



City of Ketchum

June 7, 2021

Mayor Bradshaw and City Councilors
City of Ketchum
Ketchum, Idaho

Mayor Bradshaw and City Councilors:

Recommendation to approve Right-of-Way Encroachment Agreement 20643 for placement of snowmelt in the City Right-of-Way at 120 Northwood Way.

Recommendation and Summary

Staff is recommending Council approve the attached Encroachment Agreement and adopt the following motion:

"I move to authorize the Mayor to sign Encroachment Agreement 20643 with Corey and Amber Black."

The reasons for the recommendation are as follows:

- The improvements will not impact the use or operation of the residential street
- The improvements will not impact drainage within the City ROW
- The owner will be required to maintain the sidewalk and snowmelt

Introduction and History

A Right-of-Way Encroachment Permit request was received for placement of a snowmelt system within the sidewalk, curb, and gutter within the City's Right-of-Way along 120 Northwood Way.

Right-of-Way standards were developed to achieve goals of drainage, parking, snow storage, access for emergency vehicles, and provide materials that can be reasonably maintained by the city. Pavers, snowmelt systems, and subsurface drip irrigation systems are not maintained by the City but may be approved through an encroachment agreement.

City code requires a right-of-way encroachment permit for any permanent encroachment in the public right-of-way. These agreements are intended to help protect the City in the event the proposed encroachments were to ever pose an issue requiring repair, relocation, or removal of the encroachment.

Analysis

The proposed encroachments were determined not to impact public access or city operations.

Financial Impact

There is no financial impact resulting from approval of this encroachment agreement.

Attachments:

Encroachment Agreement 20643

WHEN RECORDED, PLEASE RETURN TO:

**OFFICE OF THE CITY CLERK
CITY OF KETCHUM
POST OFFICE BOX 2315
KETCHUM, IDAHO 83340**

RIGHT-OF-WAY ENCROACHMENT AGREEMENT 20643

THIS AGREEMENT, made and entered into this ____ day of ____, 2021, by and between the CITY OF KETCHUM, IDAHO, a municipal corporation ("Ketchum"), whose address is Post Office Box 2315, Ketchum, Idaho and RED FISH PROPERTIES, (collectively referred to as "Owner"), whose address is 540 EASTRIDGE DRIVE, HAILEY, ID 83333.

RECITALS

WHEREAS, Owner is the owner of real property described as 120 Northwood Way ("Subject Property"), located within the City of Ketchum, State of Idaho; and

WHEREAS, Owner wishes to permit placement of snowmelt within the sidewalk, curb, and gutter within the right-of-way on Northwood Way. These improvements are shown in Exhibit "A" attached hereto and incorporated herein (collectively referred to as the "Improvements"); and,

WHEREAS, Ketchum finds that said Improvements will not impede the use of said public right-of-way at this time subject to the terms and provisions of this Agreement;

NOW, THEREFORE, in contemplation of the above stated facts and objectives, it is hereby agreed as follows:

TERMS AND CONDITIONS

1. Ketchum shall permit Owner to maintain the sidewalk, curb, gutter, and snowmelt identified in Exhibit "A" within the public right-of-way of Northwood Way, Idaho, until notified by Ketchum to remove the improvements at which time Owner shall remove improvements at Owner's expense.

2. Owner shall be responsible for the maintenance of said Improvements. Any modification to the improvements identified in Exhibit "A" shall be approved by the City of Ketchum prior to any modifications taking place.

3. In consideration of Ketchum allowing Owner to maintain the Improvements in the public right-of-way, Owner agrees to indemnify and hold harmless Ketchum from and against any and all claims of liability for any injury or damage to any person or property arising from the Improvements constructed, installed and maintained in the public right-of-way. Owner shall further indemnify and hold Ketchum harmless from and against any and all claims arising from any breach or default in the performance of any obligation on Owner's part to be performed under this Agreement, or arising from any negligence of Owner or Owner's agents, contractors or employees and from and against all costs, attorney's fees, expenses and liabilities incurred in the defense of any such action or proceeding brought thereon. In the event any action or proceeding is brought against Ketchum by reason of such claim, Owner, upon notice from Ketchum, shall

defend Ketchum at Owner's expense by counsel satisfactory to Ketchum. Owner, as a material part of the consideration to Ketchum, hereby assumes all risk of damages to property or injury to persons in, upon or about the Improvements constructed, installed and maintained in the public right-of-way arising from the construction, installation and maintenance of said Improvements and Owner hereby waives all claims in respect thereof against Ketchum.

4. Ketchum shall not be liable for injury to Owner's business or loss of income therefrom or for damage which may be sustained by the person, goods, wares, merchandise or property of Owner, its tenants, employees, invitees, customers, agents or contractors or any other person in or about the Subject Property caused by or resulting from the Improvements constructed, installed, removed or maintained in the public right-of-way.

5. Owner understands and agrees that by maintaining the Improvements in the public right-of-way pursuant to this Agreement, Owner obtains no claim or interest in said public right-of-way which is adverse to that of Ketchum and that Owner obtains no exclusive right to said public right-of-way nor any other right to use the public right-of-way not specifically described herein.

6. This Agreement shall be a covenant running with the Subject Property and the terms and provisions hereof shall inure to the benefit of and be binding upon the parties and the respective heirs, personal representatives, successors and assigns of the parties hereof.

7. In the event either party hereto retains an attorney to enforce any of the rights, duties and obligations arising out of this Agreement, the prevailing party shall be entitled to recover from the non-prevailing party reasonable attorney's fees at the trial and appellate levels and, whether or not litigation is actually instituted.

8. This Agreement shall be governed by, construed, and enforced in accordance with the laws and decisions of the State of Idaho. Venue shall be in the District Court of the fifth Judicial District of the State of Idaho.

9. This Agreement sets forth the entire understanding of the parties hereto, and shall not be changed or terminated orally. It is understood and agreed by the parties hereto that there are no verbal promises or implied promises, agreements, stipulations or other representations of any kind or character pertaining to the Improvements maintained in the public right-of-way other than as set forth in this Agreement.

10. No presumption shall exist in favor of or against any party to this Agreement as the result of the drafting and preparation of this document.

11. This Agreement shall be recorded with the Blaine County Recorder by Ketchum.

12. The parties fully understand all of the provisions of this Agreement, and believe them to be fair, just, adequate and reasonable, and accordingly accept the provisions of this Agreement freely and voluntarily.

CITY OF KETCHUM:

By: _____
Neil Bradshaw
Its: Mayor

STATE OF _____,)
) ss.
County of _____.)

On this ____ day of _____, 2021, before me, the undersigned Notary Public in and for said State, personally appeared Corey Black, known or identified to me to be a Governor of Red Fish Properties. LLC, a person who executed the foregoing instrument on behalf of said limited liability company and acknowledged to me that said limited liability company executed the same.

Notary Public for _____
Residing at _____
Commission expires _____

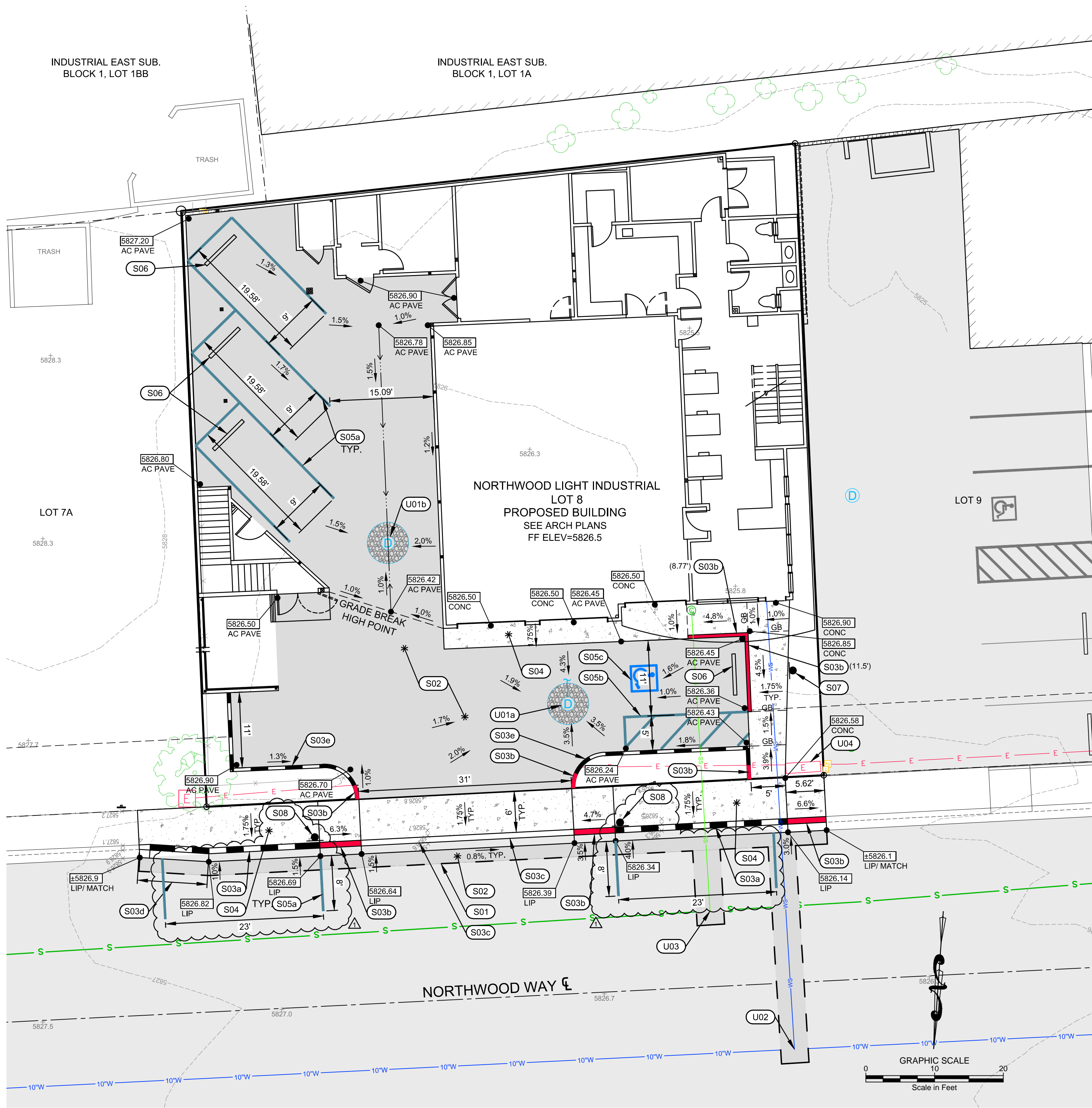
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On this ____ day of _____, 2021, before me, the undersigned Notary Public in and for said State, personally appeared NEIL BRADSHAW, known or identified to me to be the Mayor of the CITY OF KETCHUM, IDAHO, and the person who executed the foregoing instrument on behalf of said municipal corporation and acknowledged to me that said municipal corporation executed the same.

Notary Public for _____
Residing at _____
Commission expires _____

EXHIBIT “A”

REUSE OF DRAWINGS: These drawings, or any portion thereof, shall not be used on any Project or extensions of this Project except by agreement in writing with Galena Engineering, Inc..



LEGEND

EXISTING ITEMS		PROPOSED ITEMS	
	PROPERTY LINE		NEW ASPHALT
	ADJOINING PROPERTY LINE		CONCRETE SIDEWALK
	ASPHALT PAVEMENT		CONCRETE VERTICAL CURB & GUTTER
	CURB AND GUTTER		CONCRETE ROLLED CURB & GUTTER
	EXTERIOR BUILDING FOOTPRINT		CURB TRANSITION
	EASEMENT		ZERO REVEAL CURB & GUTTER
	10" W WATER MAIN		RETAINING WALL
	SEWER MAIN		WATER SERVICE
	UNDERGROUND POWER		4" SEWER SERVICE
	FOUND 1/2" REBAR		DRYWELL
	FOUND 5/8" REBAR		FLOW LINE
	POWER BOX		SAWCUT LINE
	TELEPHONE RISER		GRADE
	CABLE TV RISER		
	DRYWELL		
	DECIDUOUS TREE		
	5' CONTOUR INTERVAL		
	1' CONTOUR INTERVAL		

CONSTRUCTION KEYNOTES

SITE IMPROVEMENTS

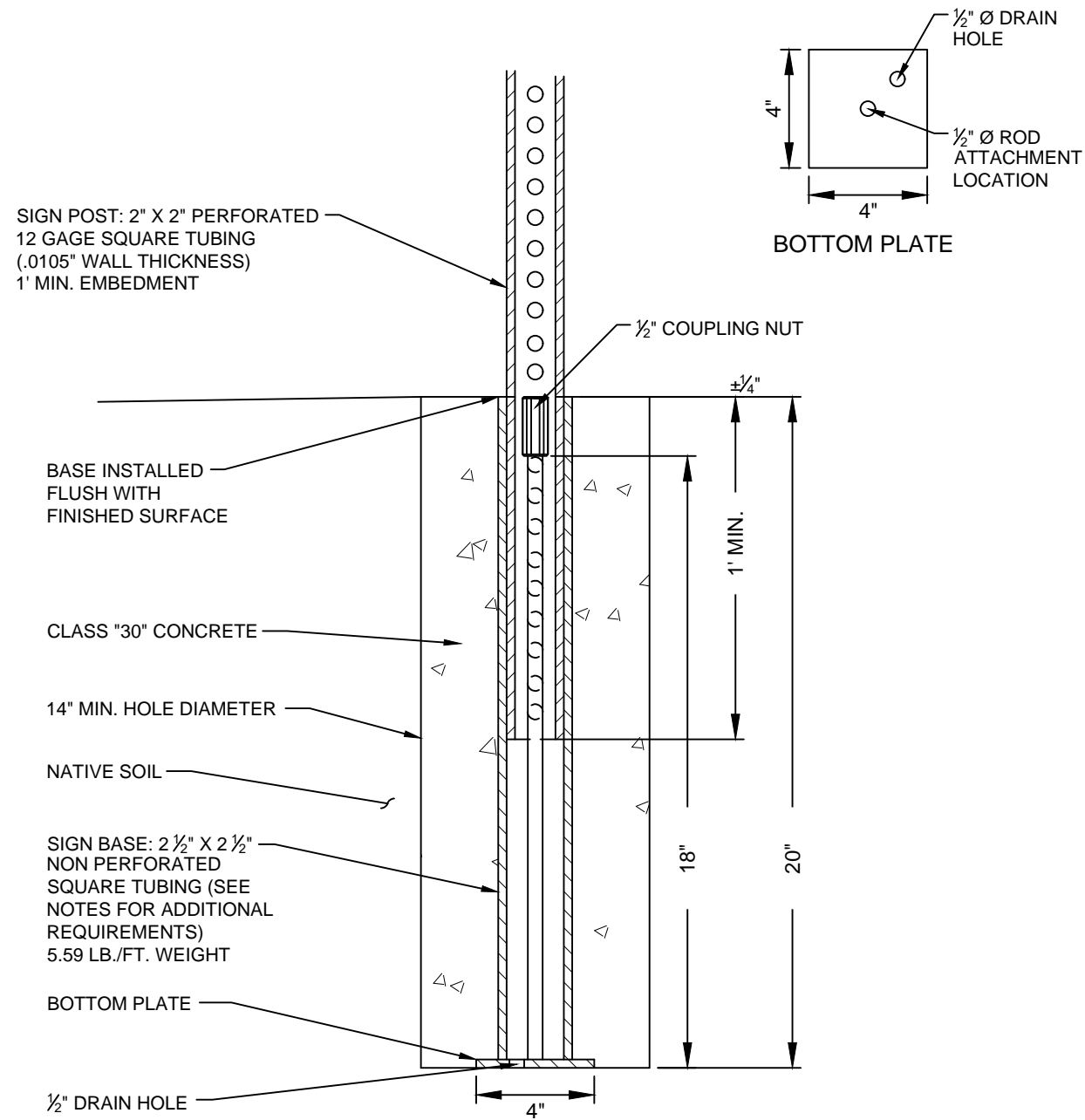
- S01 SAWCUT EXISTING ASPHALT TO PROVIDE FOR A CLEAN VERTICAL EDGE
- S02 CONSTRUCT/REPAIR ASPHALT. SEE DETAIL 1, SHEET C2.0
- S03 CONSTRUCT CONCRETE CURB
 - a. 6" CONCRETE ROLLED CURB AND GUTTER PER DETAIL 3, SHEET C2.0
 - b. CURB TRANSITION PER DETAIL 4, SHEET C2.0
 - c. ZERO REVEAL CURB AND GUTTER PER DETAIL 4, SHEET C2.0. PAINT CURB RED.
 - d. TRANSITION FROM 6" CONCRETE ROLLED CURB AND GUTTER TO MATCH EXISTING CURB AND GUTTER
 - e. 6" VERTICAL CURB PER DETAIL 5, SHEET C2.0
- S04 CONSTRUCT CONCRETE SIDEWALK, WIDTH AS SHOWN HEREON. SEE DETAIL 2, SHEET C2.0
- S05 INSTALL PAVEMENT MARKINGS
 - a. 4" WIDE WHITE PARKING STRIPE
 - b. 4" WIDE BLUE PARKING STRIPE
 - c. ADA COMPLIANT SYMBOL
- S06 6' LONG CONCRETE CURB STOP. INSTALL PER MANUFACTURER'S RECOMMENDATIONS
- S07 INSTALL "ADA PARKING" SIGN. SIGN HEIGHT TO BE 60" FROM GROUND TO BOTTOM OF SIGN. SIGN BASE PER DETAIL 1, SHEET C1.0
- S08 INSTALL SIGN BASE PER DETAIL 1, SHEET C1.0 (PROVIDED BY CITY OF KETCHUM) FOR FUTURE "NO PARKING IN DRIVEWAY" SIGN TO BE INSTALLED BY CITY OF KETCHUM.

UTILITY IMPROVEMENTS

- U01 INSTALL DRYWELL PER DETAIL 8, SHEET C2.0
 - a. RIM ELEV= 5826.07;
 - b. RIM ELEV= 5826.32
- U02 INSTALL WATER SERVICE PER CITY OF KETCHUM STANDARDS; SERVICE SIZE TO BE DETERMINED BY PLUMBING ENGINEER. CONTRACTOR TO CONFIRM LOCATION AND DEPTH OF WATER MAIN. TRENCH CONSTRUCTION PER DETAIL 6, SHEET C2.0. SEE DETAIL 7, SHEET C2.0 FOR POTABLE, NON-POTABLE WATER LINE SEPARATION REQUIREMENTS.
- U03 INSTALL 4" Ø PVC SEWER SERVICE @ S=2.0% MIN; CONNECT TO EXISTING SERVICE STUB. TRENCH CONSTRUCTION PER DETAIL 6, SHEET C2.0
- U04 RETAIN AND PROTECT EXISTING TRANSFORMER.

CONSTRUCTION NOTES

- ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE MOST CURRENT EDITION OF THE "IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION" (ISPCW) AND CITY OF KETCHUM STANDARDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND KEEPING A COPY OF THE ISPCW AND CITY OF KETCHUM STANDARDS ON SITE DURING CONSTRUCTION.
- THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN ON THE PLANS IN AN APPROXIMATE WAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING EXISTING UTILITIES PRIOR TO COMMENCING AND DURING THE CONSTRUCTION. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH RESULT FROM HIS FAILURE TO ACCURATELY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. CONTRACTOR SHALL CALL DIGLINE (1-800-342-1585) TO LOCATE ALL EXISTING UNDERGROUND UTILITIES A MINIMUM OF 48 HOURS IN ADVANCE OF EXCAVATION.
- CONTRACTOR SHALL COORDINATE RELOCATIONS OF DRY UTILITY FACILITIES (POWER, CABLE, PHONE, TV) WITH THE APPROPRIATE UTILITY FRANCHISE.
- THE CONTRACTOR SHALL CLEAN UP THE SITE AFTER CONSTRUCTION SO THAT IT IS IN A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION (THIS MAY INCLUDE ENCROACHMENT PERMITS AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION GENERAL PERMIT (CGP) PERMIT COVERAGE).
- ALL CLEARING & GRUBBING SHALL CONFORM TO ISPCW SECTION 201.
- ALL EXCAVATION & EMBANKMENT SHALL CONFORM TO ISPCW SECTION 202. SUBGRADE SHALL BE EXCAVATED AND SHAPED TO LINE, GRADE, AND CROSS-SECTION SHOWN ON THE PLANS. THE SUBGRADE SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D-698. THE CONTRACTOR SHALL WATER OR AERATE SUBGRADE AS NECESSARY TO OBTAIN OPTIMUM MOISTURE CONTENT. IN-LIEU OF DENSITY MEASUREMENTS, THE SUBGRADE MAY BE PROOF-ROLLED TO THE APPROVAL OF THE ENGINEER.
 - PROOF-ROLLING: AFTER EXCAVATION TO THE SUBGRADE ELEVATION AND PRIOR TO PLACING COURSE GRAVEL, THE CONTRACTOR SHALL PROOF ROLL THE SUBGRADE WITH A 5-TON SMOOTH DRUM ROLLER, LOADED WATER TRUCK, OR LOADED DUMP TRUCK, AS ACCEPTED BY THE ENGINEER. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF UNSUITABLE SUBGRADE MATERIAL AREAS, AND/OR AREAS NOT CAPABLE OF COMPACTION ACCORDING TO THESE SPECIFICATIONS. UNSUITABLE OR DAMAGED SUBGRADE IS WHEN THE SOIL MOVES, PUMPS AND/OR DISPLACES UNDER ANY TYPE OF PRESSURE INCLUDING FOOT TRAFFIC LOADS.
 - IF, IN THE OPINION OF THE ENGINEER, THE CONTRACTOR'S OPERATIONS RESULT IN DAMAGE TO, OR PROTECTION OF THE SUBGRADE, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, REPAIR THE DAMAGED SUBGRADE BY OVER-EXCAVATION OF UNSUITABLE MATERIAL TO FIRM SUBSOL, LINE EXCAVATION WITH GEOTEXTILE FABRIC, AND BACKFILL WITH PIT RUN GRAVEL.
- ALL 2" MINUS GRAVEL SHALL CONFORM TO ISPCW 802, TYPE II (ITD STANDARD 703.04, 2"), SHALL BE PLACED IN CONFORMANCE WITH ISPCW SECTION 801 AND COMPACTED PER SECTION 202. MINIMUM COMPACTION OF PLACED MATERIAL SHALL BE 90% OF MAXIMUM LABORATORY DENSITY AS DETERMINED BY AASHTO T-99.
- ALL 3/4" MINUS CRUSHED GRAVEL SHALL CONFORM TO ISPCW 802, TYPE I (ITD STANDARD 703.04, 3/4" B), SHALL BE PLACED IN CONFORMANCE WITH ISPCW SECTION 802 AND COMPACTED PER SECTION 202. MINIMUM COMPACTION OF PLACED MATERIAL SHALL BE 95% OF MAXIMUM LABORATORY DENSITY AS DETERMINED BY AASHTO T-99 OR ITD T-91.
- ALL ASPHALTIC CONCRETE PAVEMENT WORK SHALL CONFORM TO ISPCW SECTION(S) 805, 810, AND 811 FOR CLASS II PAVEMENT. ASPHALT AGGREGATE SHALL BE 1/2" (13MM) NOMINAL SIZE CONFORMING TO TABLE 803B IN ISPCW SECTION 803. ASPHALT BINDER SHALL BE PG 58-28 CONFORMING TO TABLE A-1 IN ISPCW SECTION 805.
- ASPHALT SAWCUTS SHALL BE AS INDICATED ON THE DRAWINGS, OR 24" INCHES FROM EDGE OF EXISTING ASPHALT, IF NOT INDICATED OTHERWISE SO AS TO PROVIDE A CLEAN PAVEMENT EDGE FOR MATCHING. NO WHEEL CUTTING SHALL BE ALLOWED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TRAFFIC CONTROL PER THE CURRENT EDITION OF THE US DEPARTMENT OF TRANSPORTATION MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- ALL CONCRETE WORK SHALL CONFORM TO ISPCW SECTIONS 701, 703, AND 705. ALL CONCRETE SHALL BE 3,000 PSI MINIMUM, 28 DAY, AS DEFINED IN ISPCW SECTION 703, TABLE 1.0. IMMEDIATELY AFTER PLACEMENT PROTECT CONCRETE BY APPLYING MEMBRANE-FORMING CURING COMPOUND, TYPE 2, CLASS A PER ASTM C 309-94. APPLY CURING COMPOUND PER MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS.
- ALL TRENCHING SHALL CONFORM TO ISPCW STANDARD DRAWING SD-301. TRENCHES SHALL BE BACKFILLED AND COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99.
- PER IDAHO CODE § 55-1613, THE CONTRACTOR SHALL RETAIN AND PROTECT ALL MONUMENTS, ACCESSORIES TO CORNERS, BENCHMARKS AND POINTS SET IN CONTROL. SURVEYS, ALL MONUMENTS, ACCESSORIES TO CORNERS, BENCHMARKS AND POINTS THAT ARE LOST OR DISTURBED BY CONSTRUCTION SHALL BE REESTABLISHED AND RE-MONUMENTED, AT THE EXPENSE OF THE AGENCY OR PERSON CAUSING THEIR LOSS OR DISTURBANCE AT THEIR ORIGINAL LOCATION OR BY SETTING OF A WITNESS CORNER OR REFERENCE POINT OR A REPLACEMENT BENCHMARK OR CONTROL POINT, BY OR UNDER THE DIRECTION OF A PROFESSIONAL LAND SURVEYOR.
- CONSTRUCTION OF WATER MAINS AND ALL OTHER RELATED APPURTENANCES SHALL BE IN ACCORDANCE WITH THE IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ISPCW), IDAPA 58.01.08, IDAHO RULES FOR PUBLIC DRINKING WATER SYSTEMS AND THE CITY OF KETCHUM UTILITIES DEPARTMENT STANDARDS.
- CONTRACTOR SHALL PRESSURE TEST, DISINFECT, AND CONDUCT BIOLOGICAL TESTING IN ACCORDANCE WITH THE IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ISPCW), AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS, AND THE PRESSURE TESTING, DISINFECTION, AND MICROBIOLOGICAL TESTING PROCEDURES.
- ALL WATER SUPPLY FIXTURES, FITTINGS, PIPING, AND ALL RELATED APPURTENANCES SHALL BE ANS/ISF STD. 61 COMPLIANT.
- ALL WATER SUPPLY FIXTURES, FITTINGS, PIPING, AND ALL RELATED APPURTENANCES SHALL COMPLY WITH THE LOW LEAD ACT REQUIRING ALL MATERIALS TO HAVE A LEAD CONTENT EQUAL TO OR LESS THAN 0.25%.
- THE CONTRACTOR SHALL USE ANS/ISF STANDARD 60 CHEMICALS AND COMPOUNDS DURING INSTALLATION & DISINFECTION OF POTABLE WATER MAIN.
- EXISTING CONDITIONS AND BOUNDARY INFORMATION SHOWN HEREON ARE PER A SURVEY CONDUCTED BY BENCHMARK ASSOCIATES.



NOTES:

- BASES SHALL BE INSTALLED TO BE FLUSH WITH SURFACE.
- ALL INSTALLATIONS SHALL HAVE 14" Ø MINIMUM FOUNDATION OR GROUTED INTO SOLID ROCK.

SIGN BASE MATERIAL & DIMENSION REQUIREMENTS	
2 1/2" OUTSIDE TUBE STEEL (20' LENGTH)	
2 1/2" INSIDE TUBE STEEL	
3/8" THICK	
INTERNAL ROD MATERIAL & DIMENSION REQUIREMENTS	
1/2" COLD ROLLED ROD (18" LENGTH)	
1/2" COUPLING NUTS	
BOTTOM PLATE MATERIAL & DIMENSION REQUIREMENTS	
4" X 4" X 1/2" STEEL STRAP	

1 SIGN BASE (CITY OF KETCHUM DETAIL 13)
N.T.S.

PURPOSE: REVISED ISSUE FOR BUILDING PERMIT (04/10/2020)

NO.	DATE	BY	REVISIONS
1	04/10/20	SKS	RESPONSE TO 4/5/20 BUILDING PERMIT COMMENTS: SNOW MELT

SKS
DESIGNED BY
SKS
DRAWN BY
SMF
CHECKED BY

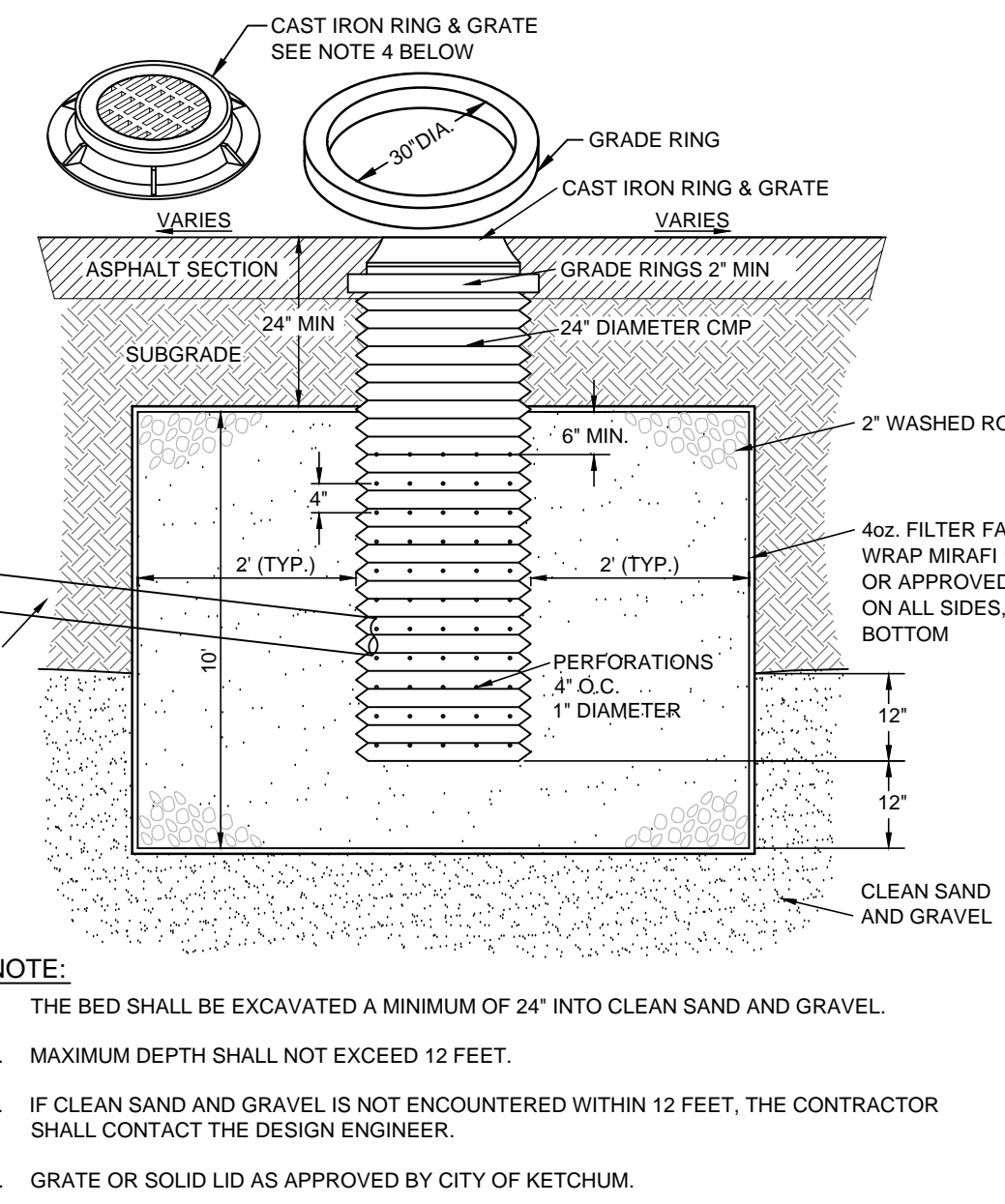
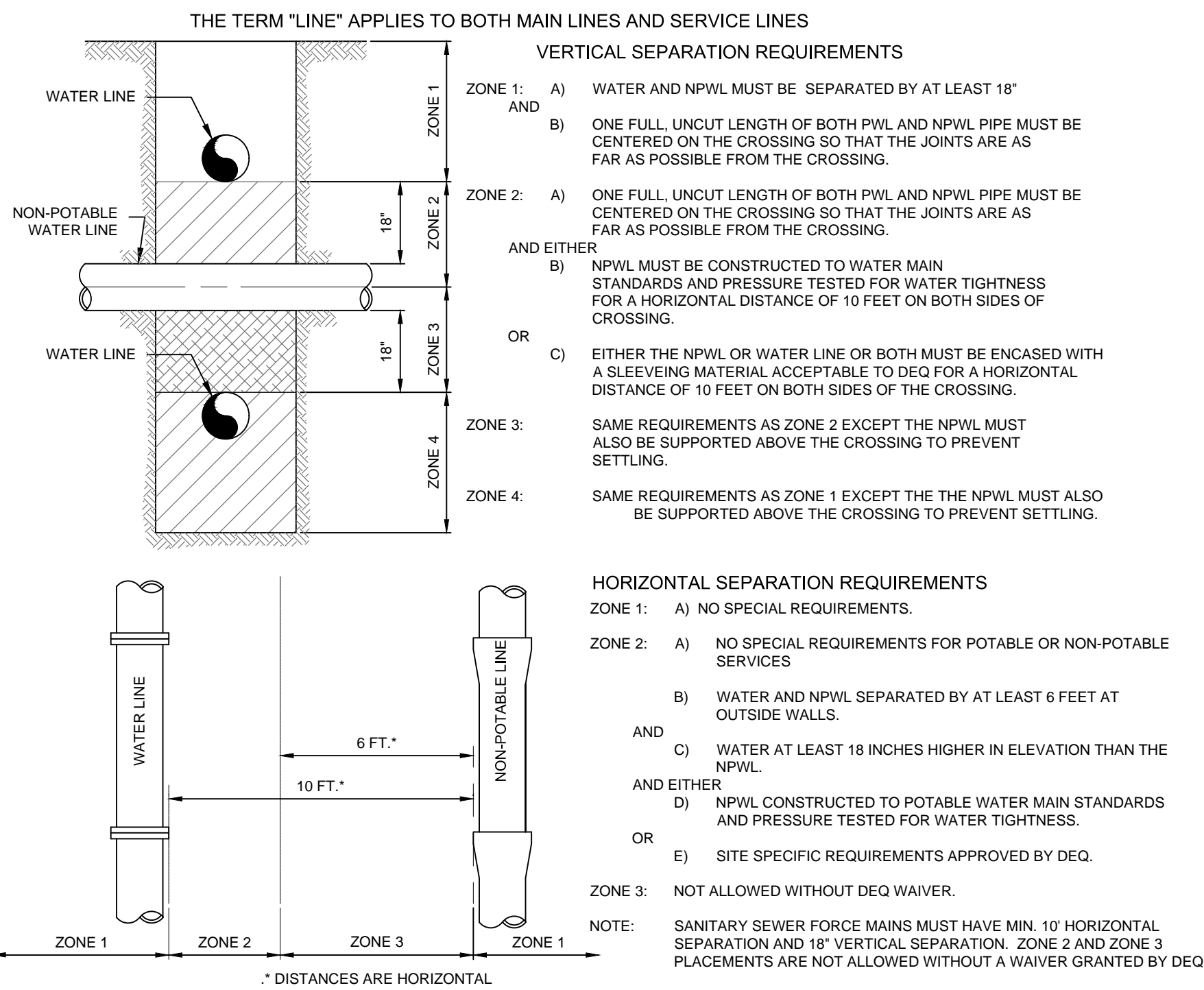
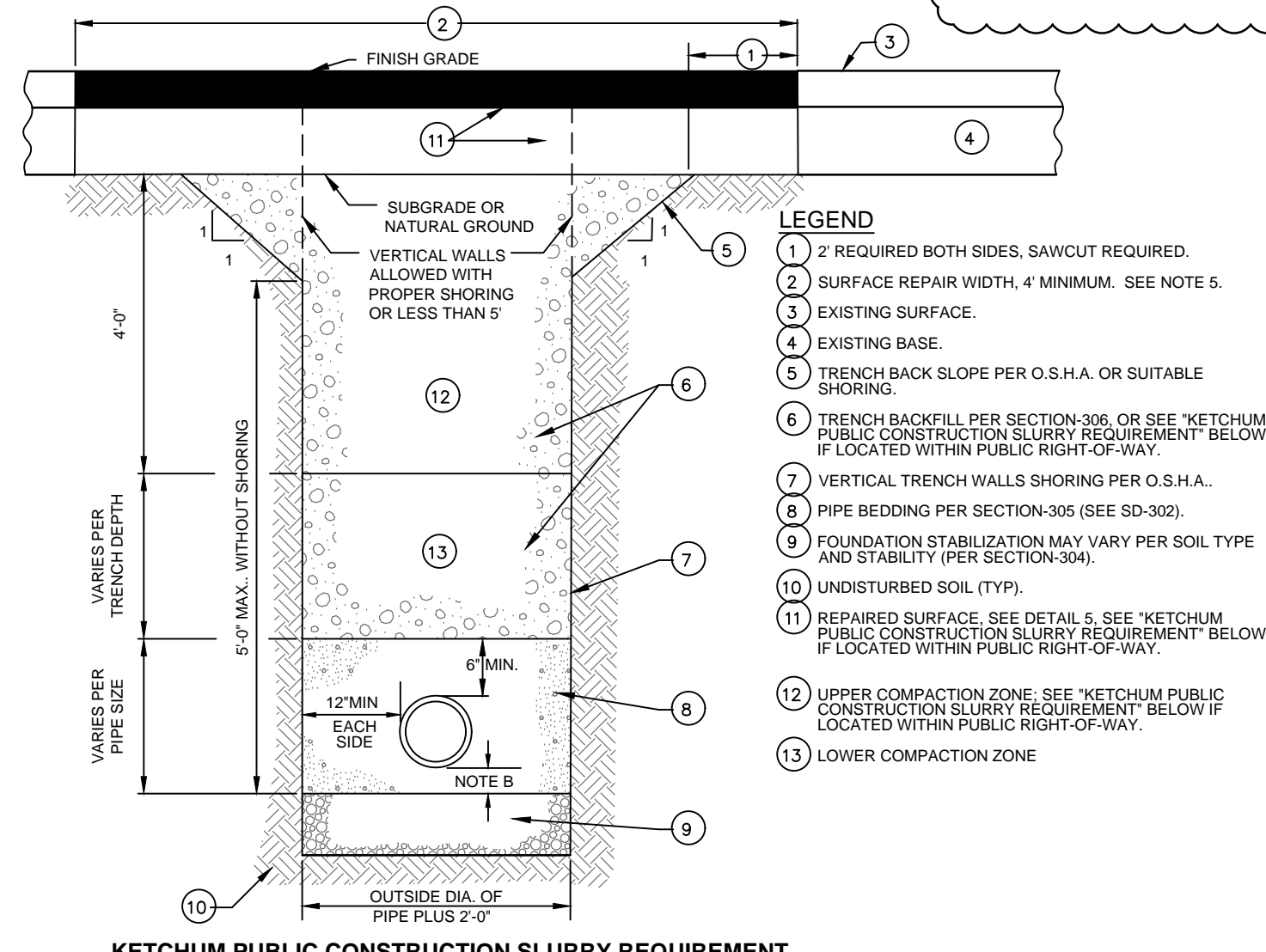
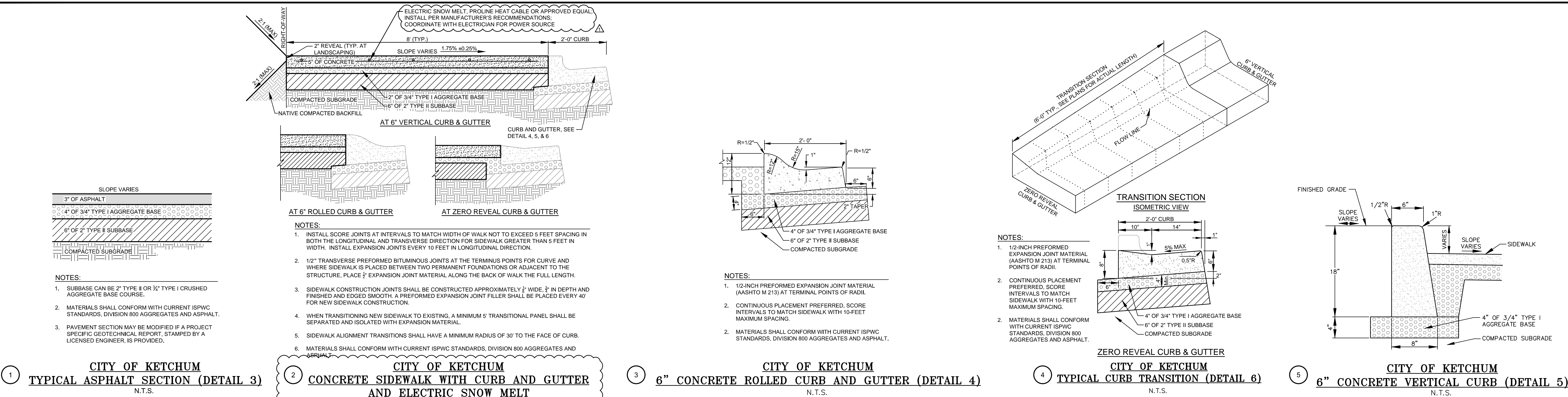
GALENA
ENGINEERING, INC.
Civil Engineers & Land Surveyors
317 N. River Street
Hailey, Idaho 83333
email: galena@galena-engineering.com

ORIGINAL SIGNED BY
SAMANTHA STAHLNECKER
DATE ORIGINAL SIGNED:
04/10/2020
PROFESSIONAL ENGINEER
LICENSED
STATE OF IDAHO
17618
SAMANTHA STAHLNECKER
ORIGINAL ON FILE AT
OFFICE OF GALENA
ENGINEERING
(HAILEY, ID)

PROJECT INFORMATION
C:\Users\Admin\Desktop\7638-01\bw\Construction\7638-01_Civil.dwg 04/10/2020 10:28:02 AM

GRADING AND DRAINAGE PLAN
BLACK BUILDING - 120 NORTHWOOD WAY
LOCATED WITHIN SECTION 12, T.4 N., R.17 E., B.M., CITY OF KETCHUM, BLAINE COUNTY, IDAHO
PREPARED FOR MY SUN VALLEY HOME

REUSE OF DRAWINGS: These drawings, or any portion thereof, shall not be used on any Project or extensions of this Project except by agreement with Galena Engineering, Inc..



Owner	My Sun Valley Home	Computed by	SKS
Project	My Sun Valley Home	Date	3/10/2020
Project No.	7639-01		
Drywell	a		

Storm Duration =	1 hr
Intensity =	1 in/hr
Hardscape Data (pavement, etc.)	
Runoff Area =	0.174 Acres
Runoff Area =	7,600 ft ²
Runoff Coefficient =	0.90
Softscape Data (lawn, unimproved area)	
Runoff Area =	0.008 Acres
Runoff Area =	329 ft ²
Runoff Coefficient =	0.30
Prorated Surface Coefficients	
Runoff Area =	0.182 Acres
Runoff Area =	7,929 ft ²
Runoff Coefficient =	0.875104
Drain Bed Voids =	40 %
Infiltration Rate =	120 in/hr

Q _{peak} =	C ₁ *A =	0.16 cfs
Runoff Volume =	Q _{peak} *Time =	578.23 ft ³
Perc Area =	A _u *x*A _s	x = 20 %
Perc Area =	51.82 ft ²	Percentage of walls that water will infiltrate out of
Perc Volume =	518.16 ft ³	Surface area available for water to flow from the drywell and infiltrate
Storage Required = Runoff Volume - Perc Volume	60.07 ft ³	Volume of water infiltrated during 1 hour storm
Storage Volume = (V _v *Void Ratio)+V _s	105.79 ft ³	You need to store the portion of the storm that will not infiltrate
Storage Required - Storage Volume	-45.72 ft ³	Storage available in drywell
	must be less than zero	Compares required storage with provided storage.
		If provided storage is greater, number will be negative and the drywell is adequately sized.

Drywell Dimensions =		Bottom Area (A _b) =	22.21 ft ²
A =	6 ft	Sidewall Area (A _s) =	148.04 ft ²
B =	2 ft	Volume Rock =	193.79 ft ³
C =	9 ft	Volume Pipe =	28.27 ft ³
D =	10 ft		

DETAILS
BLACK BUILDING - 120 NORTHWOOD WAY
LOCATED WITHIN SECTION 12, T.4 N., R.17 E., B.M., CITY OF KETCHUM, BLAINE COUNTY, IDAHO
PREPARED FOR MY SUN VALLEY HOME

ORIGINAL SIGNED BY
SAMANTHA STAHLNECKER
DATE ORIGINAL SIGNED: 04/10/2020
PROFESSIONAL ENGINEER
LICENSED
STATE OF IDAHO
17618
SAMANTHA STAHLNECKER
ORIGINAL ON FILE AT
OFFICE OF GALENA
ENGINEERING
(HAILEY, ID)

SKS
DESIGNED BY
SKS
DRAWN BY
SMF
CHECKED BY
GALENA
ENGINEERING, INC.
Civil Engineers & Land Surveyors
317 N. River Street
Hailey, Idaho 83433
(208) 788-1705
email: galena@galena-engineering.com

PURPOSE: REVISED ISSUE FOR BUILDING PERMIT (04/10/2020)

NO.	DATE	BY	REVISIONS
1	04/10/20	SKS	RESPONSE TO 4/5/20 BUILDING PERMIT COMMENTS: SNOW MELT