Exp. 06/30/2018
CIVIL
No. 14167

TY-05
SHEET 42 OF 50

DWG NO. _____

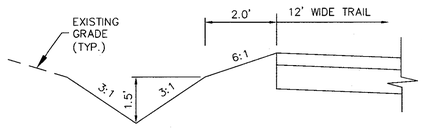
HANSEN NO. _____



"TRL" 21+73.50 TO "TRL" 29+99.53

SECTION (WEST SIDE OF TRAIL)

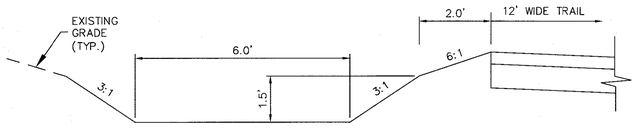
NOT TO SCALE



"TRL" 29+99.53 TO "TRL" 30+50.15

SECTION (WEST SIDE OF TRAIL)

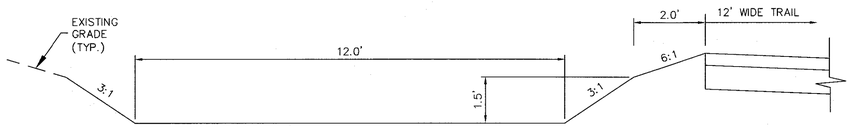
NOT TO SCALE



"TRL" 30+50.15 TO "TRL" 32+83.07

SECTION (WEST SIDE OF TRAIL)

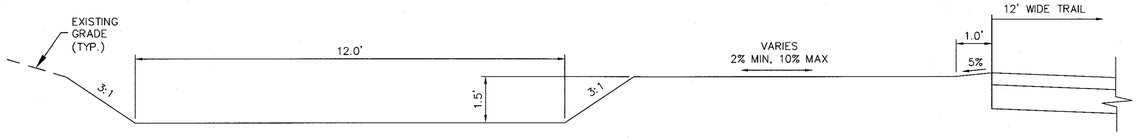
NOT TO SCALE



"TRL" 34+00.08 TO "TRL" 40+38.05

SECTION (WEST SIDE OF TRAIL)

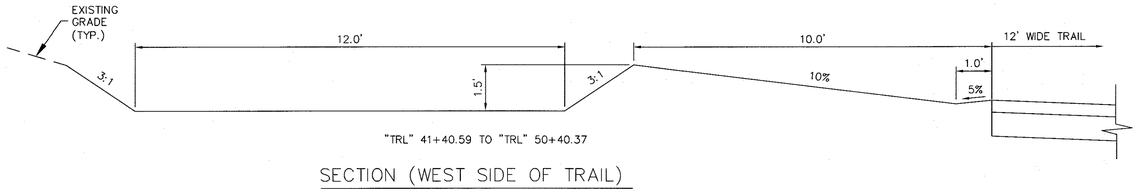
NOT TO SCALE



"TRL" 40+38.05 TO "TRL" 41+40.59

SECTION (WEST SIDE OF TRAIL)

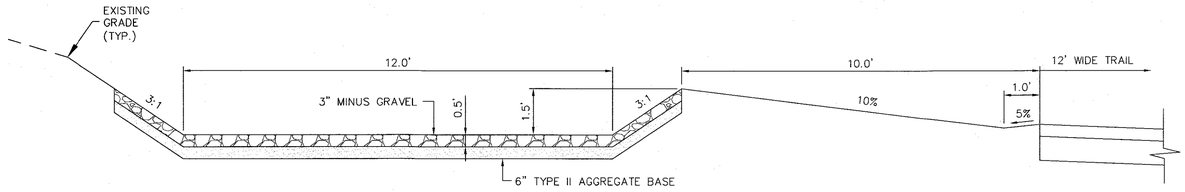
NOT TO SCALE



"TRL" 41+40.59 TO "TRL" 50+40.37

SECTION (WEST SIDE OF TRAIL)

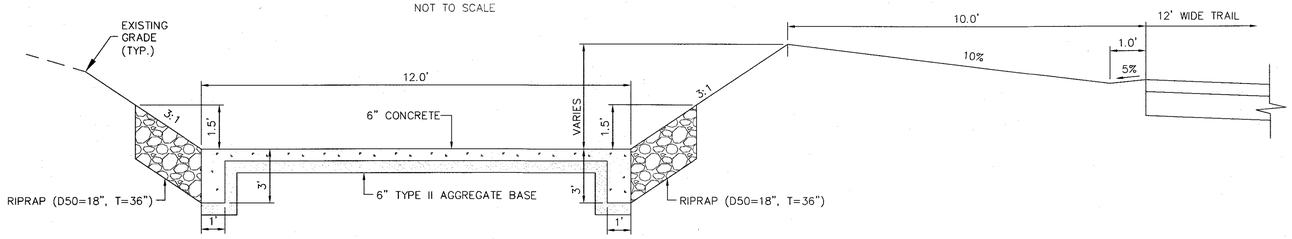
NOT TO SCALE



"TRL" 50+40.37 TO "TRL" 50+80.56

SECTION (WEST SIDE OF TRAIL)

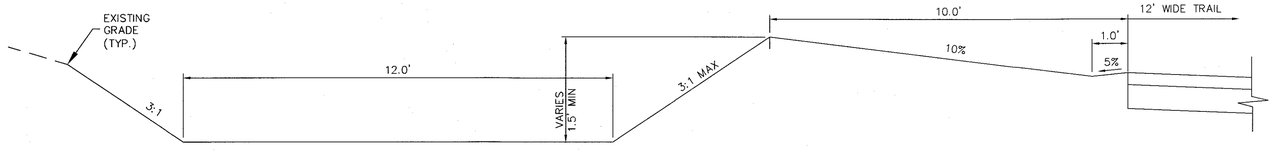
NOT TO SCALE



"TRL" 50+80.56 TO "TRL" 51+94.63

SECTION (WEST SIDE OF TRAIL)

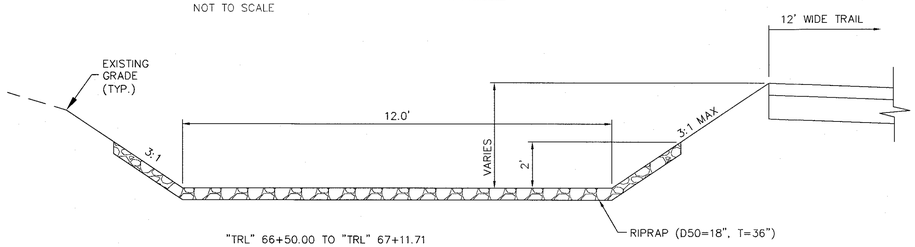
NOT TO SCALE



"TRL" 54+38.20 TO "TRL" 66+50.00

SECTION (WEST SIDE OF TRAIL)

NOT TO SCALE



"TRL" 66+50.00 TO "TRL" 67+11.71

SECTION (WEST SIDE OF TRAIL)

NOT TO SCALE

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY
DRAINAGE SWALE SECTIONS 1

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR

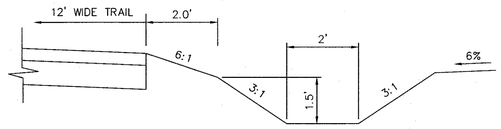
PROJECT NO.
OLY1720.000

PROFESSIONAL ENGINEER STATE OF NEVADA
JERRY SLATER
Exp. 06/30/2018
CIVIL
No. 14167
6-30-18

TY-06
SHEET 43 OF 50

DWG NO. _____

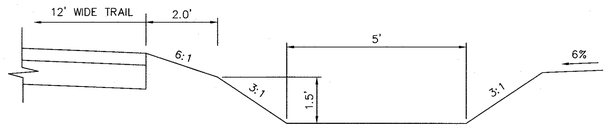
HANSEN NO. _____



"TRL" 22+40.35 TO "TRL" 28+00.00

SECTION (EAST SIDE OF TRAIL)

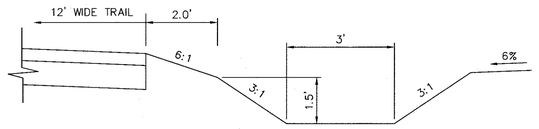
NOT TO SCALE



"TRL" 28+25.00 TO "TRL" 33+42.78

SECTION (EAST SIDE OF TRAIL)

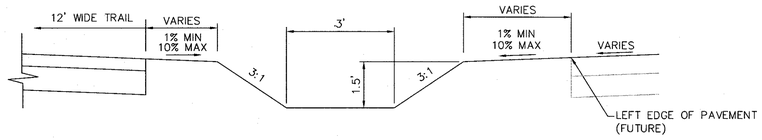
NOT TO SCALE



"TRL" 34+00.00 TO "TRL" 36+75.01

SECTION (EAST SIDE OF TRAIL)

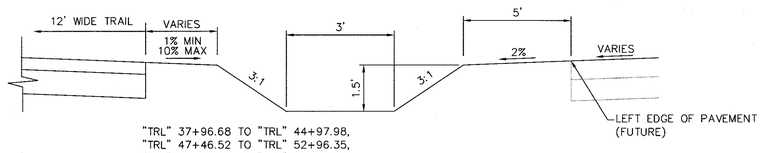
NOT TO SCALE



"TRL" 36+75.01 TO "TRL" 37+96.68

SECTION (EAST SIDE OF TRAIL)

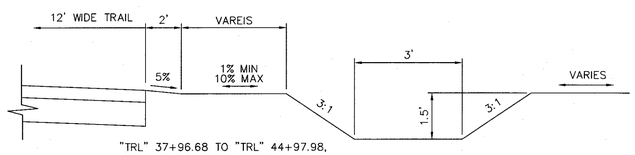
NOT TO SCALE



"TRL" 37+96.68 TO "TRL" 44+97.98,
"TRL" 47+46.52 TO "TRL" 52+96.35,
"TRL" 55+22.65 TO "TRL" 61+51.25,
"TRL" 63+02.44 TO "TRL" 67+26.76

SECTION (EAST SIDE OF TRAIL)

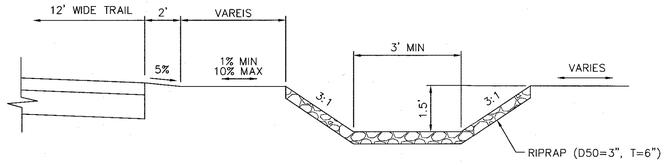
NOT TO SCALE



"TRL" 37+96.68 TO "TRL" 44+97.98,
"TRL" 53+58.32 TO "TRL" 54+22.31,
"TRL" 54+85.58 TO "TRL" 55+22.65,
"TRL" 61+51.25 TO "TRL" 63+02.44

SECTION (EAST SIDE OF TRAIL)

NOT TO SCALE



"TRL" 52+96.35 TO "TRL" 53+44.36

SECTION (EAST SIDE OF TRAIL)

NOT TO SCALE

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

DRAINAGE SWALE SECTIONS 2

DATE: 05/29/18

DRAFTER: BCC

DESIGNER: BCC

CHECKED: JSR

PROJECT NO.
OLY1720.000

PROFESSIONAL ENGINEER STATE OF NEVADA
JERRY C. SLATER
Exp. 06/30/2018
CIVIL
No. 14167

TY-07

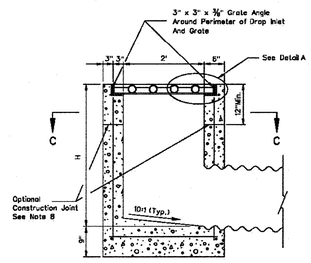
SHEET 44 OF 50

DWG NO. _____

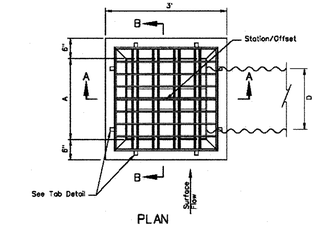
HANSEN NO. _____

PIPE SIZE (INCH)	A	H Min. (FT)	CONCRETE (CU. YD.) BASE QUAN. (H Min.)	CONCRETE (CU. YD.) ADD RATE (CU. YD./FT)	REINFORCING (LB) BASE QUAN. (H Min.)	REINFORCING (LB) ADD RATE (LB./FT)	STRUCTURAL STEEL (LB)
15"	2"	2.50	0.71	0.19	36	10	229
18"	2' 6"	3.00	0.89	0.20	40	10	254
24"	3"	3.50	1.08	0.22	58	12	278
30"	3' 6"	4.00	1.28	0.24	63	12	304
36"	4'	4.50	1.50	0.26	67	13	328
42"	4' 6"	5.00	1.71	0.28	90	15	353
48"	5'	5.50	1.94	0.30	95	15	378

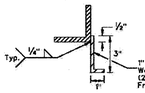
The Concrete And Reinforcing Quantities Are Based On The H Min. Shown. Increase The Concrete And Reinforcing Base Quantity By The Corresponding Add Rate (Per Foot Of Increased H) If The H Specified Is Larger Than H Min.



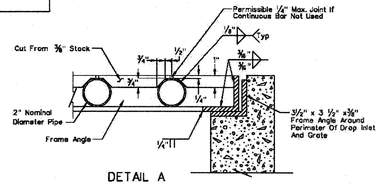
SECTION A-A



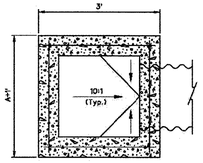
PLAN



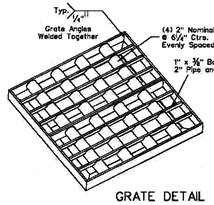
TAB DETAIL



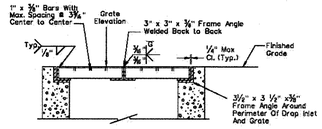
DETAIL A



SECTION C-C



GRATE DETAIL



SECTION B-B

NOTES:

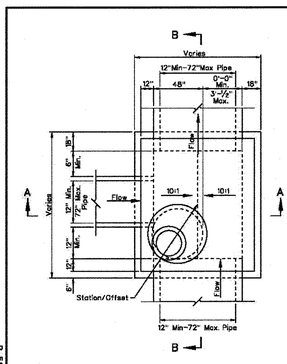
1. All concrete shall be class A or AA.
2. Reinforcing steel shall be No. 4 bars with maximum spacing at 18 inch centers, wired tightly at all intersections and embedded 2 inches clear of all concrete surfaces.
3. Exposed edges of concrete shall be chamfered 1 inch.
4. Structural steel weight includes the 2 inch normal diameter pipe standard weight and frame angles (3"x 3"x 3/8") and (3 1/2"x 3 1/2"x 3/8").
5. For 2 inch nominal diameter pipe see ASTM A53.
6. See sheet R-2.9.1 for details if connecting HDPE pipe.
7. Slope catch basin floors 10:1 from all directions toward outlet pipe. If basin is used as a junction, shape flow line(s) to outlet pipe and provide a 10:1 slope to flow line(s).
8. Run rebar continuous thru construction joint. Joint must be a minimum 3 inches from horizontal bars.
9. Additional pipe penetrations may be placed in any wall.

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

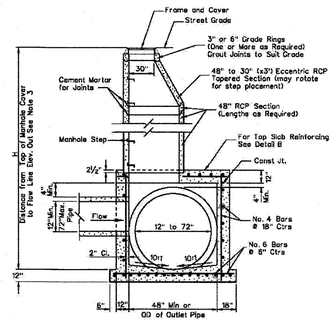
DROP INLET
TYPE 2B

R-4.2.2	(609)	Signed Original On File
ADOPTED 11/08	REVISED 10/19	CHIEF HYDRAULICS ENGR.

R-58



PLAN

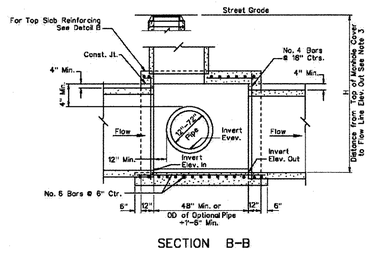


For Variable Height Situations

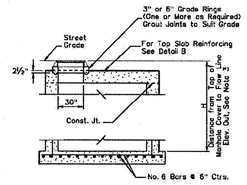
SECTION A-A

NOTES:

1. All concrete shall be class A or AA.
2. Inflow pipe invert elevations shall be greater than or equal to 0.1 foot above the outflow pipe invert elevation.
3. For values of "H", see plans. "H" is the difference in elevation between the outflow pipe invert elevation and the top of manhole elevation at street grade.
4. Precast concrete pipe sections, tapered sections, lids, grade rings, bases, and steps shall conform to AASHTO M 199 (ASTM C-478).
5. Manhole cover shall bear entity identification and system function (if applicable).
6. Shape flowline in manhole to outlet pipe, and provide a 10:1 slope from all directions toward flow line.
7. Refer to sheet R-2.9.1 for details if connecting to HDPE pipe.

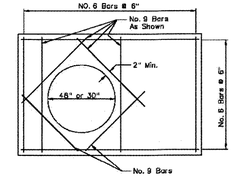


SECTION B-B



For Minimum Height Situation
Hydraulic Engineer Will Look at Other Options for Extreme Minimum Cover Situations.

SECTION A-A



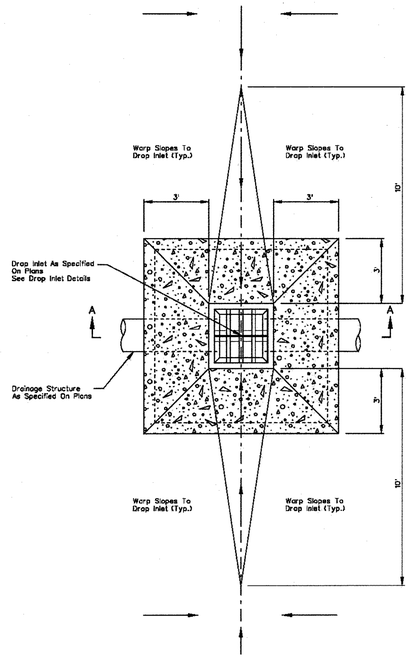
Top Slab Reinforcing
DETAIL B

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

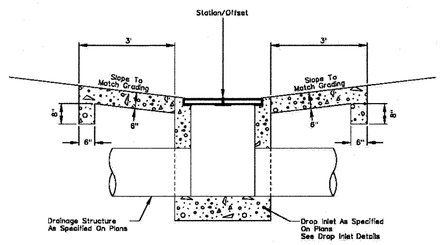
MANHOLE
TYPE 4

R-4.3.2	(609)	Signed Original On File
ADOPTED 10/88	REVISED 5/09	CHIEF HYDRAULICS ENGR.

R-53



CONCRETE APRON



SECTION A-A

NOTES:

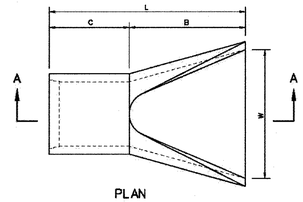
1. Concrete shall be class A or AA.

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

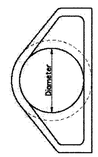
DROP INLET
CONCRETE APRON

R-4.2.7	(609)	Signed Original On File
ADOPTED 3/08	REVISED	CHIEF HYDRAULICS ENGR.

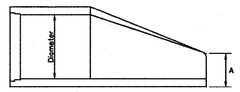
R-21



PLAN



END VIEW



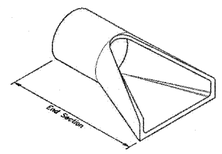
SECTION A-A

NOTES:

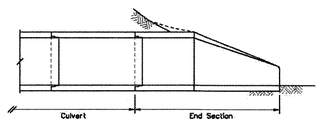
1. Class and type of concrete shall be as specified for reinforced concrete pipe.
2. Structural design of end section shall conform to that of standard reinforced concrete culvert pipe.
3. Length of pipe shown on the design plans does not include connector section (length C).
4. Contact hydraulics Engineer for sizes not listed.
5. Actual dimensions of end sections may vary by manufacturer. Adjust pipe lengths as necessary to accommodate precast end sections used. See sheets R-1.1.2 and R-2.1.4 for extension beyond fill slope and pipe pay lengths.

DIAMETER	WEIGHT	A	B	C *	L	W
18"	670	9"	27"	46"	73"	38"
24"	1300	9 ½"	43 ½"	80"	75 ½"	48"
30"	1850	12"	54"	92 ½"	75 ½"	60"
36"	3500	15"	63"	34 ½"	97"	72"
42"	4930	21"	67"	35"	98"	78"
48"	6700	24"	72"	28"	98"	84"
54"	7150	27"	65"	30"	100"	90"

* For Reference Only



ISOMETRIC VIEW



CROSS SECTION VIEW
18" TO 54" RCP

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

RCP END SECTION
18" TO 54" RCP

R-2.3.1	(803)	Signed Original On File
ADOPTED 1/73	REVISED 10/15	CHIEF HYDRAULICS ENGR.

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC

SHEEP MOUNTAIN PARKWAY

NDOT DETAILS

DATE: 05/29/18
DRAFTER: BCC
DESIGNER: BCC
CHECKED: JSR
PROJECT NO.
OLY1720.000

PROFESSIONAL ENGINEER STATE OF NEVADA
JERRY J. SLATER
Exp. 06/30/2018
CIVIL
No. 14167

TY-08
SHEET 45 OF 50
DWG NO. _____

HANSEN NO. _____

DEPARTMENT OF PUBLIC WORKS

Mayor:
CAROLYN G. GOODMAN

City Council:
STEVEN D. ROSS (Mayor Pro-Tem)
LOIS TARKANIAN
RICKI Y. BARLOW
STAVROS S. ANTHONY
BOB COFFIN
BOB BEERS

City Manager:
ELIZABETH N. FRETWELL

Director of Public Works:
DAVID N. BOWERS, P.E., P.T.O.E.

City Engineer:
ALLEN E. PAVELKA, P.E.

Funded By:
CITY OF LAS VEGAS

SHEEP MOUNTAIN PARKWAY
PROOF OF CONCEPT PLANS

PREPARED BY
HORROCKS ENGINEERS
1349 Galleria Drive, Suite 110
Henderson, NV 89014
(702) 966-4063

NO.	DATE	SHEET	REVISIONS

PREPARED FOR
CITY OF LAS VEGAS

H# XXXXX | BID# XX.XXXX
DATE: 02/03/16 | DESIGNED BY: XXX
SUBMITTAL STAGE: **00% - PRELIMINARY** | DRAWN BY: XXX | CHECKED BY: XXX

TITLE
SHEEP MOUNTAIN IMPROVEMENT

SHEET
COVER SHEET

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

SHEET
G1.01
1 OF 42
DRAWING NO.
XXX-XXXX

PRELIMINARY NOT FOR CONSTRUCTION

SHEET INDEX

1	G1.01	COVER SHEET
2	G1.02	LEGEND, KEY MAP AND INDEX
3	G1.03	NOT USED
4	H1.01	GEOMETRIC CONTROL PLAN 1 OF 2
5	H1.02	GEOMETRIC CONTROL PLAN 2 OF 2
6	TY1.01	TYPICAL SECTIONS 1 OF 5
7	TY1.02	TYPICAL SECTIONS 2 OF 5
8	TY1.03	TYPICAL SECTIONS 3 OF 5
9	TY1.04	TYPICAL SECTIONS 4 OF 5
10	TY1.05	TYPICAL SECTIONS 5 OF 5
11	C1.01	SHEEP MTN. PLAN AND PROFILE-STA. 150+00 TO 163+00
12	C1.02	SHEEP MTN. PLAN AND PROFILE-STA.163+00 TO 176+00
13	C1.03	SHEEP MTN. PLAN AND PROFILE-STA.176+00 TO 189+00
14	C1.04	SHEEP MTN. PLAN AND PROFILE-STA.189+00 TO 202+00
15	C1.05	SHEEP MTN. PLAN AND PROFILE-STA.202+00 TO 215+00
16	C1.06	SHEEP MTN. PLAN AND PROFILE-STA.215+00 TO 228+00
17	C1.07	SHEEP MTN. PLAN AND PROFILE-STA.228+00 TO 241+00
18	C1.08	SHEEP MTN. PLAN AND PROFILE-STA.241+00 TO 254+00
19	C1.09	SHEEP MTN. PLAN AND PROFILE-STA.254+00 TO 266+00
20	C1.10	SHEEP MTN. PLAN AND PROFILE-STA.266+00 TO 278+00
21	C1.11	GRAND TETON RAMP "A" PLAN AND PROFILE-STA.0+00 TO 13+00
22	C1.12	GRAND TETON RAMP "A" PLAN AND PROFILE-STA.13+00 TO 22+00
23	C1.13	GRAND TETON RAMP "B" PLAN AND PROFILE-STA.0+00 TO 13+00
24	C1.14	GRAND TETON RAMP "B" PLAN AND PROFILE-STA.13+00 TO 21+00
25	C1.15	GRAND TETON RAMP "C" PLAN AND PROFILE-STA.0+00 TO 13+00
26	C1.16	GRAND TETON RAMP "C" PLAN AND PROFILE-STA.13+00 TO 21+00
27	C1.17	GRAND TETON RAMP "D" PLAN AND PROFILE-STA.0+00 TO 15+00
28	C1.18	KYLE CANYON RAMP "A" PLAN AND PROFILE-STA.0+00 TO 8+00
29	C1.19	KYLE CANYON RAMP "A" PLAN AND PROFILE-STA.8+00 TO 17+00
30	C1.20	KYLE CANYON RAMP "B" PLAN AND PROFILE-STA.0+00 TO 11+00
31	C1.21	KYLE CANYON RAMP "B" PLAN AND PROFILE-STA.11+00 TO 19+00
32	C1.22	KYLE CANYON RAMP "C" PLAN AND PROFILE-STA.0+00 TO 13+00
33	C1.23	KYLE CANYON RAMP "C" PLAN AND PROFILE-STA.13+00 TO 23+00
34	C1.24	KYLE CANYON RAMP "D" PLAN AND PROFILE-STA.0+00 TO 13+00
35	C1.25	KYLE CANYON RAMP "D" PLAN AND PROFILE-STA.13+00 TO 23+00
36	C1.26	GRAND TETON ROAD-PLAN AND PROFILE STA.0+00 TO 13+00
37	C1.27	GRAND TETON ROAD-PLAN AND PROFILE STA.13+00 TO 26+00
38	C1.28	SKYE CANYON PLAN AND PROFILE-STA.0+00 TO 11+50
39	C1.29	SKYE CANYON PLAN AND PROFILE-STA.11+50 TO 25+00
40	C1.30	IRON MOUNTAIN PLAN AND PROFILE-STA.0+00 TO 12+00
41	C1.31	IRON MOUNTAIN PLAN AND PROFILE-STA.12+00 TO 25+00
42	C1.32	KYLE CANYON ROAD PLAN AND PROFILE-STA.26+00 TO 39+00

ALIGNMENT ABBREVIATIONS

"SM"	SHEEP MOUNTAIN
"KC"	KYLE CANYON
"SC"	SKYE CANYON PARK DRIVE
"IM"	IRON MOUNTAIN ROAD
"GT"	GRAND TETON
"GTRA"	GRAND TETON RAMP A
"GTRB"	GRAND TETON RAMP B
"GTRC"	GRAND TETON RAMP C
"GTRD"	GRAND TETON RAMP D
"KCRA"	KYLE CANYON RAMP A
"KCRB"	KYLE CANYON RAMP B
"KCRC"	KYLE CANYON RAMP C
"KCRD"	KYLE CANYON RAMP D

LEGEND

- NVE TRANSMISSION POLE MAINTENANCE AREA (20' X 40')
- PP — NVE TRANSMISSION POLE
- 5 FOOT CONTOURS
- 1 FOOT CONTOURS
- CUT — CUT — DAYLIGHT CUT LINE
- FILL — FILL — DAYLIGHT FILL LINE
- NVE EASEMENT
- PROPOSED R/W
- PARCEL LINES

BASIS OF BEARINGS

SOUTH 00°22'12" WEST, BEING THE BEARING OF THE WEST LINE OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 6, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M, CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEROF IN FILE 151, PAGE 14 OF SURVEYS IN CLARK COUNTY RECORDER'S OFFICE, NEVADA.

BENCHMARK

MOMUMENT ID: (1934) 19

U.S. DEPARTMENT OF AGRICULTURE BRASS DISC AT SOUTHWEST CORNER OF U.S. 95 AND KYLE CANYON ROAD

ELEVATION = 2817.61 FEET, 858.810 METERS
NAVD 88 DATUM

PER THE CITY OF LAS VEGAS BENCHMARK BOOK -
2008 ADJUSTMENT (UPDATED 05/24/2010)

DESIGN CRITERIA

SHEEP MOUNTAIN
- 75 MPH DESIGN SPEED
- 6% MAX. SUPERELEVATION
- 6% MAX. PROFILE GRADE
- 30' CLEAR ZONE

RAMPS
- DESIGN SPEED
  - 65 MPH (EXIT RAMPS WITHIN 390' OF PAINTED GORE)
  - 50 MPH (ENTRANCE RAMPS WITHIN 300' OF PAINTED GORE)
  - 50 MPH (RAMP BODY)
  - 35 MPH (WITHIN 300' OF RAMP TERMINAL)
- 6% MAX. SUPERELEVATION
- 6% MAX. PROFILE GRADE
- CLEAR ZONE: SIDE SLOPES ARE 6:1 OR FLATTER WITHIN CLEAR ZONE; BARRIER PROTECTION ADDED WHEN CLEAR ZONE IS VIOLATED

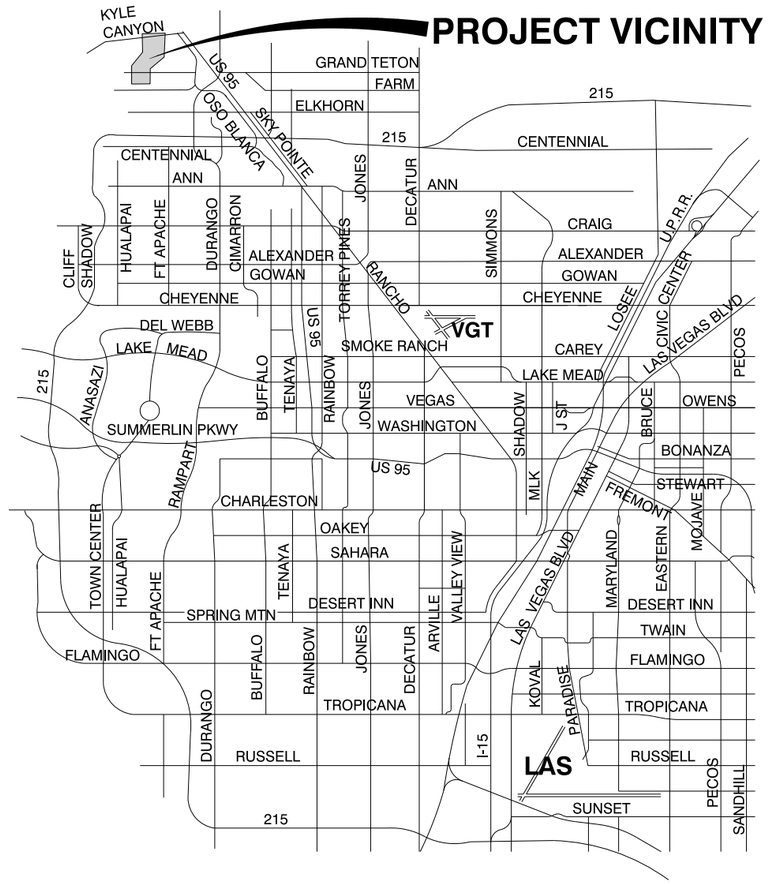
GRAND TETON
- 40 MPH DESIGN SPEED
- 6% MAX. PROFILE GRADE
- 16.5' MIN VERTICAL CLEARANCE AT SHEEP MOUNTAIN STRUCTURE

SKYE CANYON PARK
- 40 MPH DESIGN SPEED
- 8% MAX. PROFILE GRADE
- 16.5' MIN. VERTICAL CLEARANCE AT SHEEP MOUNTAIN STRUCTURE

IRON MOUNTAIN
- 40 MPH DESIGN SPEED
- 8% MAX. PROFILE GRADE
- 16.5' MIN. VERTICAL CLEARANCE AT SHEEP MOUNTAIN STRUCTURE

KYLE CANYON
- 50 MPH DESIGN SPEED (KYLE CANYON)
- 16.5' MIN. VERTICAL CLEARANCE AT SHEEP MOUNTAIN STRUCTURE
- MOMUMENT ID: (1934) 19

PROJECT VICINITY



VICINITY MAP

NOT TO SCALE

PREPARED BY
HORROCKS ENGINEERS
1349 Galleria Drive, Suite 110
Henderson, NV 89014
(702) 966-4063

NO.	DATE	SHEET	REVISIONS

PREPARED FOR
CITY OF LAS VEGAS

H# XXXXX | BID# XX.XXXXX | DESIGNED BY: XXX | DRAWN BY: XXX | CHECKED BY: XXX

DATE: 02/03/16

SUBMITTAL STAGE: **00% - PRELIMINARY**

TITLE: SHEEP MOUNTAIN IMPROVEMENT

SHEET: LEGENDS, KEYMAP AND INDEX

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

SHEET
G1.02
2 OF 42

DRAWING NO.
XXX-XXXX

PRELIMINARY NOT FOR CONSTRUCTION

THIS SHEET INTENTIONALLY LEFT BLANK

PREPARED FOR
CITY OF LAS VEGAS

H# XXXXX | BID# XX.XXXX
DATE: 02/03/16 | DESIGNED BY: XXX
SUBMITTAL STAGE: | DRAWN BY: XXX
00% - PRELIMINARY | CHECKED BY: XXX

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NO.	DATE	REVISIONS

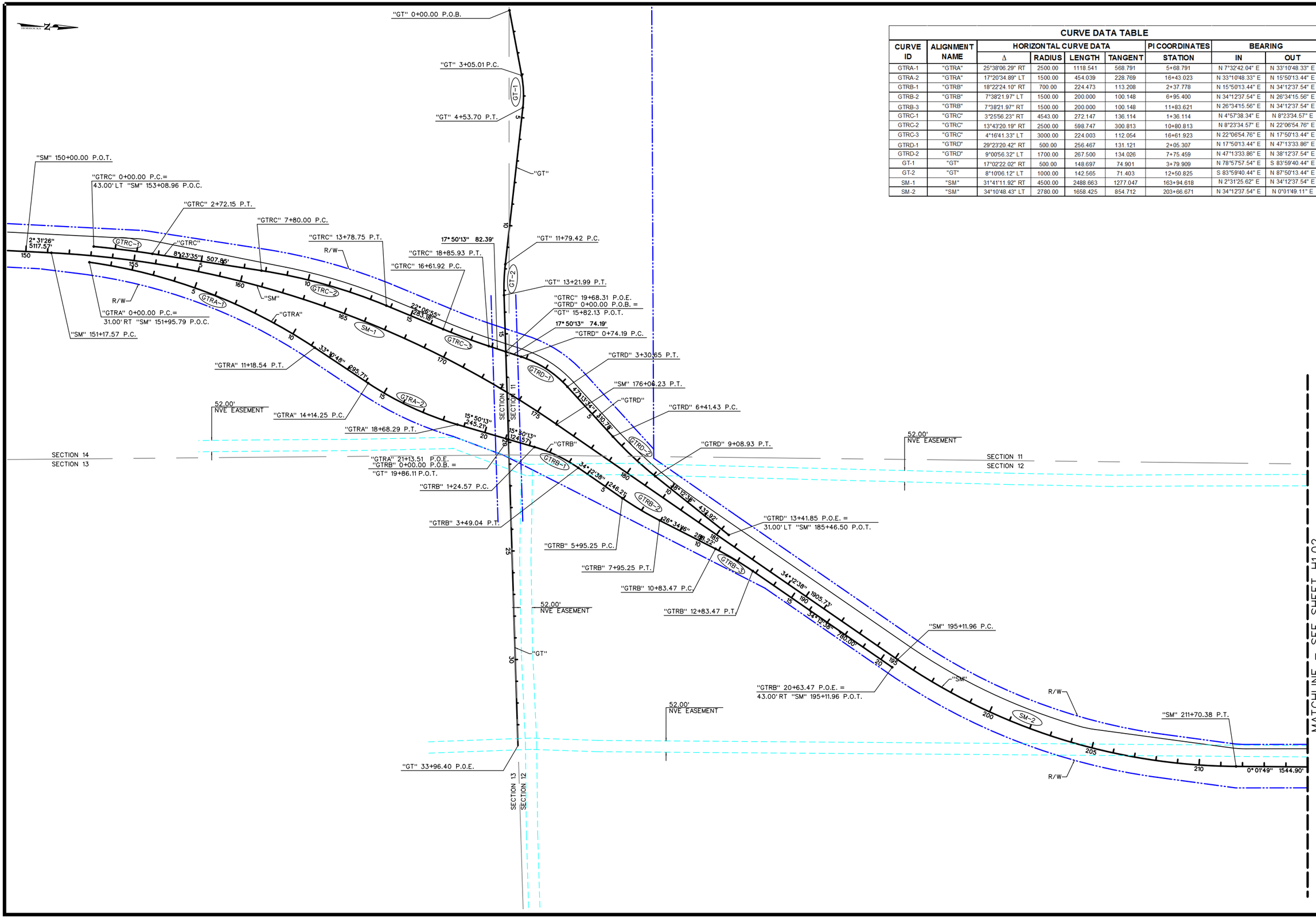
TITLE
SHEEP MOUNTAIN IMPROVEMENT

SHEET

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

SHEET
G1.03
3 OF **42**
DRAWING NO.
XXX-XXXX

PRELIMINARY NOT FOR CONSTRUCTION



CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES	BEARING	
		Δ	RADIUS	LENGTH	TANGENT	STATION	IN	OUT
GTRA-1	"GTRA"	25°38'06.29" RT	2500.00	1118.541	568.791	5+68.791	N 7°32'42.04" E	N 33°10'48.33" E
GTRA-2	"GTRA"	17°20'34.89" LT	1500.00	454.039	228.769	16+43.023	N 33°10'48.33" E	N 15°50'13.44" E
GTRB-1	"GTRB"	18°22'24.10" RT	700.00	224.473	113.208	2+37.778	N 15°50'13.44" E	N 34°12'37.54" E
GTRB-2	"GTRB"	7°38'21.97" LT	1500.00	200.000	100.148	6+95.400	N 34°12'37.54" E	N 26°34'15.56" E
GTRB-3	"GTRB"	7°38'21.97" RT	1500.00	200.000	100.148	11+83.621	N 26°34'15.56" E	N 34°12'37.54" E
GTRC-1	"GTRC"	3°25'56.23" RT	4543.00	272.147	136.114	1+36.114	N 4°57'38.34" E	N 8°23'34.57" E
GTRC-2	"GTRC"	13°43'20.19" RT	2500.00	598.747	300.813	10+80.813	N 8°23'34.57" E	N 22°06'54.76" E
GTRC-3	"GTRC"	4°16'41.33" LT	3000.00	224.003	112.054	16+61.923	N 22°06'54.76" E	N 17°50'13.44" E
GTRD-1	"GTRD"	29°23'20.42" RT	500.00	256.467	131.121	2+05.307	N 17°50'13.44" E	N 47°13'33.86" E
GTRD-2	"GTRD"	9°00'56.32" LT	1700.00	267.500	134.026	7+75.459	N 47°13'33.86" E	N 38°12'37.54" E
GT-1	"GT"	17°02'22.02" RT	500.00	148.697	74.901	3+79.909	N 78°57'57.54" E	S 83°59'40.44" E
GT-2	"GT"	8°10'06.12" LT	1000.00	142.565	71.403	12+50.825	S 83°59'40.44" E	N 87°50'13.44" E
SM-1	"SM"	31°41'11.92" RT	4500.00	2488.663	1277.047	163+94.618	N 2°31'25.62" E	N 34°12'37.54" E
SM-2	"SM"	34°10'48.43" LT	2780.00	1658.425	854.712	203+66.671	N 34°12'37.54" E	N 0°01'49.11" E

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CITY OF LAS VEGAS

H# XXXXX | BID# XX-XXXXX | DESIGNED BY: XXX | DRAWN BY: XXX | CHECKED BY: XXX

DATE: 02/03/16

SUBMITTAL STAGE:
30% - PRELIMINARY

TITLE
SHEEP MOUNTAIN

SHEET
GEOMETRIC CONTROL PLAN
1 OF 2

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

SHEET
H1.01
4 OF 42

DRAWING NO.
XXX-XXXX

NO.	DATE	SHEET	REVISIONS

PRELIMINARY NOT FOR CONSTRUCTION

MATCHLINE - SEE SHEET H1.01

CURVE DATA TABLE								
CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES	BEARING	
		Δ	RADIUS	LENGTH	TANGENT	STATION	IN	OUT
IM-1	"IM"	3°39'11.62" RT	5500.00	350.685	175.402	17+87.076	N 87°49'56.86" E	S 88°30'51.52" E
IM-2	"IM"	3°05'34.56" LT	5500.00	296.900	148.486	21+10.845	S 88°30'51.52" E	N 88°23'33.92" E
KCRA-1	"KCRA"	4°00'00.00" LT	3000.00	209.440	104.762	13+47.545	N 5°04'27.71" E	N 1°04'27.71" E
KCRB-1	"KCRB"	4°25'18.93" LT	2000.00	154.354	77.215	3+64.781	N 1°04'27.71" E	N 3°20'51.22" W
KCRB-2	"KCRB"	13°40'56.89" RT	3500.00	835.814	419.905	14+66.734	N 3°20'51.22" W	N 10°20'05.36" E
KCRC-1	"KCRC"	1°02'38.60" RT	16043.00	292.339	146.173	2+73.265	N 0°01'49.11" E	N 1°04'27.71" E
KCRC-2	"KCRC"	18°06'55.23" LT	1000.00	316.172	159.416	9+39.417	N 1°04'27.71" E	N 17°02'27.53" W
KCRC-3	"KCRC"	18°06'55.23" RT	850.00	268.747	135.504	15+33.612	N 17°02'27.53" W	N 1°04'27.71" E
KCRD-1	"KCRD"	18°52'57.54" RT	850.00	280.130	141.347	11+25.291	N 1°04'27.71" E	N 19°57'25.24" E
KCRD-2	"KCRD"	6°45'47.98" LT	8000.00	944.339	472.718	17+36.793	N 19°57'25.24" E	N 13°11'37.26" E
SM-3	"SM"	1°02'38.60" RT	16000.00	291.555	145.782	228+61.065	N 0°01'49.11" E	N 1°04'27.71" E
SM-4	"SM"	16°09'07.26" RT	5000.00	1409.529	709.469	267+26.626	N 1°04'27.71" E	N 17°13'34.96" E

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DATE: 02/03/16

SUBMITTAL STAGE:
30% - PRELIMINARY

NO.	DATE	SHEET	REVISIONS

TITLE
SHEEP MOUNTAIN

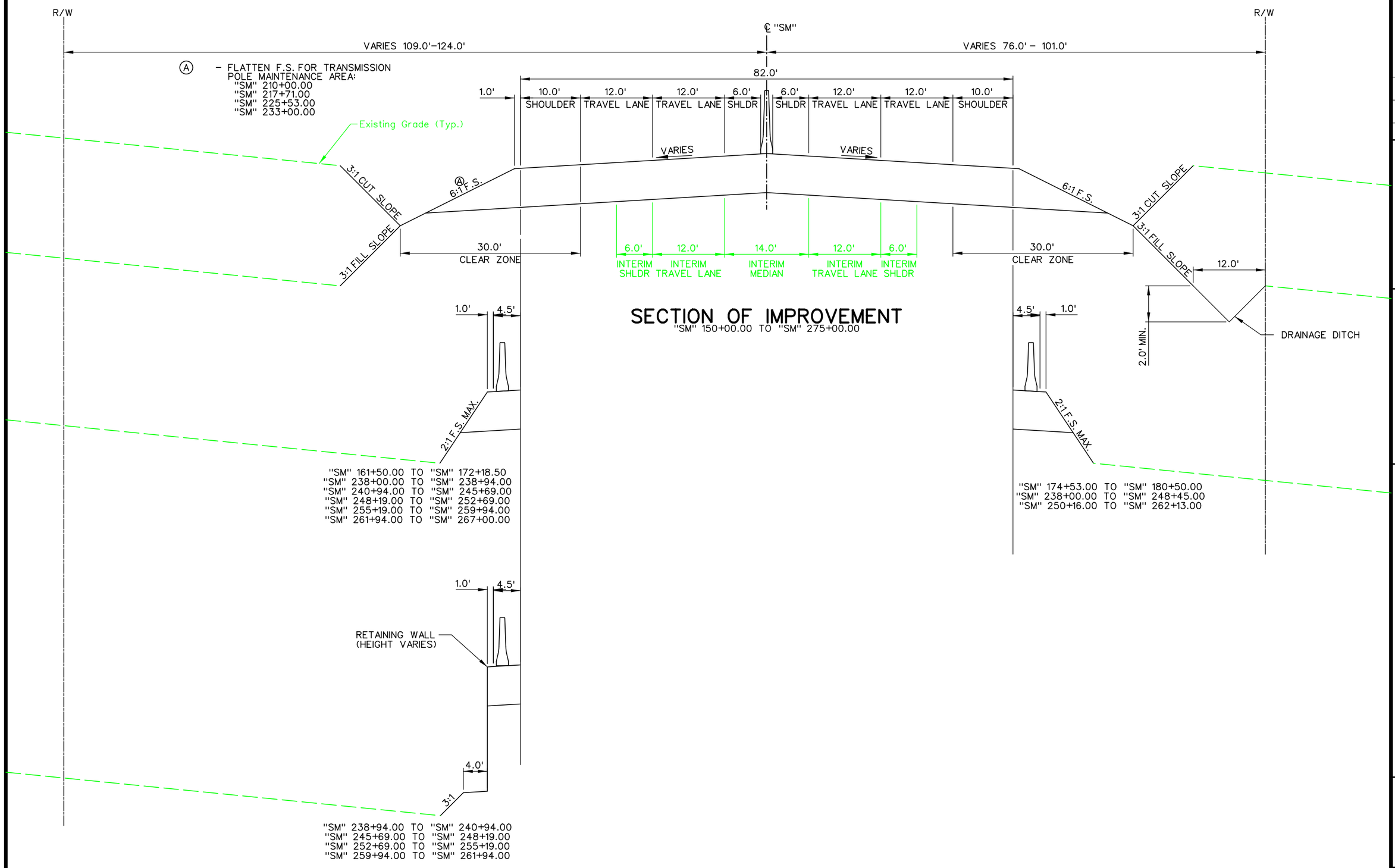
SHEET
GEOMETRIC CONTROL PLAN
2 OF 2

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

SHEET
H1.02
5 OF 42

DRAWING NO.
XXX-XXXX

PRELIMINARY NOT FOR CONSTRUCTION



SECTION OF IMPROVEMENT

"SM" 150+00.00 TO "SM" 275+00.00

NO.	DATE	SHEET	REVISIONS

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H# XXXXX | BID# XX-XXXXX | DESIGNED BY: XXX | DRAWN BY: XXX | CHECKED BY: XXX

DATE: 02/03/16

SUBMITTAL STAGE: **30% - PRELIMINARY**

TITLE: SHEEP MOUNTAIN

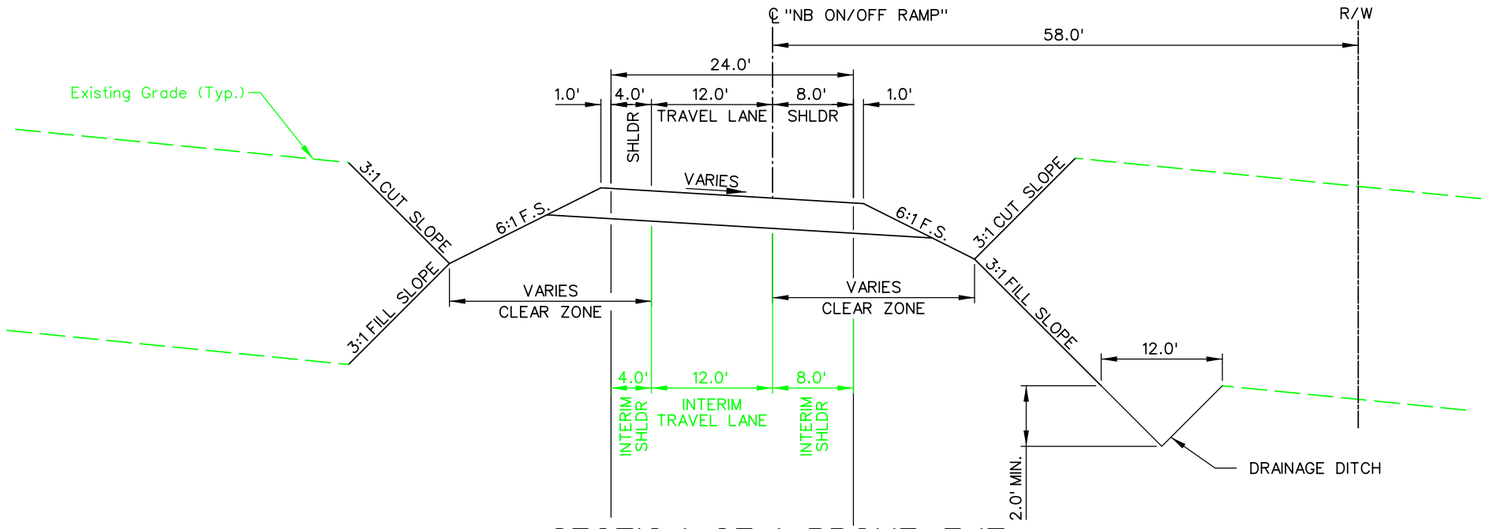
SHEET: TYPICAL SECTIONS 1 OF 5

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

SHEET
TY1.01
6 OF 42

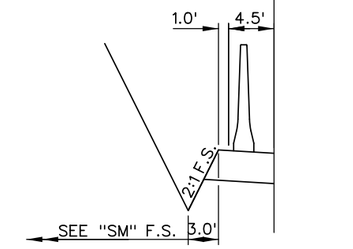
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XXX-XXXX

PRELIMINARY NOT FOR CONSTRUCTION

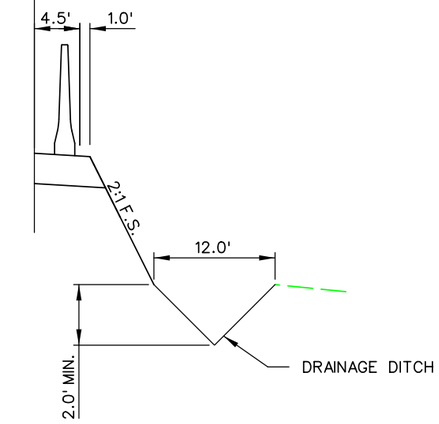


SECTION OF IMPROVEMENT

"GTRA" 3+87.82 TO "GTRA" 20+68.29
"GTRB" 0+45.21 TO "GTRB" 10+44.63
"KCRA" 5+00.00 TO "KCRA" 16+00.00
"KCRB" 0+67.00 TO "KCRB" 11+42.65



"GTRB" 0+60.35 TO "GTRB" 6+00.00
"KCRA" 5+00.00 TO "KCRA" 15+90.00
"KCRB" 0+67.00 TO "KCRB" 11+42.65



"GTRA" 8+50.00 TO "GTRA" 14+14.25
"KCRA" 6+50.00 TO "KCRA" 12+50.00
"KCRB" 3+75.00 TO "KCRB" 12+75.00

NO.	DATE	SHEET	REVISIONS

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SUBMITTAL STAGE:
30% - PRELIMINARY

SHEEP MOUNTAIN

TITLE

TYPICAL SECTIONS
2 OF 5

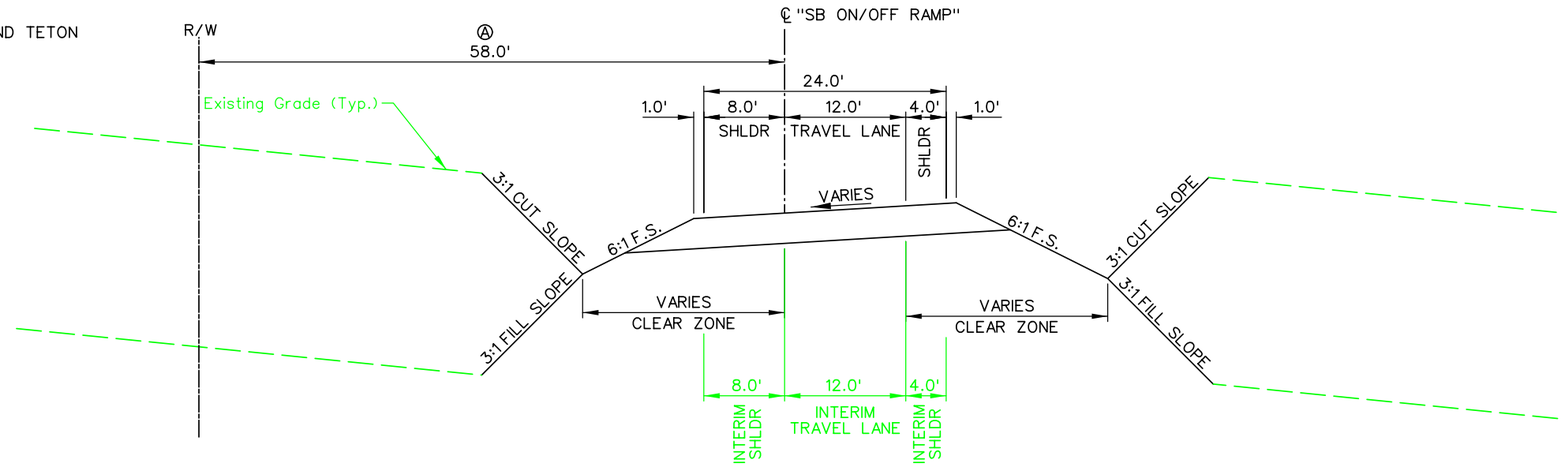
SHEET

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

SHEET
TY1.02
7 OF 42
DRAWING NO.
XXX-XXXX

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Ⓐ – R/W FOR SB ON/OFF RAMPS AT GRAND TETON IS 100.0'



SECTION OF IMPROVEMENT

"GTRC" 6+97.87 TO "GTRC" 19+22.55
"GTRD" 0+45.36 TO "GTRD" 8+86.35
"KCRC" 9+78.16 TO "KCRC" 22+90.00
"KCRD" 0+74.00 TO "KCRD" 18+32.00

NO.	DATE	SHEET	REVISIONS

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H# XXXXX | BID# XX.XXXXX | DESIGNED BY: XXX | DRAWN BY: XXX | CHECKED BY: XXX

DATE: 02/03/16

SUBMITTAL STAGE: **30% - PRELIMINARY**

TITLE: **SHEEP MOUNTAIN**

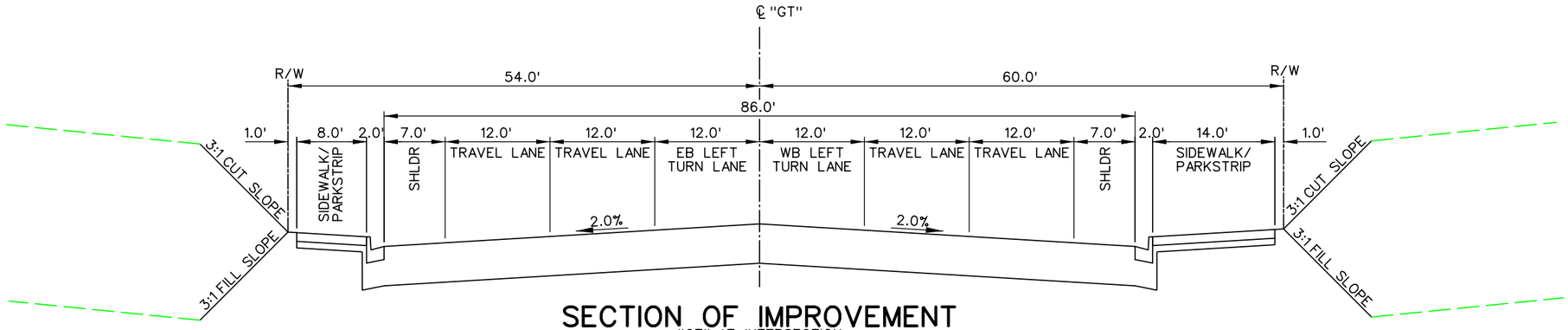
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PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

SHEET
TY1.03
8 OF 42

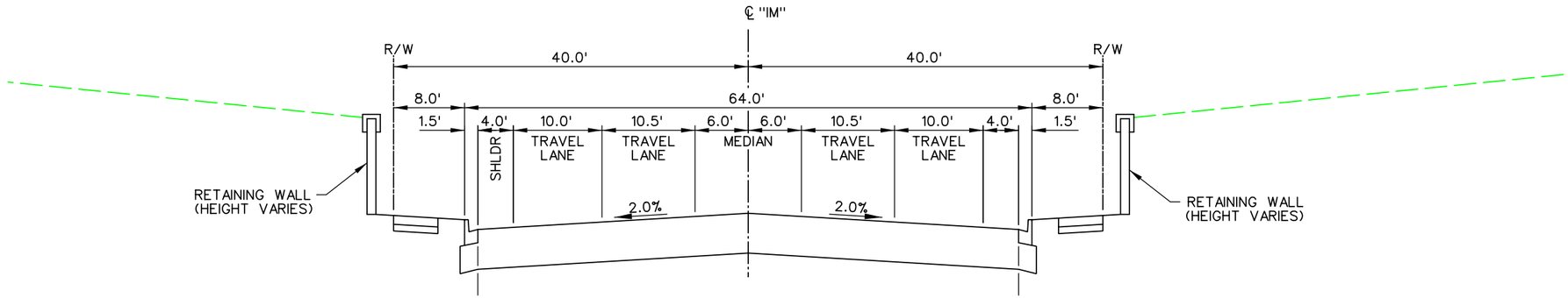
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PRELIMINARY NOT FOR CONSTRUCTION



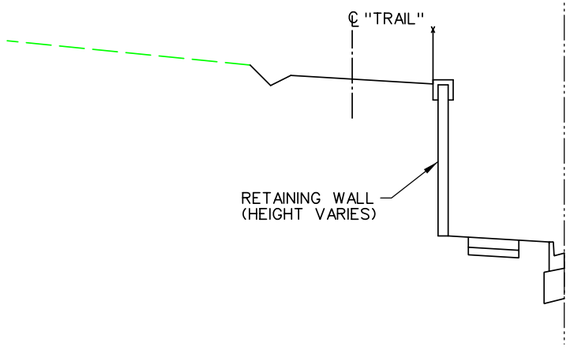
SECTION OF IMPROVEMENT

"GT" AT INTERSECTION
WITH SHEEP MOUNTAIN

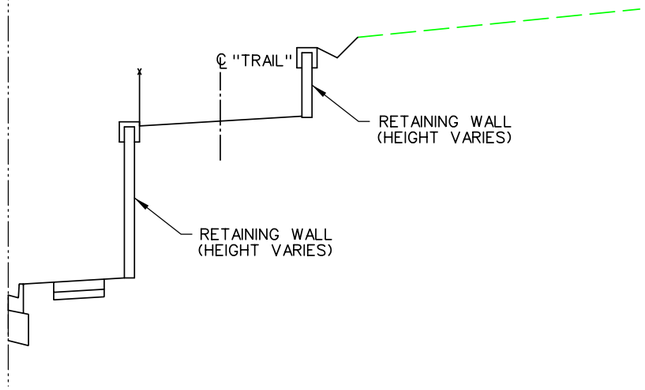


SECTION OF IMPROVEMENT

"IM" AT INTERSECTION
WITH SHEEP MOUNTAIN



"IM" 9+65.00 TO "IM" 12+25.00



"IM" 9+65.00 TO "IM" 12+90.00

NO.	DATE	SHEET	REVISIONS

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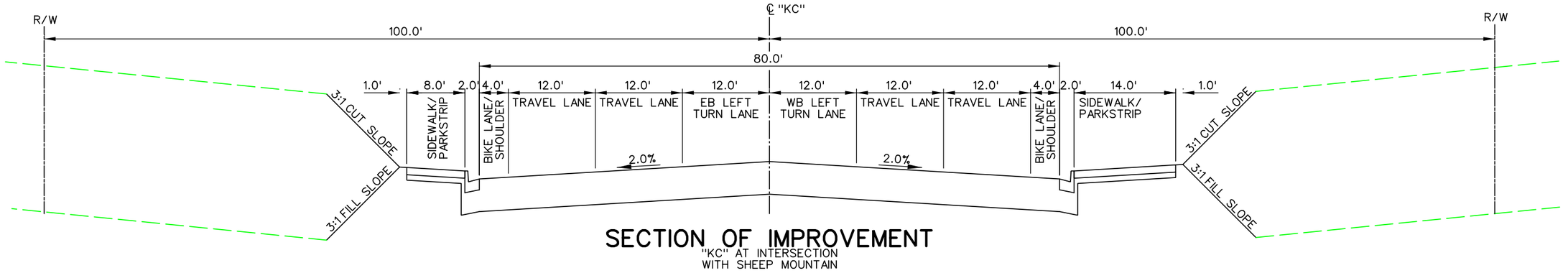
TITLE
SHEEP MOUNTAIN

SHEET
TYPICAL SECTIONS 4 OF 5

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
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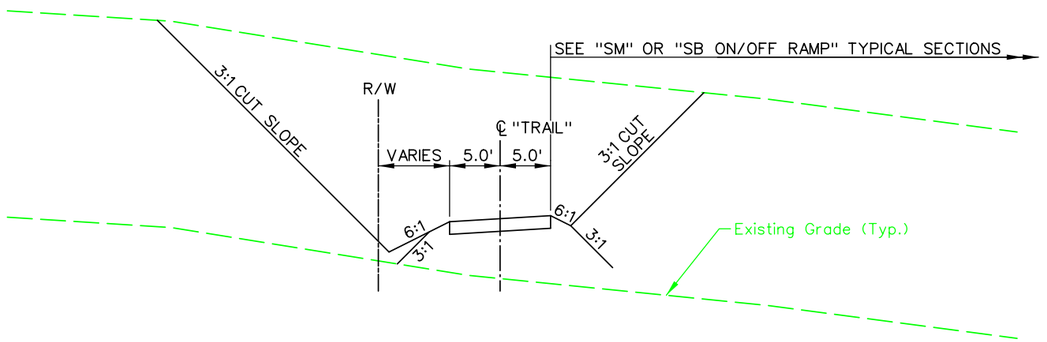
SHEET
TY1.04
9 OF **42**
DRAWING NO.
XXX-XXXX

PRELIMINARY NOT FOR CONSTRUCTION



SECTION OF IMPROVEMENT

"KC" AT INTERSECTION
WITH SHEEP MOUNTAIN



SECTION OF IMPROVEMENT

"TRAIL"

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NO.	DATE	SHEET	REVISIONS

PREPARED FOR
CITY OF LAS VEGAS

H# XXXXX | BID# XX.XXXXX | DESIGNED BY: XXX | DRAWN BY: XXX | CHECKED BY: XXX | DATE: 02/03/16 | SUBMITTAL STAGE: 30% - PRELIMINARY

TITLE
SHEEP MOUNTAIN

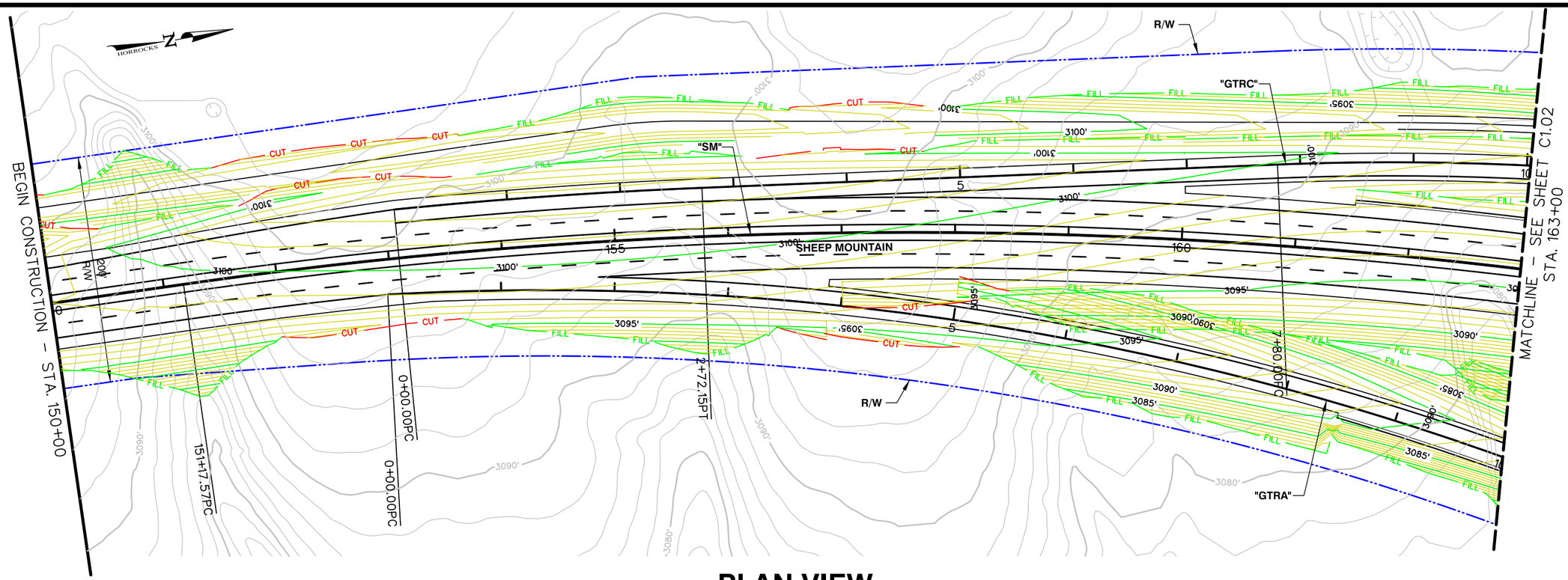
SHEET
TYPICAL SECTIONS
5 OF 5

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

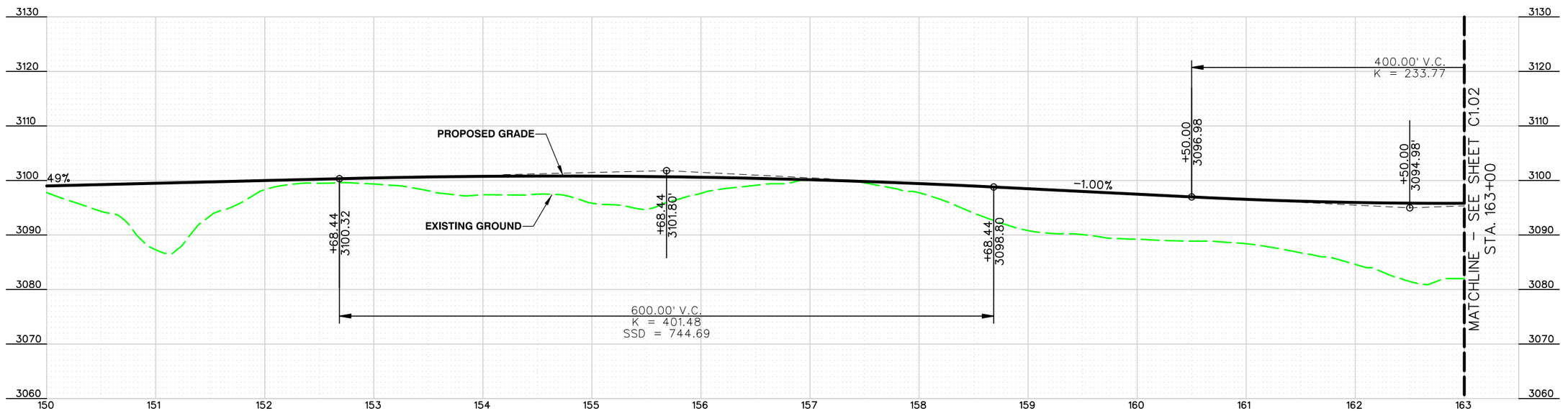
SHEET
TY1.05
10 OF 42

DRAWING NO.
XXX-XXXX

PRELIMINARY NOT FOR CONSTRUCTION



PLAN VIEW



PROFILE VIEW

NO.	DATE	SHEET	REVISIONS

PREPARED BY
HORROCKS ENGINEERS
1349 Galleria Drive, Suite 110
Henderson, NV 89014
(702) 966-4063

PREPARED FOR
CITY OF LAS VEGAS

H# XXXXX | BID# XX-XXXXX | DESIGNED BY: XXX | DRAWN BY: XXX | CHECKED BY: XXX | DATE: 02/03/16 | SUBMITTAL STAGE: 30% - PRELIMINARY

TITLE
SHEEP MOUNTAIN

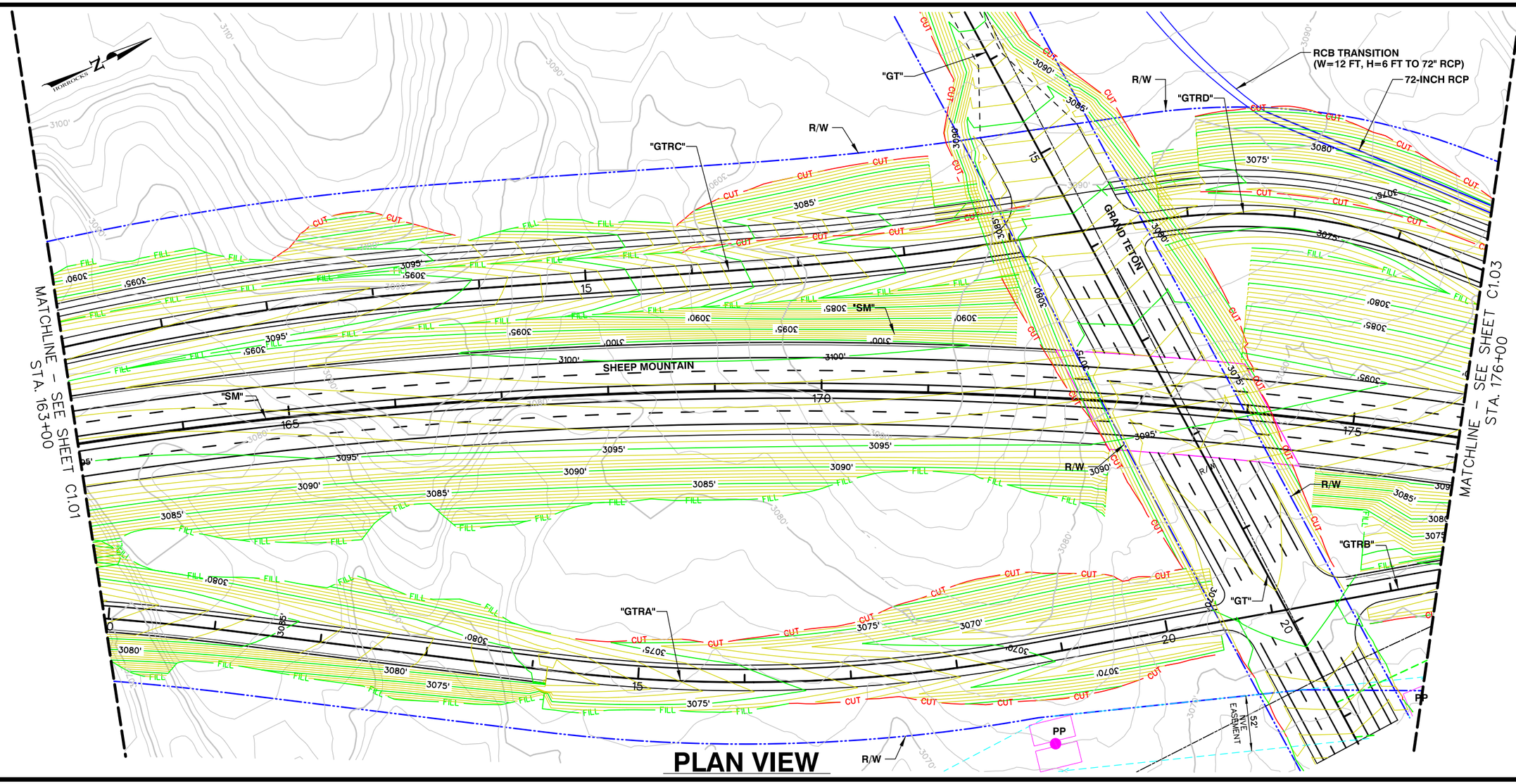
SHEET
SHEEP MOUNTAIN PLAN AND PROFILE
STA. 150+00 TO 163+00

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

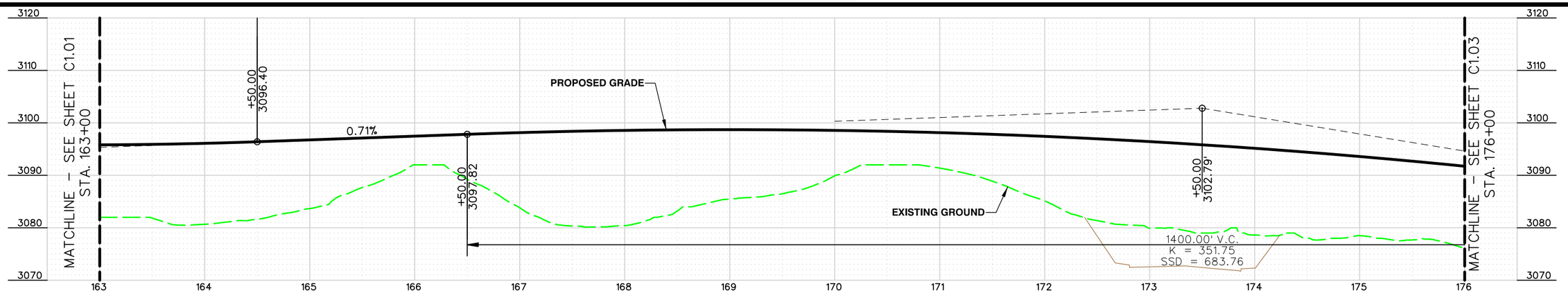
SHEET
C1.01
11 OF 42

DRAWING NO.
XXX-XXXX

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PLAN VIEW



PROFILE VIEW

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NO.	DATE	SHEET	REVISIONS

PREPARED FOR
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H# XXXXX | BID# XX-XXXXX | DESIGNED BY: XXX | DRAWN BY: XXX | CHECKED BY: XXX | DATE: 02/03/16 | SUBMITTAL STAGE: 30% - PRELIMINARY

TITLE
SHEEP MOUNTAIN

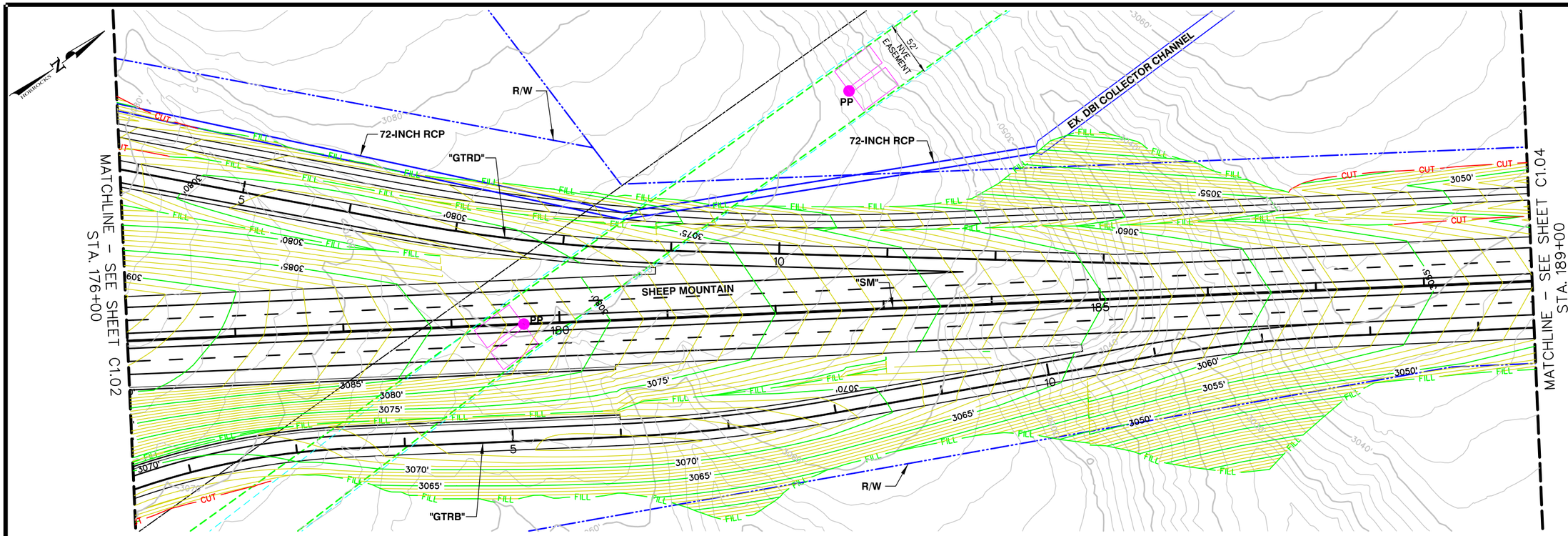
SHEET
SHEEP MOUNTAIN PLAN AND PROFILE
STA. 163+00 TO 176+00

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

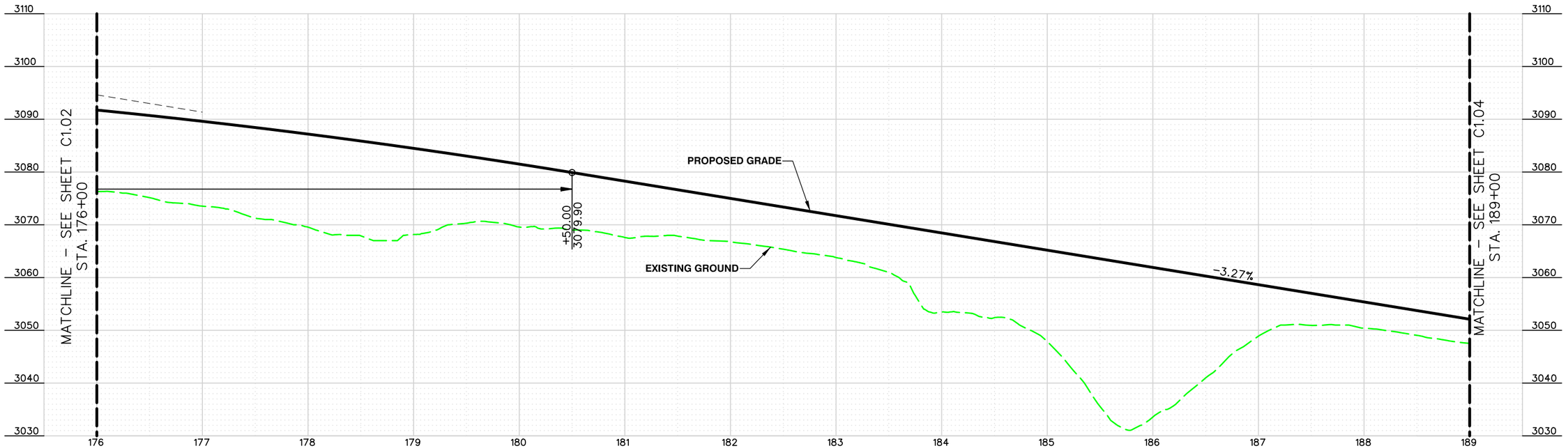
SHEET
C1.02
12 OF 42

DRAWING NO.
XXX-XXXX

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PLAN VIEW



PROFILE VIEW

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NO.	DATE	SHEET	REVISIONS

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H# XXXXX | BID# XX-XXXXX | DESIGNED BY: XXX
DATE: 02/03/16 | DRAWN BY: XXX
SUBMITTAL STAGE: 30% - PRELIMINARY | CHECKED BY: XXX

TITLE
SHEEP MOUNTAIN

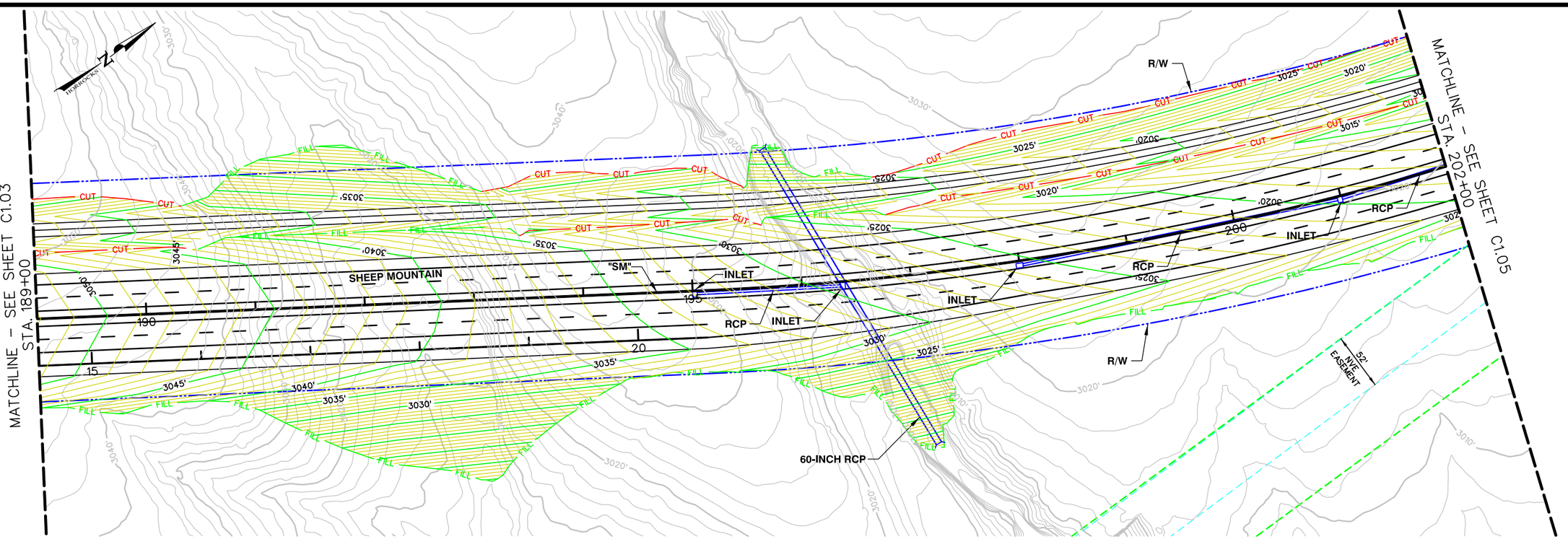
SHEET
SHEEP MOUNTAIN PLAN AND PROFILE
STA. 176+00 TO 189+00

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

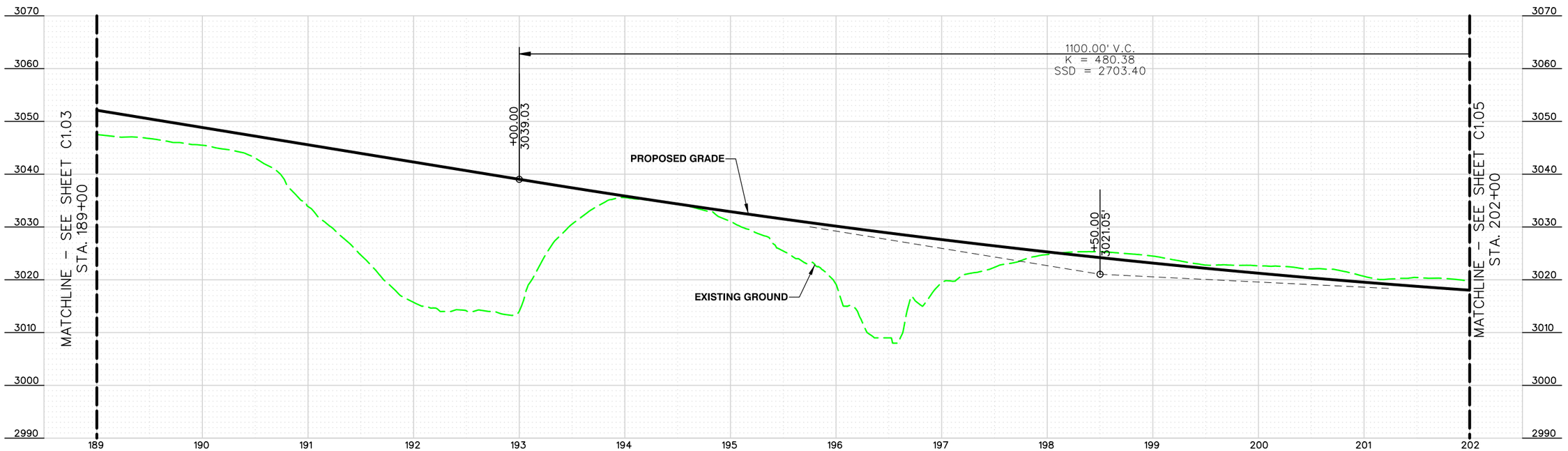
SHEET
C1.03
13 OF 42

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XXX-XXXX

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PLAN VIEW



PROFILE VIEW

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NO.	DATE	SHEET	REVISIONS

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BID# XX-XXXXX
DATE: 02/03/16
DESIGNED BY: XXX
DRAWN BY: XXX
CHECKED BY: XXX
SUBMITTAL STAGE: 30% - PRELIMINARY

TITLE
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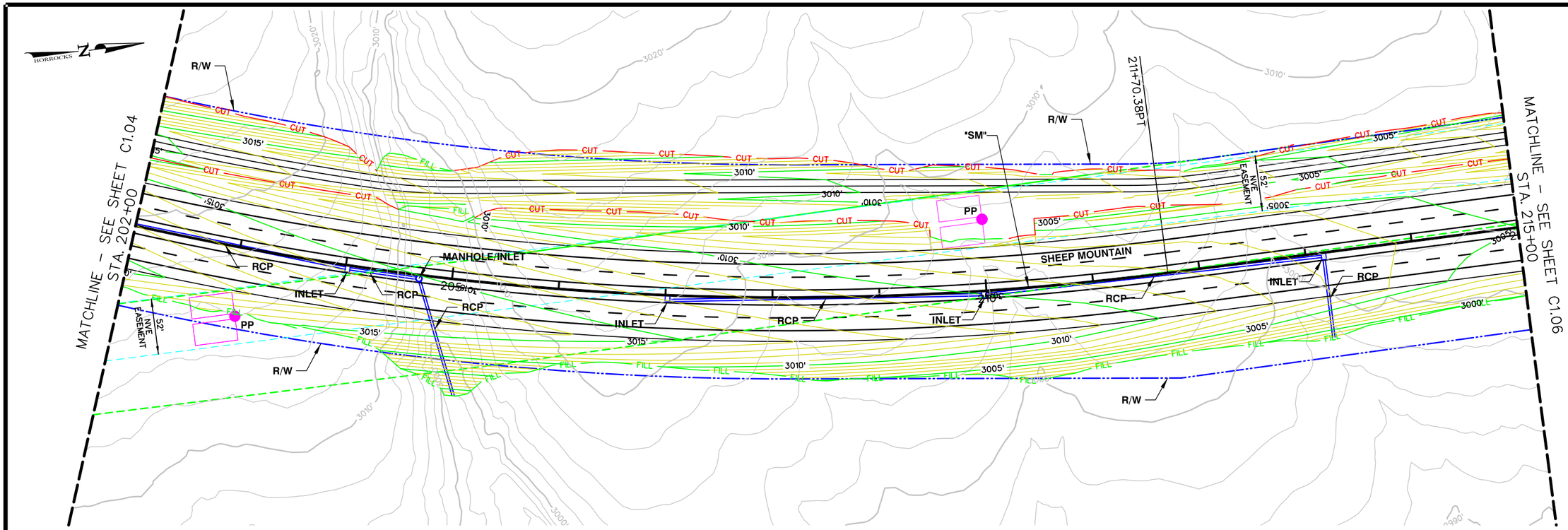
SHEET
SHEEP MOUNTAIN PLAN AND PROFILE
STA. 189+00 TO 202+00

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

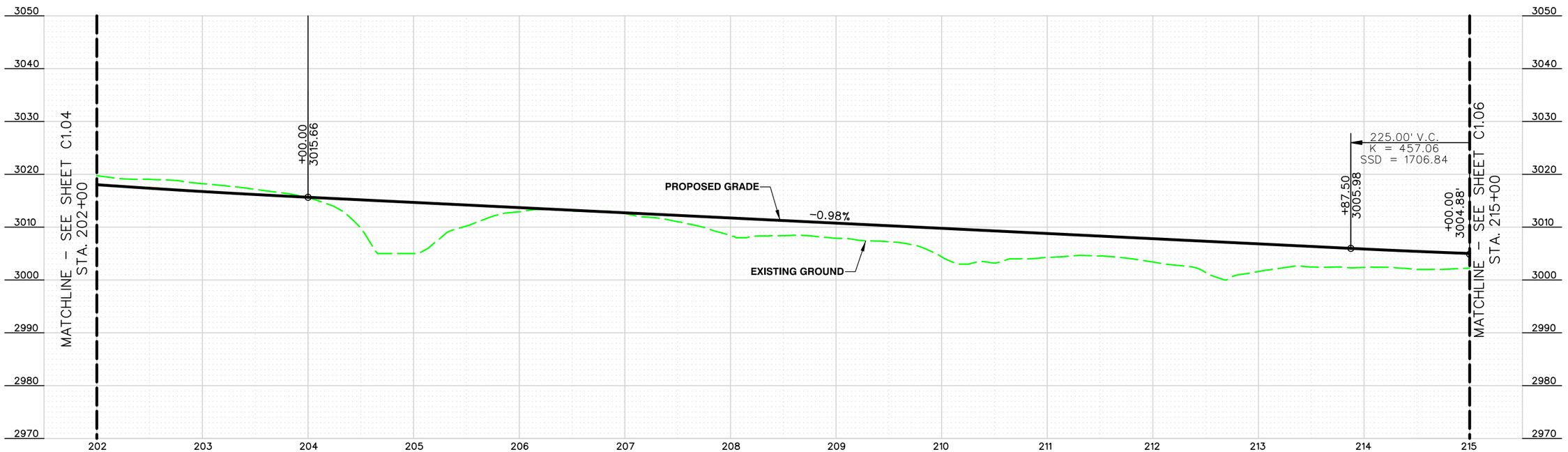
SHEET
C1.04
14 OF 42

DRAWING NO.
XXX-XXXX

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PLAN VIEW



PROFILE VIEW

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CITY OF LAS VEGAS

H# XXXXX | BID# XX-XXXXX | DESIGNED BY: XXX | DRAWN BY: XXX | CHECKED BY: XXX | DATE: 02/03/16 | SUBMITTAL STAGE: 30% - PRELIMINARY

TITLE
SHEEP MOUNTAIN

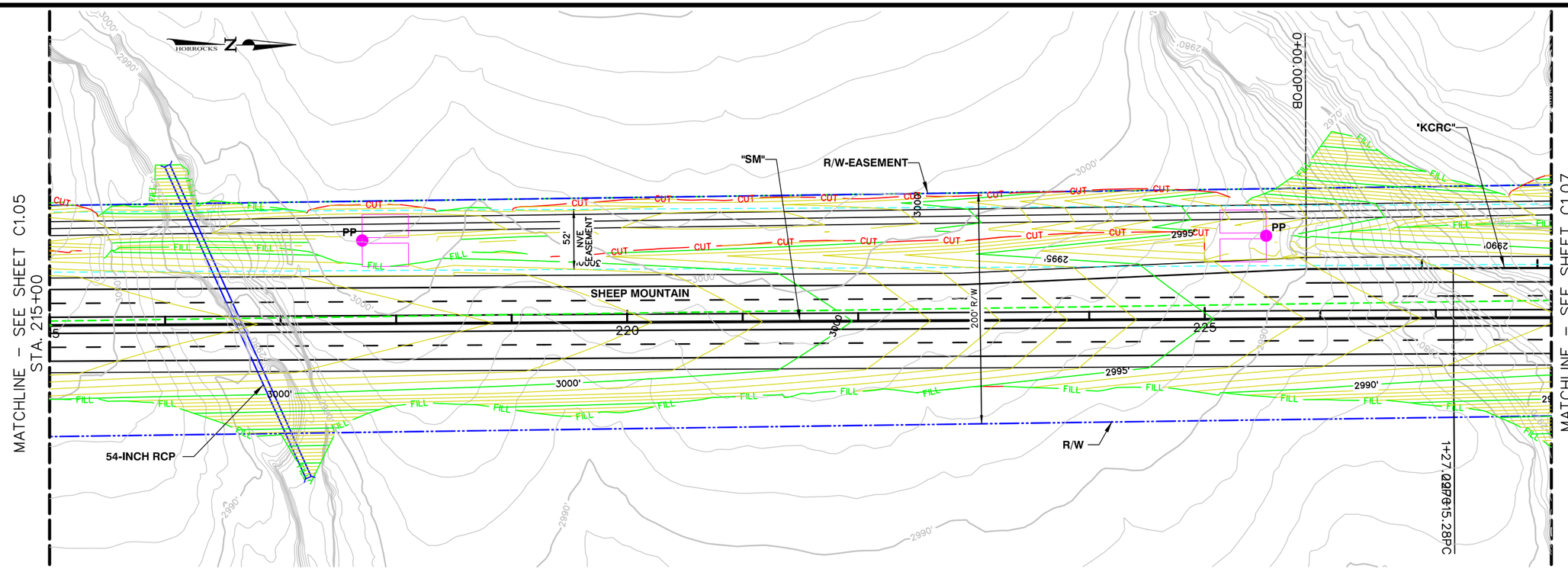
SHEET
SHEEP MOUNTAIN PLAN AND PROFILE
STA. 202+00 TO 215+00

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

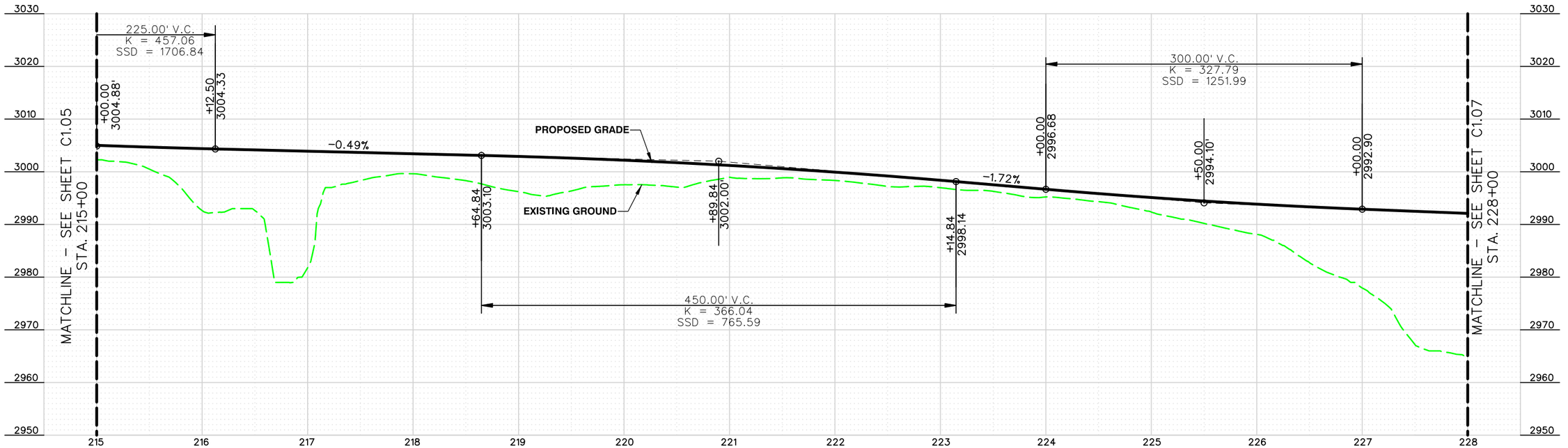
SHEET
C1.05
15 OF 42

DRAWING NO.
XXX-XXXX

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PLAN VIEW



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NO.	DATE	SHEET	REVISIONS

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H# XXXXX | BID# XX-XXXXX
DATE: 02/03/16 | DESIGNED BY: XXX
SUBMITTAL STAGE: 30% - PRELIMINARY | DRAWN BY: XXX
CHECKED BY: XXX

TITLE
SHEEP MOUNTAIN

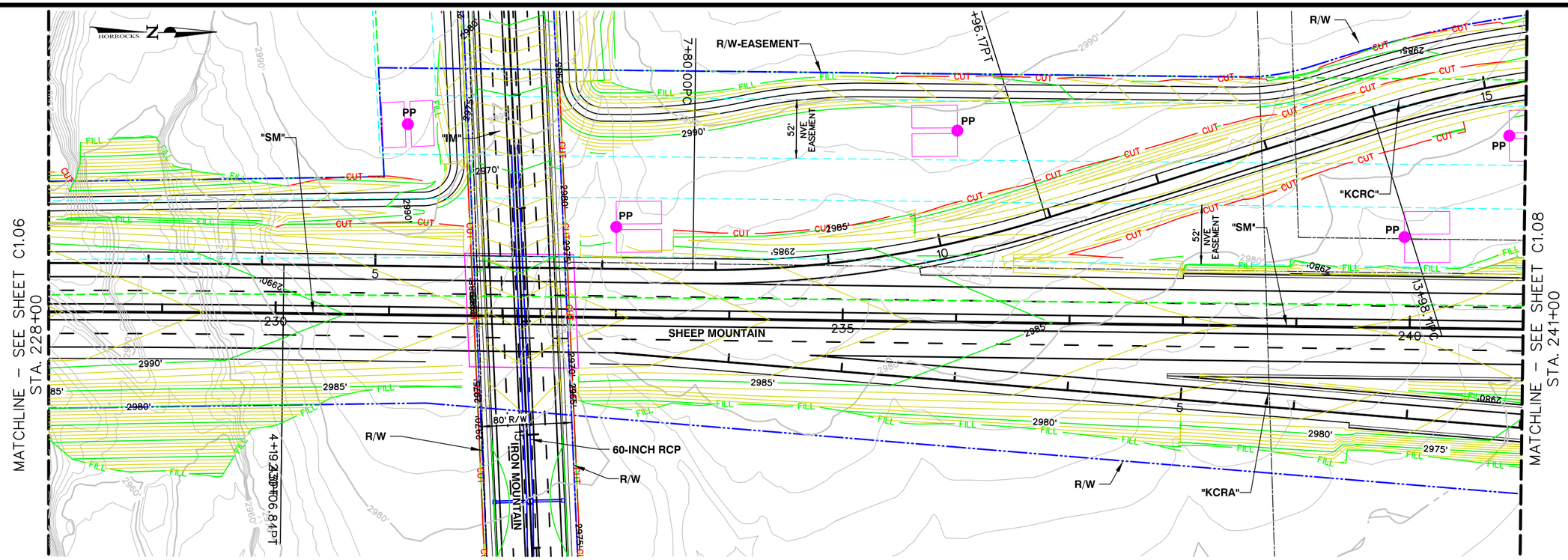
SHEET
SHEEP MOUNTAIN PLAN AND PROFILE
STA. 215+00 TO 228+00

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

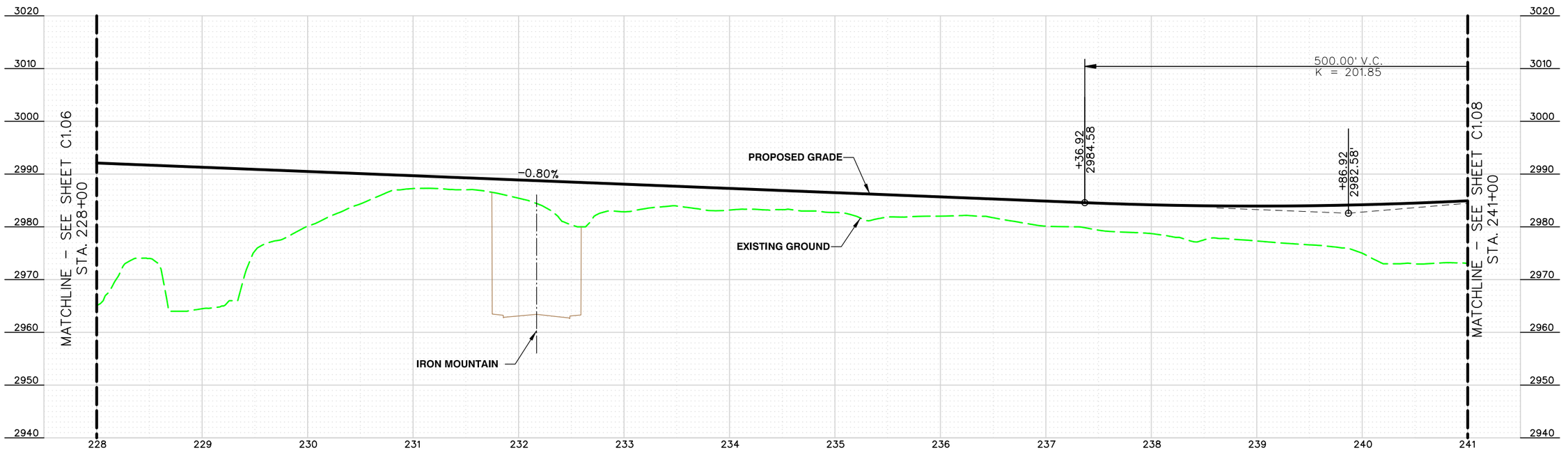
SHEET
C1.06
16 OF 42

DRAWING NO.
XXX-XXXX

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PLAN VIEW



PROFILE VIEW

NO.	DATE	SHEET	REVISIONS

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CITY OF LAS VEGAS

H# XXXXX | BID# XX-XXXXX
DATE: 02/03/16 | DESIGNED BY: XXX
SUBMITTAL STAGE: 30% - PRELIMINARY | DRAWN BY: XXX
CHECKED BY: XXX

TITLE
SHEEP MOUNTAIN

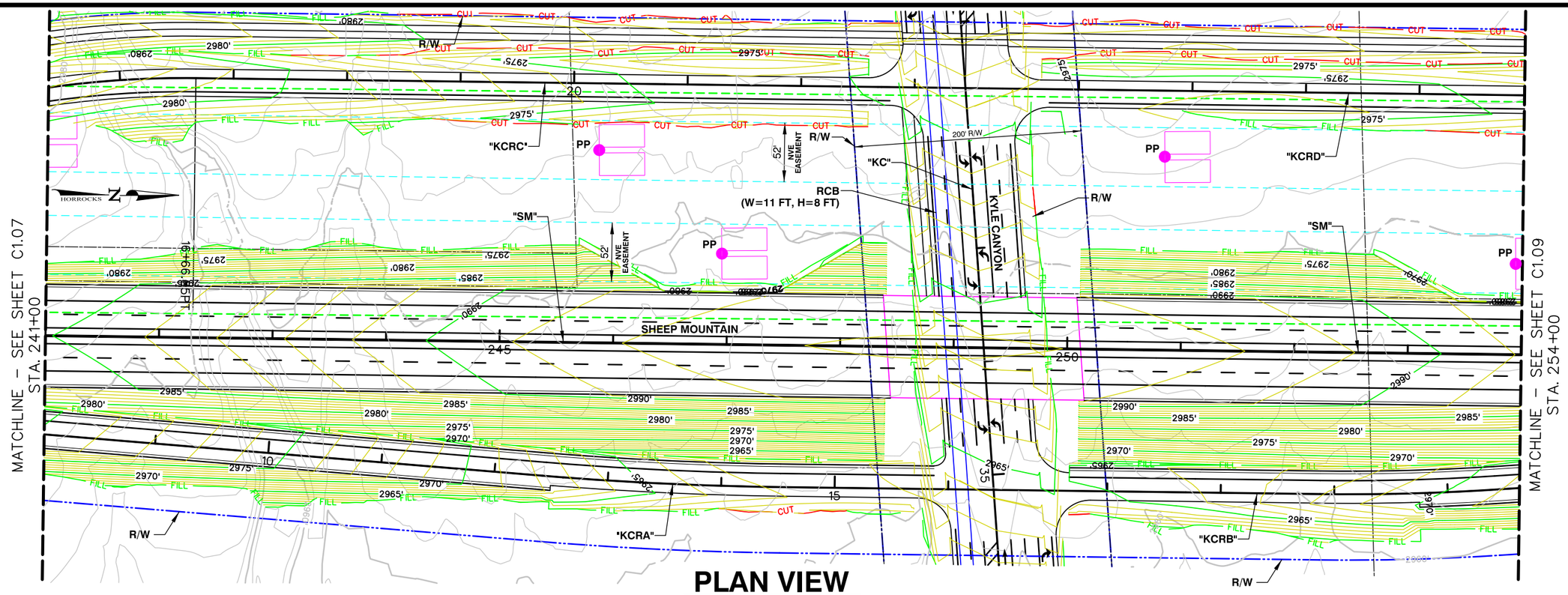
SHEET
SHEEP MOUNTAIN PLAN AND PROFILE
STA. 228+00 TO 241+00

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

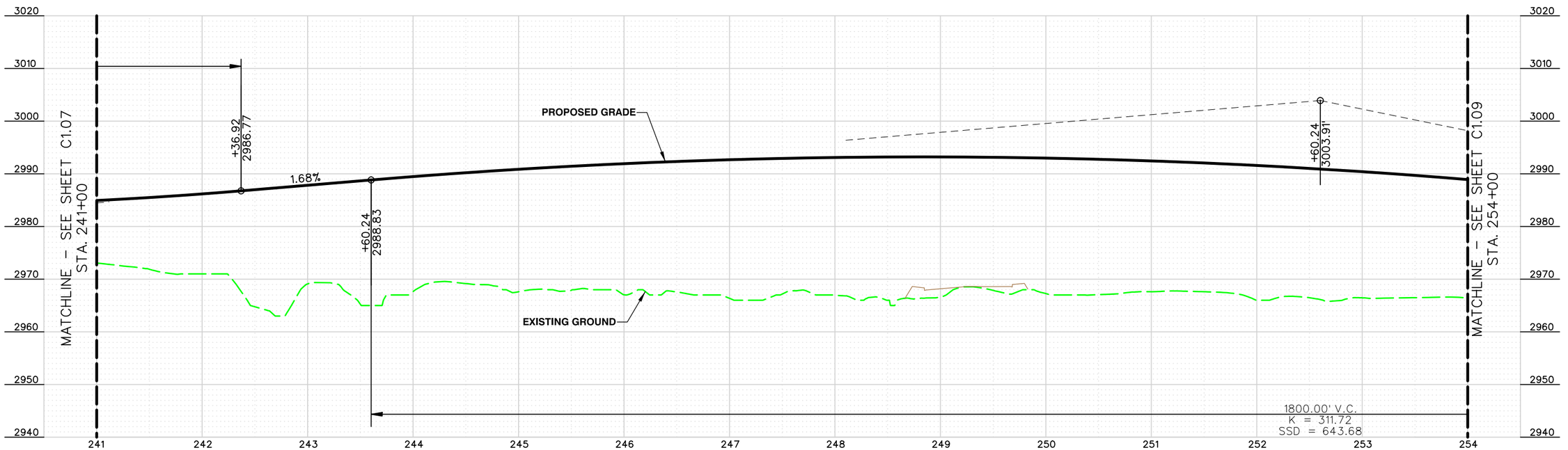
SHEET
C1.07
17 OF 42

DRAWING NO.
XXX-XXXX

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PLAN VIEW



PROFILE VIEW

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CITY OF LAS VEGAS

H# XXXXX | BID# XX-XXXXX
DATE: 02/03/16 | DESIGNED BY: XXX
SUBMITTAL STAGE: 30% - PRELIMINARY | DRAWN BY: XXX
CHECKED BY: XXX

NO.	DATE	SHEET	REVISIONS

TITLE
SHEEP MOUNTAIN

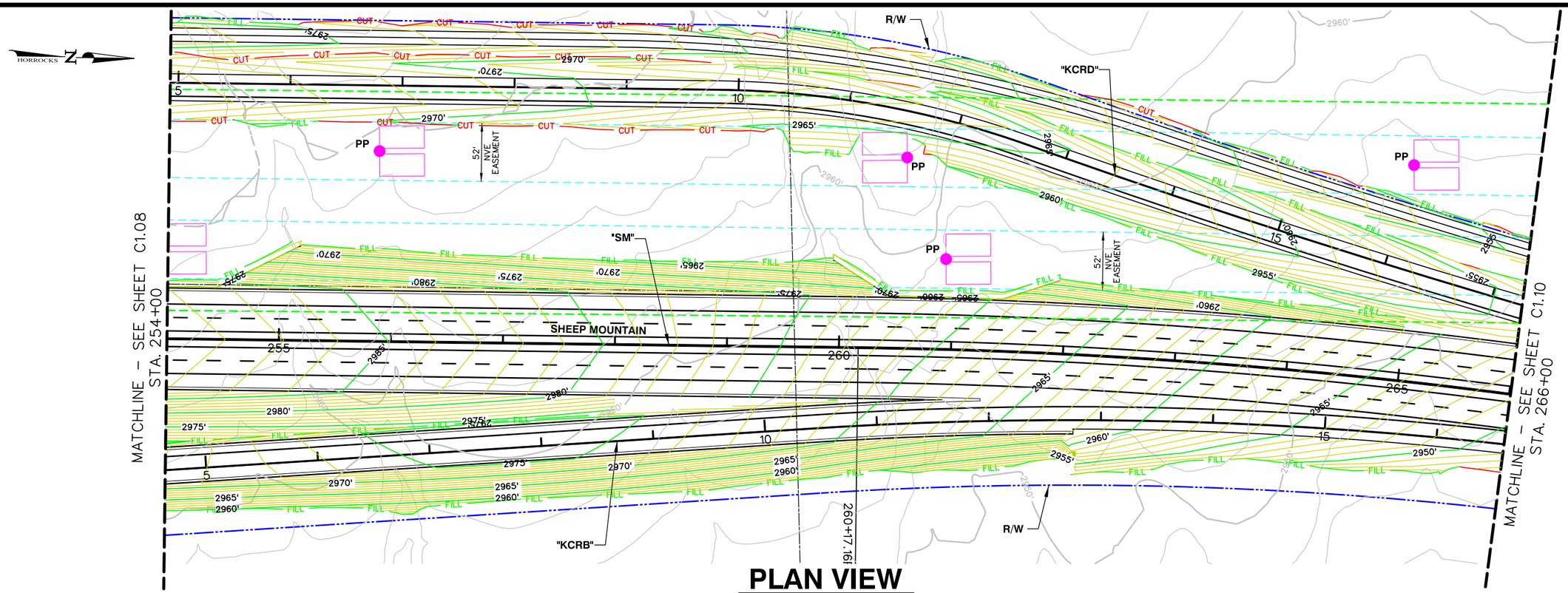
SHEET
SHEEP MOUNTAIN PLAN AND PROFILE
STA. 241+00 TO 254+00

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

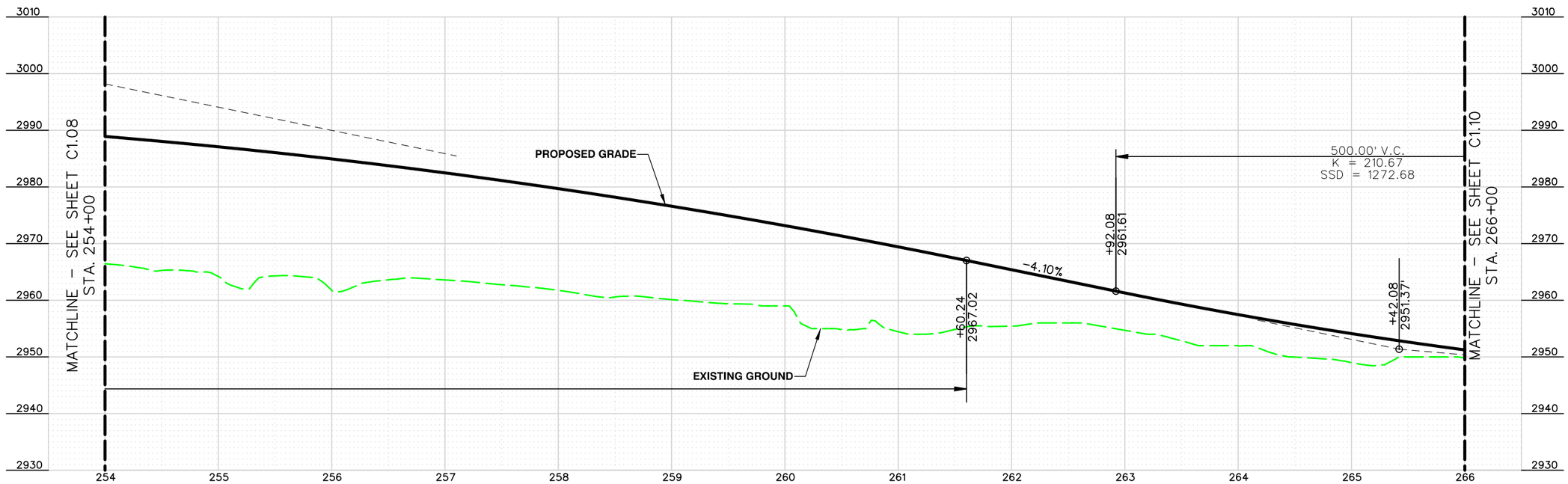
SHEET
C1.08
18 OF 42

DRAWING NO.
XXX-XXXX

PRELIMINARY NOT FOR CONSTRUCTION



PLAN VIEW



PROFILE VIEW

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NO.	DATE	SHEET	REVISIONS

PREPARED FOR
CITY OF LAS VEGAS

H# XXXXX | BID# XX-XXXXX | DESIGNED BY: XXX | DRAWN BY: XXX | CHECKED BY: XXX | DATE: 02/03/16 | SUBMITTAL STAGE: 30% - PRELIMINARY

TITLE
SHEEP MOUNTAIN

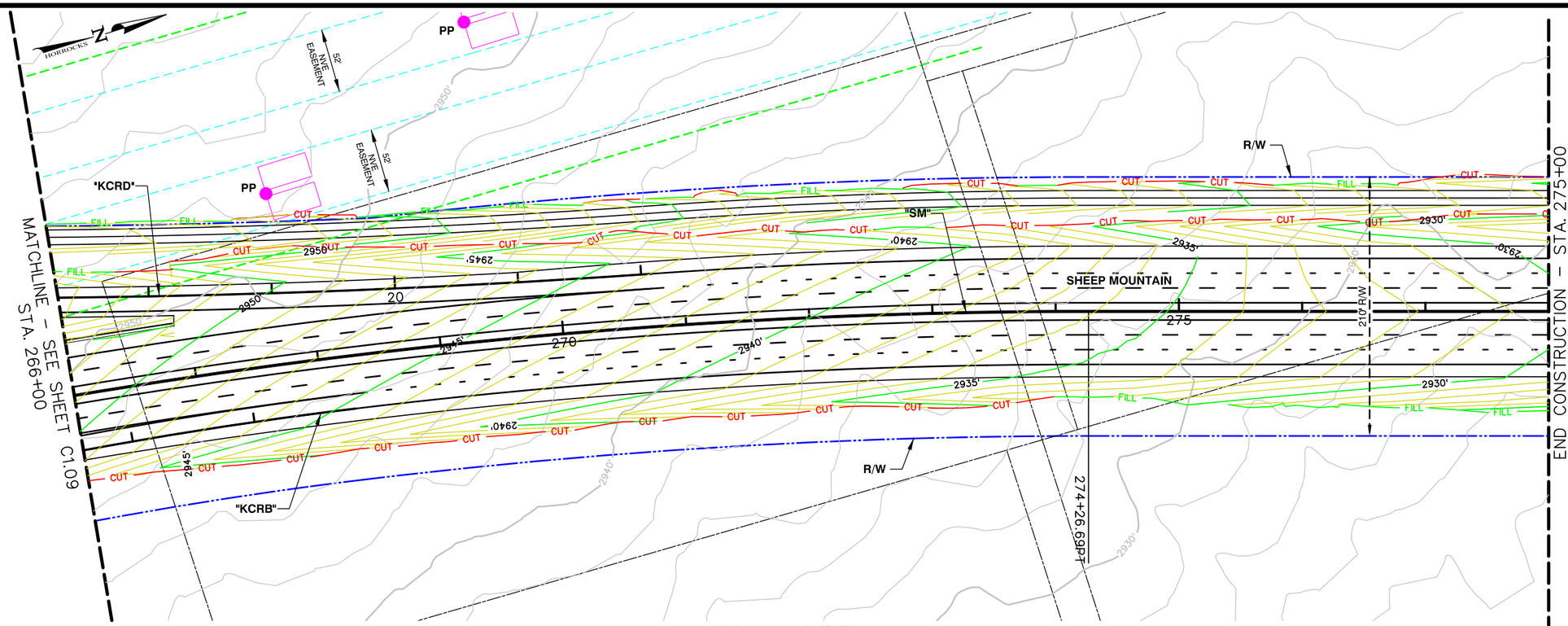
SHEET
SHEEP MOUNTAIN PLAN AND PROFILE
STA. 254+00 TO 266+00

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

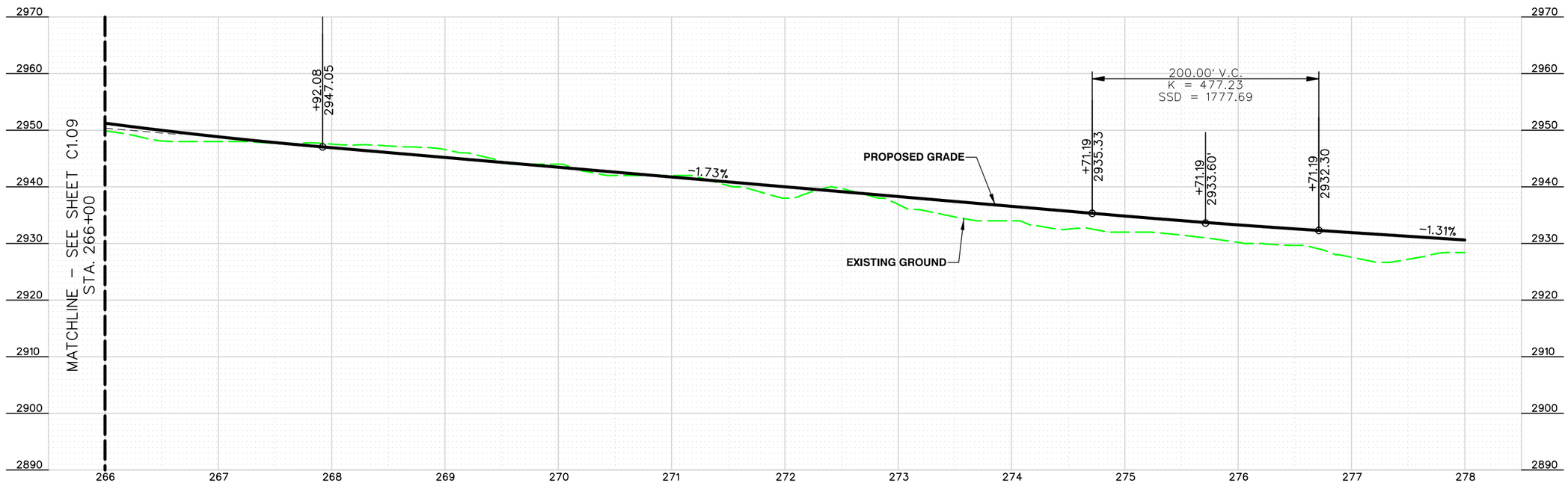
SHEET
C1.09
19 OF 42

DRAWING NO.
XXX-XXXX

PRELIMINARY NOT FOR CONSTRUCTION



PLAN VIEW



PROFILE VIEW

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NO.	DATE	SHEET	REVISIONS

PREPARED FOR
CITY OF LAS VEGAS

H# XXXXX | BID# XX-XXXXX | DESIGNED BY: XXX | DRAWN BY: XXX | CHECKED BY: XXX | DATE: 02/03/16 | SUBMITTAL STAGE: 30% - PRELIMINARY

TITLE
SHEEP MOUNTAIN

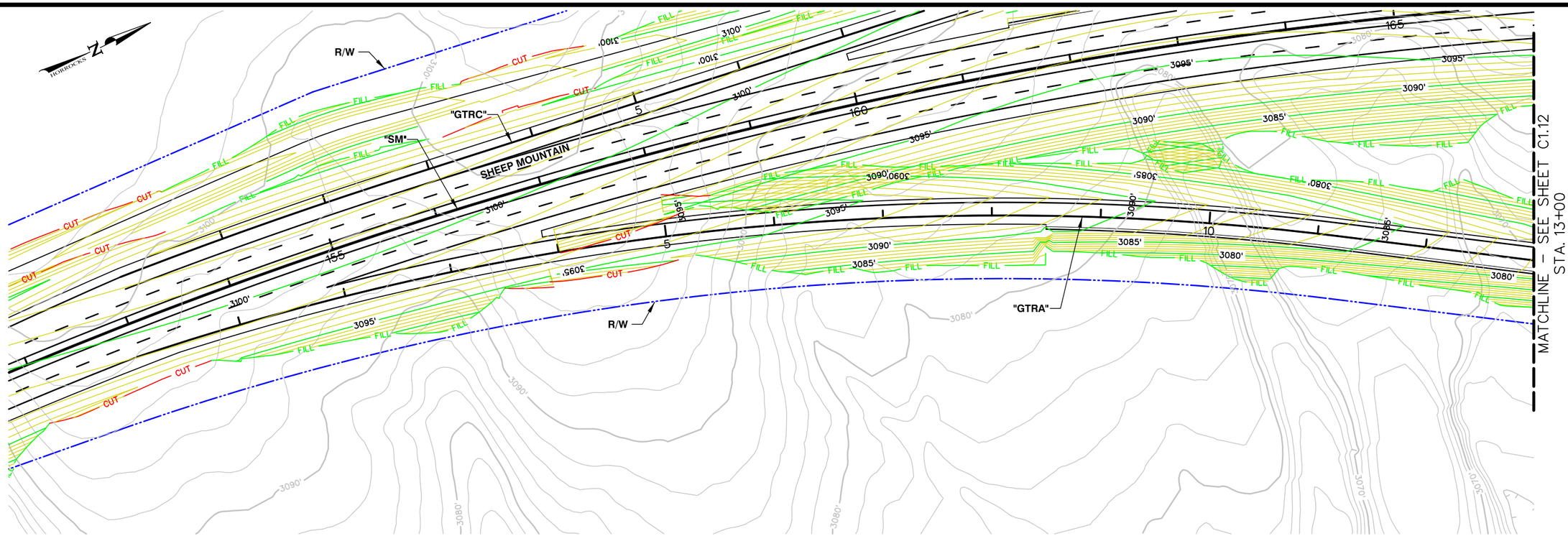
SHEET
SHEEP MOUNTAIN PLAN AND PROFILE
STA. 266+00 TO 278+00

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

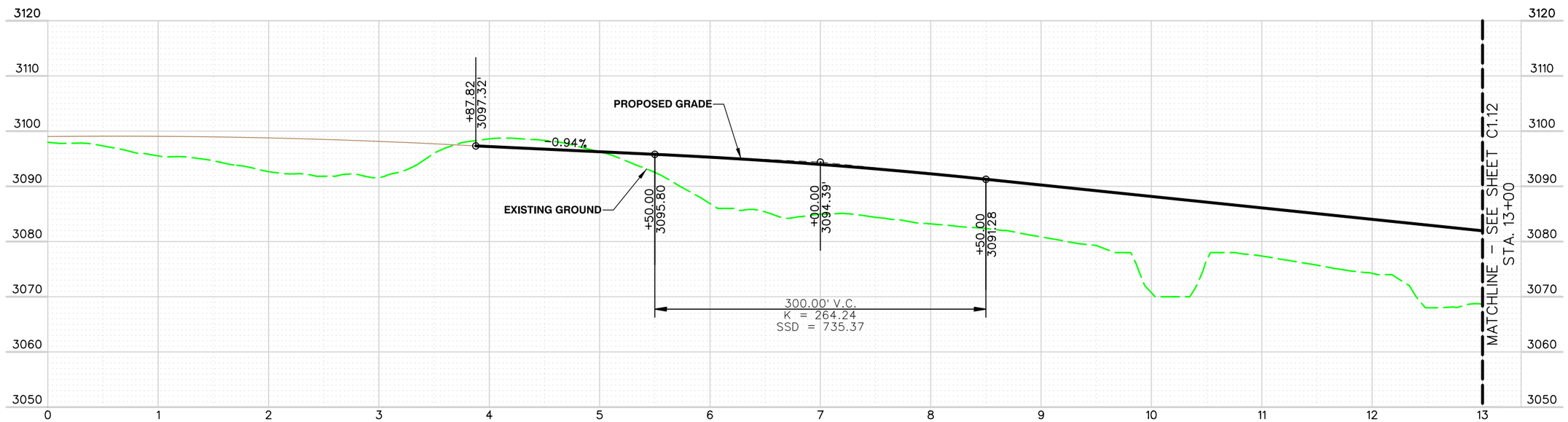
SHEET
C1.10
20 OF 42

DRAWING NO.
XXX-XXXX

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PLAN VIEW



PROFILE VIEW

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NO.	DATE	SHEET	REVISIONS

PREPARED FOR
CITY OF LAS VEGAS

H# XXXXX | BID# XX-XXXXX
DATE: 02/03/16 | DESIGNED BY: XXX
SUBMITTAL STAGE: 30% - PRELIMINARY | DRAWN BY: XXX | CHECKED BY: XXX

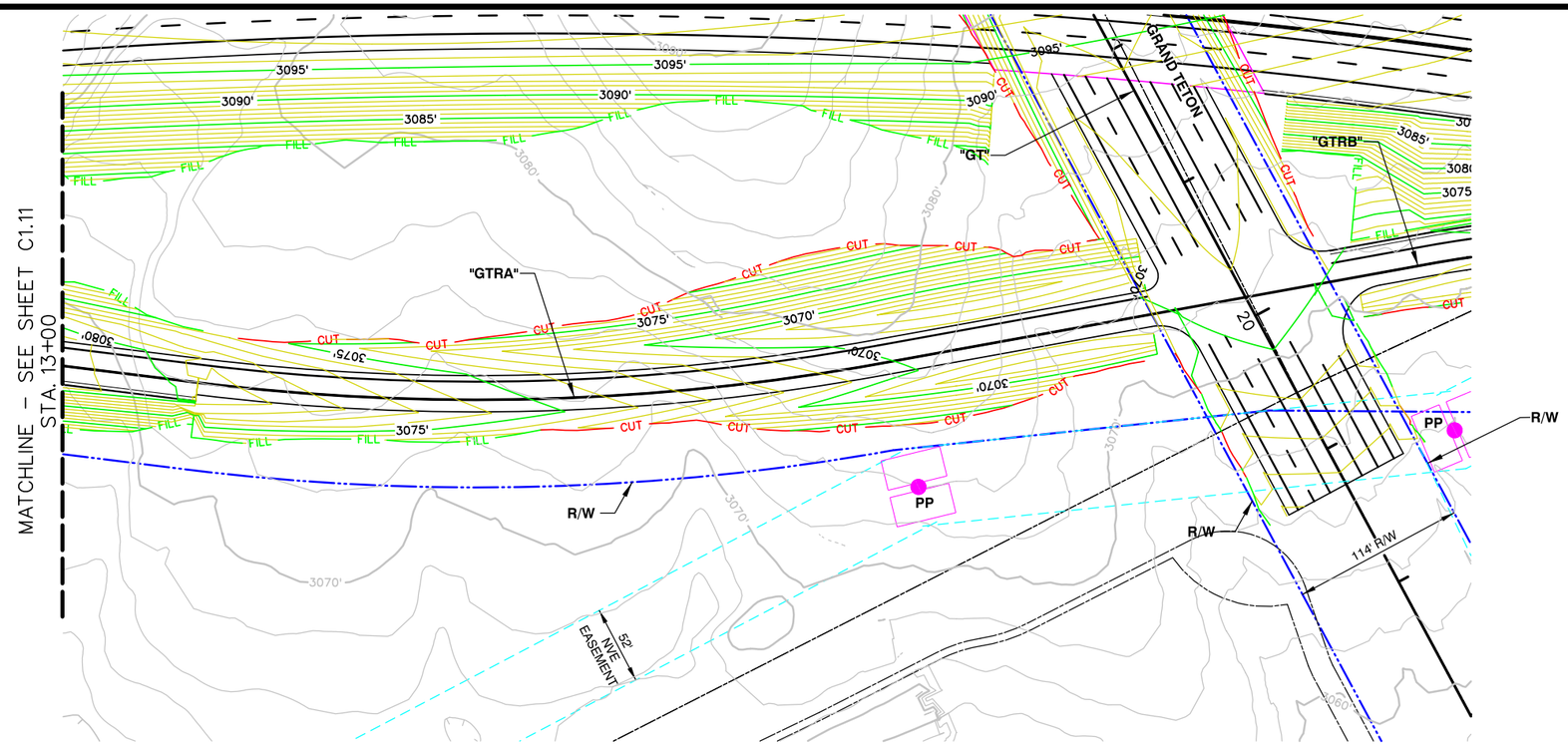
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SHEET: GRAND TETON RAMP "A"
PLAN AND PROFILE-STA. 0+00 TO 13+00

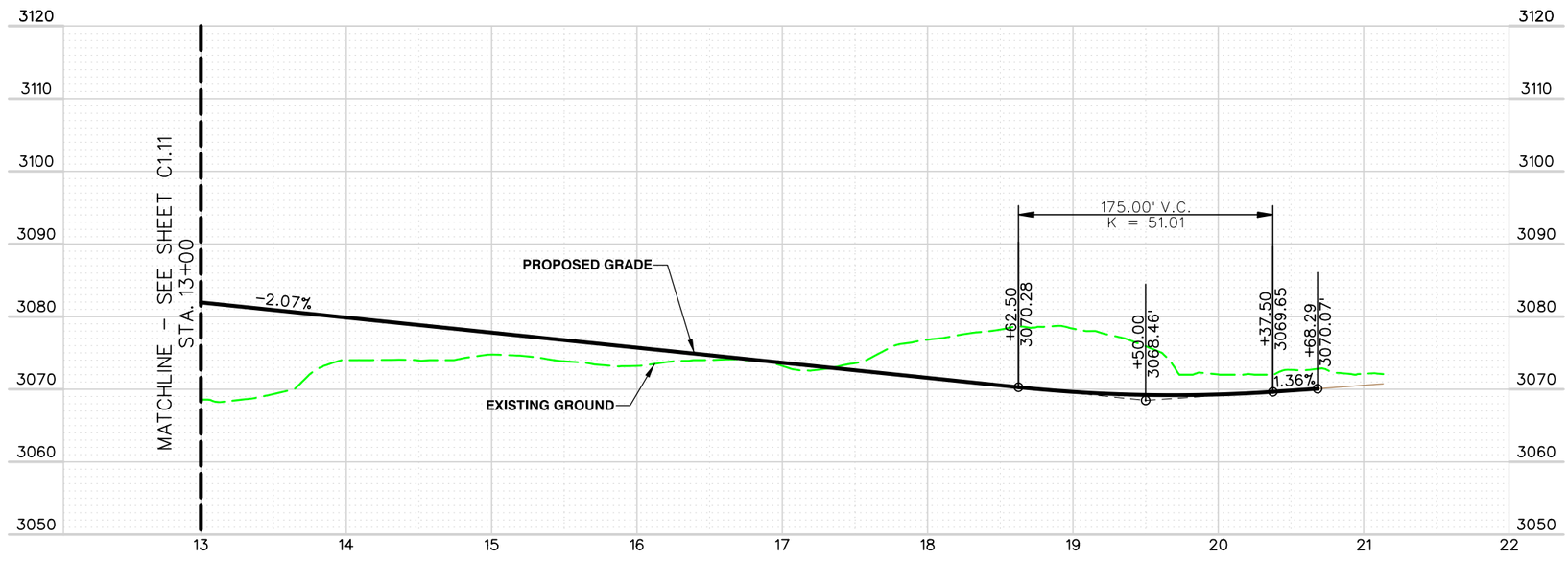
PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

SHEET
C1.11
21 OF 42
DRAWING NO.
XXX-XXXX

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PLAN VIEW



PROFILE VIEW

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NO.	DATE	SHEET	REVISIONS

PREPARED FOR
CITY OF LAS VEGAS

H# XXXXX | BID# XX.XXXXX | DESIGNED BY: XXX | DRAWN BY: XXX | CHECKED BY: XXX | DATE: 02/03/16 | SUBMITTAL STAGE: 30% - PRELIMINARY

TITLE: SHEEP MOUNTAIN

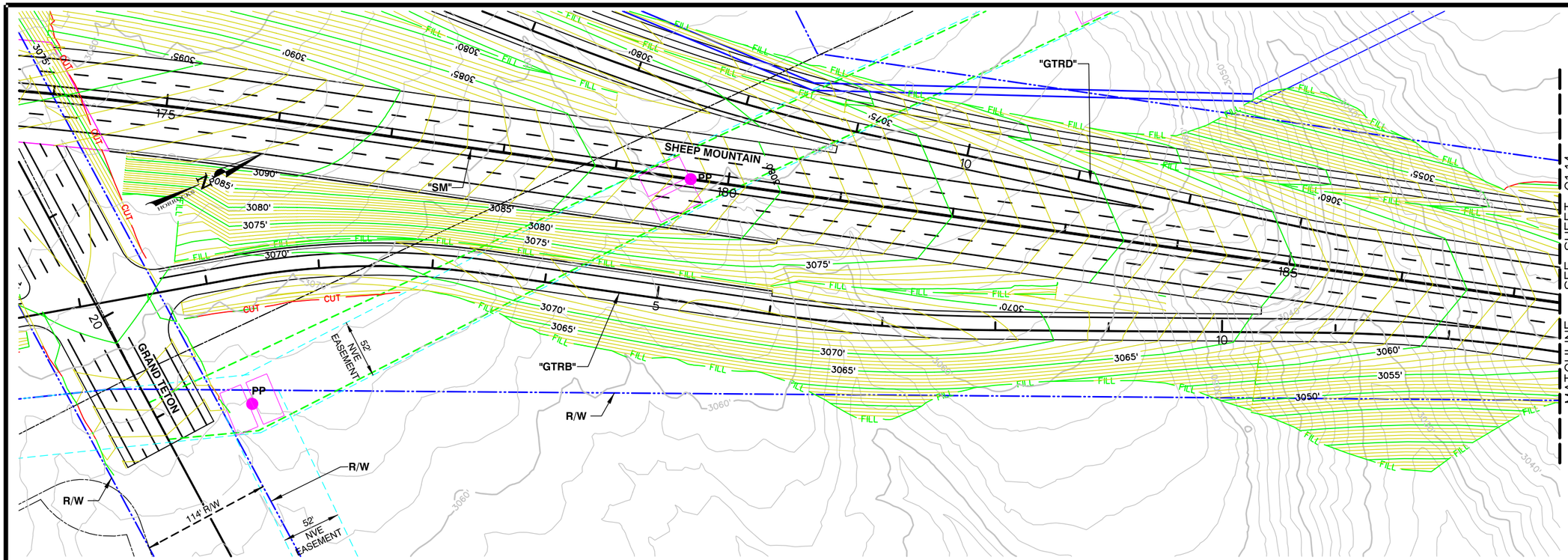
SHEET: GRAND TETON RAMP "A"
PLAN AND PROFILE-STA. 13+00 TO 22+00

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

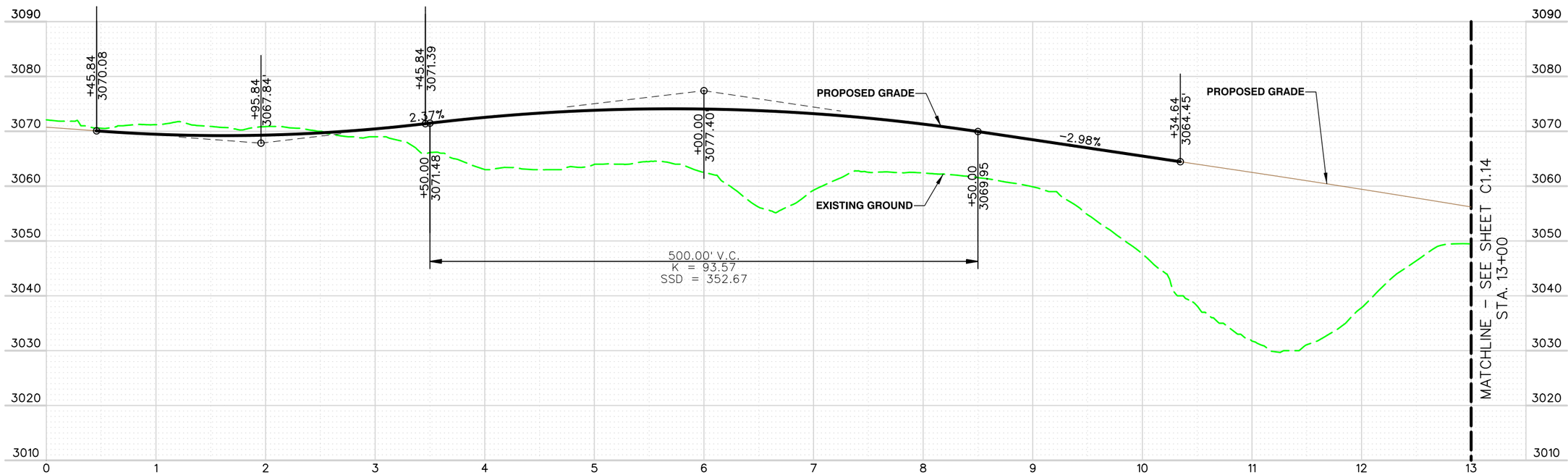
SHEET
C1.12
22 OF 42

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XXX-XXXX

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PLAN VIEW



PROFILE VIEW

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NO.	DATE	SHEET	REVISIONS

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H# XXXXX | BID# XX-XXXXX | DESIGNED BY: XXX | DRAWN BY: XXX | CHECKED BY: XXX | DATE: 02/03/16 | SUBMITTAL STAGE: 30% - PRELIMINARY

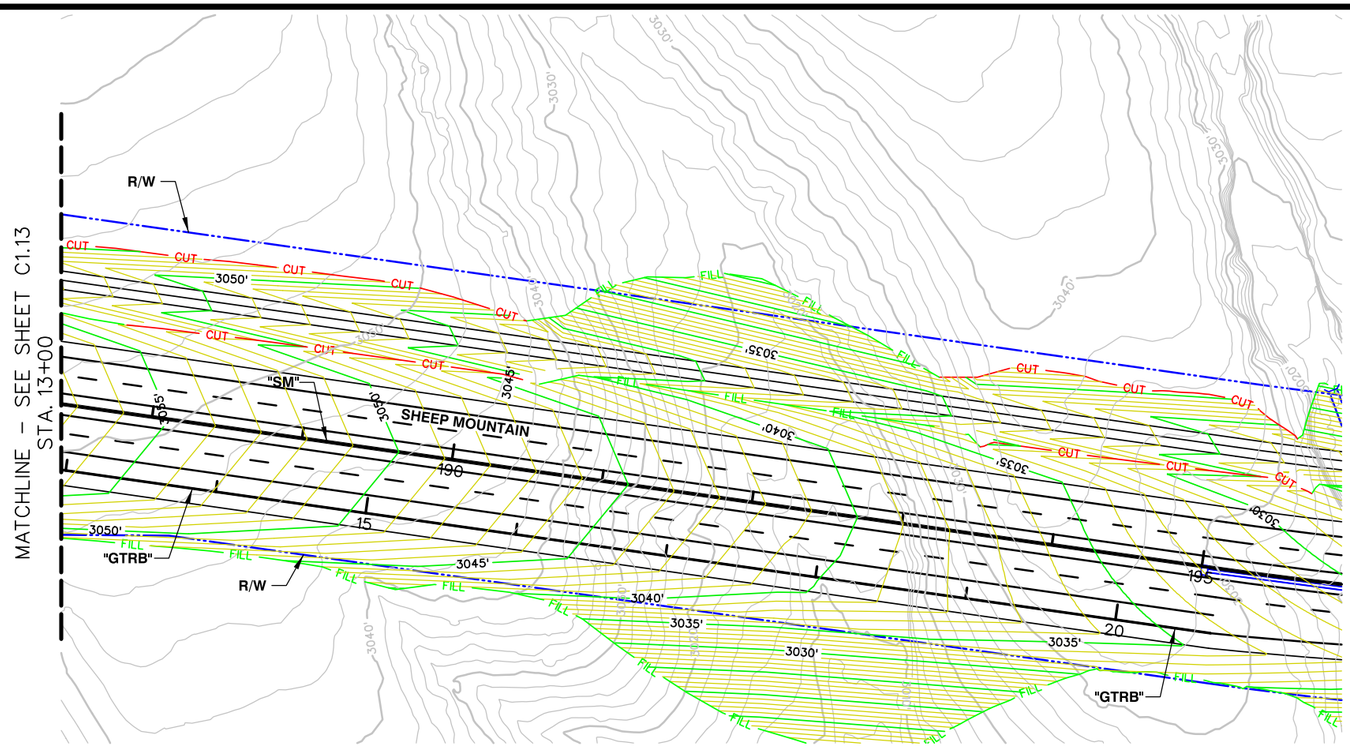
TITLE: SHEEP MOUNTAIN

SHEET: GRAND TETON RAMP "B"
PLAN AND PROFILE-STA. 0+00 TO 13+00

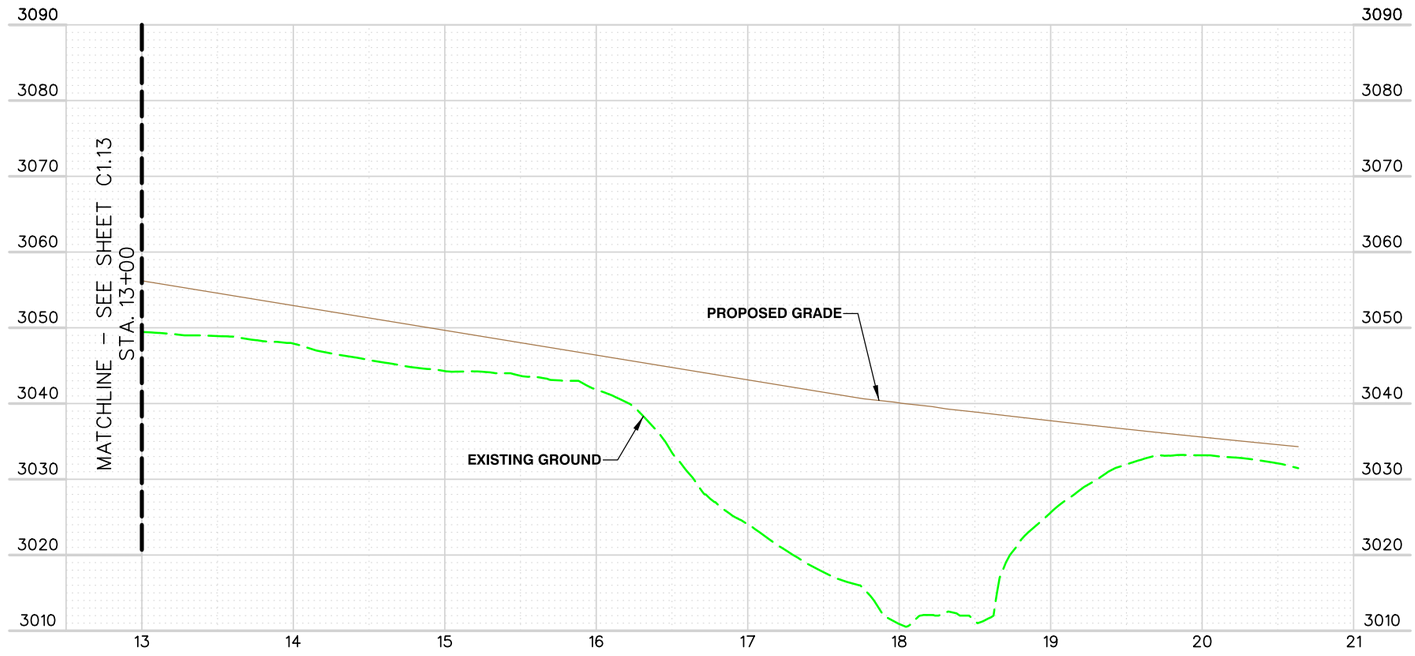
PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

SHEET C1.13
23 OF 42
DRAWING NO. XXX-XXXX

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PLAN VIEW



PROFILE VIEW

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NO.	DATE	SHEET	REVISIONS

PREPARED FOR
CITY OF LAS VEGAS

H# XXXXX | BID# XX-XXXXX
DATE: 02/03/16 | DESIGNED BY: XXX
SUBMITTAL STAGE: 30% - PRELIMINARY | DRAWN BY: XXX | CHECKED BY: XXX

TITLE: SHEEP MOUNTAIN

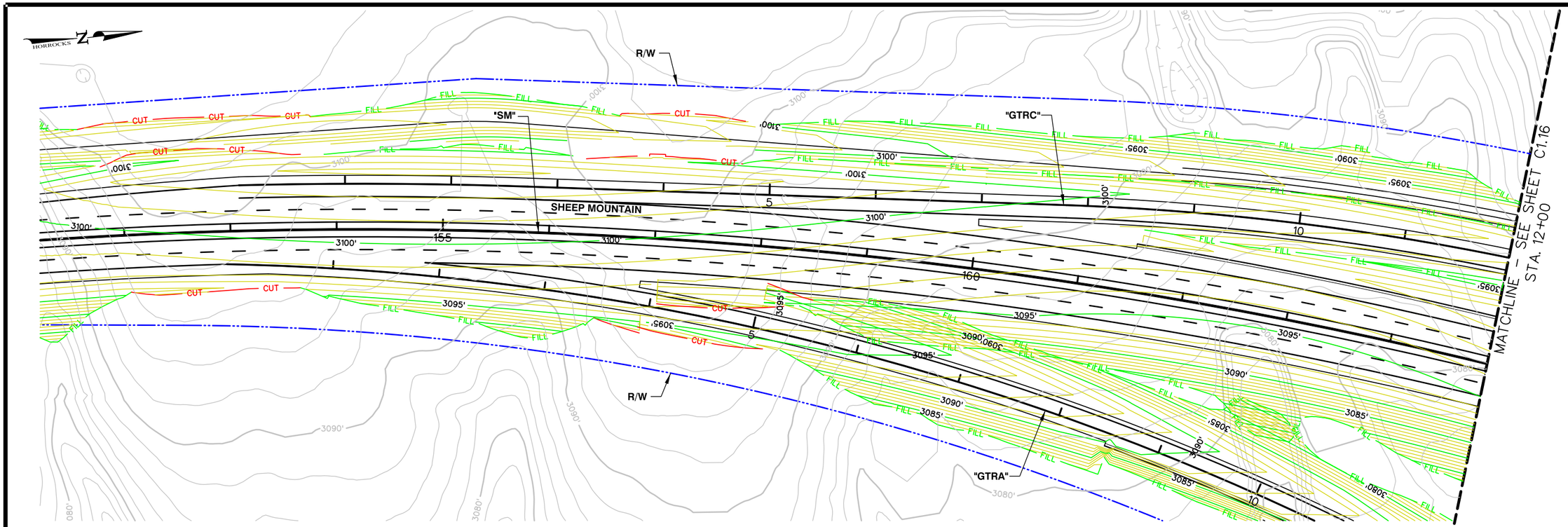
SHEET: GRAND TETON RAMP "B"
PLAN AND PROFILE-STA. 13+00 TO 21+00

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

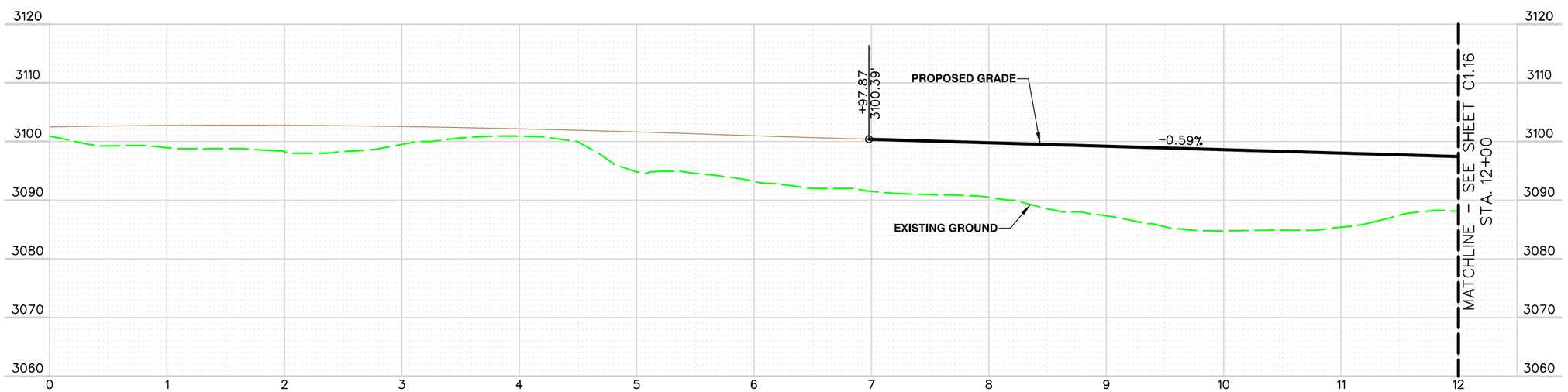
SHEET
C1.14
24 OF 42

DRAWING NO.
XXX-XXXX

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PLAN VIEW



PROFILE VIEW

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NO.	DATE	SHEET	REVISIONS

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CITY OF LAS VEGAS

H# XXXXX | BID# XX-XXXXX
DATE: 02/03/16 | DESIGNED BY: XXX
SUBMITTAL STAGE: 30% - PRELIMINARY | DRAWN BY: XXX
CHECKED BY: XXX

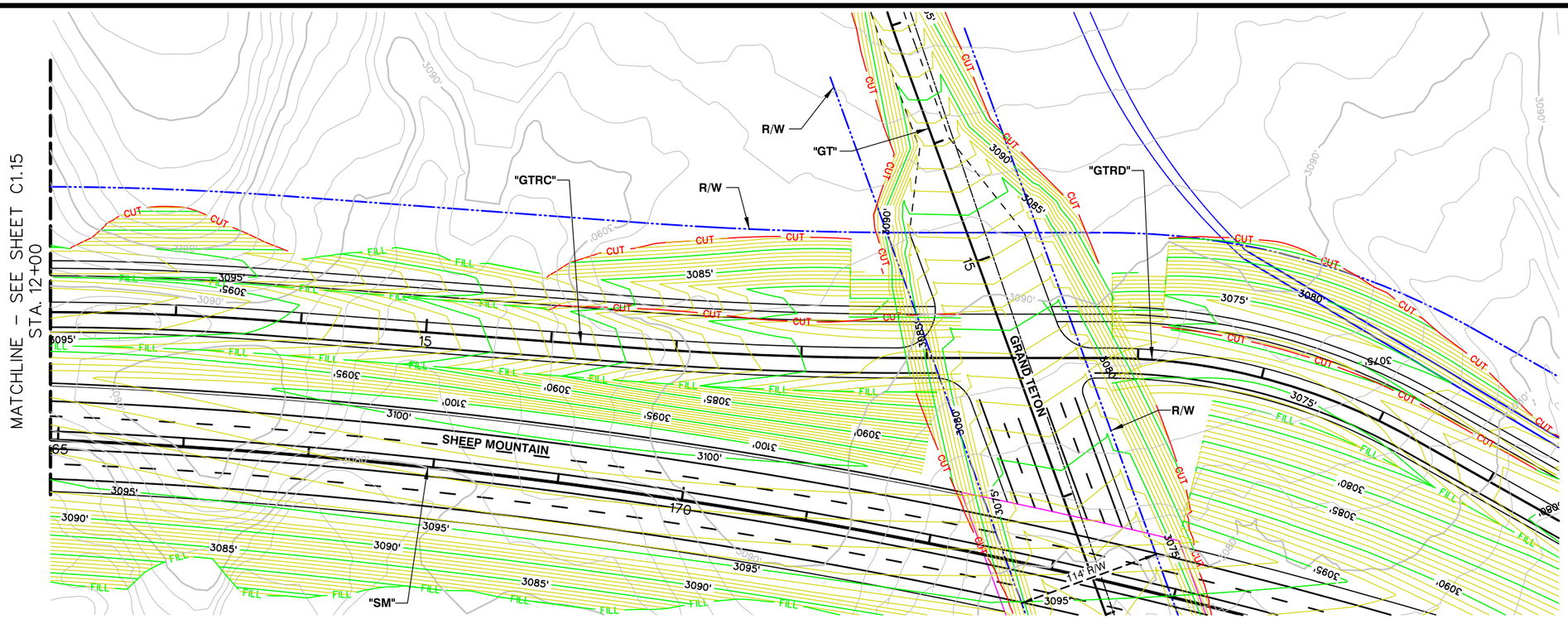
TITLE: SHEEP MOUNTAIN

SHEET: GRAND TETON RAMP "C"
PLAN AND PROFILE-STA. 0+00 TO 12+00

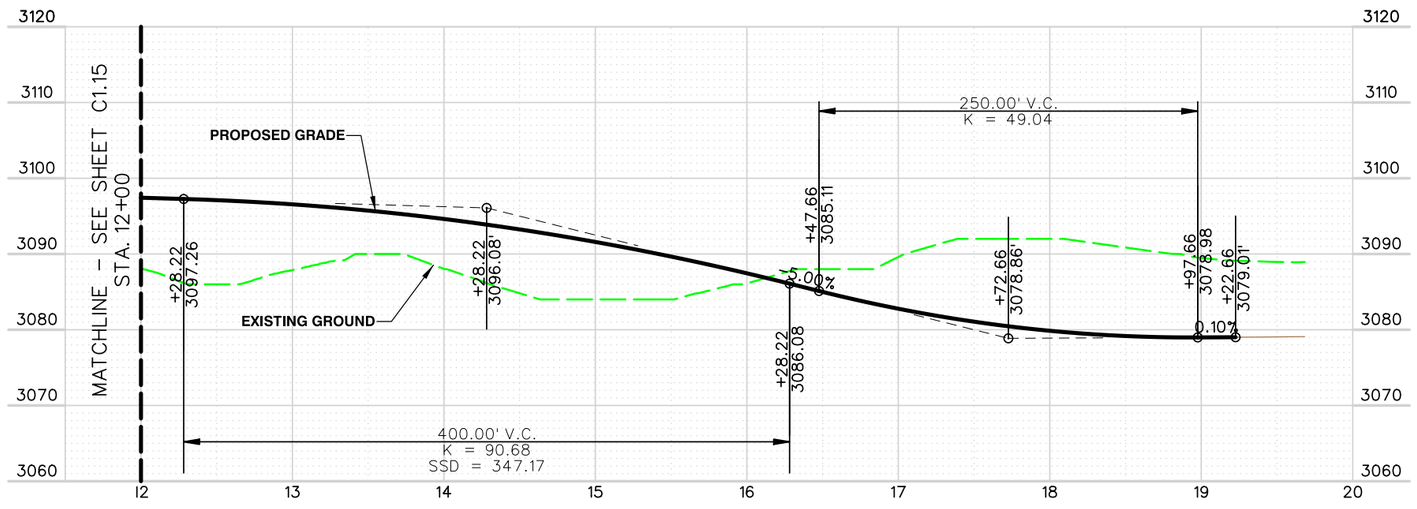
PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

SHEET
C1.15
25 OF 42
DRAWING NO.
XXX-XXXX

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PLAN VIEW



PROFILE VIEW

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Henderson, NV 89014
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NO.	DATE	SHEET	REVISIONS

PREPARED FOR
CITY OF LAS VEGAS

H# XXXXX | BID# XX-XXXXX
DATE: 02/03/16 | DESIGNED BY: XXX
SUBMITTAL STAGE: 30% - PRELIMINARY | DRAWN BY: XXX | CHECKED BY: XXX

TITLE: SHEEP MOUNTAIN

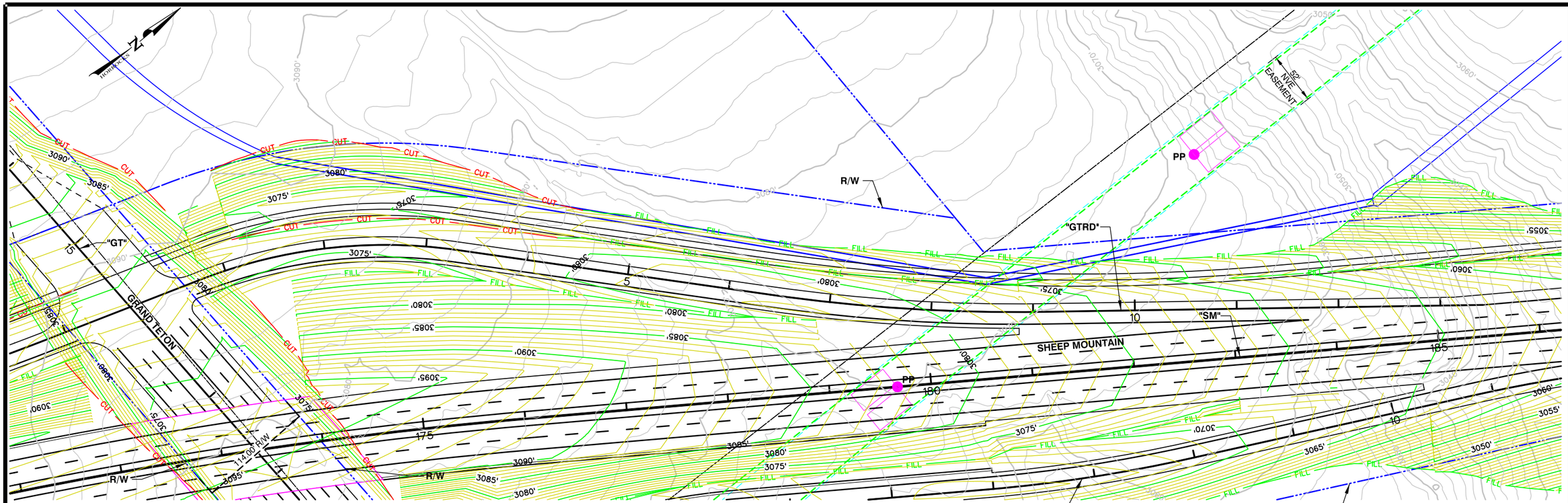
SHEET: GRAND TETON RAMP "C"
PLAN AND PROFILE-STA. 12+00 TO 21+00

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

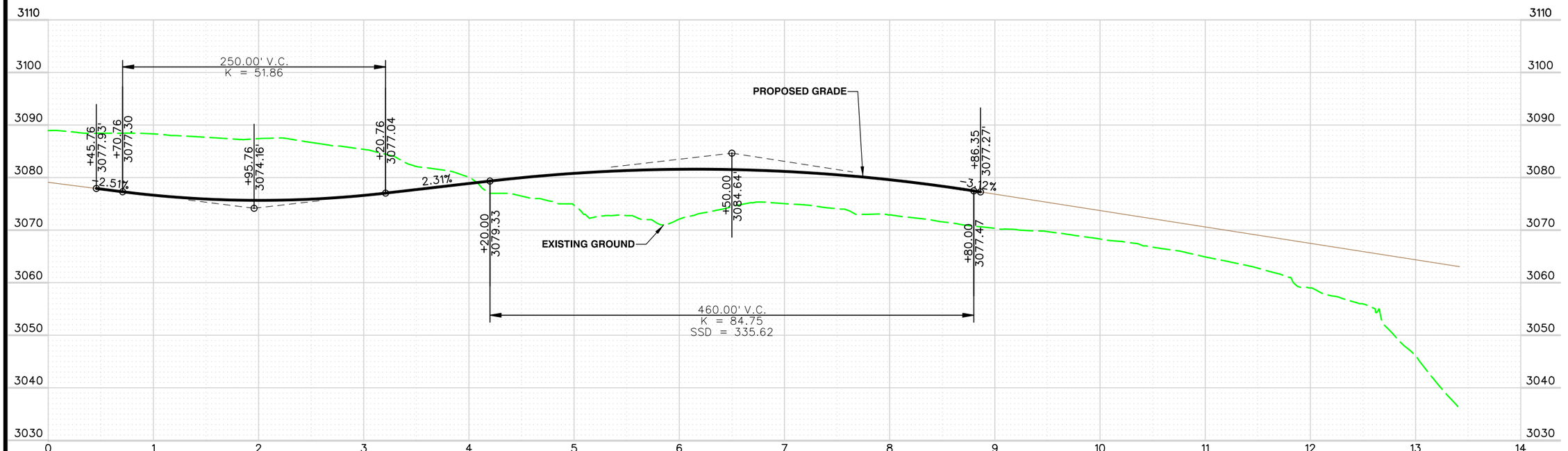
SHEET
C1.16
26 OF 42

DRAWING NO.
XXX-XXXX

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PLAN VIEW



PROFILE VIEW

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NO.	DATE	SHEET	REVISIONS

PREPARED FOR
CITY OF LAS VEGAS

H# XXXXX | BID# XX-XXXXX | DESIGNED BY: XXX | DRAWN BY: XXX | CHECKED BY: XXX | DATE: 02/03/16 | SUBMITTAL STAGE: 30% - PRELIMINARY

TITLE
SHEEP MOUNTAIN

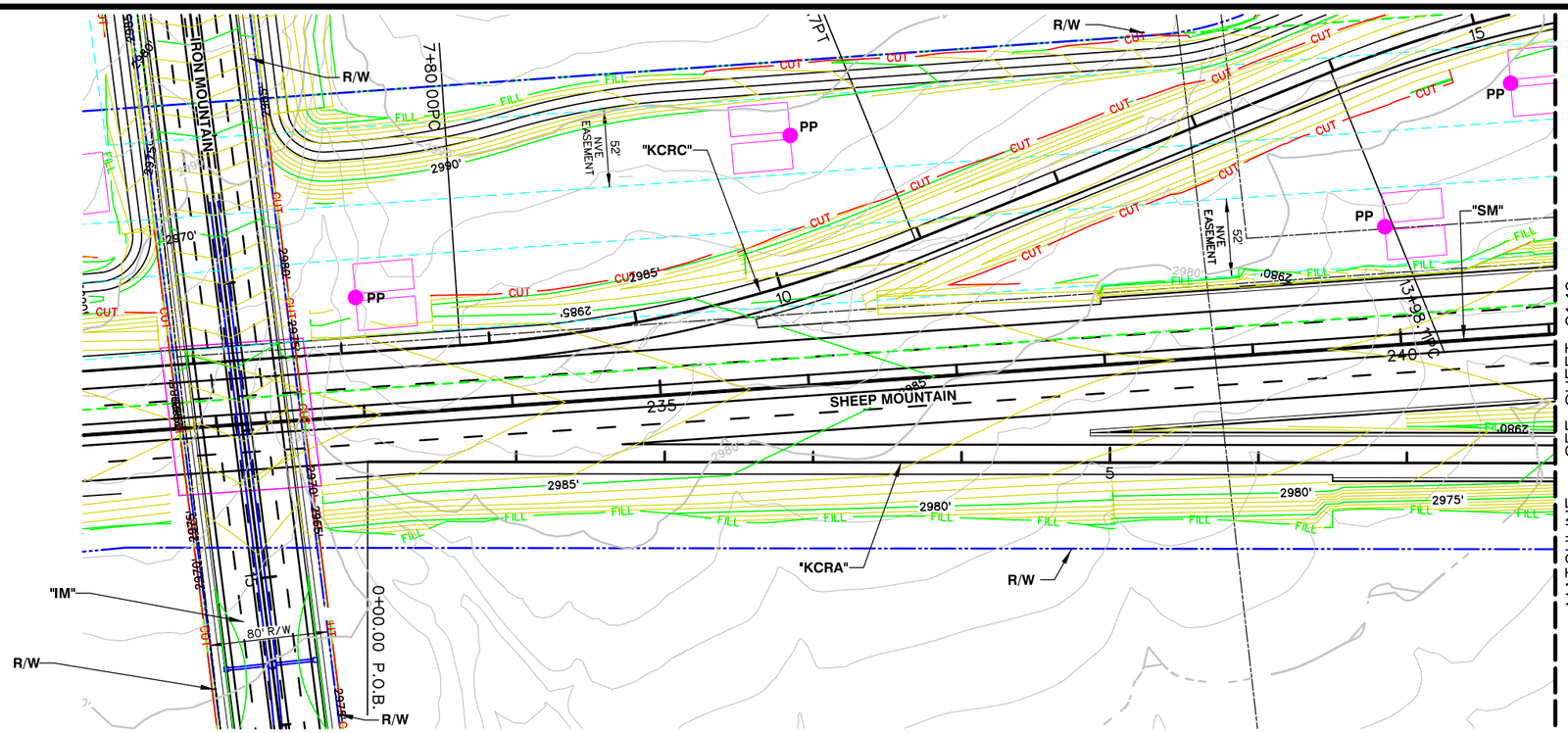
SHEET
GRAND TETON RAMP "D"
PLAN AND PROFILE-STA. 0+00 TO 15+00

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

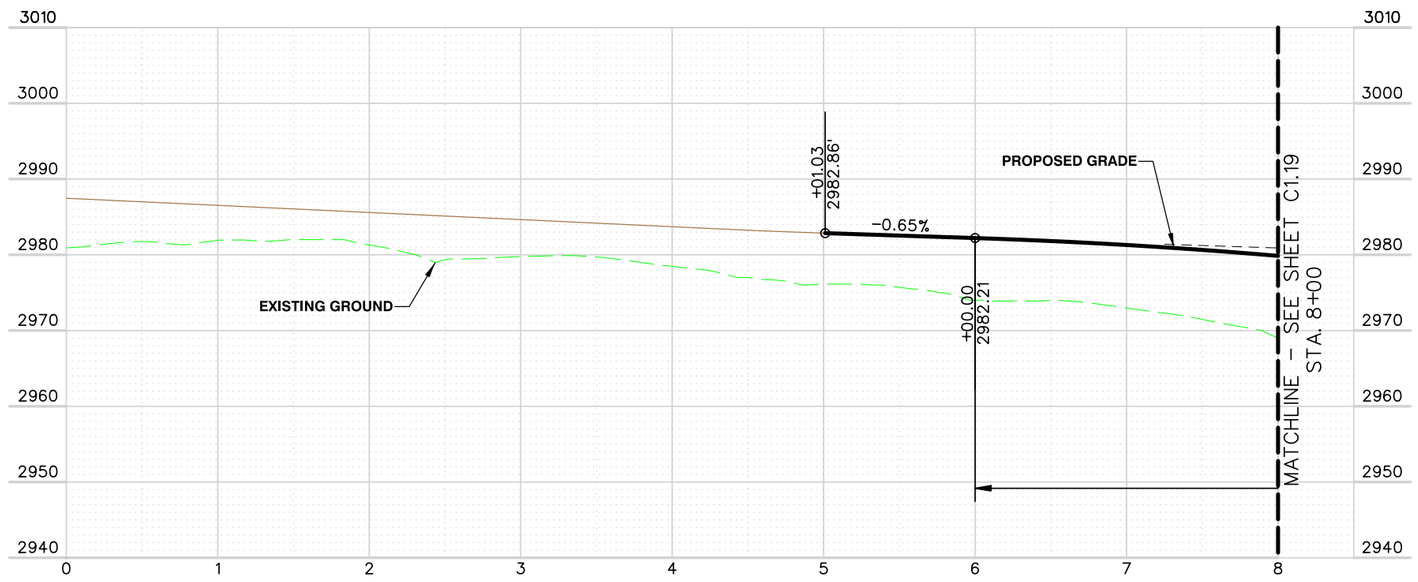
SHEET
C1.17
27 OF 42

DRAWING NO.
XXX-XXXX

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PLAN VIEW



PROFILE VIEW

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NO.	DATE	SHEET	REVISIONS

PREPARED FOR
CITY OF LAS VEGAS

H# XXXXX | BID# XX.XXXX | DESIGNED BY: XXX | DRAWN BY: XXX | CHECKED BY: XXX

DATE: 02/03/16 | SUBMITTAL STAGE: 30% - PRELIMINARY

TITLE
SHEEP MOUNTAIN

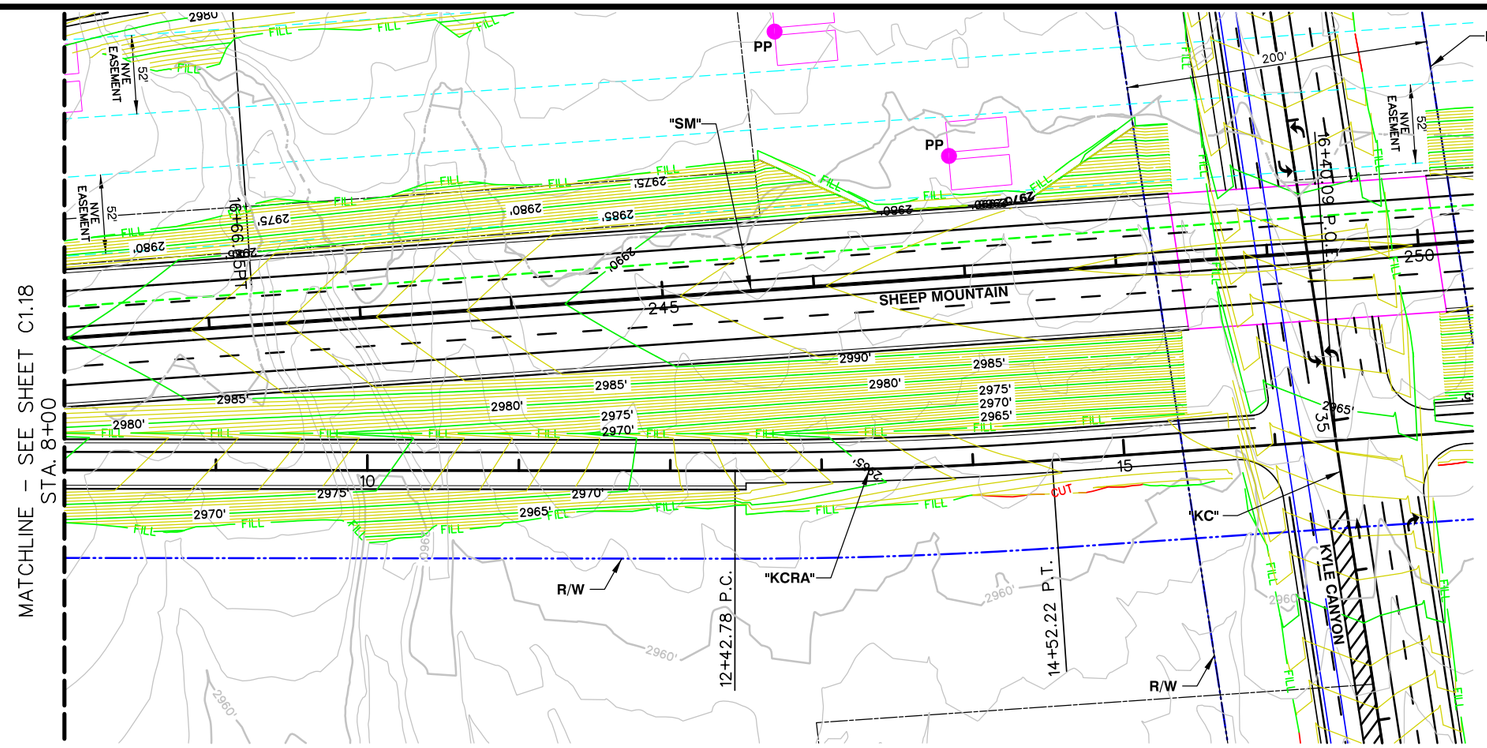
SHEET
KYLE CANYON RAMP "A"
PLAN AND PROFILE-STA. 0+00 TO 8+00

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

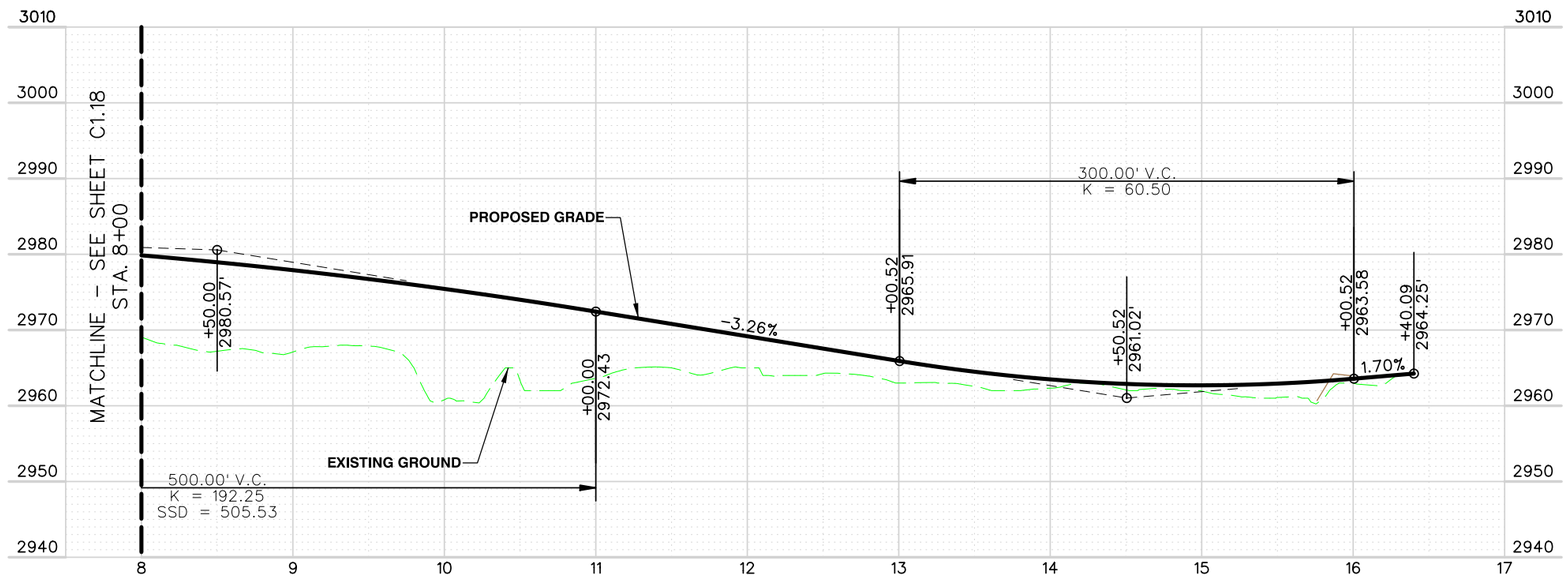
SHEET
C1.18
28 OF 42

DRAWING NO.
XXX-XXXX

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PLAN VIEW



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NO.	DATE	SHEET	REVISIONS

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CITY OF LAS VEGAS

H# XXXXX | BID# XX-XXXXX
DATE: 02/03/16 | DESIGNED BY: XXX
SUBMITTAL STAGE: 30% - PRELIMINARY | DRAWN BY: XXX | CHECKED BY: XXX

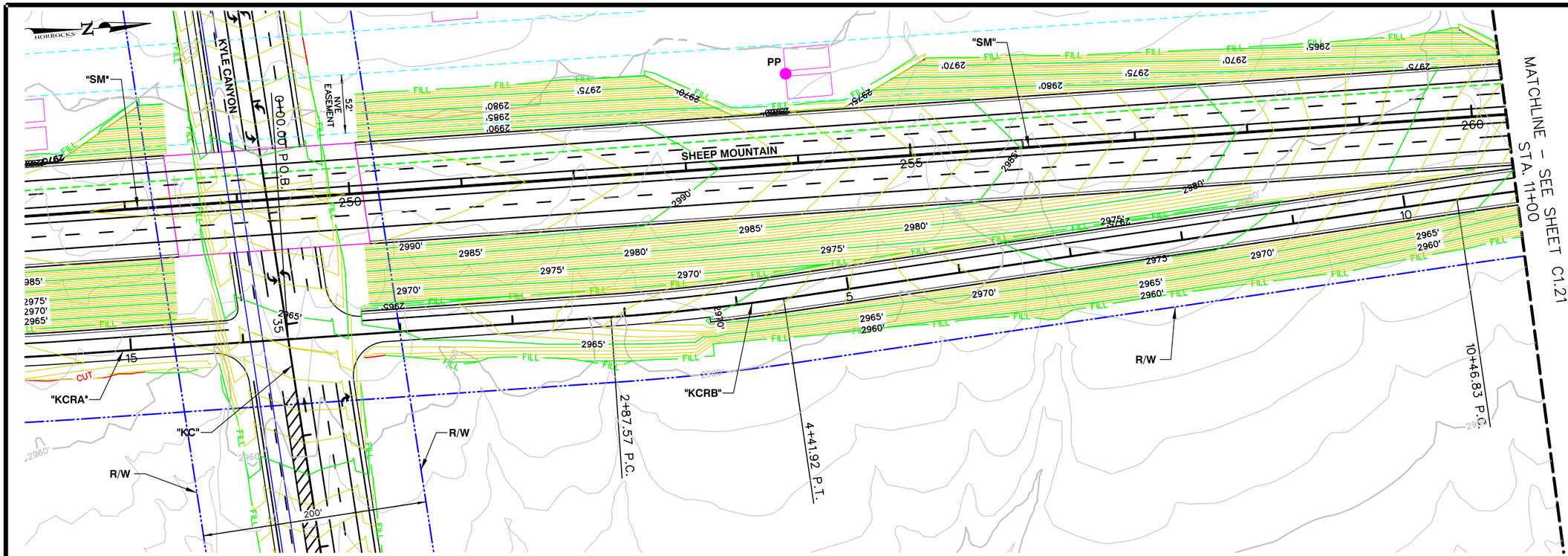
TITLE
SHEEP MOUNTAIN

SHEET
KYLE CANYON RAMP "A"
PLAN AND PROFILE-STA. 8+00 TO 17+00

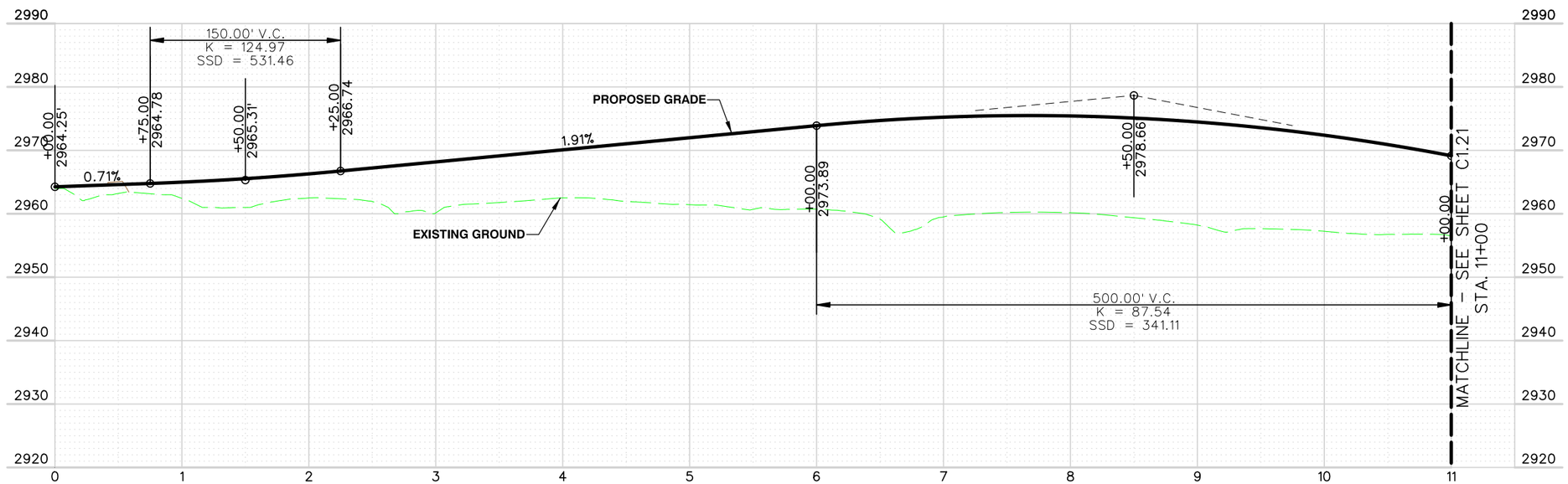
PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

SHEET
C1.19
29 OF 42
DRAWING NO.
XXX-XXXX

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PLAN VIEW



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NO.	DATE	SHEET	REVISIONS

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CITY OF LAS VEGAS

H# XXXXX | BID# XX.XXXXX | DESIGNED BY: XXX | DRAWN BY: XXX | CHECKED BY: XXX | DATE: 02/03/16 | SUBMITTAL STAGE: 30% - PRELIMINARY

TITLE: SHEEP MOUNTAIN

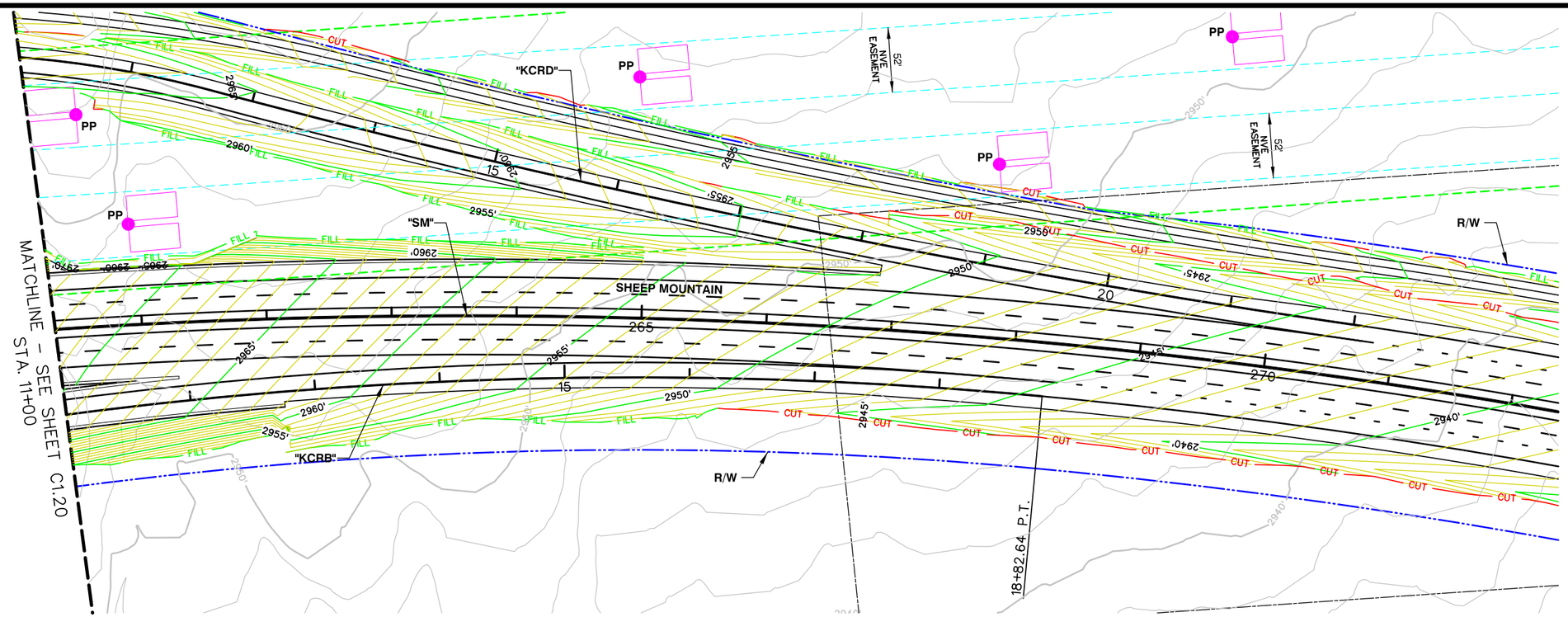
SHEET: KYLE CANYON RAMP "B"
PLAN AND PROFILE-STA. 0+00 TO 11+00

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

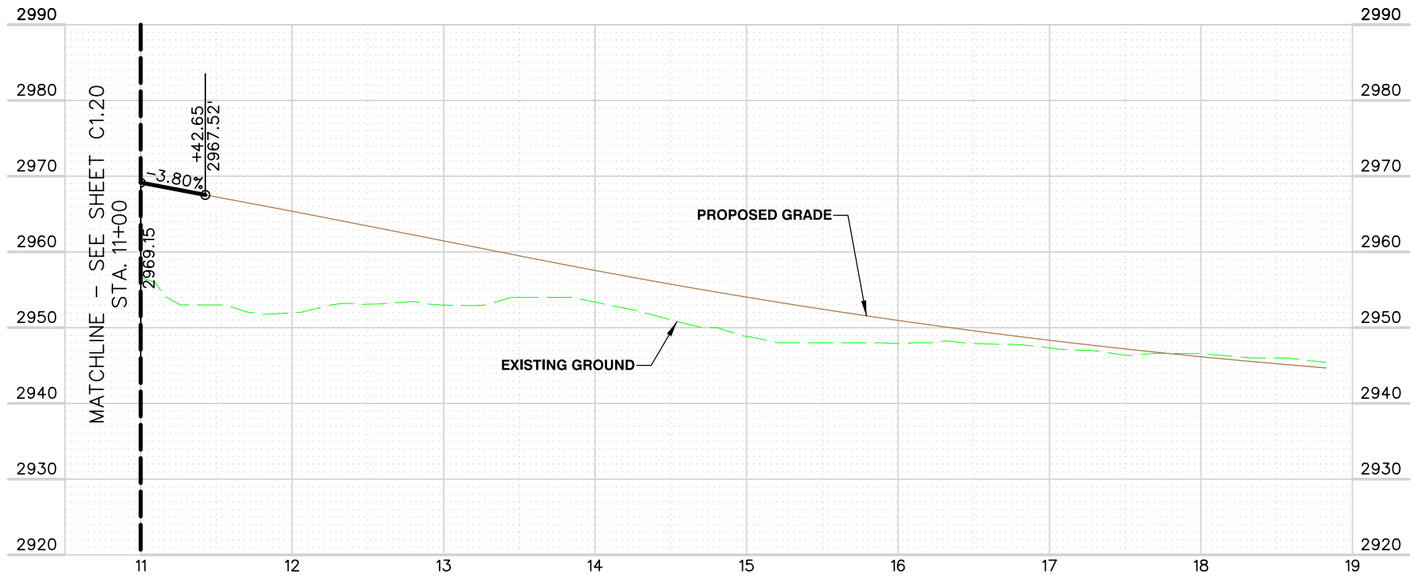
SHEET
C1.20
30 OF 42

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H# XXXXX | BID# XX-XXXXX
DATE: 02/03/16 | DESIGNED BY: XXX
SUBMITTAL STAGE: 30% - PRELIMINARY | DRAWN BY: XXX
CHECKED BY: XXX

NO.	DATE	SHEET	REVISIONS

TITLE: SHEEP MOUNTAIN

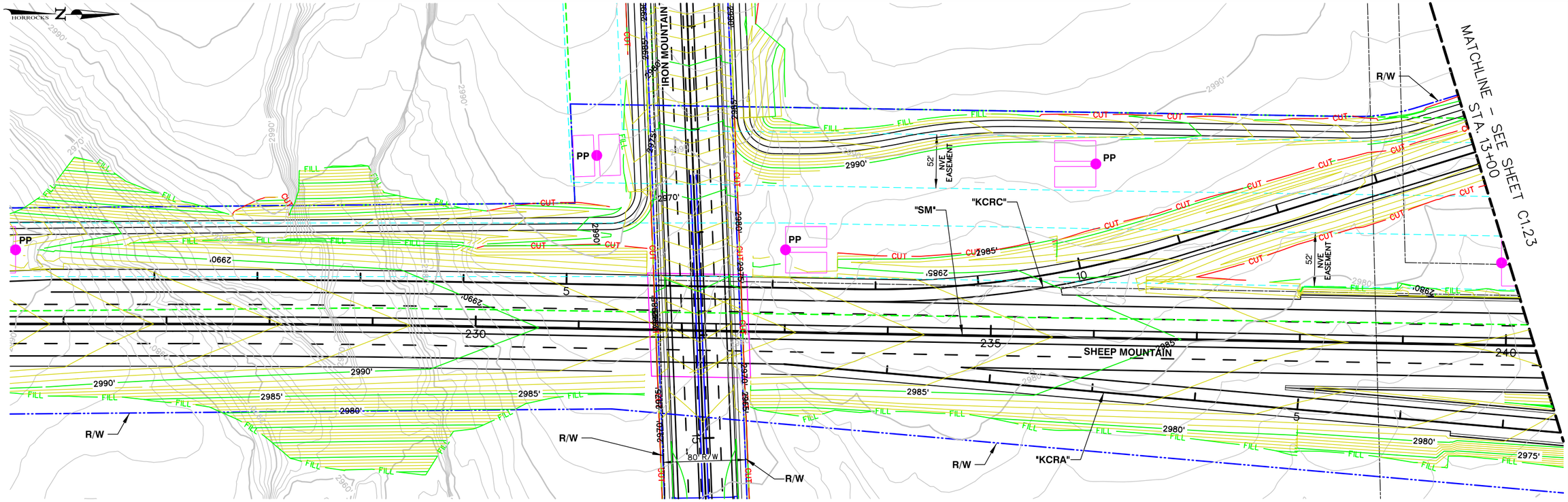
SHEET: KYLE CANYON RAMP "B"
PLAN AND PROFILE-STA. 11+00 TO 19+00

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

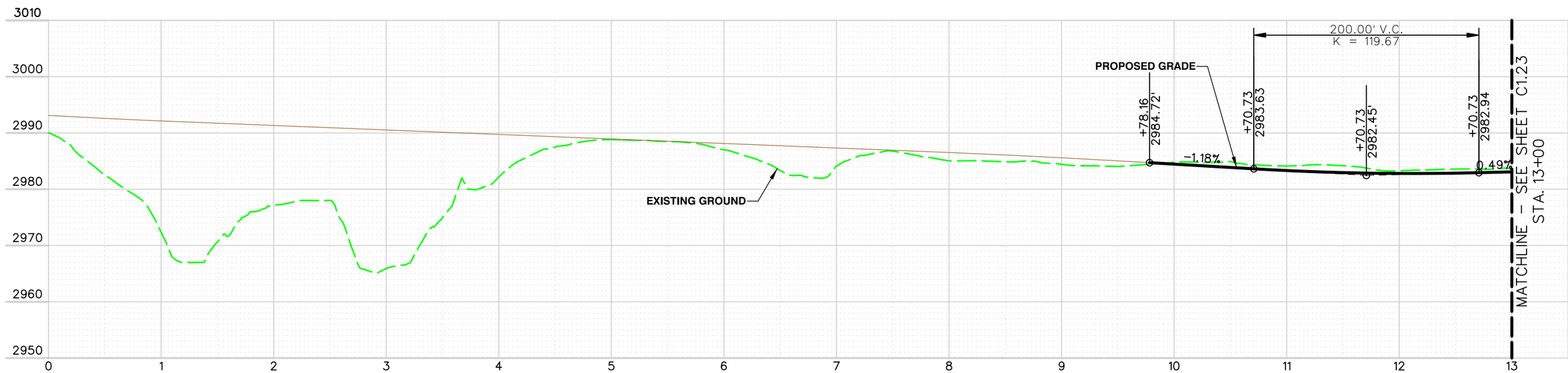
SHEET
C1.21
31 OF 42

DRAWING NO.
XXX-XXXX

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PLAN VIEW



PROFILE VIEW

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NO.	DATE	SHEET	REVISIONS

PREPARED FOR
CITY OF LAS VEGAS

H# XXXXX | BID# XX-XXXXX | DESIGNED BY: XXX | DRAWN BY: XXX | CHECKED BY: XXX

DATE: 02/03/16

SUBMITTAL STAGE: 30% - PRELIMINARY

TITLE
SHEEP MOUNTAIN

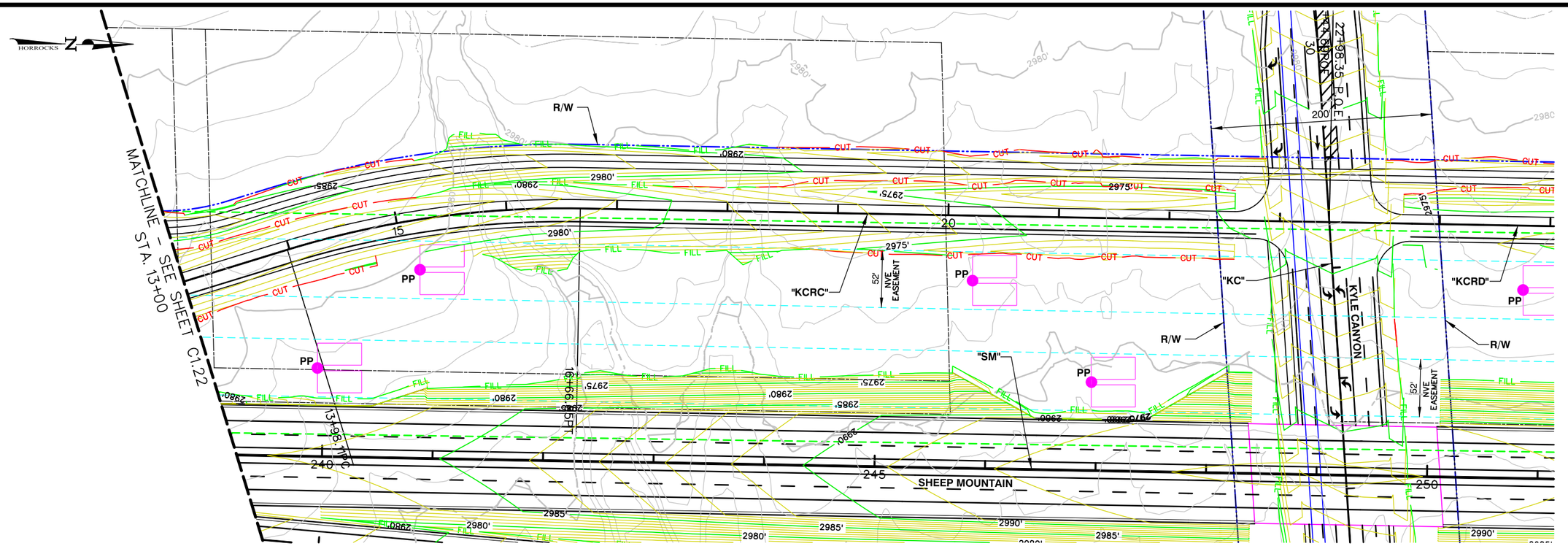
SHEET
KYLE CANYON RAMP "C"
PLAN AND PROFILE-STA. 0+00 TO 13+00

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

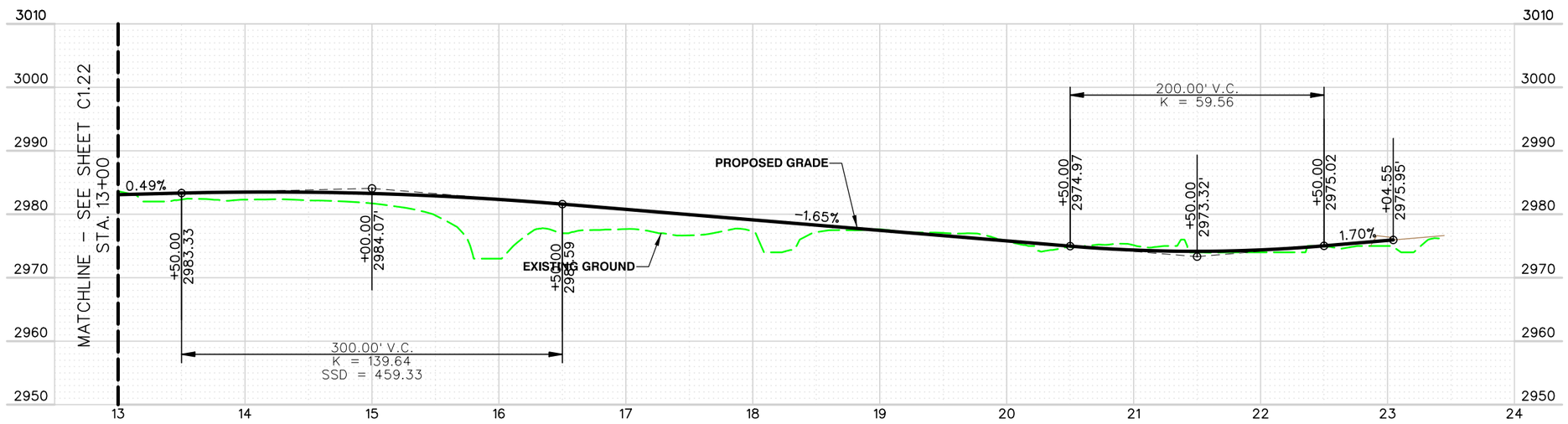
SHEET
C1.22
32 OF 42

DRAWING NO.
XXX-XXXX

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PLAN VIEW



PROFILE VIEW

NO.	DATE	SHEET	REVISIONS

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PREPARED FOR
CITY OF LAS VEGAS

H# XXXXX | BID# XX-XXXXX | DESIGNED BY: XXX | DRAWN BY: XXX | CHECKED BY: XXX | DATE: 02/03/16 | SUBMITTAL STAGE: 30% - PRELIMINARY

TITLE: SHEEP MOUNTAIN

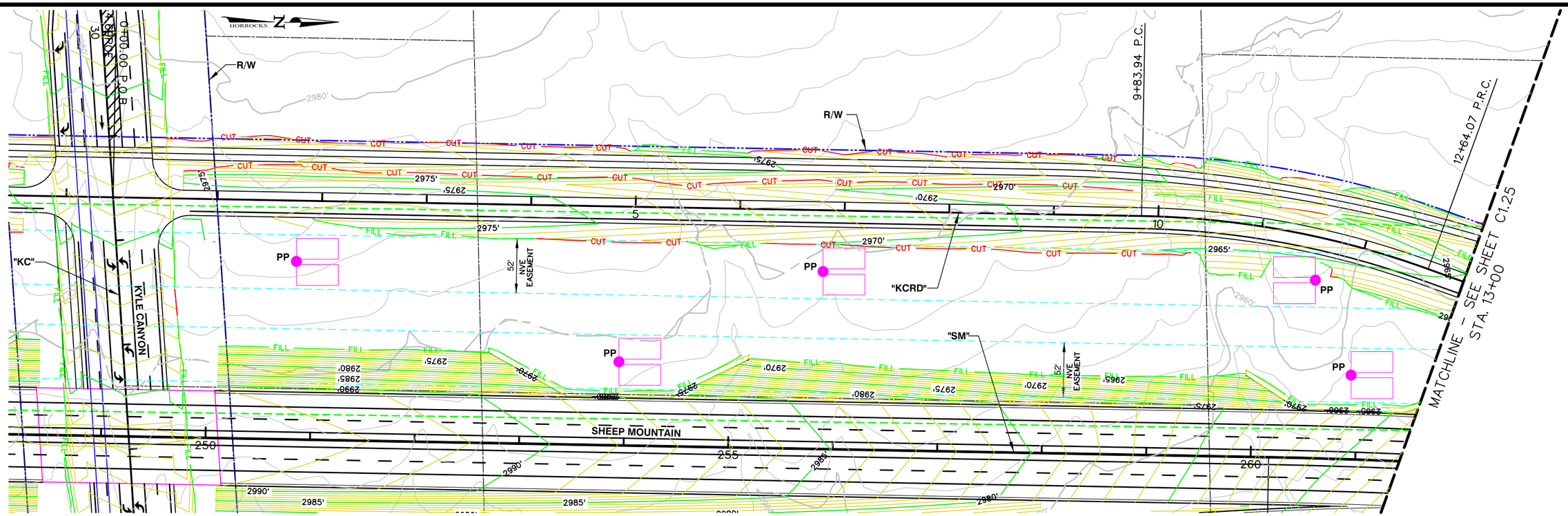
SHEET: KYLE CANYON RAMP "C" PLAN AND PROFILE-STA. 13+00 TO 23+00

PRELIMINARY NOT FOR CONSTRUCTION

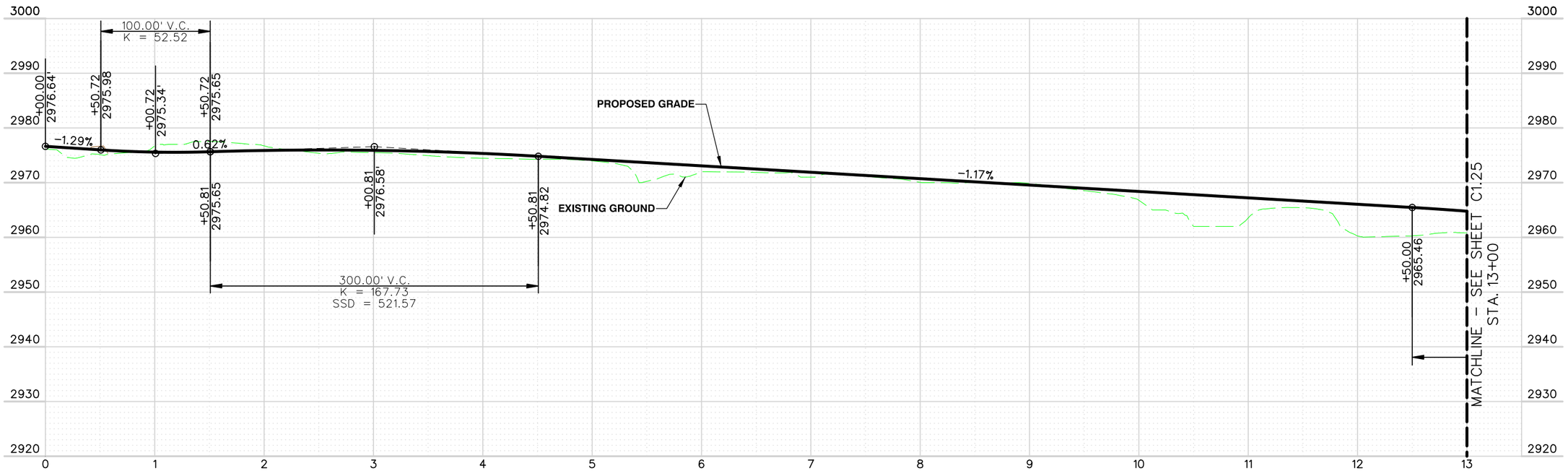
PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

SHEET
C1.23
33 OF 42

DRAWING NO.
XXX-XXXX



PLAN VIEW



PROFILE VIEW

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NO.	DATE	SHEET	REVISIONS

PREPARED FOR
CITY OF LAS VEGAS

H# XXXXX | BID# XX-XXXXX | DESIGNED BY: XXX | DRAWN BY: XXX | CHECKED BY: XXX

DATE: 02/03/16

SUBMITTAL STAGE: 30% - PRELIMINARY

TITLE: SHEEP MOUNTAIN

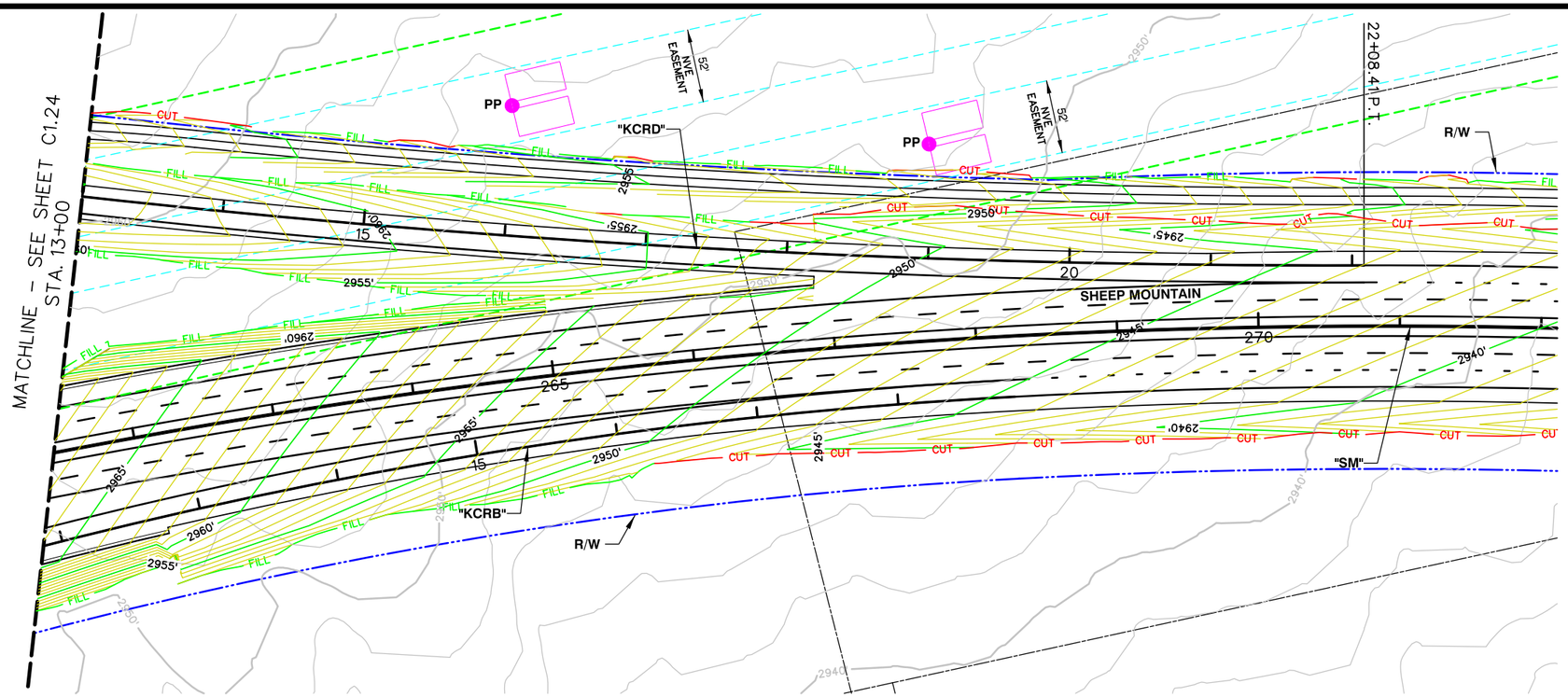
SHEET: KYLE CANYON RAMP "D"
PLAN AND PROFILE-STA. 0+00 TO 13+00

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

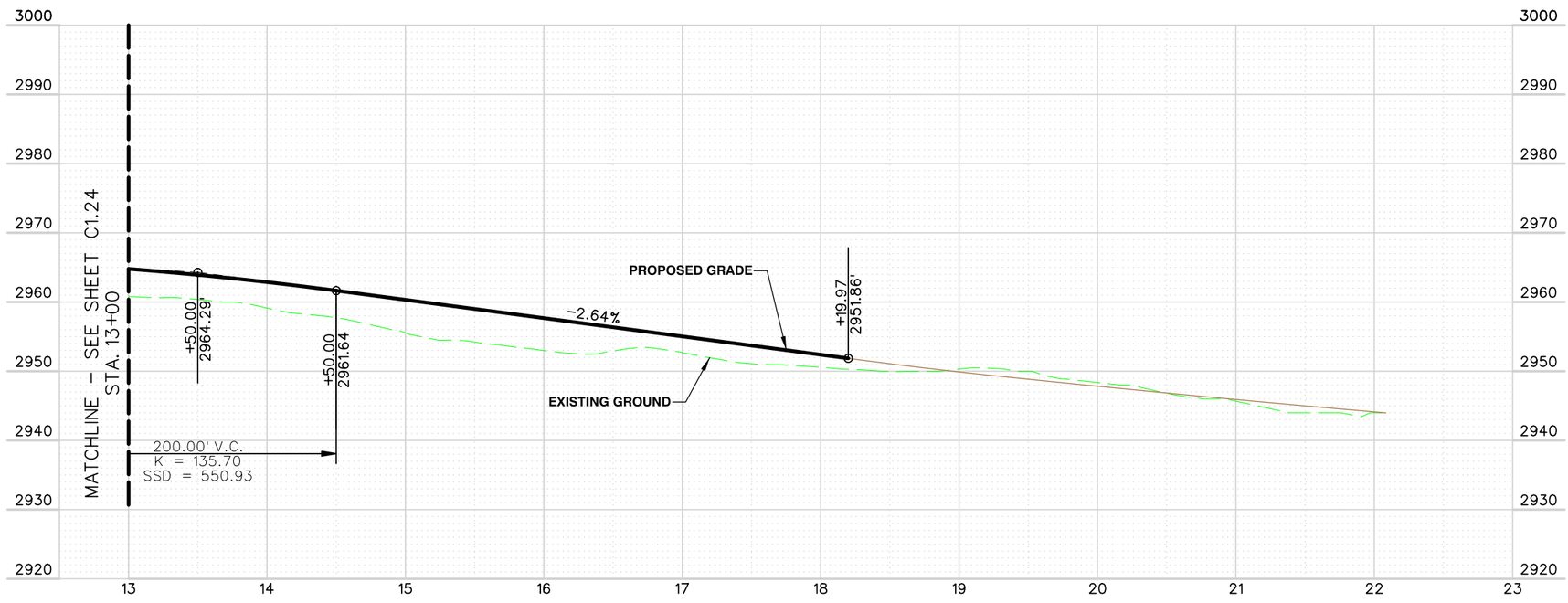
SHEET C1.24
34 OF 42

DRAWING NO. XXX-XXXX

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PLAN VIEW



PROFILE VIEW

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NO.	DATE	SHEET	REVISIONS

PREPARED FOR
CITY OF LAS VEGAS

H# XXXXX | BID# XX.XXXXX | DESIGNED BY: XXX | DRAWN BY: XXX | CHECKED BY: XXX | DATE: 02/03/16 | SUBMITTAL STAGE: 30% - PRELIMINARY

TITLE: SHEEP MOUNTAIN

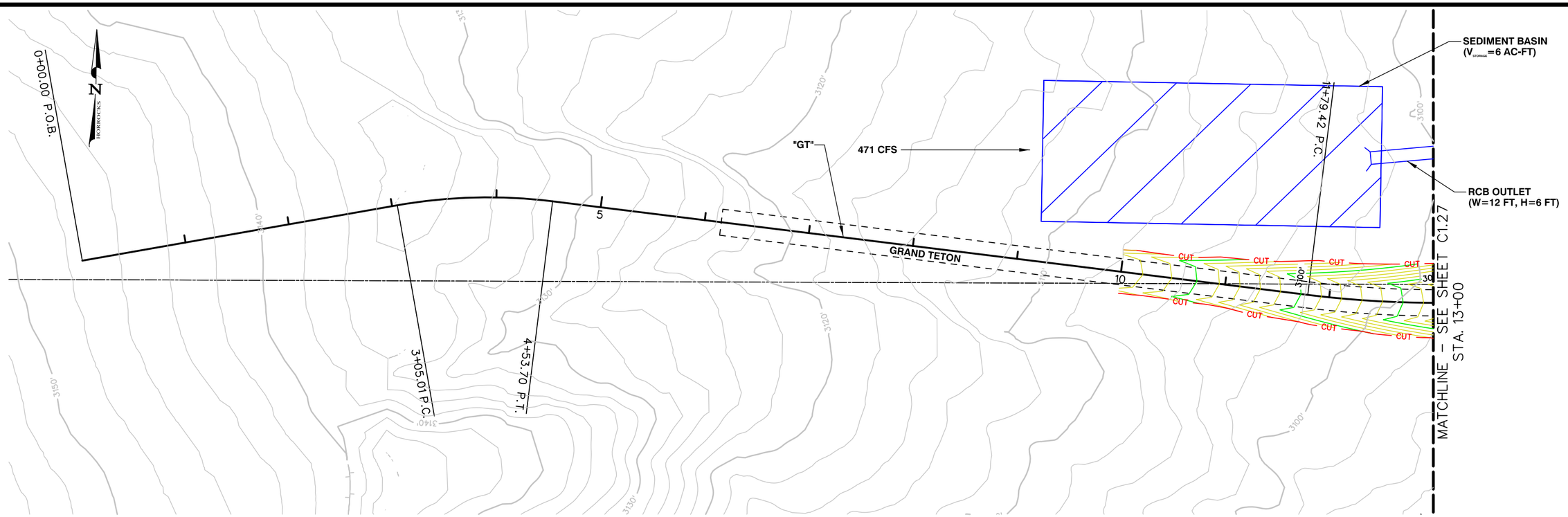
SHEET: KYLE CANYON RAMP "D"
PLAN AND PROFILE-STA. 13+00 TO 23+00

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

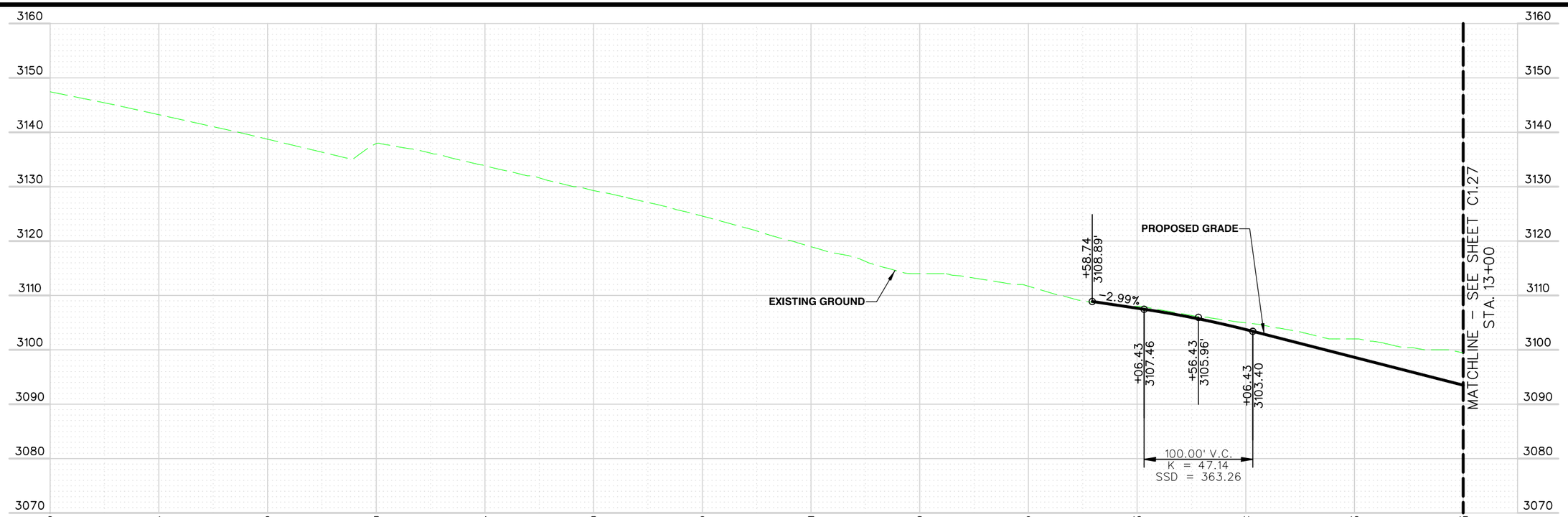
SHEET
C1.25
35 OF 42

DRAWING NO.
XXX-XXXX

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PLAN VIEW



PROFILE VIEW

NO.	DATE	SHEET	REVISIONS

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CITY OF LAS VEGAS

H# XXXXX | BID# XX-XXXXX | DESIGNED BY: XXX | DRAWN BY: XXX | CHECKED BY: XXX | DATE: 02/03/16 | SUBMITTAL STAGE: **30% - PRELIMINARY**

TITLE: **SHEEP MOUNTAIN**

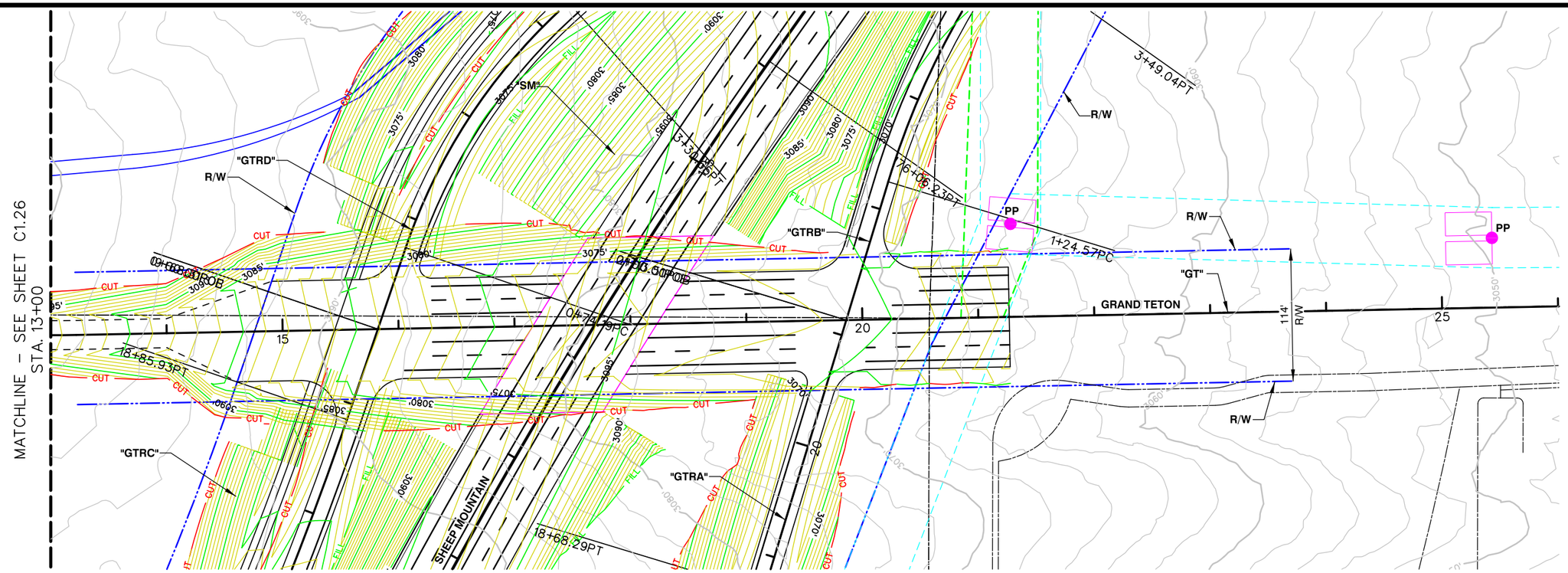
SHEET: **GRAND TETON ROAD**
PLAN AND PROFILE-STA. 0+00 TO 13+00

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

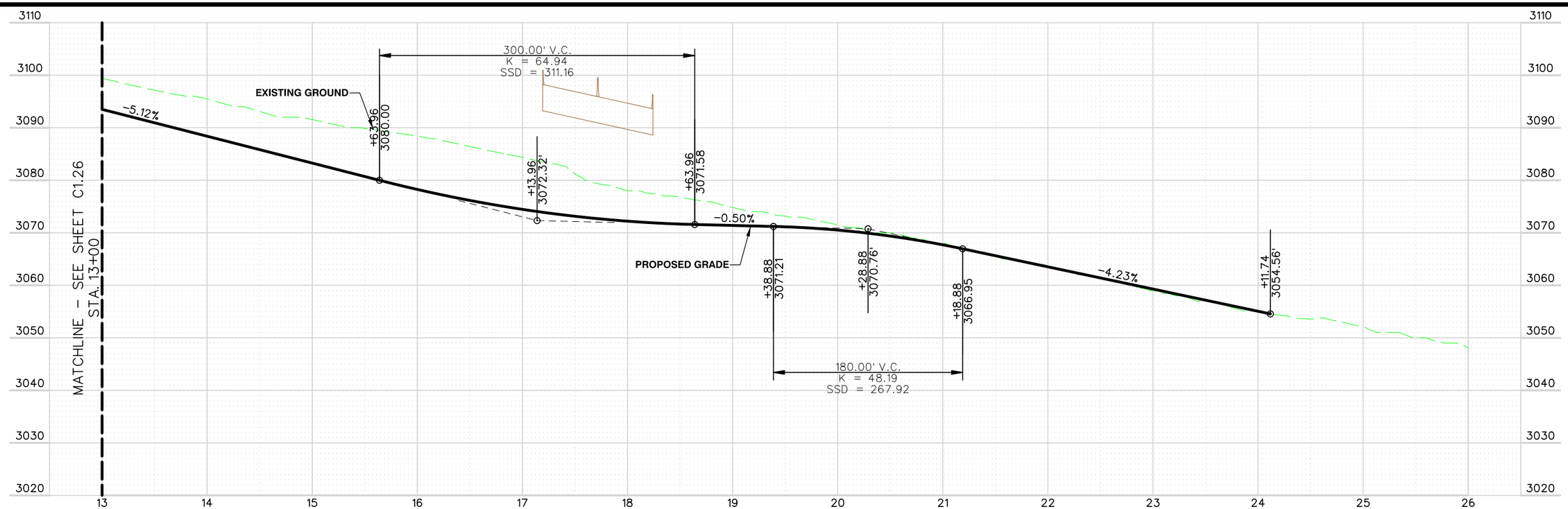
SHEET
C1.26
36 OF 42

DRAWING NO.
XXX-XXXX

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PLAN VIEW



PROFILE VIEW

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NO.	DATE	SHEET	REVISIONS

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CITY OF LAS VEGAS

H# XXXXX | BID# XX.XXXXX
DATE: 02/03/16 | DESIGNED BY: XXX
SUBMITTAL STAGE: 30% - PRELIMINARY | DRAWN BY: XXX
CHECKED BY: XXX

TITLE: SHEEP MOUNTAIN

SHEET: GRAND TETON ROAD
PLAN AND PROFILE-STA. 13+00 TO 26+00

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10759

SHEET
C1.27
37 OF 42
DRAWING NO.
XXX-XXXX

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"SHEET INTENTIONALLY LEFT BLANK"

PREPARED FOR
CITY OF LAS VEGAS

H# XXXXX | BID# XX-XXXXX

DATE: 02/03/16 | DESIGNED BY: XXX

SUBMITTAL STAGE: **30% - PRELIMINARY** | DRAWN BY: XXX | CHECKED BY: XXX

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NO.	DATE	SHEET	REVISIONS

TITLE: **SHEEP MOUNTAIN**

SHEET

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

SHEET
C1.28
38 OF **42**

DRAWING NO.
XXX-XXXX

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"SHEET INTENTIONALLY LEFT BLANK"

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CITY OF LAS VEGAS

H# XXXXX | BID# XX-XXXXX

DATE: 02/03/16 | DESIGNED BY: XXX

SUBMITTAL STAGE: | DRAWN BY: XXX

30% - PRELIMINARY | CHECKED BY: XXX

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NO.	DATE	SHEET	REVISIONS

TITLE
SHEEP MOUNTAIN

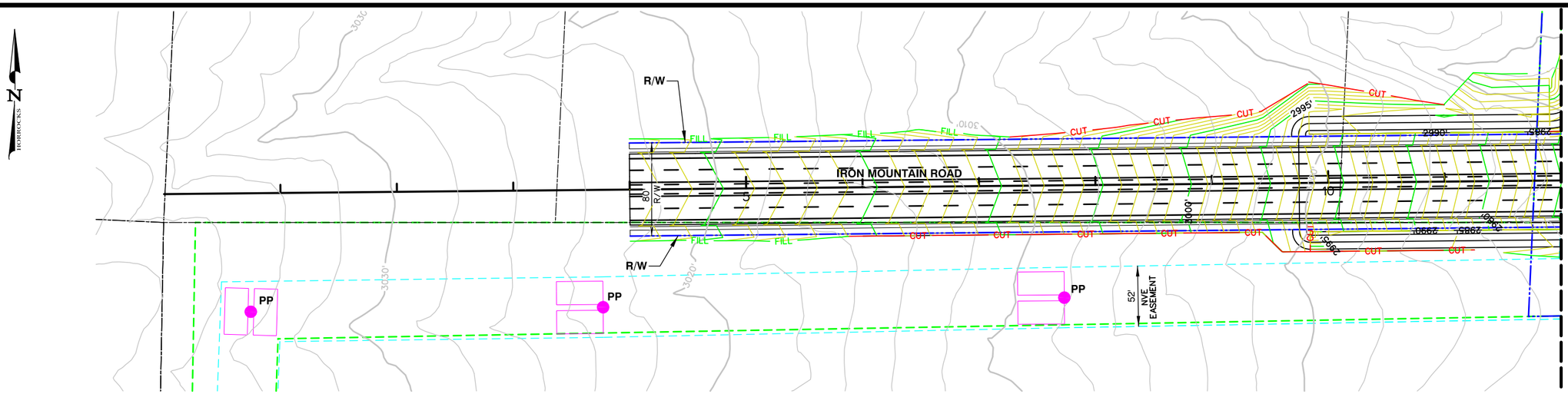
SHEET

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

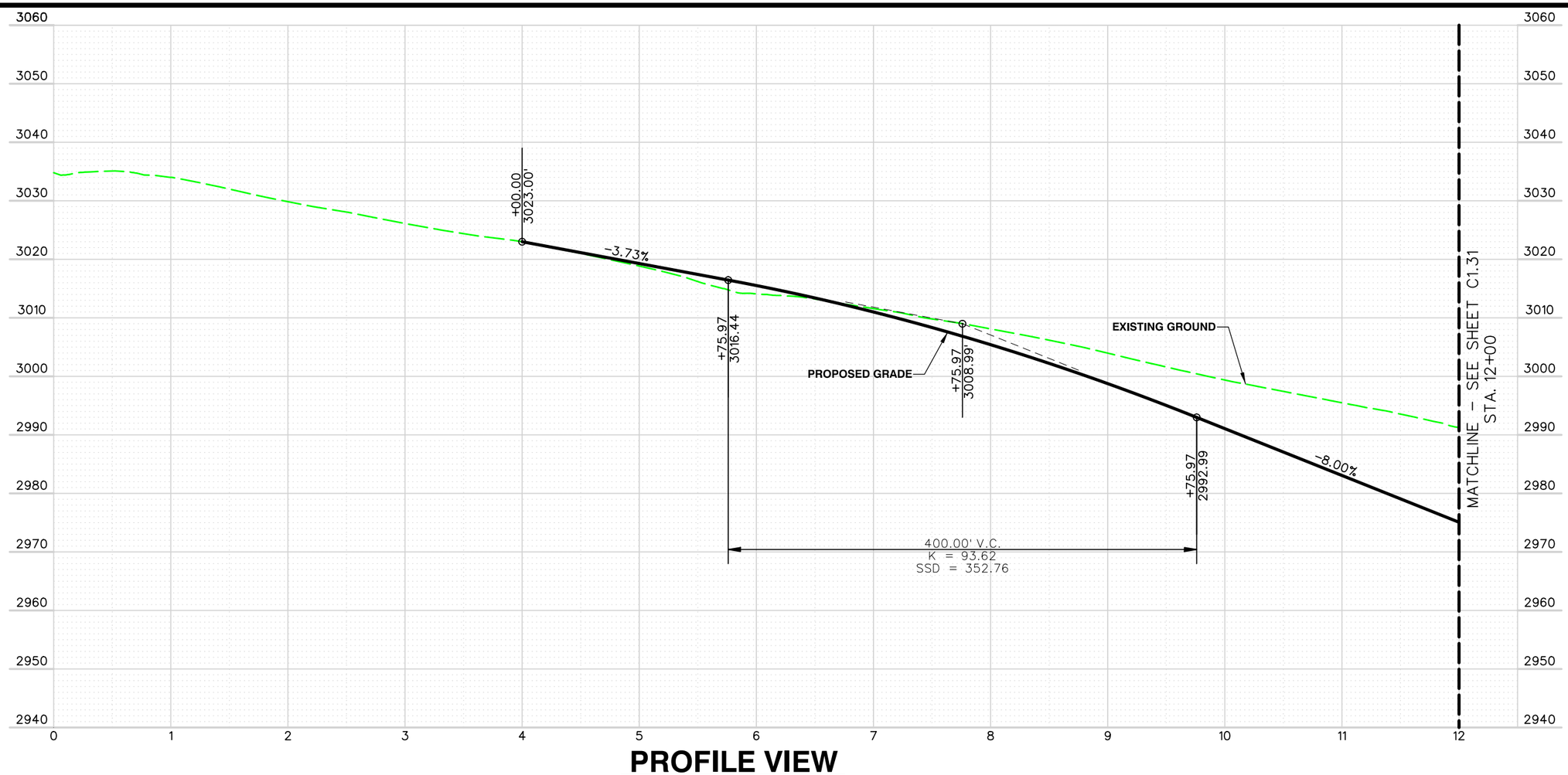
SHEET
C1.29
39 OF 42

DRAWING NO.
XXX-XXXX

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PLAN VIEW



PROFILE VIEW

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NO.	DATE	SHEET	REVISIONS

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CITY OF LAS VEGAS

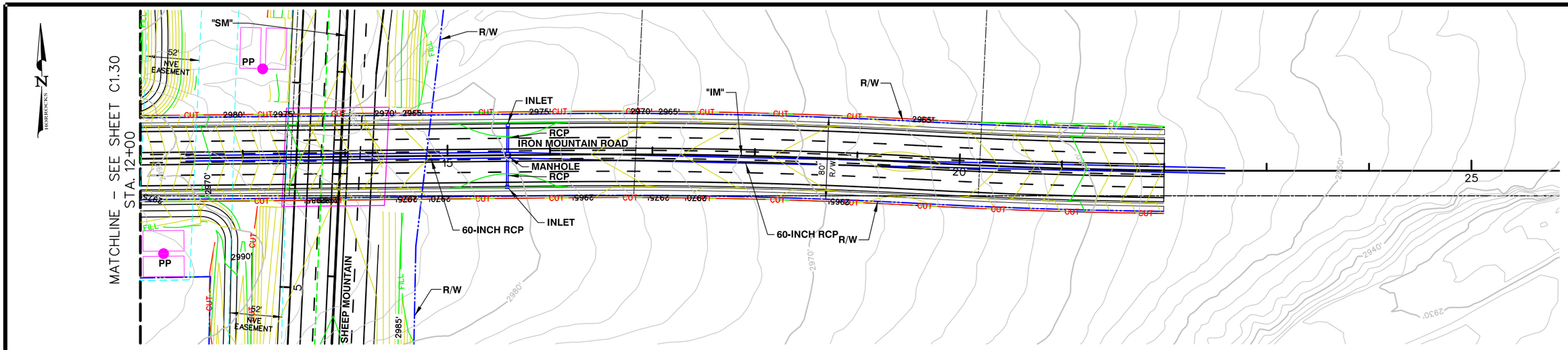
H# XXXXX | BID# XX-XXXXX | DESIGNED BY: XXX | DRAWN BY: XXX | CHECKED BY: XXX | DATE: 02/03/16 | SUBMITTAL STAGE: 30% - PRELIMINARY

TITLE
SHEET
IRON MOUNTAIN ROAD
PLAN AND PROFILE-STA. 0+00 TO 12+00
SHEET NAME
SHEEP MOUNTAIN

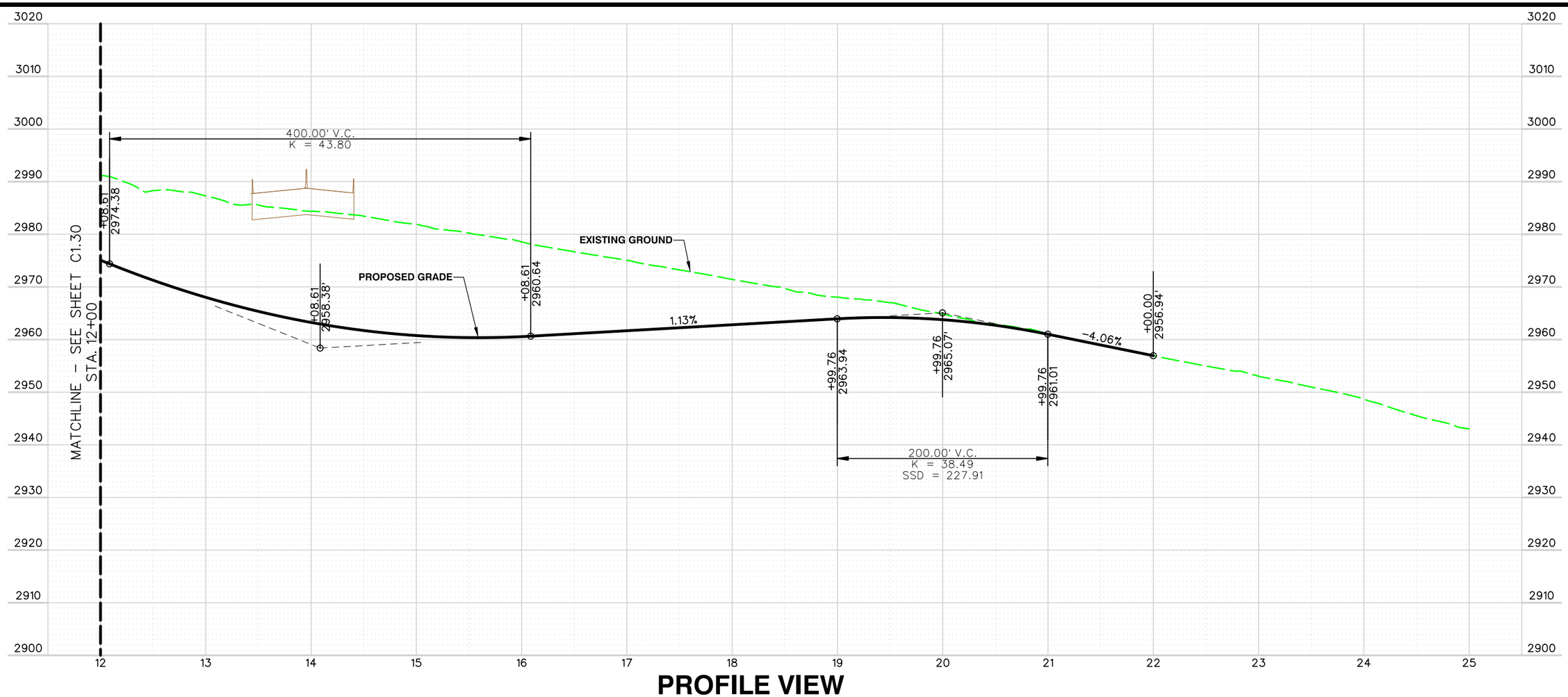
PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

SHEET
C1.30
40 OF 42
DRAWING NO.
XXX-XXXX

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PLAN VIEW



PROFILE VIEW

NO.	DATE	SHEET	REVISIONS

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PREPARED FOR
CITY OF LAS VEGAS

BID# XX-XXXXX
DESIGNED BY: XXX
DRAWN BY: XXX
CHECKED BY: XXX

H# XXXXX
DATE: 02/03/16
SUBMITTAL STAGE: **30% - PRELIMINARY**

PRELIMINARY NOT FOR CONSTRUCTION

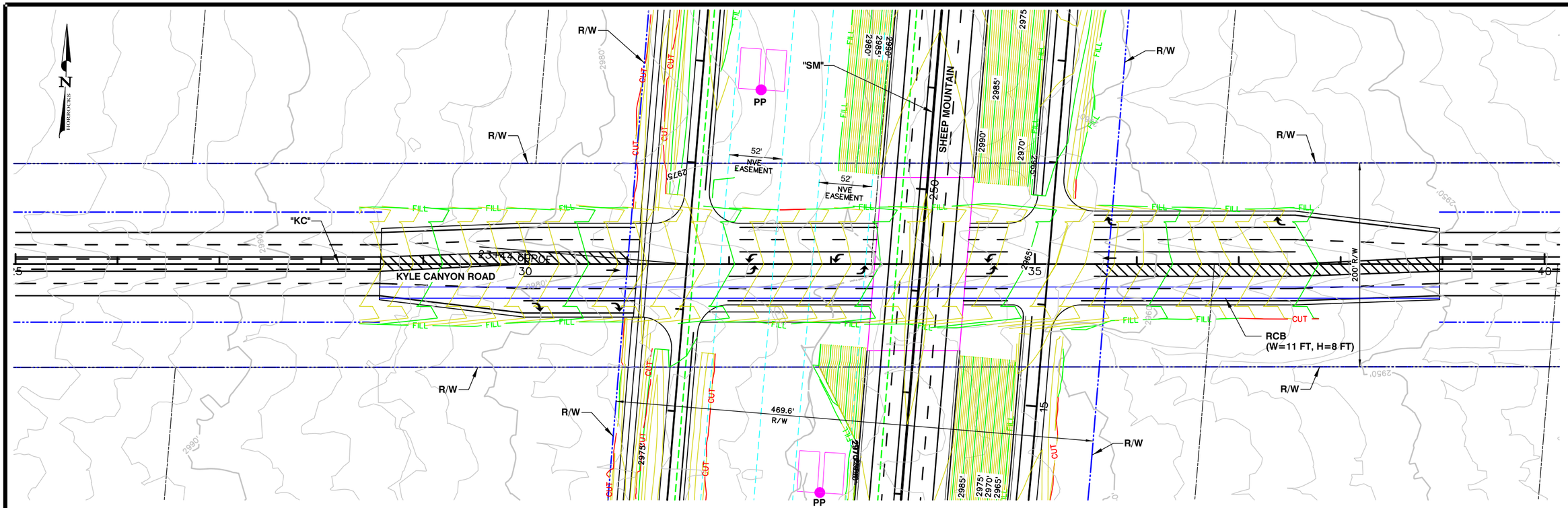
TITLE: **SHEEP MOUNTAIN**

SHEET: **IRON MOUNTAIN ROAD**
PLAN AND PROFILE-STA. 12+00 TO 25+00

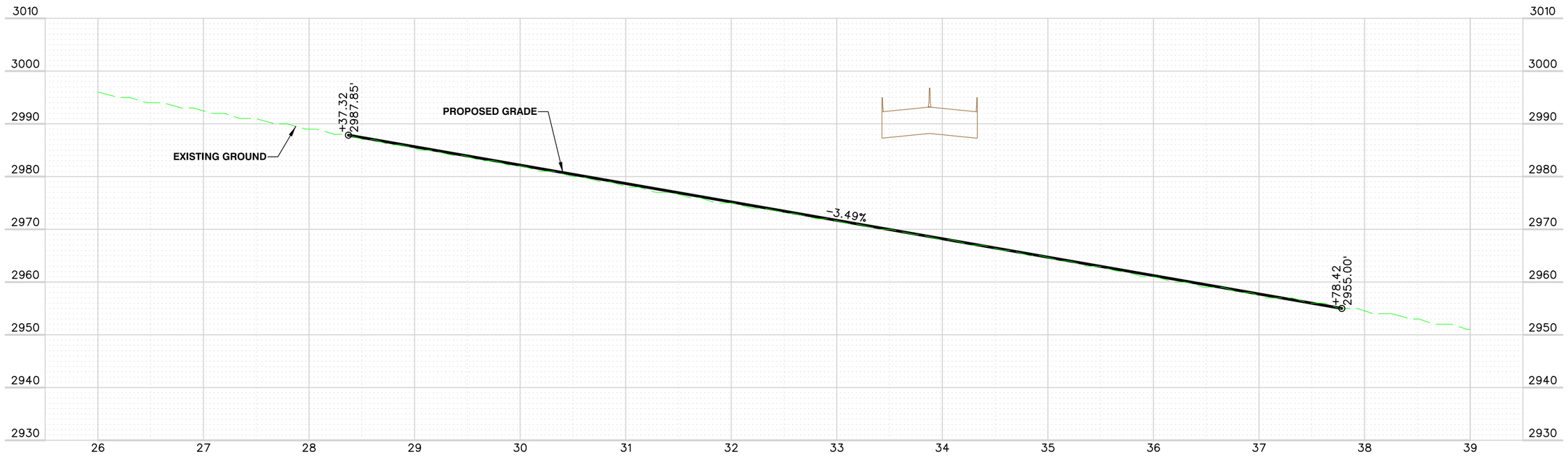
PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

SHEET
C1.31
41 OF 42

DRAWING NO.
XXX-XXXX



PLAN VIEW



PROFILE VIEW

NO.	DATE	SHEET	REVISIONS

PREPARED BY
HORROCKS ENGINEERS
1349 Galleria Drive, Suite 110
Henderson, NV 89014
(702) 966-4063

PREPARED FOR
CITY OF LAS VEGAS

H# XXXXX | BID# XX-XXXXX
DATE: 02/03/16 | DESIGNED BY: XXX
SUBMITTAL STAGE: 30% - PRELIMINARY | DRAWN BY: XXX
CHECKED BY: XXX

TITLE
SHEEP MOUNTAIN

SHEET
KYLE CANYON ROAD
PLAN AND PROFILE-STA. 26+00 TO 39+00

PROFESSIONAL ENGINEER-STATE OF NEVADA
WAYNE HORLACHER
EXP. 06-30-17
CIVIL
No. 10739

SHEET
C1.32
42 OF 42

DRAWING NO.
XXX-XXXX

PRELIMINARY NOT FOR CONSTRUCTION