



# Community Planning & Permitting

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302 • Tel: 303.441.3930 • Fax: 303.441.4856  
Mailing Address: P.O. Box 471 • Boulder, Colorado 80306 • [www.bouldercounty.org](http://www.bouldercounty.org)

**MEMO TO:** Agencies  
**FROM:** Pete L'Orange, Planner II  
**DATE:** March 18, 2022  
**RE:** Docket SD-22-0001

**Docket SD-22-0001: Niwot Hills TDR PUD Subdivision Filing 3**

**Request:** Request for a combined preliminary plan and final plat for the creation of eleven lots within the planned unit development of Niwot Hills using Transferable Development Rights.

**Location:** 6775 Niwot Hills Drive, TRACT 1 NIWOT HILLS TDR PUD FILING 2, NE 1/4 of Section 32, Township 2N, Range 69W.

**Zoning:** Agricultural (A)

**Applicants/ Owners:** Michael Markel, Ridgeline Development Corporation, and Niwot Hills LLC

This docket combines the Preliminary Plan and Final Plat processes into a single approval process since the proposal is part of an approved sketch plan (SD-99-0002), the proposal is consistent with that plan, and does not require extensive engineering, as allowed under Article 5-101.C of the Boulder County Land Use Code. This proposed final plat docket creates the parcels 14 through 23 and 33 as approved through the SD-99-02 Sketch Plan and is the last step in the process to create subdivided land. The final plat process will review the final engineering plans, the development agreement, letters of credit, conservation easements, deeds of development rights, home owners covenants, the plat, and any other necessary documents, reports and studies.

This process includes public hearings before the Boulder County Planning Commission and Board of County Commissioners. Adjacent property owners and holders of liens, mortgages, easements or other rights in the subject property are notified of these hearings.

The Community Planning & Permitting staff, Planning Commission, and County Commissioners value comments from individuals and referral agencies. Please check the appropriate response below or send a letter to the Community Planning & Permitting Department at P.O. Box 471, Boulder, Colorado 80306 or via email to [planner@bouldercounty.org](mailto:planner@bouldercounty.org). All comments will be made part of the public record and given to the applicant. Only a portion of the submitted documents may have been enclosed; you are welcome to call the Community Planning & Permitting Department at 303-441-3930 or email [planner@bouldercounty.org](mailto:planner@bouldercounty.org) to request more information. If you have questions regarding this application, please contact our office at (303) 441-3930 or me via email at [plorange@bouldercounty.org](mailto:plorange@bouldercounty.org).

Please return responses to the above address by **April 22, 2022**.

(Please note that due to circumstances surrounding COVID-19, application timelines and deadlines may need to be modified as explained in the CPP Notice of Emergency Actions issued March 23, 2020 (see <https://boco.org/covid-19-cpp-notice-20200323> ).

We have reviewed the proposal and have no conflicts.

Letter enclosed.

Signed \_\_\_\_\_ Please PRINT Name \_\_\_\_\_

Agency or Address \_\_\_\_\_



## Boulder County Land Use Department

Courthouse Annex Building  
 2045 13th Street • PO Box 471 • Boulder, Colorado 80302  
 Phone: 303-441-3930 • Fax: 303-441-4856  
 Email: [planner@bouldercounty.org](mailto:planner@bouldercounty.org)  
 Web: [www.bouldercounty.org/lu](http://www.bouldercounty.org/lu)  
 Office Hours: Mon., Wed., Thurs., Fri. 8 a.m. to 4:30 p.m.  
 Tuesday 10 a.m. to 4:30 p.m.

Shaded Areas for Staff Only
Intake Stamp

### Application Form

Project Number		Project Name	
<input type="checkbox"/> Limited Impact Special Use <input type="checkbox"/> Limited Impact Special Use Waiver <input type="checkbox"/> Modification of Special Use <input type="checkbox"/> Site Plan Review <input type="checkbox"/> Site Plan Review Waiver <input type="checkbox"/> Subdivision Exemption <input type="checkbox"/> Exemption Plat <input type="checkbox"/> 1041 State Interest Review <input type="checkbox"/> Other:	Application Deadline: First Wednesday of the Month <input type="checkbox"/> Variance <input type="checkbox"/> Appeal	Application Deadline: Second Wednesday of the Month <input type="checkbox"/> Sketch Plan <input checked="" type="checkbox"/> Preliminary Plan <input checked="" type="checkbox"/> Final Plat <input type="checkbox"/> Resubdivision (Replat) <input type="checkbox"/> Special Use/SSDP	<input type="checkbox"/> Rezoning <input type="checkbox"/> Road/Easement Vacation <input type="checkbox"/> Location and Extent <input type="checkbox"/> Road Name Change
	Location(s)/Street Address(es) 6775 Niwot Hills Drive		
Subdivision Name Niwot Hills TDR PUD			
Lot(s) 1-11	Block(s) 1	Section(s) NE 1/4 SEC. 32	Township(s) 2 NORTH
Area In Acres 28.241	Existing Zoning PUD	Existing Use of Property Vacant	Range(s) 69 WEST
Proposed Water Supply Left Hand Water District	Proposed Sewage Disposal Method Municipal Sewer System		

### Applicants:

Applicant/Property Owner Ridgeline Development Corporation		Email Address Michael@MarkelHomes.com	
Mailing Address 5723 Arapahoe Avenue, #2B			
City Boulder	State CO.	Zip Code 80303	Phone 303-339-6122
Applicant/Property Owner/Agent/Consultant Michael Markel		Email Address Michael@MarkelHomes.com	
Mailing Address 5723 Arapahoe Avenue, #2B			
City Boulder	State CO.	Zip Code 80303	Phone 303-339-6122
Agent/Consultant Cameron Knapp (DREXEL, BARRRELL)		Email Address cknapp@drexelbarrell.com	
Mailing Address 1800 38th Street			
City Boulder	State CO.	Zip Code 80301	Phone 303-442-4338
		Fax 303-442-4373	

### Certification (Please refer to the Regulations and Application Submittal Package for complete application requirements.)

I certify that I am signing this Application Form as an owner of record of the property included in the Application. I certify that the information and exhibits I have submitted are true and correct to the best of my knowledge. I understand that all materials required by Boulder County must be submitted prior to having this matter processed. I understand that public hearings or meetings may be required. I understand that I must sign an Agreement of Payment for Application processing fees, and that additional fees or materials may be required as a result of considerations which may arise in the processing of this docket. I understand that the road, school, and park dedications may be required as a condition of approval. I understand that I am consenting to allow the County Staff involved in this application or their designees to enter onto and inspect the subject property at any reasonable time, without obtaining my prior consent.

**All landowners are required to sign application.** If additional space is needed, attach additional sheet signed and dated.

Signature of Property Owner	Printed Name Michael Markel	Date 3-7-2022
Signature of Property Owner	Printed Name	Date

The Land Use Director may waive the landowner signature requirement for good cause, under the applicable provisions of the Land Use Code.



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Vicinity

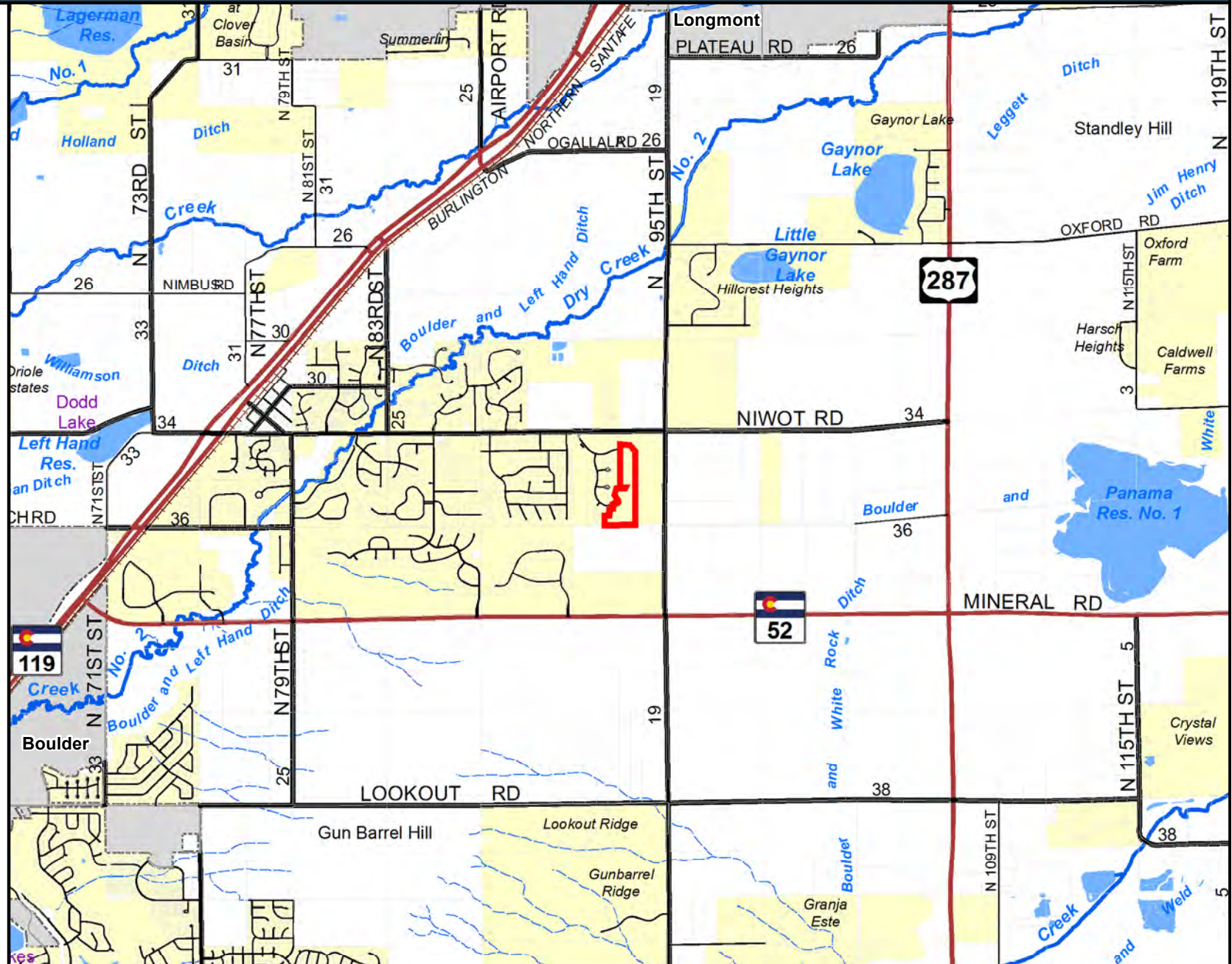
6775 NIWOT HILLS

Subject Parcel

Municipalities

### Subdivisions

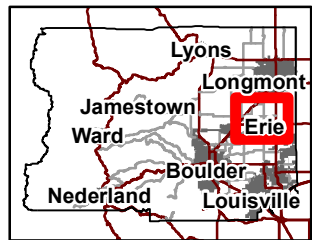
Subdivisions



0 0.35 0.7 Miles



Area of Detail Date: 6/14/2021



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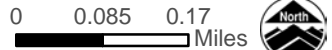
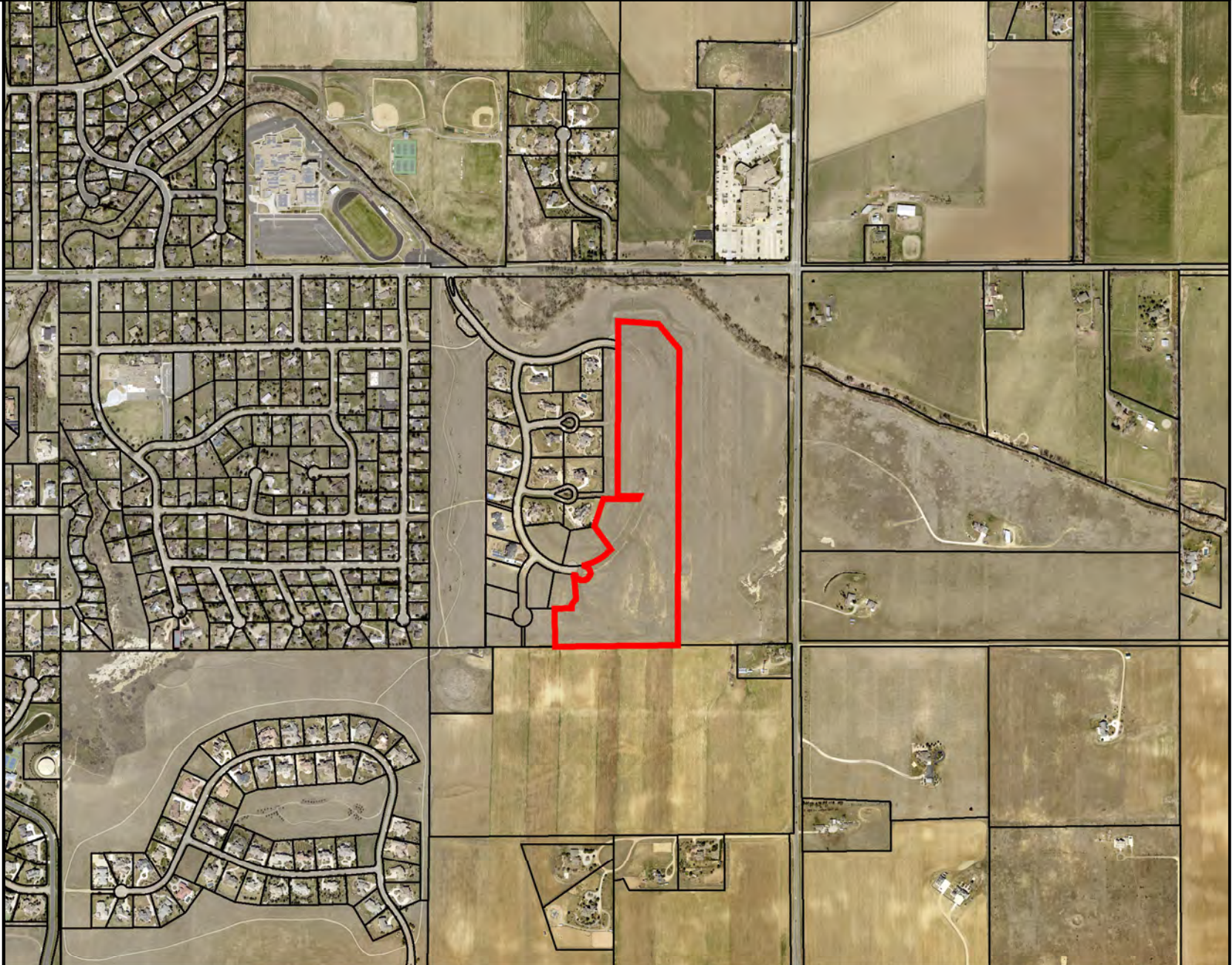
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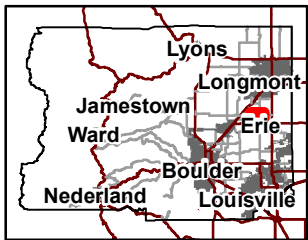
Aerial

6775 NIWOT HILLS

 Subject Parcel



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Aerial

6775 NIWOT HILLS

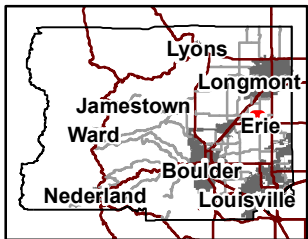
 Subject Parcel



0 0.035 0.07 Miles



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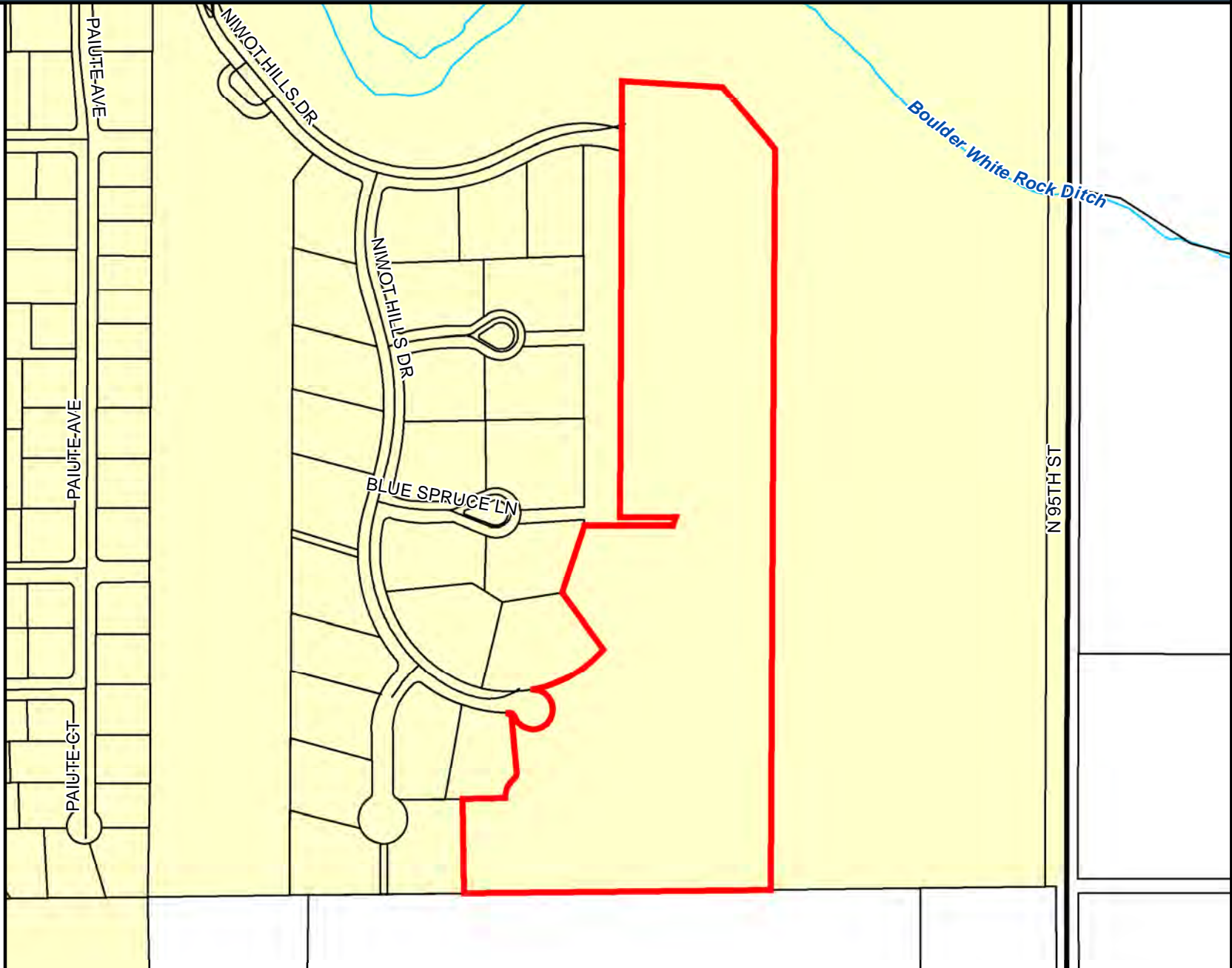
Location

6775 NIWOT HILLS

Subject Parcel

**Subdivisions**

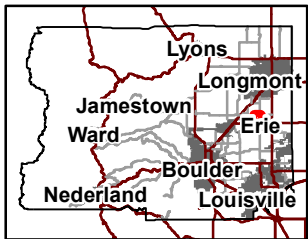
Subdivisions



0 0.035 0.07 Miles



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Zoning

6775 NIWOT HILLS

Subject Parcel

### Major Road Setbacks

110 feet

### Zoning Districts

Agricultural

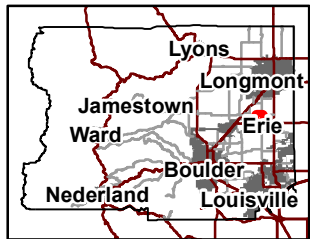
Business

Rural Residential

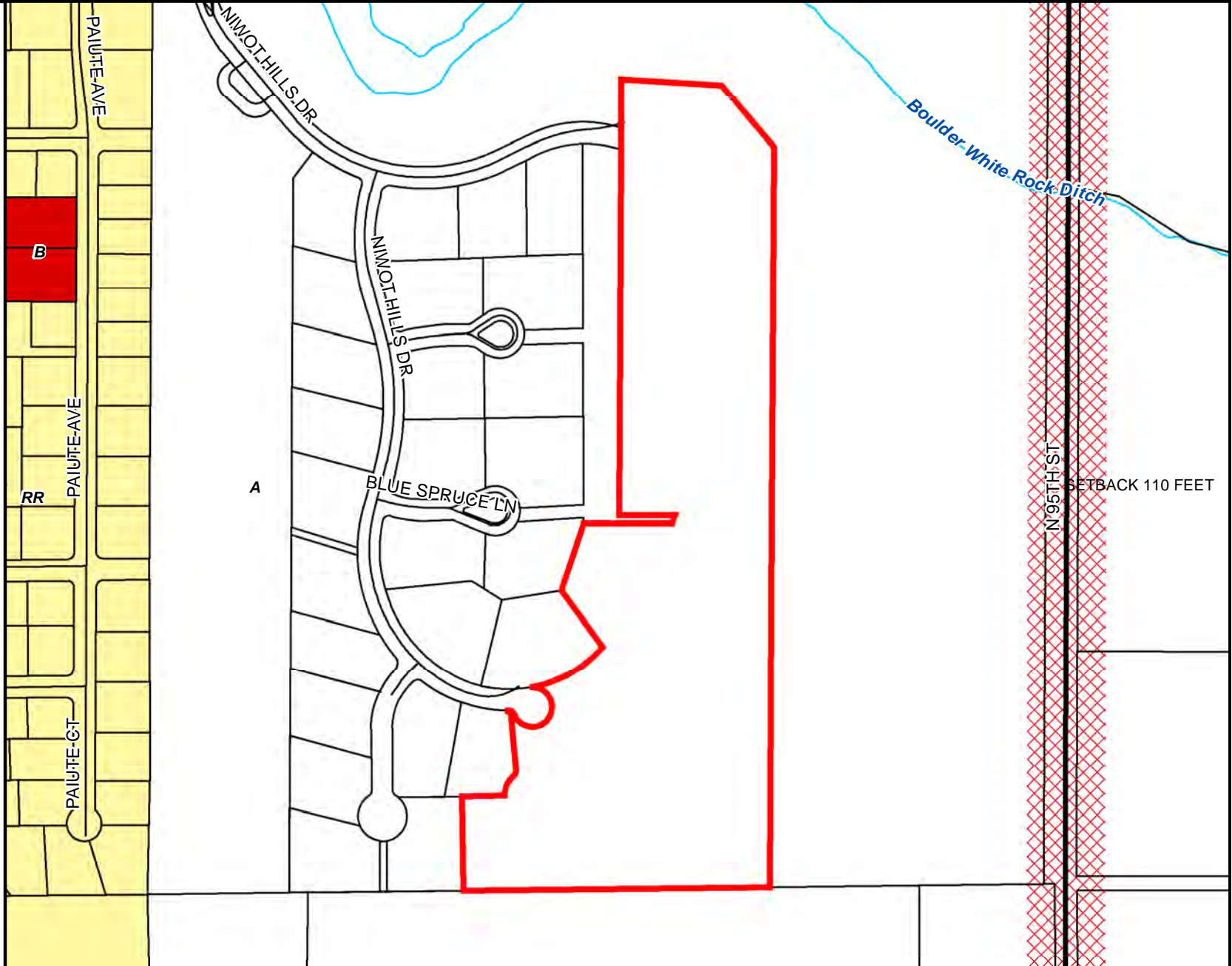
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Comprehensive Plan

6775 NIWOT HILLS

Subject Parcel

NLNA Buffer

Environmental Conservation Areas

Riparian Areas

Significant Natural Communities

Natural Landmarks  
Natural Areas

### Significant Agricultural Land

Ag of National Importance

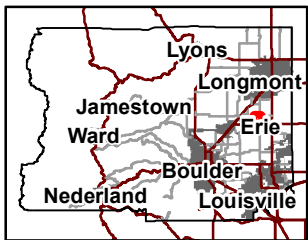
Ag of Statewide Importance

Ag of Local Importance

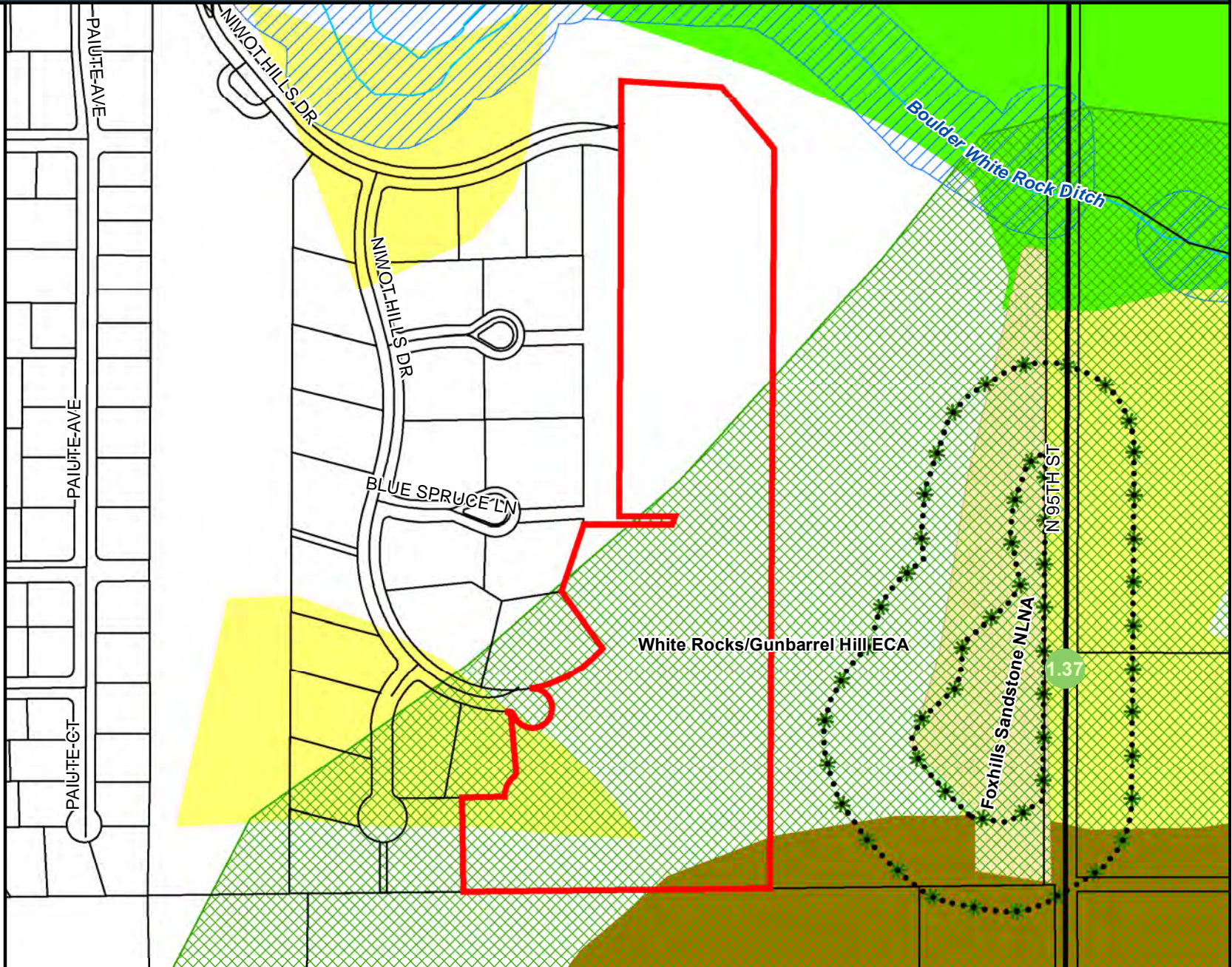
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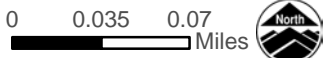
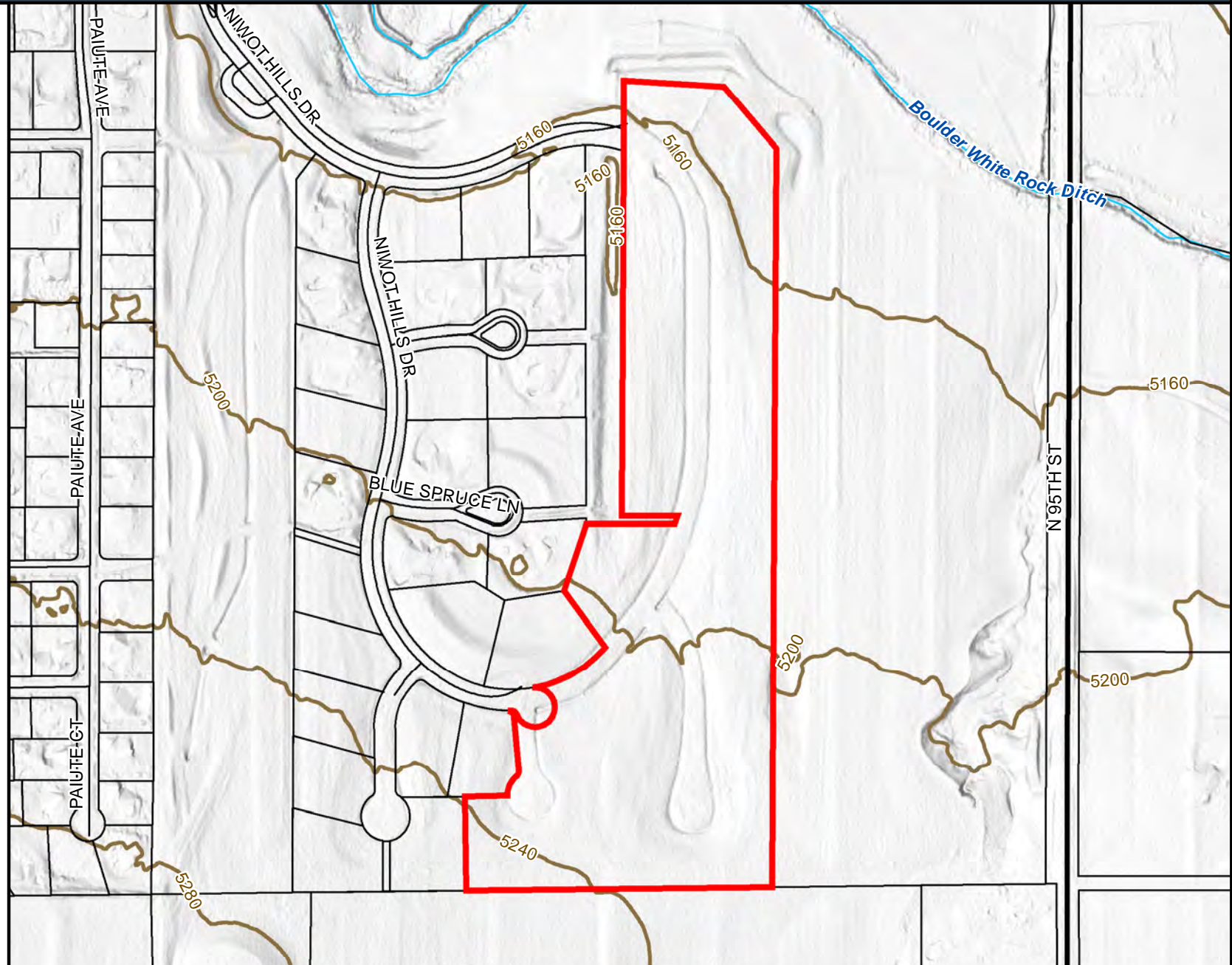
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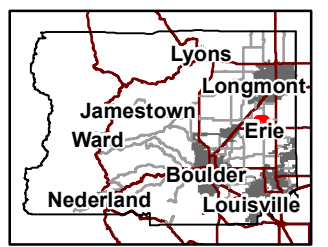
## Elevation Contours

### 6775 NIWOT HILLS

-  Subject Parcel
-  Contours 40'



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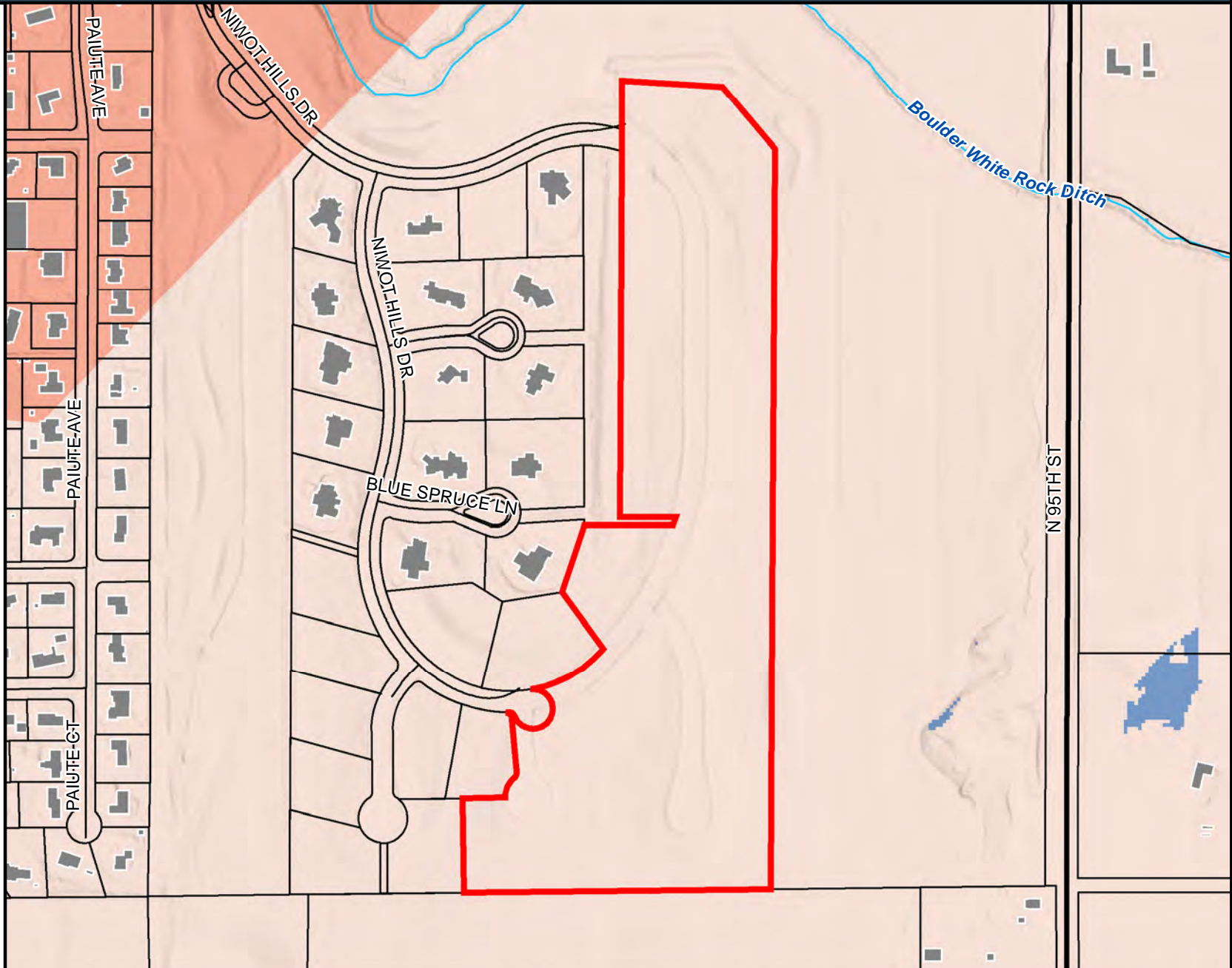
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## Geologic Hazards

### 6775 NIWOT HILLS

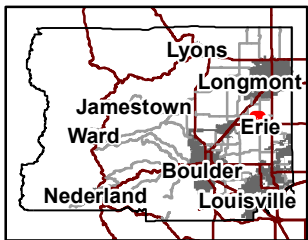
-  Subject Parcel
-  Landslide high susceptibility area
-  High Swelling Soil Potential
-  Moderate Swelling Soil Potential



0 0.035 0.07 Miles



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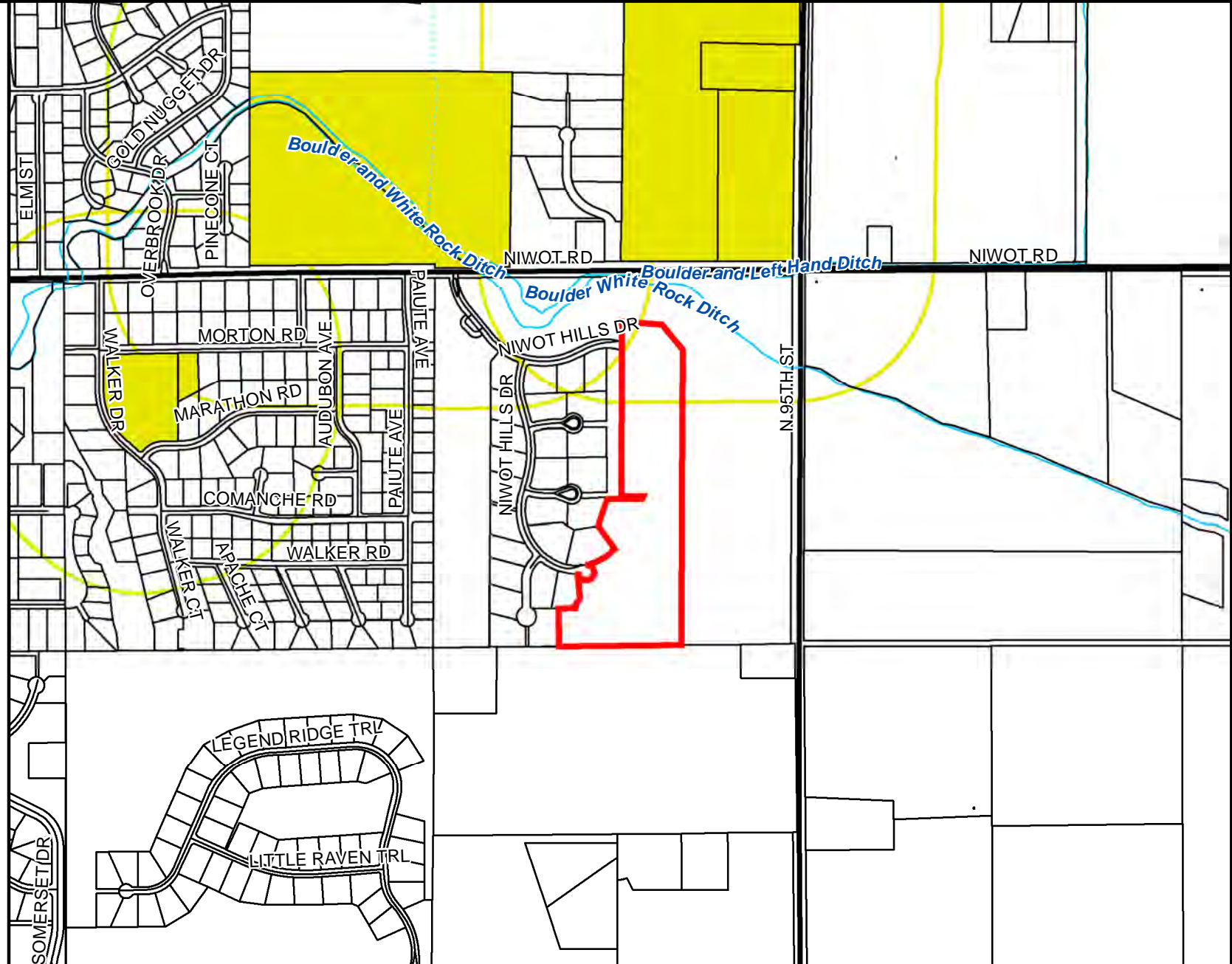
## Marijuana Business Regulatory Areas

6775 NIWOT HILLS

Subject Parcel

### Facilities and Regulatory Buffers

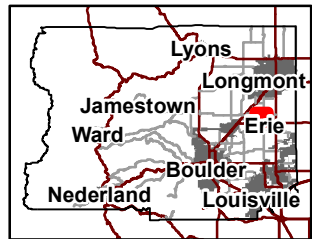
- Educational Facility
- Educational Facility Buffer



0 0.085 0.17 Miles



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## Oil & Gas Facilities

### 6775 NIWOT HILLS

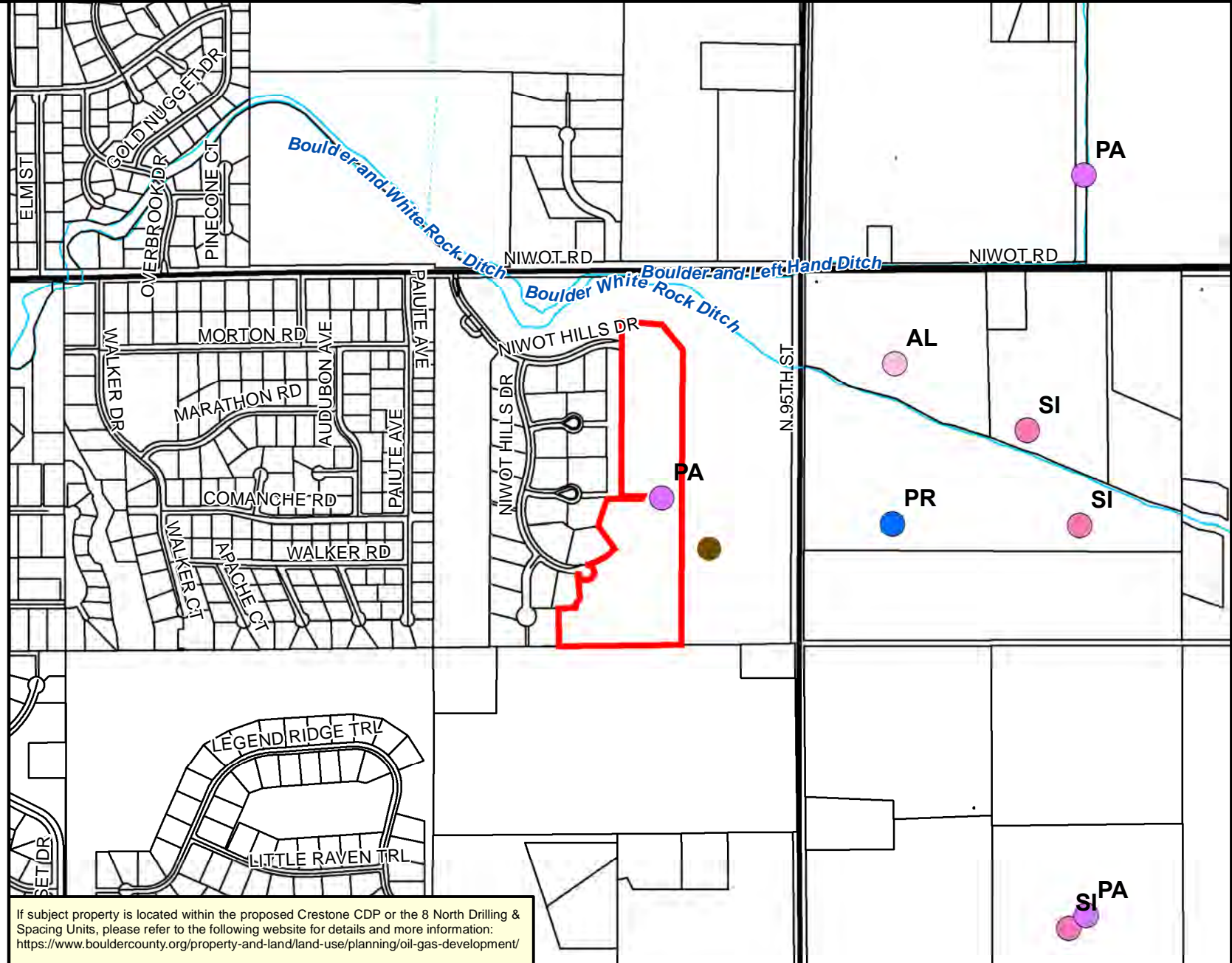
Subject Parcel

### Oil & Gas Well

- Producing (PR)
- Plugged & Abandoned (PA)
- Abandoned Location (AL)
- Shut-In (SI)

### Pit

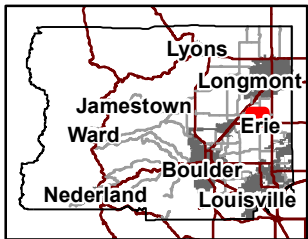
- Closed Pit



0 0.085 0.17 Miles



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If subject property is located within the proposed Crestone CDP or the 8 North Drilling & Spacing Units, please refer to the following website for details and more information: <https://www.bouldercounty.org/property-and-land/land-use/planning/oil-gas-development/>



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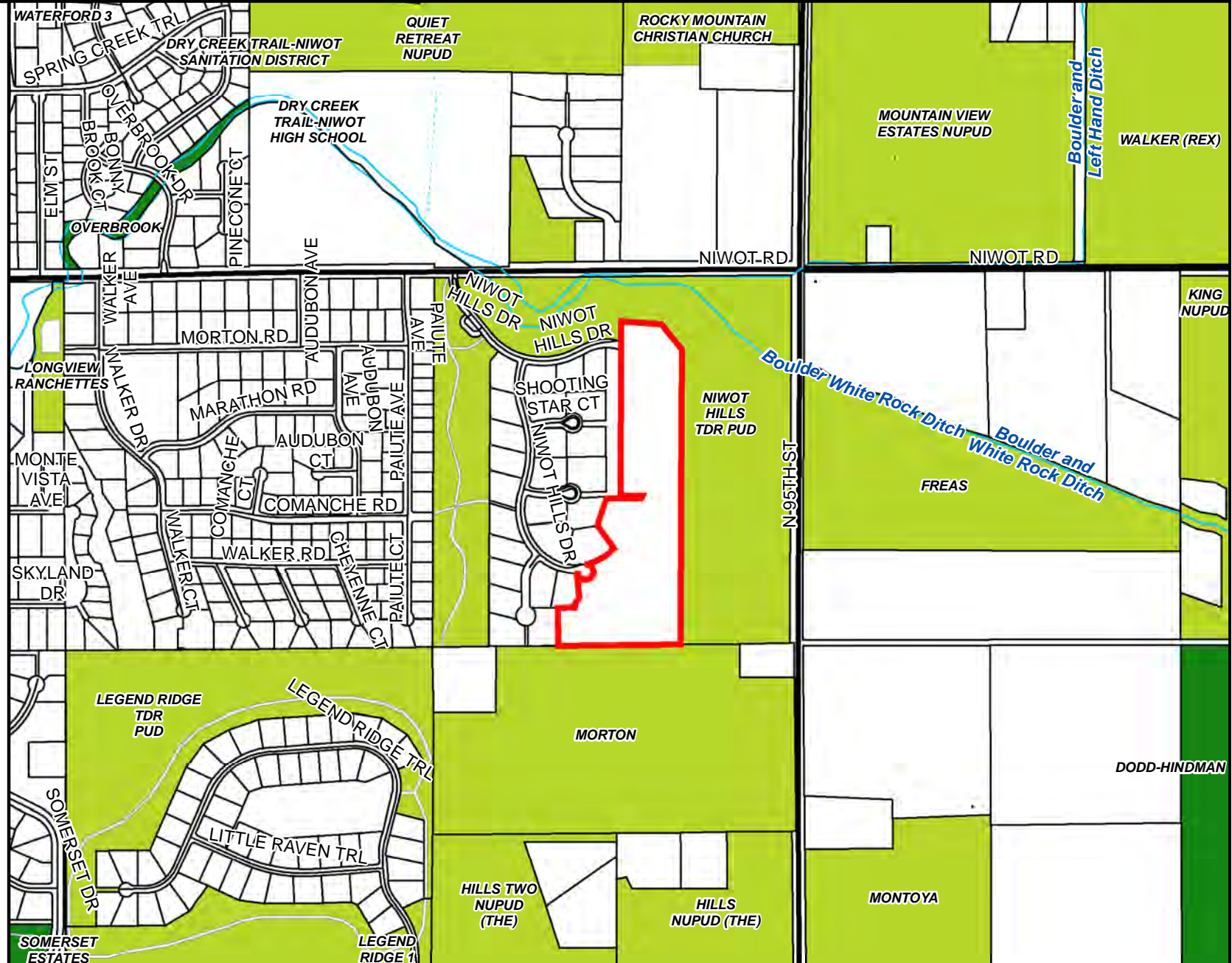
Public Lands & CEs

6775 NIWOT HILLS

Subject Parcel

## Boulder County Open Space

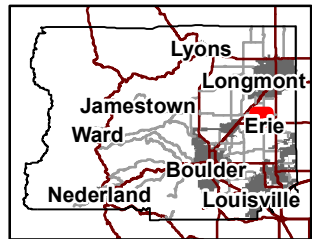
- County Open Space
- County Conservation Easement



0 0.085 0.17 Miles



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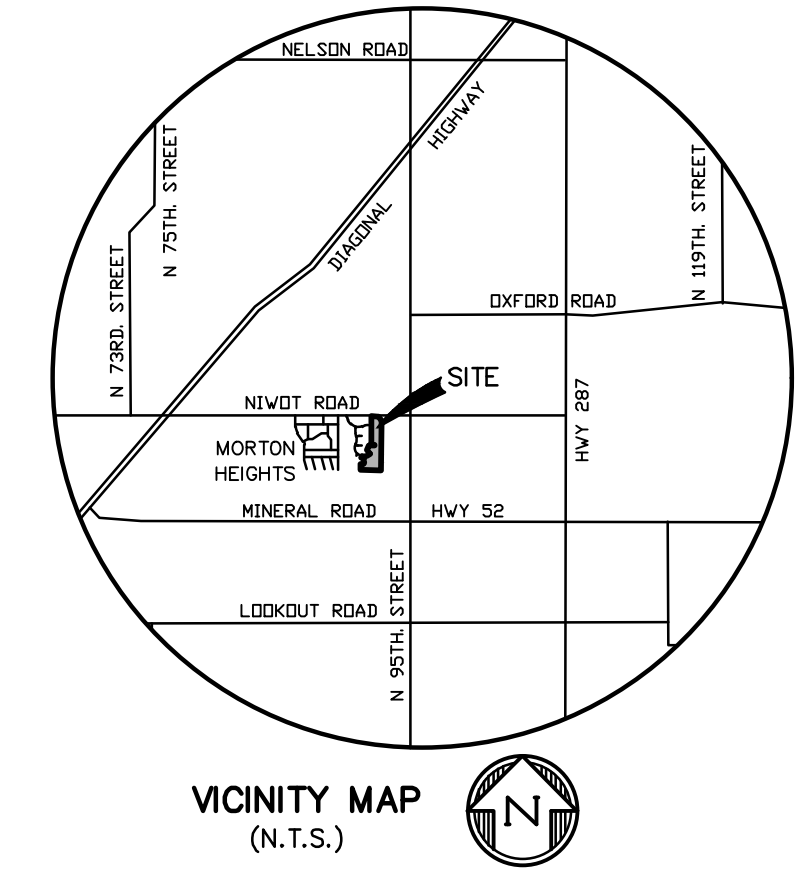
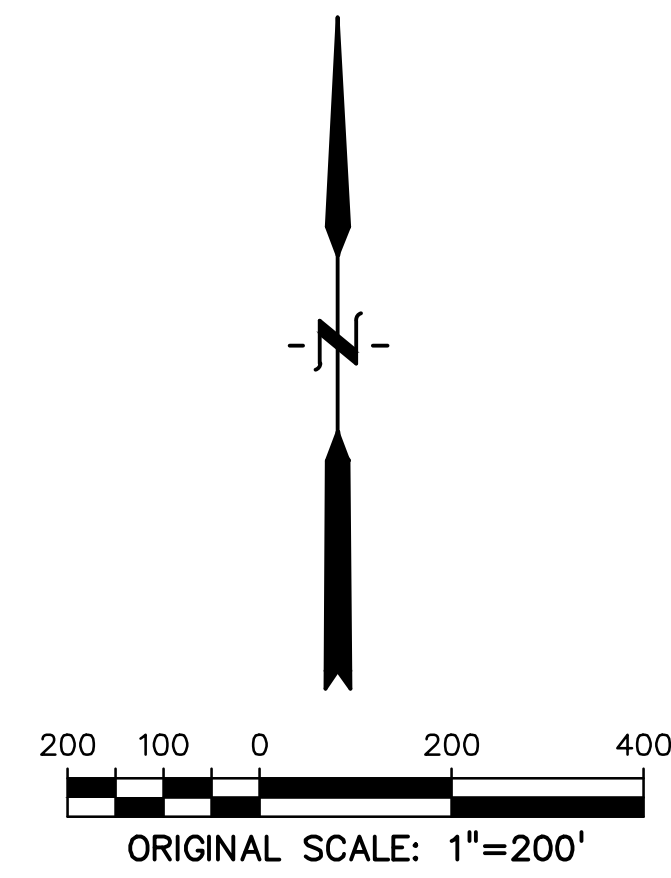
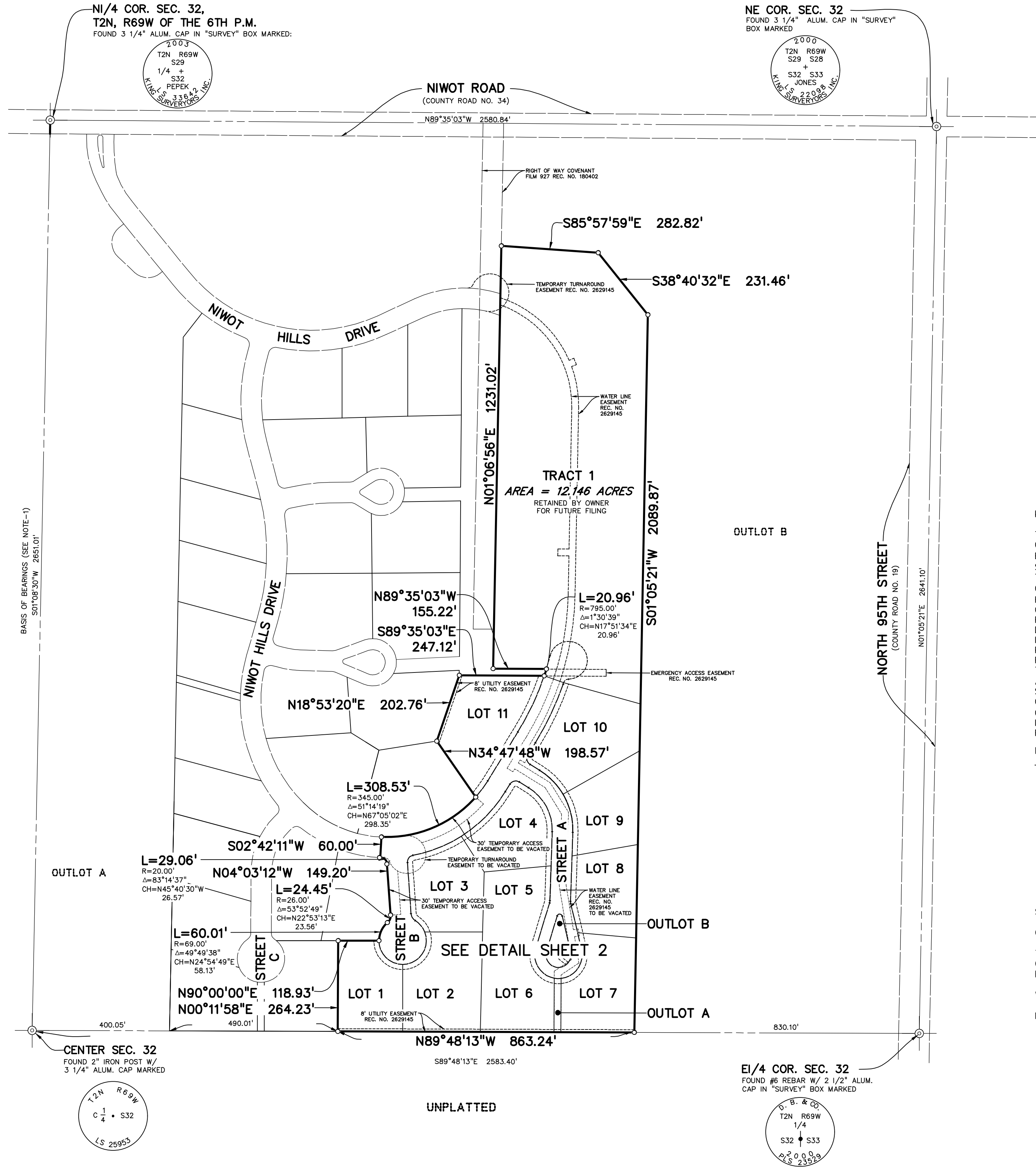
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# FINAL PLAT

## NIWOT HILLS TDR/PUD SUBDIVISION FILING NO. 3

A REPLAT OF TRACT 1, NIWOT HILLS TDR/PUD SUBDIVISION FILING NO. 2  
LOCATED IN THE NE1/4 OF SECTION 32, T2N, R69W OF THE 6TH P.M.,  
COUNTY OF BOULDER, STATE OF COLORADO.

AREA = 28.241 ACRES, ±  
SHEET 1 OF 2



OUTLOT TABLE		
OUTLOT	OWNERSHIP AND MAINTENANCE	USE
A&B	HOA	PRIVATE OPEN SPACE, DRAINAGE, UTILITIES, AND EMERGENCY ACCESS

**OWNER'S CERTIFICATE AND DEDICATION**

KNOW ALL MEN BY THESE PRESENTS:

THAT THE UNDERSIGNED, NIWOT HILLS, LLC, A COLORADO LIMITED LIABILITY COMPANY, IS THE OWNER AND PROPRIETOR OF THE LAND SITUATED IN BOULDER COUNTY, COLORADO, AND LYING WITHIN "NIWOT HILLS TDR/PUD SUBDIVISION FILING NO. 2", A SUBDIVISION IN THE COUNTY OF BOULDER, STATE OF COLORADO, AND DOES HEREBY ACCEPT THE RESPONSIBILITY FOR THE COMPLETION OF THE PUBLIC IMPROVEMENTS AND DOES HEREBY DEDICATE AND SET APART ALL OF THE ROADS AND OTHER IMPROVEMENTS AND PLACES AS SHOWN ON THE PLAT TO THE USE OF THE PUBLIC FOREVER, AND, UNLESS OTHERWISE SPECIFICALLY NOTED BY REFERENCE ON THIS PLAT, DOES HEREBY DEDICATE THOSE PORTIONS OF THE REAL PROPERTY WHICH ARE INDICATED AS EASEMENTS ON THE PLAT AS EASEMENTS TO BOULDER COUNTY, COLORADO FOR THE PURPOSE(S) SHOWN HEREON, AND DOES HEREBY GRANT TO BOULDER COUNTY, COLORADO THE RIGHT TO REGULATE THE INSTALLATION AND MAINTENANCE OF NECESSARY STRUCTURES, FACILITIES AND/OR REQUIRED PUBLIC IMPROVEMENTS BY THE ENTITY RESPONSIBLE FOR PROVIDING THE SERVICES FOR WHICH THE EASEMENTS ARE ESTABLISHED.

IN WITNESS WHEREOF, I HERETO SET MY HAND THIS \_\_\_\_ DAY OF \_\_\_\_\_, 2022.

NIWOT HILLS, LLC,  
A COLORADO LIMITED LIABILITY COMPANY

BY: \_\_\_\_\_  
MICHAEL MARKEL  
MANAGER

**ACKNOWLEDGMENT**

STATE OF COLORADO }  
COUNTY OF BOULDER } SS

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS \_\_\_\_ DAY OF \_\_\_\_\_, 2022, BY MICHAEL MARKEL, AS MANAGER OF NIWOT HILLS, LLC, A COLORADO LIMITED LIABILITY COMPANY.

WITNESS MY HAND AND OFFICIAL SEAL.

MY COMMISSION EXPIRES: \_\_\_\_\_

NOTARY PUBLIC

**GENERAL NOTES**

- THE BASIS OF BEARINGS IS THE WEST LINE OF THE NE1/4 OF SECTION 32, BEING MONUMENTED AS SHOWN HEREON, WITH THE LINE ASSUMED TO BEAR S01°08'30"W.
- DREXEL BARRELL & CO. RELIED UPON TITLE COMMITMENT NO. F0615180-170-RRO-JHL, ISSUED BY FIDELITY NATIONAL TITLE INSURANCE COMPANY, WITH AN EFFECTIVE DATE OF APRIL 22, 2019 FOR ALL INFORMATION REGARDING THE LEGAL DESCRIPTION, EASEMENTS AND RIGHTS-OF-WAYS.

PREPARED BY: DREXEL, BARRELL & CO.  
1800 38TH STREET  
BOULDER, CO. 80301  
303-442-4338

- ALL REFERENCES TO BOOKS, PAGES, MAPS AND RECEPTION NUMBERS ARE PUBLIC DOCUMENTS ON FILE WITH THE CLERK AND RECORDER OF BOULDER COUNTY, STATE OF COLORADO.
- EASEMENTS AND PUBLIC DOCUMENTS SHOWN OR NOTED HEREON WERE EXAMINED AS TO LOCATION AND PURPOSE AND WERE NOT EXAMINED AS TO RESERVATIONS, RESTRICTIONS, EXCLUSIONS, CONDITIONS, OBLIGATIONS, TERMS OR AS TO THE RIGHT TO GRANT THE SAME.
- THE LINEAL UNITS SHOWN HEREON ARE US SURVEY FEET.
- THE LAST FIELD INSPECTION OF THE SITE WAS ON JULY 5, 2018.

**BOARD OF COMMISSIONER'S APPROVAL**

APPROVED THIS \_\_\_\_ DAY OF \_\_\_\_\_, 2022,  
BOARD OF COMMISSIONERS, BOULDER COUNTY, COLORADO. THIS APPROVAL DOES NOT GUARANTEE THAT THE SIZE, SOIL CONDITIONS, SUBSURFACE GEOLOGY, GROUND WATER CONDITIONS, OR FLOODING CONDITIONS OF ANY LOT SHOWN HEREON ARE SUCH THAT A BUILDING PERMIT, WELL PERMIT, OR SEWAGE DISPOSAL PERMIT WILL BE ISSUED. THIS APPROVAL IS WITH THE UNDERSTANDING THAT ALL EXPENSES INVOLVING REQUIRED IMPROVEMENTS FOR ALL UTILITY SERVICES, PAVING, LANDSCAPING, CURBS, GUTTERS, SIDEWALKS, ROAD LIGHTING, ROAD SIGNS, FLOOD PROTECTION DEVICES, DRAINAGE STRUCTURES, AND ALL OTHER IMPROVEMENTS THAT MAY BE REQUIRED SHALL BE THE RESPONSIBILITY OF THE OWNER AND/OR PROPRIETOR AND NOT THE COUNTY OF BOULDER. THE BOARD OF COMMISSIONERS ALSO CONSENT TO THE VACATION OF THE TEMPORARY TURNAROUND EASEMENT AS SHOWN HEREON AND THE WATER LINE EASEMENT AS SHOWN HEREON.

CHAIR \_\_\_\_\_ ATTEST \_\_\_\_\_  
SECRETARY TO RECORD \_\_\_\_\_

I, \_\_\_\_\_, SECRETARY TO THE BOULDER COUNTY PLANNING COMMISSION, DO HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE ALL CONDITIONS OF COUNTY APPROVAL OF THIS PLAT OF "NIWOT HILLS TDR/PUD SUBDIVISION FILING NO. 3" HAVE BEEN FULLY SATISFIED, AND THAT THE SAME IS HEREBY AUTHORIZED FOR RECORDATION.

WITNESS MY HAND ON THIS \_\_\_\_ DAY OF \_\_\_\_\_, 2022.

SECRETARY TO THE BOULDER COUNTY PLANNING COMMISSION

**LEGAL DESCRIPTION**

TRACT 1, NIWOT HILLS TDR/PUD SUBDIVISION FILING NO. 2, COUNTY OF BOULDER, STATE OF COLORADO

**SURVEYOR'S CERTIFICATE**

I, MATHEW E. SELDERS, A DULY REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THERE ARE NO ROADS, PIPELINES, IRRIGATION DITCHES, OR OTHER EASEMENTS OF RECORD, OR OTHER OWNERSHIPS IN EVIDENCE, OR KNOWN BY ME, TO EXIST ON OR ACROSS THE HEREBEFORE DESCRIBED LAND EXCEPT AS SHOWN ON THIS PLAT OF "NIWOT HILLS TDR/PUD SUBDIVISION FILING NO. 3"; THAT THIS PLAT TRULY AND CORRECTLY REPRESENTS THE RESULTS OF A SURVEY MADE ON JULY 5, 2018 BY ME OR UNDER MY DIRECT RESPONSIBILITY, SUPERVISION AND CHECKING AND THAT ALL MONUMENTS EXIST AS SHOWN HEREON; THAT MATHEMATICAL CLOSURE ERRORS ARE LESS THAN 0.01 FEET; AND THAT SAID PLAT HAS BEEN PREPARED IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS OF THE STATE OF COLORADO DEALING WITH SUBDIVISION AND/OR SURVEYING OF LAND AND ALL PROVISIONS (WITHIN MY CONTROL) OF THE BOULDER COUNTY SUBDIVISION REGULATIONS.

I ATTEST THE ABOVE ON THIS \_\_\_\_ DAY OF \_\_\_\_\_, 2022.

MATHEW E. SELDERS  
COLORADO REGISTERED PROFESSIONAL LAND SURVEYOR NO. 27275

**CLERK AND RECORDER'S CERTIFICATE**

STATE OF COLORADO }  
COUNTY OF BOULDER } SS

I HEREBY CERTIFY THAT THIS INSTRUMENT WAS FILED IN MY OFFICE AT \_\_\_\_ O'CLOCK, THIS \_\_\_\_ DAY OF \_\_\_\_\_, 2022, AND IS DULY RECORDED IN PLAN FILE \_\_\_\_\_.

RECEPTION # \_\_\_\_\_

FEES PAID \$ \_\_\_\_\_ RECORDER \_\_\_\_\_

DEPUTY \_\_\_\_\_

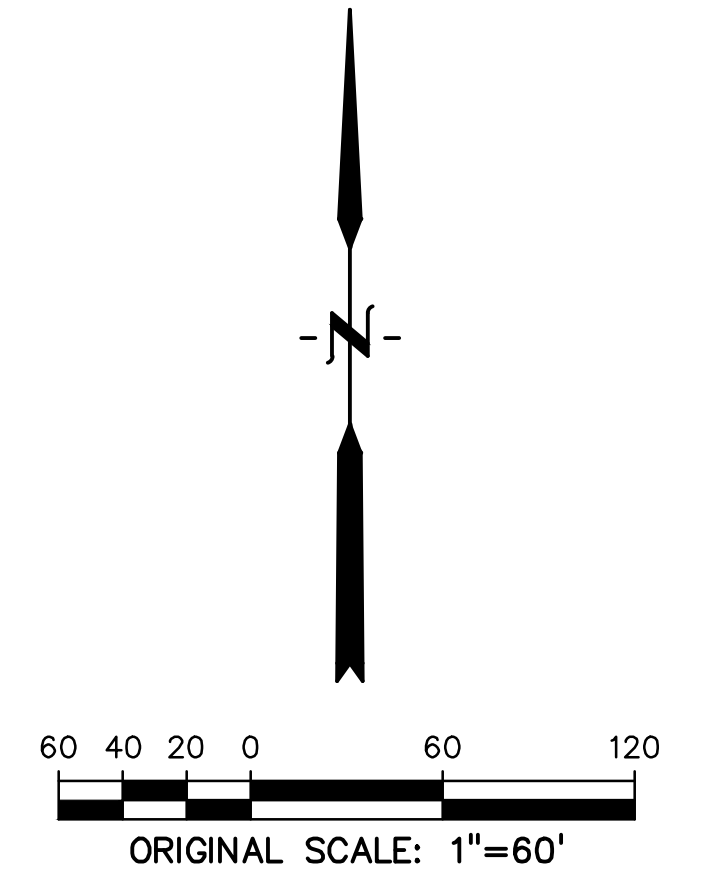
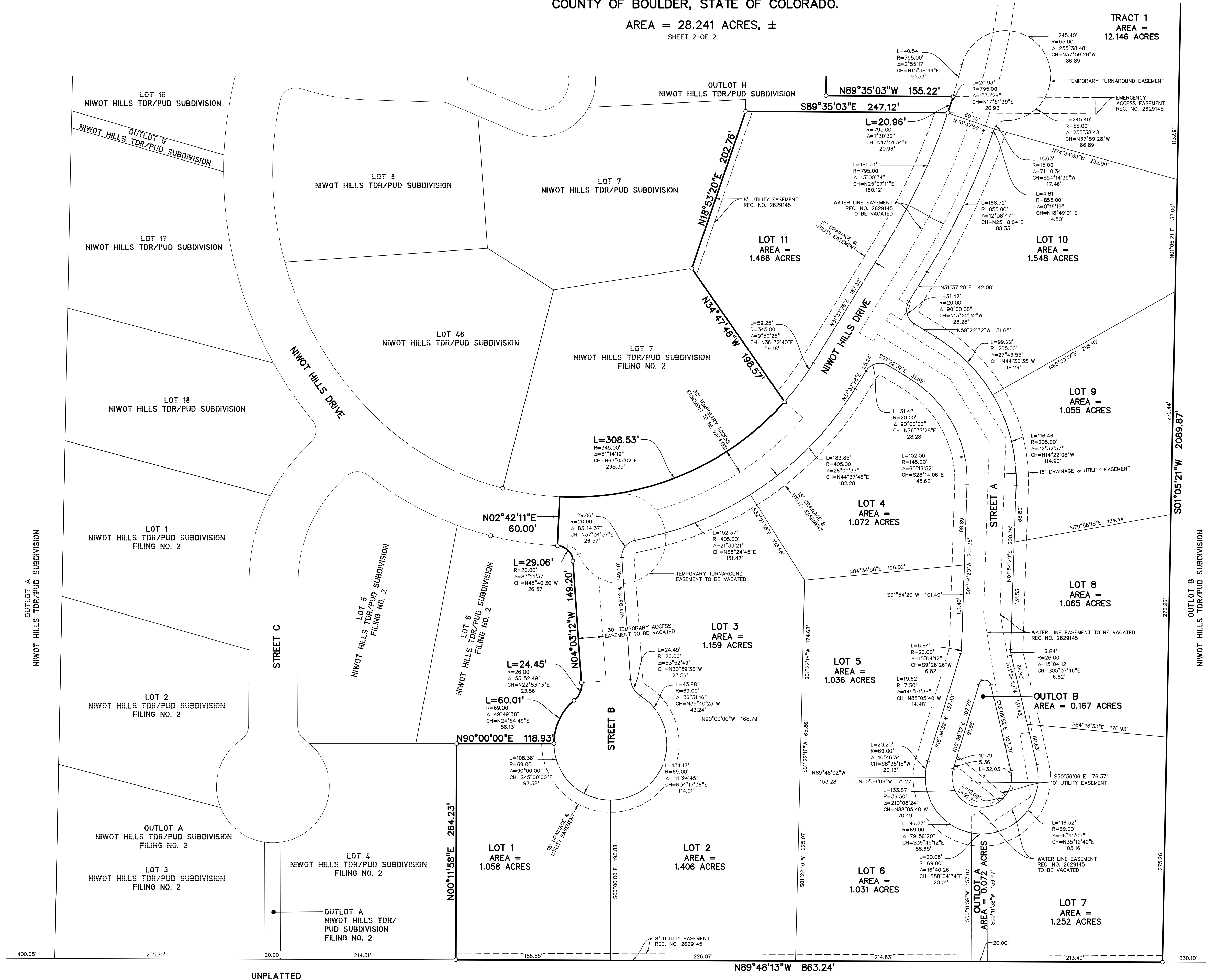
17:305981-0402/C/Survey/Drawings/2022/06-04\_P1.dwg, 2/21/2022 9:50:35 AM

# FINAL PLAT NIWOT HILLS TDR/PUD SUBDIVISION FILING NO. 3

A REPLAT OF TRACT 1, NIWOT HILLS TDR/PUD SUBDIVISION FILING NO. 2  
LOCATED IN THE NE1/4 OF SECTION 32, T2N, R69W OF THE 6TH P.M.,  
COUNTY OF BOULDER, STATE OF COLORADO.

AREA = 28.241 ACRES, ±  
SHEET 2 OF 2

TRACT 1  
AREA =  
12.146 ACRES







1800 38<sup>th</sup> St. • Boulder, CO 80301 • 303-442-4338 • 303-442-4373 fax  
3 South 7th St. • Colorado Springs, CO 80905 • 719-260-0887 • 719-260-8352 fax  
6513 W. 4<sup>th</sup> Street • Greeley, CO 80634 • 970-351-0645

March 7, 2022

Nathan Schull, AICP – Planner II  
Boulder County Community Planning & Permitting  
P.O. BOX 471  
Boulder, CO. 80306

**RE: Niwot Hills – Phase III  
Boulder County, CO.**

### **PROJECT DESCRIPTION**

On behalf of the applicant, Ridgeline Development Corporation, we wish to make a formal application to Boulder County under Article 5 of the Boulder County Land Use Code requesting a combined Sketch Plan, Preliminary Plan, and Final Plat approval for the creation of 11 lots within the planned unit development of Niwot Hills using Transferable Development Rights.

The subject property is located at 6775 Niwot Hills Drive, identified as Boulder County Assessor's Parcel #131532025007, on the southwest corner of Niwot Road and North 95<sup>th</sup> Street, in Section 32, Township 2 North, Range 69 West, in an Agricultural zoning district in unincorporated Boulder County. More specifically, the Phase III development will be situated in the southeast corner of the Niwot Hills TDR/PUD.

The overall Niwot Hills TDR/PUD was approved in 1999 with a total of 46 lots on approximately 160-acres. Phase I was approved for 17 lots in 2000 and Phase II was more recently approved in 2019 for the development of another 8 lots. This proposed Phase III development will be for another 11 lots that range in size from 1.06 acres to 1.47 acres. The total area of Phase III (28.2 acres) will include a future development area designated as Tract 1, with 12.15 acres.

The proposed development shall utilize existing water and sewer services already stubbed to each individual lot and will be served by the Left Hand Water District and Niwot Sanitation District.

The proposed site improvements will include extending the pavement of Niwot Hills Road – at its current southern limit – to wrap around the southern side of the development and back northward. This extension will have two new cul de sacs branching off the road to provide access to the new lots. A temporary turnaround will be constructed at the end of the street (as was done with Phase II). A final future phase of Niwot Hills would involve completing the Niwot Hills Drive loop to the northeast.

Stormwater Detention has already been provided for this proposed Phase with the construction of detention and water quality facilities on Outlots A and B as part of the initial Phase I Niwot Hills development. Drainage requirements as presented in the approved Drainage Report for Niwot Hills will be followed.

Niwot Hills, Phase III  
March 7, 2022

- 2 -

A subdivision plat complying with Article 3-203.5 has been prepared and submitted with this application. Final platted lots will be subject to the standards and requirements set forth in the adopted Amended Design Guidelines – Rules and Regulations for Niwot Hills that was adopted by the Niwot Hills Homeowners Association in July 2016.

It is understood that a Development Agreement shall be provided in compliance with Article 3-206.B of the Code prior to recordation of the final plat.

We sincerely appreciate your time and effort in the review of the project. Please let me know if you should have any questions or desire any additional information.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Cameron W. Knapp". The signature is stylized and written in a cursive-like font.

Cameron W. Knapp, P.E.

Project Manager

Drexel, Barrell & Co.

PREPARED BY:



Drexel, Barrell & Co. Engineers • Surveyors 1800 38TH STREET BOULDER, COLORADO 80303 (303) 442-4338 BOULDER - GREELEY COLORADO SPRINGS

OWNER/CLIENT:

RIDGELINE DEVELOPMENT CORPORATION

5723 ARAPAHOE AVENUE, #28 BOULDER, COLORADO 80303 ATTN: JASON MARKEL (303) 339-6122

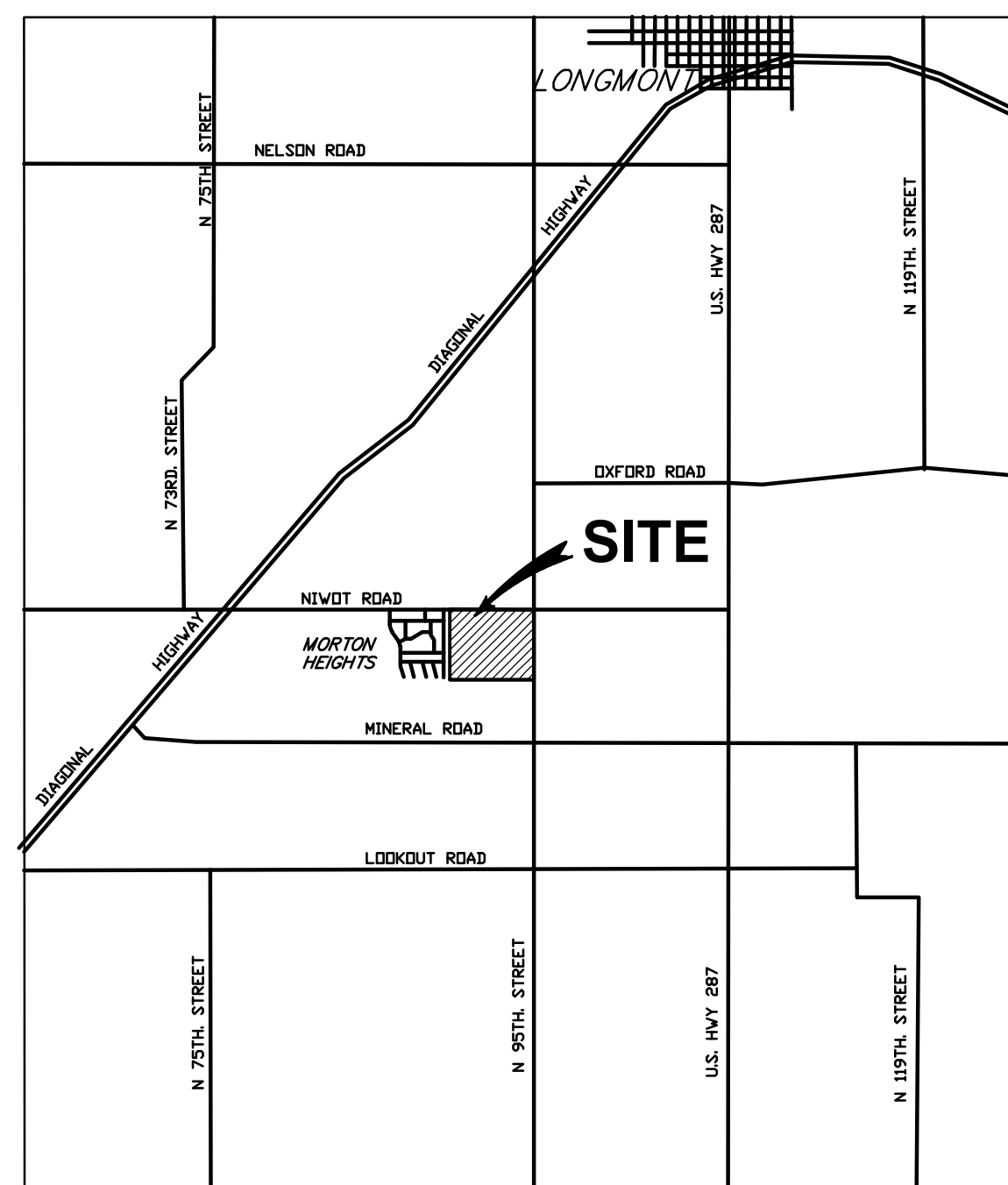
FINAL CONSTRUCTION DRAWINGS FOR: NIWOT HILLS TDR/PUD SUBDIVISION FILING NO. 3 BOULDER COUNTY, COLORADO

FINAL CONSTRUCTION PLANS FOR

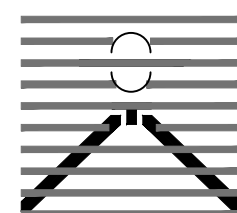
NIWOT HILLS - TDR/PUD SUBDIVISION FILING NO. 3

LOCATED IN THE NE 1/4 OF SECTION 32, T2N, R69W, OF THE 6TH P.M. COUNTY OF BOULDER, STATE OF COLORADO.

MARCH 2022



VICINITY MAP NOT TO SCALE



PREPARED BY: Drexel, Barrell & Co. Engineers • Surveyors 1800 38TH STREET BOULDER, COLORADO 80303 (303) 442-4338

CONTACT: CAMERON KNAPP, P.E.

PREPARED FOR:

RIDGELINE DEVELOPMENT CORPORATION 5723 ARAPAHOE AVE., SUITE NO. 2B BOULDER, COLORADO 80303 (303) 339-6122

CONTACT: JASON MARKEL

GENERAL NOTES

- 1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH BOULDER COUNTY STANDARDS AND SPECIFICATIONS, LATEST REVISION THEREOF.
2. ALL WORK SHALL BE INSPECTED AND APPROVED BY BOULDER COUNTY AT THE DESIGNATED SIX PHASES PER BOULDER COUNTY TRANSPORTATION DEPARTMENT CONSTRUCTION REQUIREMENTS.
3. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE.

BOULDER COUNTY NOTES

- 1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE COLORADO DEPARTMENT OF TRANSPORTATION STANDARDS SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2011 OR LATER EDITION AND THE STANDARD PLANS M&S STANDARDS 2012 OR LATER EDITION EXCEPT AS REVISED BY THE SPECIAL PROVISIONS OR NOTED ON THE PLANS.
2. PLAN QUANTITIES OF SURFACING MATERIALS ARE BASED ON THE FOLLOWING UNIT WEIGHTS AND RATES OF APPLICATION:
HOT BITUMINOUS PAVEMENT @ 150 LBS./C.F.

Table with 2 columns: SHEET NUMBER, SHEET TITLE. Rows include C1 COVER SHEET, C2 EXISTING CONDITIONS & DEMOLITION PLAN, C3 GRADING PLAN, C4 UTILITY PLAN, C5 STORMWATER MANAGEMENT PLAN, C6 NIWOT HILLS DRIVE PLAN & PROFILE, C7 NIWOT HILLS DRIVE PLAN & PROFILE, C8 & C9 STREET A PLAN & PROFILE, C10 STREET B PLAN & PROFILE, C11 & C12 DETAIL SHEETS.

BASIS OF BEARINGS

BEARINGS ARE REFERRED TO THE WEST LINE OF THE NE 1/4 OF SECTION 32 AS BEARING S01°08'30" W PER THE RECORDED PLAT OF THIRD ADDITION TO MORTON HEIGHTS SUBDIVISION (ASSUMED MERIDIAN).

BENCHMARK

3-1/4" ALUMINUM CAP AT THE NORTHWEST CORNER OF SECTION 32, T2N, R69W OF THE 6TH P.M. ELEVATION=5119.30 NGVD 1929 DATUM.

GEOTECHNICAL

\*SUBSURFACE INVESTIGATION NIWOT HILLS SUBDIVISION, PHASE 1" PREPARED BY SCOTT, COX & ASSOCIATES, INC. DATED FEBRUARY 2000. CONTACT: KEVIN L. HINDS, P.E.

\*PRELIMINARY SUBSURFACE INVESTIGATION NIWOT HILLS SUBDIVISION, PHASE II" PREPARED BY SCOTT, COX & ASSOCIATES, INC. DATED MAY 2002. CONTACT: KEVIN L. HINDS, P.E.

Table with columns: ISSUE, DATE. Row: COUNTY SUBMITTAL 3/7/2022. Other rows for DESIGNED BY, DRAWN BY, CHECKED BY, FILE NAME.

DRAWING SCALE: HORIZONTAL: NA VERTICAL: NA

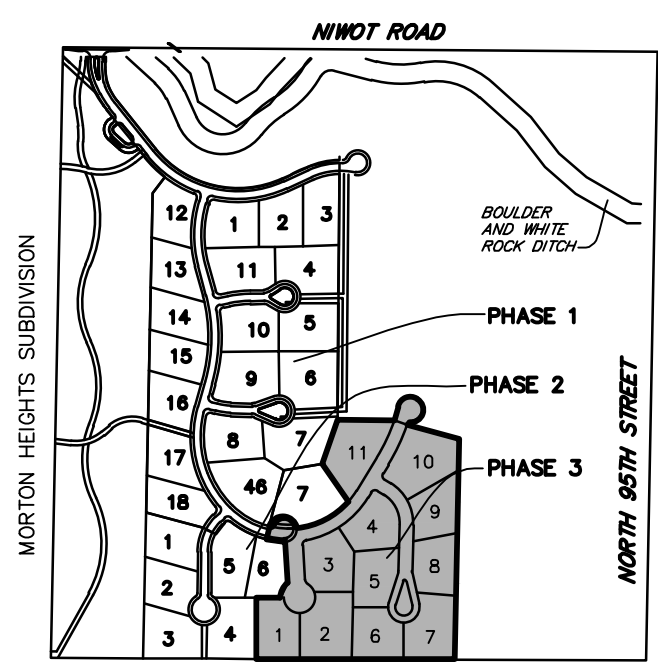
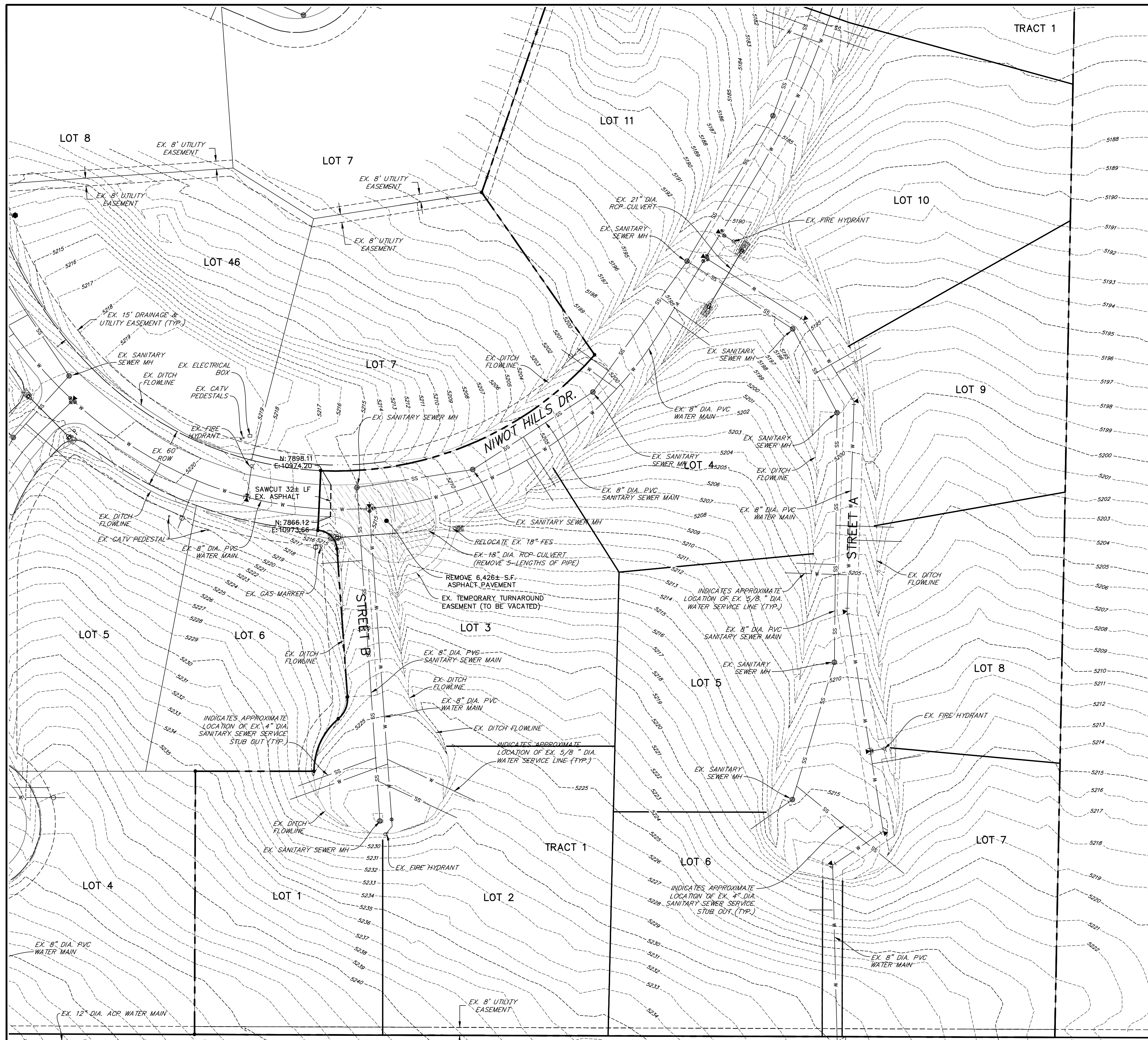
COVER SHEET

PROJECT:20598-04BLCV DRAWING NO.

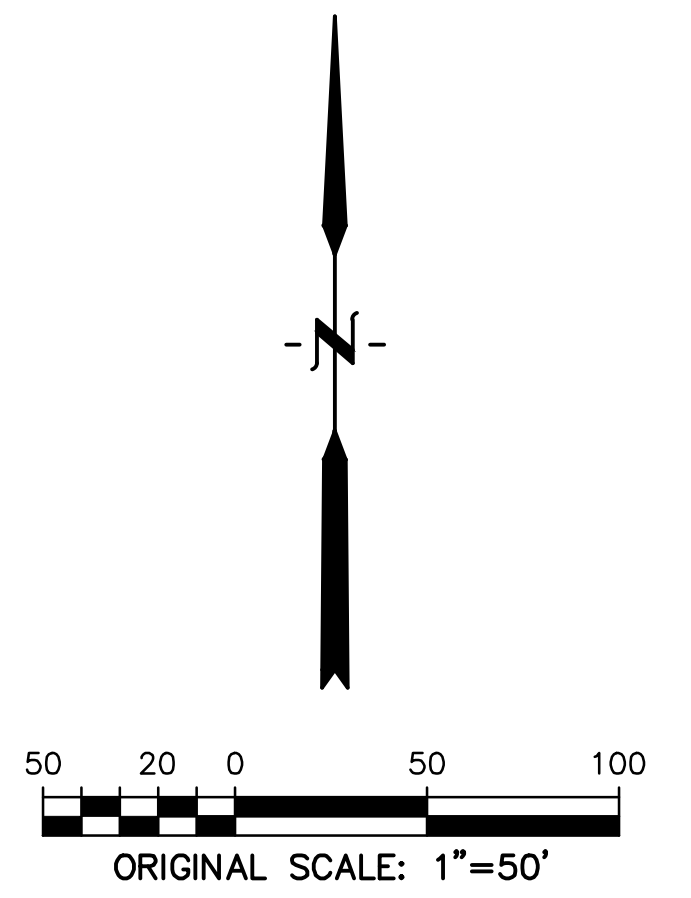
C1

SHEET: 1 OF 12





KEY MAP  
NOT TO SCALE



**LEGEND**

- PROPERTY LINE .....
- EX. ROW LINE .....
- EX. EASEMENT LINE .....
- EX. STORM LINE .....
- EX. INTERMEDIATE CONTOUR.....
- EX. INDEX CONTOUR.....
- EX. FLOWLINE .....
- AREA OF DEMOLITION & REMOVAL .....
- PROPOSED SAWCUT LINE .....

**BENCHMARK**  
3-1/4" ALUMINUM CAP AT THE NORTHWEST CORNER OF SECTION 32, T2N, R69W OF THE 6TH P.M. ELEVATION=5119.30 NGVD 1929 DATUM.

**BASIS OF BEARINGS**  
BEARINGS ARE REFERRED TO THE WEST LINE OF THE NE 1/4 OF SECTION 32 AS BEARING S01°08'30" W PER THE RECORDED PLAT OF THIRD ADDITION TO MORTON HEIGHTS SUBDIVISION (ASSUMED MERIDIAN).



Know what's below.  
Call before you dig.

PREPARED BY:  
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COLORADO SPRINGS

OWNER/CLIENT:  
**RIDGELINE DEVELOPMENT CORPORATION**  
5723 ARAPAHOE AVENUE, #28  
BOULDER, COLORADO 80303  
ATTN: JASON MARKEL  
(303) 339-6122

FINAL CONSTRUCTION DRAWINGS FOR:  
**NWOT HILLS  
TDR/PUD SUBDIVISION  
FILING NO. 3  
BOULDER COUNTY, COLORADO**

ISSUE	DATE
COUNTY SUBMITTAL	3/7/2022
DESIGNED BY:	CWK
DRAWN BY:	CKW
CHECKED BY:	MDM
FILE NAME:	EX01

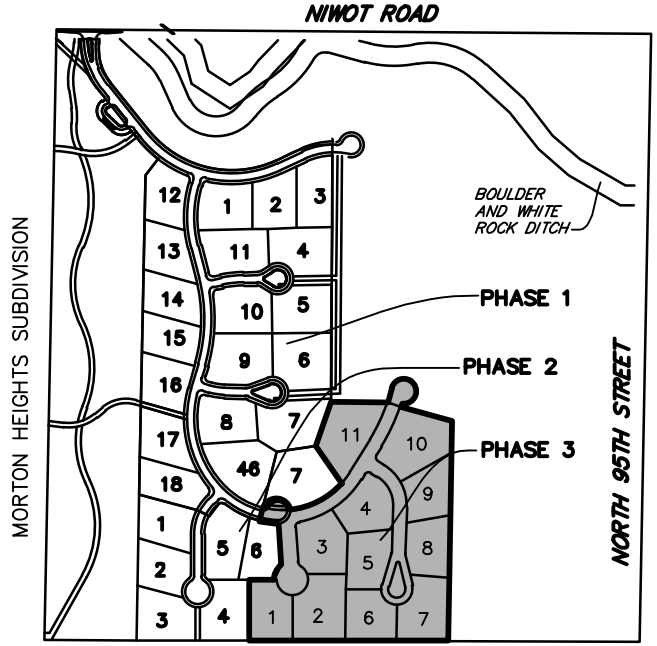
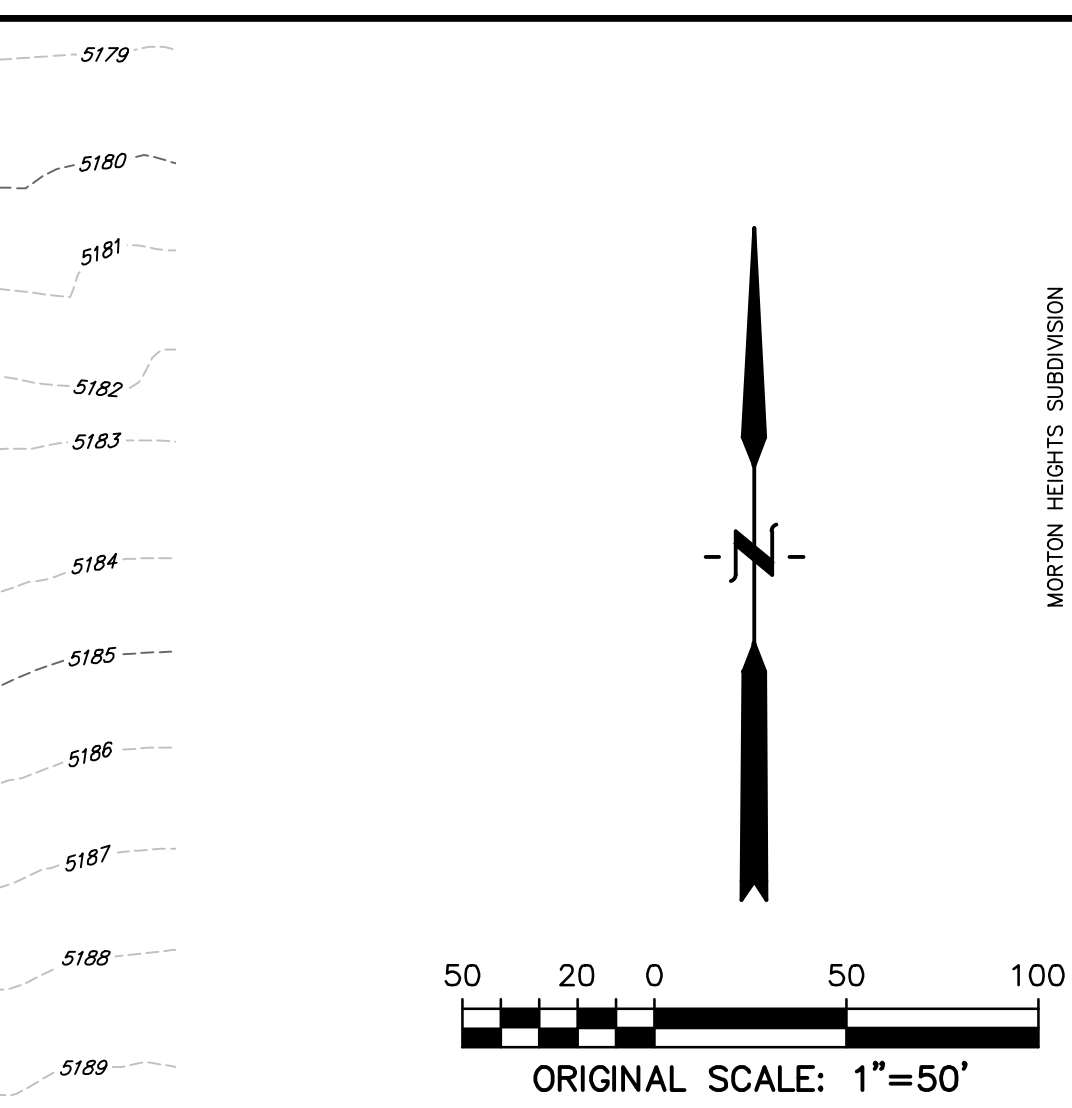
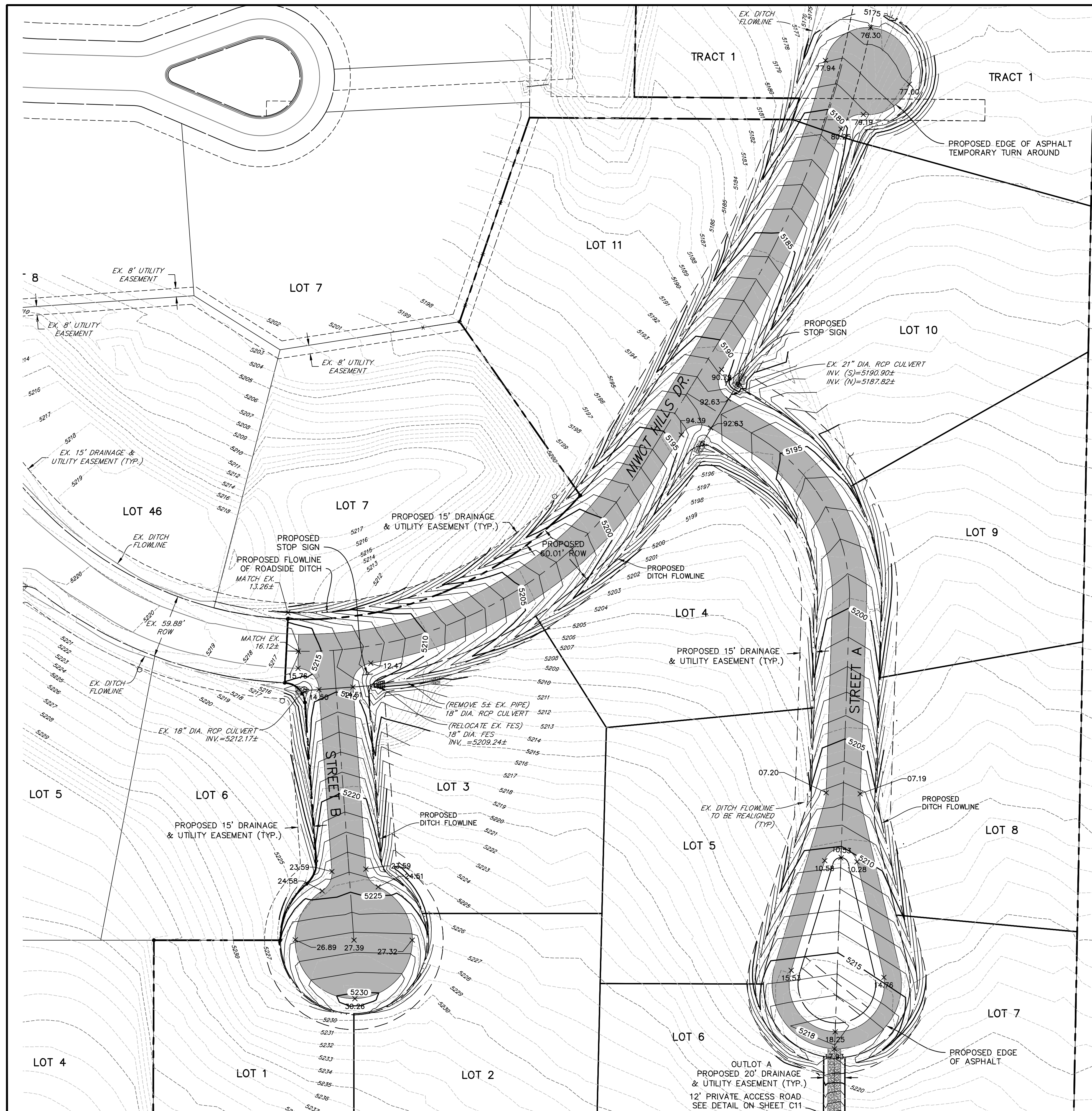
DRAWING SCALE:  
HORIZONTAL: 1"=50'  
VERTICAL: N.A.

**EXISTING CONDITIONS & DEMOLITION PLAN**

PROJECT: 20598-04BLCV  
DRAWING NO.

**C2**

SHEET: 2 OF 12



**KEY MAP**  
NOT TO SCALE

**LEGEND**

PROPERTY LINE	-----
EX. ROW LINE	-----
EX. EASEMENT LINE	-----
EX. STORM LINE	-----
EX. INTERMEDIATE CONTOUR	-----
EX. INDEX CONTOUR	-----
PROPOSED ASPHALT	████████
PROPOSED ROW LINE	-----
PROPOSED EASEMENT LINE	-----
PROPOSED STORM SEWER	-----
PROPOSED INTERMEDIATE CONTOUR	-----
PROPOSED INDEX CONTOUR	-----
EXISTING SPOT ELEVATION	x 56.23
PROPOSED SPOT ELEVATION	x 62.84
PROPOSED SLOPE	-1.5%
FLOWLINE OF DRAINAGE SWALE	-----

NOTE:  
1. ADD 5200 TO ALL SPOT ELEVATIONS

**BASIS OF BEARINGS**

BEARINGS ARE REFERRED TO THE WEST LINE OF THE NE 1/4 OF SECTION 32 AS BEARING S01°08'30" W PER THE RECORDED PLAT OF THIRD ADDITION TO MORTON HEIGHTS SUBDIVISION (ASSUMED MERIDIAN).

**BENCHMARK**

3-1/4" ALUMINUM CAP AT THE NORTHWEST CORNER OF SECTION 32, T2N, R69W OF THE 6TH P.M. ELEVATION=5119.30 NGVD 1929 DATUM.

**GRADING NOTES**

- SEE ROAD PROFILES ON SHEETS C6-C10
- SEE ROAD TYPICAL SECTIONS ON SHEET C11
- SEE 12' PRIVATE ACCESS ROAD DETAIL ON SHEET C11

PREPARED BY:  
**DBC**  
Drexel, Barrell & Co.  
Engineers-Surveyors  
1800 38TH STREET  
BOULDER, COLORADO 80301  
(303) 442-4338  
BOULDER - GREELEY  
COLORADO SPRINGS

OWNER/CLIENT:  
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5723 ARAPAHOE AVENUE, #28  
BOULDER, COLORADO 80303  
ATTN: JASON MARKEL  
(303) 339-6122

FINAL CONSTRUCTION DRAWINGS FOR:  
**NWOT HILLS  
TDR/PUD SUBDIVISION  
FILING NO. 3  
BOULDER COUNTY, COLORADO**

ISSUE	DATE
COUNTY SUBMITTAL	3/7/2022
DESIGNED BY:	CKW
DRAWN BY:	CHK
CHECKED BY:	MDM
FILE NAME:	GR01

DRAWING SCALE:  
HORIZONTAL: 1"=50'  
VERTICAL: N.A.

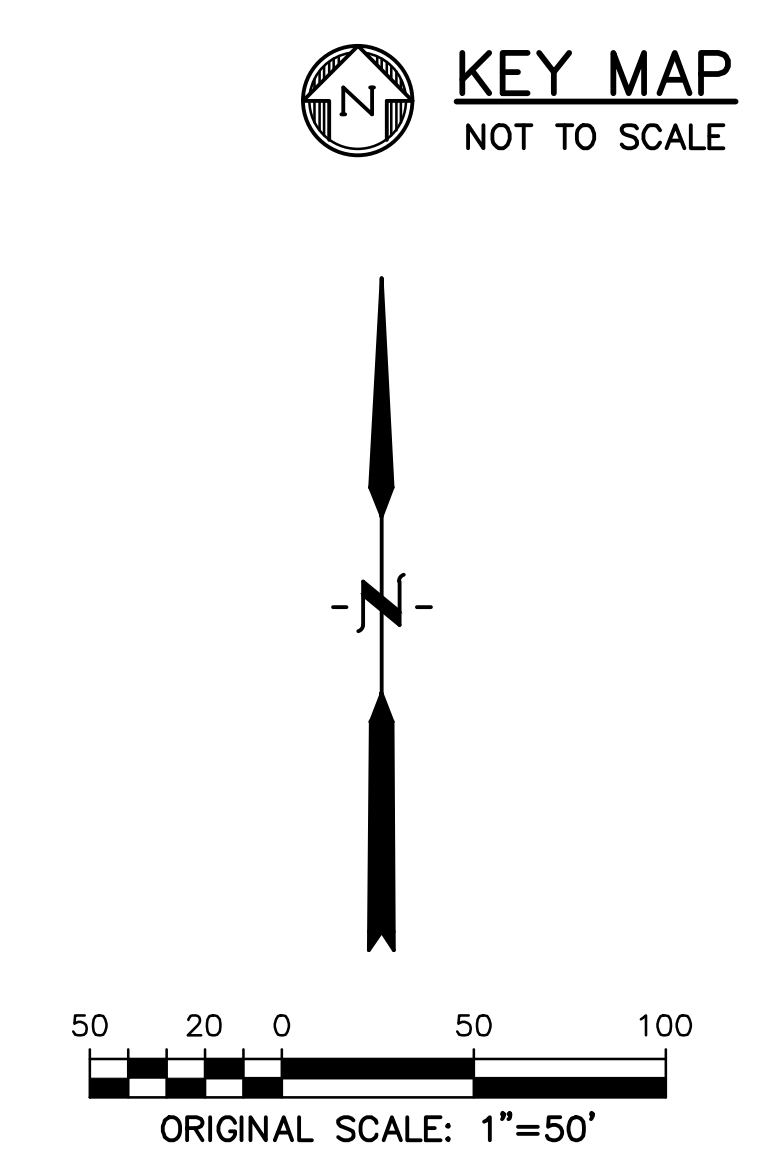
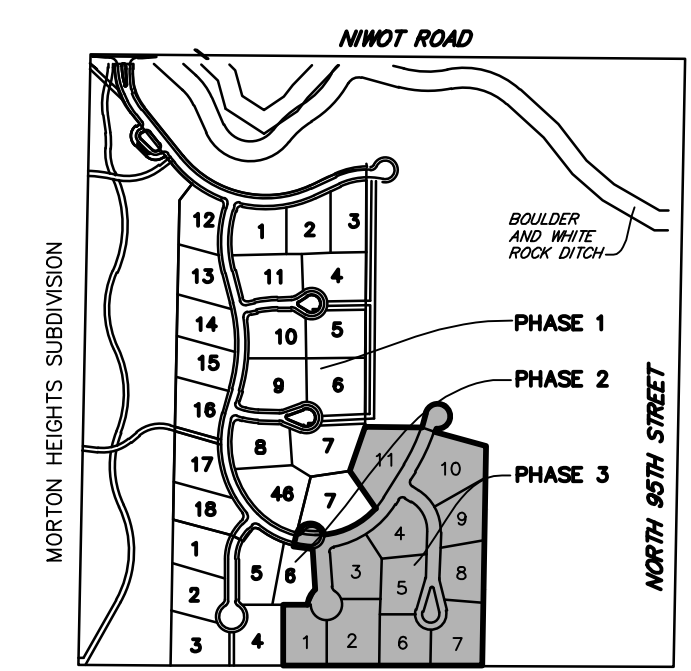
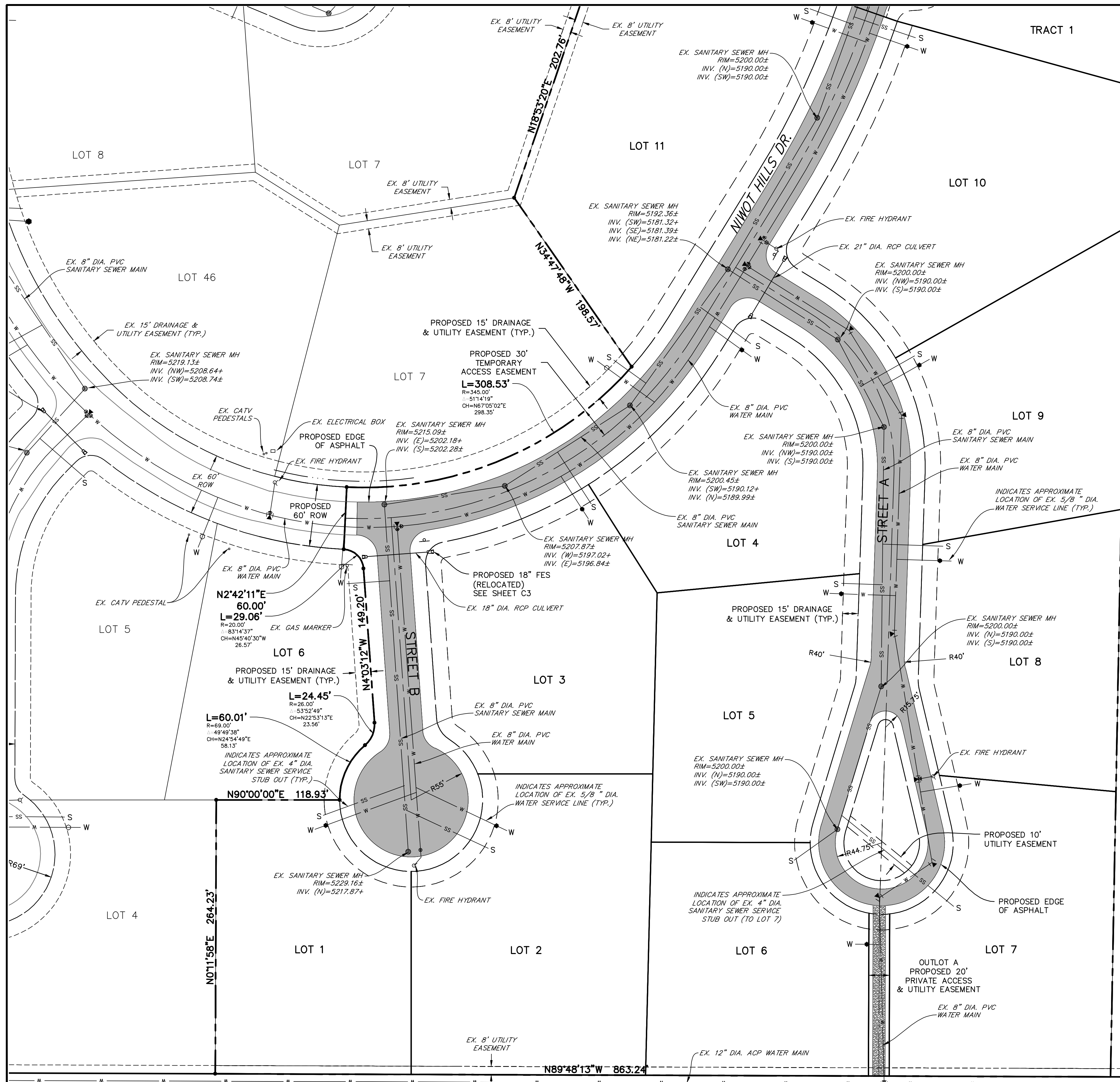
**GRADING PLAN**

PROJECT: 20598-04BLCV  
DRAWING NO.

**C3**

SHEET: 3 OF 12





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FINAL CONSTRUCTION DRAWINGS FOR:  
**NIWOT HILLS  
 TDR/PUD SUBDIVISION  
 FILING NO. 3**  
 BOULDER COUNTY, COLORADO

ISSUE	DATE
COUNTY SUBMITTAL	3/7/2022
DESIGNED BY:	CKW
DRAWN BY:	CKW
CHECKED BY:	MDM
FILE NAME:	UT01

DRAWING SCALE:  
 HORIZONTAL: 1"=50'  
 VERTICAL: N.A.

UTILITY PLAN

PROJECT: 20598-04BLCV  
 DRAWING NO.

**C4**

SHEET: 4 OF 12



**GENERAL BEST MANAGEMENT PRACTICES NOTES:**

1. CONTRACTOR/PERMITEE SHALL PERIODICALLY INSPECT ALL INSTALLED BMP'S, PROVIDED MAINTENANCE, AND MAKE REPAIRS AS NECESSARY TO PREVENT FAILURE.
2. SILT FENCE OR AN EQUIVALENT SHALL BE PLACED AS PERIMETER CONTROL ON ALL CONSTRUCTION ACTIVITIES THAT OCCUR ON LAND, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS, OR OTHERWISE REQUESTED, REMOVE PERIMETER CONTROLS WITHIN 30 DAYS AFTER THE DATE OF WARRANTY PERFORMANCE OF THE WORK OR IN ACCORDANCE WITH BMP'S.
3. VEHICLE TRACKING CONTROLS SHALL BE USED AT ALL VEHICLE AND EQUIPMENT ACCESS POINTS TO THE SITE TO PREVENT SEDIMENT EXITING THE PROJECT SITE ONTO PAVED PUBLIC ROADS. ACCESS SHALL BE PROVIDED ONLY AT LOCATION APPROVED BY THE ENGINEER. VEHICLE TRACKING CONTROL LOCATIONS SHALL BE RECORDED ON THE SWMP SITE MAP.
4. ALL INLETS AND CULVERTS SHALL BE PROTECTED DURING ONSITE CONSTRUCTION ACTIVITIES. INLET PROTECTION LOCATIONS SHALL BE RECORDED ON THE SWMP SITE MAP.
5. CONCRETE WASTED IN DESIGNATED DEWATERING AREAS SHALL BE COLLECTED, REMOVED FROM THE PROJECT SITE, AND DISPOSED OF PROPERLY. WASTED CONCRETE ALSO INCLUDES EXCESS CONCRETE REMOVED FROM FORMS, SPILLS, SLOP, AND ALL OTHER UNUSED CONCRETE THAT ENDS UP ON THE GROUND.
6. THE CONTRACTOR/PERMITEE MUST MAINTAIN A SPILL KIT ON SITE WHEN WORKING AROUND SURFACE WATERS. IF POLLUTANTS ARE SPILLED INTO ANY SURFACE WATERS DURING THE COURSE OF CONSTRUCTION ACTIVITIES, THE CONTRACTOR/PERMITEE MUST NOTIFY THE OWNER'S REPRESENTATIVE OR ENGINEER IMMEDIATELY.
7. ALL EXISTING MATURE TREES WITHIN THE DESIGNATED PROJECT AREA ARE TO BE FENCED PROTECTED IN PLACE AT DRIPLINE UNLESS OTHERWISE DIRECTED BY THE ENGINEER. PRIOR TO THE INSTALLATION OF WORK, THE ENGINEER SHALL MARK ANY TREES AND/OR LARGE SHRUBS TO BE REMOVED AS PART OF CONSTRUCTION ACTIVITIES. AREAS OF TREE REMOVAL SHALL BE DETERMINED AND MARKED IN COLLABORATION BETWEEN THE CONTRACTOR/PERMITEE AND THE ENGINEER.
8. ALL EXCAVATION ACTIVITIES OCCURRING WITHIN 10 FEET OF THE DRIPLINE SHALL BE PERFORMED BY HAND AND IF NECESSARY ROOTS SHALL BE CLEANLY CUT NOT TORN OR RIPPED. IF EXPOSED, TREE ROOTS SHALL BE BACKFILLED AND WATERED ON THE SAME DAY OF CUTTING AND APPROVED ROOT STIMULATOR SHALL BE APPLIED. SOILS SHALL NOT BE COMPACTED WITHIN THE DRIPLINE OF MATURE TREES UNLESS OTHERWISE APPROVED BY THE ENGINEER.

**SEQUENCE FOR INSTALLATION & REMOVAL OF BMP'S**

	BEFORE GRADING ACTIVITIES BEGIN	SITE GRADING	UTILITY INSTALLATION	PAVING OPERATIONS	FINAL STABILIZATION
SILT FENCE					
VEHICLE TRACKING PAD					
TEMPORARY SEEDING					
OUTLET PROTECTION					
SEDIMENT CONTROL LOGS					
INLET PROTECTION					

LIMITS OF CONSTRUCTION = 5 ACRES±  
 ESTIMATED TOTAL FILL = 1,703± CY  
 ESTIMATED TOTAL CUT = 3,164± CY

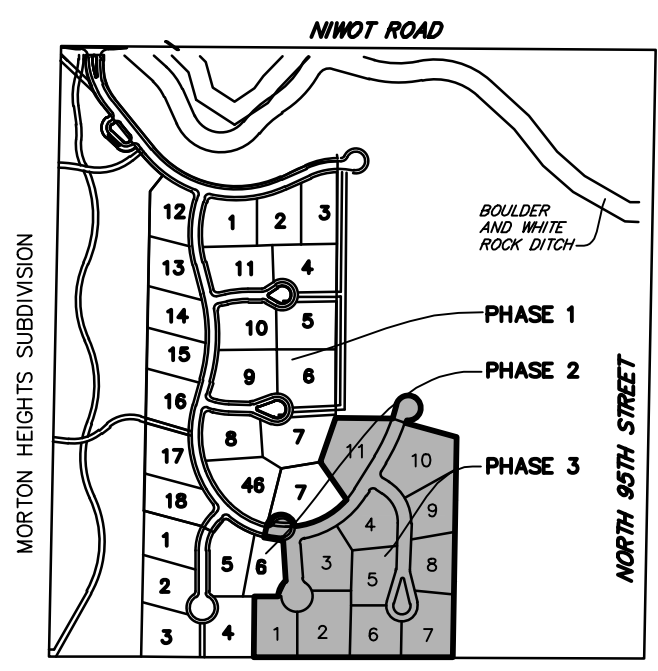
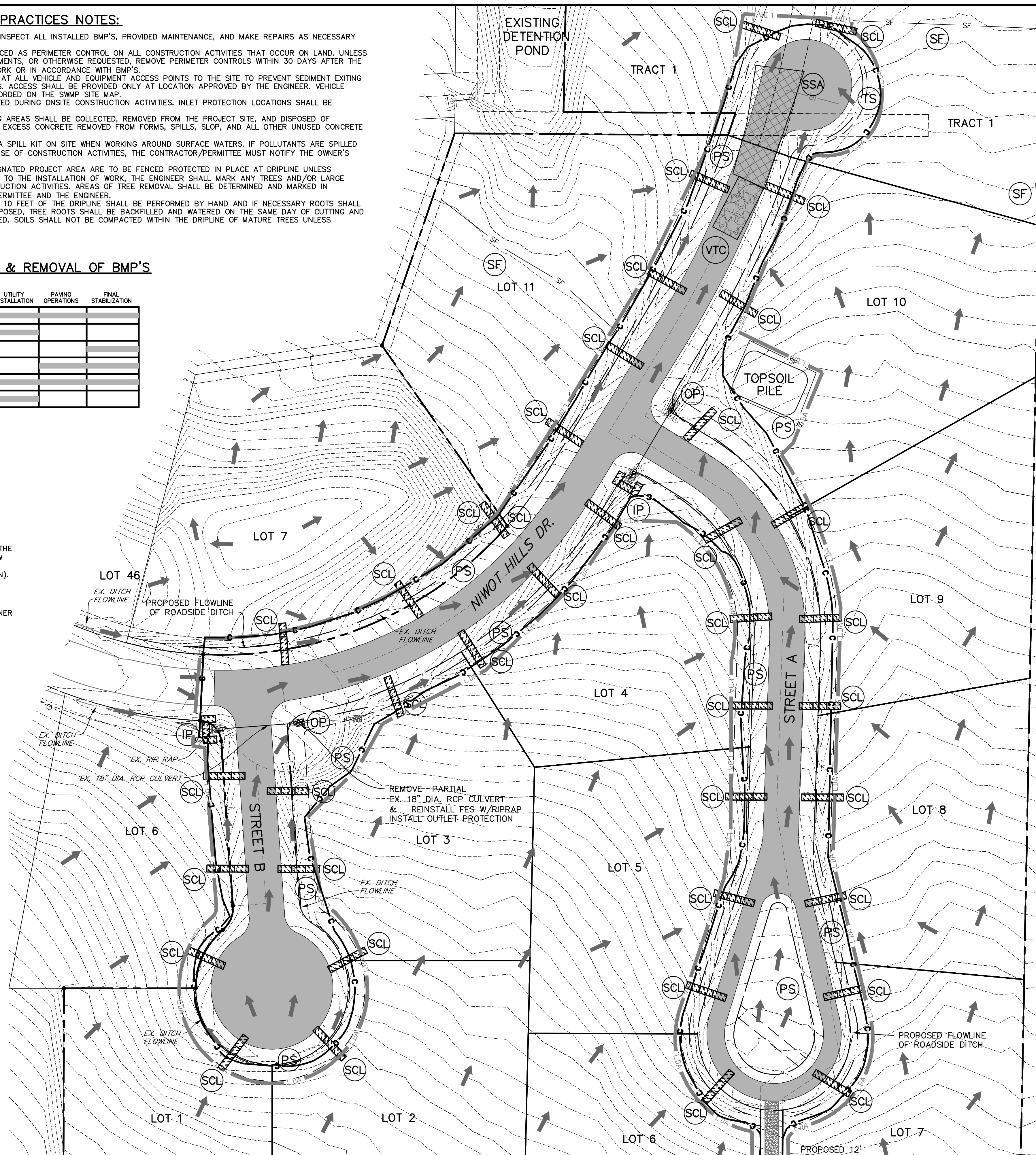
COMPACTION, STRIPPINGS, & AREA OF PAVEMENT/GRAVEL NOT ACCOUNTED FOR IN THESE TOTALS.

**BASIS OF BEARINGS**

BEARINGS ARE REFERRED TO THE WEST LINE OF THE NE 1/4 OF SECTION 32 AS BEARING S01°08'30" W PER THE RECORDED PLAT OF THIRD ADDITION TO MORTON HEIGHTS SUBDIVISION (ASSUMED MERIDIAN).

**BENCHMARK**

3-1/4" ALUMINUM CAP AT THE NORTHWEST CORNER OF SECTION 32, T2N, R69W OF THE 6TH P.M. ELEVATION=5119.30 NGVD 1929 DATUM.

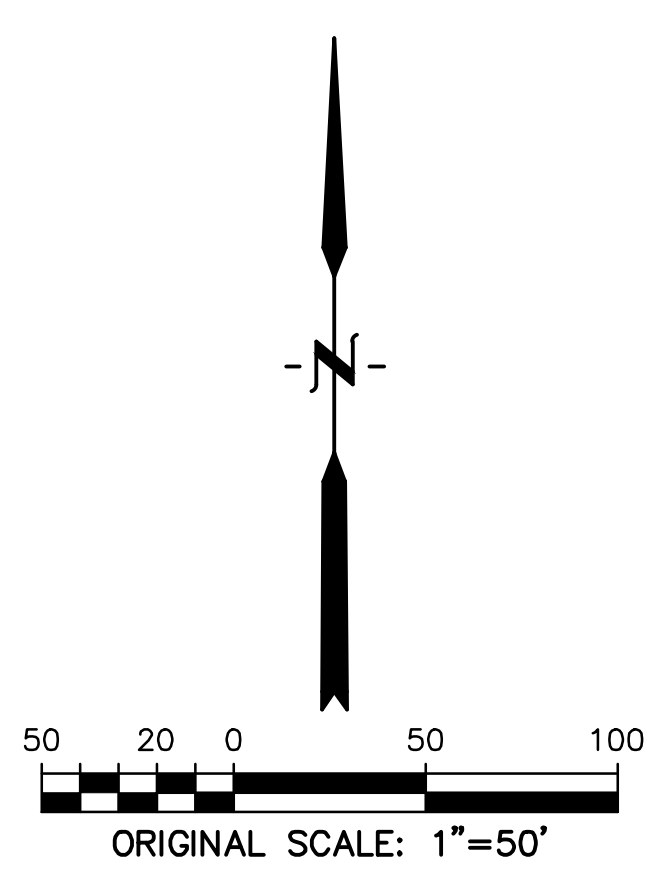


**KEY MAP**  
NOT TO SCALE

**LEGEND**

- PROPERTY LINE
- EX. ROW LINE
- EX. EASEMENT LINE
- EX. STORM LINE
- EX. INTERMEDIATE CONTOUR
- EX. INDEX CONTOUR
- PROPOSED ASPHALT
- PROPOSED ROW LINE
- PROPOSED EASEMENT LINE
- PROPOSED STORM SEWER
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED INDEX CONTOUR
- FLOWLINE OF DRAINAGE SWALE
- DIRECTION OF FLOW
- LIMITS OF CONSTRUCTION
- LIMITS OF DISTURBED AREA
- SILT FENCE
- VEHICLE TRACKING CONTROL PAD
- STABILIZED STAGING AREA
- INLET PROTECTION
- OUTLET PROTECTION
- SEDIMENT CONTROL LOG
- TEMPORARY SEEDING
- PERMANENT SEEDING

- NOTE:
1. REFER TO CDOT M&S STANDARDS, LATEST REVISION, FOR TEMPORARY EROSION CONTROL DETAILS (STANDARD PLAN NO. M-208-1).
  2. NO ASPHALT OR CONCRETE BATCH PLANTS LOCATED ON SITE.
  3. NO SPRINGS, STREAMS, WETLANDS AND OTHER SURFACE WATERS LOCATED ON SITE.
  4. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ON SITE ALL EQUIPMENT STAGING, FUELING, AND MATERIAL STORAGE.
  5. ALL ROAD SIDE DITCHES SHALL BE SEEDDED WITH SPECIFIED PERMANENT SEEDING MIX.



PREPARED BY:  
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 BOULDER, COLORADO 80301  
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 BOULDER - GREELEY  
 COLORADO SPRINGS

OWNER/CLIENT:  
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FINAL CONSTRUCTION DRAWINGS FOR:  
**NWOT HILLS**  
**TDR/PUD SUBDIVISION**  
**FILING NO. 3**  
 BOULDER COUNTY, COLORADO

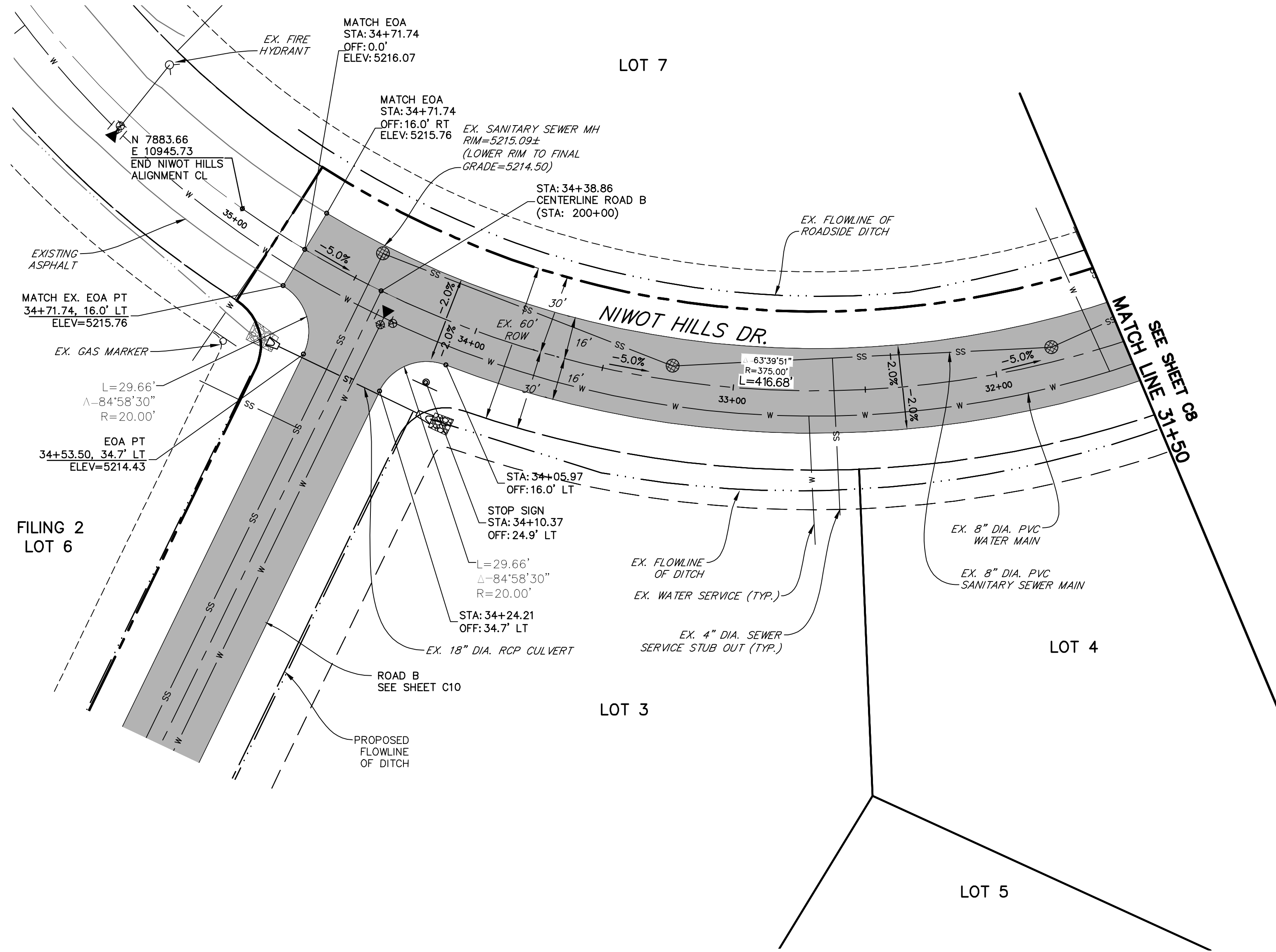
ISSUE	DATE
COUNTY SUBMITTAL	3/7/2022
DESIGNED BY:	CKW
DRAWN BY:	CKW
CHECKED BY:	MDM
FILE NAME:	SWMP01

DRAWING SCALE:  
 HORIZONTAL: 1"=50'  
 VERTICAL: N.A.

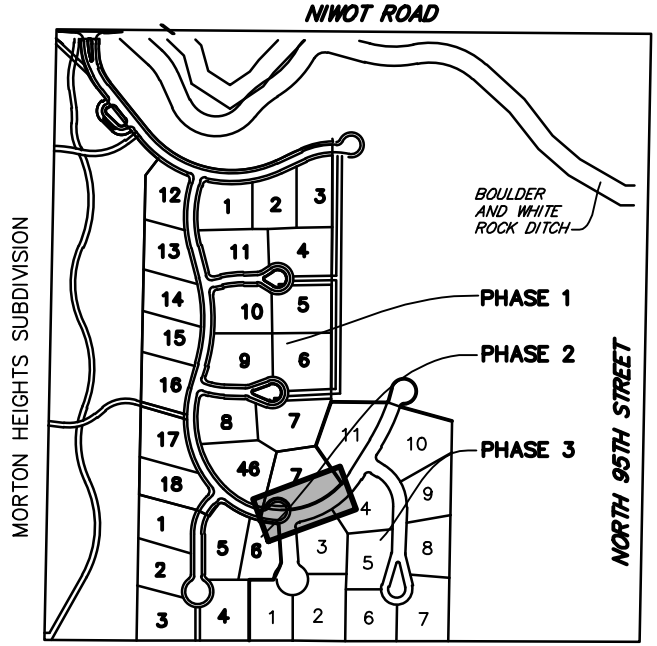
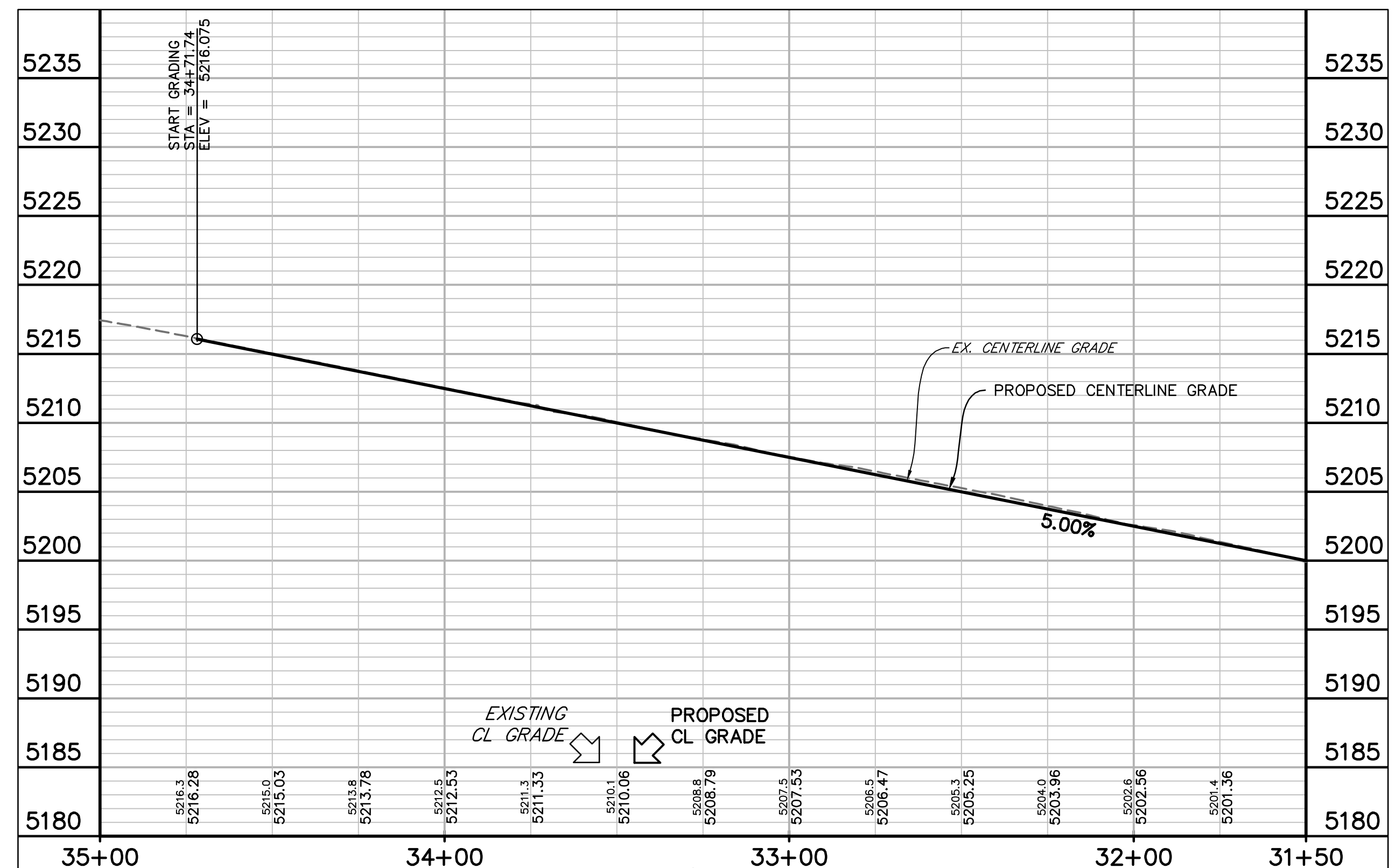
**STORMWATER MANAGEMENT PLAN**

PROJECT: 20598-04BLCV  
 DRAWING NO.

**C5**  
 SHEET: 5 OF 12



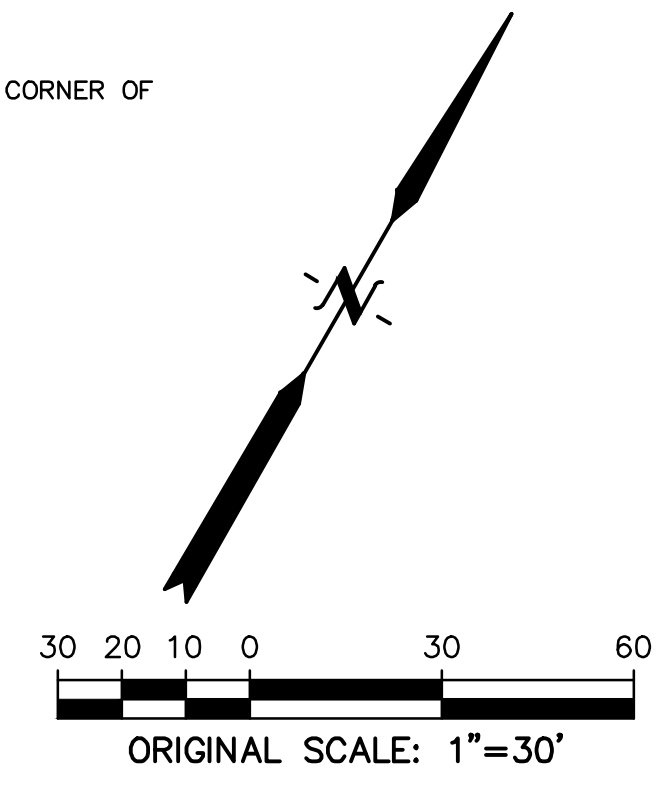
FILING 2  
LOT 6



KEY MAP  
NOT TO SCALE

**BASIS OF BEARINGS**  
BEARINGS ARE REFERRED TO THE WEST LINE OF THE NE 1/4 OF SECTION 32 AS BEARING S01°08'30" W PER THE RECORDED PLAT OF THIRD ADDITION TO MORTON HEIGHTS SUBDIVISION (ASSUMED MERIDIAN).

**BENCHMARK**  
3-1/4" ALUMINUM CAP AT THE NORTHWEST CORNER OF SECTION 32, T2N, R69W OF THE 6TH P.M. ELEVATION=5119.30 NGVD 1929 DATUM.



- LEGEND**
- PROPERTY LINE .....
  - EX. ROW LINE .....
  - EX. EASEMENT LINE .....
  - EX. SANITARY SEWER..... SS
  - EX. WATER LINE .....
  - EX. STORM LINE .....
  - EX. CABLE TV..... CTV
  - EX. FIRE HYDRANT..... ⌘
  - EX. WATER VALVE..... ⊙
  - EX. WATER METER..... ○
  - EX. MANHOLE .....
  - PROPOSED METER..... ●
  - PROPOSED ASPHALT .....
  - PROPOSED ROW LINE .....
  - PROPOSED EASEMENT LINE .....



PREPARED BY:  
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BOULDER - GREELEY  
COLORADO SPRINGS

OWNER/CLIENT:  
**RIDGELINE DEVELOPMENT CORPORATION**  
5723 ARAPAHOE AVENUE, #28  
BOULDER, COLORADO 80303  
ATTN: JASON MARKEL  
(303) 339-6122

FINAL CONSTRUCTION DRAWINGS FOR:  
**NIWOT HILLS  
TDR/PUD SUBDIVISION  
FILING NO. 3  
BOULDER COUNTY, COLORADO**

ISSUE	DATE
COUNTY SUBMITTAL	3/7/2022

DESIGNED BY: CWK  
DRAWN BY: CWK  
CHECKED BY: MDM  
FILE NAME: PPO1

FOR, AND ON BEHALF OF,  
DREXEL, BARRELL & CO.  
DRAWING SCALE:  
HORIZONTAL: 1"=30'  
VERTICAL: 1"=10'

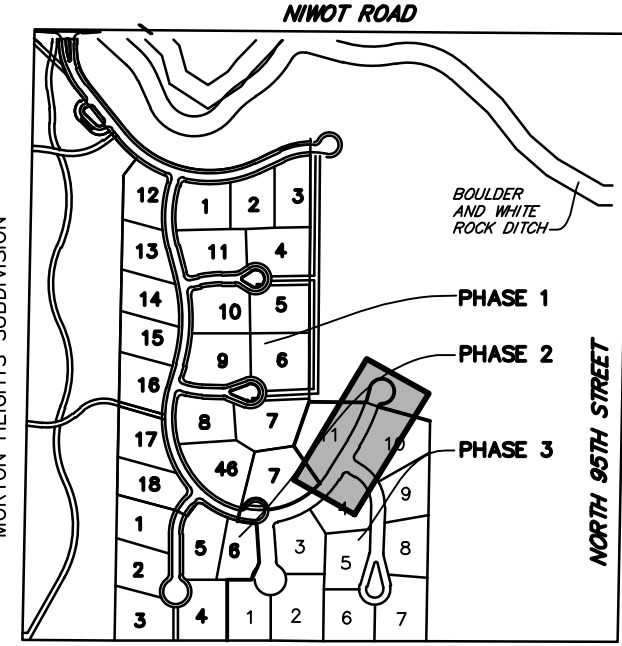
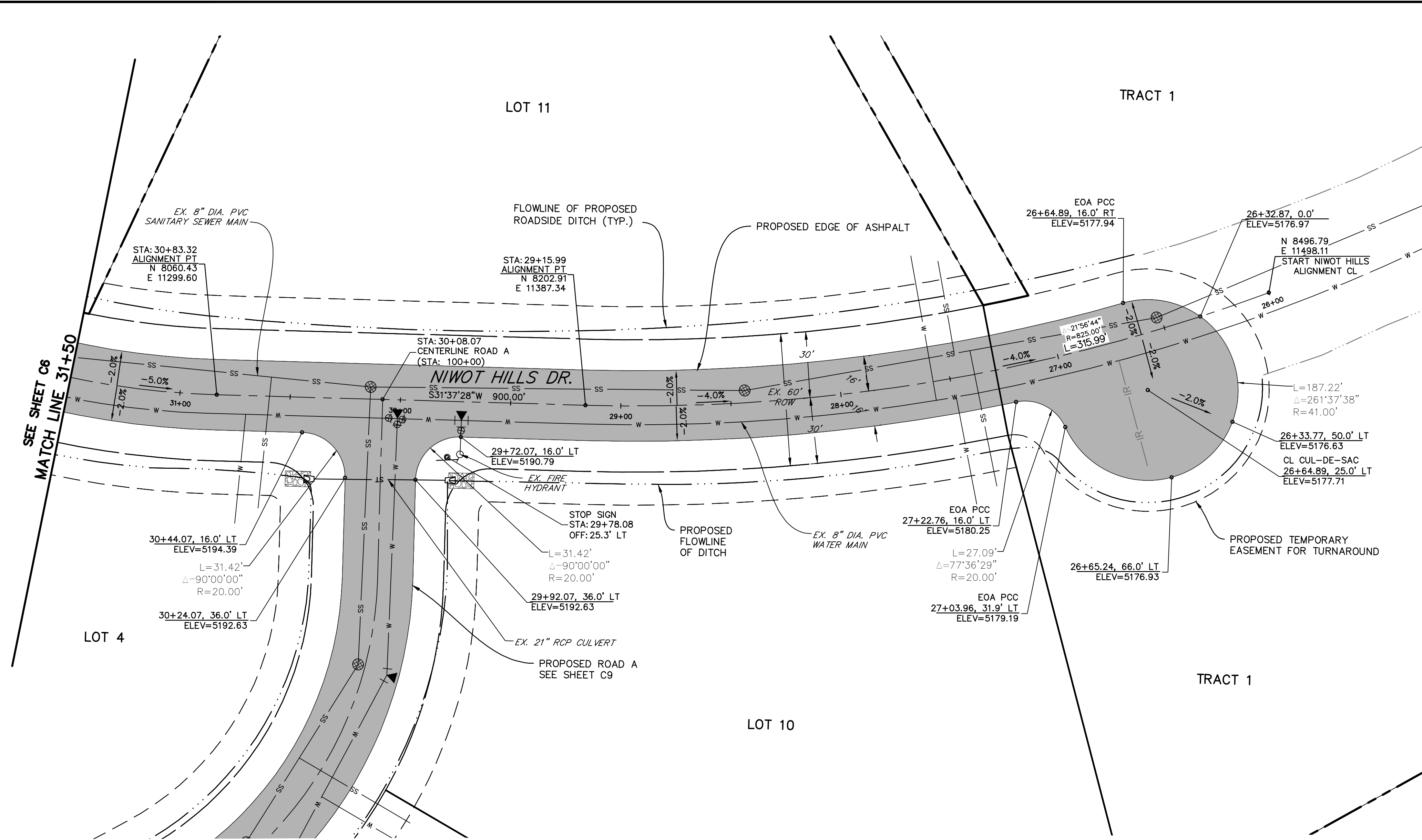
**NIWOT HILLS  
DRIVE PLAN  
& PROFILE**

PROJECT:20598-04BLCV  
DRAWING NO.

**C6**

SHEET: 6 OF 12





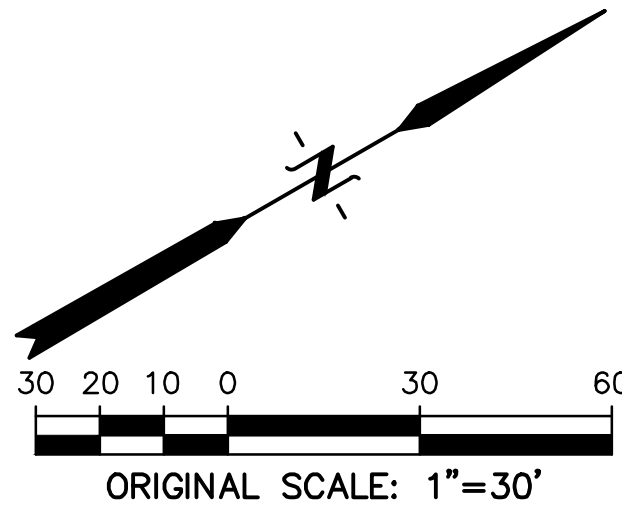
**KEY MAP**  
NOT TO SCALE

**BASIS OF BEARINGS**

BEARINGS ARE REFERRED TO THE WEST LINE OF THE NE 1/4 OF SECTION 32 AS BEARING S01°08'30" W PER THE RECORDED PLAT OF THIRD ADDITION TO MORTON HEIGHTS SUBDIVISION (ASSUMED MERIDIAN).

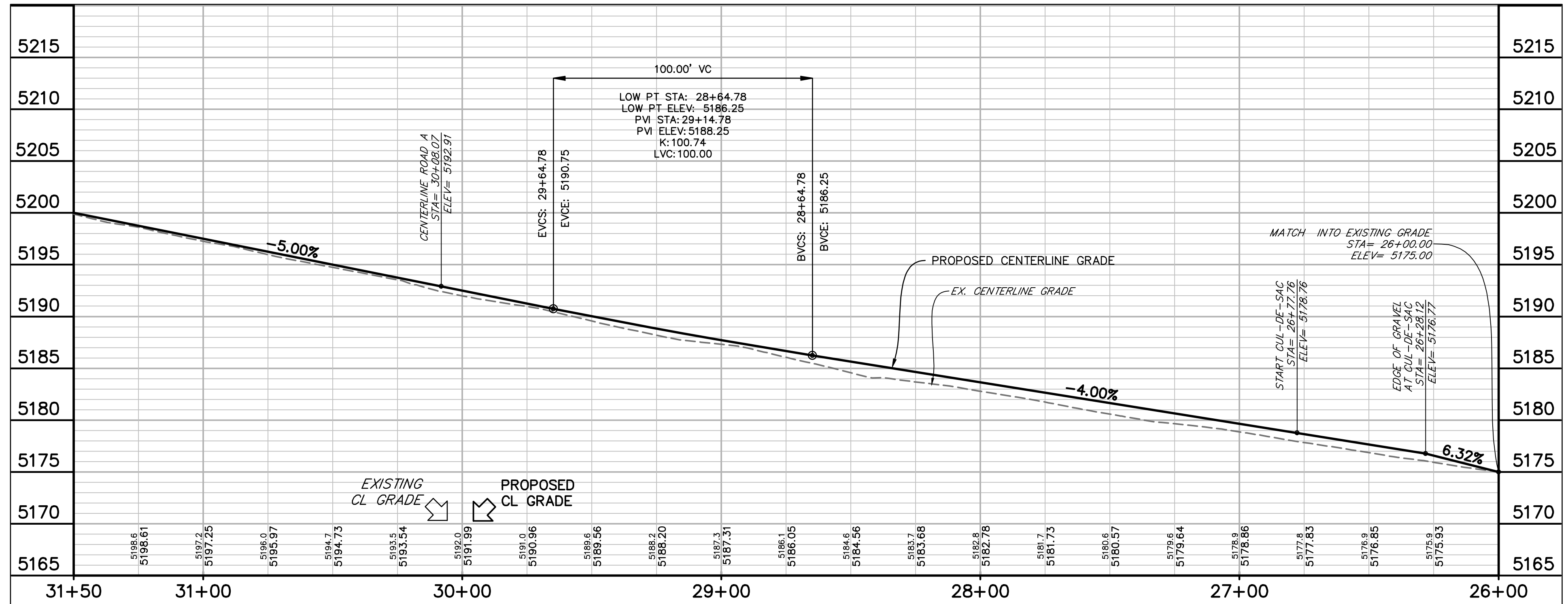
**BENCHMARK**

3-1/4" ALUMINUM CAP AT THE NORTHWEST CORNER OF SECTION 32, T2N, R69W OF THE 6TH P.M. ELEVATION=5119.30 NGVD 1929 DATUM.



**LEGEND**

- PROPERTY LINE .....
- EX. ROW LINE .....
- EX. EASEMENT LINE .....
- EX. SANITARY SEWER .....
- EX. WATER LINE .....
- EX. STORM LINE .....
- EX. CABLE TV .....
- EX. FIRE HYDRANT .....
- EX. WATER VALVE .....
- EX. WATER METER .....
- EX. MANHOLE .....
- PROPOSED METER .....
- PROPOSED ASPHALT .....
- PROPOSED ROW LINE .....
- PROPOSED EASEMENT LINE .....



PREPARED BY:



Drexel, Barrell & Co.  
Engineers-Surveyors  
1800 38TH STREET  
BOULDER, COLORADO 80301  
(303) 442-4338  
BOULDER - GREELEY  
COLORADO SPRINGS

OWNER/CLIENT:

**RIDGELINE DEVELOPMENT CORPORATION**

5723 ARAPAHOE AVENUE, #28  
BOULDER, COLORADO 80303  
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(303) 339-6122

FINAL CONSTRUCTION DRAWINGS FOR:  
**NIWOT HILLS  
TDR/PUD SUBDIVISION  
FILING NO. 3**  
BOULDER COUNTY, COLORADO

ISSUE	DATE
COUNTY SUBMITTAL	3/7/2022
DESIGNED BY:	CKW
DRAWN BY:	CKW
CHECKED BY:	MDM
FILE NAME:	PP01

FOR, AND ON BEHALF OF,  
DREXEL, BARRELL & CO.  
DRAWING SCALE:  
HORIZONTAL: 1"=30'  
VERTICAL: 1"=10'

**NIWOT HILLS DRIVE PLAN & PROFILE**

PROJECT: 20598-04BLCV  
DRAWING NO.

**C7**

SHEET: 7 OF 12



Know what's below.  
Call before you dig.

### LEGEND

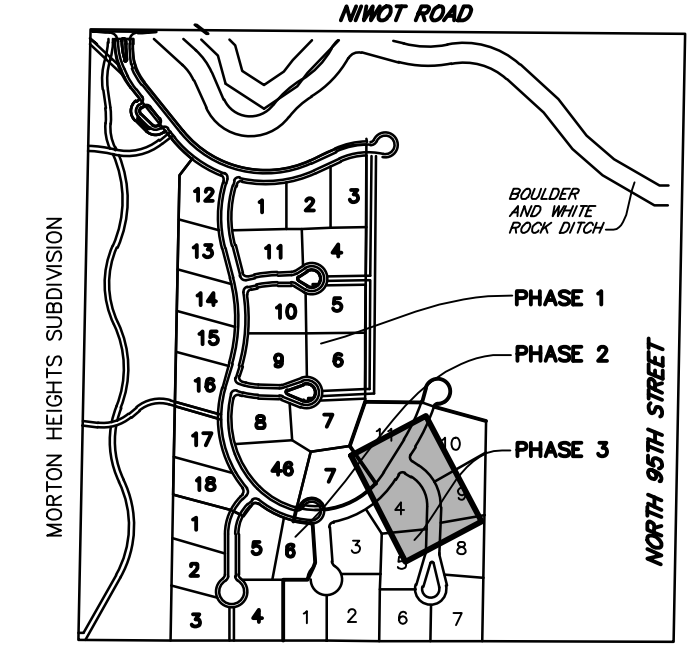
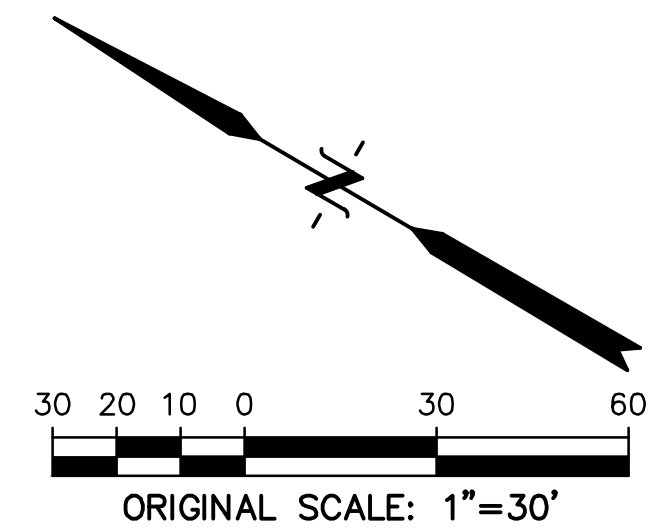
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EX. ROW LINE.....	---	EX. WATER METER.....	○
EX. EASEMENT LINE.....	---	EX. MANHOLE.....	⊕
EX. SANITARY SEWER.....	SS	PROPOSED METER.....	●
EX. WATER LINE.....	W	PROPOSED ASPHALT.....	■
EX. STORM LINE.....	ST	PROPOSED ROW LINE.....	---
EX. CABLE TV.....	CTV	PROPOSED EASEMENT LINE.....	---
EX. FIRE HYDRANT.....	Y		

### BASIS OF BEARINGS

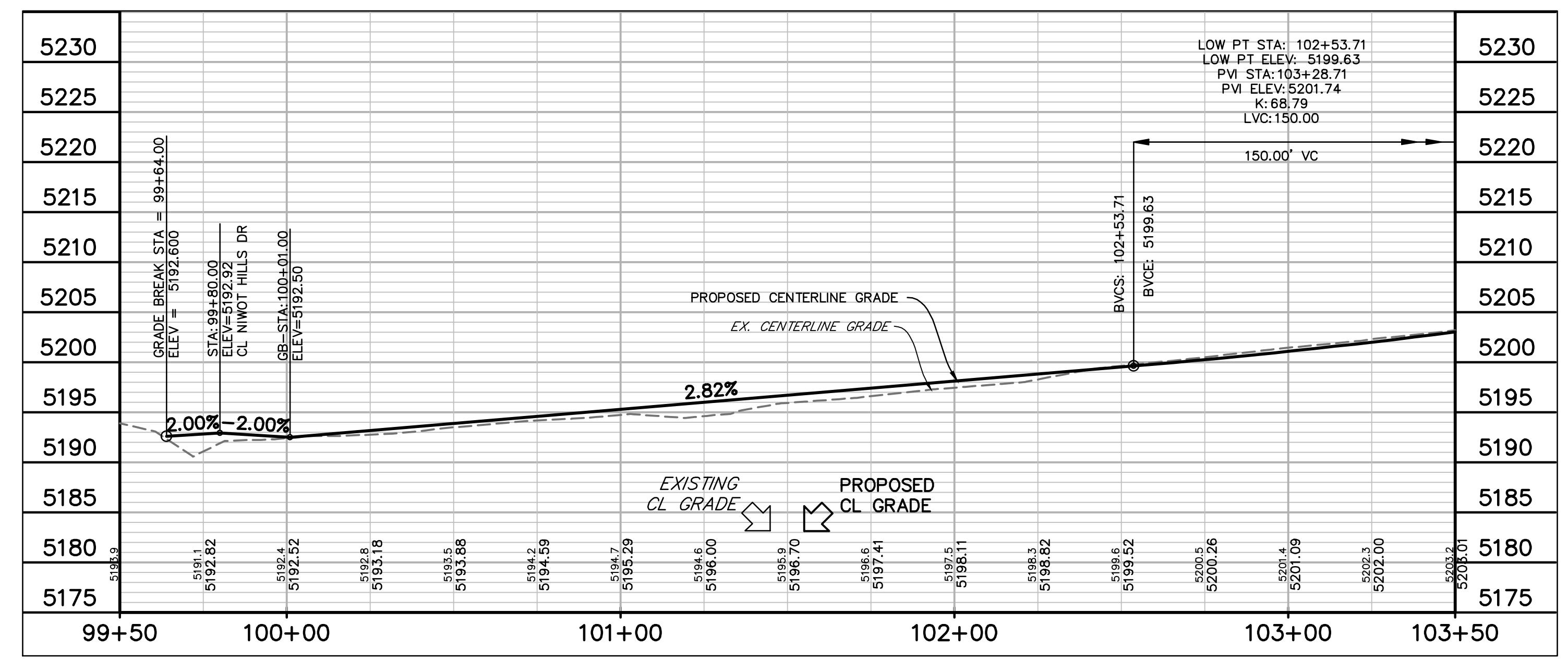
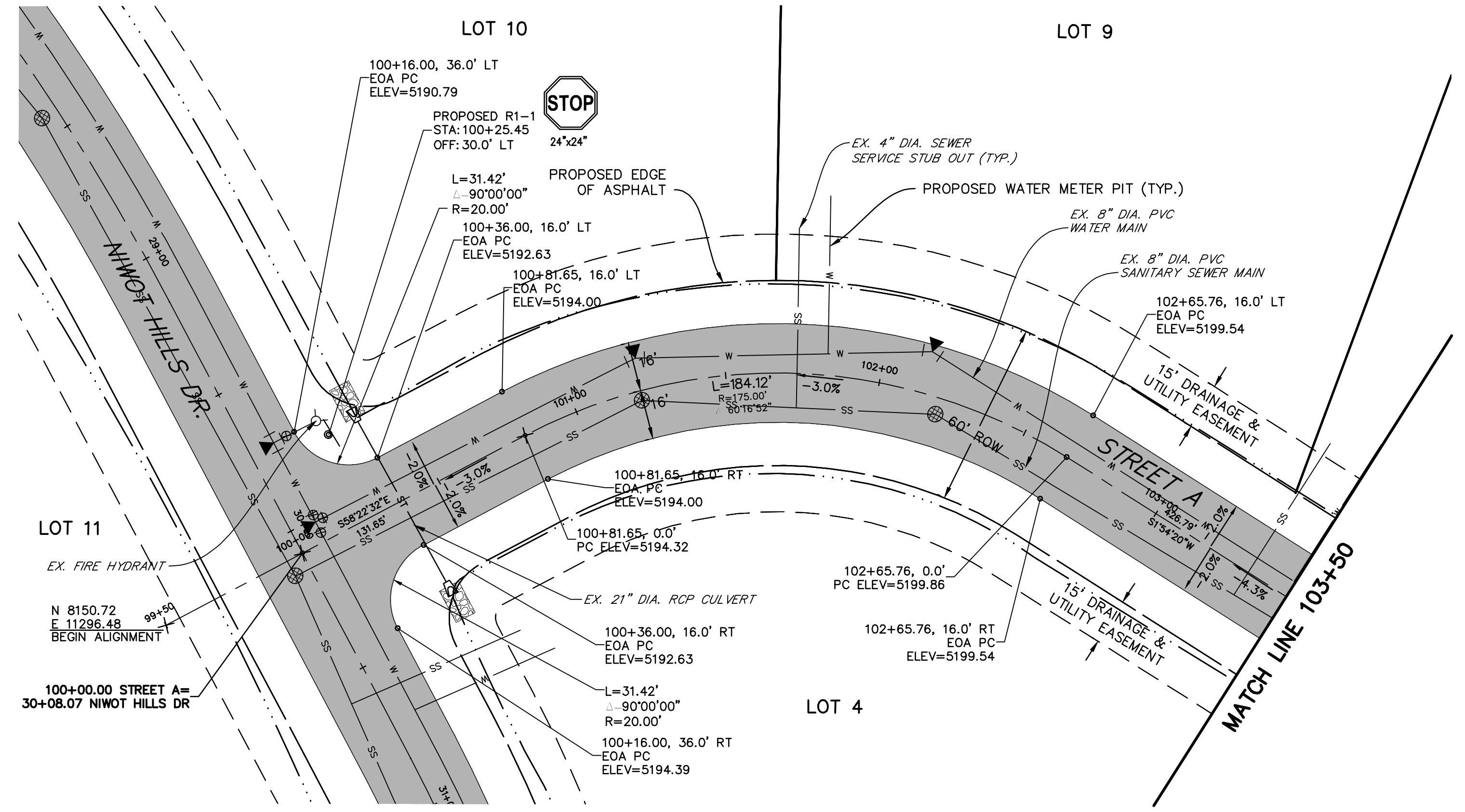
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### BENCHMARK

3-1/4" ALUMINUM CAP AT THE NORTHWEST CORNER OF SECTION 32, T2N, R69W OF THE 6TH P.M. ELEVATION=5119.30 NGVD 1929 DATUM.



KEY MAP  
NOT TO SCALE



PREPARED BY:



Drexel, Barrell & Co.  
Engineers-Surveyors  
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(303) 442-4338  
BOULDER - GREELEY  
COLORADO SPRINGS

OWNER/CLIENT:

RIDGELINE  
DEVELOPMENT  
CORPORATION

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FINAL CONSTRUCTION DRAWINGS FOR:  
NIWOT HILLS  
TDR/PUD SUBDIVISION  
FILING NO. 3  
BOULDER COUNTY, COLORADO

ISSUE	DATE
COUNTY SUBMITTAL	3/7/2022
DESIGNED BY:	CKW
DRAWN BY:	CHK
CHECKED BY:	MDM
FILE NAME:	PP02

FOR, AND ON BEHALF OF,  
DREXEL, BARRELL & CO.  
DRAWING SCALE:  
HORIZONTAL: 1"=30'  
VERTICAL: 1"=10'

STREET A  
PLAN &  
PROFILE

PROJECT:20598-04BLCV  
DRAWING NO.

**C8**

SHEET: 8 OF 12



Know what's below.  
Call before you dig.

### LEGEND

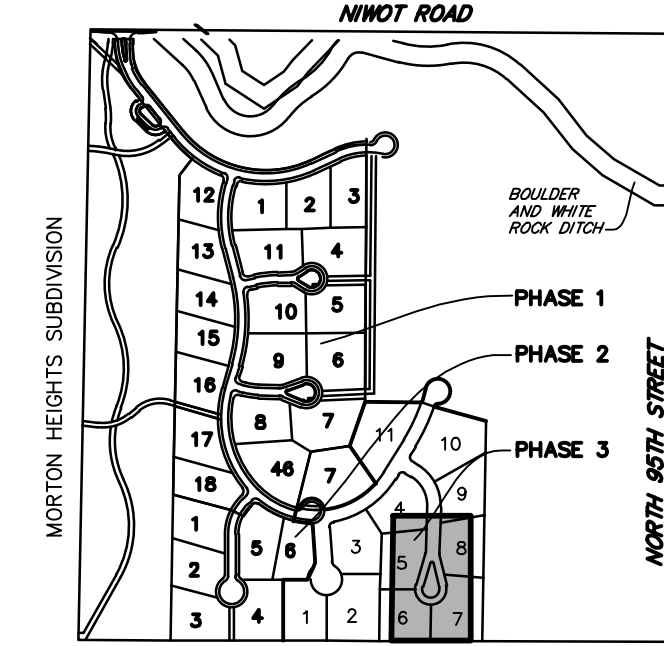
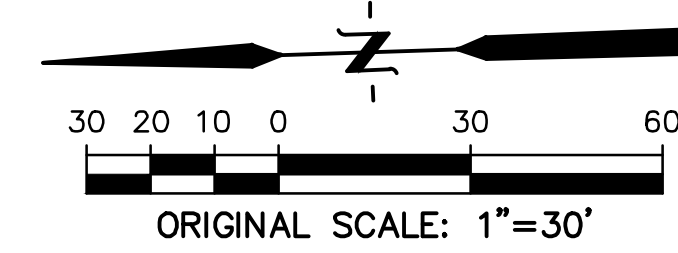
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EX. ROW LINE.....	---	EX. WATER METER.....	○
EX. EASEMENT LINE.....	---	EX. MANHOLE.....	⊕
EX. SANITARY SEWER.....	SS	PROPOSED METER.....	●
EX. WATER LINE.....	W	PROPOSED ASPHALT.....	▒
EX. STORM LINE.....	ST	PROPOSED ROW LINE.....	---
EX. CABLE TV.....	CTV	PROPOSED EASEMENT LINE.....	---
EX. FIRE HYDRANT.....	Y		

### BASIS OF BEARINGS

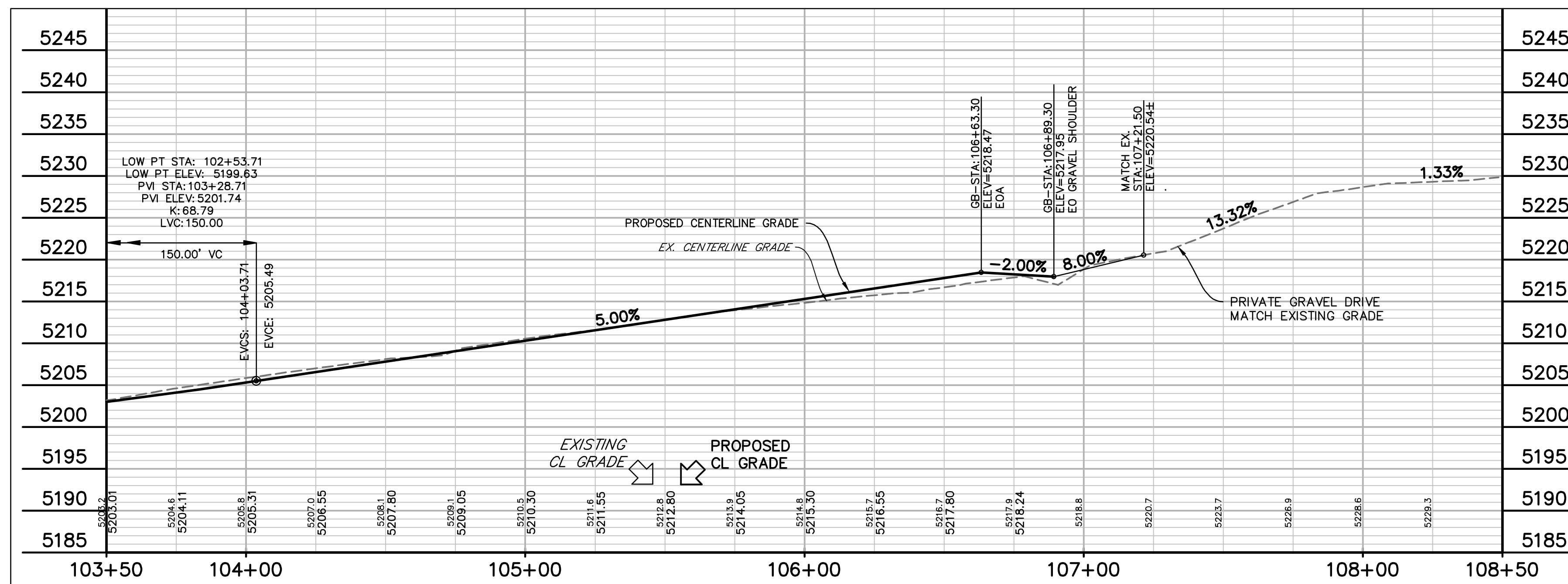
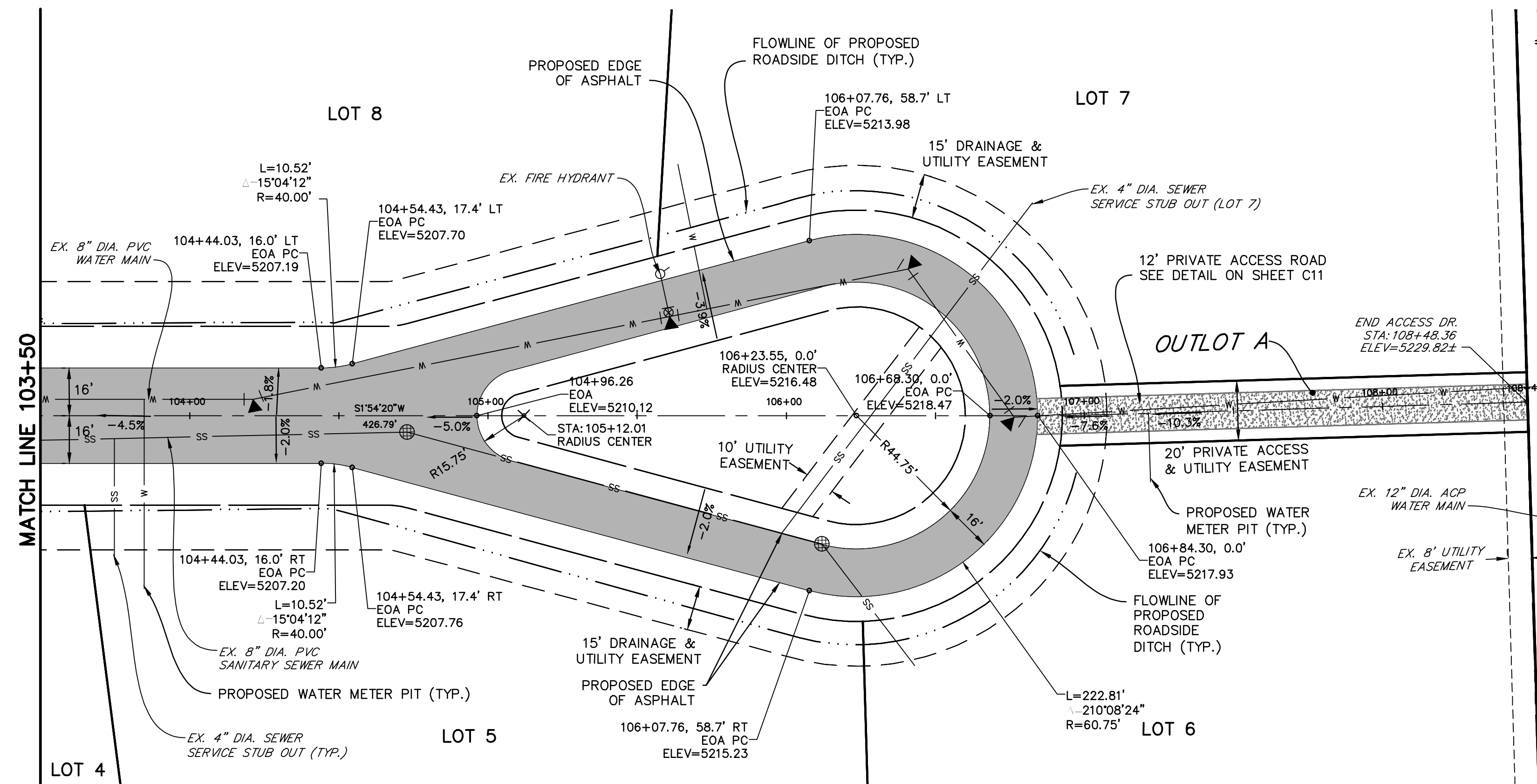
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### BENCHMARK

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KEY MAP  
NOT TO SCALE



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Engineers-Surveyors  
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BOULDER - GREELEY  
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CORPORATION

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FINAL CONSTRUCTION DRAWINGS FOR:  
Niwot Hills  
TDR/PUD SUBDIVISION  
FILING NO. 3  
BOULDER COUNTY, COLORADO

ISSUE	DATE
COUNTY SUBMITTAL	3/7/2022
DESIGNED BY:	CKW
DRAWN BY:	CHK
CHECKED BY:	MDM
FILE NAME:	PP02

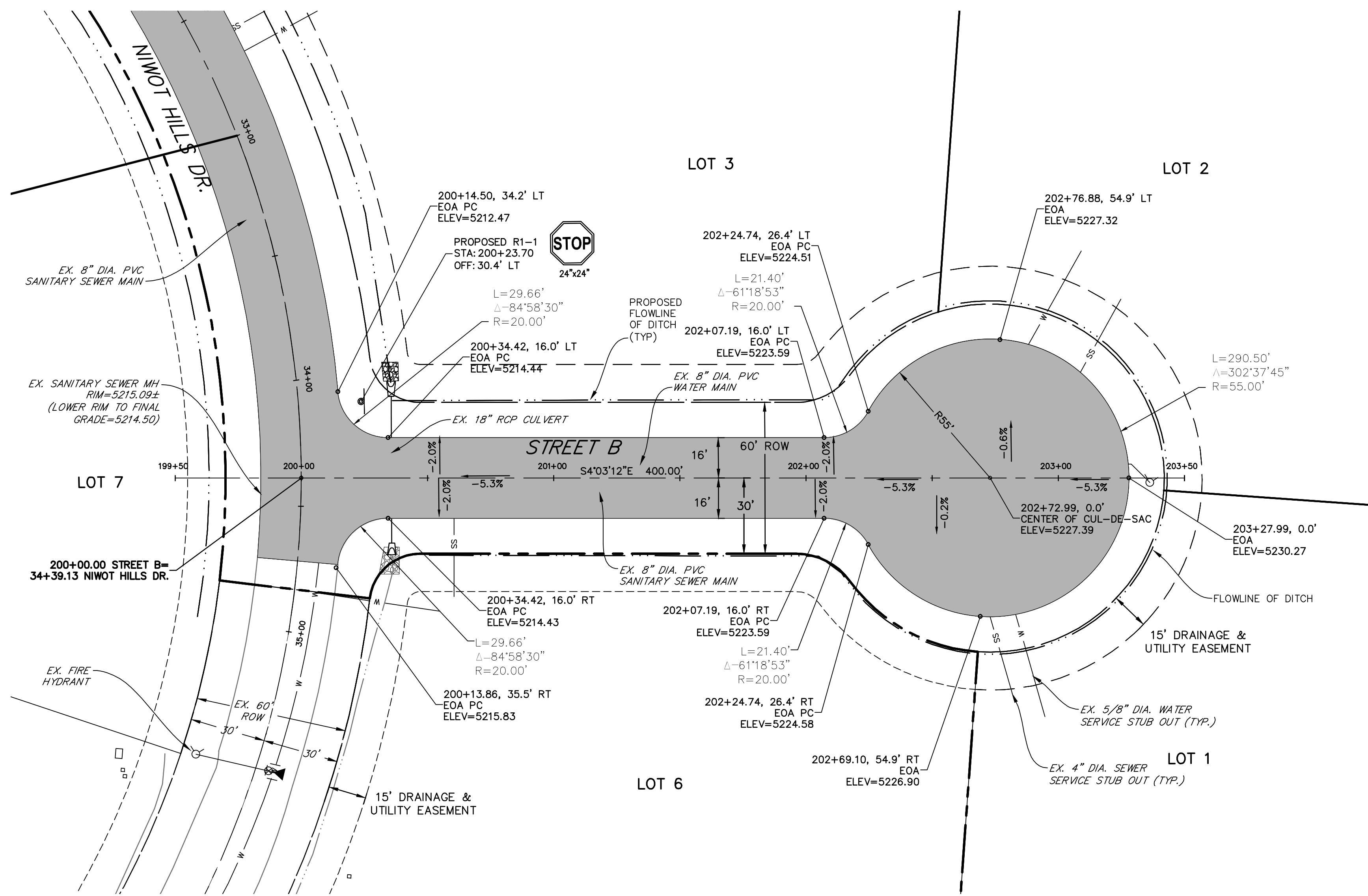
FOR, AND ON BEHALF OF,  
DREXEL, BARRELL & CO.  
DRAWING SCALE:  
HORIZONTAL: 1"=30'  
VERTICAL: 1"=10'

STREET A  
PLAN &  
PROFILE

PROJECT:20598-04BLCV  
DRAWING NO.

**C9**

SHEET: 9 OF 12

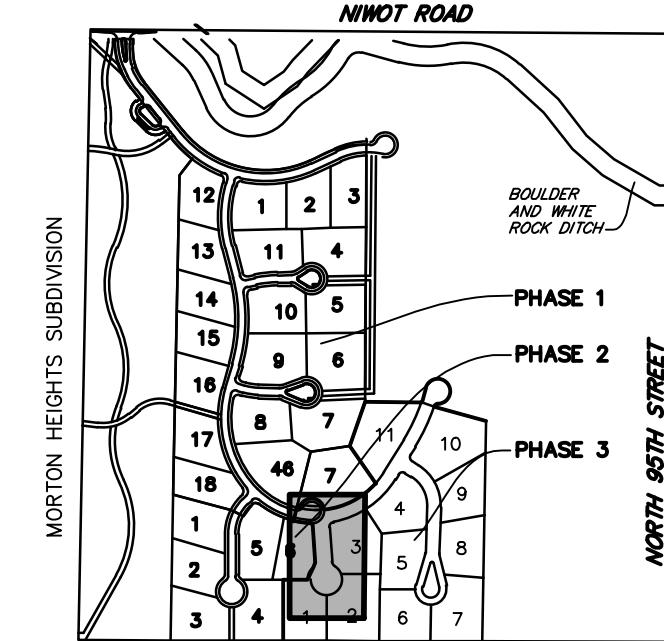


**BASIS OF BEARINGS**

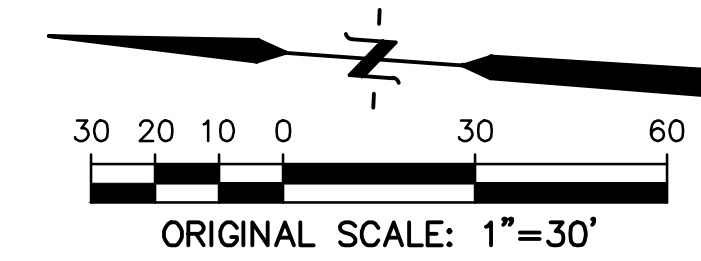
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**BENCHMARK**

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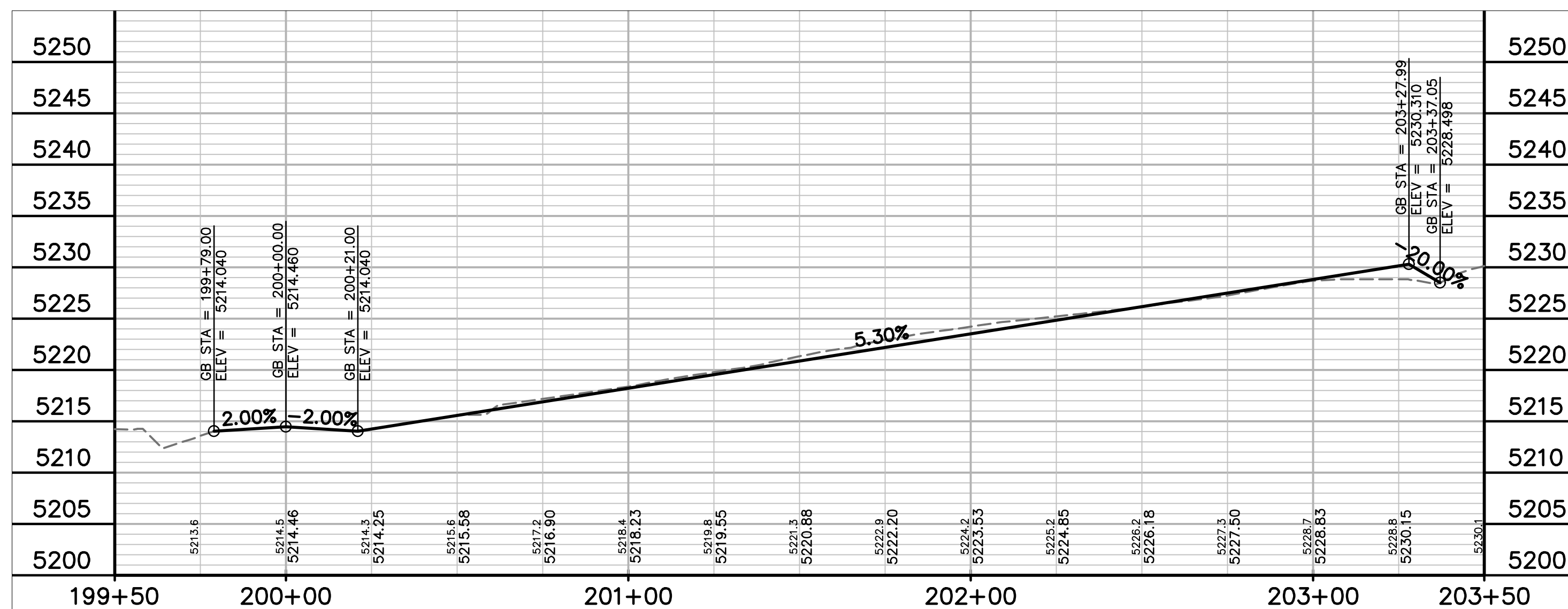


**KEY MAP**  
NOT TO SCALE



**LEGEND**

- PROPERTY LINE .....
- EX. ROW LINE .....
- EX. EASEMENT LINE .....
- EX. SANITARY SEWER..... SS
- EX. WATER LINE .....
- EX. STORM LINE .....
- EX. CABLE TV..... CTV
- EX. FIRE HYDRANT..... ⌘
- EX. WATER VALVE..... ⊙
- EX. MANHOLE .....
- PROPOSED METER..... ●
- PROPOSED ASPHALT .....
- PROPOSED ROW LINE .....
- PROPOSED EASEMENT LINE .....



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FINAL CONSTRUCTION DRAWINGS FOR:  
**NWOT HILLS  
TDR/PUD SUBDIVISION  
FILING NO. 3  
BOULDER COUNTY, COLORADO**

ISSUE	DATE
COUNTY SUBMITTAL	3/7/2022

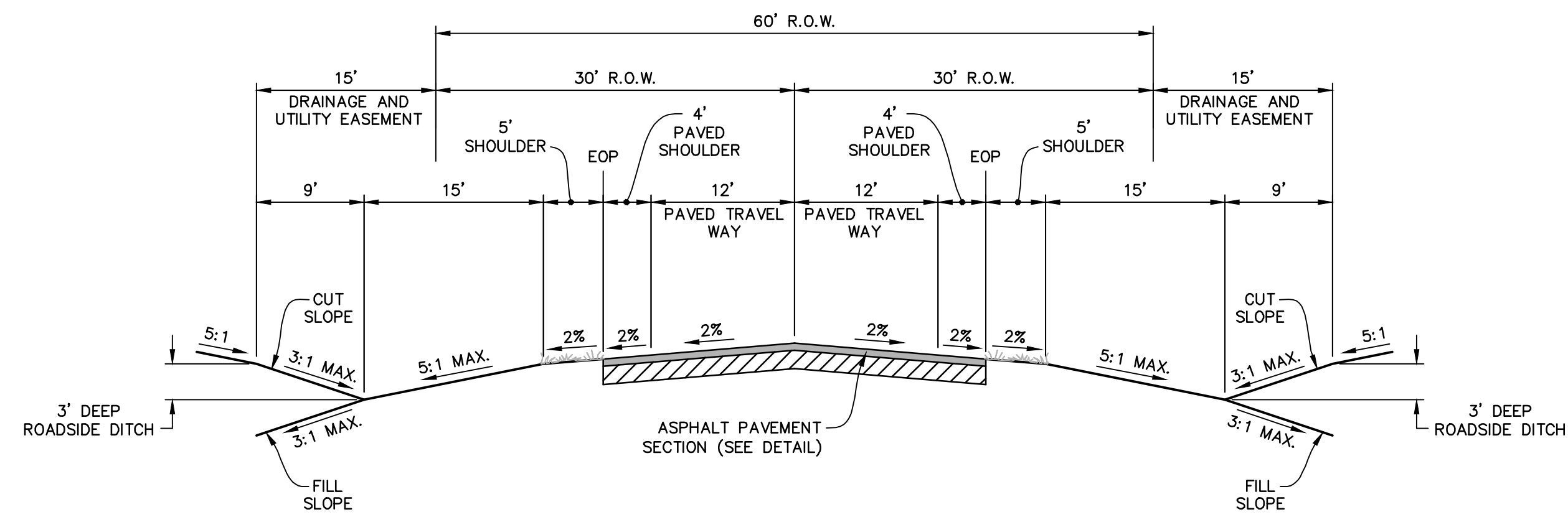
DESIGNED BY:	CHK
DRAWN BY:	CHK
CHECKED BY:	MDM
FILE NAME:	PP03

FOR, AND ON BEHALF OF,  
DREXEL, BARRELL & CO.  
DRAWING SCALE:  
HORIZONTAL: 1"=30'  
VERTICAL: 1"=10'

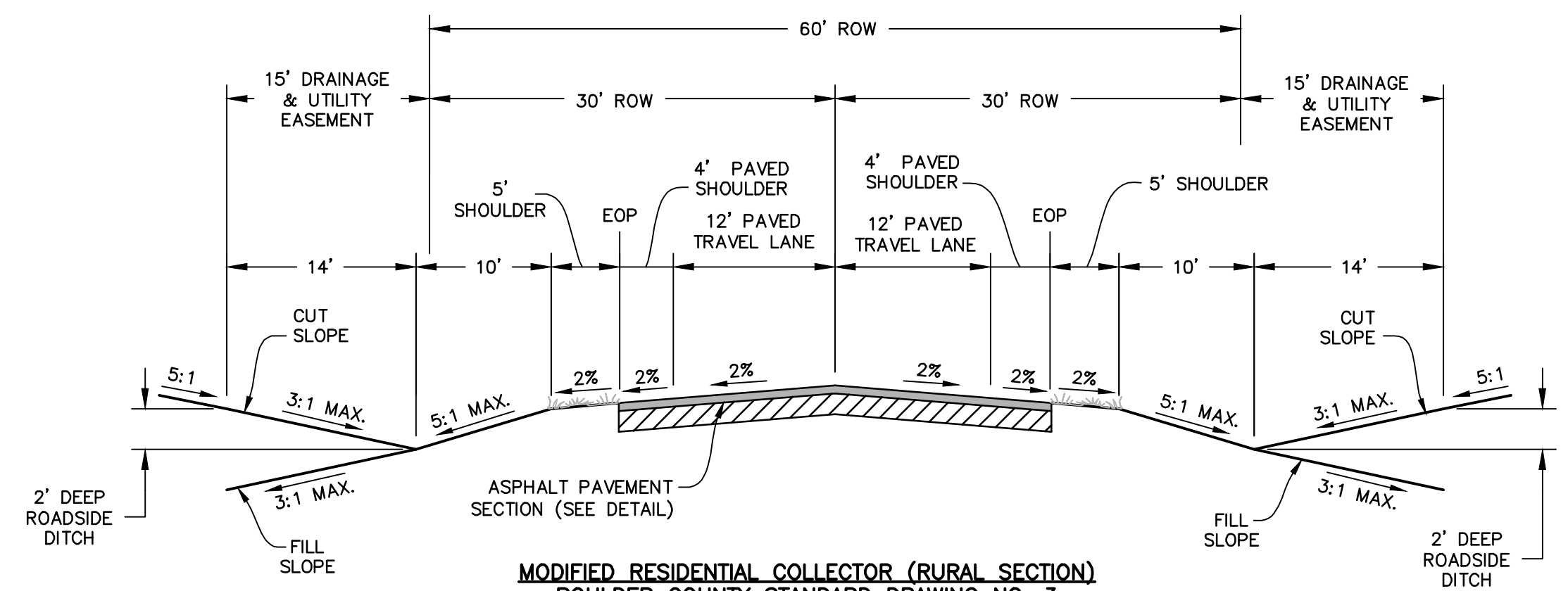
**STREET B  
PLAN &  
PROFILE**

PROJECT:20598-04BLCV  
DRAWING NO.

**C10**



**MODIFIED RESIDENTIAL COLLECTOR (RURAL SECTION)**  
**BOULDER COUNTY STANDARD DRAWING NO. 3**  
**TYPICAL ROAD SECTION FOR NIWOT HILLS DRIVE**  
 NO SCALE

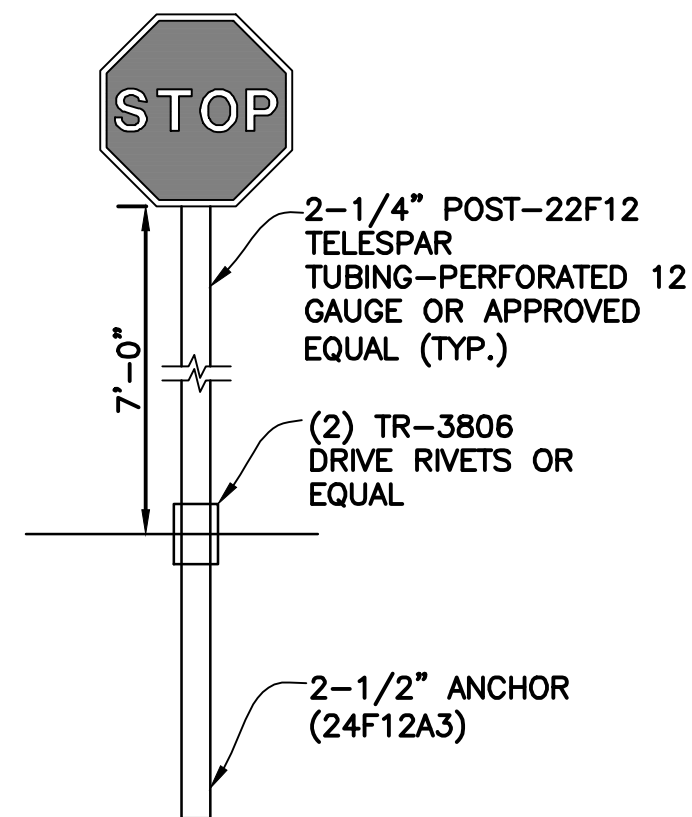


**MODIFIED RESIDENTIAL COLLECTOR (RURAL SECTION)**  
**BOULDER COUNTY STANDARD DRAWING NO. 3**  
**TYPICAL ROAD SECTION FOR STREET A & STREET B**  
 NO SCALE

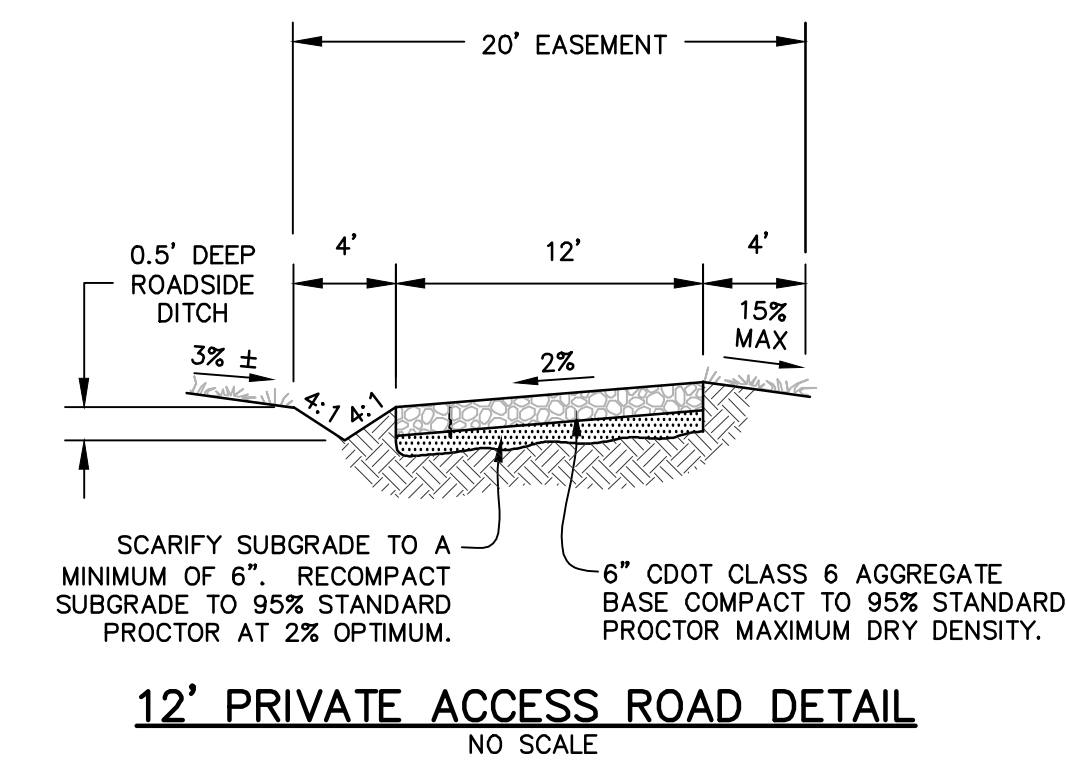
ALTERNATIVE	SECTION TYPE	PAVEMENT THICKNESS (INCHES)			
		ASPHALT PAVEMENT SURFACE	AGGREGATE BASE COURSE (CLASS 6)	PORTLAND CONCRETE CEMENT	TOTAL
1	COMPOSITE SECTION	4	9		13
2	FULL DEPTH	7			7
3	RIGID SECTION			7	7

NOTES:  
 PAVEMENT SPECIFICATIONS & MINIMUM THICKNESS ARE BASED ON THE GEOTECHNICAL SUBSURFACE INVESTIGATION BY SCOTT, COX & ASSOCIATES, INC. (PROJECT NO. 0016B) DATED FEBRUARY 2000. REFER TO THIS REPORT FOR ADDITIONAL DETAILS, SUB GRADE PREPARATION, AND MATERIAL SPECIFICATIONS.

**PAVEMENT SECTION DETAIL**  
 NO SCALE



**STOP SIGN & INSTALLATION DETAIL**  
 NO SCALE



**12' PRIVATE ACCESS ROAD DETAIL**  
 NO SCALE

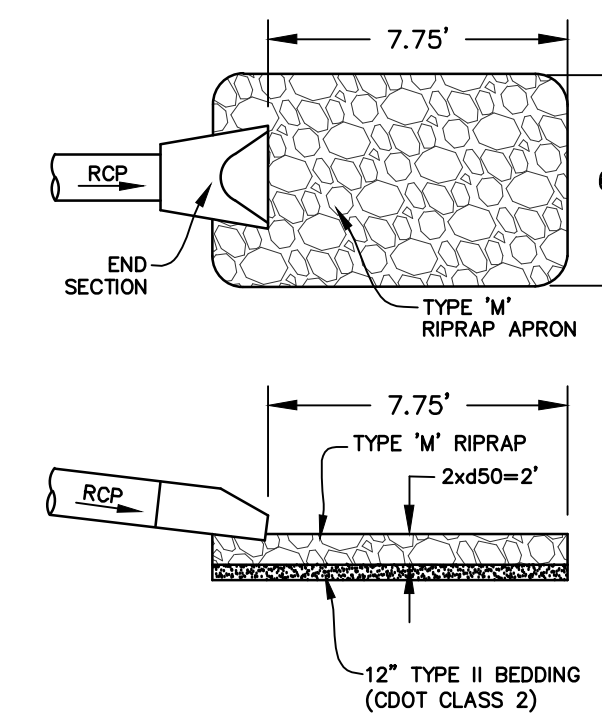
**TREVARTON ROADSIDE GRASS SEED MIX (RECOMMENDED):**

COMMON NAME	SCIENTIFIC NAME	VARIETY	% OF MIX	KG PLS / HA	LB PLS / ACRE
BIG BLUE STEM	ANDROPOGON GERARDII	PAWNEE	10	1.2	6.5
BLUE GAMMA	BOUTELOUA GRACILIS	HACHITA OR LOVINGTON	25	0.6	3.3
SIDE OATS GAMMA	BOUTELOUA CURTIPENDULA	VAUGHN	25	2.6	14.2
CANADIAN WILDRIE	ELYMUS CANADENSIS	NATIVE	10	1.7	9.3
SLENDER WHEATGRASS	ELYMUS TRACHYCAULUS	SAN LUIS	10	5.4	29.4
WESTERN WHEATGRASS	PASCOPYRUM SMITHII	ARRIBA	20	15.5	84.5
TOTAL =			100%	27.0	147.2

NOTES:  
 1. KG PLS / HA = KILOGRAMS OF PURE LIVE SEED PER HECTARE.  
 2. LB PLS / ACRE = POUNDS OF PURE LIVE SEED PER ACRE.  
 3. ORDERS WILL BE MADE IN PURE LIVE SEED POUNDS, NOT BULK POUNDS.  
 4. RATES SHOWN IN THE ABOVE TABLE ARE FOR DRILL SEEDING.  
 5. RATES SHOWN IN THE ABOVE TABLE NEED TO BE DOUBLED IF A BROADCAST SEEDING METHOD IS USED.  
 6. THE USE OF ANY OTHER SEED MIX MUST BE APPROVED BY CITY OF LAFAYETTE.

**TEMPORARY SEED MIX**

- NOTES**
- RIPRAP SHALL CONSIST OF HARD, DENSE, DURABLE, STONE, ANGULAR IN SHAPE AND RESISTANT TO WEATHERING. ROUNDED STONE OR BouldERS WILL NOT BE ACCEPTED AS RIPRAP MATERIAL. THE STONE SHALL HAVE A SPECIFIC GRAVITY OF AT LEAST 2.5. EACH PIECE SHALL HAVE ITS GREATEST DIMENSION NOT GREATER THAN THREE TIMES ITS LEAST DIMENSION.
  - STONES WITH TYPICAL DIMENSIONS THAT ARE EQUAL TO 450 AND LARGER SHALL BE PLACED AT THE TOP SURFACE WITH FACES AND SHAPES MATCHED TO MINIMIZE VOIDS AND FORM AS SMOOTH A SURFACE AS PRACTICAL.
  - DUMPING AND BACKHOE PLACEMENT ALONE IS NOT SUFFICIENT TO ENSURE A PROPERLY INTERLOCKED SYSTEM. THE MATERIAL MAY BE MACHINE-PLACED AND THEN ARRANGED AS NECESSARY BY THE USE OF GRADALL WITH A MULTI-PRONG GRAPPLE DEVICE OR BY HAND TO INTERLOCK AND FORM A SUBSTANTIAL BOND.



**OUTLET STRUCTURE RIPRAP BEDDING DETAIL**  
 NO SCALE

RIPRAP SHALL CONFORM TO THE GRADATION REQUIREMENTS GIVEN BELOW IN CDOT TABLE 506-2.

PAY ITEM	STONE SIZE (INCHES)	% OF MATERIAL SMALLER THAN TYPICAL STONE <sup>1</sup>	TYPICAL STONE WEIGHTS (POUNDS)	
			TYPICAL DIMENSIONS <sup>2</sup> (INCHES)	TYPICAL WEIGHT <sup>3</sup>
RIPRAP 6	70-100	12	85	"M"
	50-70	9	35	
	35-50	2	0.4	
RIPRAP 9	70-100	15	160	"L"
	50-70	12	85	
	35-50	3	1.3	
RIPRAP 12	70-100	21	440	"M"
	50-70	18	275	
	35-50	12	65	
RIPRAP 18	100	30	1280	"M"
	50-70	24	650	
	35-50	18	275	
RIPRAP 24	100	42	3500	"M"
	50-70	33	1700	
	35-50	24	650	

1. 450=NOMINAL STONE SIZE  
 2. BASED ON TYPICAL ROCK WEIGHT  
 3. EQUIVALENT SPHERICAL DIAMETER BASED ON SPECIFIC GRAVITY=2.5

PREPARED BY:



Drexel, Barrell & Co.  
 Engineers-Surveyors  
 1800 38TH STREET  
 BOULDER, COLORADO 80301  
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OWNER/CLIENT:

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 BOULDER, COLORADO 80303  
 ATTN: JASON MARKEL  
 (303) 339-6122

FINAL CONSTRUCTION DRAWINGS FOR:  
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 BOULDER COUNTY, COLORADO

ISSUE	DATE
COUNTY SUBMITTAL	3/7/2022

DESIGNED BY: CWK  
 DRAWN BY: CWK  
 CHECKED BY: MDM  
 FILE NAME: DT01

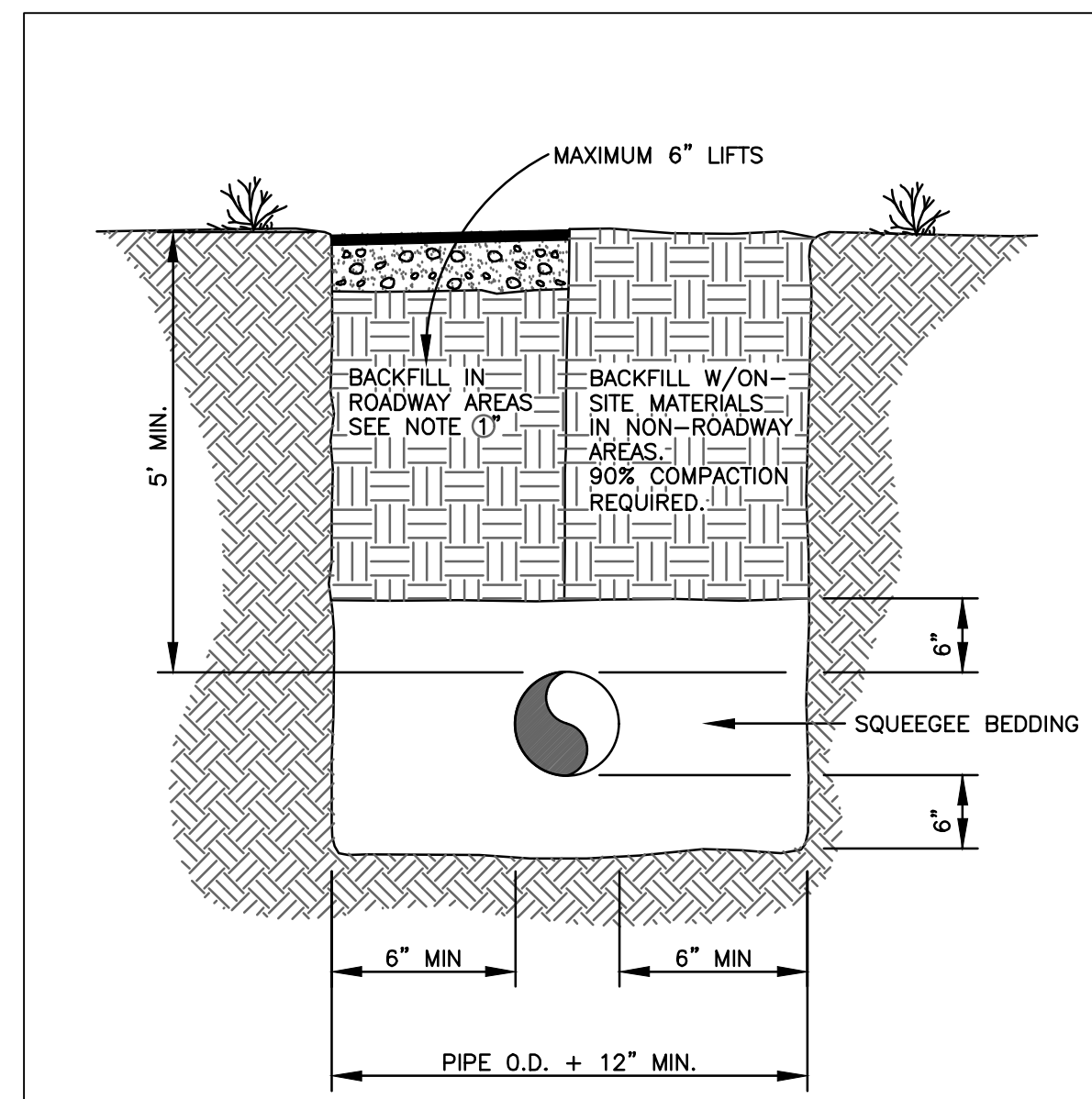
DRAWING SCALE:  
 HORIZONTAL: NA  
 VERTICAL: NA

**DETAILS SHEET**

PROJECT: 20598-04BLCV  
 DRAWING NO.

**C11**

SHEET: 11 OF 12



NOTE 1: BACKFILL MATERIAL IN ROADWAY AREAS SHALL BE CLASS 6 ROADBASE OR AN ALTERNATIVE APPROVED BY THE LOCAL TRANSPORTATION AUTHORITY. 95% COMPACTION REQUIRED.

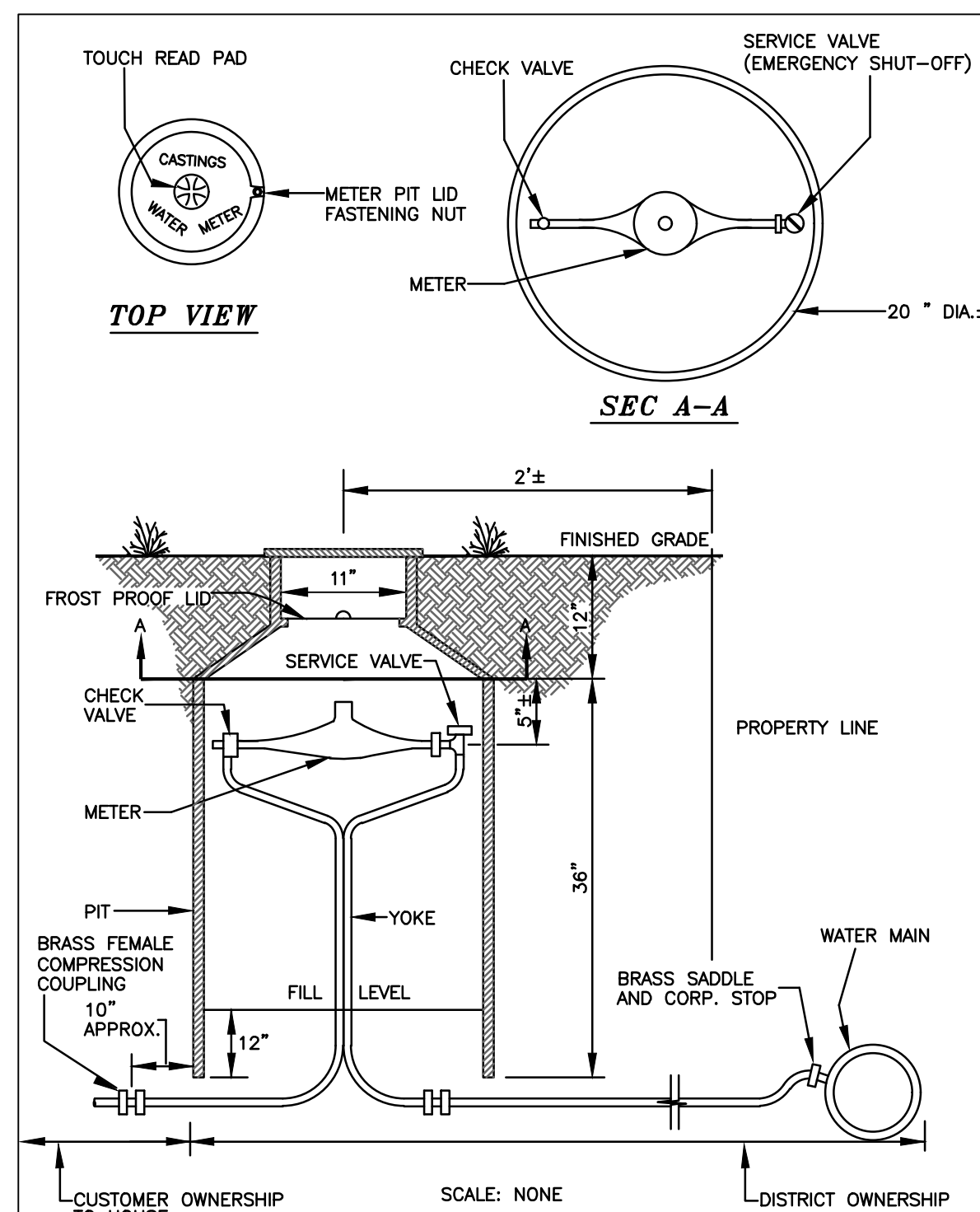
SCALE: NONE

**TYPICAL TRENCH DETAIL**

<b>LEFT HAND WATER DISTRICT</b>	
BKEETH	1-DD
REV. 9-22-99	D:\AUTOCAD\DET1.DWG

**LEFT HAND WATER DISTRICT NOTES**

- ALL MATERIAL AND CONSTRUCTION SHALL CONFORM WITH THE LEFT HAND WATER DISTRICT "STANDARDS AND SPECIFICATIONS", LATEST REVISION THEREOF.
- SHOULD CIRCUMSTANCES WARRANT CHANGES FROM THE APPROVED PLANS OR SPECIFICATIONS, THE PROPOSED REVISION MUST BE SUBMITTED TO AND APPROVED BY THE DISTRICT. NO WORK SHALL PROCEED ON THAT PORTION OF THE PROJECT BEING REVISED UNTIL SAID REVISIONS ARE SUBMITTED AND APPROVED BY THE DISTRICT. MINOR CHANGES FROM THE PLANS OR SPECIFICATION MAY BE APPROVED BY OBTAINING WRITTEN PERMISSION FROM THE DISTRICT.
- INSPECTIONS SHALL BE REQUIRED DURING ALL PHASES OF INSTALLATION. THE DISTRICT'S OFFICE SHALL BE NOTIFIED AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE WHEN PIPE IS TO BE LAID IN ANY TRENCH. NO PIPE OR JOINTS SHALL BE COVERED UNTIL THEY HAVE BEEN INSPECTED BY THE DISTRICT OR WRITTEN APPROVAL TO BACKFILL IS OBTAINED FROM THE DISTRICT.
- NO CONSTRUCTION WORK SHALL BE STARTED UNTIL THE APPLICANT HAS RECEIVED WRITTEN APPROVAL FROM THE DISTRICT.
- ALL WORK PERFORMED IN THE PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED UNDER AN ENCROACHMENT PERMIT FROM THE CONTROLLING AGENCY AND IN ACCORDANCE WITH THE RULES AND REGULATIONS OF SUCH A PERMIT. ALL PERMITS SHALL BE OBTAINED BY THE OWNER OR THE CONTRACTOR.
- WATER MAIN SHALL BE CONSTRUCTED ACCORDING TO THE LOCATION AND GRADE AS SHOWN ON THESE PLANS. MAINTAIN FIVE (5) FEET MINIMUM OF COVER OVER WATER MAIN AND SERVICES.
- WATER MAINS SHALL BE LAID AT LEAST TEN (10) FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SANITARY SEWER. WATER MAINS CROSSING ABOVE STORM AND SANITARY SEWERS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF EIGHTEEN (18) INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. AT ALL SUCH CROSSINGS, ONE FULL LENGTH OF WATER PIPE (MINIMUM EIGHTEEN (18) FEET LONG) SHALL BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE.
- WHERE THE WATER MAIN IS LOWERED TO CROSS UNDER A STORM OR SANITARY SEWER, THE SEWER SHALL BE ENCASED IN A MINIMUM OF FIVE (5) INCHES OF CONCRETE. THE ENCASEMENT SHALL EXTEND ALONG THE SEWER LINE FOR A MINIMUM OF TEN (10) FEET EITHER SIDE OF THE WATERLINE. AT ALL SUCH CROSSINGS, ONE FULL LENGTH OF WATER PIPE (MINIMUM EIGHTEEN (18) FEET LONG) SHALL BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE.
- NOT MORE THAN FOUR HUNDRED FIFTY (450) LINEAR FEET OF TRENCH SHALL BE DUG IN ADVANCE OF THE COMPLETED PIPE LAYING OPERATIONS. SEE TYPICAL TRENCH DETAIL 1-DD THIS SHEET.
- THE MAXIMUM CLEAR WIDTH OF TRENCH AT THE TOP OF THE PIPE SHALL NOT BE MORE THAN THE OUTSIDE DIAMETER OF THE BARREL OF THE PIPE PLUS TWO (2) FEET.
- ALL WATER MAIN SHALL BE BEDDED IN CLEAN, FREE DRAINING WELL-GRADED SAND OR SQUEEGEE IN CONFORMANCE WITH THE DISTRICT'S SPECIFICATIONS.
- AT LOCATIONS WHERE CONNECTIONS TO EXISTING WATER MAINS ARE TO BE INSTALLED, THE CONTRACTOR SHALL LOCATE EXISTING MAINS BOTH VERTICALLY AND HORIZONTALLY AND SHALL VERIFY THEIR EXACT SIZE AND TYPE OF MATERIAL IN ADVANCE OF THE TIME SCHEDULE FOR MAKING CONNECTIONS.
- ALL CONNECTIONS TO EXISTING MAINS IN SERVICE SHALL BE WET TAPS. NO TAPPING SHALL BE DONE WITHOUT A DISTRICT INSPECTOR PRESENT.
- IF IT IS IMPOSSIBLE TO MAKE THE CONNECTION WITHOUT A SHUT DOWN, THE CONTRACTOR SHALL NOTIFY AND SCHEDULE THE CONNECTION WITH THE DISTRICT.
- ALL EXISTING VALVES SHALL BE OPERATED ONLY BY DISTRICT EMPLOYEES.
- ALL PVC PIPE AND FITTINGS USED SHALL MEET A.W.W.A. SPECIFICATION C900 AND SHALL BE CLASS 200. THE PIPES SHALL HAVE RUBBER RING GASKETS.
- ALL DUCTILE IRON PIPE SHALL MEET A.W.W.A. SPECIFICATION C151 AND SHALL BE CLASS 350. ALL PIPE JOINTS SHALL BE AN APPROVED SLIP TYPE OR MECHANICAL JOINT AS APPROVED BY THE DISTRICT.
- POLYETHYLENE ENCASEMENT SHALL BE REQUIRED FOR ALL DUCTILE IRON PIPE. POLYETHYLENE ENCASEMENT SHALL BE EIGHT (8) MILLS THICK AND SHALL MEET A.W.W.A. SPECIFICATION C105.
- FITTINGS SHALL BE CAST OF DUCTILE IRON CONFORMING TO A.W.W.A. SPECIFICATION C104, C110, C111, AND C153. FITTINGS SHALL BE CLASS 250.
- RESIDENTIAL DOMESTIC WATER SERVICES SHALL BE 3/4" INCH COPPER TUBING AND SHALL MEET ASTM CLASS 1 SPECIFICATIONS AND U.S. GOVERNMENT TYPE K SPECIFICATION WW-T-799. SEE TYPICAL RESIDENTIAL SERVICE DETAIL 7-DD THIS SHEET.
- RESIDENTIAL DOMESTIC WATER METERS SHALL BE 5/8" INCH METERS. OPEN SPACE IRRIGATION WATER METERS SHALL BE 5/8" INCH METERS. ALL METERS, PITS AND YOKES SHALL BE PURCHASED FROM THE DISTRICT. SERVICE LINES SHALL BE STUBBED OUT ELEVEN (11) FEET PAST THE PIT. SERVICE LOCATIONS SHALL BE AS INDICATED BY THESE PLANS.
- VALVES IN WATER MAINS SHALL BE LOCATED AS SHOWN ON THESE PLANS.
- A VALVE BOX SHALL BE PROVIDED FOR EVERY VALVE. SEE VALVE BOX DETAIL 3-DD THIS SHEET.
- ALL PLUGS, CAPS, TEES AND BENDS SHALL BE PROVIDED WITH A CONCRETE THRUST BLOCK. SEE HORIZONTAL THRUST BLOCKS DETAIL 5-DD THIS SHEET.
- HYDRANTS SHALL BE SET TO THE FINISHED GRADE, WITH THE SAFETY FLANGE APPROXIMATELY FOUR (4) INCHES ABOVE THE GROUND, AS INDICATED BY THESE PLANS. SEE MODIFIED STANDARD HYDRANT DETAIL 4-DD THIS SHEET. HYDRANTS SHALL BE MUELLER SUPER CENTURION 200 OR 250 AND SHALL COMPLY WITH AWWA SPECIFICATION C-502. ALL HYDRANTS SHALL BE EQUIPPED WITH TRAFFIC KNOCK-OFF TYPE SECTIONS.



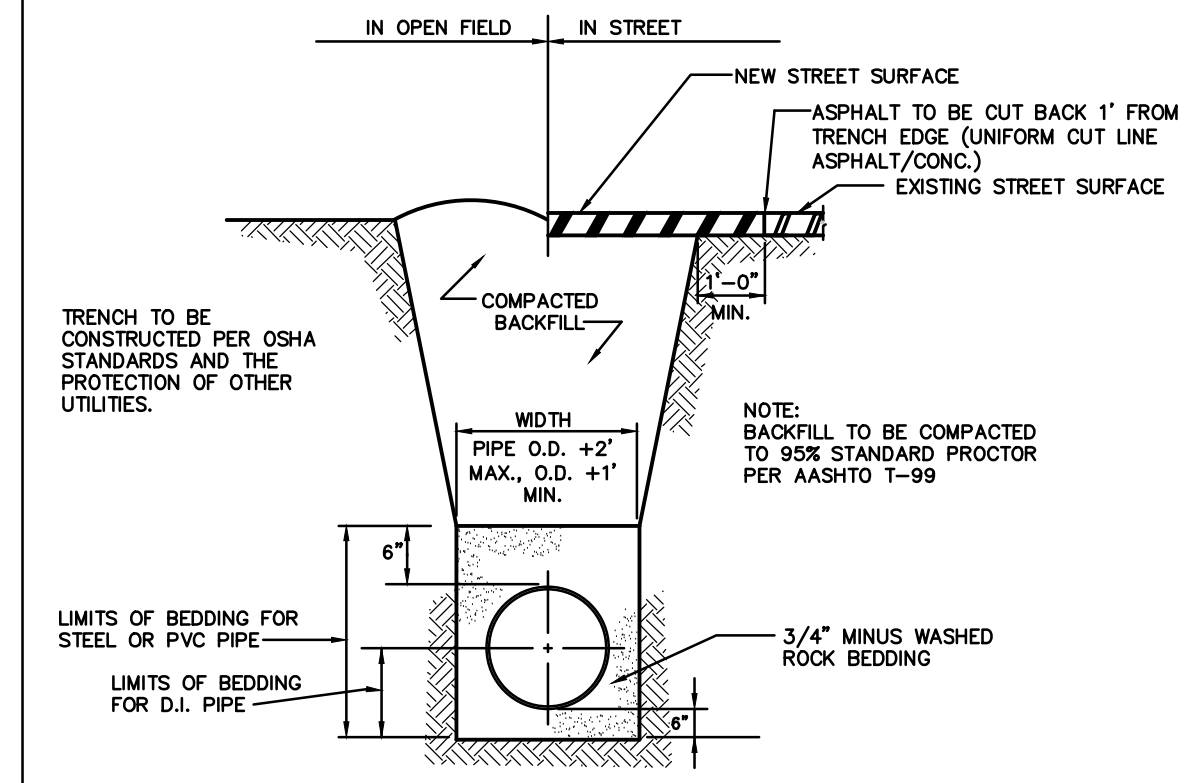
**TYPICAL RESIDENTIAL SERVICE**

<b>LEFT HAND WATER DISTRICT</b>	
BKEETH	7-DD
REV. 10-28-99	D:\AUTOCAD\DET7.DWG

**NIWOT SANITATION DISTRICT NOTES**

- ALL MATERIAL AND CONSTRUCTION SHALL CONFORM WITH THE NIWOT SANITATION DISTRICT "STANDARD SEWER CONSTRUCTION SPECIFICATIONS", LATEST REVISION THEREOF.
- SHOULD CIRCUMSTANCES WARRANT CHANGES FROM THE APPROVED PLANS OR SPECIFICATIONS, THE PROPOSED REVISION MUST BE SUBMITTED AND APPROVAL MUST BE OBTAINED FROM THE DISTRICT. NO WORK SHALL PROCEED ON THAT PORTION OF THE PROJECT BEING REVISED UNTIL SAID REVISIONS ARE SUBMITTED, APPROVED AND DISTRIBUTED. MINOR CHANGES FROM THE PLANS OR SPECIFICATION MAY BE APPROVED BY OBTAINING WRITTEN PERMISSION FROM THE DISTRICT.
- THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AND INTERESTED PARTIES 48 HOURS PRIOR TO COMMENCEMENT OF WORK IN ORDER TO INSURE THAT THERE WILL NOT BE INTERRUPTIONS OF SERVICE DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE LIABLE FOR ALL DAMAGES TO EXISTING STRUCTURES AND SHALL SAVE THE DISTRICT HARMLESS FROM ANY LIABILITY OF EXPENSE FOR INJURIES, DAMAGES, OR REPAIRS TO SUCH FACILITIES.
- SHOULD ANY UTILITY BE DAMAGED IN THE CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER OF SUCH UTILITY, AND UNLESS AUTHORIZED BY THE OWNER OF THE UTILITY, THE CONTRACTOR SHALL NOT ATTEMPT TO MAKE REPAIRS.
- NO SANITARY SEWER SHALL BE CONSTRUCTED WITHIN THE DISTRICT UNTIL FINAL PLANS AND SPECIFICATION HAVE BEEN APPROVED BY THE DISTRICT AND WRITTEN AUTHORIZATION TO PROCEED HAS BEEN OBTAINED FROM THE DISTRICT.
- NO EXCAVATION SHALL BE STARTED UNTIL ALL REQUIRED PERMITS HAVE BEEN OBTAINED.
- THE DISTRICT'S OFFICE SHALL BE NOTIFIED AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY CONSTRUCTION OPERATION. NO PIPES OR JOINTS SHALL BE COVERED UNTIL THEY HAVE BEEN INSPECTED BY THE DISTRICT.
- INSPECTIONS SHALL BE REQUIRED AS FOLLOWS:
  - DURING TRENCHING OPERATIONS
  - DURING LAYING OPERATIONS
  - DURING BACKFILLING OPERATIONS
- PHYSICAL CONNECTION TO THE EXISTING SANITARY SEWER SYSTEM SHALL NOT BE MADE UNTIL THE SEWER HAS BEEN SATISFACTORILY COMPLETED.
- SANITARY SEWER LINES SHALL BE CONSTRUCTED ACCORDING TO THE LOCATION AND GRADE AS SHOWN ON THESE PLANS. MAINTAIN A MINIMUM OF SIX (6) FEET OF COVER OVER SANITARY SEWER LINES AND SERVICES.
- SANITARY SEWER LINES SHALL BE LOCATED A MINIMUM OF TEN (10) FEET HORIZONTALLY AS MEASURED FROM CENTERLINE FROM THE EXISTING OR PROPOSED WATER MAINS. MAINTAIN A MINIMUM OF EIGHTEEN (18) INCH VERTICAL SEPARATION BENEATH EXISTING AND PROPOSED WATER MAINS.
- LENGTH OF OPEN EXCAVATION SHALL NOT EXCEED 450 LINEAR FEET OF TRENCH IN ADVANCE OF THE COMPLETED PIPE-LAYING OPERATION.
- THE MINIMUM CLEAR WIDTH OF UNSHEETED OR SHEARED TRENCH MEASURED AT THE HORIZONTAL DIAMETER OF THE PIPE SHALL BE EIGHTEEN (18) INCHES, OR ONE (1) FOOT GREATER THAN THE OUTSIDE DIAMETER OF THE BARREL OF THE PIPE; WHICHEVER IS GREATER. THE MAXIMUM CLEAR WIDTH OF TRENCH AT THE TOP OF THE PIPE SHALL NOT BE MORE THAN THE OUTSIDE DIAMETER OF THE BARREL PLUS TWO (2) FEET AS PER THE DETAIL ON THIS SHEET.
- PVC PIPE SHALL BE BEDDED IN CLEAN, FREE DRAINING, WELL GRADED SAND OR SQUEEGEE IN CONFORMANCE WITH THE DISTRICT'S SPECIFICATIONS.
- ALL TRENCHES AND EXCAVATIONS SHALL BE BACKFILLED IMMEDIATELY AFTER THE PIPE IS LAID THEREIN, BUT NOT BEFORE THE PIPE HAS BEEN INSPECTED BY THE DISTRICT.
- WHERE EXCAVATION IS MADE THROUGH PERMANENT PAVEMENTS OR SIDEWALKS, THE ENTIRE BACKFILL TO THE SUBGRADE OF THE STRUCTURE SHALL BE MADE IN ACCORDANCE WITH BOULDER COUNTY SPECIFICATIONS.
- ALL SERVICES SHALL BE FOUR (4) INCH PVC PIPE AND SHALL BE CONSTRUCTED PER THE TYPICAL SERVICE CONNECTION DETAIL ON THIS SHEET.
- ALL SANITARY SEWER LINES SHALL BE PVC PIPE MEETING ASTM D178 AND D3034. THE MAXIMUM ALLOWABLE LENGTH PER SECTION OF PIPE FROM BELL TO SPIGOT SHALL NOT EXCEED TWELVE AND ONE-HALF (12.5) FEET.
- ALL PVC PIPE SHALL HAVE A WALL THICKNESS MEETING ASTM D3034: SDR 35 OR BETTER.
- PIPE JOINT ASSEMBLIES SHALL BE BELL AND SPIGOT WITH AN O-RING RUBBER GASKET CONFORMING TO ASTM D3034.
- ALL MANHOLES SHALL BE CONSTRUCTED USING PRECAST CONCRETE SECTIONS FABRICATED FROM TYPE II CONCRETE AND CONFORMING TO ASTM C478. MANHOLE CONES SHALL BE OF THE ECCENTRIC TYPE, CONFORMING TO THE DIMENSIONS OF THE STANDARD DETAIL ON THIS SHEET.
- ALL MANHOLES SHALL BE CONSTRUCTED WITH A CAST-IN-PLACE MANHOLE BASE CONFORMING TO THE DIMENSIONS OF THE STANDARD DETAIL ON THIS SHEET. PROVIDE A MINIMUM TWO-TENTHS (0.2) OF A FOOT DROP THROUGH THE MANHOLE AS SPECIFIED BY THESE PLANS.
- ALL PIPE SHALL BE LAID AND MAINTAINED TO THE REQUIRED LINES AND GRADES WITHIN FIVE HUNDREDTHS (0.05) OF A FOOT. THE MINIMUM GRADE OF AN EIGHT (8) INCH SEWER SHALL BE 0.40%.
- WHERE SHOWN ON THESE PLANS, A PIECE OF PIPE OF THE PROPER SIZE SHALL BE BUILT INTO THE MANHOLE WHERE FUTURE LATERALS MAY BE CONNECTED. THIS PIPE SHALL BE SEALED WITH A PLUG OR STOPPED AT ITS OUTER END AND AN INVERT SHALL BE BUILT INTO EACH MANHOLE FOR SUCH LATERAL CONNECTIONS. STUB-OUTS FOR FUTURE USE SHALL NOT EXCEED TWO (2) FEET IN LENGTH FROM THE OUTSIDE WALL OF THE MANHOLE TO THE FIRST BELL.
- MANHOLES SHALL BE RAISED TO FINISHED GRADE USING PRECAST CONCRETE RINGS.

**NIWOT SANITATION DISTRICT TYPICAL TRENCH**



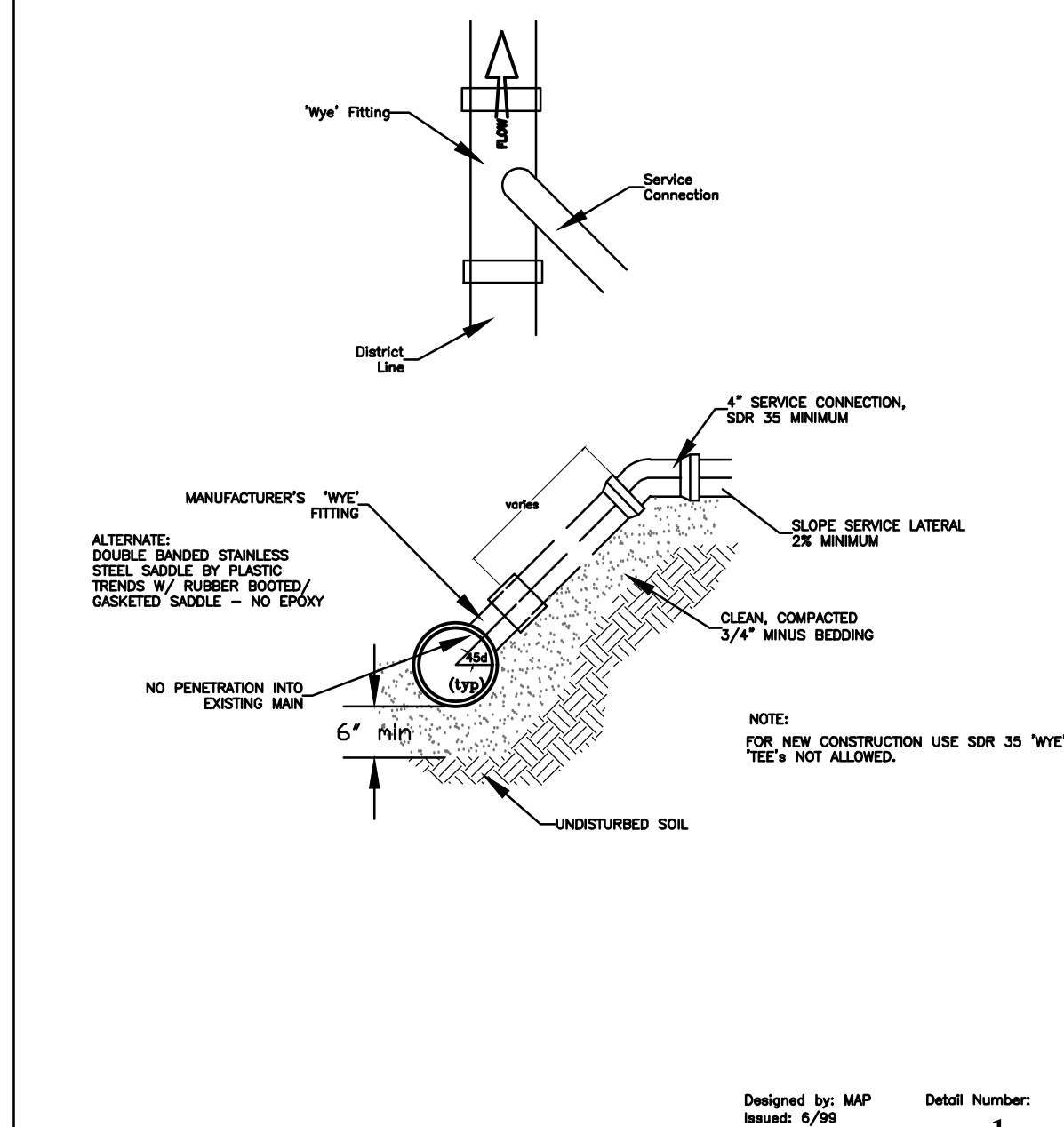
**TYPICAL TRENCH SECTION**

NO SCALE

Designed by: MAP  
Issued: 6/99  
Revised: 12/99

Detail Number:  
**2**

**NIWOT SANITATION DISTRICT TYPICAL SERVICE CONNECTION**



Designed by: MAP  
Issued: 6/99  
Revised: 12/99

Detail Number:  
**1**

PREPARED BY:



Drexel, Barrell & Co.  
Engineers-Surveyors  
1800 38TH STREET  
BOULDER, COLORADO 80301  
(303) 442-4338  
BOULDER - GREELEY  
COLORADO SPRINGS

OWNER/CLIENT:

**RIDGELINE DEVELOPMENT CORPORATION**

5723 ARAPAHOE AVENUE, #2B  
BOULDER, COLORADO 80303  
ATTN: JASON MARKEL  
(303) 339-6122

FINAL CONSTRUCTION DRAWINGS FOR:  
**NIWOT HILLS  
TDR/PUD SUBDIVISION  
FILING NO. 3  
BOULDER COUNTY, COLORADO**

ISSUE	DATE
COUNTY SUBMITTAL	3/7/2022
DESIGNED BY:	CKW
DRAWN BY:	CKW
CHECKED BY:	MDM
FILE NAME:	DT01

DRAWING SCALE:  
HORIZONTAL: NA  
VERTICAL: NA

**DETAILS SHEET**

PROJECT:20598-04BLCV  
DRAWING NO.

**C12**

SHEET: 12 OF 12