NORDIC VALLEY PHASE 1B
CONSTRUCTION DRAWINGS
WEBER COUNTY, UTAH

OWNER:
NORDIC VILLAGE, LLC.
482 WEST 800 NORTH, SUITE 204
OREM, UTAH 84057
(801) 870-0204
CONTACT: NATHAN SCHELLENBERG

SITE ENGINEER:
MULHOLLAND DEVELOPMENT SOLUTIONS
P.O. BOX 680925
PARK CITY, UTAH 84068

SUBMITTED: August 22, 2025

NOTES:

1. BENCHMARK IS THE NORTH QUARTER CORNER OF SECTION 32 - FOUND 4" BRASS CAP ELEVATION 5405.24'

2. ALL MATERIALS AND CONSTRUCTION FOR ROADWAY AND STORM WATER INFRASTRUCTURE SHALL CONFORM TO WEBER COUNTY DESIGN STANDARDS, CONSTRUCTION SPECIFICATIONS AND STANDARD DRAWINGS AND TO CONTRACT DOCUMENTS PREPARED FOR THIS PROJECT.

3. THE CONSTRUCTION OF THE WATER SYSTEM IMPROVEMENTS SHALL CONFORM TO THE UTAH ADMINISTRATIVE CODE R309-550-6(1) NSF STANDARD FOR HEALTH EFFECTS, R309-550-8 (7) PRESSURE AND LEAKAGE TESTING, R309-550-8(9) SEALING PIPE ENDS DURING CONSTRUCTION, R309-550-8(10) DISINFECTING WATER DISTRIBUTION SYSTEMS, R309-550-7 (1) SEPARATION OF WATER MAINS FROM SEWERS AND OTHER POLLUTION SOURCES OR NORDIC VALLEY IMPROVEMENT DISTRICT PROCEDURES, DESIGN STANDARDS AND CONSTRUCTION SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.

4. THE CONSTRUCTION OF THE WASTEWATER SYSTEM IMPROVEMENTS SHALL CONFORM TO NORDIC VALLEY IMPROVEMENT DISTRICT DESIGN STANDARDS AND CONSTRUCTION SPECIFICATIONS.

5. FINISH GRADES ARE AT ROADWAY CENTERLINE, UNLESS OTHERWISE SPECIFICALLY NOTED.

6. ALL ROADWAY SIDE SLOPES ARE TO BE 2:1 SLOPES EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE, OR AS DIRECTED BY THE ENGINEER.

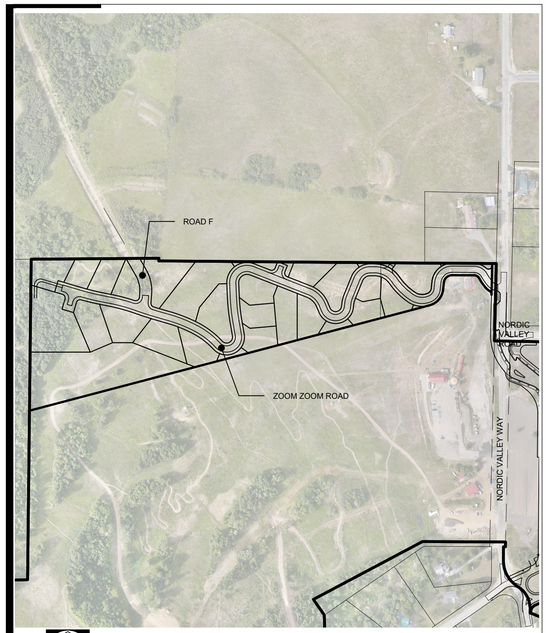
8. MULHOLLAND DEVELOPMENT SOLUTIONS ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITY LOCATIONS.THE UTILITIES SHOWN ON THESE DRAWINGS HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION.

9. CONTRACTOR SHALL CONFINE CONSTRUCTION ACTIVITY TO AREAS WITHIN THE RIGHT-OF-WAY, UTILITY EASEMENTS, AND DESIGNATED STORAGE, STAGING, ACCESS, CONSTRUCTION AND MATERIAL WASTE AREAS. CONTRACTOR SHALL ABIDE BY EROSION CONTROL REQUIREMENTS AS SET FORTH HEREIN AND AS REQUIRED BY STATE, COUNTY, AND LOCAL LAWS.

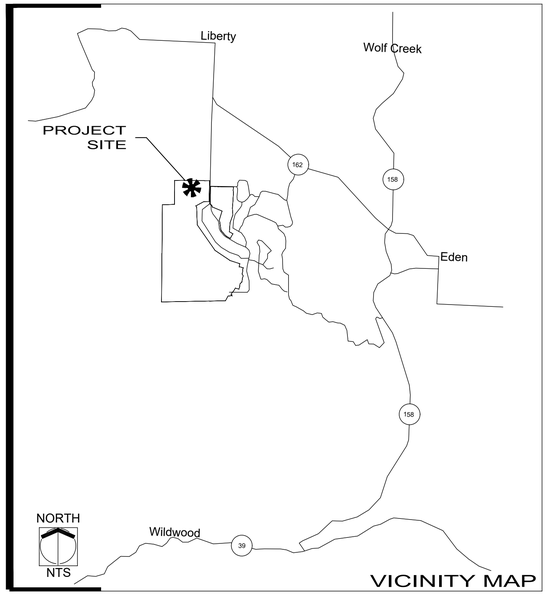
10. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE IN DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED BUT IN NO CASE MORE THAN 5 DAYS AFTER CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.

11. IF SEDIMENT IS TRACKED ONTO PAVED ROADS, THE ROADS AND WORK AREAS WILL BE SWEPT TO REMOVE MATERIAL, AS REQUIRED. IF LARGE AMOUNTS OF MATERIAL GET ON THE SURFACES, THE MATERIAL WILL BE MANUALLY REMOVED AND/OR A VACUUM SWEEPER WILL BE USED. IF ACCEPTABLE STANDARDS ARE NOT MET, OPERATIONS WILL CEASE UNTIL CONDITIONS IMPROVE TO THE POINT THAT STANDARDS CAN BE MAINTAINED.

12. REFER TO WESTERN GEOLOGIC & ENVIRONMENTAL LLC REPORT FOR GEOTECHNICAL ENGINEERING CONSIDERATIONS RELATED TO THE CONSTRUCTION OF SUBDIVISION IMPROVEMENTS.



PROJECT SITE



VICINITY MAP

SHEET INDEX

NORDIC PHASE 1B
CONSTRUCTION DRAWINGS

MULHOLLAND DEVELOPMENT SOLUTIONS
kristian@mulholland-development.com
P.O. BOX 680925
PARK CITY, UTAH 84068
435.901.2940 (c)

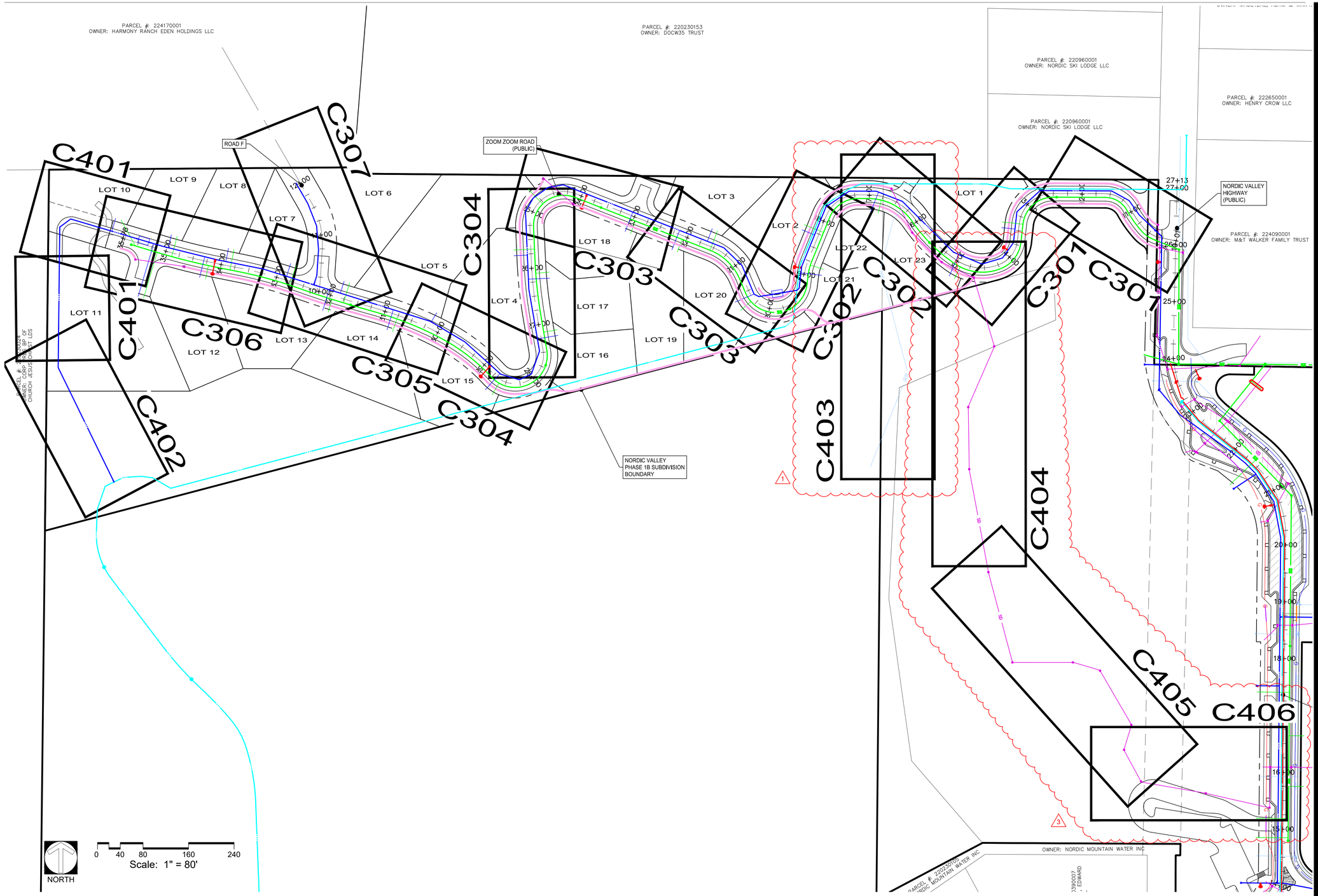
LICENSED PROFESSIONAL ENGINEER No.524922 KRISTIAN J. MULHOLLAND 8/22/2025 STATE OF UTAH

DATE:	August 22, 2025
DESIGN BY:	KJM
DRAWN BY:	BRC
REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN

REVISIONS:
- 1 07/11/2025: ADDED C403 SHEET
- 3 08/21/2025: ADDED C404 TO C406 SHEETS

SHEET TITLE: COVER SHEET

SHEET: C101



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file name: C201_Nordic Phase 1B Index Plan.dwg | plot date: August 22, 2025 | plotted by: Jenny

NORDIC PHASE 1B CONSTRUCTION DRAWINGS

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DATE:	August 22, 2025
DESIGN BY:	KJM
DRAWN BY:	BRC
REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN

REVISIONS:

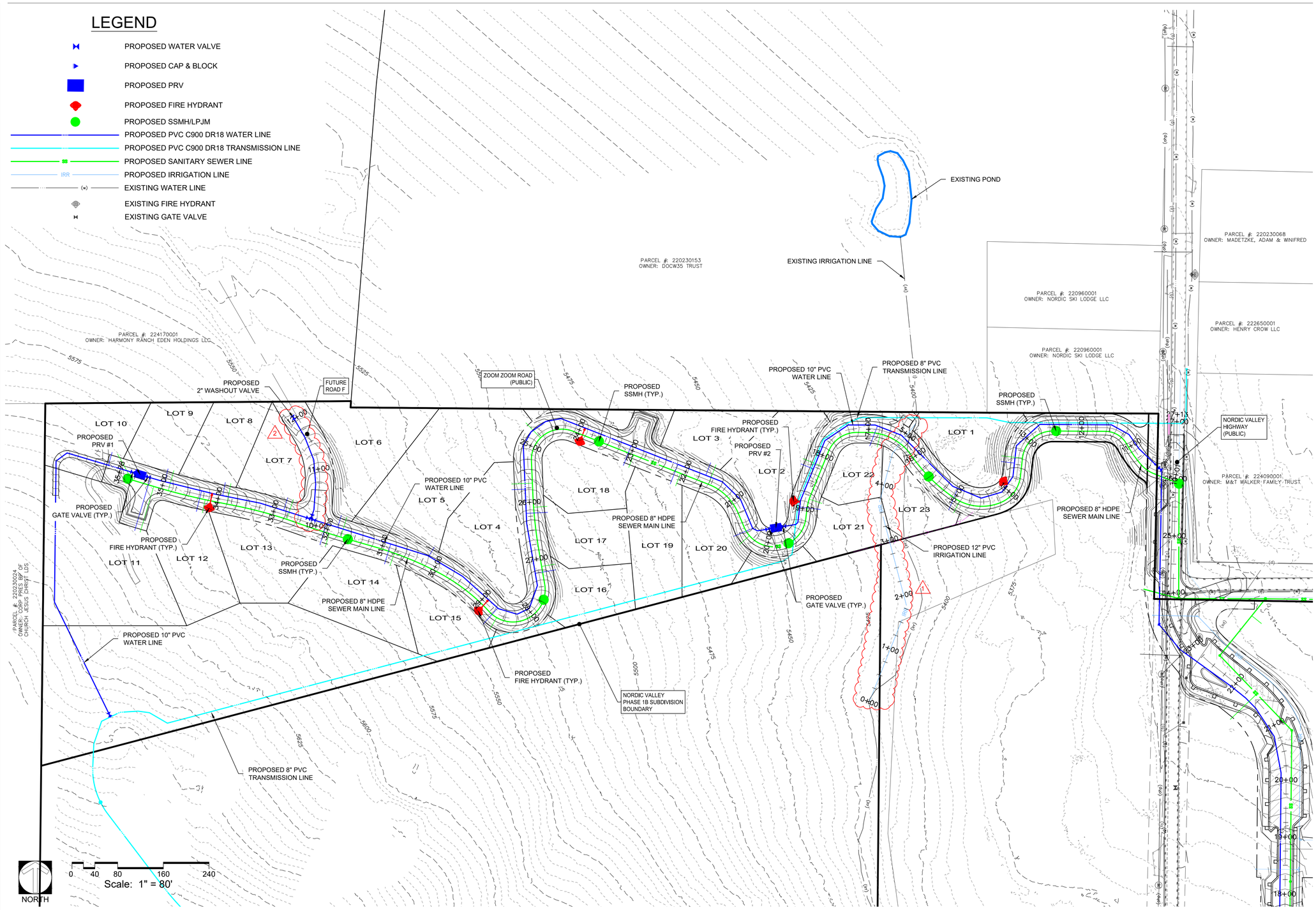
- 1 07/11/2025: NEW SHEET FOR BACKLOT IRRIGATION
- 3 08/21/2025: NEW SHEETS FOR BACKLOT STORMWATER

SHEET TITLE:
NORDIC VALLEY PH-1B INDEX PLAN

SHEET:
C201

LEGEND

- PROPOSED WATER VALVE
- PROPOSED CAP & BLOCK
- PROPOSED PRV
- PROPOSED FIRE HYDRANT
- PROPOSED SSMH/LPJM
- PROPOSED PVC C900 DR18 WATER LINE
- PROPOSED PVC C900 DR18 TRANSMISSION LINE
- PROPOSED SANITARY SEWER LINE
- PROPOSED IRRIGATION LINE
- EXISTING WATER LINE
- EXISTING FIRE HYDRANT
- EXISTING GATE VALVE



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LICENSED PROFESSIONAL ENGINEER No.5249227 KRISTIAN J. MULHOLLAND 8/15/2025 STATE OF UTAH

DATE:	August 15, 2025
DESIGN BY:	KJM
DRAWN BY:	BRC
REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN

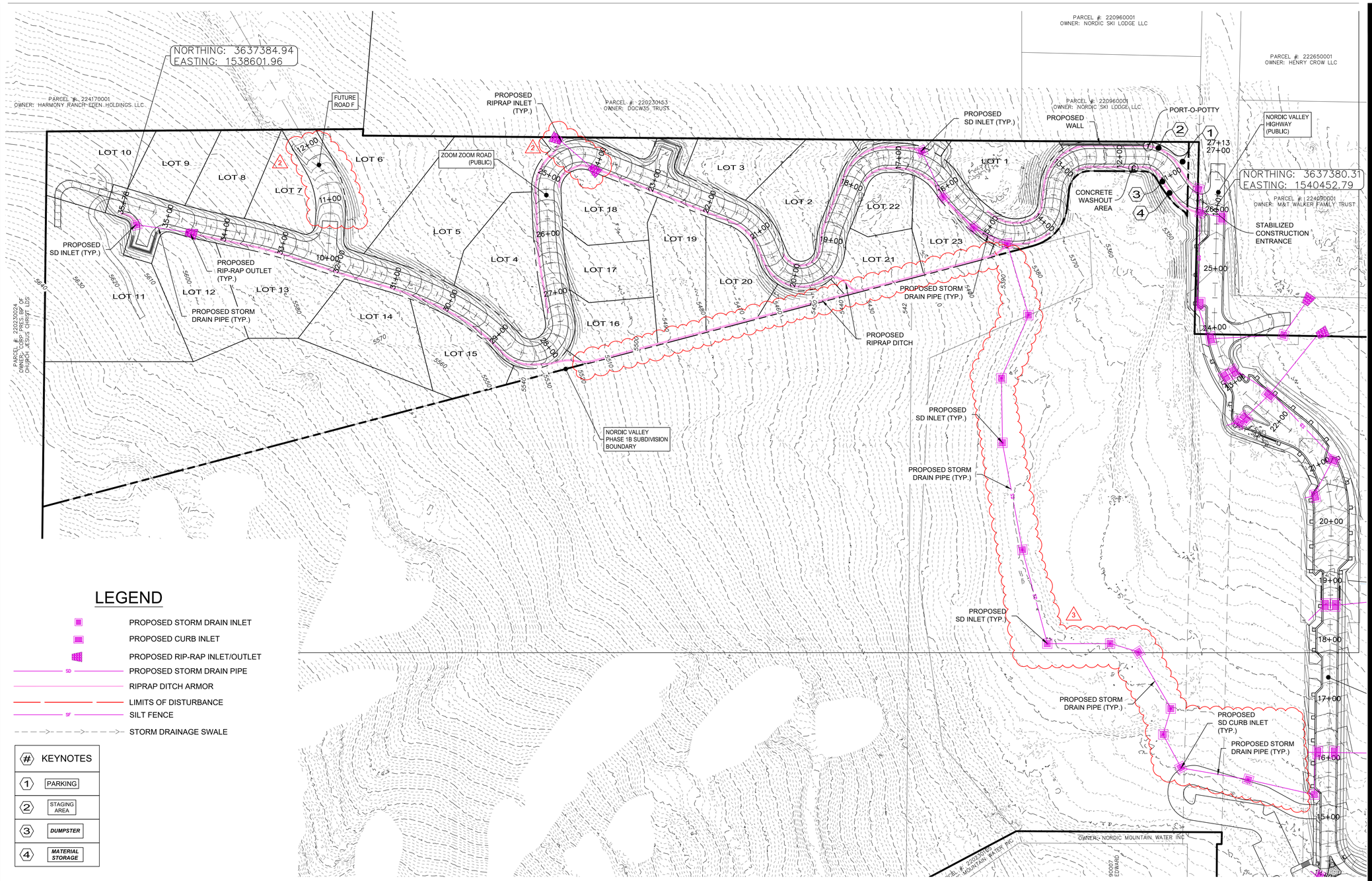
REVISIONS:

1. 07/11/2025: RE-ALIGNMENT OF IRRIGATION LINE
2. 08/15/2025: EXTENDED WATER LINE

SHEET TITLE:
NORDIC VALLEY PH-1B OVERALL SEWER & WATER PLAN

SHEET:
C202

path: D:\MDS Dropbox\Projects\106. Nordic Valley\01_Design\Nordic Phase 1B\
file name: C202_Nordic Phase 1B Overall Sewer and Water Plan.dwg | plot date: August 15, 2025 | plotted by: Ron



LEGEND

- PROPOSED STORM DRAIN INLET
- PROPOSED CURB INLET
- PROPOSED RIP-RAP INLET/OUTLET
- PROPOSED STORM DRAIN PIPE
- RIPRAP DITCH ARMOR
- LIMITS OF DISTURBANCE
- SILT FENCE
- STORM DRAINAGE SWALE

# KEYNOTES	
1	PARKING
2	STAGING AREA
3	DUMPSTER
4	MATERIAL STORAGE

NORTH

0 40 80 160 240

Scale: 1" = 80'

path: C:\Users\Jenny\MDS Dropbox\Projects\106. Nordic Valley\01_Design\Nordic Phase 1B\
file name: C203_Nordic Phase 1B Overall Grading Plan.dwg | plot date: August 22, 2025 | plotted by: Jenny

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DATE:	August 22, 2025
DESIGN BY:	KJM
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REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN

REVISIONS:

2 08/15/2025: EXTENDED ROAD GRADING AND ADDED CULVERT

3 08/21/2025: ADDED STORMWATER LINE AND EXTEND DITCH

SHEET TITLE:
NORDIC VALLEY PH-1B OVERALL GRADING PLAN

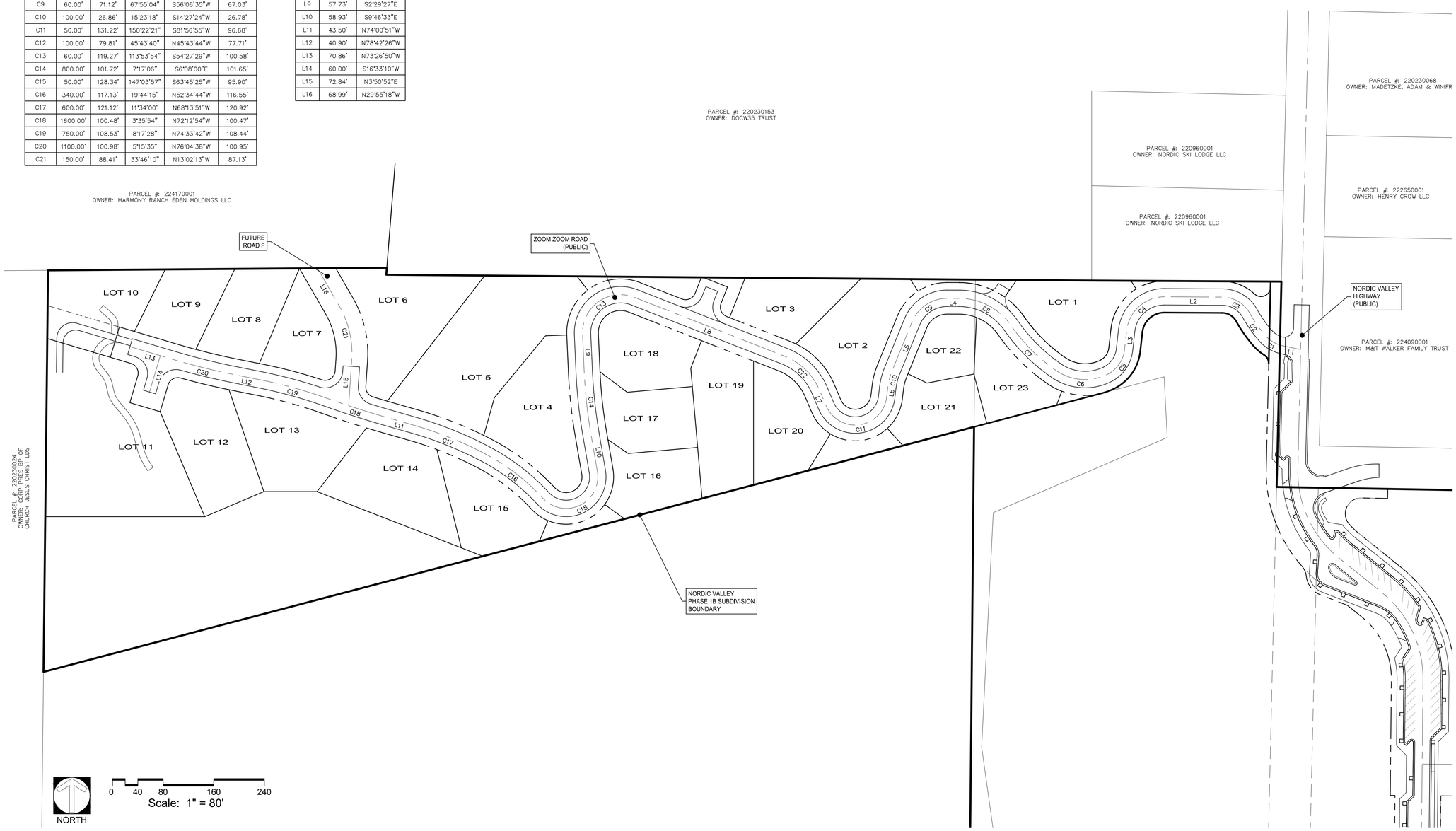
SHEET:
C203

CURVE TABLE

CURVE	RADIUS	LENGTH	DELTA	CH BEARING	CH DIST
C1	50.00'	32.01'	36°41'09"	N59°33'23"W	31.47'
C2	200.00'	42.98'	12°18'41"	N35°03'28"W	42.89'
C3	50.00'	53.05'	60°47'42"	N59°17'58"W	50.60'
C4	60.00'	87.92'	83°57'19"	S48°19'31"W	80.26'
C5	50.00'	51.04'	58°29'05"	S35°35'25"W	48.85'
C6	80.00'	83.25'	59°37'29"	N85°21'18"W	79.55'
C7	280.00'	101.77'	20°49'29"	N45°07'49"W	101.21'
C8	100.00'	96.37'	55°12'48"	N62°19'29"W	92.68'
C9	60.00'	71.12'	67°55'04"	S56°06'35"W	67.03'
C10	100.00'	26.86'	15°23'18"	S14°27'24"W	26.78'
C11	50.00'	131.22'	150°22'21"	S81°56'55"W	96.68'
C12	100.00'	79.81'	45°43'40"	N45°43'44"W	77.71'
C13	60.00'	119.27'	113°53'54"	S54°27'29"W	100.58'
C14	800.00'	101.72'	7°17'06"	S6°08'00"E	101.65'
C15	50.00'	128.34'	147°03'57"	S63°45'25"W	95.90'
C16	340.00'	117.13'	19°44'15"	N52°34'44"W	116.55'
C17	600.00'	121.12'	11°34'00"	N68°13'51"W	120.92'
C18	1600.00'	100.48'	3°35'54"	N72°12'54"W	100.47'
C19	750.00'	108.53'	8°17'28"	N74°33'42"W	108.44'
C20	1100.00'	100.98'	5°15'35"	N76°04'38"W	100.95'
C21	150.00'	88.41'	33°46'10"	N13°02'13"W	87.13'

LINE TABLE

LINE	LENGTH	BEARING
L1	29.16'	N77°53'58"W
L2	91.37'	N89°41'49"W
L3	30.42'	S6°20'52"W
L4	18.78'	N89°55'53"W
L5	83.96'	S22°09'03"W
L6	15.35'	S6°45'44"W
L7	26.19'	N22°51'54"W
L8	254.95'	N68°35'34"W
L9	57.73'	S2°29'27"E
L10	58.93'	S9°46'33"E
L11	43.50'	N74°00'51"W
L12	40.90'	N78°42'26"W
L13	70.86'	N73°26'50"W
L14	60.00'	S16°33'10"W
L15	72.84'	N3°50'52"E
L16	68.99'	N29°55'18"W



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file name: C204_Nordic Phase 1B Roadway Centerline.dwg | plot date: August 22, 2025 | plotted by: Jenny

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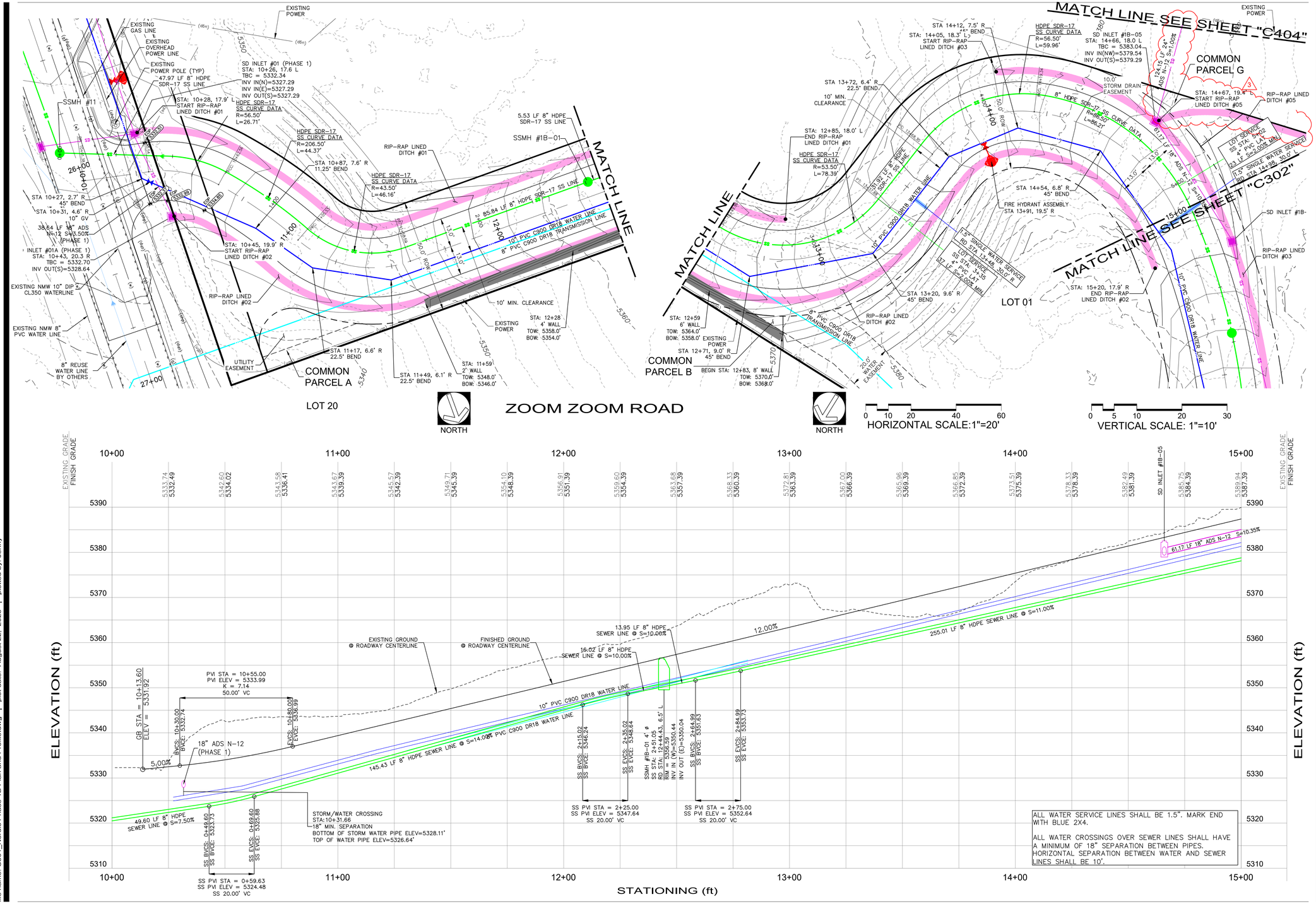
DATE:	August 22, 2025
DESIGN BY:	KJM
DRAWN BY:	BRC
REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN
REVISIONS:	
-	
-	
-	
-	
-	
-	

SHEET TITLE:
NORDIC VALLEY PH-1B ROADWAY CENTERLINE

SHEET:
C204



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file name: C301_Nordic Phase 1B Plan and Profile.dwg | plot date: August 22, 2025 | plotted by: Jenny

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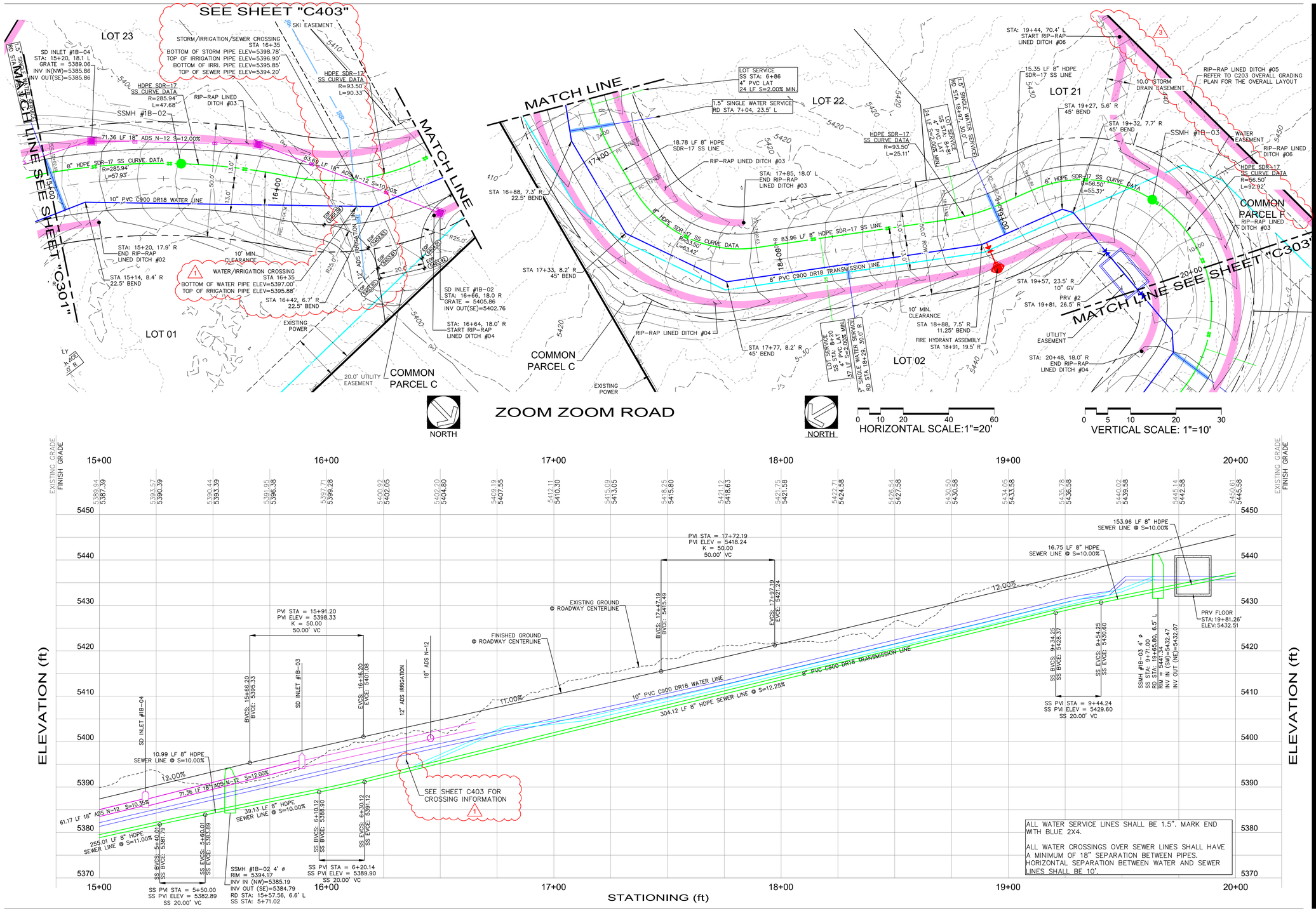
DATE:	August 22, 2025
DESIGN BY:	KJM
DRAWN BY:	BRC
REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN

REVISIONS:

3 08/21/2025: EXTENDED DITCH LENGTH AND ADDED STORMWATER LINE.

SHEET TITLE:
ZOOM ZOOM ROAD PLAN AND PROFILE STA 10+00 - 15+00

SHEET:
C301



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DRAWN BY:	BRC
REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN

REVISIONS:

- 1 07/11/2025: ADDED IRRIGATION LINE
- 3 08/21/2025: EXTEND RIP-RAP DITCH

SHEET TITLE: ZOOM ZOOM ROAD PLAN AND PROFILE STA 15+00 - 20+00

SHEET: C302

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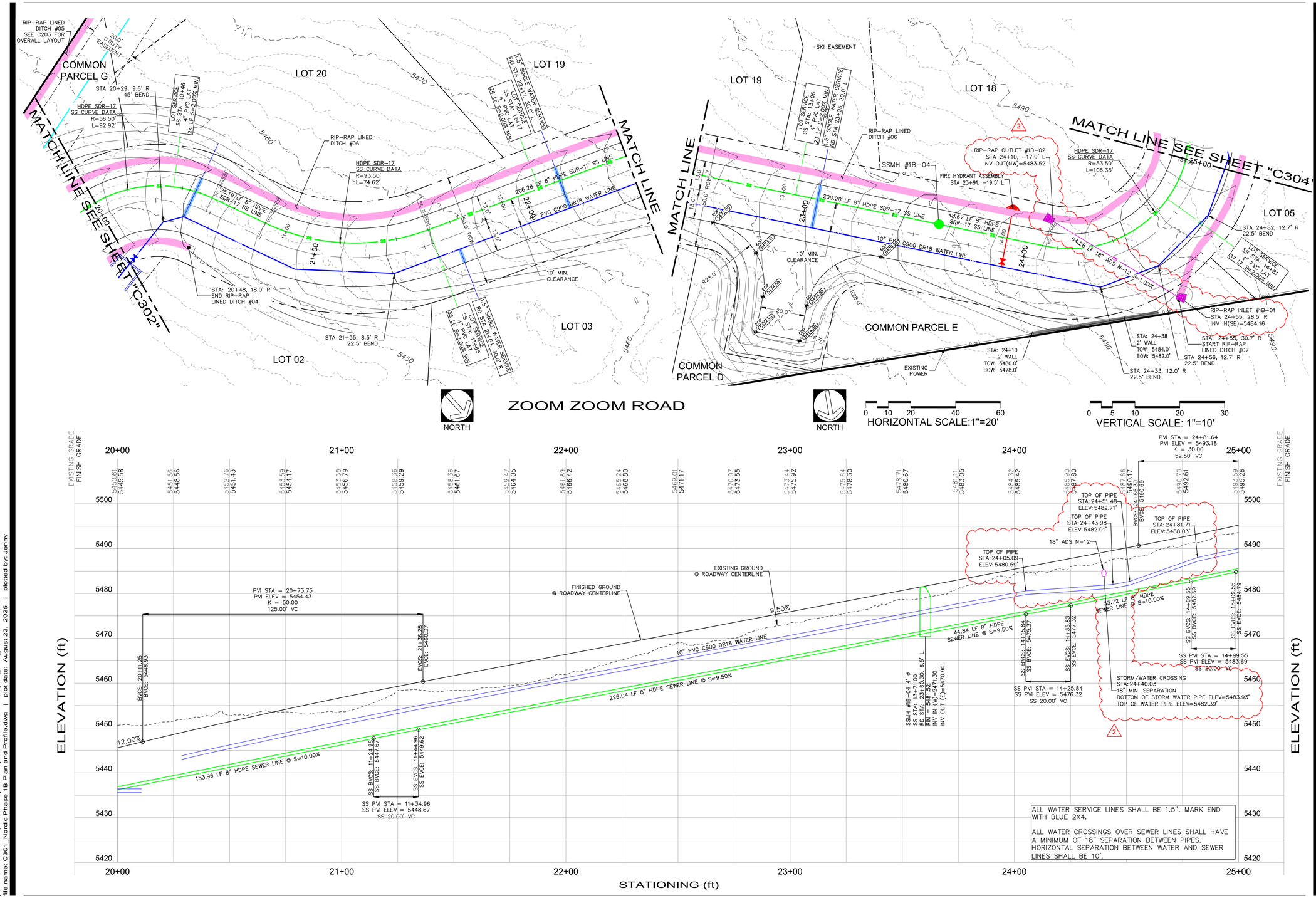

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DATE:	August 22, 2025
DESIGN BY:	KJM
DRAWN BY:	BRC
REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN

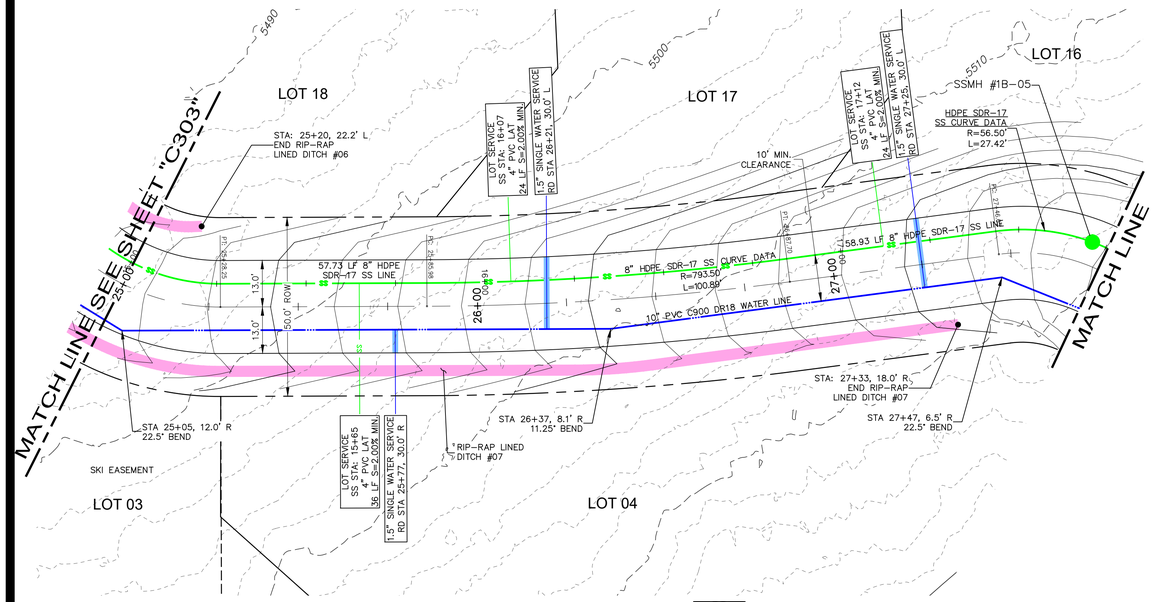
REVISIONS:

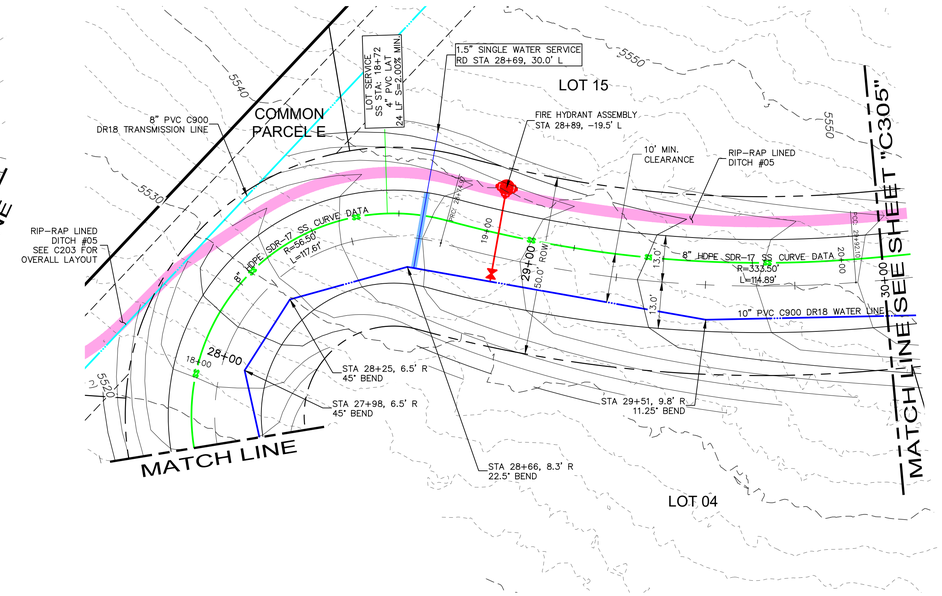
2 08/15/2025: ADDED CULVERT AND ADJUSTED WATERLINE TO PROVIDE MIN. SEPARATION WITH STORM DRAIN CROSSING.

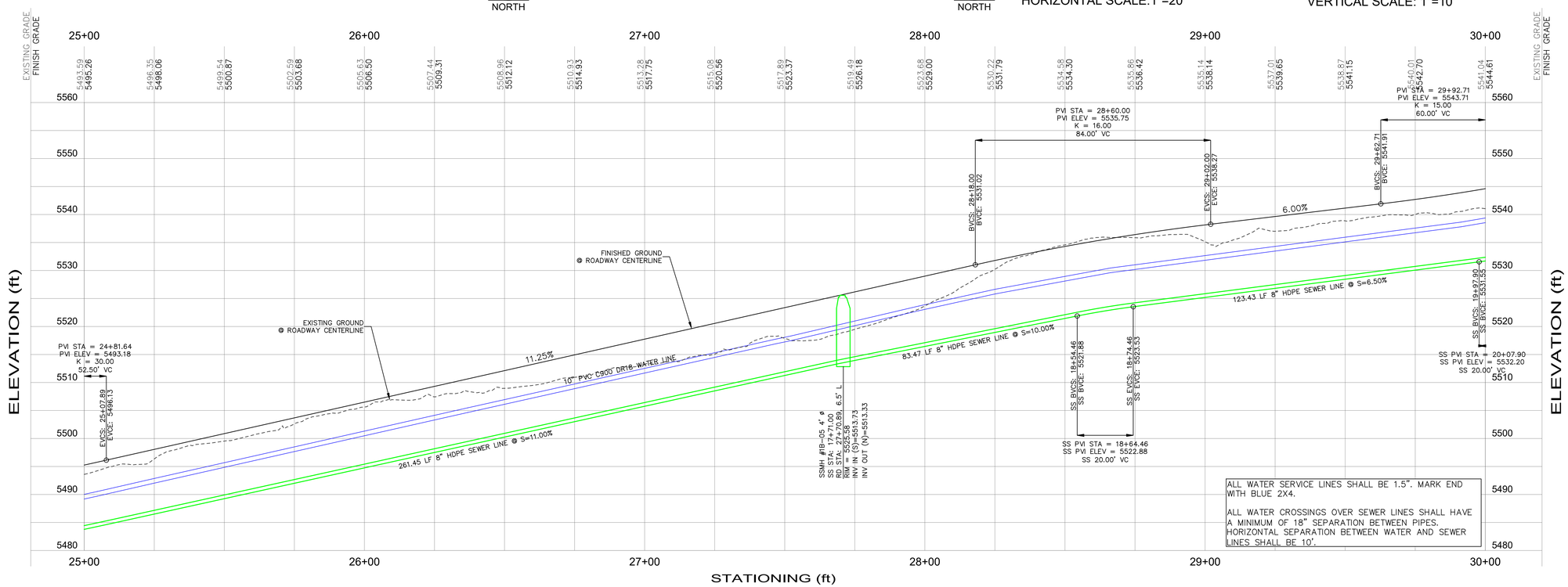
SHEET TITLE:
ZOOM ZOOM ROAD PLAN AND PROFILE STA 20+00 - 25+00

SHEET:
C303

path: C:\Users\Jenny\MDS Dropbox\Projects\106; Nordic Valley\01_Design\Nordic Phase 1B\
file name: C301_Nordic Phase 1B Plan and Profile.dwg | plot date: August 22, 2025 | plotted by: Jenny







ALL WATER SERVICE LINES SHALL BE 1.5". MARK END WITH BLUE 2X4.

ALL WATER CROSSINGS OVER SEWER LINES SHALL HAVE A MINIMUM OF 18" SEPARATION BETWEEN PIPES. HORIZONTAL SEPARATION BETWEEN WATER AND SEWER LINES SHALL BE 10'.

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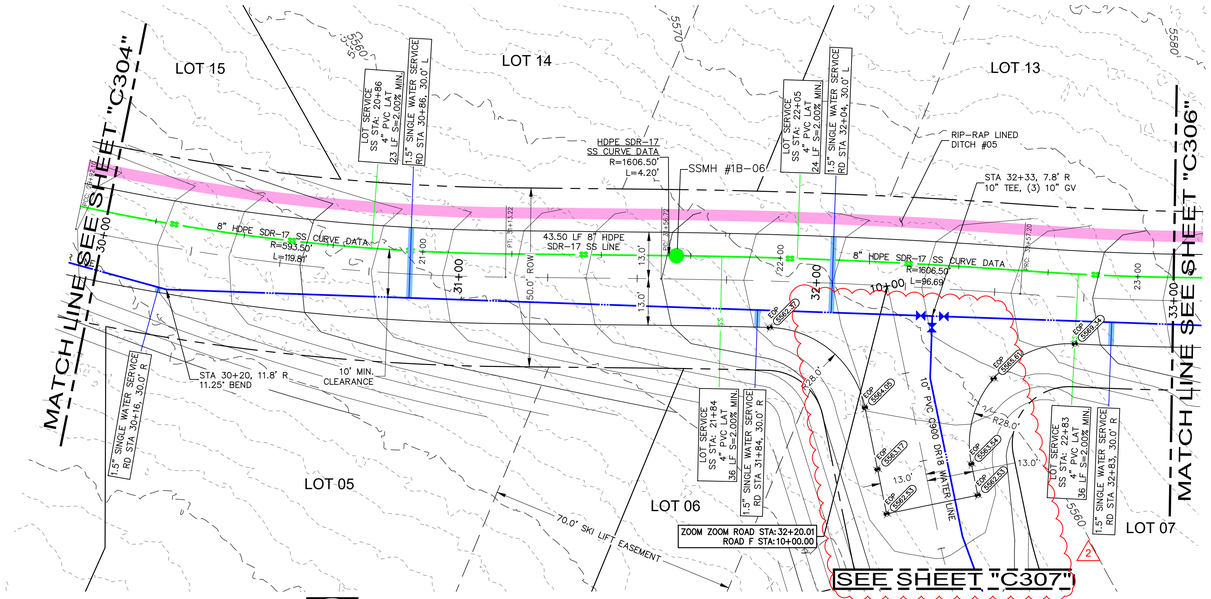
REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN
REVISIONS:	

SHEET TITLE:
ZOOM ZOOM ROAD
PLAN AND PROFILE
STA 25+00 - 30+00

SHEET:
C304

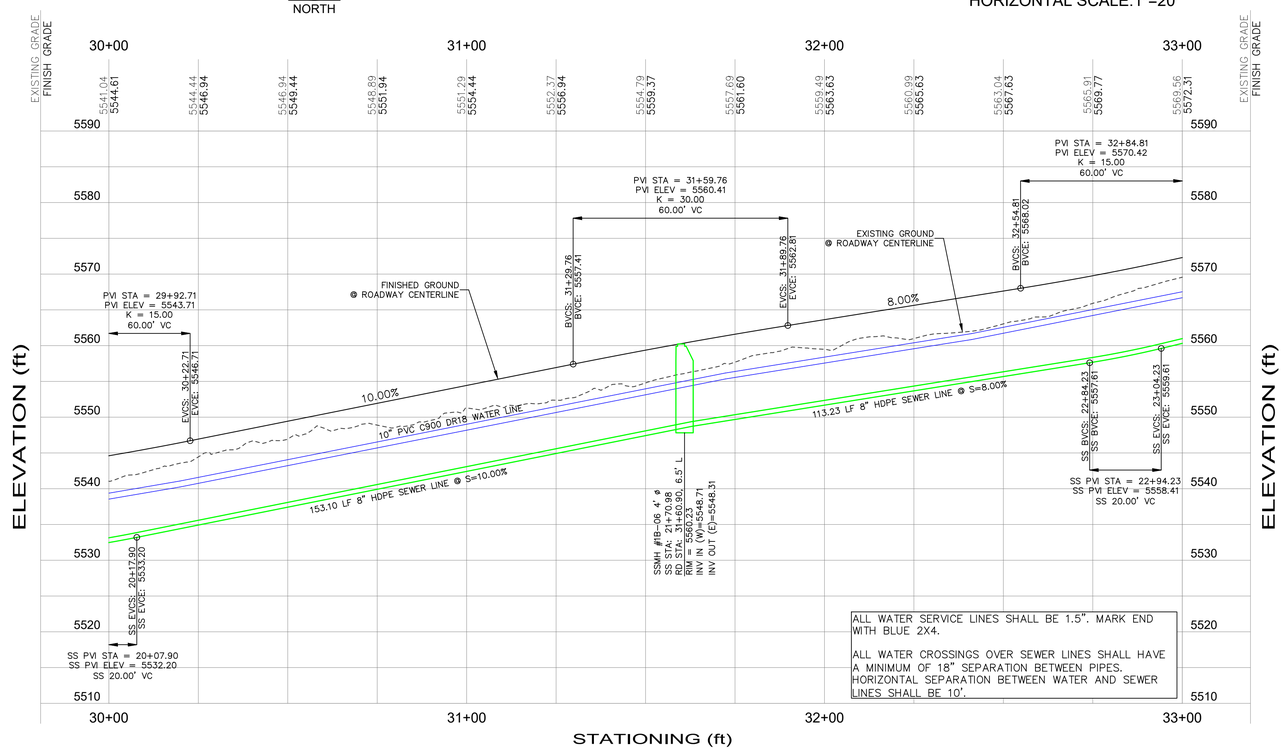
path: C:\Users\Jenny\MDS Dropbox\Projects\106; Nordic Valley\01_Design\Nordic Phase 1B\
file name: C301_Nordic Phase 1B Plan and Profile.dwg | plot date: August 22, 2025 | plotted by: Jenny



ZOOM ZOOM ROAD

HORIZONTAL SCALE:1"=20'

VERTICAL SCALE: 1"=10'



ALL WATER SERVICE LINES SHALL BE 1.5". MARK END WITH BLUE 2X4.

ALL WATER CROSSINGS OVER SEWER LINES SHALL HAVE A MINIMUM OF 18" SEPARATION BETWEEN PIPES. HORIZONTAL SEPARATION BETWEEN WATER AND SEWER LINES SHALL BE 10'.

path: C:\Users\Jenny\MDS Dropbox\Projects\106; Nordic Valley\01_Design\Nordic Phase 1B\
file name: C301_Nordic Phase 1B Plan and Profile.dwg | plot date: August 22, 2025 | plotted by: Jenny

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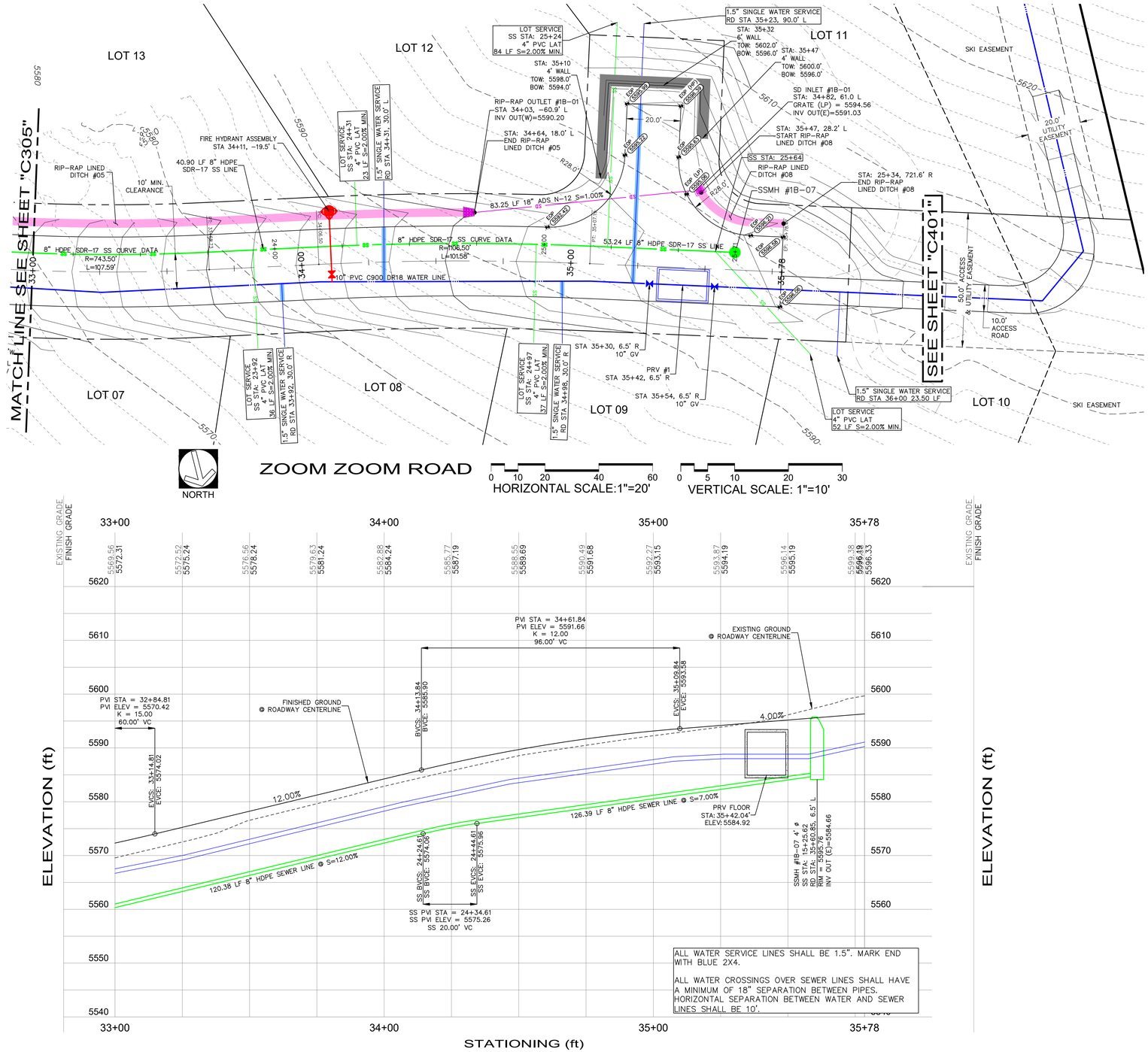
REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN

REVISIONS:
- 2 08/15/2025: EXTENDED WATERLINE AND ROAD GRADING

SHEET TITLE:
ZOOM ZOOM ROAD PLAN AND PROFILE STA 30+00 - 33+00

SHEET:
C305



NORDIC PHASE 1B CONSTRUCTION DRAWINGS

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REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN
REVISIONS:	

SHEET TITLE:
ZOOM ZOOM ROAD PLAN AND PROFILE STA 33+00 - END

SHEET:
C306

path: C:\Users\Jenny\MDS Dropbox\Projects\106; Nordic Valley\01_Design\Nordic Phase 1B\
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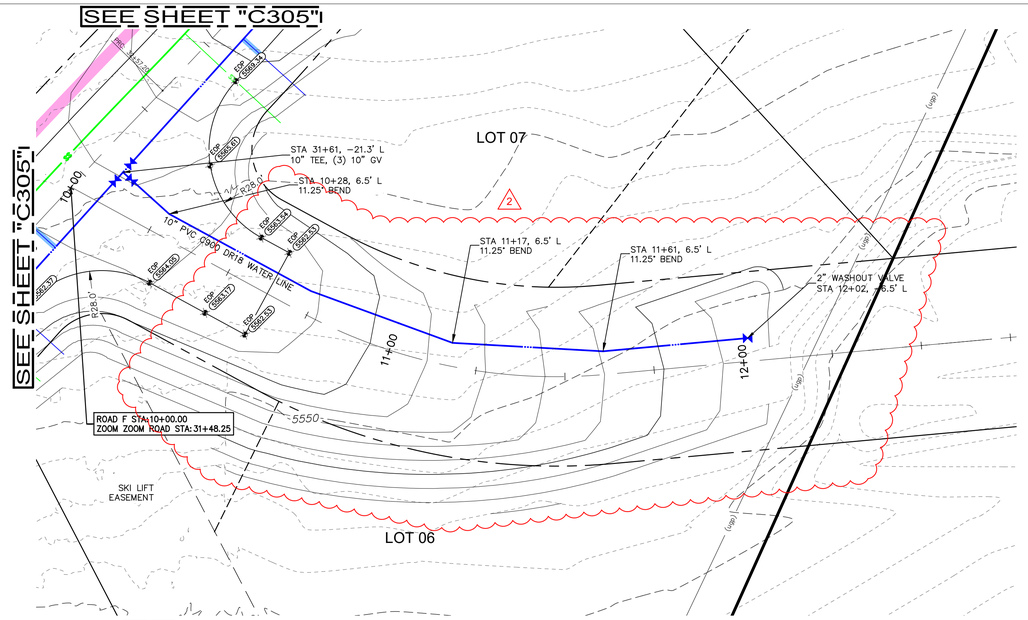

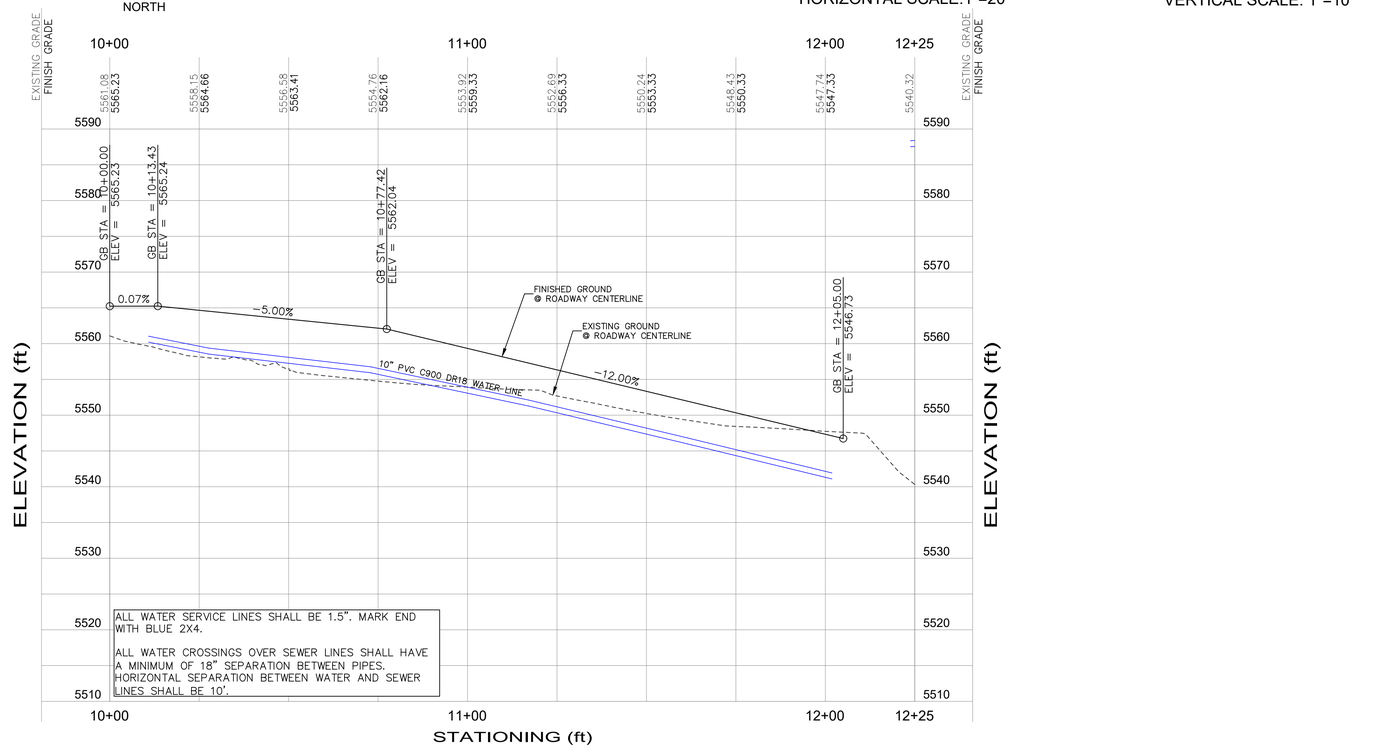

ALL WATER SERVICE LINES SHALL BE 1.5". MARK END WITH BLUE 2X4.

ALL WATER CROSSINGS OVER SEWER LINES SHALL HAVE A MINIMUM OF 18" SEPARATION BETWEEN PIPES. HORIZONTAL SEPARATION BETWEEN WATER AND SEWER LINES SHALL BE 10'.

path: C:\Users\Jenny\MDS Dropbox\Projects\106; Nordic Valley\01_Design\Nordic Phase 1B\
file name: C301_Nordic Phase 1B Plan and Profile.dwg | plot date: August 22, 2025 | plotted by: Jenny

NORDIC PHASE 1B
CONSTRUCTION DRAWINGS

MULHOLLAND DEVELOPMENT SOLUTIONS
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435.901.2940 (c)

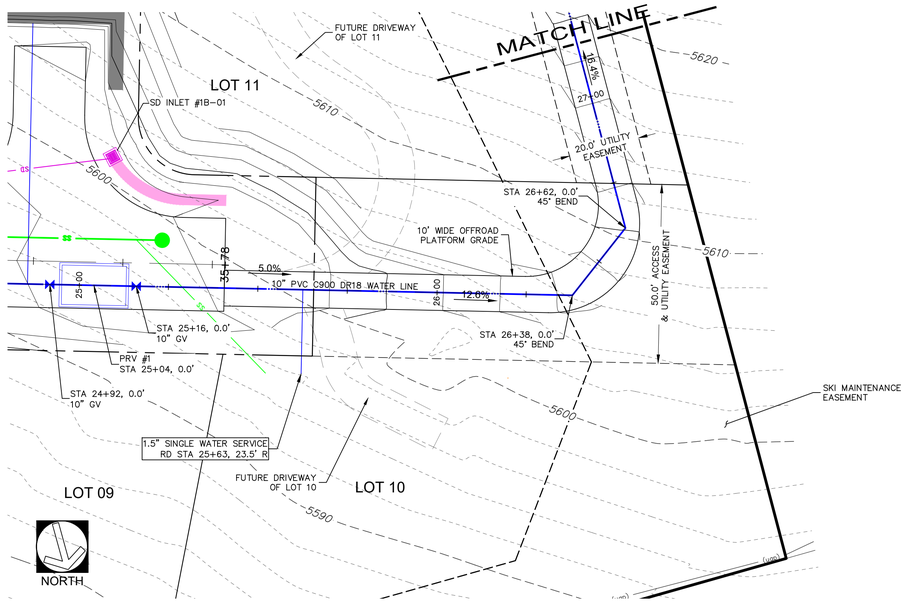
LICENSED PROFESSIONAL ENGINEER
No.524922
KRISTIAN J. MULHOLLAND
8/22/2025
STATE OF UTAH

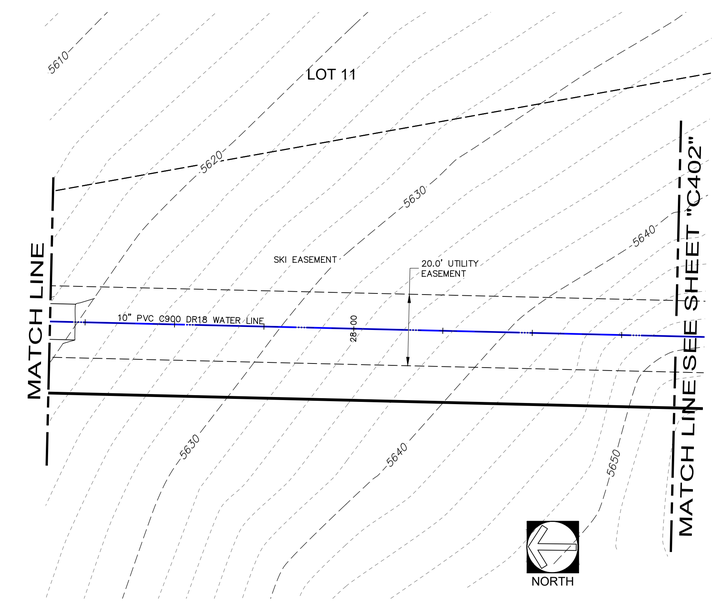
DATE:	August 22, 2025
DESIGN BY:	KJM
DRAWN BY:	BRC
REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN

REVISIONS:
- 2 08/15/2025: EXTENDED WATERLINE AND ROAD GRADING

SHEET TITLE:
ROAD F
PLAN AND PROFILE
STA 10+00 - END

SHEET:
C307

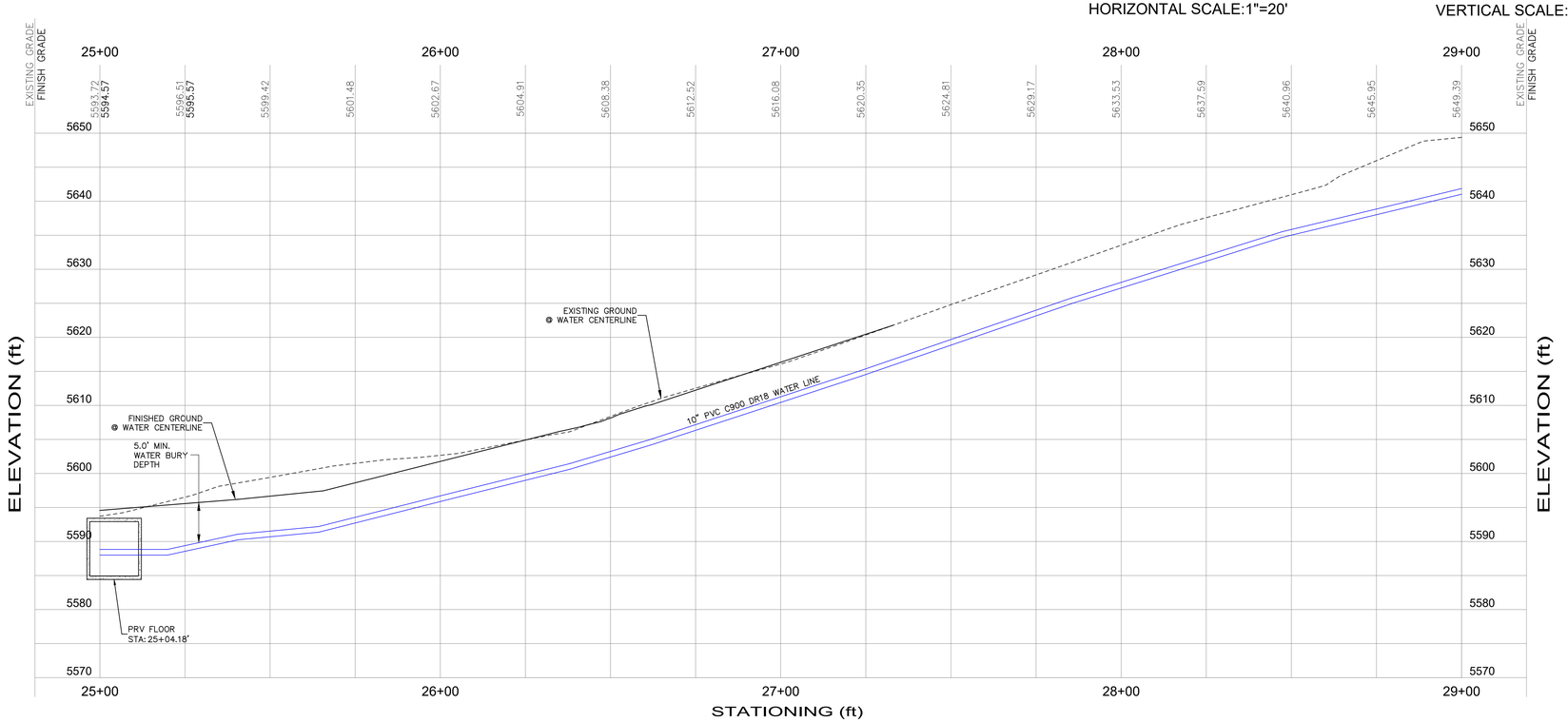




HORIZONTAL SCALE:1"=20'

VERTICAL SCALE: 1"=10'

BACKLOT WATER



NORDIC PHASE 1B CONSTRUCTION DRAWINGS

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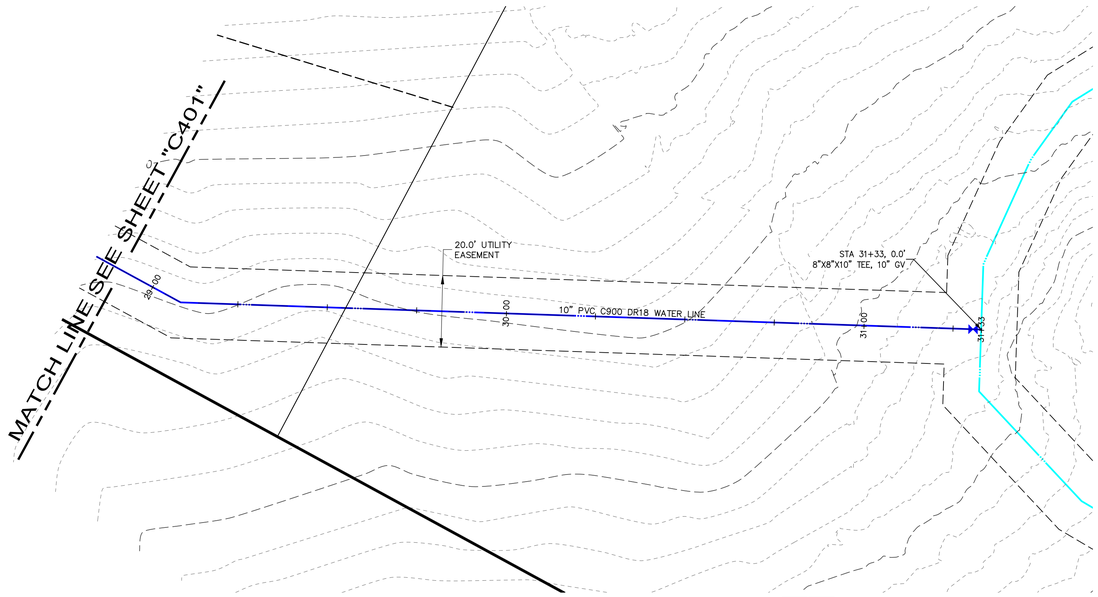
LICENSED PROFESSIONAL ENGINEER No.5249227 KRISTIAN J. MULHOLLAND 8/22/2025 STATE OF UTAH

DATE:	August 22, 2025
DESIGN BY:	KJM
DRAWN BY:	BRC
REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN
REVISIONS:	

SHEET TITLE: BACKLOT WATER PLAN AND PROFILE STA 25+00 - 29+00

SHEET: C401

path: C:\Users\Jenny\MDS Dropbox\Projects\106; Nordic Valley\01_Design\Nordic Phase 1B\
file name: C401_Backlot Water Plan and Profile.dwg | plot date: August 22, 2025 | plotted by: Jenny

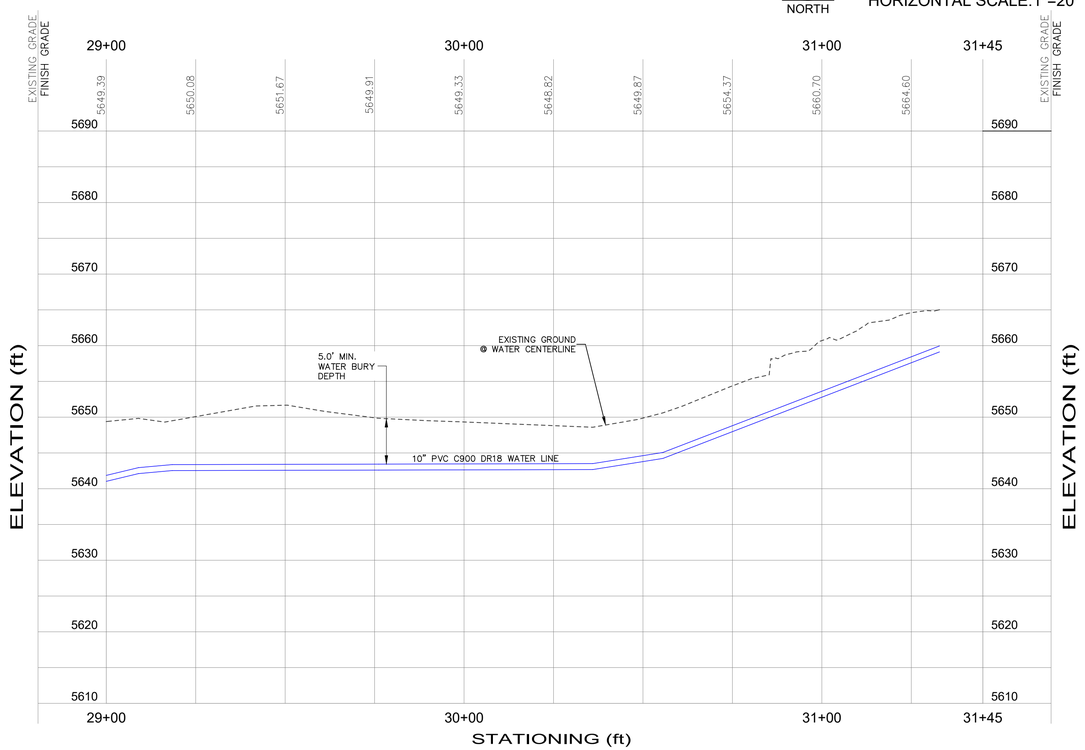


BACKLOT WATER

NORTH

HORIZONTAL SCALE:1"=20'

VERTICAL SCALE: 1"=10'



NORDIC PHASE 1B
CONSTRUCTION DRAWINGS

MULHOLLAND DEVELOPMENT SOLUTIONS
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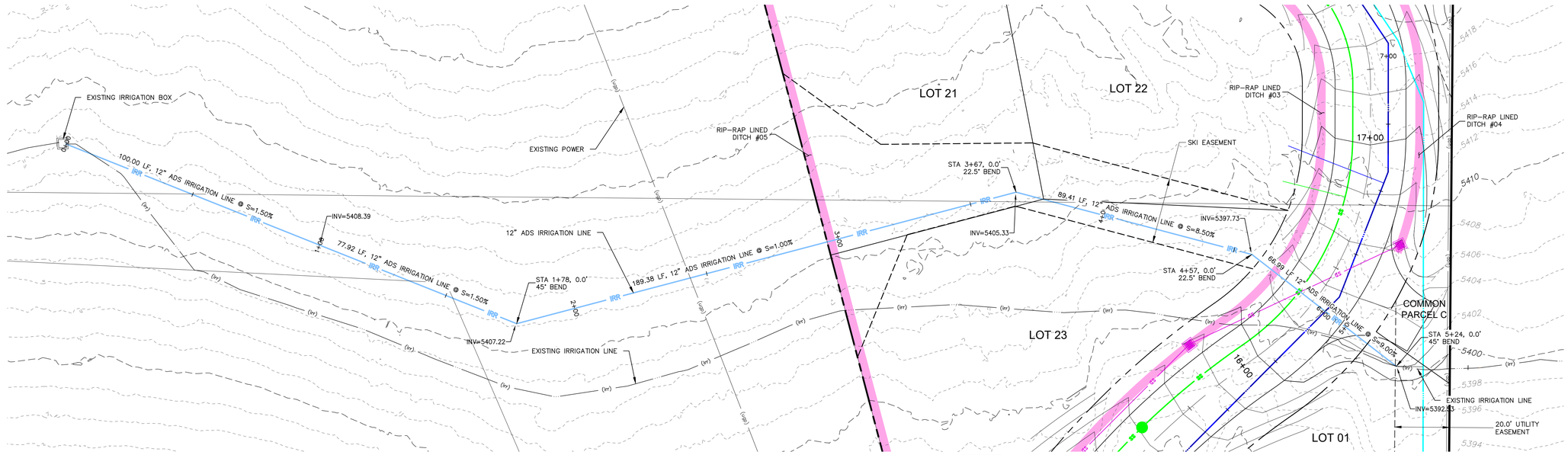
LICENSED PROFESSIONAL ENGINEER
No.5249227
KRISTIAN J. MULHOLLAND
8/22/2025
STATE OF UTAH

DATE:	August 22, 2025
DESIGN BY:	KJM
DRAWN BY:	BRC
REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN
REVISIONS:	
-	
-	
-	
-	
-	
-	

SHEET TITLE:
BACKLOT WATER
PLAN AND PROFILE
STA 29+00 - END

SHEET:
C402

path: C:\Users\Jenny\MDS Dropbox\Projects\106; Nordic Valley\01_Design\Nordic Phase 1B\
file name: C401_Backlot Water Plan and Profile.dwg | plot date: August 22, 2025 | plotted by: Jenny

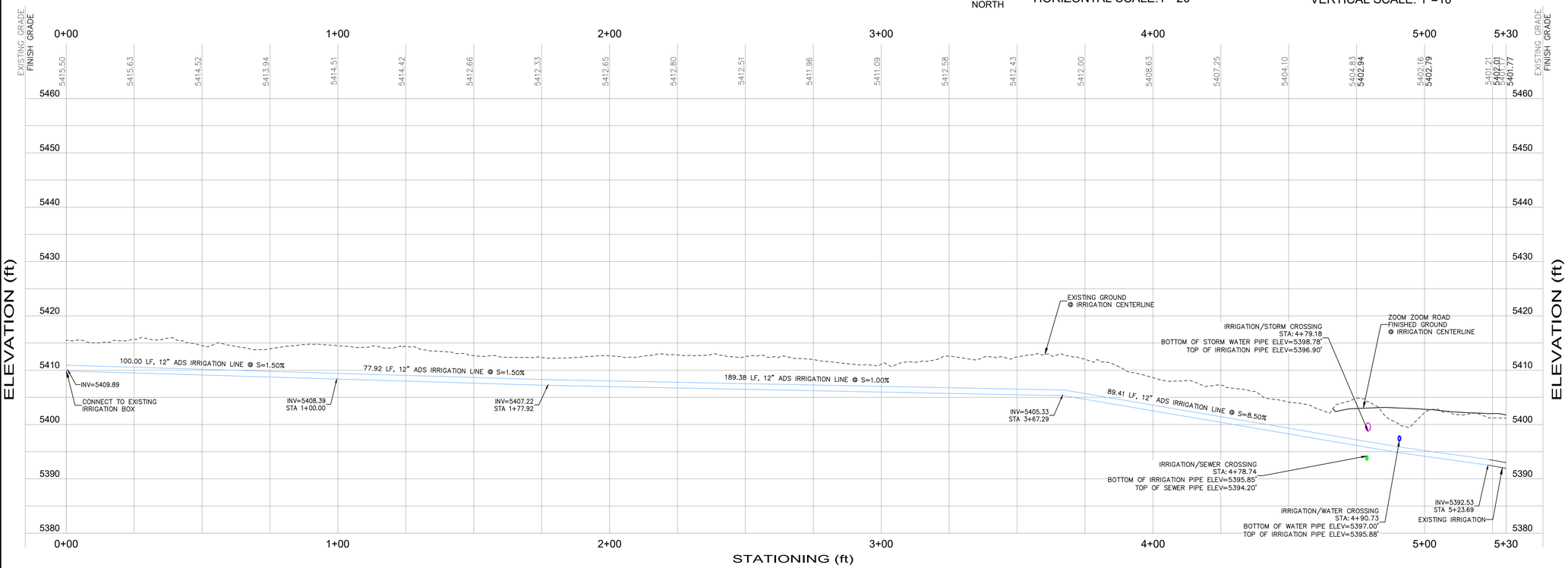


BACKLOT IRRIGATION

NORTH

HORIZONTAL SCALE:1"=20'

VERTICAL SCALE: 1"=10'



path: C:\Users\Jenny\MDS Dropbox\Projects\106; Nordic Valley\01_Design\Nordic Phase 1B\
file name: C401_Backlot Water Plan and Profile.dwg | plot date: August 22, 2025 | plotted by: Jenny

NORDIC PHASE 1B CONSTRUCTION DRAWINGS

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LICENSED PROFESSIONAL ENGINEER No.5249227 KRISTIAN J. MULHOLLAND 8/22/2025 STATE OF UTAH

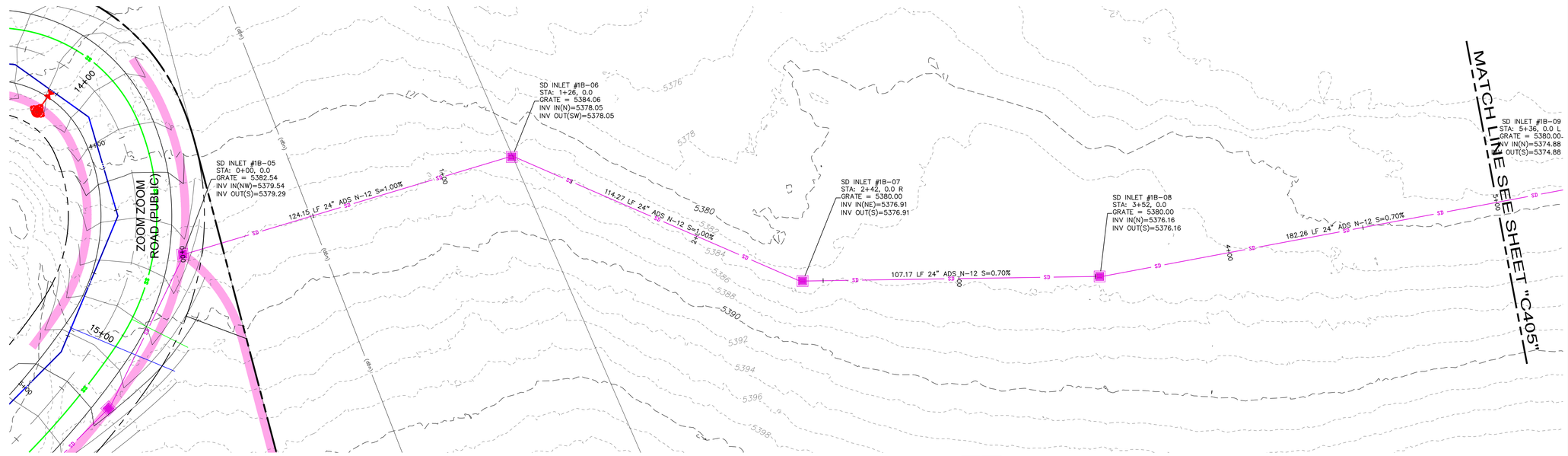
DATE:	August 22, 2025
DESIGN BY:	KJM
DRAWN BY:	BRC
REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN

REVISIONS:

1. 07/11/2025: NEW SHEET ADDED FOR BACKLOT IRRIGATION PLAN AND PROFILE

SHEET TITLE:
BACKLOT IRRIGATION PLAN AND PROFILE STA 0+00 - END

SHEET: C403

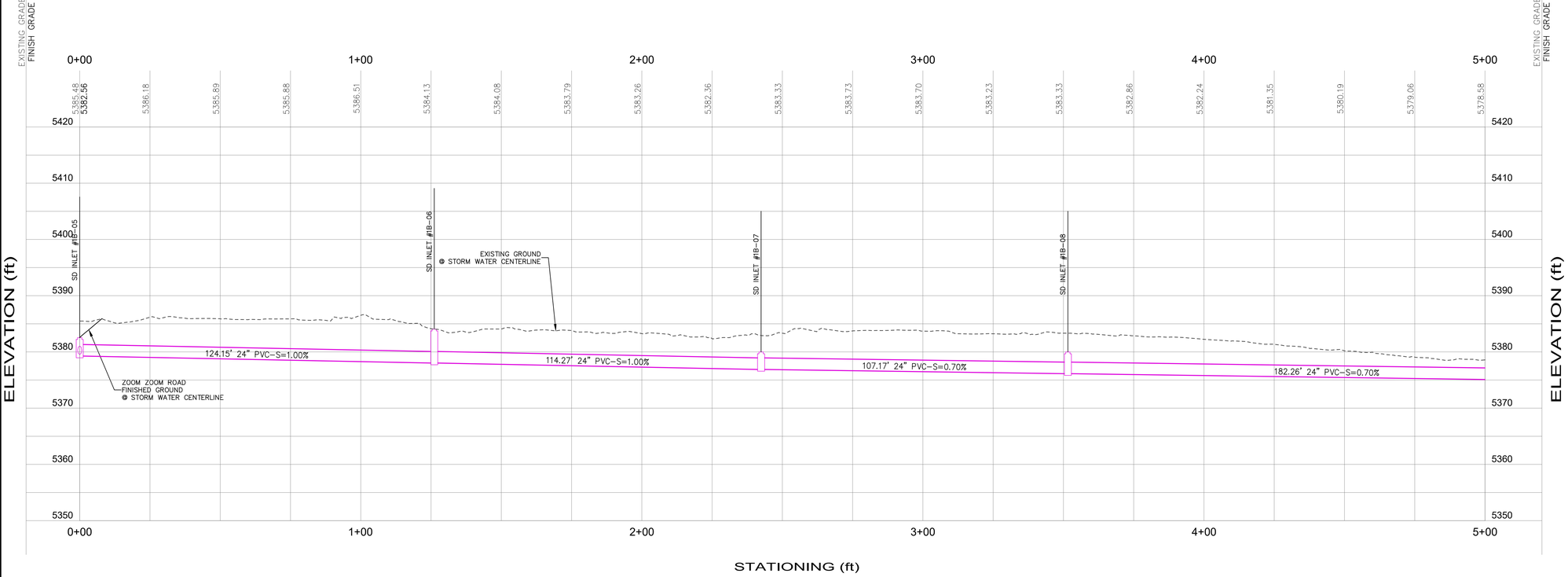


BACKLOT STORMWATER

NORTH

HORIZONTAL SCALE:1"=20'

VERTICAL SCALE: 1"=10'



path: C:\Users\Jenny\MDS Dropbox\Projects\106; Nordic Valley\01_Design\Nordic Phase 1B\
file name: C404_Backlot Stormwater Plan and Profile.dwg | plot date: August 22, 2025 | plotted by: Jenny

NORDIC PHASE 1B
CONSTRUCTION DRAWINGS

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LICENSED PROFESSIONAL ENGINEER
No.524922
KRISTIAN J. MULHOLLAND
8/22/2025
STATE OF UTAH

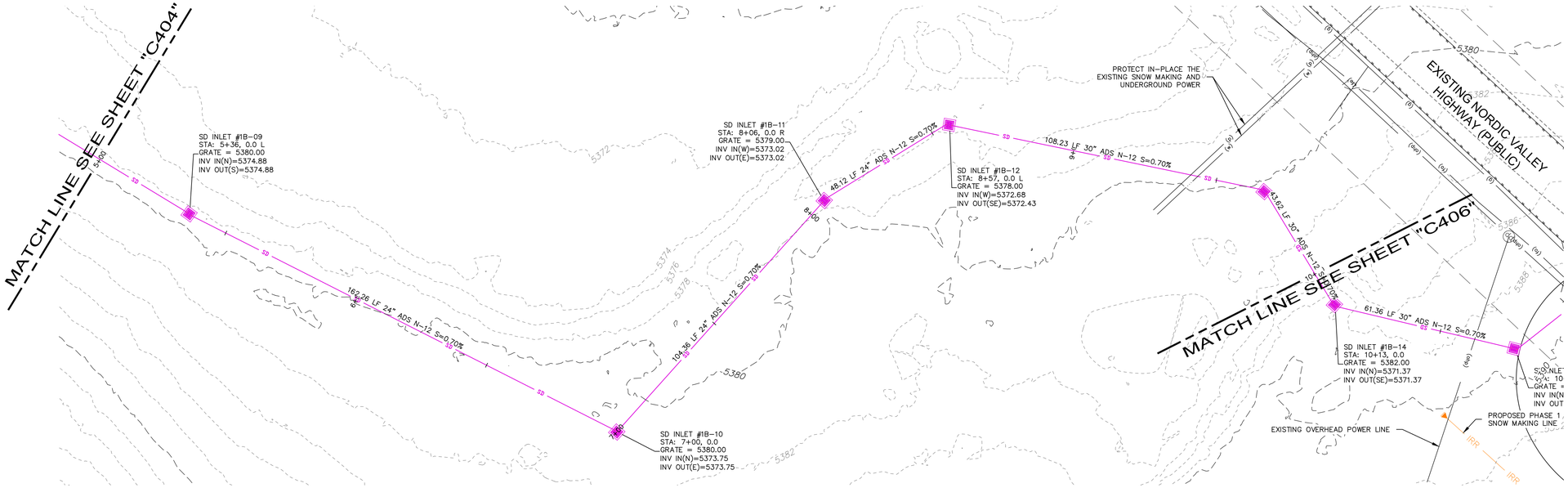
DATE:	August 22, 2025
DESIGN BY:	KJM
DRAWN BY:	BRC
REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN

REVISIONS:

3 08/21/2025: NEW SHEET FOR BACKLOT STORMWATER PLAN AND PROFILE

SHEET TITLE:
BACKLOT STORMWATER PLAN AND PROFILE STA 0+00 - 500

SHEET:
C404

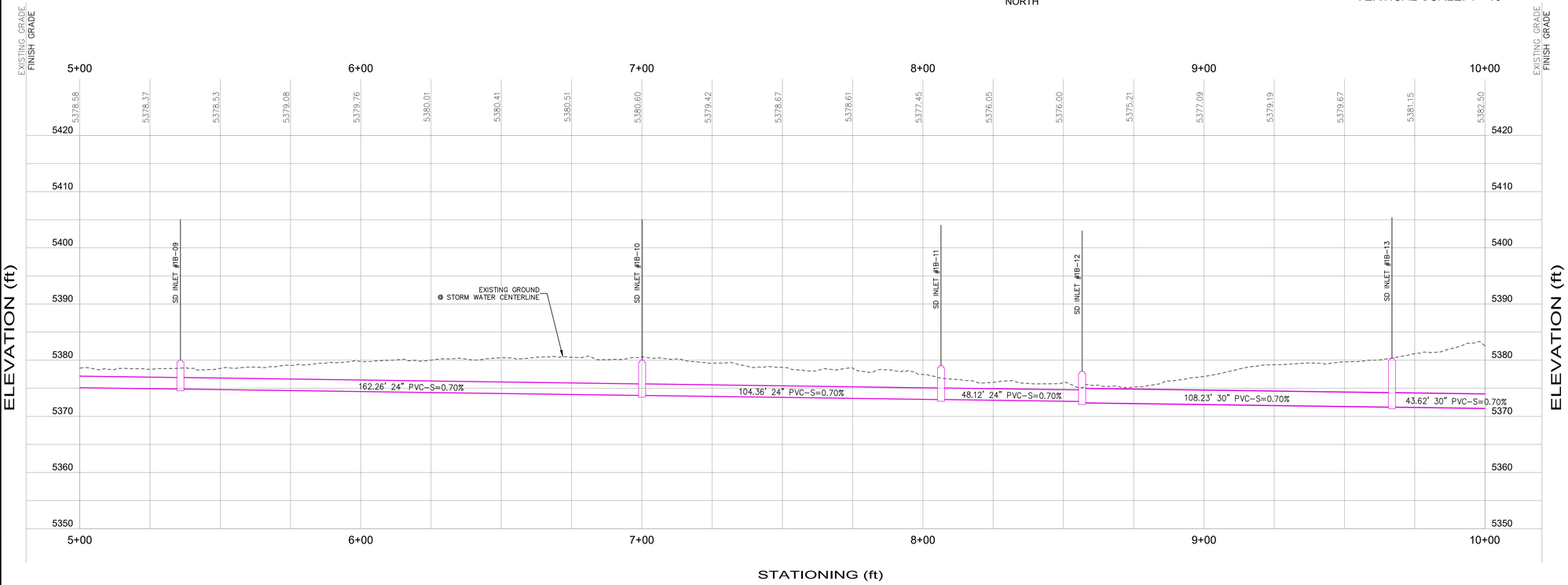


BACKLOT STORMWATER

NORTH

0 10 20 40 60
HORIZONTAL SCALE:1"=20'

0 5 10 20 30
VERTICAL SCALE: 1"=10'



path: C:\Users\Jenny\MDS Dropbox\Projects\106; Nordic Valley\01_Design\Nordic Phase 1B\
file name: C404_Backlot Stormwater Plan and Profile.dwg | plot date: August 22, 2025 | plotted by: Jenny

NORDIC PHASE 1B CONSTRUCTION DRAWINGS

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LICENSED PROFESSIONAL ENGINEER No.5249227 KRISTIAN J. MULHOLLAND 8/22/2025 STATE OF UTAH

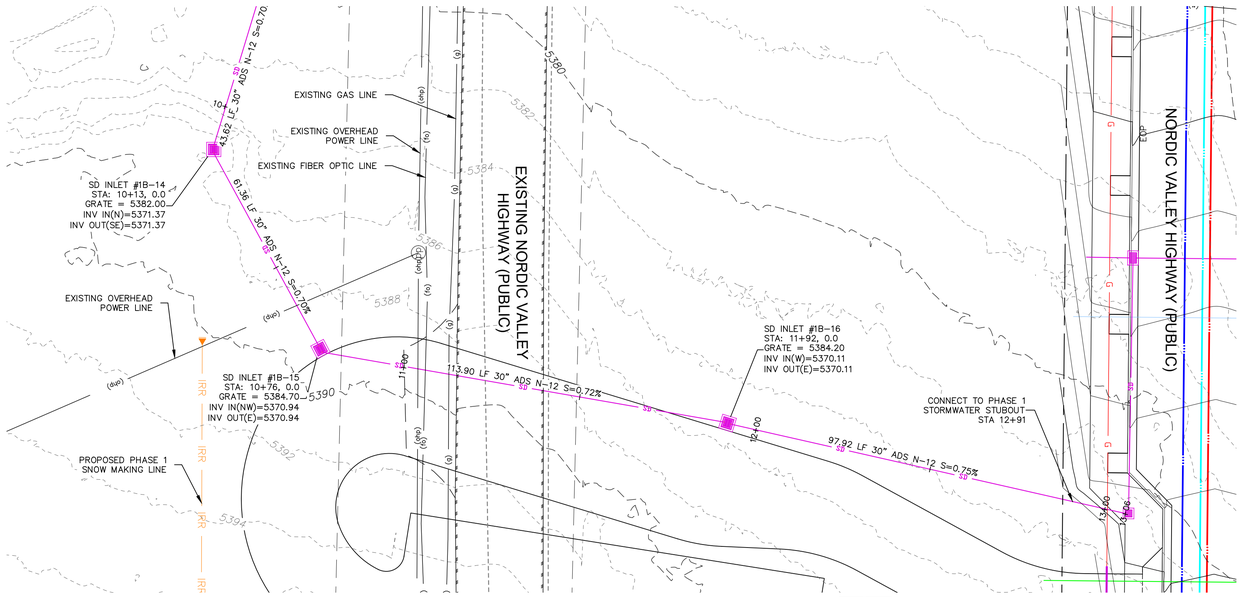
DATE:	August 22, 2025
DESIGN BY:	KJM
DRAWN BY:	BRC
REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN

REVISIONS:

3 08/21/2025: NEW SHEET FOR BACKLOT STORMWATER PLAN AND PROFILE

SHEET TITLE:
BACKLOT STORMWATER PLAN AND PROFILE STA 5+00 - 10+00

SHEET:
3 C405

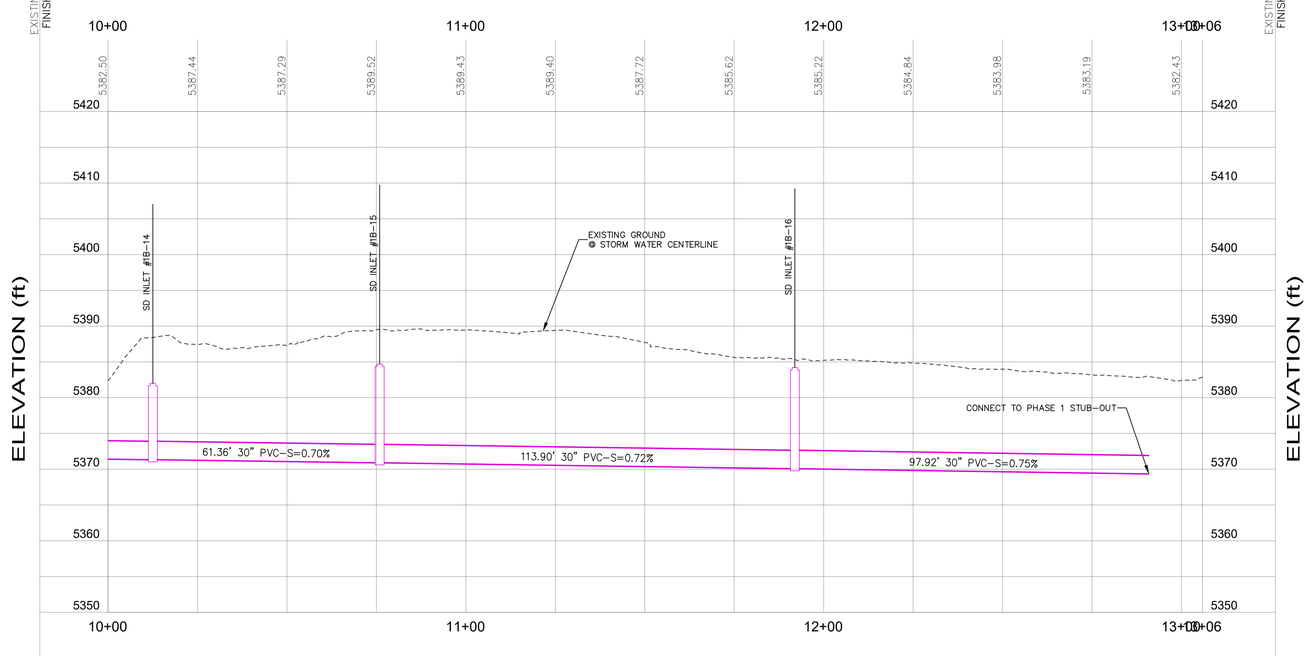


BACKLOT STORMWATER

NORTH

0 10 20 40 60
HORIZONTAL SCALE:1"=20'

0 5 10 20 30
VERTICAL SCALE: 1"=10'



NORDIC PHASE 1B
CONSTRUCTION DRAWINGS

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LICENSED PROFESSIONAL ENGINEER
No.524922
KRISTIAN J. MULHOLLAND
8/22/2025
STATE OF UTAH

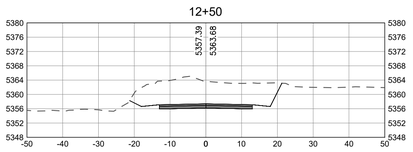
DATE:	August 22, 2025
DESIGN BY:	KJM
DRAWN BY:	BRC
REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN

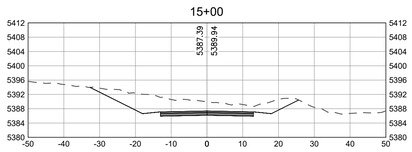
REVISIONS:
- 3 08/21/2025: NEW SHEET FOR BACKLOT STORMWATER PLAN AND PROFILE

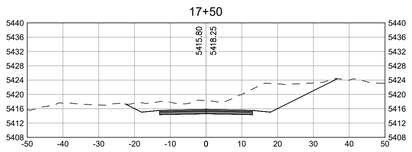
SHEET TITLE:
BACKLOT STORMWATER PLAN AND PROFILE STA 10+00 - END

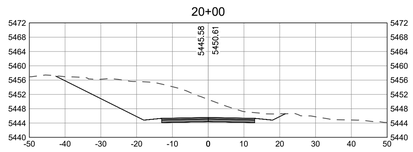
SHEET:
C406

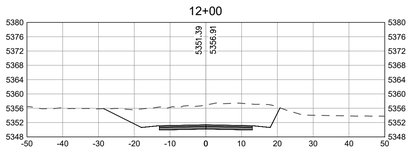
path: C:\Users\Jenny\MDS Dropbox\Projects\106; Nordic Valley\01_Design\Nordic Phase 1B\
file name: C404_Backlot Stormwater Plan and Profile.dwg | plot date: August 22, 2025 | plotted by: Jenny

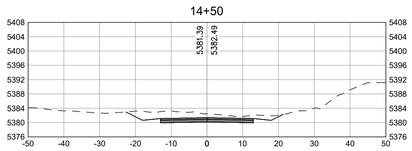


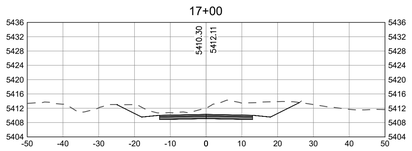


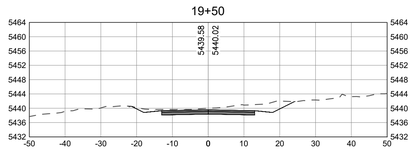


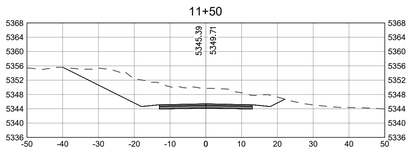


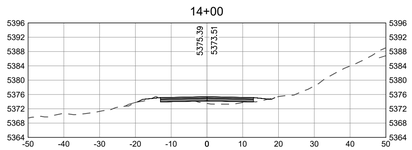


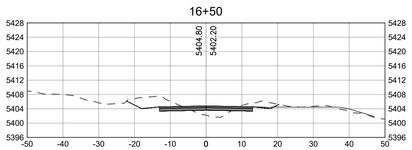


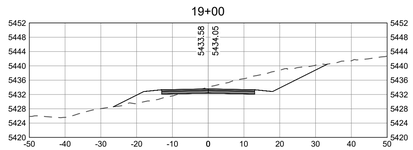


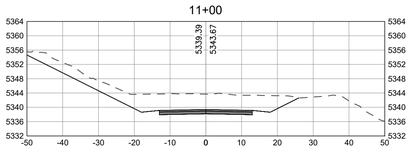


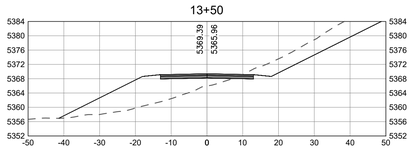


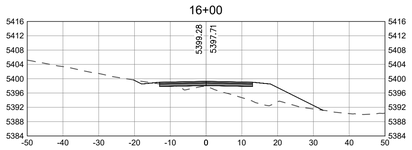


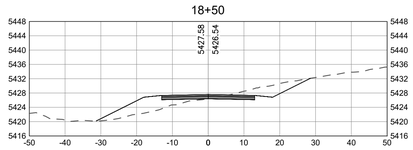


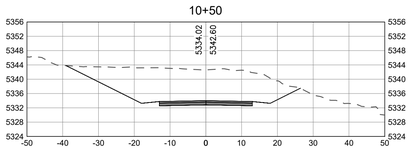


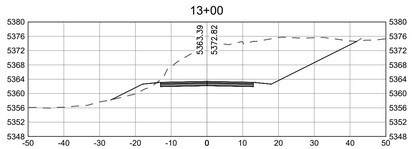


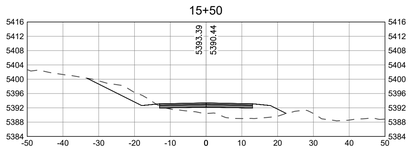


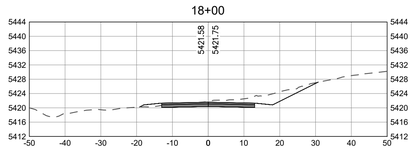












path: D:\MDS Dropbox\Projects\106; Nordic Valley\01_Design\Nordic Phase 1B\
file name: C501_Nordic Phase 1B Cross Sections.dwg | plot date: July 22, 2025 | plotted by: Ron

NORDIC PHASE 1B
CONSTRUCTION DRAWINGS

MULHOLLAND
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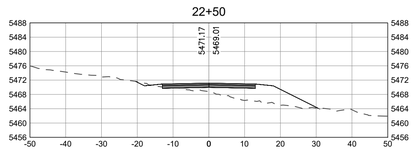
435.901.2940 (c)

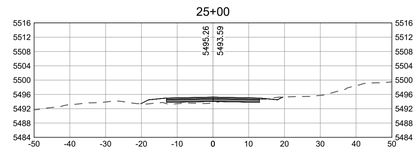
LICENSED PROFESSIONAL ENGINEER
No.524922
KRISTIAN J. MULHOLLAND
7/22/2025
STATE OF UTAH

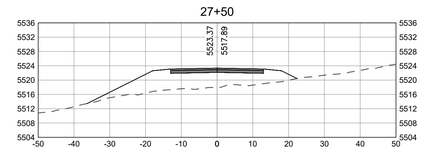
DATE:	July 22, 2025
DESIGN BY:	KJM
DRAWN BY:	BRC
REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN
REVISIONS:	
-	
-	
-	
-	
-	
-	

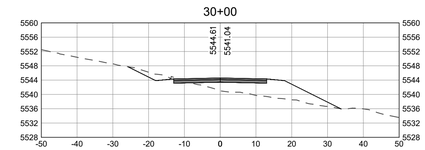
SHEET TITLE:
ZOOM ZOOM ROAD
CROSS SECTIONS
STA 10+50 + 20+00

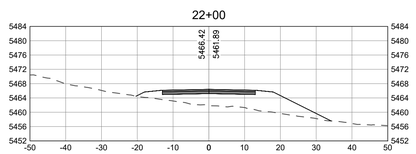
SHEET:
C501

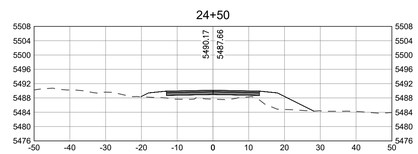


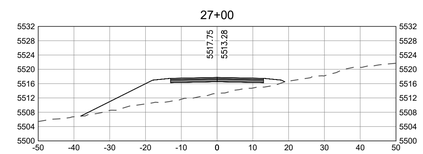


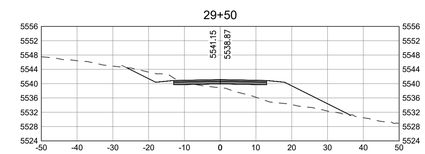


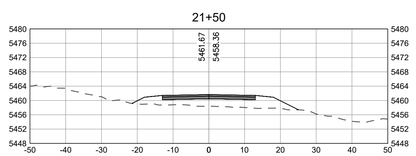


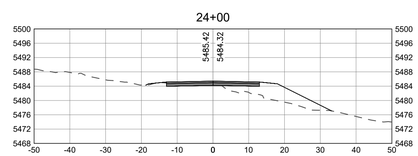


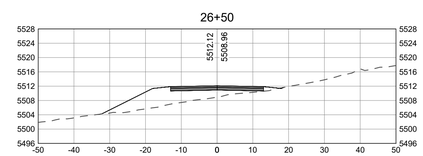


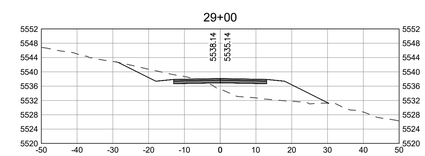


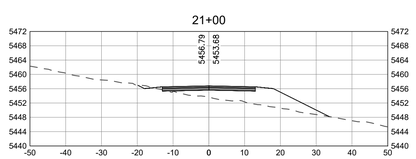


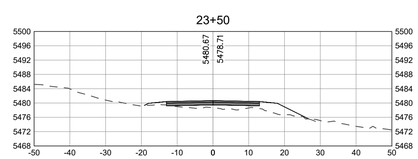


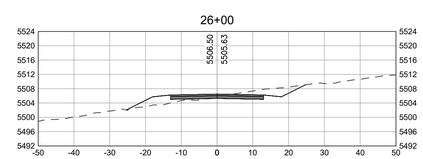


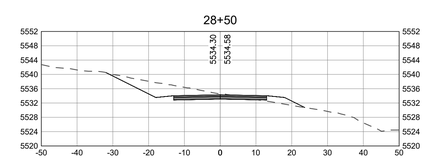


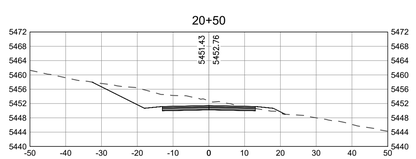


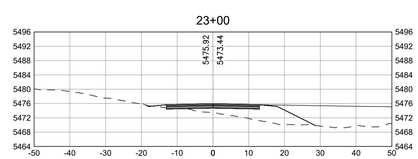


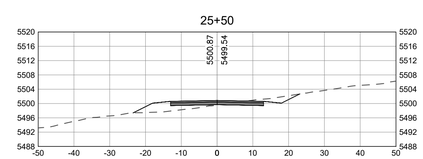


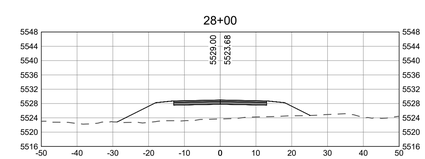












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file name: C501_Nordic Phase 1B Cross Sections.dwg | plot date: July 22, 2025 | plotted by: Ron

NORDIC PHASE 1B
CONSTRUCTION DRAWINGS

MULHOLLAND
DEVELOPMENT SOLUTIONS
kristian@mulholland-development.com
P.O. BOX 680925
PARK CITY, UTAH 84068
435.901.2940 (c)

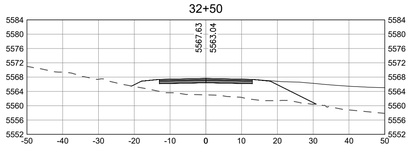
LICENSED PROFESSIONAL ENGINEER
No.5249227
KRISTIAN J. MULHOLLAND
7/22/25
STATE OF UTAH

DATE:	July 22, 2025
DESIGN BY:	KJM
DRAWN BY:	BRC
REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN
REVISIONS:	
-	
-	
-	
-	
-	
-	

SHEET TITLE:
ZOOM ZOOM ROAD
CROSS SECTIONS
STA 20+50 + 30+00

SHEET:
C502

32+50



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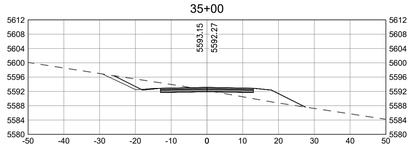

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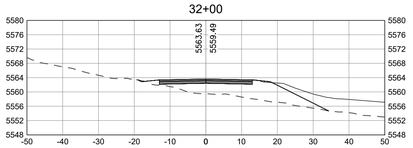

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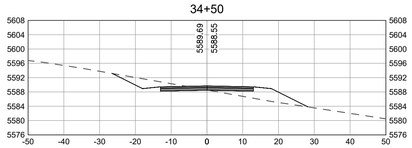

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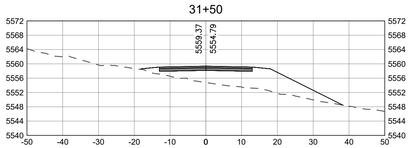

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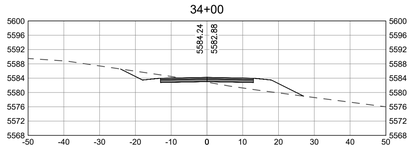

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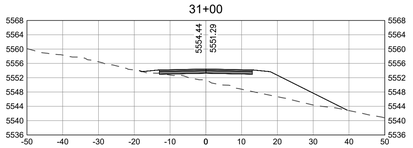

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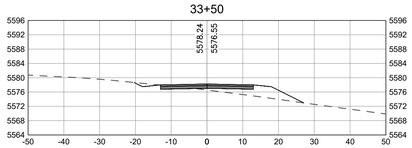

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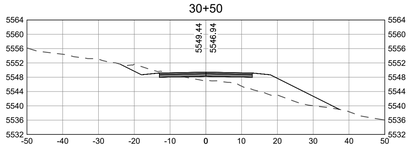

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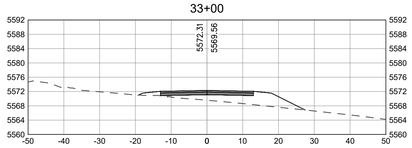

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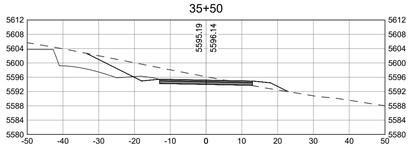

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file name: C501_Nordic Phase 1B Cross Sections.dwg | plot date: July 22, 2025 | plotted by: Ron

NORDIC PHASE 1B
CONSTRUCTION DRAWINGS

MULHOLLAND
DEVELOPMENT SOLUTIONS
kristian@mulholland-development.com
P.O. BOX 680925
PARK CITY, UTAH 84068
435.901.2940 (c)

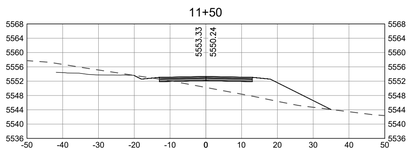
LICENSED PROFESSIONAL ENGINEER
No.524922
KRISTIAN J. MULHOLLAND
7/22/25
STATE OF UTAH

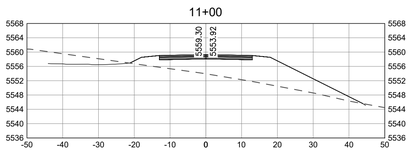
DATE:	July 22, 2025
DESIGN BY:	KJM
DRAWN BY:	BRC
REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN

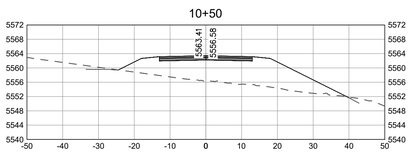
REVISIONS:
-
-
-
-
-
-

SHEET TITLE:
ZOOM ZOOM ROAD
CROSS SECTIONS
STA 30+50 + END

SHEET:
C503







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file name: C501_Nordic Phase 1B Cross Sections.dwg | plot date: July 22, 2025 | plotted by: Ron

NORDIC PHASE 1B
CONSTRUCTION DRAWINGS

MULHOLLAND
DEVELOPMENT SOLUTIONS
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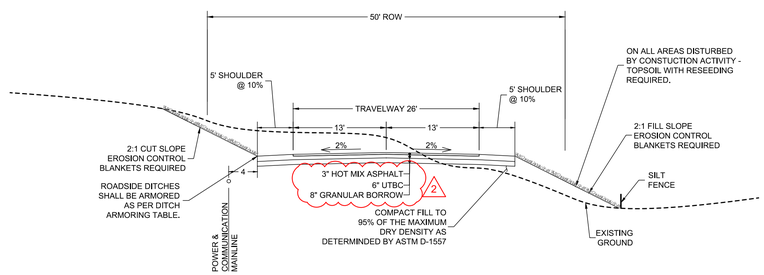
P.O. BOX 680925
PARK CITY, UTAH 84068
435.901.2940 (c)

LICENSED PROFESSIONAL ENGINEER
No.5249227
KRISTIAN J. MULHOLLAND
7/22/2025
STATE OF UTAH

DATE:	July 22, 2025
DESIGN BY:	KJM
DRAWN BY:	BRC
REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN
REVISIONS:	
-	
-	
-	
-	
-	
-	

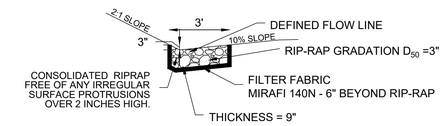
SHEET TITLE:
ROAD F
CROSS SECTIONS
STA 10+50 + 11+50

SHEET:
C504



ZOOM ZOOM ROAD TYPICAL SECTION

ROAD SIDE RIP-RAP ARMORED CHANNEL



ROADSIDE DITCH ARMORING TABLE

ROAD SLOPE	ARMOR
1-2%	REVEGETATION ONLY W/TOPSOIL (4")
2-6%	EROSION CONTROL BLANKET W/TOPSOIL (4")
>6%	RIP-RAP GRADATION D_{50} =3"

RIP-RAP ARMORED CHANNEL

NATIVE GRASS MIXTURE

	% pure
Perennial Ryegrass	24.09%
Slender Wheatgrass	19.27%
Bluebunch Wheatgrass	14.30%
Western Wheatgrass	14.60%
Sheep Fescue	9.85%
Lewis Blue Flax	7.63%
California Poppy	7.47%
Other Crop	0.10%
Inert Matter	2.66%
Weed Seed	0.02%

Slope Mix = 1.25 Acres/Bag

SEED MIX FROM GRANITE SEED COMPANY
1697 W. 2100 N.
LEHI, UT 84043
801.768.4422

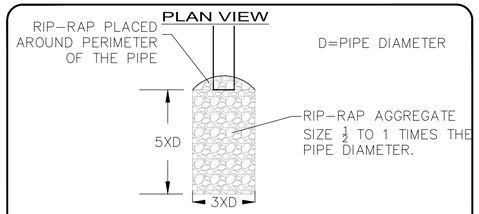
SEED MIX NO: 105044

NOTES:

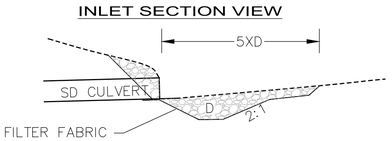
1. RE-VEGETATION OF NON-IRRIGATED AREAS IS REQUIRED ON OR AFTER OCTOBER 1 (WEATHER DEPENDENT), BUT BEFORE SNOW ACCUMULATES.
2. GRADE AND SHAPE THE AREA TO BE SEEDED SO THAT IT WILL DRAIN PROPERLY AND ACCOMMODATE SEEDING EQUIPMENT.
3. THE SUBSOIL (FILL SLOPE) SHOULD BE SERRATED TO PROVIDE AN INTERFACE BETWEEN MATERIALS.
4. SPREAD TOPSOIL BEFORE SEEDING.
5. TOPSOIL SURFACE TO PROVIDE FOR SEED RETENTION AND GERMINATION.
6. REPLACE SEED ON ANY BARE AREAS, OR ANY AREA SHOWING SIGNS OF EROSION AS NECESSARY.

ROADWAY SLOPE RE-VEGETATION SPECIFICATIONS

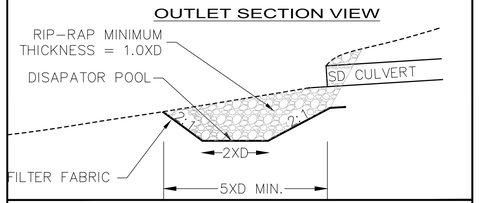
PLAN VIEW



INLET SECTION VIEW

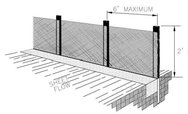


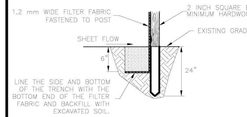
OUTLET SECTION VIEW



RIP-RAP INLET / OUTLET CULVERT PROTECTION

SILT FENCE

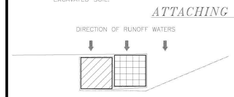




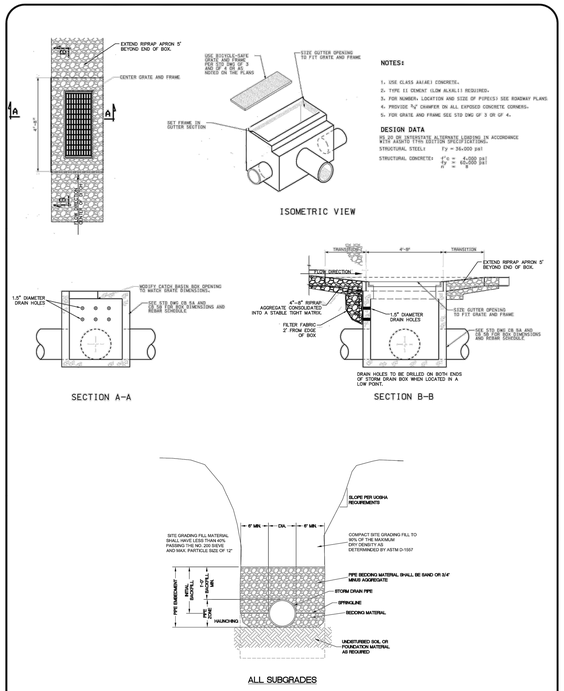
INSTALLATION:
1. Where possible, layout the silt fence 5 to 10 feet beyond the toe of slope.
2. Align the fence along the contour as close as possible.
3. When excavating the trench, use machinery that will produce no more than the desired dimension.
4. Place posts 6 foot on center along contour (or use pre assembled unit) and drive 2 feet (min.) into ground. Excavate an anchor trench (8 inches wide and 8 inches deep) immediately up-gradient of posts.
5. Cut fabric to required width, unroll along length of barrier and drape over barrier. Secure fabric to, stakes with staples, or similar, with trailing edge extending into anchor trench.
6. Backfill trench over filter fabric to anchor.

MAINTENANCE:
1. Inspect immediately after any rainfall and at least daily during prolonged rainfall.
2. Look for runoff bypassing ends of barriers or undercutting fence (repair immediately).
3. Repair or replace damaged areas of the fence and remove accumulated sediment.
4. Re-anchor fence as necessary to prevent shortcutting.
5. Remove accumulated sediment when it reaches ½ the height of the fence.

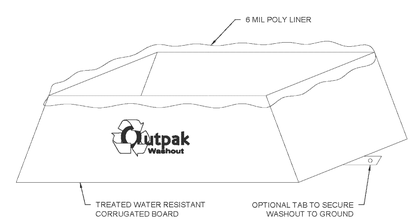
ATTACHING TWO SILT FENCES



1. PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE.
2. ROTATE BOTH POSTS AT LEAST 180 DEGREES IN A CLOCKWISE DIRECTION TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL.
3. DRIVE BOTH POSTS ABOUT 24 INCHES INTO THE GROUND AND BURY FLAP.



STORM DRAIN INLET AND PIPE TRENCH DETAIL



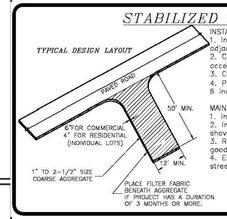
NOTES:

1. THE WASHOUT SHALL BE INSTALLED PRIOR TO USING MATERIALS THAT REQUIRE WASHOUT ON THIS PROJECT.
2. AS NECESSARY, SIGNS SHALL BE PLACED THROUGHOUT THE SITE TO INDICATE THE LOCATION OF THE WASHOUT.
3. THE WASHOUT AREA WILL BE REPLACED AS NECESSARY TO MAINTAIN CAPACITY FOR LIQUID WASTE.
4. WASHOUT RESIDUE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE FACILITY.
5. DO NOT WASHOUT INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS.
6. AVOID DUMPING EXCESS CONCRETE IN NON-DESIGNATED DUMPING AREAS.
7. LOCATE WASHOUT AT LEAST 50' (15 METERS) FROM STORM DRAIN, OPEN DITCHES, OR WATER BODIES.
8. THE WASHOUT SHALL BE USED ONLY FOR NON-HAZARDOUS WASTES.

CORRUGATED WASHOUT
SPECIFICATIONS

Outpak Washout
Boise, Idaho
208-890-0383
outpak.com

STABILIZED CONSTRUCTION ENTRANCE



INSTALLATION:
1. Install at any point of ingress or egress at a construction site where adjacent traveled way is paved.
2. Clear and grub area and grade to provide slope shown for driveway, or access/intersection. If adjacent to waterway, use a maximum slope of 2%.
3. Compact subgrade and place filter fabric if required.
4. Place coarse aggregate, 1 to 2 ½ inches size, to a minimum depth of 8 inches for commercial projects, and 4 inches for residential projects.

MAINTENANCE:
1. Inspect daily for loss of gravel or sediment buildup.
2. Inspect adjacent roadway for sediment deposit and clean by sweeping or shoveling.
3. Repair entrance and replace gravel as required to maintain control in good working condition.
4. Expand stabilized area as required to accommodate traffic, and off site street parking and prevent erosion at driveway.

NORDIC PHASE 1B
CONSTRUCTION DRAWINGS

MULHOLLAND DEVELOPMENT SOLUTIONS
kristian@mulholland-development.com
P.O. BOX 680925
PARK CITY, UTAH 84068
435.901.2940 (c)

LICENSED PROFESSIONAL ENGINEER
No.5249227
KRISTIAN J. MULHOLLAND
8/22/2025
STATE OF UTAH

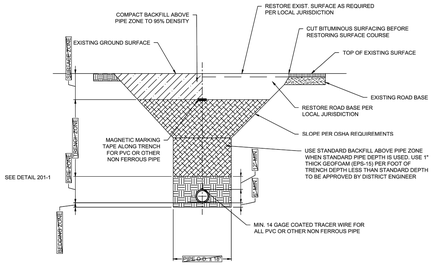
DATE:	August 22, 2025
DESIGN BY:	KJM
DRAWN BY:	BRC
REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN

REVISIONS:
- 2 08/15/2025: UPDATED PAVEMENT SECTION

SHEET TITLE: STANDARD DETAILS

SHEET: C601

path: C:\Users\Jenny\MDS Dropbox\Projects\106. Nordic Valley\01_Design\Nordic Phase 1B\
file name: C601_Nordic Phase 1B Standard Details.dwg | plot date: August 22, 2025 | plotted by: Jenny



NOTES:
EXCAVATION: TRENCH SHALL MEET ALL CURRENT OSHA REQUIREMENTS AND UOSH REQUIREMENTS FOR SAFETY.
BACKFILL: BACKFILL OPERATIONS SHALL COMPLY WITH APLWA 33-05-20 AND MATERIALS SHALL COMPLY WITH APWA 31-05-13 AND 32-11-23 WITH THE FOLLOWING MATERIAL SELECTION:

	UNIMPROVED AREAS	PAVEMENT AREAS
BEDDING	DETAIL 201-1	DETAIL 201-1
PIPE ZONE	DETAIL 201-1	DETAIL 201-1
TRENCH ZONE	NATIVE OR IMPORTED SOIL	UNTREATED BASE COURSE
SURFACE ZONE	NATIVE TOP SOIL	UNTREATED BASE

SEWER ROCK #34 GRAVEL AND RECYCLED AGGREGATE ARE NOT ALLOWED AS BACKFILL.

COMPACTION: COMPACTED TO 95% OF MAXIMUM DRY DENSITY PER AASHTO T99.

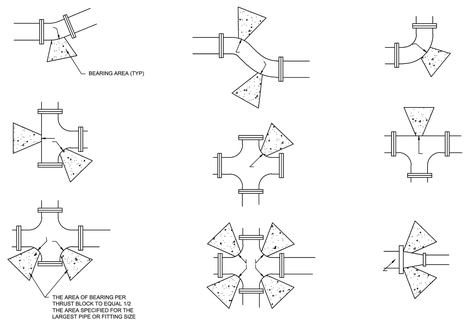
	UNIMPROVED AREAS	PAVEMENT AREAS
PIPE ZONE	PER PIPE MANUFACTURE RECOMMENDATION	PER PIPE MANUFACTURE RECOMMENDATION
TRENCH ZONE	92% OF ASTM D 698	95% OF ASTM D 1557
SURFACE ZONE	90% OF ASTM D 698	95% OF ASTM D 1557

WATER SETTLING OR "JETTING" OF TRENCHES BACKFILL NOT ALLOWED

INSTALLATION OF PIPE: INSTALL PIPE PER APWA 33-11-00 "WATER DISTRIBUTION AND TRANSMISSION SYSTEMS." INSTALL PIPE ON STABLE FOUNDATION WITH UNIFORM BEARING. SHAPE TRENCH BY HAND TO FIT BOTTOM QUADRANT OF PIPE ALLOWING SPACE FOR PIPE BELLS.

UPDATED: MAY 2025

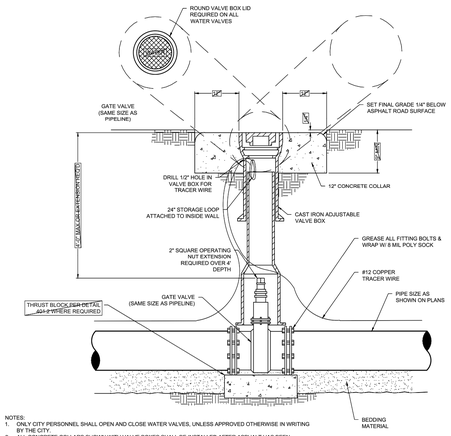
NORDIC VALLEY WATER INFRASTRUCTURE	WATERLINE TRENCH	401-1



PIPE SIZE (IN)	MIN BEARING AREA (SQ FT)				
	TEES, PLUGS, VALVES, DEADENDS	90 BENDS	45 BENDS	22.5 BENDS	11.25 BENDS
4	1.9	2.7	1.4	0.7	0.4
4	4.2	6.0	3.2	1.7	0.8
4	7.5	10.7	5.8	2.9	1.5
12	17.0	24.0	13.0	6.6	3.3
14	23.1	32.7	17.7	9.0	4.5
16	30.2	42.7	23.1	11.8	5.9
18	38.2	54.0	29.2	14.9	7.5
20	47.1	66.6	36.0	18.4	9.2
24	67.9	96.0	51.9	26.5	13.3
30	106.0	149.9	81.2	41.4	20.8

UPDATED: MAY 2025

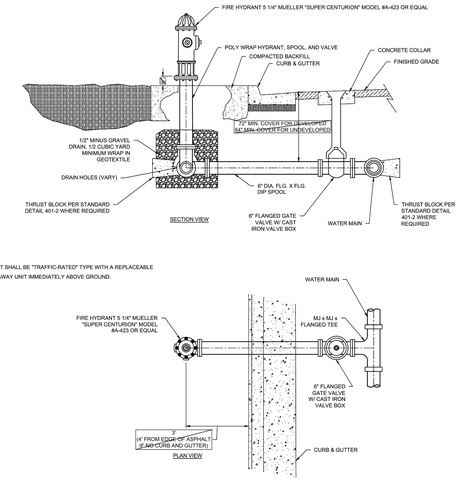
NORDIC VALLEY WATER INFRASTRUCTURE	THRUST BLOCK	401-2



NOTES:
1. ONLY CITY PERSONNEL SHALL OPEN AND CLOSE WATER VALVES, UNLESS APPROVED OTHERWISE IN WRITING BY THE CITY.
2. ALL CONCRETE COLLARS SHOWN WITH VALVE BOXES SHALL BE INSTALLED AFTER ASPHALT HAS BEEN INSTALLED.
3. INSTALL AND COMPACT ALL BACKFILL MATERIAL PER STANDARD DETAIL 401-1

UPDATED: MAY 2025

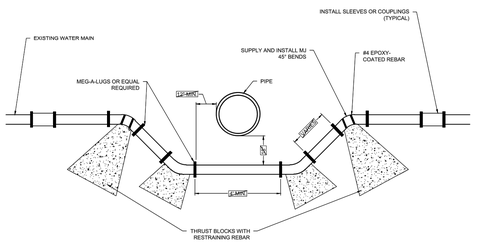
NORDIC VALLEY WATER INFRASTRUCTURE	GATE VALVE	401-3



NOTES:
1. HYDRANT SHALL BE "TRAFFIC-RATED" TYPE WITH A REPLACEABLE BREAK-AWAY UNIT IMMEDIATELY ABOVE GROUND.

UPDATED: MAY 2025

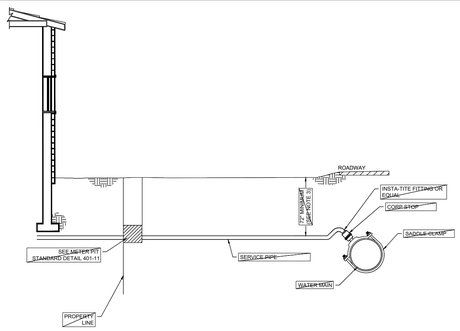
NORDIC VALLEY WATER INFRASTRUCTURE	HYDRANT CONNECTION	401-4



NOTES:
1. DISTRICT TO BE GIVEN 24 HOUR NOTICE BEFORE LOOPING ANY WATERLINE

UPDATED: MAY 2025

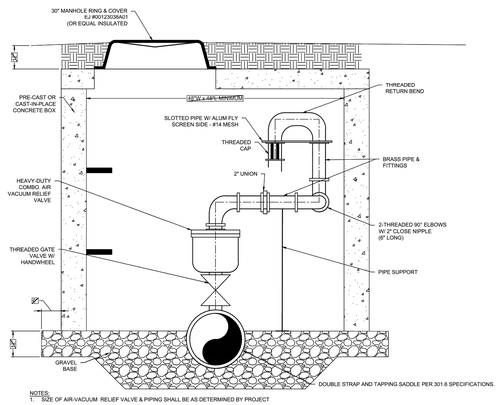
NORDIC VALLEY WATER INFRASTRUCTURE	WATERLINE LOOP	401-5



NOTES:
1. SEE STANDARD DETAIL 401-1 FOR WATER TRENCH REQUIREMENTS
2. NO LATERALS ARE TO BE INSTALLED WITHIN 5' OF BEDROCK
3. 72" MINIMUM COVER FOR DEVELOPED AREA AND 54" MINIMUM COVER FOR UNDEVELOPED AREAS. COVER REQUIREMENT MAY BE REDUCED PER RECOMMENDATION BY APPROVED GEOTECHNICAL REPORT. GEOTECHNICAL REPORT SHALL SPECIFICALLY ADDRESS FROST DEPTH AND PIPE FREEZING POTENTIAL.
4. PLACE TAPS A MINIMUM OF 24 INCHES APART AND FROM THE END OF PIPE

UPDATED: MAY 2025

NORDIC VALLEY WATER INFRASTRUCTURE	SERVICE LATERAL	401-6



NOTES:
1. SIZE OF AIR-VACUUM RELIEF VALVE & PIPING SHALL BE AS DETERMINED BY PROJECT ENGINEER; AND APPROVED BY DISTRICT ENGINEER
2. INSPECTION: VAULT AND SERVICE LINE SHALL BE INSPECTED BY DISTRICT PRIOR TO BACKFILLING.
3. BACKFILL: INSTALL BACKFILL IN LIFTS NOT EXCEEDING 8" AFTER COMPACTION. COMPACT EACH LIFT TO AN AVERAGE DRY DENSITY OF 97% WITH NO DENSITY TEST RESULT LESS THAN 92%
4. ALL EXPOSED METAL PARTS SHALL BE GALVANIZED

UPDATED: MAY 2025

NORDIC VALLEY WATER INFRASTRUCTURE	AIR-VACUUM RELEASE VALVE	401-7

NORDIC PHASE 1B
CONSTRUCTION DRAWINGS

MULHOLLAND DEVELOPMENT SOLUTIONS
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P.O. BOX 680925
PARK CITY, UTAH 84068
435.901.2940 (c)

LICENSED PROFESSIONAL ENGINEER No.5249227 KRISTIAN J. MULHOLLAND 8/22/2025 STATE OF UTAH

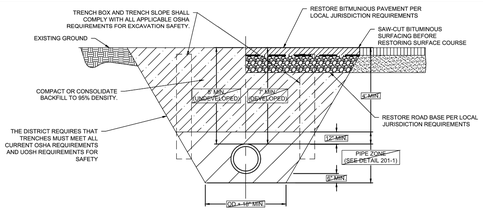
DATE:	August 22, 2025
DESIGN BY:	KJM
DRAWN BY:	BRC
REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN

REVISIONS:
2 08/15/2025: ADDED DETAIL SHEET

SHEET TITLE: STANDARD DETAILS

SHEET: C602 2

path: C:\Users\JennyMDS Dropbox\Projects\106. Nordic Valley\01_Design\Nordic Phase 1B\
file name: C601_Nordic Phase 1B Standard Details.dwg | plot date: August 22, 2025 | plotted by: Jenny

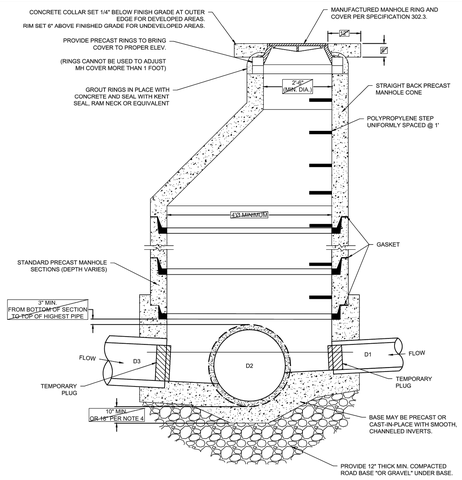


SECTION VIEW

NOTES:

1. THE DISTRICT REQUIRES CONTRACTOR MUST MEET ALL OF THE REQUIREMENTS ESTABLISHED FOR SAFE TRENCHING. (SEE OSHA AND UOSH REQUIREMENTS LATEST EDITIONS).
2. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES BEFORE LAYING PIPE WITHIN 50' OF SAID UTILITIES WHICH MAY BE EXPOSED, DAMAGED OR CROSSED AS SHOWN ON THE DRAWINGS OR AS "BLUE STAKED". THE CONTRACTOR WILL MAKE ARRANGEMENTS WITH THE UTILITY COMPANY TO MOVE THE UTILITY IF NECESSARY OR OBTAIN PERMISSION FROM THE DISTRICT ENGINEER TO MODIFY GRADE OF PIPELINE IN ORDER TO GO AROUND UTILITIES.
3. TESTING: ALL NEW GRAVITY TO BE "TELEVISED" AND NECESSARY REPAIRS MADE BEFORE ACCEPTANCE. ALL LINES MUST BE PRESSURE TESTED TO 3.5 PSI MIN. FOR 5 MINUTES. A MANDRAL OR BALL CAN BE USED TO VERIFY DEFORMATION OF A PIPE AS DETERMINED FROM THE VIDEO UNLESS SPECIFIED OTHERWISE. MANHOLES MUST BE TESTED AS DESCRIBED IN SPECIFICATION 502.4.
4. ALL GRAVITY LINES TO BE INSTALLED IN PUBLIC RIGHT-OF-WAY OR RECORDED EASEMENT UNLESS OTHERWISE APPROVED BY THE DISTRICT ENGINEER.
5. WHERE COLLAPSIBLE SOILS ARE ENCOUNTERED, FURNISH, PLACE AND COMPACT IMPORTED BACKFILL MATERIALS AS REQUIRED AND AS DIRECTED.
6. 18" SPACING MUST BE MAINTAINED BETWEEN ALL WATER LINE PIPE CROSSINGS AND THE TOP OF THE SEWER PIPE.
7. MAX. DEPTH SHALL BE 20' TO THE TOP OF PIPE UNLESS APPROVED OTHERWISE BY THE DISTRICT ENGINEER.

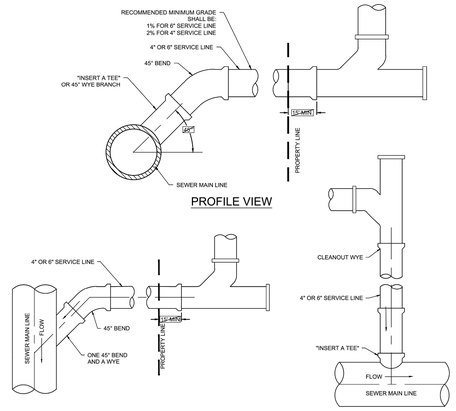
UPDATED: MAY 2025		
NORDIC VALLEY SEWER INFRASTRUCTURE	SEWER TRENCH	402-1



NOTES:

1. IF GRADE ALLOWS, INVERTS OF D1 & D3 SHALL BE REQUIRED TO MATCH TOP OF D2.
2. REMOVE DEBRIS, TEMPORARY PLUGS AND PLYWOOD FROM INSIDE OF MANHOLES ONCE GRADING HAS BEEN COMPLETED AND FINAL SURFACING IS IN PLACE.
3. IF MANHOLE BASE IS TO BE POURED IN PLACE, FOLLOW SAME PATTERN AS SHOWN EXCEPT USE 10" MIN WALL THICKNESS.
4. MANHOLES DEEPER THAN 20 FEET MUST HAVE AN 18" THICK CONCRETE BASE.

UPDATED: MAY 2025		
NORDIC VALLEY SEWER INFRASTRUCTURE	SEWER MANHOLE	402-3



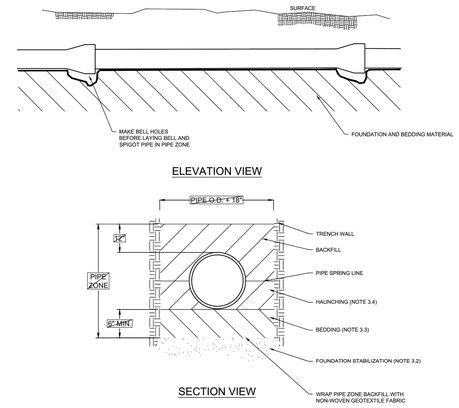
SECTION VIEW - 45° WYE BRANCH

SECTION VIEW - "INSERT A TEE"

NOTES:

1. ALL HOUSE SERVICES SHALL BE 4" DIAMETER. COMMERCIAL AND PUBLIC SERVICES SHALL BE 6" DIAMETER UNLESS DIRECTED OTHERWISE AND SHALL BE EXTENDED FROM MAIN LINES TO PROPERTY LINES.
2. ALL 90° BENDS AT CONNECTION TO MAIN MUST BE CONSTRUCTED WITH ONE 45° BEND AND A WYE.
3. NOTIFY DISTRICT 24 HOURS IN ADVANCE OF ANY CONNECTION. EVERY CONNECTION TO BE INSPECTED BY DISTRICT.
4. CONNECTION TO USERS TO BE DONE BY OTHERS.
5. IN AREAS WHERE SEWER LATERALS ARE NEECED TO SERVICE A BASEMENT 11' MIN. DEPTH IS RECOMMENDED. IF THE SEWER LINE IS NOT 11' DEEP A NOTE MUST BE PLACED ON THE PLANS "BEFORE EXCAVATING BASEMENTS, CONTRACTOR MUST VERIFY SEWER DEPTH"

UPDATED: MAY 2025		
NORDIC VALLEY SEWER INFRASTRUCTURE	SERVICE CONNECTION	402-5



SECTION VIEW

INSTALLATION:

PLASTIC PIPE: FOLLOW ASTM D 2321
"STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY=FLOW APPLICATIONS"

METAL PIPE: FOLLOW ASTM A 798
"STANDARD PRACTICE FOR INSTALLING FACTORY-MADE CORRUGATED STEEL PIPE FOR SEWERS AND OTHER APPLICATIONS

INSTALLATION IN BEDROCK REQUIRES 18" PIPE BEDDING, 24" PIPE ZONE WIDTH, AND CHECK DAMS EVERY 450'.

NOTES:

1. EXCAVATE THE PIPE ZONE: WIDTH IS MEASURED AT THE PIPE SPRING LINE AND INCLUDES ANY NECESSARY SHEATHING. PROVIDE WIDTH RECOMMENDED BY PIPE MANUFACTURER. FOLLOW MANUFACTURER'S RECOMMENDATIONS WHEN USING TRENCH BOXES.
2. FOUNDATION STABILIZATION: OBTAIN ENGINEER'S PERMISSION BEFORE INSTALLING COMMON FILL. VIBRATE TO STABILIZE. INSTALLATION OF STABILIZATION-SEPARATION GEOTEXTILE WILL BE REQUIRED TO SEPARATE BACKFILL MATERIAL AND NATIVE SUBGRADE MATERIALS IF COMMON FILL CANNOT PROVIDE A WORKING SURFACE OR PREVENT SOILS MIGRATION.
3. BEDDING: FOLLOW APWA SECTION 33 05 20 REQUIREMENTS AND THE FOLLOWING PROVISIONS.
   3.1. FURNISH 3/4" MINUS WASHED ROCK FOR PLASTIC PIPE AND 1" MINUS WASHED ROCK FOR CONCRETE PIPE MATERIAL UNLESS SPECIFIED OTHERWISE BY PIPE MANUFACTURER.
   3.2. MAXIMUM LIFT THICKNESS IS 8-INCHES
   3.3. BEDDING IMMEDIATELY UNDER THE PIPE SHOULD NOT BE COMPACTED, BUT LOOSELY PLACED.
   3.4. COMPACTION IS 95 PERCENT OR GREATER RELATIVE TO A MODIFIED PROCTOR DENSITY. APWA SECTION 31 23 26.
4. PIPE ZONE: DO NOT USE SEWER ROCK, PEA GRAVEL, OR RECYCLED RAP AGGREGATE IN THE PIPE ZONE. WATER JETTING IS NOT ALLOWED.
   4.1. MAXIMUM LIFT THICKNESS IS 8-INCHES BEFORE COMPACTION. COMPACTION IS 95 PERCENT OR GREATER RELATIVE TO A MODIFIED PROCTOR DENSITY, APWA SECTION 31 23 26 UNLESS PIPE MANUFACTURER REQUIRES MORE STRINGENT INSTALLATION.
   4.2. SUBMISSION OF QUALITY CONTROL COMPACTION TEST RESULT DATA DEVELOPED FOR THE HAUNCH ZONE MAY BE REQUESTED BY ENGINEER AT ANY TIME. CONTRACTOR IS TO PROVIDE RESULTS OF TESTS IMMEDIATELY UPON REQUEST.

UPDATED: MAY 2025		
NORDIC VALLEY GENERAL INFRASTRUCTURE	PIPE ZONE BACKFILL	201-1

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file name: C601_Nordic Phase 1B Standard Details.dwg | plot date: August 22, 2025 | plotted by: Jenny

NORDIC PHASE 1B
CONSTRUCTION DRAWINGS

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LICENSED PROFESSIONAL ENGINEER
No.5249227
KRISTIAN J. MULHOLLAND
8/22/2025
STATE OF UTAH

DATE:	August 22, 2025
DESIGN BY:	KJM
DRAWN BY:	BRC
REVIEW BY:	
PROJECT NO:	NORDIC
ISSUE:	DESIGN

REVISIONS:

2 08/15/2025: ADDED DETAIL SHEET

SHEET TITLE:

STANDARD DETAILS

SHEET:

C603 2