



## City of Ketchum

November 21, 2022

Mayor Bradshaw and City Councilors  
City of Ketchum  
Ketchum, Idaho

Mayor Bradshaw and City Councilors:

### **Recommendation to Approve Walnut & 4<sup>th</sup> Mixed-Use Building Amended FAR Exceedance Agreement 20595A, 580 E 4<sup>th</sup> Street Right-of-Way Encroachment 22814, and 331 N Walnut Avenue Right-of-Way Encroachment Agreement 22815.**

#### Recommendation and Summary

Staff recommends the Ketchum City Council approve the attached Walnut & Fourth Mixed-Use Building Amended FAR Exceedance Agreement 20595A, 580 E 4<sup>th</sup> Street (Walnut & 4<sup>th</sup> Mixed-Use Building) Right-of-Way Encroachment Agreement 22814, and 331 N Walnut Avenue (Gold Mine) ROW Encroachment Agreement 22815 and adopt the following motions:

- “I move to authorize the Mayor to sign Amended FAR Exceedance Agreement 20595A with Walnut & Fourth LLC.”
- “I move to authorize the Mayor to sign 580 E 4<sup>th</sup> Street (Walnut & 4<sup>th</sup> Mixed-Use Building) Right-of-Way Encroachment Agreement 22814 with Walnut & Fourth LLC.”
- “I move to authorize the Mayor to sign 331 N Walnut Avenue (Gold Mine) Right-of-Way Encroachment Agreement 22815 with The Community Library Association.”

#### The reasons for the recommendation are as follows:

- The Planning and Zoning Commission reviewed proposed modifications to the project plans approved for the Walnut & 4<sup>th</sup> Mixed-Use Building (Design Review Amendment Application File No. P20-046A) during their regular meeting on September 27<sup>th</sup>, 2022. The proposed changes included modifying the mixture and configuration of uses within the mixed-use building, including the community housing. The proposed modifications provide two community housing units within the basement—Community Housing Unit A has a total net-livable floor area of 1,104 square feet with an associated 52-square-foot detached storage area and Community Housing Unit B has a total net-livable floor area of 914 square feet with an associated 53-square-foot detached storage area.
- The Planning and Zoning Commission unanimously approved the modifications to the Walnut & Fourth Mixed-Use Building (Design Review Amendment P20-46A) with the condition that the amended FAR Exceedance Agreement be reviewed and approved by the Ketchum City Council prior to City approval of the building permit modifications.
- The applicant proposed changes to the right-of-way improvements proposed for the project, including surfacing the new 8-foot-wide sidewalk installed along Walnut Avenue with concrete instead of pavers. These modifications also proposed extending the right-of-improvements

along Walnut Avenue and installing new 8-foot-wide heated concrete sidewalks in front of the Gold Mine property. The proposed right-of-way improvements have been reviewed and approved by City Departments, including the City Engineer. The project requires a Right-of-Way Encroachment Permit for the heated paver and concrete sidewalks along 4th Street and Walnut Avenue.

### Introduction and History

The Planning and Zoning Commission reviewed and approved Design Review Permit P20-046 for the proposed Walnut & 4<sup>th</sup> Mixed-Use Building on September 15<sup>th</sup>, 2020. The new mixed-use building is located at the southwest corner of Walnut Avenue and 4<sup>th</sup> Street within the Retail Core Subdistrict of the Community Core (CC-1 Zone). The project was issued a building permit (Application File No. B21-009) on June 22<sup>nd</sup>, 2021 and is currently under construction.

The Planning and Zoning Commission reviewed proposed modifications to the project plans approved for the Walnut & 4<sup>th</sup> Mixed-Use Building (Design Review Amendment Application File No. P20-046A) during their regular meeting on September 27<sup>th</sup>, 2022. The proposed changes included modifying the mixture and configuration of uses within the mixed-use building, including the community housing. The applicant also proposed changes to the right-of-way improvements proposed for the project, including surfacing the new 8-foot-wide sidewalk installed along Walnut Avenue with concrete instead of pavers. These modifications also proposed extending the right-of-improvements along Walnut Avenue and installing new 8-foot-wide heated concrete sidewalks in front of the Gold Mine property.

### Analysis

#### *Amended FAR Exceedance Agreement 20595A*

The Ketchum City Council approved the Walnut & Fourth Mixed-Use Building Floor Area Ratio (FAR) Exceedance Agreement 20595 on April 19<sup>th</sup>, 2021. FAR Exceedance Agreement 20595 memorialized the applicant's community housing contribution in exchange for the FAR increase and approved a 1,488-square-foot community housing rental unit within the basement of the new mixed-use building targeted for Blaine County Housing Authority (BCHA) Income Category 4.

The Planning and Zoning Commission reviewed proposed modifications to the Walnut & 4<sup>th</sup> Mixed-Use Building (Design Review Amendment Application File No. P20-46A) during their regular meeting on September 27<sup>th</sup>, 2022. The proposed changes included modifying the mixture and configuration of uses within the mixed-use building, including the community housing. The project plans approved with the original project proposed one 1,488-square-foot community housing unit within the basement of the new mixed-use building. The proposed modifications provide two community housing units within the basement—Community Housing Unit A has a total net-livable floor area of 1,104 square feet with an associated 52-square-foot detached storage area and Community Housing Unit B has a total net-livable floor area of 914 square feet with an associated 53-square-foot detached storage area.

The total floor area of the two community housing units and associated storage areas is 2,123 square feet. The total net-livable floor area proposed for the two community housing contribution is 2,018 square feet, which is 1,190 square feet more than required for the FAR exceedance. The proposed modifications increase the total community housing contribution proposed for the project by 530 net-livable square feet. The two community housing rental units are proposed to be targeted for BCHA Income Category 4 or lower. The FAR Exceedance Agreement requires that: (1) the deed covenant for the community housing units be recorded prior to issuance of a Certificate of Occupancy for the

project and (2) the community housing units must be listed for rent through BCHA concurrent with the issuance of a Certificate of Occupancy by the City for the project.

The Planning and Zoning Commission unanimously approved the modifications to the Walnut & Fourth Mixed-Use Building (Design Review Amendment P20-46A) with the condition that the amended FAR Exceedance Agreement be reviewed and approved by the Ketchum City Council prior to City approval of the building permit modifications. Amended FAR Exceedance Agreement 20595A is included as Attachment A to the Staff Report for the City Council's review and approval.

#### *Right-of-Way Encroachment Agreements*

The applicant also proposed changes to the right-of-way improvements for the Walnut & 4th Mixed-Use Building project. These modifications proposed modifying a portion of the sidewalk along Walnut Avenue from heated pavers to heated concrete. These modifications also proposed extending the heated concrete sidewalk improvements along Walnut Avenue through the street frontage adjacent to the Gold Mine property located at 331 N Walnut Avenue. The proposed right-of-way improvements have been reviewed and approved by City Departments, including the City Engineer. The project requires a Right-of-Way Encroachment Permit for the heated paver and concrete sidewalks along 4th Street and Walnut Avenue. Right-of-Way Encroachment Agreement 22814 for the new 8-foot-wide heated paver and heated concrete sidewalks installed for the Walnut & 4<sup>th</sup> Mixed-Use Building located at 580 E 4<sup>th</sup> Street is included as Attachment B to the Staff Report. Right-of-Way Encroachment Agreement 22815 for the new 8-foot-wide heated concrete sidewalk extension in front of the Gold Mine property located at 331 N Walnut Avenue is included as Attachment C to the Staff Report.

Pursuant to Ketchum Municipal Code §12.12.040.C, a Right-of-Way Encroachment Permit is required for any permanent fixture to the ground or a building is installed in the public right-of-way. The standards for issuance of a Right-of-Way Encroachment Permit are specified in Ketchum Municipal Code §12.12.060. The City Council has the authority to review and approve all permanent encroachments within the public right-of-way associated with a development project pursuant to Ketchum Municipal Code §17.96.030.C. The associated Right-of-Way Encroachment Agreement is 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. The agreement also obligates the property owner to install, maintain, and repair the permanent encroachments, including the snowmelt system for the public sidewalks.

Permanent encroachments within the right-of-way must be in the public interest pursuant to Ketchum Municipal Code §12.12.060.A. The proposed encroachments are in the public interest because the snowmelt system will prevent the accumulation of snow and ice on the sidewalks along Walnut Avenue and 4<sup>th</sup> Street and will maintain safe pedestrian access during winter. The improvements will not impact the use or operation of the street, decrease the number of on-street parking spaces, or impact drainage or snow removal along Walnut Avenue or 4<sup>th</sup> Street. The heated sidewalk system meets the City's energy efficiency requirements for snowmelt systems installed within the public rights-of-way in downtown Ketchum.

#### Sustainability

The project does not limit the ability of the city to reach the goals of the Ketchum Sustainability Action Plan – 2020. The project has been designed to meet all standards specified in the 2018 International Energy Conservation Code and the City of Ketchum's Green Building Codes provided in Chapter 15.20

of Ketchum Municipal Code. The proposed snowmelt system as specified in Exhibit A of Right-of-Way Encroachment Agreement 22814 (Attachment B) and Right-of-Way Encroachment Agreement 22815 (Attachment C) meets the City's snowmelt requirements for commercial projects.

#### Financial Impact

There is no financial requirement from the city for this action at this time.

#### Attachments

- A. Amended FAR Exceedance Agreement 20595A
- B. 580 E 4<sup>th</sup> Street Right-of-Way Encroachment Agreement 22814
- C. 331 N Walnut Ave Right-of-Way Encroachment Agreement 22815

Attachment A:  
Amended  
FAR Exceedance Agreement  
20595A

**FAR EXCEEDANCE  
AGREEMENT #20595A**

**Parties:**

City of Ketchum	"City"	P.O. Box 2315, 191 W 5 <sup>th</sup> Street, Ketchum, Idaho 83340
Walnut & Fourth LLC	"Owner"	Mailing: 313 N Water Avenue, Idaho Falls, Idaho 83402  Physical Address: 580 E 4 <sup>th</sup> Street, Ketchum, Idaho 83340

This FAR Exceedance Agreement ("Agreement") is made between the City of Ketchum, a municipal corporation of the state of Idaho, and Walnut & Fourth LLC, a limited liability corporation, the owner of the development project.

RECITALS

- A. Pursuant to the City's authority under the Idaho Local Land Use Planning Act, the Ketchum Municipal Code ("K.M.C.") Chapter 17.124 provides for certain development standards, including maximum floor area ratio (FAR) standards under K.M.C. 17.124.040 - Floor Area Ratios and Community Housing. These standards are intended to protect the public interest, health, general welfare, and provision of public services. The City has provided options for development proposals to potentially exceed the allowable FAR in exchange for mitigation of the impacts of such larger development, particularly as focused on affordable community and workforce housing. K.M.C. 17.124.040(B).
- B. Litigation was brought challenging the constitutionality and legality of the City's FAR standards in relation to the inclusionary housing incentive under K.M.C. 17.124.040 that was voluntarily dismissed.
- C. The City has adopted Resolution 17-006 which provides for the Parties to proceed with the FAR standards and options under K.M.C. 17.124.040, so long as the Parties voluntarily opt into a FAR Exceedance Agreement, making clear they are voluntarily opting by contract into use of such FAR standards and mitigation measures and are waiving any claims or demands related to any legal challenge to K.M.C. 17.124.040.

THEREFORE, in consideration of the mutual agreement herein contained and subject to the terms and conditions stated, it is hereby understood and agreed by the Parties as follows:

- 1. **Attestation of Developer.** Developer, by this Agreement, attests that the City has disclosed potential litigation challenging K.M.C. 17.124. Developer desires to voluntarily proceed on the development proposal, including proposal of exceedance of FAR

standards and accompanying mitigation measures, using the approach and standards as set forth in K.M.C. 17.124.

2. **Waiver and Release of Claims.** Developer, by this Agreement, waives and releases any claims, demands, challenges, claims for reimbursement or refund, and/or damages now or in the future deriving from or relying on the outcome of future litigation substantially challenging the validity of K.M.C. 17.124 and its standards. It is Developer's intent to accept and proceed with such standards as outlined in K.M.C. 17.124 for Developer's development plan for purposes of allowable FAR and Developer voluntarily and knowingly accepts the mitigation measures as proposed.
3. **FAR Exceedance Consideration.** In consideration for Developer's attestation and waiver, the City agrees to consider their exceedance proposal and will currently consider and evaluate Developer's proposed FAR exceedance and accompanying mitigation measures within the framework and standards of K.M.C. 17.124.040, attached hereto as Exhibit A and made a part of this Agreement.
4. **Maximum FAR and Mitigation.** The Parties hereby agree to an allowable maximum floor area ratio and accompanying mitigation measures as set forth in Exhibit B, attached hereto and made a part of this Agreement.
5. **Withdrawal.** Developer may withdraw from this Agreement upon thirty days notice to City provided that Developer has not commenced building and has received no benefit from a maximum FAR exceedance. Withdrawal shall cause an immediate reversion to the permitted gross FAR as set forth in Exhibit A: K.M.C. 17.124.040(A) at the time of this Agreement.
6. **Amendments.** This Agreement may not be amended, modified, altered or changed in any respect whatsoever, except by further agreement in writing duly executed by the parties.
7. **No Assignment.** Developer shall not sell, assign, or transfer all or any portion of its interest in this Agreement at any time without consent of the City.
8. **Binding Effect.** This Agreement shall be binding upon the heirs, estates, personal representatives, successors, and assigns of the parties.
9. **Attorney Fees and Costs.** In the event any action is brought to enforce this Agreement, the prevailing party is entitled to an award of reasonable attorney fees and costs.
10. **Notices.** Any notice under this Agreement shall be in writing and shall be treated as duly delivered if the same is personally delivered or deposited in the United States mail,

certified, return receipt requested, postage prepaid, and properly addressed to the contacts as specified at the beginning of this Agreement.

11. **Partial Invalidity.** Whenever possible, each provision of this Agreement shall be interpreted in such a way as to be effective and valid under applicable law. If a provision of this Agreement is prohibited by or invalid under applicable law, it shall be ineffective only to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Agreement.
  
12. **Waiver:** The rights and remedies of the parties to this Agreement are cumulative and not alternative. Neither the failure nor any delay by any party in exercising any right, power, or privilege under this Agreement or the documents referenced in this Agreement will operate as a waiver of such right, power, or privilege, and no single or partial exercise of any such right, power, or privilege will preclude any other or further exercise of such right, power, or privilege or the exercise of any other right, power, or privilege.
  
13. **Execution and Counterparts:** This Agreement may be executed in one or more counterparts, each of which shall be deemed an original agreement, but all of which shall be considered one instrument.

DATED THIS \_\_\_\_ DAY OF NOVEMBER 2022.

Developer

City of Ketchum, Idaho

\_\_\_\_\_  
Ryan Kirkham  
Walnut & Fourth LLC

\_\_\_\_\_  
Neil Bradshaw, Mayor

Attest:

\_\_\_\_\_  
Trent Donat, City Clerk



STATE OF IDAHO,                    )  
  ) ss.  
County of Blaine.                 )

On this \_\_\_\_ day of \_\_\_\_\_, 2022, before me, the undersigned Notary Public in and for said State, personally appeared Ryan Kirkham, known to me to be a member of Walnut & Fourth LLC, and the person who executed the foregoing instrument and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

\_\_\_\_\_  
Notary Public for \_\_\_\_\_  
Residing at \_\_\_\_\_  
Commission expires \_\_\_\_\_

STATE OF IDAHO                 )  
  ) ss.  
County of Blaine                 )

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.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the day and year in this certificate first above written.

\_\_\_\_\_  
Notary Public for \_\_\_\_\_  
Residing at \_\_\_\_\_  
Commission expires \_\_\_\_\_

## 17.124.040: FLOOR AREA RATIOS AND COMMUNITY HOUSING:

- A. General Requirements: All new buildings and alterations to existing buildings in the GR-H, T, T-3000, T-4000 and CC zoning districts, unless otherwise specified in this title, shall be subject to the maximum floor area ratio (FAR) described below. Hotels that meet the definition of "hotel" found in [chapter 17.08](#) of this title may exceed the floor area listed in the table below subject to section [17.124.050](#) of this chapter.

Districts	Permitted Gross FAR	Inclusionary Housing Incentive
GR-H	0.5	1.4
T	0.5	1.6
T-3000	0.5	1.6
T-4000	0.5	1.6
CC	1.0	2.25

### B. Inclusionary Housing Incentive:

1. The purpose of this section is to encourage new development to include a reasonable supply of affordable and resident occupied workforce housing for sale or rent, to help meet the demand and needs for housing of the community's employees. Land within the zoning districts specified in the table above may be built to the listed permitted FAR. As an incentive to build community housing units, floor area may be increased up to the maximum FAR listed in said table with inclusionary housing incentive.
2. An increased FAR may be permitted subject to design review approval, and provided, that all of the following conditions are met:
  - a. A minimum of twenty percent (20%) of the total increase in gross floor area above the greater of the permitted FAR is deed restricted in perpetuity as community housing unit(s). Of this gross square footage, a fifteen percent (15%) reduction will be allowed as a standard discount from gross square footage to net livable square footage for community housing units.
  - b. After calculating net livable square footage, an allowance can be made for projects with demonstrated groundwater issues as documented by a registered engineer. Upon determination by the city that groundwater on the subject property precludes underground parking, a credit of three hundred fifty (350) square feet per required parking space shall be subtracted from the net livable square footage prior to the calculation for the twenty percent (20%) deed restricted community housing. Parking space credit shall be rounded to the nearest whole number, and shall not be calculated as fractions.
  - c. Community housing requirements may be paid via a fee in lieu of housing. The community housing units times the fee equals the amount due to the city. The fee in lieu shall be recommended by the governing housing authority on an annual basis and adopted by the city council. For fractions of units, the developer has the option of providing a full housing unit

rather than paying the fee in lieu or working with the city or other nonprofit entity to construct the balance of the community housing unit with additional funds.

- d. All community housing units, either for sale or rent, shall be administered by the governing housing authority, unless otherwise determined by the city council. The governing housing authority shall recommend the types and locations of all proposed community housing units for approval by the city.
  - e. The community housing units shall be targeted for Blaine County housing authority income category 4 (100 percent or less of area median income). The applicant may seek the recommendation of the governing housing authority in the determination of an alternative category with corresponding adjustment in the amount of community housing required. Said recommendation, if mutually agreed upon by the applicant and the commission, may be used in place of category 4. This allowance shall be based on need for the category type. The definition of who may qualify to purchase affordable housing shall be maintained in the guidelines of the governing housing authority as adopted by the city council.
  - f. The city's primary goal is to see the development of and encourage the construction of community housing units, but realizes that other options will also move the city closer to its goal of housing the workforce. With this in mind, the following options for fulfillment of the community housing incentive are available to the applicant outright. These include, but are not limited to:
    - (1) Housing constructed by the applicant on or off site, within the city of Ketchum;
    - (2) Payment of an in lieu fee; or
    - (3) Acquisition of existing housing stock that meets with the governing housing authority's requirements and approval.
  - g. In addition to those outright options noted in this section, the city council may consider alternative proposals by the applicant to fulfill the community housing incentive. The city council has full discretionary power to determine said request. Options for fulfillment of the community housing incentive include, but are not limited to:
    - (1) Land conveyance to the city;
    - (2) Existing housing unit buy down or mortgage buy down; or
    - (3) Other proposals and options as approved by the city council.
3. In the CC district, the maximum floor area incentive applies to buildings up to three (3) stories in height. Buildings above three (3) stories may exceed the 2.25 FAR maximum only in accordance with the pertinent code provisions allowing for a fourth floor (for example, hotels, PUDs and 100 percent community housing project, etc.). For hotel uses, community housing calculations apply to all those portions of the hotel development except the hotel units, which are addressed pursuant to employee housing of this chapter. (Ord. 1135, 2015)

## EXHIBIT B

### AMENDED FAR EXCEEDANCE AGREEMENT 20595A COMPLIANCE

**PROJECT:** Walnut and 4<sup>th</sup> Mixed-Use Building

**APPLICATION FILE NUMBERS:** Design Review P20-046, Design Review Amendment P20-46A, Lot Line Shift P21-015, and Building Permit B21-009

**DEVELOPER & PROPERTY OWNER:** Walnut & Fourth LLC

**LOCATION:** 580 E 4<sup>th</sup> Street (Ketchum Townsite: Block 44: Lot 7A)

**ZONING:** Retail Subdistrict of the Community Core (CC-1)

#### BACKGROUND:

1. The Planning and Zoning Commission approved Design Review Permit P20-046 for the Walnut and 4th Mixed-Use Building project on September 15<sup>th</sup>, 2020. The project includes the construction of a new two-story mixed-use building located at the southwest corner of 4<sup>th</sup> Street and Walnut Avenue and associated site improvements.
2. The project site is located at 580 E 4<sup>th</sup> Street (Ketchum Townsite: Block 44: Lot 7A) within the Retail Core Subdistrict of the Community Core (CC-1 Zone). The total area of the project site is 16,513 square feet, which conforms to the minimum area required for lots in the CC-1 Zone.
3. The mixed-use building has a proposed Floor Area Ratio (FAR) of 1.30 (21,383 gross square feet/16,513 square feet lot area).
4. The Ketchum City Council approved Floor Area Ratio (FAR) Exceedance Agreement Contract #20595, recorded as Instrument number #682499 in records of Blaine County, on April 19<sup>th</sup>, 2021. The FAR Exceedance Agreement memorialized the applicant's community housing requirement in exchange for the project's increased FAR. FAR Exceedance Agreement Contract #20595 approved a 1,488-square-foot community housing rental unit within the basement of the new mixed-use building targeted for Blaine County Housing Authority Income Category 4.
5. The project was issued a building permit (Application File No. B21-009) on June 22<sup>nd</sup>, 2021 and is currently under construction.

6. The Planning and Zoning Commission reviewed proposed modifications to the approved project plans for the Walnut & 4th Mixed-Use Building (Design Review Amendment Application File No. P20-046A) during their regular meeting on September 27<sup>th</sup>, 2022. The proposed changes included modifying the mixture and configuration of uses within the mixed-use building, including the community housing. The proposed modifications provide two community housing units within the basement—Community Housing Unit A has a total net-livable floor area of 1,104 square feet with an associated detached 52-square-foot storage area and Community Housing Unit B has a total net-livable floor area of 914 square feet with an associated detached 53-square-foot storage area.
7. The Commission unanimously approved the modifications proposed with Design Review Amendment P20-46A with the condition that FAR Exceedance Agreement 20595 be revised to reflect the modified project and that the amended agreement must be reviewed and approved by the Ketchum City Council prior to City approval of the modified project plan submitted by the applicant to amend Building Permit B21-009.

### EXCEEDANCE ANALYSIS

*Floor Area Ratios and Community Housing (Ketchum Municipal Code §17.124.040)*

**Permitted Gross FAR in Community Core Subdistrict 1 (CC-1) : 1.0**

**Permitted Gross FAR with Inclusionary Housing Incentive: 2.25**

**Walnut and Fourth Mixed-Use Building Proposed Gross Floor Area:** 21,383 gross square feet

**Lot Area:** 16,513 square feet lot area

**FAR Proposed:** 1.30 (21,383 gross square feet/16,513 square feet lot area)

**Increase Above Permitted FAR:** 4,870 square feet

**20% of Increase:** 974 square feet

**Net Livable (15% Reduction):** 828 square feet

The applicant has proposed to provide two community housing units within the mixed-use building as shown on the attached basement-level floor plan (Sheet A01). Community Housing Unit A has a total net-livable floor area of 1,104 square feet with an associated detached 52-square-foot storage area. Community Housing Unit B has a total net-livable floor area of 914 square feet with an associated detached 53-square-foot storage area.

The total floor area of the two community housing units and associated storage areas is 2,123 square feet. The total net-livable floor area for the community housing contribution is 2,018 square feet, which is 1,190 square feet more than required for the FAR exceedance.

#### *Community Housing Contribution Proposal*

The applicant proposes to:

1. Provide two community housing rental units within the basement of the mixed-use building as shown on attached Sheet A01. Community Housing Unit A has a total net-livable floor area

Walnut & Fourth Mixed-Use Building

Amended FAR Exceedance Agreement 20595A

Exhibit B

of 1,104 square feet with an associated detached 52-square-foot storage area. Community Housing Unit B has a total net-livable floor area of 914 square feet with an associated detached 53-square-foot storage area.

2. Target subject community housing unit for Blaine County Housing Authority (BCHA) Income Category 4 or lower. The tenant chosen to occupy the unit shall be selected from the BCHA database of qualified households.
3. The deed covenant for the community housing units shall be recorded prior to issuance of a Certificate of Occupancy for the project.
4. The community housing units shall be listed for rent through BCHA concurrent with the issuance of a Certificate of Occupancy by the City for the project.

BASEMENT	
NET AREA-WORKFORCE HOUSING	2018 SF
NET AREA-WORKFORCE HOUSING	105 SF
LEVEL 1	
NET AREA - FOOD SERVICE	2489 SF
NET AREA-CULTURAL	3252 SF
LEVEL 2	
NET AREA-OFFICE	4999 SF
LEVEL 3	
NET AREA-RESIDENTIAL	1922 SF
NET AREA-RESIDENTIAL	1886 SF
NET AREA-RESIDENTIAL	3809 SF
	19960 SF

**BUILDING AREA**

TOTAL GROSS BUILDING AREA = 11,215 + 10,744 = 21,383  
 TOTAL NET BUILDING AREA = 19,960  
 LOT AREA: 16,371  
 FAR: 1.3

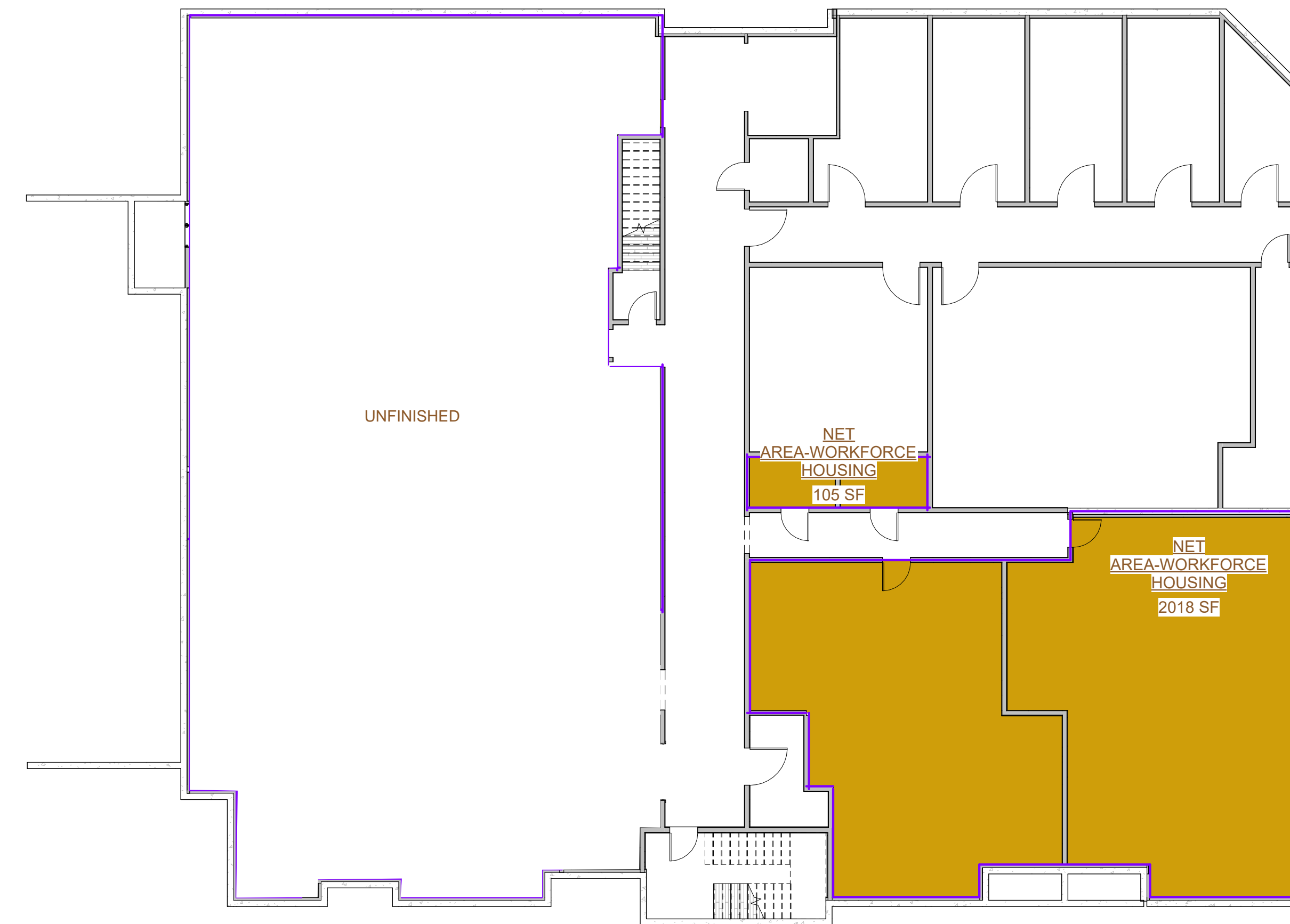
TOTAL GROSS BUILDING AREA = 11,215 + 10,744 = 21,383  
 TOTAL NET BUILDING AREA = 24,276  
 LOT AREA: 16,371  
 FAR: 1.3

**CITY OF KETCHUM AREA DEFINITION:**  
 Floor area, gross: The sum of the horizontal area of the building measured along the outside walls of each floor of a building or portion of a building, including stair towers and elevators on the ground floor only, and 50 percent of atriums over 18 feet plate height, but not including basements, underground parking areas or open unenclosed decks. Parking areas covered by a roof or portion of the building and enclosed on three or more sides by building walls are included. Four parking stalls for developments on single Ketchum Town Site lots of 5,500 square feet in size or less are not included in the gross floor area calculation.

Floor area increase: The gross and net floor area of a building allowed in addition to the permitted floor area in exchange for the provision of community housing units within the project, all of which are considered to be a public benefit.

Floor area, net: The sum of the horizontal areas of all floors in a building including basements but not including open unenclosed decks, interior or exterior circulation, mechanical equipment rooms, parking areas, common areas, public bathrooms or storage areas in basements.

Floor area ratio or far: The product of the floor area divided by the lot area (example 2,750 square feet floor area/5,500 square feet lot area = 0.5 FAR)



- NET AREA-RESIDENTIAL
- NET AREA-WORKFORCE HOUSING

2 BASEMENT FLOOR PLAN  
 1" = 10'-0"

NOT FOR CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIP.

WALNUT & 4TH LLC

580 4TH ST E., KETCHUM, ID 83340

AMENDMENT TO DESIGN REVIEW P20-A46

BASEMENT AREA PLAN

A01

ISSUE DATE:  
 08/16/22

Attachment B:  
580 E 4th Street  
Right-of-Way Encroachment  
Agreement 22814



**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 22814**

THIS AGREEMENT, made and entered into this \_\_\_\_ day of November, 2022, by and between the CITY OF KETCHUM, IDAHO, a municipal corporation ("Ketchum"), whose address is Post Office Box 2315, Ketchum, Idaho 83340 and Ryan Kirkham, representing WALNUT & FOURTH LLC, (collectively referred to as "Owner"), whose address is 313 N Water Avenue, Idaho Falls, Idaho 83402.

*RECITALS*

WHEREAS, Owner is the owner of real property described as 580 E 4<sup>th</sup> Street ("Subject Property"), located within the City of Ketchum, State of Idaho; and

WHEREAS, Owner wishes to permit the placement of a hydronic snowmelt system and pavers for the new sidewalks that are required for the development of the Walnut & Fourth Mixed-Use Building Project within the public rights-of-way along Walnut Avenue and 4<sup>th</sup> Street. 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;

WHEREAS, the Owner will restore the sidewalk, street, curb and gutter and any landscaping back to the original condition acceptable to the Streets and Facilities Director;

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 install a hydronic snowmelt system and pavers for the new sidewalks identified in Exhibit "A" within the public rights-of-way on Walnut Avenue and 4<sup>th</sup> Street, until notified by Ketchum to remove the infrastructure at which time Owner shall remove infrastructure at Owner's expense.

2. Owner shall be responsible for the maintenance of said Improvements and shall repair said improvements within 48 hours upon notice from Ketchum that repairs are needed. Any modification to the improvements identified in Exhibit "A" shall be approved by the City of Ketchum prior to any modifications taking place.

3. Snowmelt systems installed in the public right-of-way shall be installed and operate at all times during the winter according to the following:

- The system shall meet the requirements of the International Energy Conservation Code (2018 IECC, 403.12.2)
- The system shall have an electronic main control board to operate the system that is programmable and optimizes the way the system functions.
- Installation of in-ground control sensors linked to the main control board that detect snow and ice on the surface, monitor the sidewalk or driveway temperature, and automatically activates the system to be turned on or off based on the snow condition and air temperature.

4. Owner shall be responsible for restoring the sidewalk, curb and gutter and landscaping that is altered due to the construction and installation of the Improvements, to the satisfaction of the Director of Streets and Facilities.

5. 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.

6. 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.

7. 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.

8. 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.

9. 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.

10. 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.

11. 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.

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

13. 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.

OWNER:

CITY OF KETCHUM:

By: \_\_\_\_\_  
Ryan Kirkham  
Walnut & Fourth LLC

By: \_\_\_\_\_  
Neil Bradshaw  
\_\_\_\_\_ Its: Mayor

STATE OF \_\_\_\_\_ )  
County of \_\_\_\_\_ ) ss.

On this \_\_\_\_ day of \_\_\_\_\_, 2022, before me, the undersigned Notary Public in and for said State, personally appeared RYAN KIRKHAM, known to me to be the representative of WALNUT & FOURTH LLC and the person who executed the foregoing instrument and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

\_\_\_\_\_  
Notary Public for \_\_\_\_\_  
Residing at \_\_\_\_\_  
Commission expires \_\_\_\_\_

STATE OF IDAHO )  
County of Blaine ) ss.

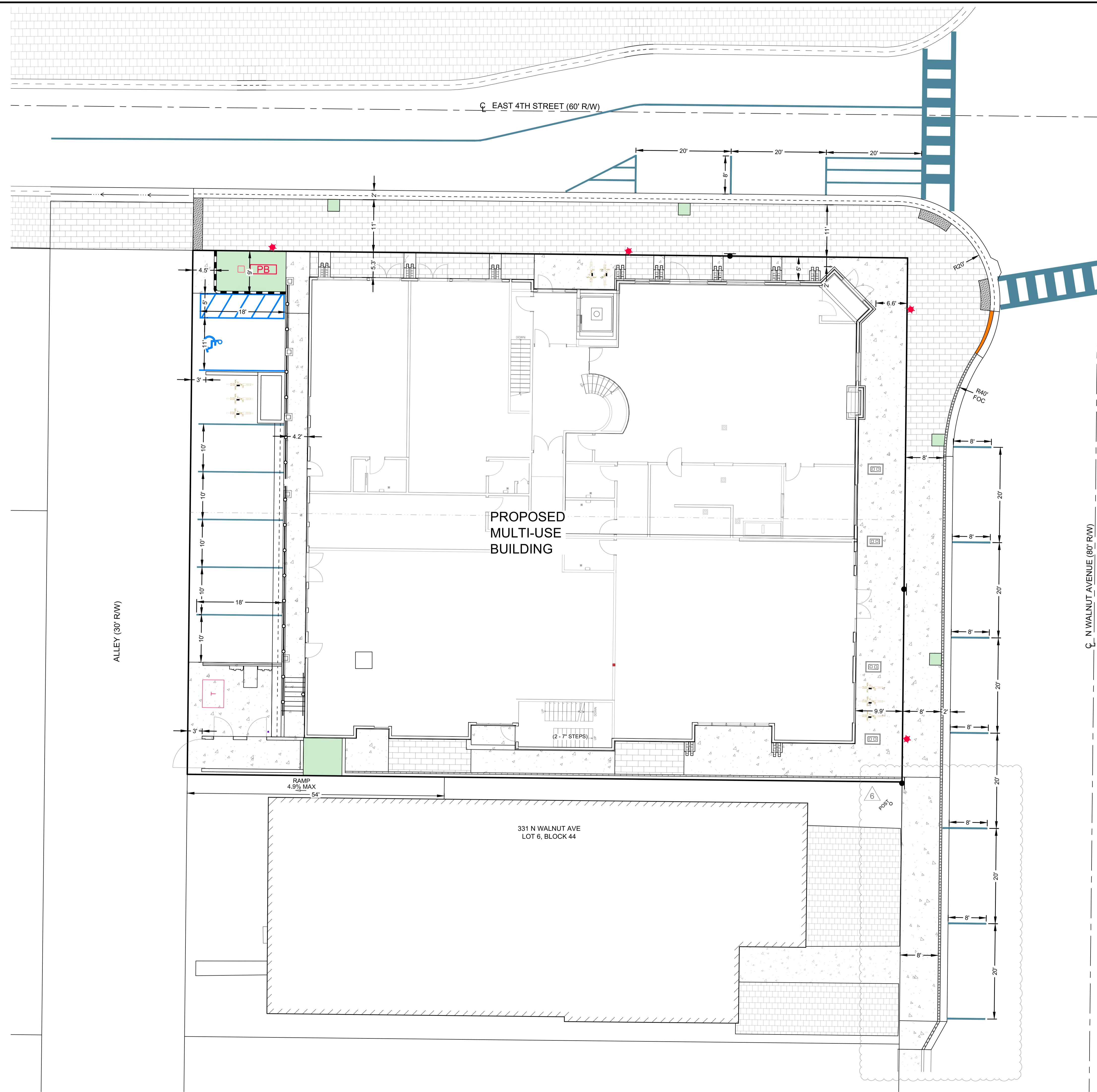
On this \_\_\_ day of \_\_\_\_\_, 2022, before me, the undersigned Notary Public in and for said State, personally appeared NEIL BRADSHAW, known or identified to me to be the Mayor of the CITY OF KETCHUM, IDAHO, and the person who executed the foregoing instrument on behalf of said municipal corporation and acknowledged to me that said municipal corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the day and year in this certificate first above written.

\_\_\_\_\_  
Notary Public for \_\_\_\_\_  
Residing at \_\_\_\_\_  
Commission expires \_\_\_\_\_

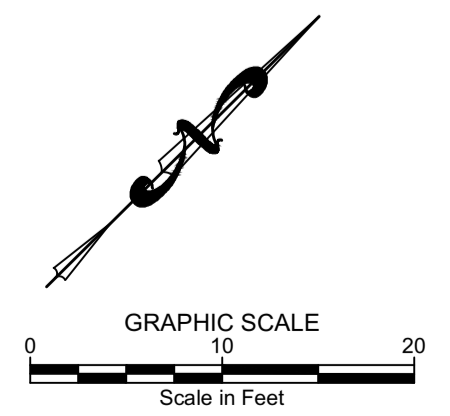
**EXHIBIT "A"**

City of Ketchum  
 BLD2101-00014  
 10/21/21



**LEGEND**

EXISTING ITEMS	
	Property Line
	Adjoiner's Lot Line
	Centerline
	FD5/8 = Found 5/8" Rebar
	Curb & Gutter
	Valley Gutter
	Building
	Pavers
PROPOSED ITEMS	
	Asphalt
	Concrete
	6" Rolled Curb & Gutter
	Zero Reveal Curb & Gutter
	Curb Transition
	Vertical Curb
	ADA Access Truncated Dome
	Sign
	Road Paint
	ADA Road Paint
	ADA Parking Symbol
	Landscape Area
	Trench Drain
	Retaining/Landscape Wall
	Rolled to Vertical Curb Transition
	Pavers
	Transformer
	FOC = Face of Curb
	Bike Rack



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.

PURPOSE: ISSUE FOR BUILDING PERMIT (01/21/2021)

NO.	DATE	BY	REVISIONS
A	05/05/21	SKS	RESPONSE TO PLANNING BUILDING PERMIT COMMENTS
A	06/18/21	SKS	RESPONSE TO PLANNING BUILDING PERMIT COMMENTS
A	05/04/22	SMF	SIDEWALK TYPE REVISIONS; CONC. FLOOR @ UT'S IN ALLEY
A	06/22/22	SMF	ADD NORTHWEST CANOPY COLUMNS
A	07/22/22	SMF	ADD 331 N WALNUT AVE. DESIGN
A	09/09/22	JCL	REVISIONS PER CITY COMMENTS (09/06/2022)

**GALENA ENGINEERING, INC.**  
 Civil Engineers & Land Surveyors  
 317 N. River Street  
 Hailey, Idaho 83433  
 (208) 768-1705  
 email: galena@galena-engineering.com

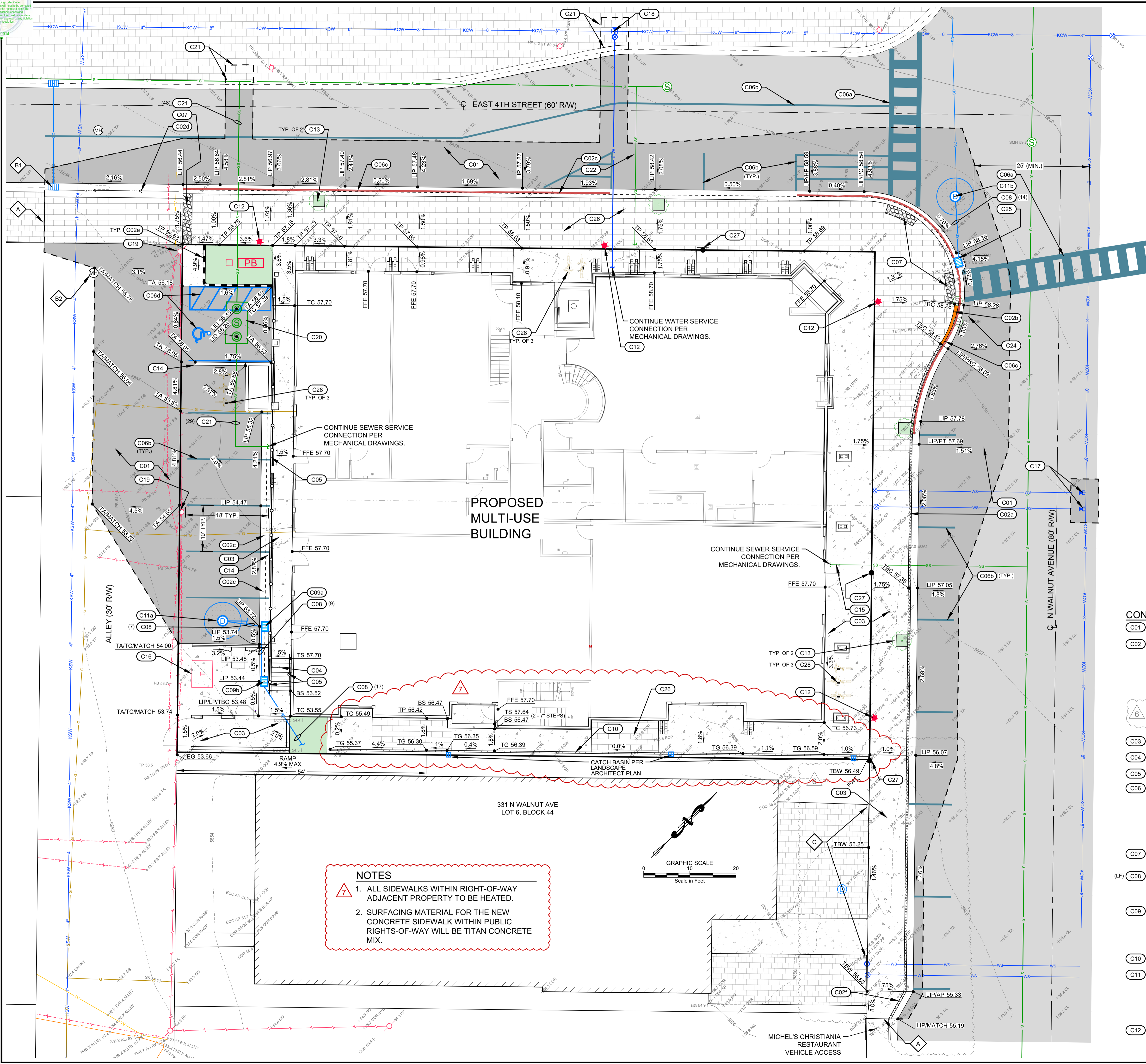
SKS/CT  
 DESIGNED BY  
 SKS/CT  
 DRAWN BY  
 SMF/JCL  
 CHECKED BY



**GEOMETRY PLAN  
 4TH AND WALNUT**  
 LOCATED WITHIN SECTION 18, T.4 N., R.18 E., B.M., CITY OF KETCHUM, BLAINE COUNTY, IDAHO  
 PREPARED FOR WALNUT & FOURTH LLC

PROJECT INFORMATION  
 P:\sds\proj\78191\proj\Construction\1819-ENG-BASE\_2022-07-22.dwg 08/31/22 4:09:27 PM

REUSE OF DRAWINGS: These drawings, or any portion thereof, shall not be used on any project or extension of this project without the written consent of Galena Engineering, Inc.



**LEGEND**

**EXISTING ITEMS**

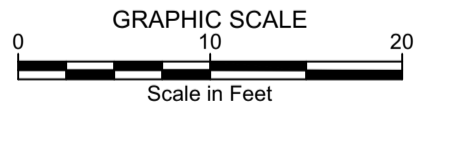
- Property Line
- Adjoiner's Lot Line
- Centerline
- CP / CNTRL = Survey Control
- 5' Contour Interval
- 1' Contour Interval
- Curb & Gutter
- Valley Gutter
- FNC = Fence Line
- Building
- Building / Structure Overhang
- Edge of Asphalt
- Concrete Sidewalk
- Pavers
- RTW = Retaining Wall
- Concrete Wheel Stop
- CT = Conifer Tree
- DT = Deciduous Tree
- SGN = Sign
- B-Rack = Bike Rack
- GM = Gas Main
- GMTR = Gas Meter
- TVB = Cable TV Buried
- TVBOX = Cable TV Riser
- PHB = Buried Telephone Line
- PHBOX = Telephone Riser
- PB = Buried Power Line
- Overhead Power Line
- Light
- PMTR = Power Meter
- PP = Power Pole
- AC = Air Conditioner
- Sewer Main
- SS = Sewer Service
- SMH = Sewer Manhole
- SCO = Sewer Cleanout
- Sand & Grease Trap
- CB = Catch Basin
- DWELL = Dry Well
- WS = Water Service
- WMH = Hydronic System Manhole
- WV = Water Valve
- KCW = Ketchum City Water Line (8")
- KXSW = Ketchum Spring Line (4") to be abandoned, summer 2021.
- AP = Angle Point
- BEG = Beginning
- BOW = Back of Walk
- BS = Bottom of Steps
- CC = Curb Cut

**PROPOSED ITEMS**

- Asphalt
- Concrete
- 6" Rolled Curb & Gutter
- Zero Rolled Curb & Gutter
- Curb Transition
- No Parking Zone
- Vertical Curb
- ADA Access Truncated Dome
- Street Light
- Sign
- Drywell
- Storm Drain
- Catch Basin
- Sawcut Line
- Road Paint
- Grade
- Tree and Tree Grate
- Trench Drain
- Retaining/Landscape Wall
- Water Service
- Sewer Service
- Sewer Cleanout
- Grease Interceptor
- Transformer
- Landscape Area
- Rolled to Vertical Curb Transition
- Pavers
- Bike Rack

**NOTES**

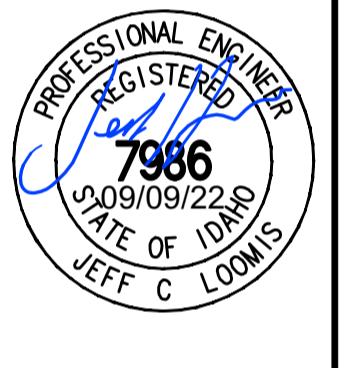
- ALL SIDEWALKS WITHIN RIGHT-OF-WAY ADJACENT PROPERTY TO BE HEATED.
- SURFACING MATERIAL FOR THE NEW CONCRETE SIDEWALK WITHIN PUBLIC RIGHTS-OF-WAY WILL BE TITAN CONCRETE MIX.



- CONSTRUCTION KEY NOTES**
- C01 CONSTRUCT ASPHALT ROADWAY / ASPHALT REPAIR. SEE DETAIL 1 / C0.1.
  - C02 CONSTRUCT CONCRETE CURB AND GUTTER a. 6" ROLLED C&G PER DETAIL 3 / C0.1. b. CURB TRANSITION PER DETAIL 5 / C0.1. c. ZERO REVEAL CURB AND GUTTER PER DETAIL 5 / C0.1. d. CONCRETE VALLEY GUTTER PER DETAIL 2 / C0.1. e. VERTICAL CURB PER DETAIL 7 / C0.2.
  - C03 CONSTRUCT CONCRETE SIDEWALK / FLAT WORK, WIDTH AS SHOWN HEREON. SEE DETAIL 8 / C0.2.
  - C04 CONSTRUCT CONCRETE STAIRS. SEE DETAIL 6 / C0.1.
  - C05 INSTALL HANDRAIL. SEE DETAIL 6 / C0.1.
  - C06 INSTALL ROAD STRIPING / PAINT a. WHITE CROSSWALK STRIPING. MATCH CITY PATTERNS. b. YELLOW ASPHALT STRIPING (4" WIDE). MATCH CITY PATTERNS. c. RED "NO PARKING" STRIPING ON CURB. MATCH CITY PATTERNS. d. BLUE ADA PARKING STRIPING (4" WIDE) AND SYMBOL. SEE DETAIL 4 / C0.2 FOR DIMENSIONS.
  - C07 INSTALL CITY OF KETCHUM APPROVED CAST IRON TRUNCATED DOME DETECTABLE WARNING INSERT. SEE DETAIL 9 / C0.1.
  - (LF) C08 INSTALL 12" ADS N-12 STORM DRAIN PIPE WITH A MINIMUM SLOPE OF 2.0%. SEE DETAIL 7 / C0.1 FOR POTABLE AND NON-POTABLE WATER LINE SEPARATION AND DETAIL 8 / C0.1 FOR TRENCHING. 2' COVER MINIMUM.
  - C09 INSTALL CATCH BASIN. SEE DETAIL 1 / C0.2 a. RIM = 53.52 I.E. (IN) = 49.86 I.E. (OUT) = 49.76 b. RIM = 53.24 I.E. (IN) = 50.24 I.E. (OUT) = 50.14
  - C10 INSTALL TRENCH DRAIN, SLOPE AT 1.0%. a. CONNECT ROOF DRAINS PER ARCHITECT. RIM = 53.85 I.E. (IN) = 49.54 I.E. (OUT) = 49.54 b. RIM = 58.66 I.E. (IN, C25) = 54.55 I.E. (IN, EXST. STORM DRAIN FROM NORTH) = 55.19.
  - C12 INSTALL CITY OF KETCHUM STANDARD STREET LIGHT. SEE DETAIL 5 / C0.2.
  - C13 INSTALL TREE WELL BOLLARDS AND MODULAR SUSPENDED PAVEMENT SYSTEM. SEE DETAIL 6 / C0.2.
  - C14 INSTALL RETAINING WALL PER ARCHITECT.
  - C15 RETAIN AND PROTECT EXISTING SEWER SERVICE.
  - C16 PROPOSED POWER BOX (TRANSFORMER, SECTOR BOX, ETC.) COORDINATE WITH IDAHO POWER FOR SIZE, TYPE, AND LOCATION.
  - C17 CUT, CAP, AND ABANDON EXISTING WATER SERVICE AT MAIN LINE.
  - C18 INSTALL 6" PVC WATER SERVICE, MECHANICAL ENGINEER TO CONFIRM SERVICE SIZE.
  - C19 RELOCATE UTILITIES. CONTRACTOR TO COORDINATE RELOCATION WITH UTILITY COMPANY.
  - C20 INSTALL 1,000 GAL. GREASE INTERCEPTOR SINGLE VAULT SYSTEM, OLDCASTLE PRECAST OR APPROVED EQUAL. BOTTOM OF TANK = 46.83 TOP OF TANK = 54.00 I.E. (IN) = 51.10 I.E. (OUT) = 51.00
  - (LF) C21 INSTALL 4" PVC SEWER SERVICE. SLOPE = 2.0% MINIMUM.
  - C22 CUT AND PLUG EXISTING SEWER SERVICE AT RIGHT-OF-WAY. SERVICE TO BE ABANDONED IN PLACE.
  - C23 REPAIR CURB, GUTTER, AND PAVER SIDEWALK. MATCH EXISTING MATERIALS, LAYERS, AND THICKNESSES.
  - C24 REMOVE AND DISPOSE OF EXISTING STORM VAULT.
  - C25 UTILIZE EXISTING CATCH BASIN. REMOVE EXISTING STORM DRAIN LINE TO STORM VAULT AND GROUT / FILL-IN HOLE. CONNECT TO NEW DRYWELL (C11b). ADJUST RIM ELEV. ORIGINAL RIM = 58.17 NEW RIM = 58.16 I.E. (OUT, NORTH) = 54.87
  - C26 CONSTRUCT HEATED PAVER SIDEWALK, WIDTH AS SHOWN HEREON. SEE DETAIL 4 / C0.1.
  - C27 INSTALL PARKING REGULATORY SIGN. COORDINATE FINAL LOCATION WITH CITY OF KETCHUM. SEE DETAIL 10 / C0.1 FOR SIGN BASE DETAIL.
  - C28 INSTALL BIKE RACKS PER ARCHITECTURAL SITE PLAN.
- MATCH EXISTING LINES AND GRADES
- RETAIN AND PROTECT EXISTING ITEM
- CATCH BASIN
  - HYDRONIC SYSTEM MANHOLE
- REGRADE AREA TO PROVIDE FOR A SMOOTH TRANSITION.

**GRADING, DRAINAGE, AND UTILITY PLAN**  
**4TH AND WALNUT**

LOCATED WITHIN SECTION 18, T.4 N., R.18 E., B.M., CITY OF KETCHUM, BLAINE COUNTY, IDAHO  
 PREPARED FOR WALNUT & FOURTH LLC



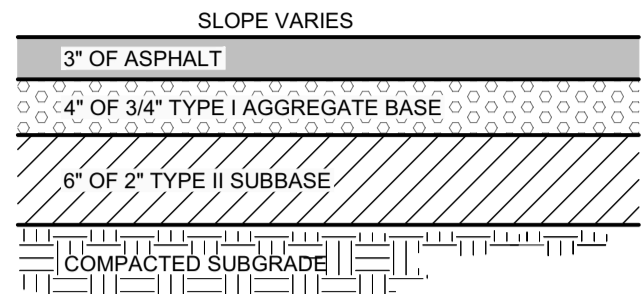
SKS/CT  
 DESIGNED BY  
 SKS/CT  
 DRAWN BY  
 SMF/JCL  
 CHECKED BY

**GALENA ENGINEERING, INC.**  
 Civil Engineers & Land Surveyors  
 317 N. River Street  
 Hailey, Idaho 83433  
 (208) 768-1705  
 email: galena@galena-engineering.com

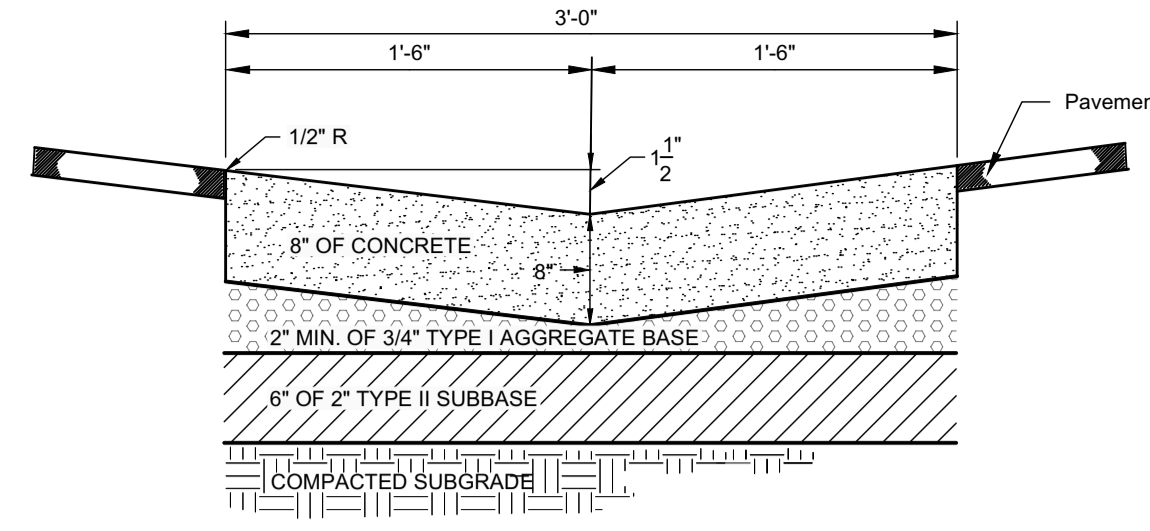
NO.	DATE	BY	REVISIONS
A	05/05/21	SKS	RESPONSE TO PLANNING BUILDING PERMIT COMMENTS
A	06/19/21	SKS	RESPONSE TO PLANNING BUILDING PERMIT COMMENTS
A	05/04/22	SMF	SIDEWALK TYPE REVISIONS: CONC. FLOOR @ UT'S IN ALLEY
A	06/22/22	SMF	ADD NORTHWEST CANOPY COLUMNS
A	07/22/22	SMF	ADD 331 N WALNUT AVE. DESIGN
A	09/09/22	JCL	REVISIONS PER CITY COMMENTS (09/06/2022)

**INSTRUCTION NOTES**

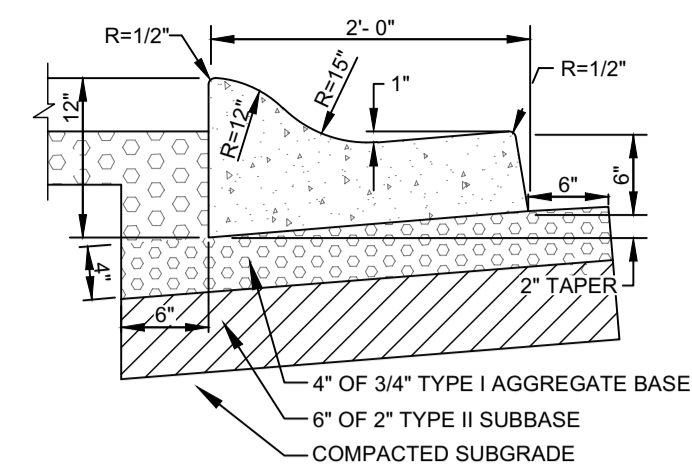
- CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE MOST CURRENT EDITION OF THE "IDAHO REGULATIONS FOR PUBLIC DRINKING WATER SYSTEMS," THE CURRENT EDITION OF THE "IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION" (ISPC), AND CITY OF KETCHUM STANDARDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND KEEPING A COPY OF THE ISPC 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.
- 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, INCLUDING BUT NOT LIMITED TO, EPA'S NPDES CONSTRUCTION GENERAL PERMIT.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
- CONSTRUCTION OF WATER MAINS AND ALL OTHER RELATED APPURTENANCES SHALL BE IN ACCORDANCE WITH THE IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ISPC), 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 (ISPC), 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 ANSINSF 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 ANSINSF STANDARD 60 CHEMICALS AND COMPOUNDS DURING INSTALLATION & DISINFECTION OF POTABLE WATER MAIN.
- CONTRACTOR SHALL COORDINATE LOCATIONS OF DRY UTILITY FACILITIES (POWER, CABLE, PHONE, TV) NOT SHOWN ON THE DRAWING WITH IDAHO POWER.
- ALL CLEARING & GRUBBING SHALL CONFORM TO ISPC SECTION 201.
- ALL EXCAVATION & EMBANKMENT SHALL CONFORM TO ISPC SECTION 202. EXCAVATED SUBGRADE SHALL BE COMPACTED AND ALL UNSUITABLE SECTIONS REMOVED AND REPLACED WITH STRUCTURAL FILL AS DETERMINED BY THE ENGINEER. MINIMUM COMPACTION OF PLACED MATERIAL SHALL BE 95% OF MAXIMUM LABORATORY DENSITY AS DETERMINED BY AASHTO T-99 OR ITS T-91.
- ALL 2" MINUS GRAVEL SHALL CONFORM TO ISPC 802, TYPE II (ITD STANDARD 703.04, 2"). SHALL BE PLACED IN CONFORMANCE WITH ISPC 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 ISPC 802, TYPE I (ITD STANDARD 703.04, 3/4" B), SHALL BE PLACED IN CONFORMANCE WITH ISPC 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 ITS T-91.
- ALL ASPHALTIC CONCRETE PAVEMENT WORK SHALL CONFORM TO ISPC SECTION(S) 805, 810, AND 811 FOR CLASS II PAVEMENT. ASPHALT AGGREGATE SHALL BE 1/2" (13MM) NOMINAL SIZE CONFORMING TO TABLE 803B IN ISPC SECTION 803. ASPHALT BINDER SHALL BE PG 58-28 CONFORMING TO TABLE A-1 IN ISPC SECTION 805.
- ALL EDGES OF EXISTING ASPHALT PAVING SHALL BE SAW CUT 24" TO PROVIDE A CLEAN PAVEMENT EDGE FOR MATCHING. NO WHEEL CUTTING SHALL BE ALLOWED. PRIOR TO REPLACING ASPHALT, THE UNDERLYING SURFACE INCLUDING VERTICAL SAWCUT JOINTS SHALL BE CLEANED OF ALL DEBRIS AND A TACK COAT SHALL BE APPLIED TO ALL CURBS, SAWCUTS, OR OVERLAY SURFACES.
- 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 FORM WORK SHALL CONFORM TO ISPC SECTION 701 AND 703. ALL CONCRETE SHALL BE 3,000 PSI MINIMUM, 28 DAY, AS DEFINED IN ISPC SECTION 703, TABLE 1-C. SURFACING MATERIAL FOR THE NEW CONCRETE SIDEWALK WITHIN PUBLIC RIGHTS-OF-WAY WILL BE TITAN CONCRETE MIX, SEE DETAILS 2, 3, AND 5, SHEET C0.1.
- ALL TRENCHING SHALL CONFORM TO ISPC STANDARD DRAWING SD-301. TRENCHES SHALL BE BACKFILLED AND COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99.
- TOPOGRAPHIC, SITE, AND BOUNDARY SURVEY SHOWN HEREON WAS CONDUCTED BY GALENA ENGINEERING, INC., 12/6/2019.
- 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 SET IN CONTROL SURVEYS 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.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIRING A MATERIALS TESTING COMPANY DURING CONSTRUCTION TO VERIFY ALL COMPACTION AND MATERIAL PLAN AND SPECIFICATION REQUIREMENTS ARE MET. QUALITY CONTROL DOCUMENTATION OF TESTING FOR WORK IN RIGHT-OF-WAY MEETING CITY OF KETCHUM CODE SECTION 12.04.040 (CONCRETE, AGGREGATE BASE COMPACTION, ASPHALT COMPACTION) WILL BE NECESSARY FOR CERTIFICATE OF OCCUPANCY.



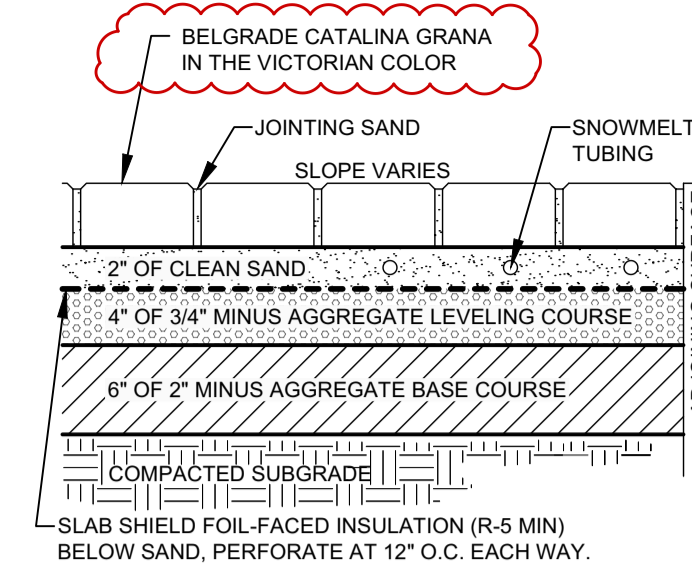
**1** C0.1 **TYPICAL STREET ASPHALT SECTION**  
N.T.S.



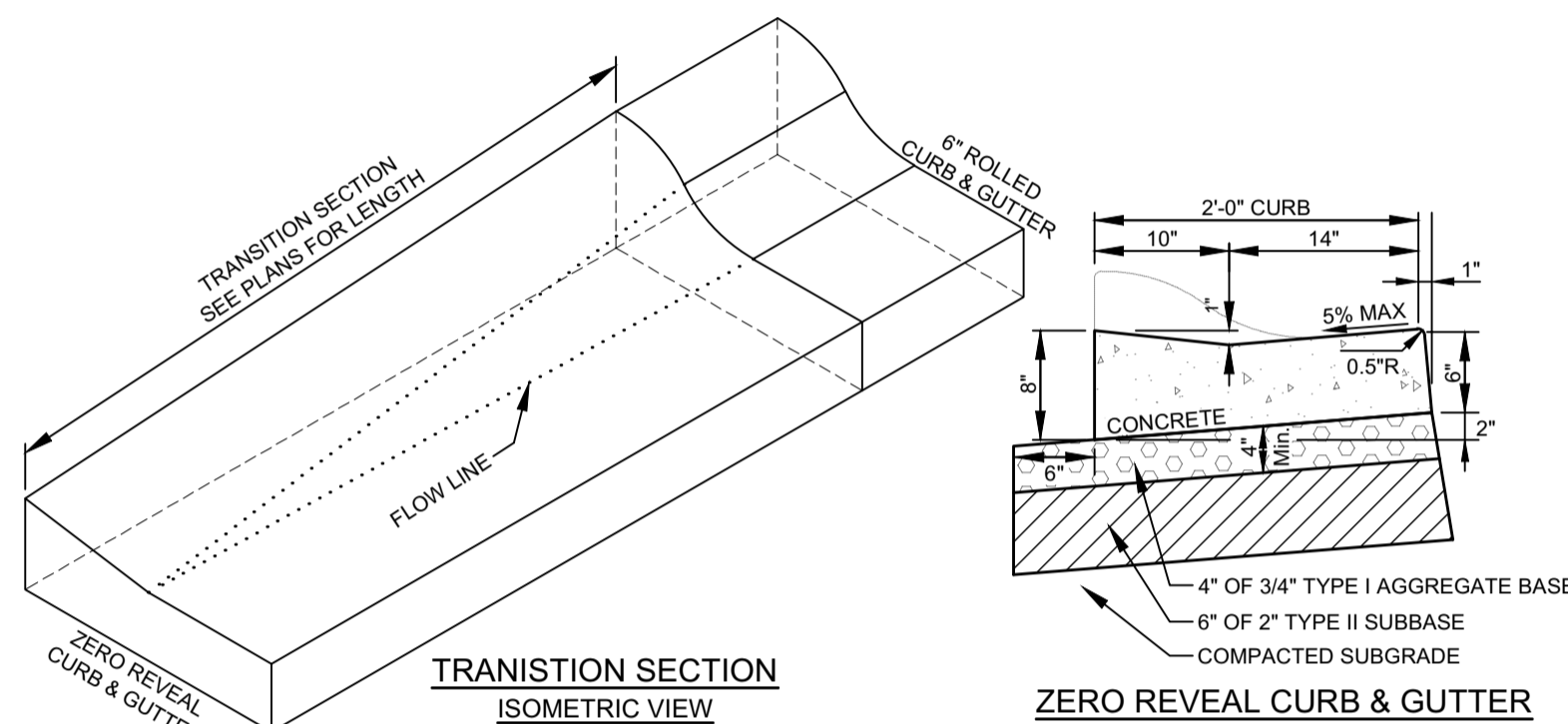
**2** C0.1 **36" CONCRETE VALLEY GUTTER**  
N.T.S.



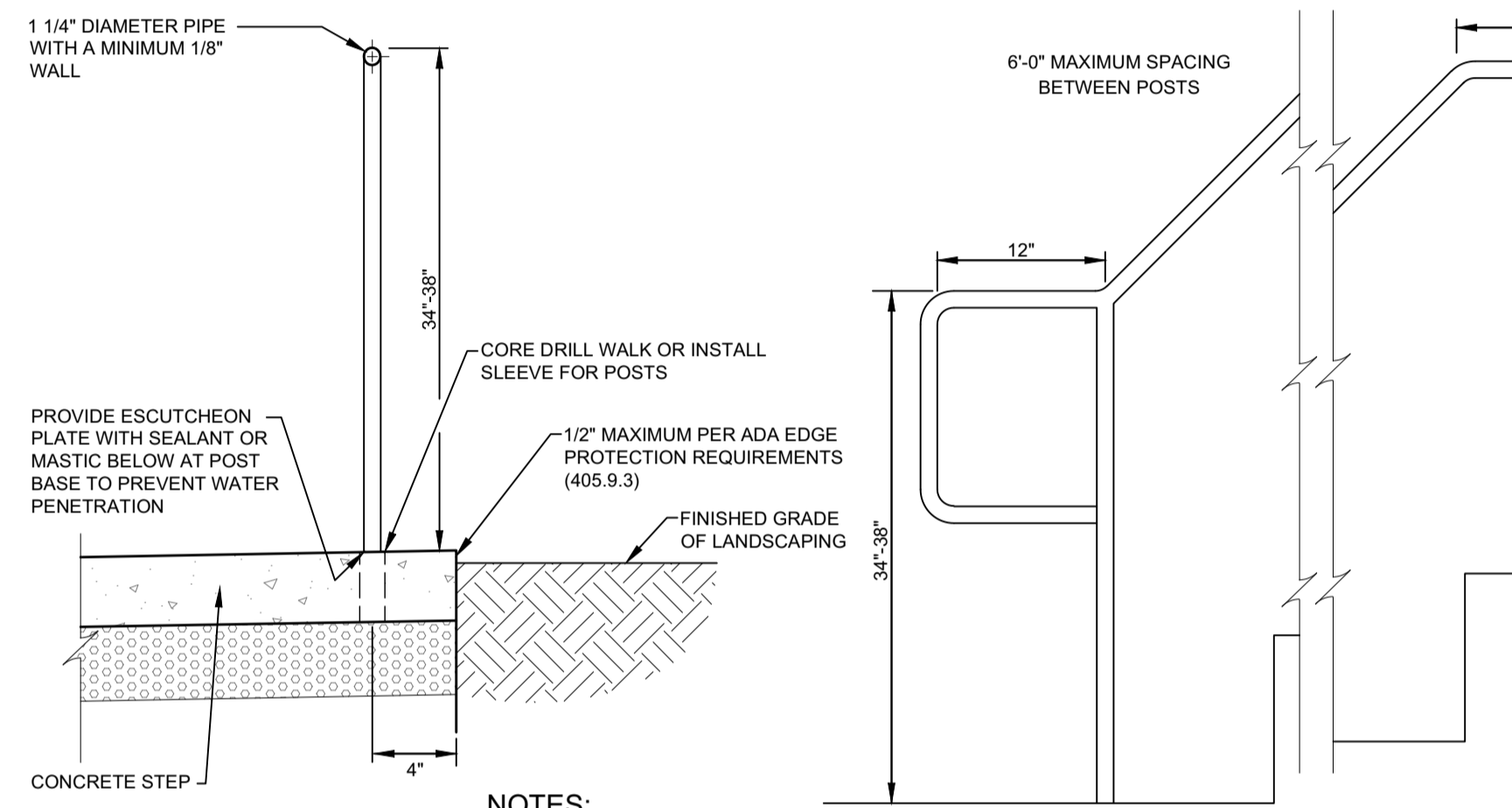
**3** C0.1 **6" CONCRETE ROLLED CURB & GUTTER**  
N.T.S.



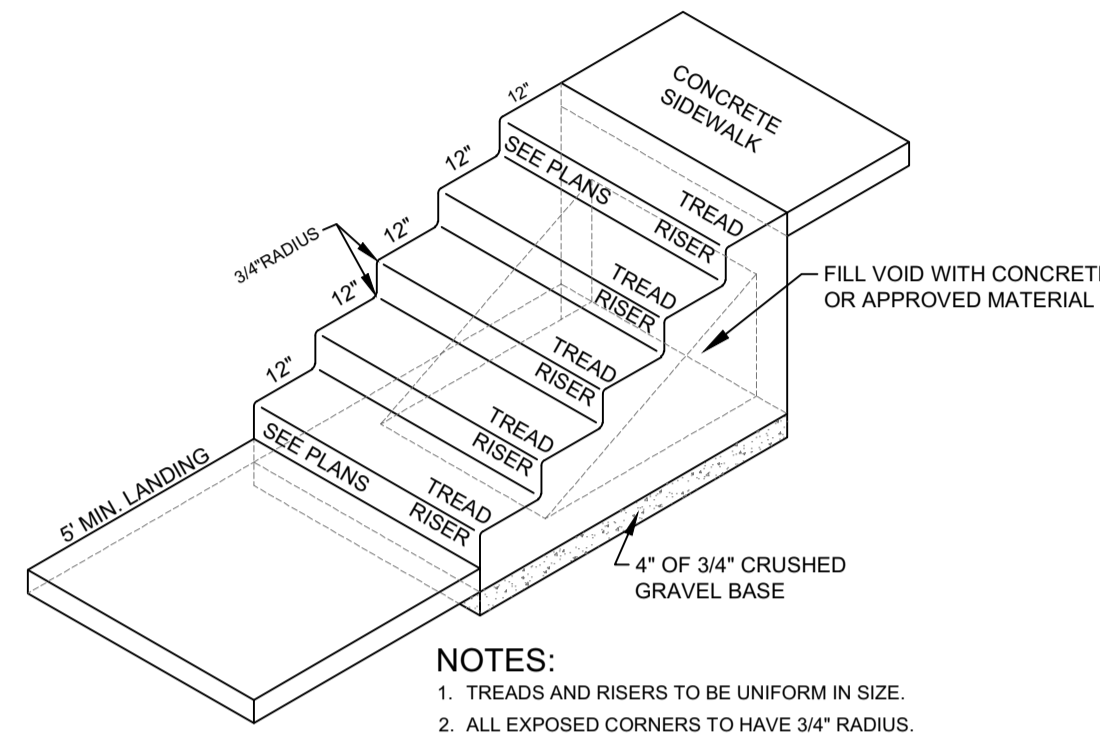
**4** C0.1 **HEATED PAVER DETAIL**  
N.T.S.



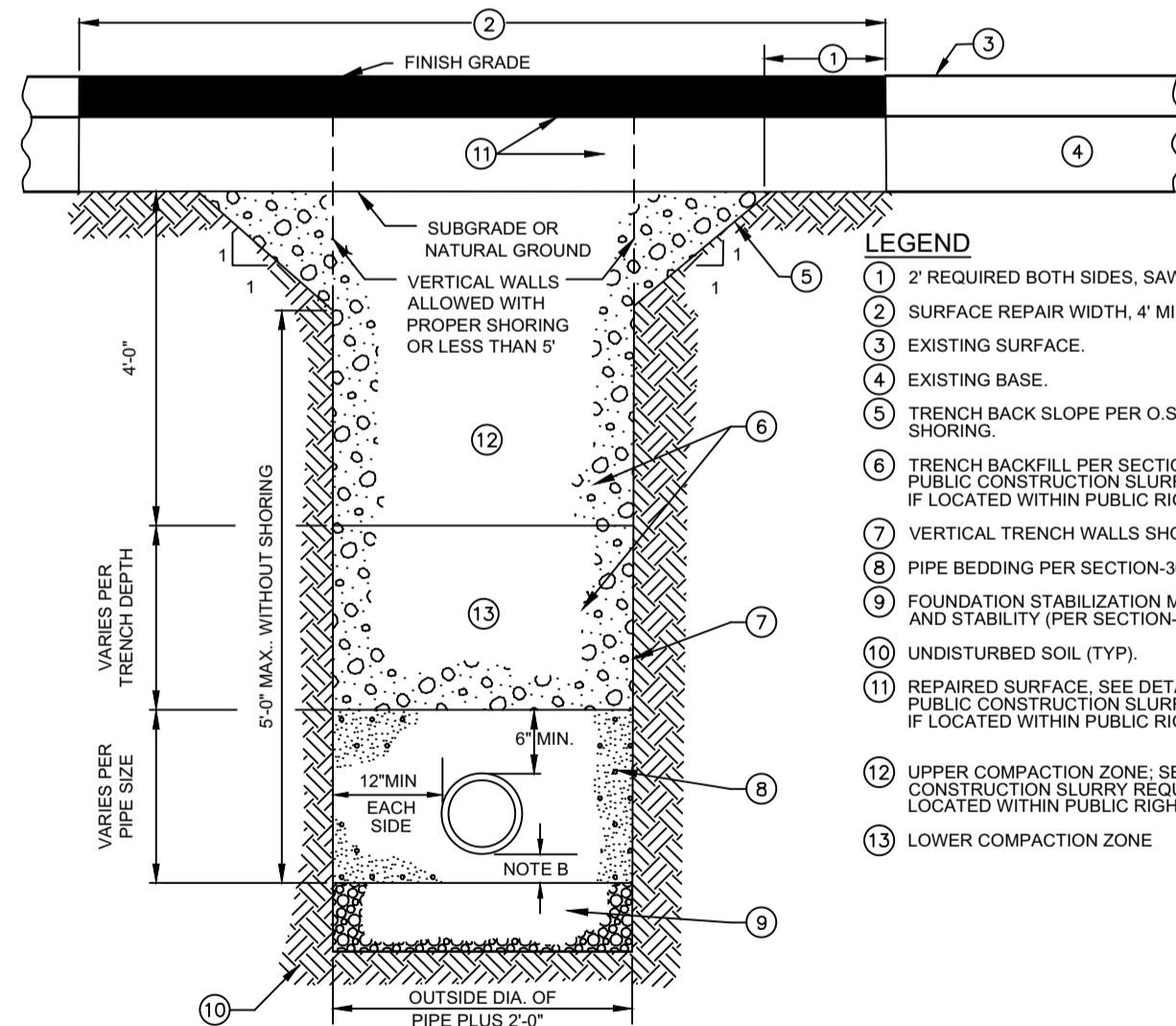
**5** C0.1 **TYPICAL CURB TRANSITION DETAIL**  
N.T.S.



**6** C0.1 **TYPICAL HANDRAIL AND STAIRS DETAIL**  
N.T.S.



**WALL MOUNTED HANDRAIL DETAIL**  
N.T.S.



**KETCHUM PUBLIC CONSTRUCTION SLURRY REQUIREMENT**  
IN AREAS WHERE IT IS NECESSARY TO CUT THE ASPHALT PAVEMENT AND DIG A TRENCH FOR BURIAL OF CONDUIT CABLE OR OTHER CITY UTILITY, THE TRENCH SHALL BE BACKFILLED WITH A LEAN CONCRETE MIX TO THE BOTTOM OF FINISH SURFACE MATERIAL WITH THE FOLLOWING PROPORTIONS OF MATERIALS:

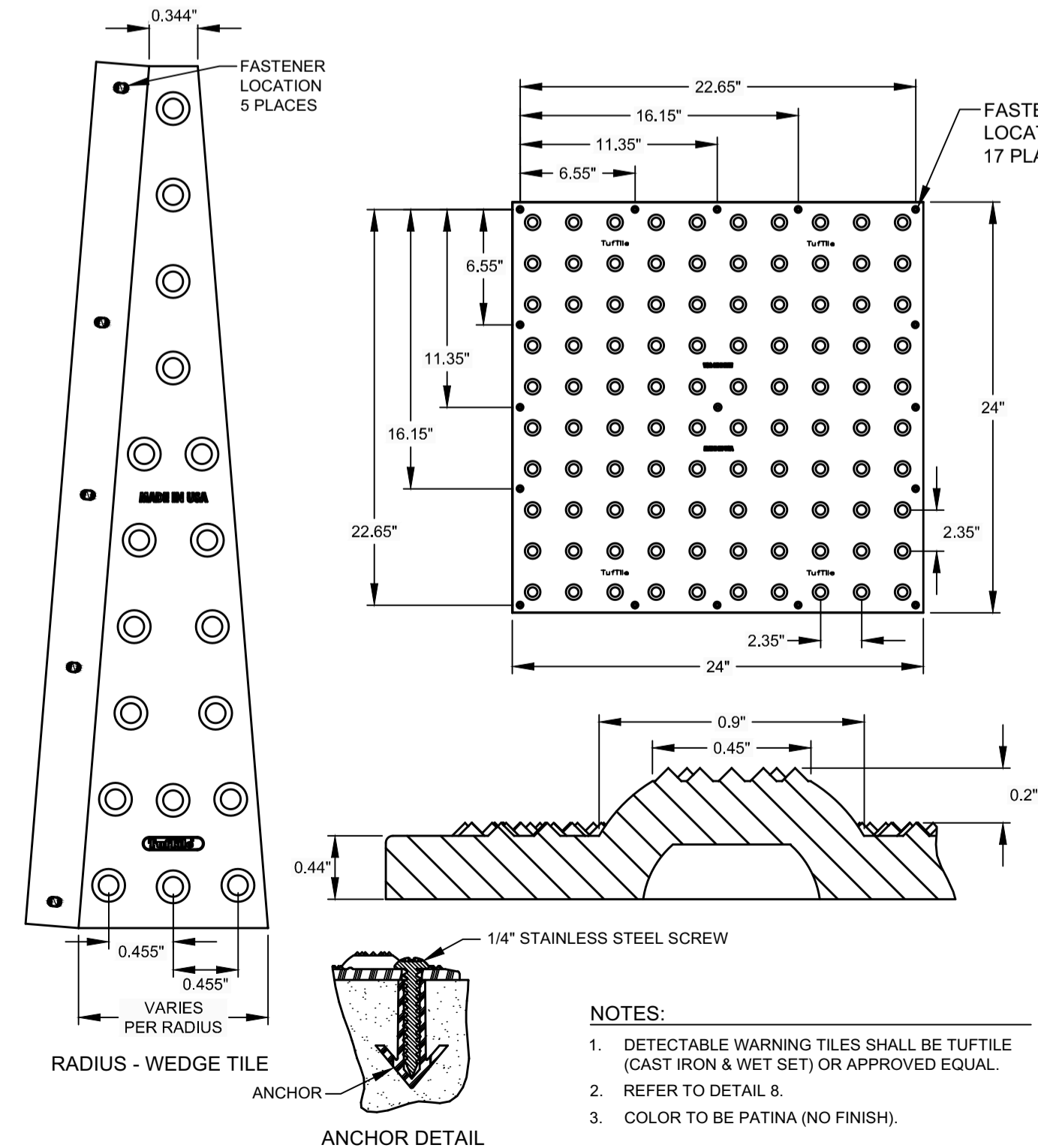
COURSE AGGREGATE (3/4" MINUS)	2,800 LBS
SAND	800 LBS
PORTLAND CEMENT	94 LBS (MAX.)
WATER	11 GAL (MAX.)

WATER CONTENT IS MAXIMUM AND MAY BE REDUCED DOWNWARD. CARE SHALL BE TAKEN TO ASSURE THAT EXCESS WATER IS NOT PRESENT IN THE MIXING DRUM PRIOR TO CHARGING THE MIXER WITH MATERIALS. THOROUGH MIXING WILL BE REQUIRED PRIOR TO DISCHARGE.

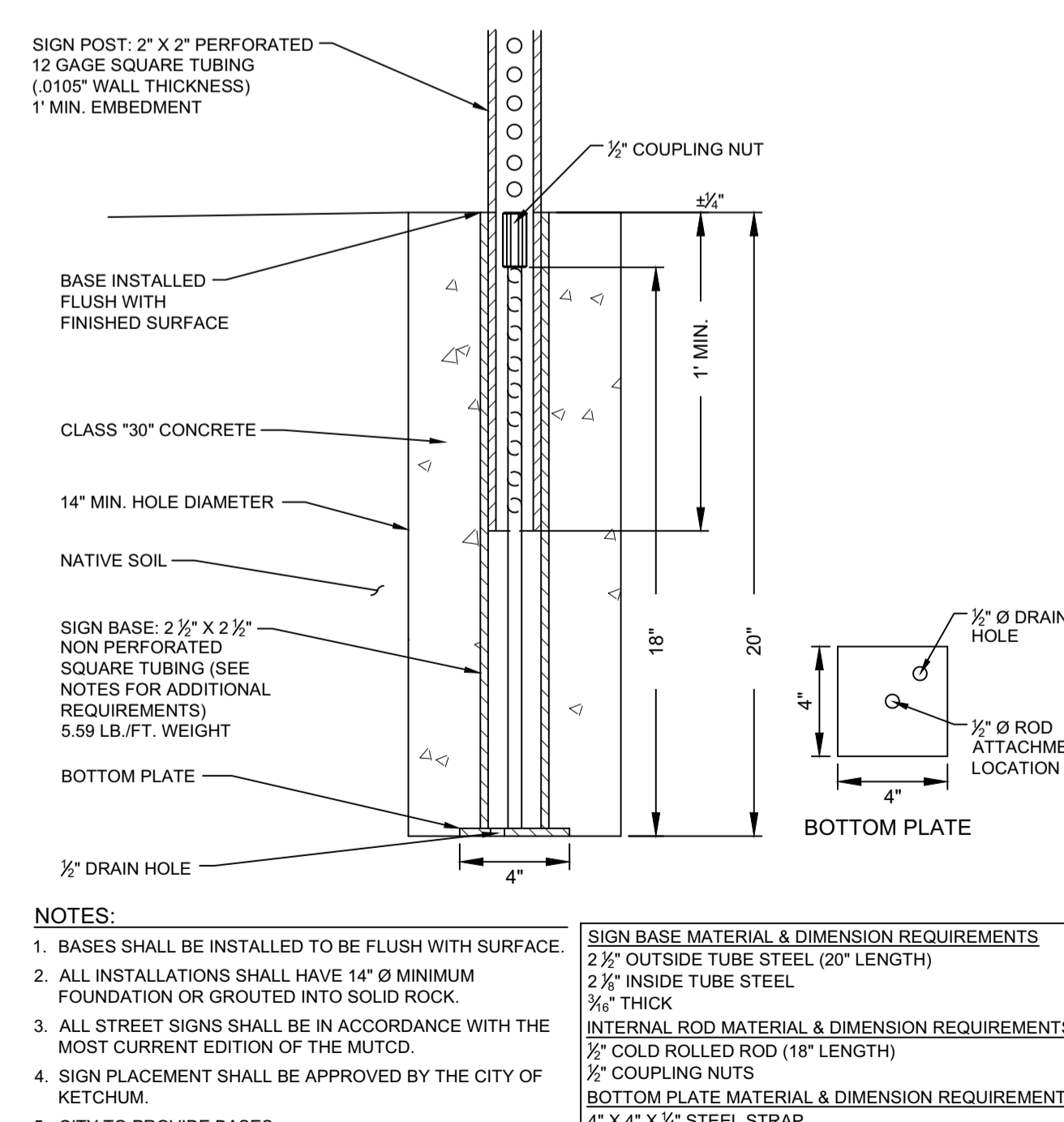
NO COMPACTION, VIBRATION, OR FINISHING IS REQUIRED. THE LEAN CONCRETE MIX SHALL BE STRUCK OFF AT OR BELOW THE ELEVATION OF THE PLANT MIX SURFACING WITH A SQUARE-NOSE SHOVEL OR SIMILAR HAND TOOL. THE BACKFILL MIX SHALL BE ALLOWED TO SET FOR A MINIMUM OF 2 HOURS BEFORE THE PERMANENT PLANT MIX SURFACING IS PLACED TO COMPLETE THE TRENCH REPAIR. TEMPORARY PLACEMENT OF ASPHALT COLD MIX SURFACING MAY BE NECESSARY TO ACCOMMODATE TRAFFIC WITHIN THE FIRST 2 HOURS OF BACKFILL PLACEMENT PRIOR TO COMPLETING THE PERMANENT REPAIR.

**NOTES:**

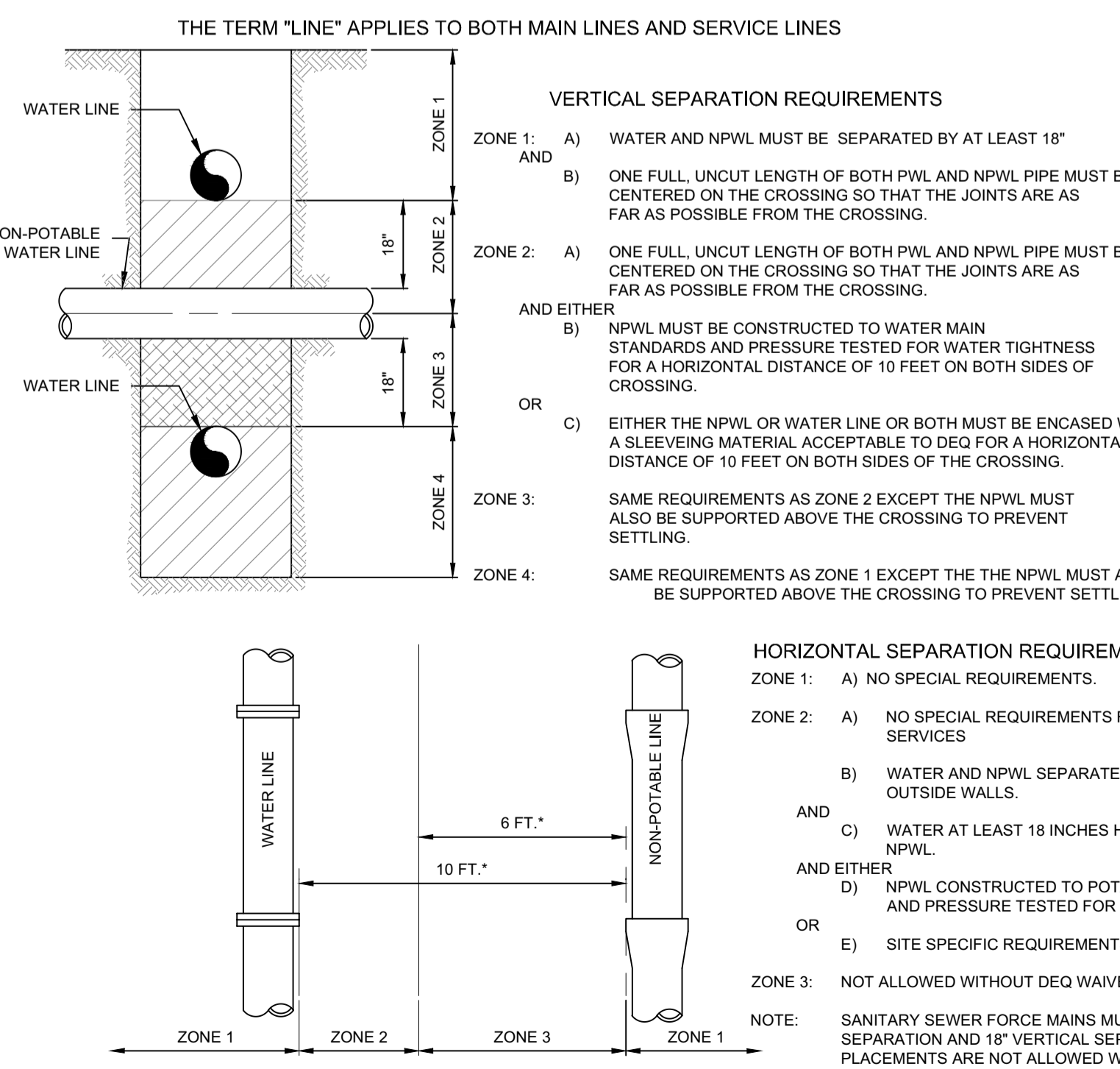
- TRENCH EXCAVATION PER SECTION-301.
- PIPE BEDDING PER SECTION-305.
- BACKFILL AND COMPACTION PER SECTION-306.
- SURFACE REPAIR AND BASE PER DETAIL 3.
- ASPHALT PAVEMENT FOR SURFACE REPAIR SHALL BE IN ACCORDANCE WITH PLANS AND ISPC SECTIONS 805, 810, AND 811 FOR CLASS II PAVEMENT. ASPHALT AGGREGATE SHALL BE 1/2" (13MM) NOMINAL SIZE CONFORMING TO TABLE 803B IN ISPC SECTION 803. ASPHALT BINDER SHALL BE PG 58-28 CONFORMING TO TABLE A-1 IN ISPC SECTION 805.
- IF TRENCH IMPACTS CROWN OF ROADWAY, CROWN MUST BE MAINTAINED AND POSITIVE DRAINAGE PROVIDED.



**9** C0.1 **DETECTABLE WARNING PLATE**  
N.T.S.



**10** C0.1 **TYPICAL SIGN BASE**  
N.T.S.



**7** C0.1 **POTABLE AND NON-POTABLE WATER LINE (NPWL) SEPARATION**  
N.T.S.

**8** C0.1 **TYPICAL TRENCH**  
N.T.S.

**NOTES AND DETAIL SHEET**

**4TH AND WALNUT**

LOCATED WITHIN SECTION 18, T.4 N., R. 18 E., B.M., CITY OF KETCHUM, BLAINE COUNTY, IDAHO  
PREPARED FOR WALNUT & FOURTH LLC



SKS/JCT  
DESIGNED BY  
SKS/JCT  
DRAWN BY  
SMF/JCL  
CHECKED BY

**GALENA**  
ENGINEERING, INC.  
Civil Engineers & Land Surveyors  
317 N. River Street  
Halley, Idaho 83333  
(208) 768-1705  
email: galena@galena-engineering.com

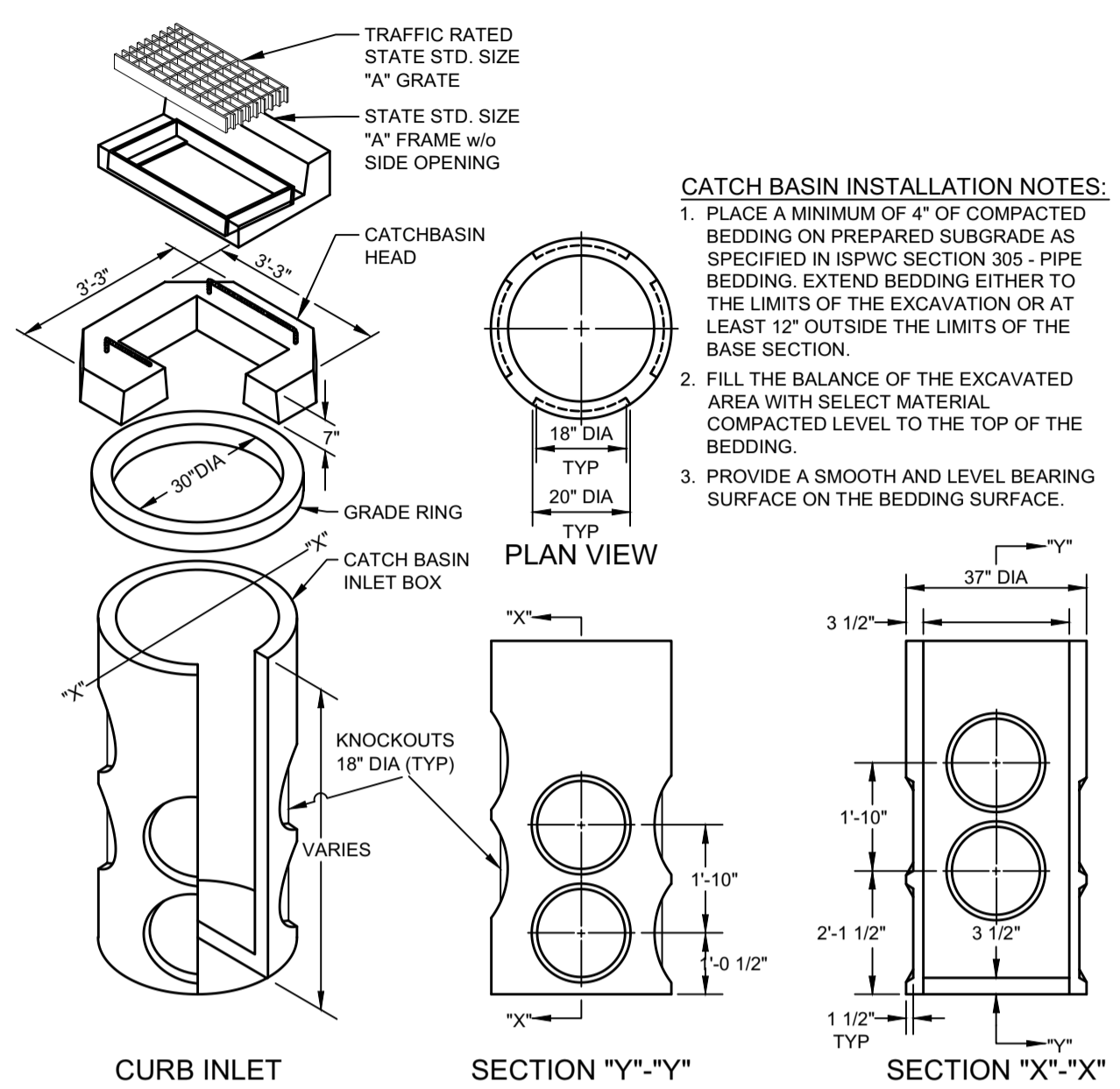
NO.	DATE	BY	REVISIONS
1	05/08/21	SKS	RESPONSE TO PLANNING BUILDING PERMIT COMMENTS
2	06/18/21	SKS	RESPONSE TO PLANNING BUILDING PERMIT COMMENTS
3	05/04/22	SMF	SIDEWALK TYPE REVISIONS - CONC. FLOOR @ UT'S IN ALLEY
4	06/22/22	SMF	ADD NORTHWEST CANOPY COLUMNS
5	07/22/22	SMF	ADD 331 WALNUT AVE. DESIGN
6	09/09/22	JCL	REVISIONS PER CITY COMMENTS (09/06/2022)

**C0.1**

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



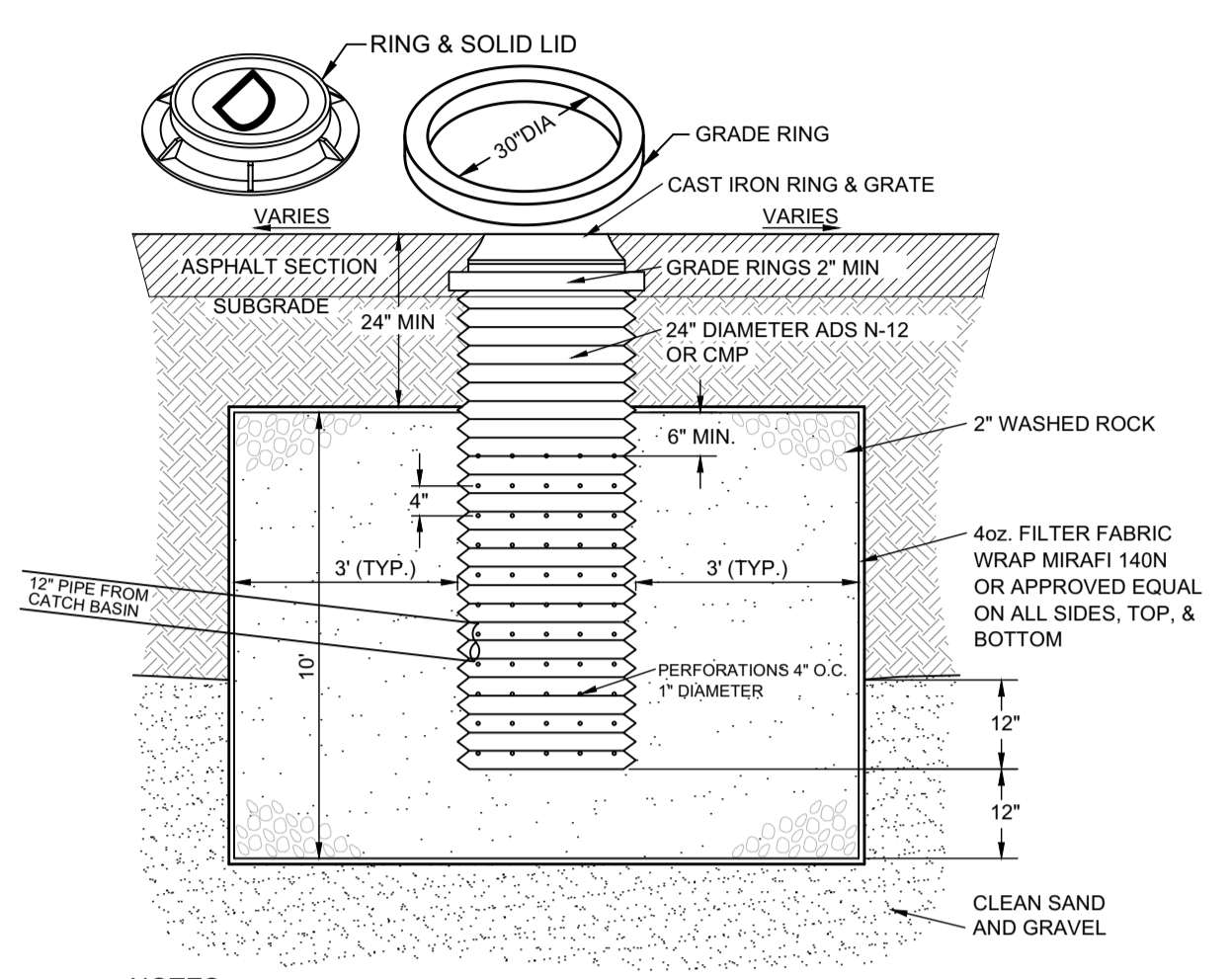
REUSE OF DRAWINGS: These drawings, or any portion thereof, shall not be used on any project or extension of this project without the written consent of Galena Engineering, Inc.



**1**  
C0.2 **30" DIAMETER CATCH BASIN**  
N.T.S.

**CATCH BASIN INSTALLATION NOTES:**

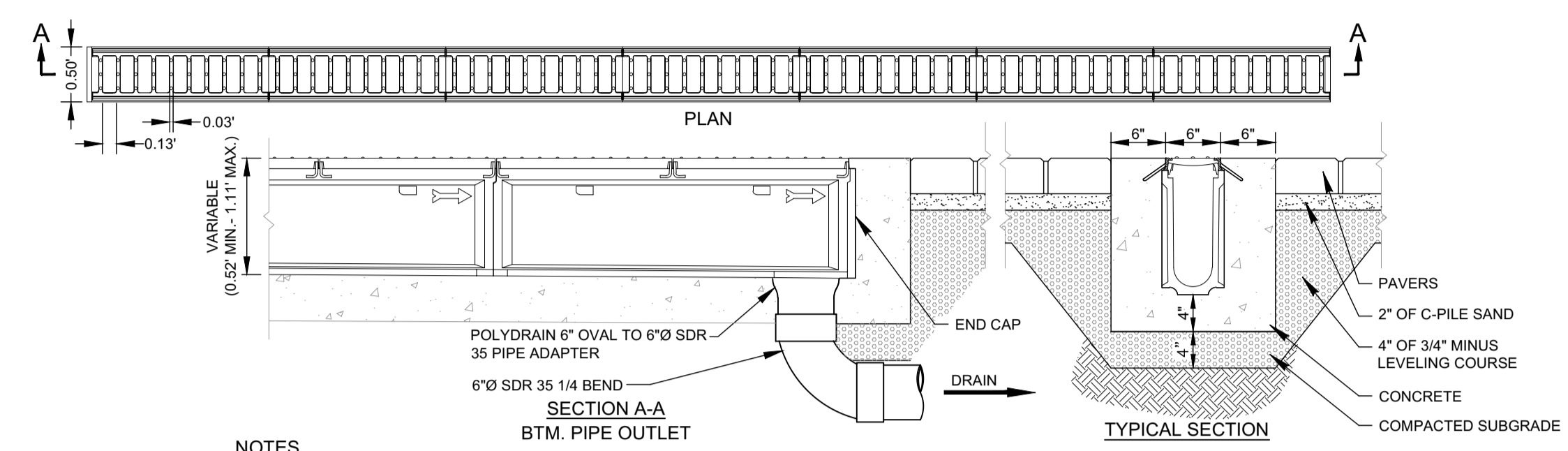
1. PLACE A MINIMUM OF 4" OF COMPACTED BEDDING ON PREPARED SUBGRADE AS SPECIFIED IN ISPGW SECTION 505 - PIPE BEDDING. EXTEND BEDDING EITHER TO THE LIMITS OF THE EXCAVATION OR AT LEAST 12" OUTSIDE THE LIMITS OF THE BASE SECTION.
2. FILL THE BALANCE OF THE EXCAVATED AREA WITH SELECT MATERIAL COMPACTED LEVEL TO THE TOP OF THE BEDDING.
3. PROVIDE A SMOOTH AND LEVEL BEARING SURFACE ON THE BEDDING SURFACE.



**2**  
C0.2 **DRYWELL DETAIL (8' Ø)**  
N.T.S.

**NOTES:**

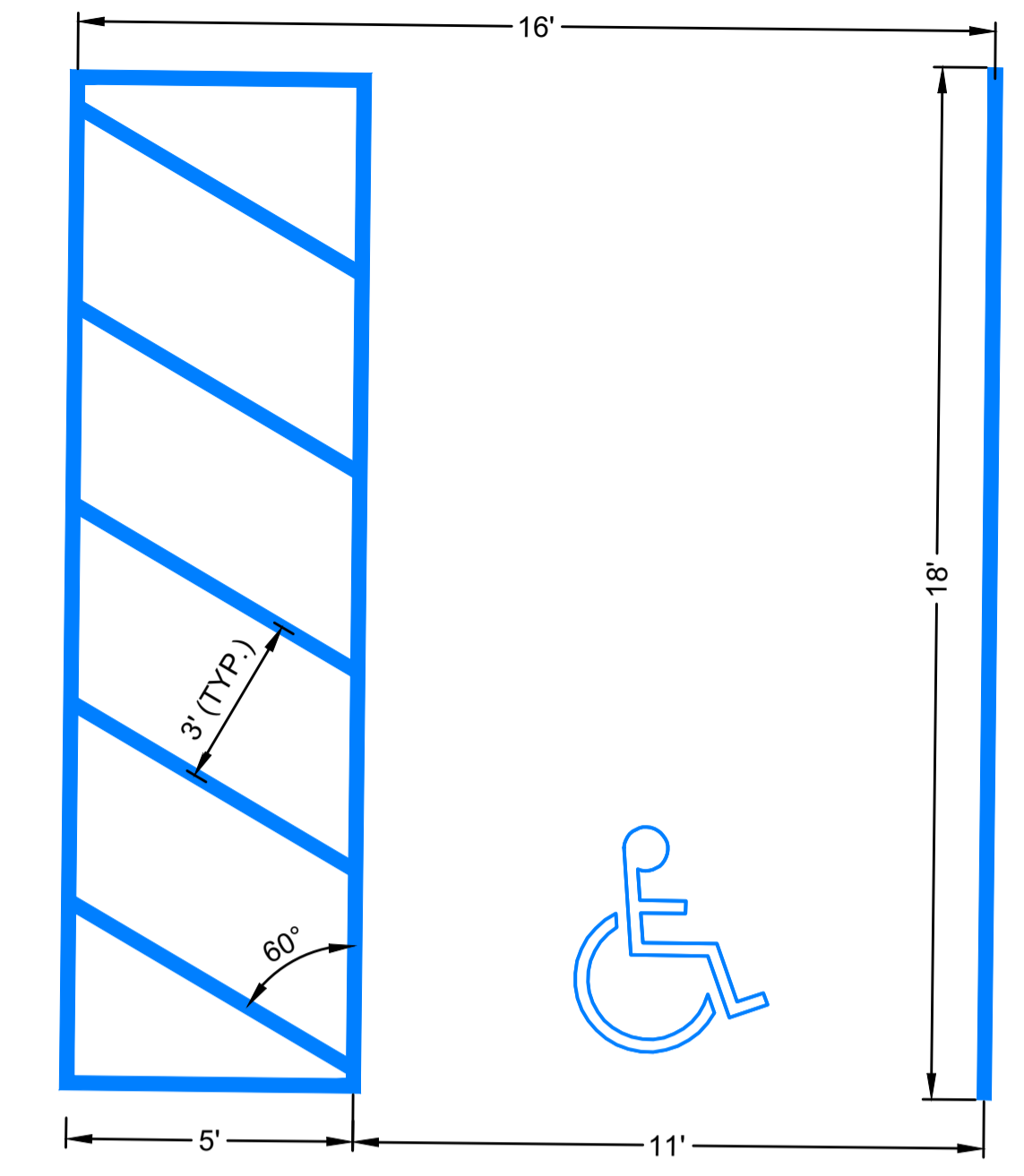
1. THE BED SHALL BE EXCAVATED A MINIMUM OF 24" INTO CLEAN SAND AND GRAVEL.
2. MAXIMUM DEPTH SHALL NOT EXCEED 12 FEET.
3. IF CLEAN SAND AND GRAVEL IS NOT ENCOUNTERED WITHIN 12 FEET, THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER.
4. GRATE OR SOLID LID AS APPROVED BY CITY OF KETCHUM.



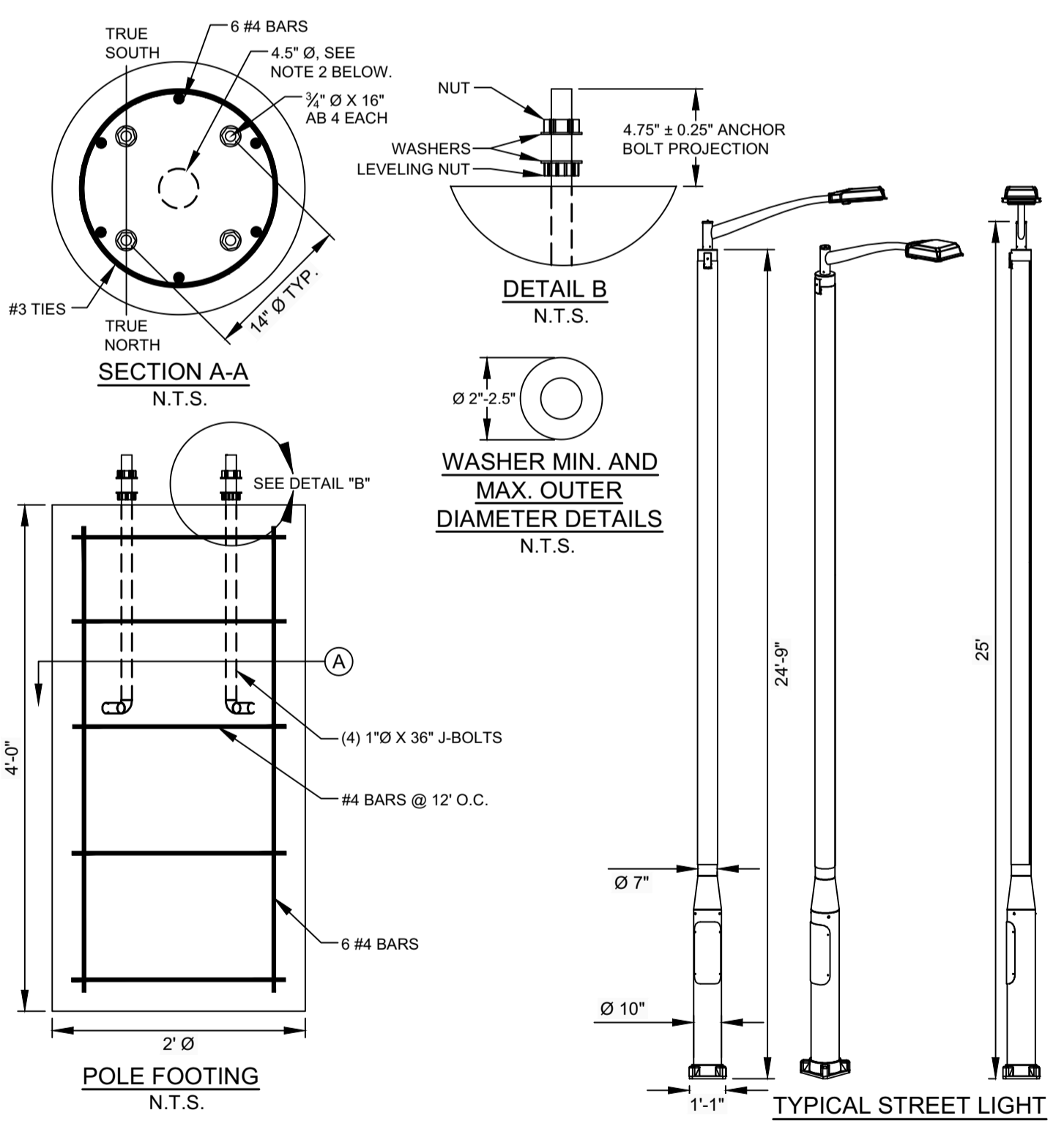
**3**  
C0.2 **TRENCH DRAIN DETAIL**  
(ABT INTERCEPTOR LINE DRAIN OR APPROVED EQUAL)  
N.T.S.

**NOTES:**

1. LINE DRAIN IS SUITABLE FOR APPLICATIONS FOR CONTROLLING SPREAD IN GUTTER FLOW CONDITIONS OR TO INTERCEPT SHEET FLOW. TYPICAL APPLICATION IS AT THE STREET CURB OR BARRIER.
2. THE FRAME AND GRATE IS SUITABLE FOR PEDESTRIAN AND BICYCLE TRAFFIC AND RATED FOR H-25 AND HS-25 LOADS.
3. CONCRETE THICKNESS, TYPE, AND AMOUNT OF REINFORCEMENT TO BE SAME AS ADJACENT PAVEMENT OR GREATER. PERFORM STRUCTURAL ANALYSIS TO DETERMINE REQUIREMENTS FOR APPLICATION.
4. TOP OF GRATE TO BE INSTALLED FLUSH TO 1/8" BELOW FINISHED GRADE. BEVEL CONCRETE TO TOP OF GRATE IF BELOW FLUSH.



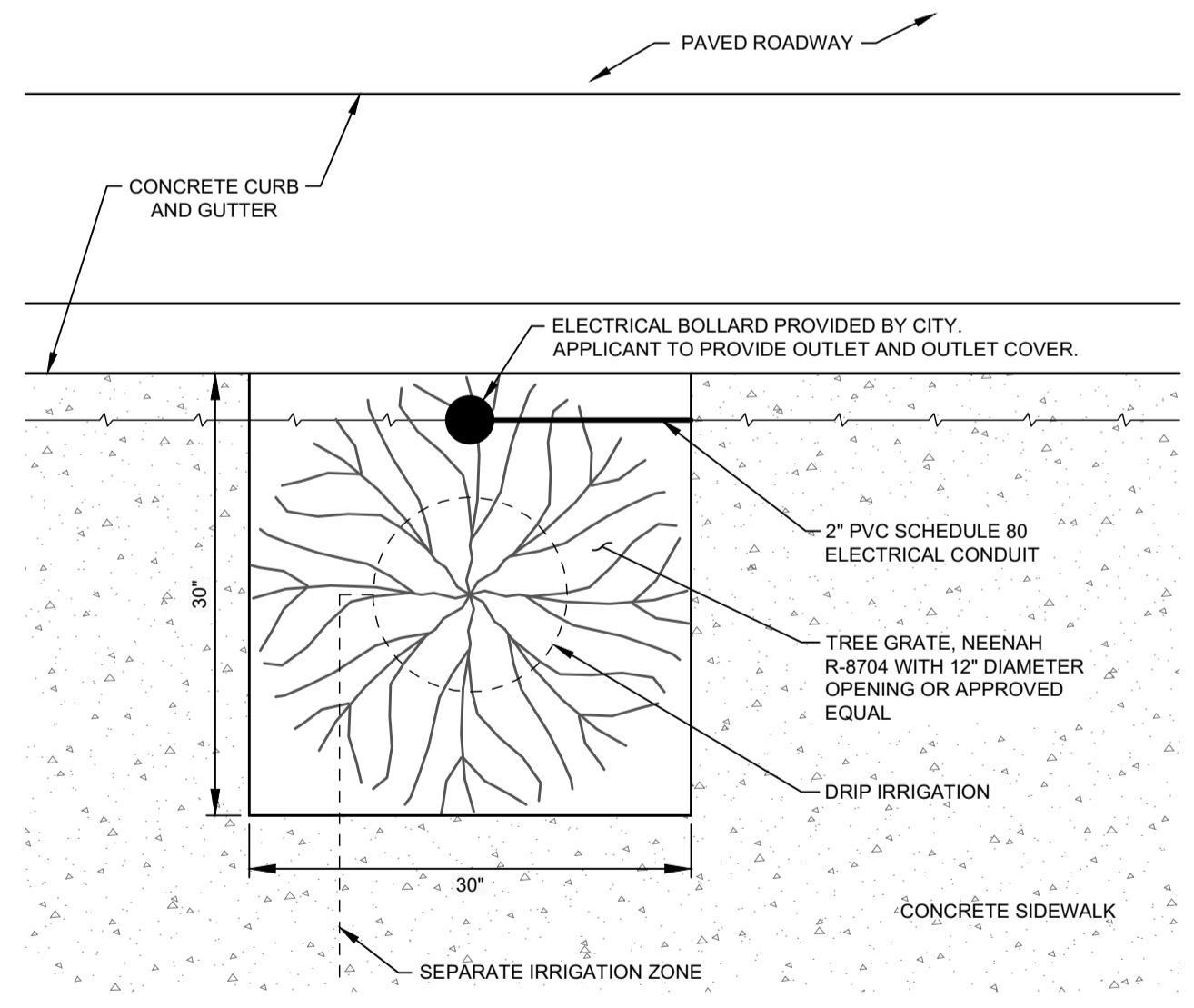
**4**  
C0.2 **ADA PARKING SPACE DIMENSIONS**  
N.T.S.



**5**  
C0.2 **TYPICAL STREET LIGHT**  
N.T.S.

**NOTES:**

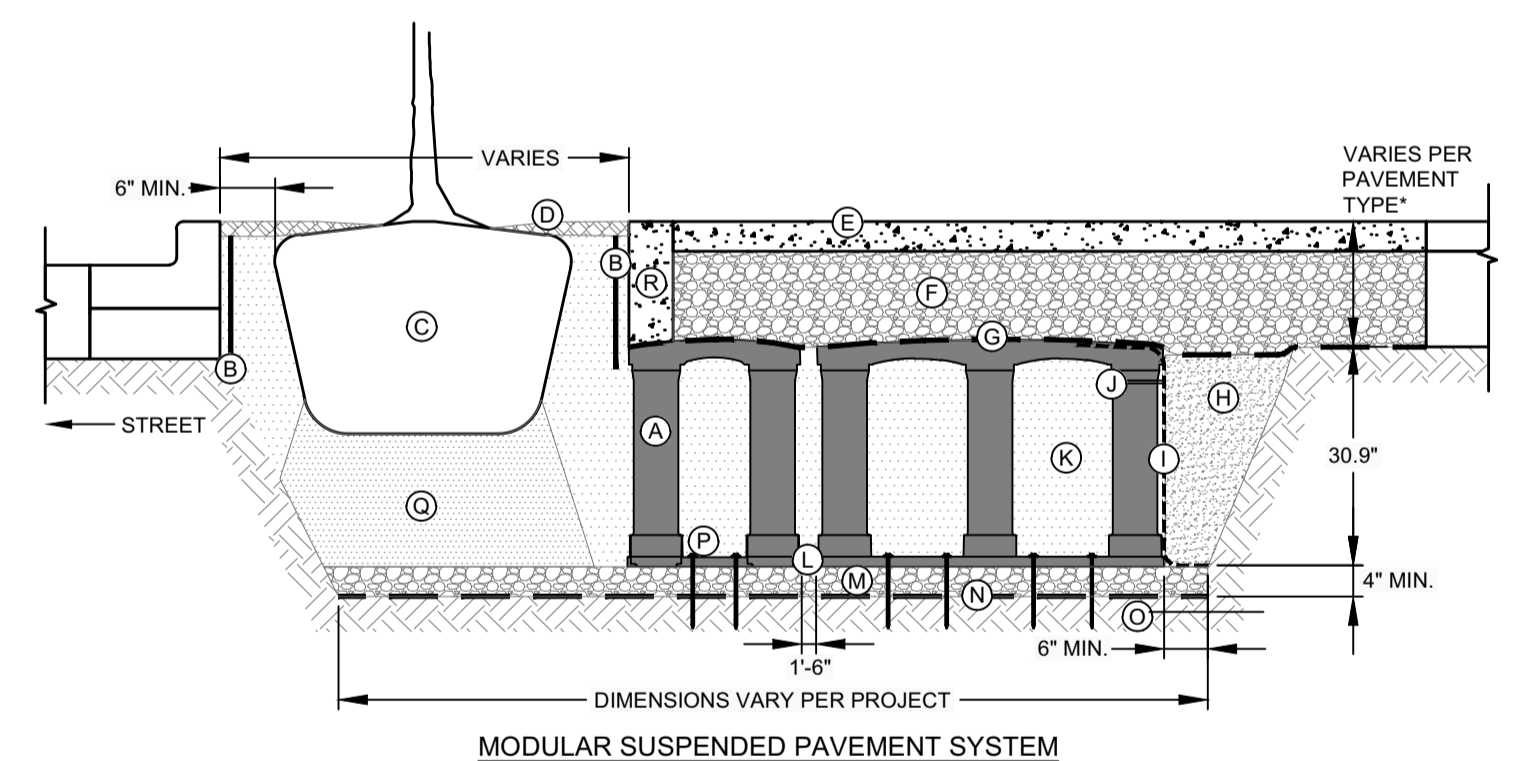
1. STREET LIGHT IS SOLARONE RFS DESIGN 158 LFP OR APPROVED EQUAL.
2. ANY CONDUITS AND/OR GROUNDING WIRES MUST BE HARDWIRED AND CONTAINED WITHIN A 4.5" Ø CIRCLE CENTERED ON THE FOUNDATION. GROUNDING ELECTRODE WIRE AND AC SUPPLY WIRE (IF REQUIRED) ARE 5' MIN. ABOVE THE BASE.
3. ANCHOR BOLT ORIENTATION TO TRUE NORTH/SOUTH IS ONLY RELEVANT FOR OFF-GRID SOLAR POLES. DISREGARD FOR GRID-TIED POLES.
4. GROUNDING WIRE MUST BE 60" FROM BASE SO IT CAN REACH THE GROUNDING LUG INSIDE THE POLE.
5. STREET LIGHT SHALL BE 25' IN HEIGHT OR AS APPROVED BY CITY OF KETCHUM.



**6**  
C0.2 **TREE WELL DETAILS**  
N.T.S.

**NOTES:**

1. TREE TO BE 3" MINIMUM CALIPER AUTUMN BLAZE MAPLE OR APPROVED EQUAL.
2. CITY OF KETCHUM REQUIRES DRIP IRRIGATION TO BE ON A SEPARATE ZONE WITH HUNTER/RAINWISE SMART CLOCK, OR APPROVED EQUAL, FOR REMOTE ACCESS BY CITY.
3. APPLICANT TO CONNECT AND PROVIDE CONDUITS, WIRING, AND SEPARATE CIRCUIT, OR TIE TO A CITY CIRCUIT FOR POWER.
4. NO DIRECT BURIAL WIRE PERMITTED.
5. TREE INSTALLATION TO BE MODULAR SUSPENDED PAVEMENT SYSTEM. SEE TREE WELL SECTION VIEW, DETAIL 2.



**KEY PLAN:**

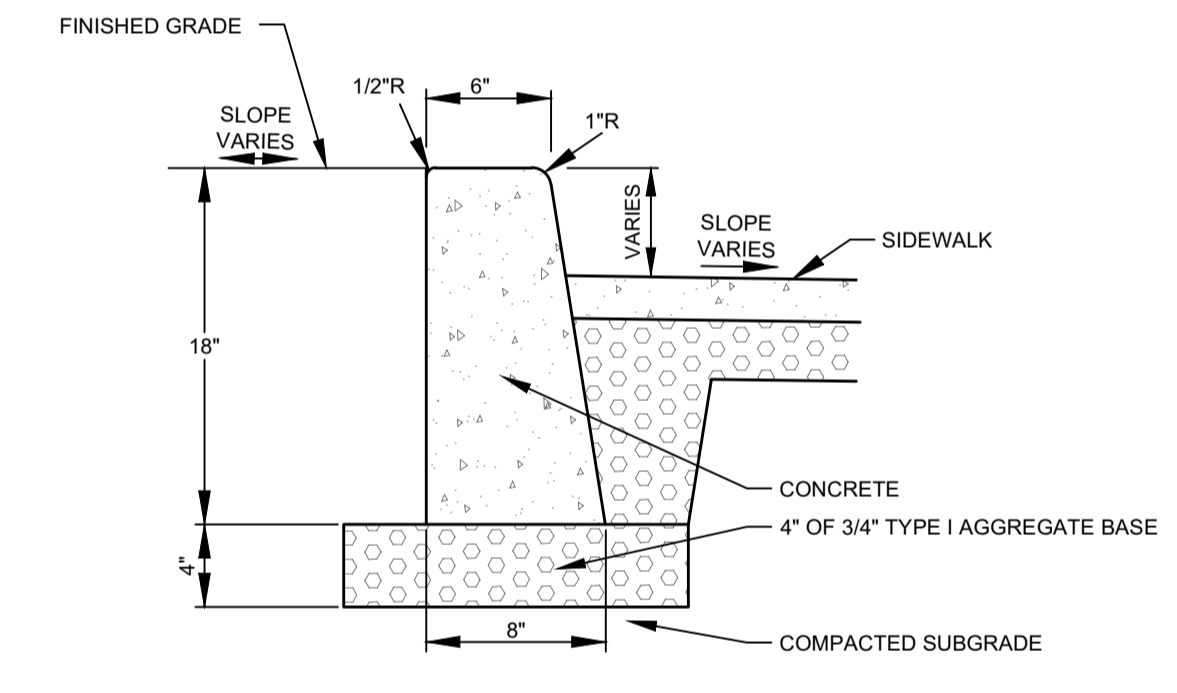
- SILVA CELL SYSTEM (DECK, BASE, AND POSTS) OR APPROVED EQUAL.
- DEEPROOT ROOT BARRIER, 12" OR 18", DEPTH DETERMINED BY THICKNESS OF PAVEMENT SECTION, INSTALL DIRECTLY ADJACENT TO CONCRETE EDGE RESTRAINT. PREVENTS ROOTS FROM DISTURBING PAVEMENT.
- TREE ROOT PACKAGE, SIZE VARIES.
- TREE OPENING TREATMENT, PER PROJECT SPECIFICATIONS.
- SURFACE TREATMENT, PER PROJECT.
- AGGREGATE BASE COURSE, DEPTH VARIES PER PROJECT.
- GEOTEXTILE TO KEEP AGGREGATE FROM MIGRATING DOWN THROUGH CELL DECK.
- BACKFILL, PER PROJECT SPECIFICATIONS.
- GEOGRID TO PROVIDE FOR VERTICAL SEPARATION BETWEEN PLANTING SOILS AND BACKFILL WHILE ALLOWING ROOT PENETRATION INTO ADJACENT SOILS. 6" (150 mm) TOE (OUTWARD FROM BASE) AND 12" (305 mm) EXCESS (OVER TOP OF DECK).
- CABLE TIE, ATTACHING GEOGRID TO SILVA CELL AT BASE OF UPPER POST FLARE.
- PLANTING SOIL, PER PROJECT SPECIFICATIONS, COMPACTED TO 70-80% PROCTOR.
- SILVA CELL BASE SLOPE, 10% MAX.
- 4" (100 mm) MIN AGGREGATE SUB BASE, COMPACTED TO 95% PROCTOR.
- GEOTEXTILE TO PROVIDE SEPARATION BETWEEN SUBGRADE AND AGGREGATE BASE.
- SUBGRADE, COMPACTED TO 95% PROCTOR.
- PIN, PER SILVA CELL SPECIFICATIONS, TO KEEP CELLS IN PLACE DURING CONSTRUCTION.
- PLANTING SOIL BELOW TREE ROOT PACKAGE, COMPACTED TO 85-90% PROCTOR.
- CONCRETE EDGE RESTRAINT TO STABILIZE EDGE AND PREVENT AGGREGATE MIGRATION INTO TREE OPENING.

**MINIMUM PAVEMENT PROFILE OPTIONS TO MEET H-20 LOADING:**

PAVEMENT	+ AGGREGATE
4" CONCRETE	4" CONCRETE
3" PAVER	+ 12" AGGREGATE
4" ASPHALT	+ 12" AGGREGATE
2.6" PAVER	+ 5" CONCRETE

**NOTES:**

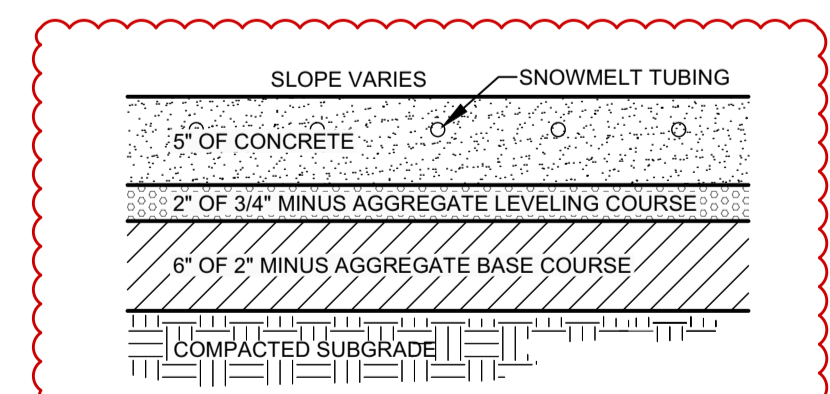
1. EXCAVATION SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE HEALTH AND SAFETY REGULATIONS.
2. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. A PROJECT SPECIFIC DETAIL WILL NEED TO BE PROVIDED TO CITY FOR REVIEW AND APPROVAL.



**7**  
C0.2 **CONCRETE VERTICAL CURB**  
N.T.S.

**NOTES:**

1. SUBBASE CAN BE 2" TYPE II OR 3/4" TYPE I CRUSHED AGGREGATE BASE COURSE.
2. MATERIALS SHALL CONFORM WITH CURRENT ISPGW STANDARDS, DIVISION 800 AGGREGATES AND ASPHALT.
3. PAVEMENT SECTION MAY BE MODIFIED IF A PROJECT SPECIFIC GEOTECHNICAL REPORT, STAMPED BY A LICENSED ENGINEER, IS PROVIDED.
4. 1/2-INCH PREFORMED EXPANSION JOINT MATERIAL (AASHTO M 213) AT TERMINAL POINTS OF RADI.
5. CONTINUOUS PLACEMENT PREFERRED, SCORE INTERVALS 10-FEET MAXIMUM SPACING (8-FEET W/SIDEWALK).



**8**  
C0.2 **TYPICAL CONCRETE SIDEWALK SECTION**  
N.T.S.

**NOTES:**

1. 1/2-INCH PREFORMED EXPANSION JOINT MATERIAL (AASHTO M 213) AT TERMINAL POINTS OF RADI.
2. CONTINUOUS PLACEMENT PREFERRED. SCORE AT INTERVALS TO MATCH WIDTH OF WALK NOT TO EXCEED 5 FEET SPACING.
3. 1/2" TRANSVERSE PREFORMED BITUMINOUS JOINTS AT THE TERMINUS POINTS FOR CURVE AND WHERE SIDEWALK IS PLACED BETWEEN TWO PERMANENT FOUNDATIONS.
4. MATERIALS AND CONSTRUCTION IN COMPLIANCE WITH ISPGW SPECIFICATIONS.



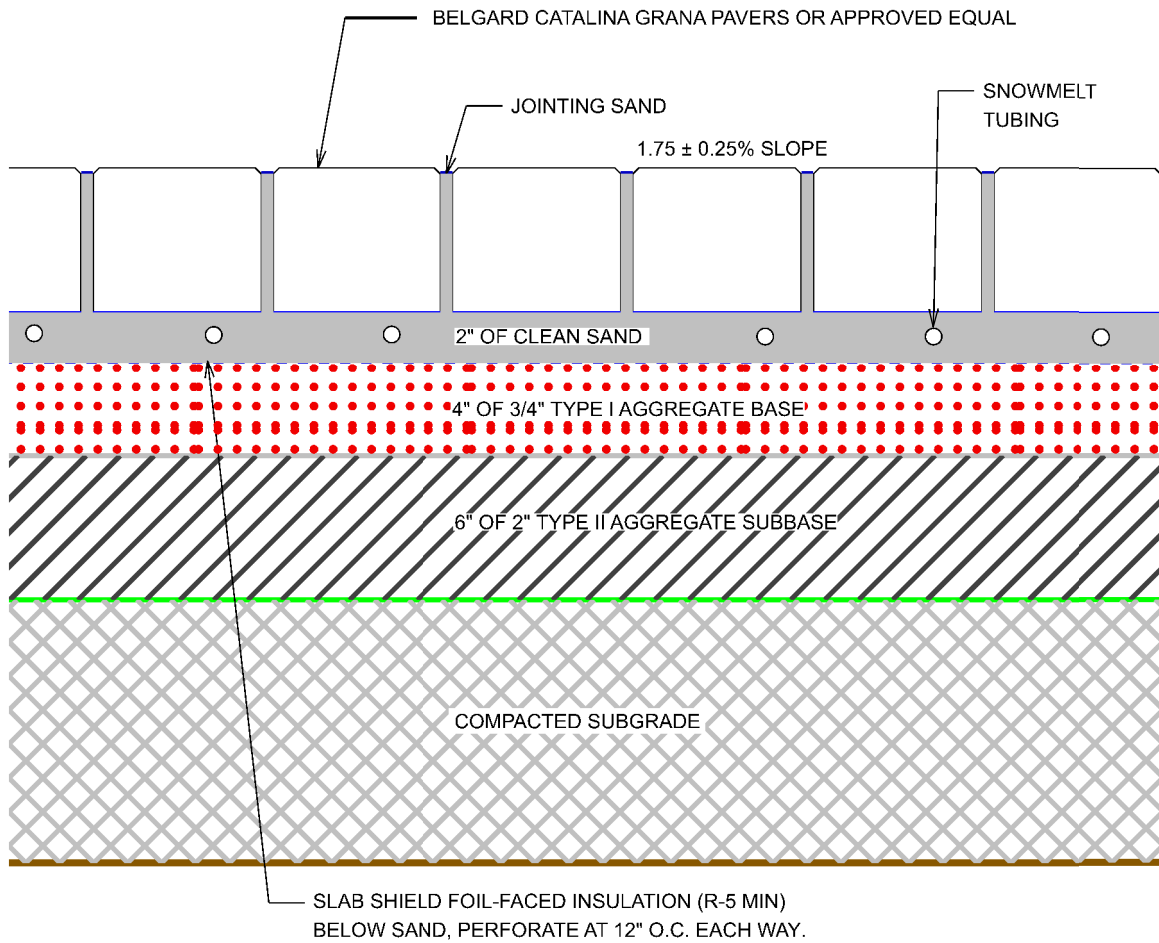
SKS/CT  
DESIGNED BY  
SKS/CT  
DRAWN BY  
SMF/JCL  
CHECKED BY

**GALENA ENGINEERING, INC.**  
Civil Engineers & Land Surveyors  
317 N. River Street  
Hailey, Idaho 83433  
(208) 768-1705  
email: galena@galena-engineering.com

NO.	DATE	BY	REVISIONS
1	05/05/21	SKS	RESPONSE TO PLANNING BUILDING PERMIT COMMENTS
2	06/19/21	SKS	RESPONSE TO PLANNING BUILDING PERMIT COMMENTS
3	05/04/22	SMF	SIDEWALK TYPE REVISIONS: CONC. FLOOR @ UT'S IN ALLEY
4	06/22/22	SMF	ADD NORTHWEST CANOPY COLUMNS
5	07/22/22	SMF	ADD 331 N WALNUT AVE. DESIGN
6	09/09/22	JCL	REVISIONS PER CITY COMMENTS (09/06/2022)

C0.2

**DETAIL SHEET**  
**4TH AND WALNUT**  
 LOCATED WITHIN SECTION 18, T.4 N., R.18 E., B.M., CITY OF KETCHUM, BLAINE COUNTY, IDAHO  
 PREPARED FOR WALNUT & FOURTH LLC  
 PROJECT INFORMATION  
 File: sds(4th)7819.dwg | Consultant: jf19 | ENG. BASE: 2022-07-22 | Draw: 08/01/22 | 4:09:27 PM



**NOTES:**

1. POLYMERIC SAND CAN BE USED AT EDGES TO PREVENT WEED, ANT INTERFERENCE.
2. MATERIALS SHALL CONFORM WITH CURRENT ISPWC AND CITY OF KETCHUM STANDARDS.
3. SNOWMELT TUBING RADII, FREQUENCY DEPENDS ON SNOW REMOVAL UPKEEP.
4. SNOWMELT REQUIRED FOR PROJECTS IN THE COMMUNITY CORE AND TOURIST ZONINGS.
5. PAVERS INSTALLED ON FOURTH STREET SHALL BE BELLGARD CATALINA GRANA IN THE COLOR VICTORIAN.

REVISION	APPROVED	DATE	CITY OF KETCHUM STANDARD DRAWING	DRAWING NO.
REV 3	CITY	3/8/2021		
			<b>PAVER SIDEWALK</b>	<b>16</b>

## Walnut & 4<sup>th</sup> ROW Snowmelt Narrative

The snowmelt system in the public right-of-way on 4th St. and Walnut Ave. in front of the Gold Mine & Walnut & 4th, will be installed in accordance with City of Ketchum standard drawing #16.

Our system includes: Tekmar snow and ice #090 "in ground sensor" used with the Tekmar snow melting #670 controls to automatically detect snow or ice on the sidewalk. These controls will be configured to shut off the system when the pavement temperature is above 50 degrees F. and precipitation is not falling. The system will be configured to shut off when the outdoor temperature is above 40 degrees F.

I have attached the city standard detail #16 and specs for the snowmelt system below for your reference.



# Lochinvar®

## FTXL 1.0 FIRE TUBE CONDENSING BOILER

Submittal Sheet

FTX1.0-Sub-01

### FTXL FIRE TUBE COMMERCIAL BOILERS

Job Name: \_\_\_\_\_  
 Location: \_\_\_\_\_  
 Engineer: \_\_\_\_\_  
 Agent/Wholesaler: \_\_\_\_\_  
 Contractor: \_\_\_\_\_

Model No. FTX1000  
 Type Gas: Natural  LP   
 Equipment Tag(s): \_\_\_\_\_

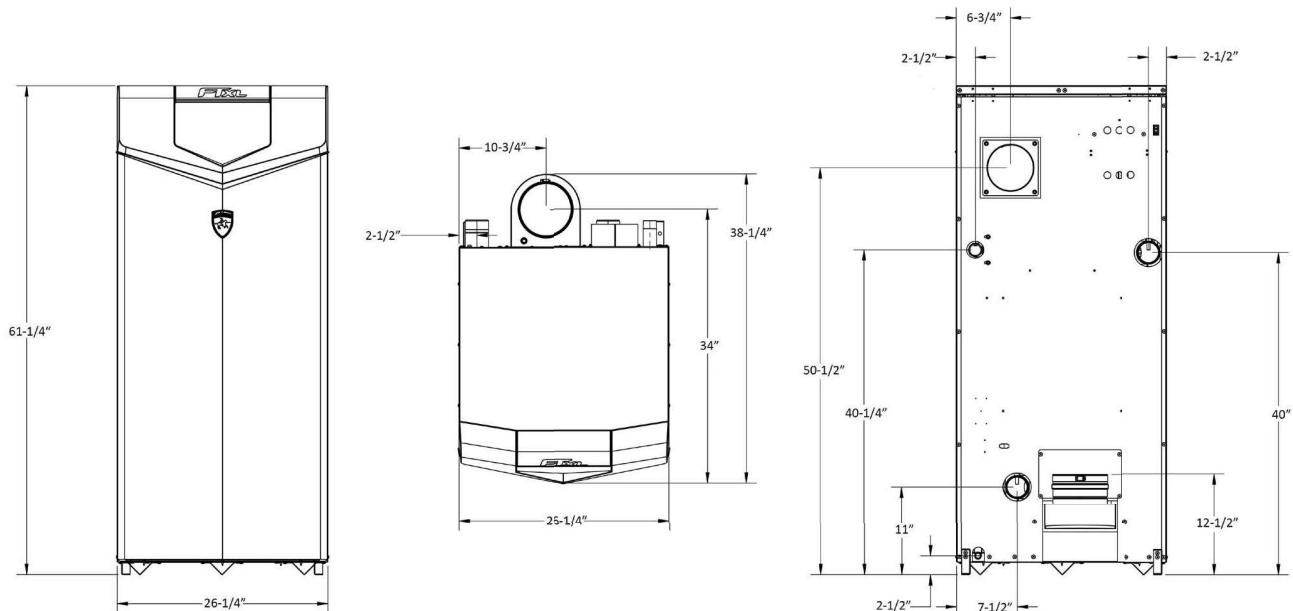
**NOTES:**

FOR EASE IN ORDERING  
BY MODEL NUMBER


FTX	1000	N	M13
FTXL Boiler	999,000 Btu/hr Input	Natural Gas	Firing Control

This model is:

- FTXL Fire Tube boiler
- 999,000 Btu/hr
- Natural gas
- M13 Firing Controls



FTX1000

FTXL BOILER 								DIMENSIONS & SPECIFICATIONS							
Model Number	Input MBH			Gross Output MBH	Net AHRI Rating MBH	Comb. Eff. %	Therm. Eff. %	Flow(GPM) Min	Flow(GPM) Max	HEX Water Volume (Gal)	Water Conn.	Vent Size	Air Inlet	Gas Conn.	Ship. Wt. (lbs.)
	Min Btu/hr	Max Btu/hr	Turn down												
FTX1000(N,L)	99.9	999	10:1	982	854	99.0	98.3	30	150	19	2-1/2"	6"	6"	1-1/4"	670

\*Information subject to change without notice. Dimensions shown are approximate and should not be used for construction purposes. Dimensions are in inches. Select "N" or "L" for Natural or LP gas. The Net AHRI Water Ratings shown are based on a piping and pickup allowance of 1.15. Lochinvar should be consulted before selecting a boiler for installations having unusual piping and pickup requirements, such as intermittent system operation, extensive piping systems, etc. The ratings have been determined under the provisions governing forced draft burners.

# FTXL™

## FIRE TUBE BOILER



### Standard Features

- › **98.3% Thermal Efficiency**
- › **Modulating Burner with up to 10:1 Turndown**
  - Direct Spark Ignition
  - Low NOx Operation
  - Sealed Combustion
  - Low Gas Pressure Operation
- › **Stainless Steel Fire-Tube Heat Exchanger**
  - ASME-Certified, “H” Stamped
  - 160 psi Working Pressure
  - 50 psi Relief Valve
  - Combustion Analyzer Test Port
  - Fully Welded Design
- › **Vertical and Horizontal Direct Vent**
  - Direct Vent up to 100 feet
  - PVC, CPVC, Polypropylene or AL29-4C
- Factory Supplied Sidewall Vent Termination
- › **Smart System Control**
- › **Other Features**
  - On/Off Switch
  - Adjustable High Limit with Manual Reset
  - Automatic Reset High Limit
  - Manual Reset Low Water Cutoff
  - Flue Temperature Sensor
  - Low Air Pressure Switch
  - Temperature and Pressure Gauge
  - Condensate Trap
  - Zero Service Clearances
  - 10-Year Limited Warranty

### Smart System Features

- › **CON•X•US Remote Connect**
- › **SMART TOUCH™ Touch Screen Operating Control**
- › **Full Color 7” Touchscreen LCD Display**
- › **Cascading Sequencer with Built-in Redundancy**
  - Selectable Cascade Type:
    - Lead Lag/Efficiency Optimization
  - Multiple Size Boilers
  - Front-End Loading
- › **3 Reset Temperatures Inputs w/Independent Outdoor Reset Curves for Each**
  - Outdoor Sensor
- › **Four-Pump Control**
  - System Pump with Parameter for Continuous Operation
  - Boiler Pump with Variable-Speed Control
  - Domestic Hot Water Boiler Pump
  - Domestic Hot Water Recirculation Pump Control with Sensor
- › **Building Management System Integration**
  - 0-10 VDC Input to Control Modulation or Setpoint
  - 0-10 VDC Input from Variable-Speed System Pump
  - 0-10 VDC Modulation Rate Output Signal
  - 0-10 VDC Enable/Disable Signal
- › **Programmable System Efficiency Optimizers**
  - Space Heating Night Setback
  - DHW Night Setback
  - Anti-Cycling
  - Ramp Delay
  - Boost Time and Temperature
- › **High-Voltage Terminal Strip**
  - 120 VAC/60 Hertz/1 Phase
  - Pump Contacts for 3 Pumps
- › **Low-Voltage Terminal Strip**
  - Building Recirculation Pump Start/Stop
  - Building Recirculation Return Temp Sensor
  - Contacts
    - Proving Switch Contacts
    - Flow Switch Contacts
    - Alarm Contacts
    - Runtime Contacts
    - 3 Space Heat Thermostat Contacts
    - Tank Thermostat Contacts
    - System Sensor Contacts
    - Tank Sensor Contacts
    - Cascade Contacts
    - 0-10 VDC BMS Contacts
    - 0-10 VDC Boiler Rate Output Contacts
    - 0-10 VDC Boiler Pump Speed Contacts
    - 0-10 VDC System Pump Speed Contacts
    - ModBus Contacts
- › **Time Clock**
- › **Data Logging**
  - Ignition Attempts
  - Last 10 Lockouts
  - Space Heat Run Hours
  - Domestic Hot Water Run Hours
  - Custom Maintenance Reminder with Contact Info
  - Password Security
  - Customizable Freeze Protection Parameters

### Optional Equipment

- Alarm Bell
- BACnet MSTP Communications Kit
- BMS Gateway to BACnet or LonMark
- Common Vent Kit
- Condensate Neutralization Kit
- Constant-Speed Boiler Circulator
- Flow Switch
- High and Low Gas Pressure Switches w/Manual Reset
- ModBus Communication
- Motorized Isolation Valve
- Variable-Speed Boiler Circulator
- Wireless Outdoor Temperature Sensor
- 30 psi ASME Relief Valve
- 75 psi ASME Relief Valve
- 100 psi ASME Relief Valve
- 125 psi ASME Relief Valve
- 150 psi ASME Relief Valve
- › **Firing Controls**
  - M9 - Standard Construction
  - M13 - CSD-1/FM/GE Gap



Lochinvar, LLC  
300 Maddox Simpson Parkway  
Lebanon, Tennessee 37090  
P: 615.889.8900 / F: 615.547.1000  
Lochinvar.com



# tekmar® Submittal

## Snow / Ice Sensor 090



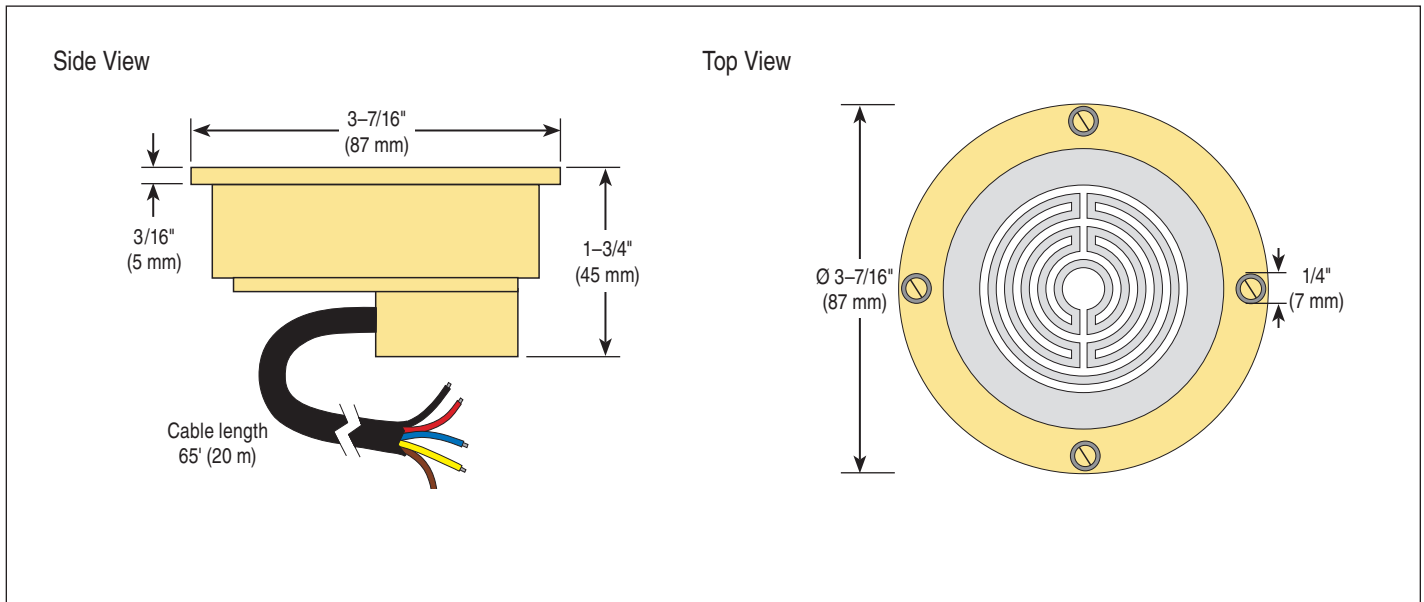
090\_C

02/16

Snow Melting Replaces: 10/13

Job \_\_\_\_\_ Designer \_\_\_\_\_ Contact \_\_\_\_\_

The Snow/Ice Sensor 090 is an in ground sensor used with tekmar snow melting controls to automatically detect snow or ice on a driveway or walkway. The 090 has 65 ft (20 m) of wire. This product can be used in applications ranging from residential driveways to commercial building fronts such as emergency access entries. This sensor allows tekmar snow melting controls to automatically operate the snow/ice melt system only when snow or ice is present, while also providing temperature feedback to the control.



### Specifications

Snow / Ice Sensor 090 In-slab, 65 ft. (20 m) Wire	
Literature	090_D, 090_C
Packaged weight	4.4 lb (2000 g)
Dimensions	1-3/4" H x 3-7/16" OD (45 mm H x 87 mm OD)
Sensor material	Silicon brass
Cable Material	65 ft. (20 m) 5 conductor stranded wire with polyethylene jacket
Approvals	CSA C US with tekmar Snow Melting Controls
Operating range	-30 to 170°F (-34 to 77°C)
Load rating	15,000 lb (66,723 N) distributed load, non-impact, installed in concrete according to the manual
Included	4 #4-40, 7/16" machined, stainless steel screws 4 #6-32, 3/8" flathead, slotted, stainless steel screws
Warranty	Limited 3 Year (See 090_D for full warranty)

### Energy Saving Features

- Automatic snow/ice detection so melting systems only operate when needed

### Additional Features

- Slab temperature sensing
- Long wire included so in field splicing is not necessary
- Designed for long life in driveway and walkway installations
- 65 ft (20 m) of cable

### SPECIAL REQUIREMENTS

The Snow / Ice Sensor 090 must be operated by a tekmar Snow Melting Control 654, 661, 662, 664, 665, 667 or 680. Operation of the sensor by 3rd party control systems may result in electrolysis failures not covered by the tekmar Limited Warranty.



tekmar Control Systems Ltd., A Watts Water Technologies Company. Head Office: 5100 Silver Star Road, Vernon, B.C. Canada V1B 3K4, 250-545-7749, Fax. 250-984-0815 Web Site: tekmarControls.com

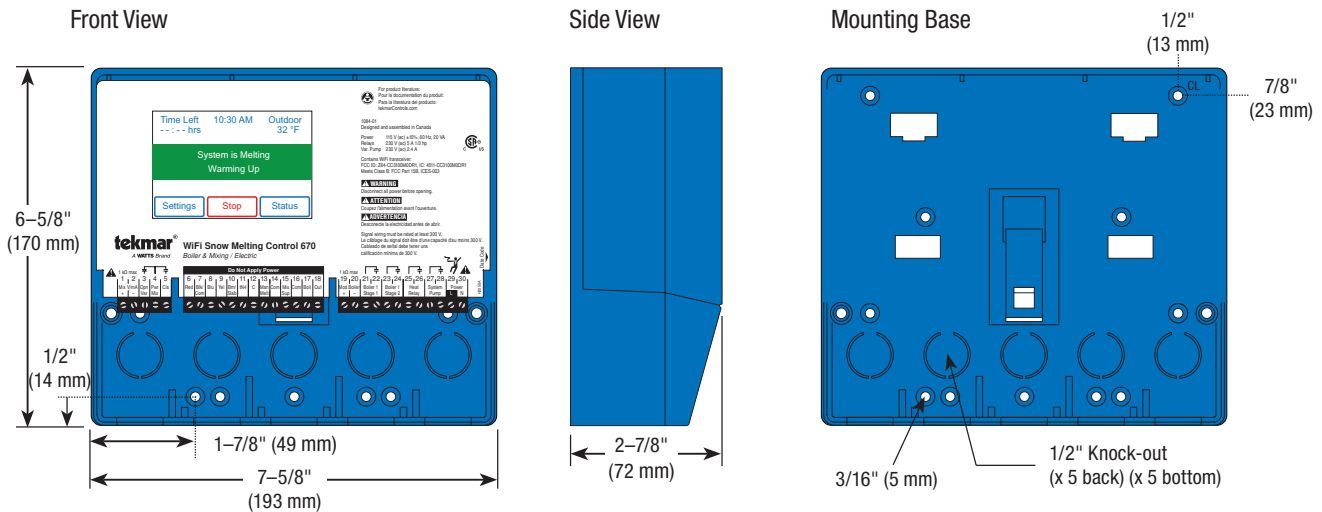


# Submittal

Job \_\_\_\_\_ Designer \_\_\_\_\_ Contact \_\_\_\_\_

## WiFi Snow Melting Control 670

The WiFi Snow Melting Control 670 operates hydronic and electric heating equipment designed to melt snow and/or ice from roads and walkway surfaces. The control works with the tekmar Snow/Ice Sensor 090 or Snow Sensor 095 to automatically detect snow or ice and operates a single boiler, steam valve, or electric cable to supply heat to the slab. Boiler return protection is provided to non-condensing boilers using a mixing valve or variable speed injection mixing pump. When connected to the Internet, the Watts® Home mobile app allows the 670 to be controlled remotely.



### Features

- Mobile app for iOS and Android
- Automatic software updates
- Automatic snow/ice detection
- Supports both inslab & retrofit aerial sensors
- Supports multiple zones with priority
- Idling
- Auto Storm
- Warm Weather Shut Down
- Cold Weather Cut Off
- EconoMelt
- Slab Protection
- Tandem Snow/Ice Detection
- Equipment exercising

### Specifications

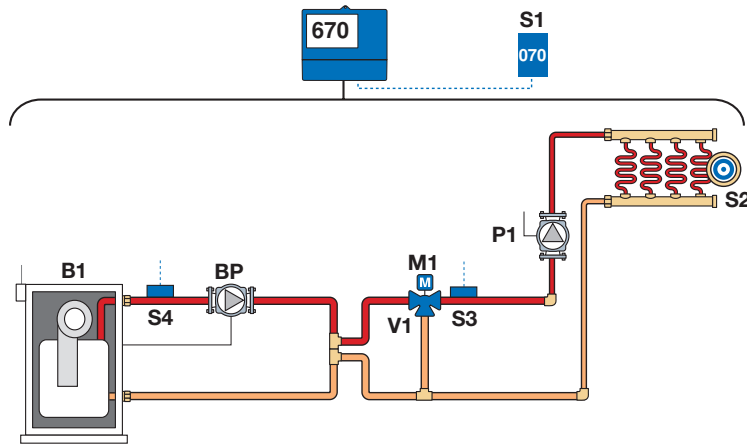
<b>WiFi Snow Melting Control 670 Boiler &amp; Mixing / Electric</b>	
Literature	670_A, 670_C, 670_D, 670_J, 670_U
Control	Microprocessor control. This is not a safety (limit) control
Packaged weight	4.3 lb. (1960 g)
Dimensions	6-5/8" H x 7-9/16" W x 2-13/16" D (170 x 193 x 72 mm)
Display	3.5" color touchscreen
Enclosure	Blue PVC plastic, NEMA type 1
Approvals	CSA C US, meets Class B: ICES & FCC Part 15
Ambient conditions	-4 to 122°F (-20 to 50°C), < RH 90% non-condensing, outdoor use permitted when installed inside a NEMA 3 enclosure
Power supply	115 V (ac) ±10%, 60 Hz, 20 VA
Relays	230 V (ac), 5 A, 1/3 hp
Boiler modulation output	0-10 V (dc) 500 Ω min impedance / 4-20 mA 1 kΩ max impedance
Injection mixing output	230 V (ac), 2.4 A, 1/6 hp, fuse T2.5 A 250V
Floating mixing output	230 V (ac), 5 A
Analog mixing output	0-10 V (dc) 500 Ω min impedance / 4-20 mA 1 kΩ max impedance
Manual melt call	Short or 0 - 32 V(ac)
Communications	WiFi 802.11n, 2.4 GHz, WPA2 encryption
Mobile app	Apple iOS 12 or higher, Android 8 or higher
Sensor	NTC thermistor, 10 kΩ @ 77°F (25°C ±0.2°C) β=3892
-Included	Outdoor Sensor 070 and 2 of Universal Sensor 082
-Optional	tekmar type # 072, 073, 082, 087, 090, 094, 095
Warranty	Limited 3 Year (See 670_D for full warranty)

tekmar product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact tekmar Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on tekmar products previously or subsequently sold.

**tekmar**<sup>®</sup>  
A WATTS Brand

# Sample Application Drawing

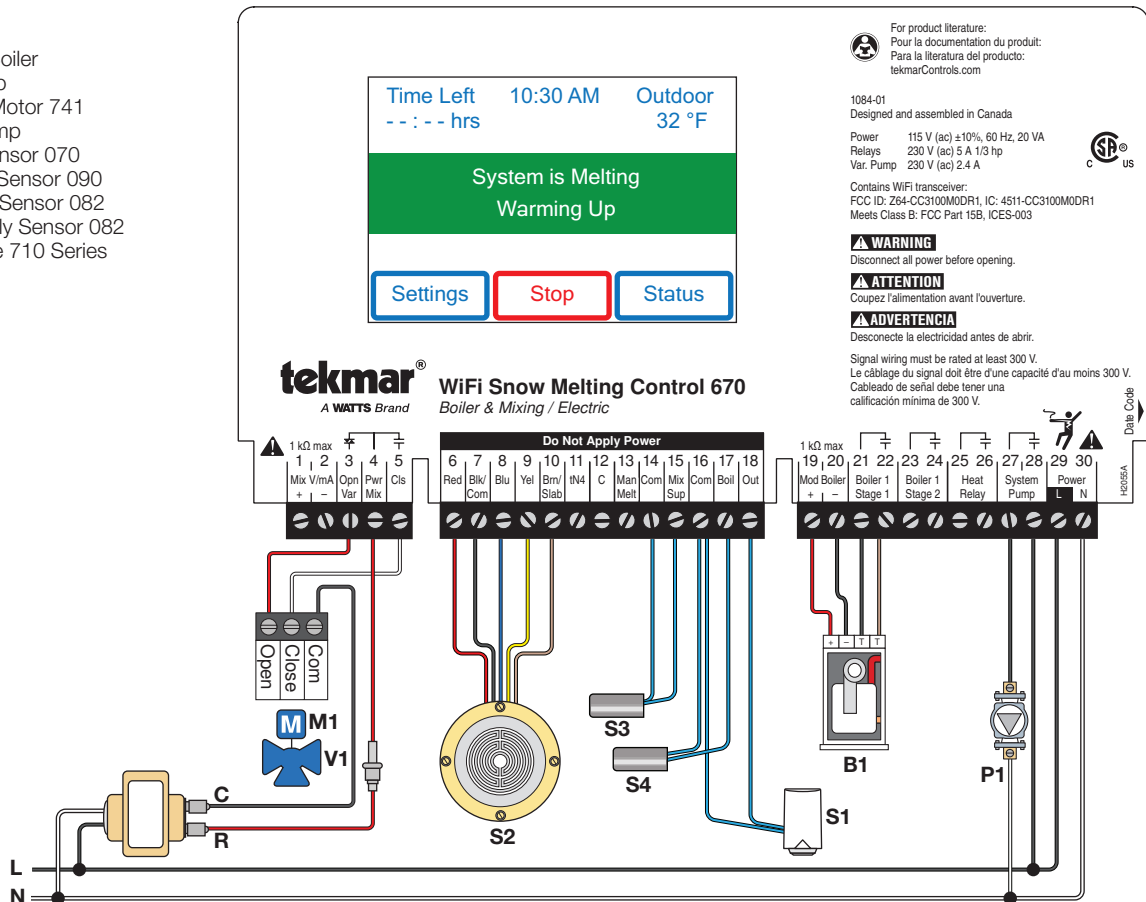
Sample Mechanical diagram



Sample Electrical diagram

## Legend

- B1 = Mod-Con Boiler
- BP = Boiler Pump
- M1 = Actuating Motor 741
- P1 = System Pump
- S1 = Outdoor Sensor 070
- S2 = Snow / Ice Sensor 090
- S3 = Mix Supply Sensor 082
- S4 = Boiler Supply Sensor 082
- V1 = Mixing Valve 710 Series



## NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.



A WATTS Brand

Tel: 1-800-438-3903 • F: (250) 984-0815  
tekmarControls.com



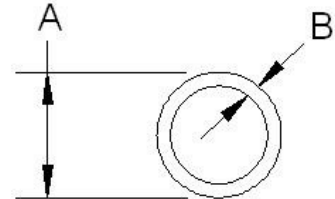
# PRODUCT SUBMITTAL 102

## RAUPEX O<sub>2</sub> barrier pipe



**Product:** RAUPEX® O<sub>2</sub> barrier pipe

**Date:** 11 February 2021 (supersedes 31 July 2019)



Article No.	Nominal Size in	Average OD A in (mm)	Minimum Wall Thickness B In (mm)	Weight lb/ft (kg/m)	Capacity gal/ft (l/m)
136008	3/8	0.500 (12.70)	0.070 (1.78)	0.05 (0.07)	0.0050 (0.0624)
136031	1/2	0.625 (15.88)	0.070 (1.78)	0.06 (0.08)	0.0098 (0.1222)
136880	5/8	0.750 (19.05)	0.083 (2.12)	0.08 (0.11)	0.0134 (0.1671)
136051	3/4	0.875 (22.22)	0.097 (2.47)	0.10 (0.15)	0.0189 (0.2356)
136011	1	1.125 (28.58)	0.125 (3.18)	0.17 (0.26)	0.0316 (0.3939)
136283	1 1/4	1.375 (34.92)	0.153 (3.88)	0.25 (0.37)	0.0467 (0.5827)
136293	1 1/2	1.625 (41.28)	0.181 (4.59)	0.35 (0.52)	0.0650 (0.8118)
136303	2	2.125 (53.98)	0.236 (6.00)	0.60 (0.90)	0.1114 (1.3906)

For updates to this publication, visit [na.rehau.com/resourcecenter](http://na.rehau.com/resourcecenter)

The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained therefrom. Before using, the user will determine suitability of the information for user's intended use and shall assume all risk and liability in connection therewith.

© 2021 REHAU

# PRODUCT SUBMITTAL 102

## RAUPEX O<sub>2</sub> barrier pipe



### TECHNICAL DESCRIPTION

Specification	English	SI	Standard	Specification	English	SI	Standard
Minimum Density	58 lb/ft <sup>3</sup>	926 kg/m <sup>3</sup>	ASTM F876	Tensile Strength	4194-4355 psi @ 68°F	26-30 N/mm <sup>2</sup> @ 20°C	--
Min. Degree of Crosslinking	70%	70%	ASTM F876		2610-2900 psi @ 176°F per ASTM D638	18-20 N/mm <sup>2</sup> @ 80°C per ASTM D638	
Max. Thermal Conductivity	2.84 Btu in./(ft <sup>2</sup> °F hr)	0.41 W/(m°C)	DIN 16892	Roughness	e=0.00028 in	e=0.007 mm	--
Coefficient of Linear Expansion	9.33X10 <sup>-4</sup> in/ft°F @ 68°F	0.14 mm/(m°C) @ 20°C	Mean @ 20-70°C per DIN 16892	Temperature Working Range	-40 to 200°F	-40 to 93°C	--
	1.33x10 <sup>-3</sup> in/ft°F @ 212°F	0.2 mm/(m°C) @ 100°C					
IZOD Impact Res.	No Break	No Break	--	O <sub>2</sub> Permeability	--	<=0.32 mg/m <sup>2</sup> /day @ 40°C	DIN 4726
Modulus of Elasticity	87,000-130,500 psi @ 68°F	600-900 N/mm <sup>2</sup> @ 20°C	Minimum @ 20°C per DIN 16892	Max. Short-term Exposure	150 psig @ 210°F (48 hr)	1035 kPa @ 99°C (48 hr)	ASTM F876
	43,500-58,000 psi @ 176°F	300-400 N/mm <sup>2</sup> @ 80°C		UV Resistance	See TB218		ASTM F2657

### FUNCTIONAL DESCRIPTION

RAUPEX O<sub>2</sub> barrier pipe is manufactured using REHAU's high-pressure peroxide method for crosslinked polyethylene (PEXa). RAUPEX pipe meets or exceeds the requirements of ASTM F876, F877, NSF 61, CSA B137.5 and PPI TR-3. RAUPEX O<sub>2</sub> barrier pipe is SDR9, red in color and for use with the EVERLOC+<sup>®</sup> compression-sleeve system certified to ASTM F877, the REHAU F1960 cold expansion fitting system certified to ASTM F1960, and RAUPEX compression nut fittings. See REHAU *Technical Bulletin TB261* for other compatible PEX fitting systems. RAUPEX O<sub>2</sub> barrier pipe has a co-extruded oxygen diffusion barrier that exceeds the strict requirements of DIN 4726. RAUPEX pipe is manufactured by REHAU using a quality management system which has been certified to the latest version of ISO 9001.

### LONG TERM STRENGTH

The maximum temperature and pressure ratings of the RAUPEX pipe are in accordance to ASTM F876, CSA B137.5 and PPI TR-3. The designer shall determine the actual conditions and apply the appropriate and additional design factors as required for any particular project. The temperature and pressure ratings apply to the application of RAUPEX pipe for conveying heating and cooling water at the 2.0 safety factor on allowable working pressure according to ASTM and CSA. According to the REHAU *PEXa Limited Warranty*, the RAUPEX pipe warranty period of 25 years is for operating conditions at or below 180°F (82.2°C) in permitted applications when the handling, use, installation and maintenance continually complies with all REHAU technical guidelines.

#### RAUPEX SDR9

maximum pressures and temperatures	design factors
160 psi @ 73.4°F (1055 kPa @ 23°C)	0.50 (per ASTM F876, CSA B137.5)
100 psi @ 180°F (690 kPa @ 82.2°C)	0.50 (per ASTM F876, CSA B137.5)
80 psi @ 200°F (550 kPa @ 93.3°C)*	0.50 (per ASTM F876, CSA B137.5)

\* REHAU defines Elevated Temperature Applications as those with operating conditions greater than 180°F (82.2°C).

When REHAU PEXa pipes are planned to be operated in Elevated Temperature Applications, contact REHAU Engineering to verify your project conditions comply with the REHAU *PEXa Limited Warranty* in accordance to REHAU *Technical Bulletin TB230 Elevated Temperature Applications*.

For updates to this publication, visit [na.rehau.com/resourcecenter](http://na.rehau.com/resourcecenter)

The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained therefrom. Before using, the user will determine suitability of the information for user's intended use and shall assume all risk and liability in connection therewith.

© 2021 REHAU

Attachment C:  
331 N Walnut Ave  
Right-of-Way Encroachment  
Agreement 22815

**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 22815**

THIS AGREEMENT, made and entered into this \_\_\_\_ day of November, 2022, by and between the CITY OF KETCHUM, IDAHO, a municipal corporation ("Ketchum"), whose address is Post Office Box 2315, Ketchum, Idaho and Jenny Emery Davison, representing The Community Library Association, (collectively referred to as "Owner"), whose address is Post Office Box 2168, Ketchum, Idaho 83340.

*RECITALS*

WHEREAS, Owner is the owner of real property described as 331 N Walnut Avenue ("Subject Property"), located within the City of Ketchum, State of Idaho; and

WHEREAS, Owner wishes to permit placement of a hydronic snowmelt system for new heated concrete sidewalks along Walnut Avenue. 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;

WHEREAS, the Owner will restore the sidewalk, street, curb and gutter and any landscaping back to the original condition acceptable to the Streets and Facilities Director;

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 install a hydronic snowmelt system for new heated concrete sidewalks identified in Exhibit "A" within the public right-of-way on Walnut Avenue, until notified by Ketchum to remove the infrastructure at which time Owner shall remove infrastructure at Owner's expense.

2. Owner shall be responsible for the maintenance of said Improvements and shall repair said improvements within 48 hours upon notice from Ketchum that repairs are needed. Any modification to the improvements identified in Exhibit "A" shall be approved by the City of Ketchum prior to any modifications taking place.

3. Snowmelt systems installed in the public right-of-way shall be installed and operate at all times during the winter according to the following:
- The system shall meet the requirements of the International Energy Conservation Code (2018 IECC, 403.12.2)

- The system shall have an electronic main control board to operate the system that is programmable and optimizes the way the system functions.
- Installation of in-ground control sensors linked to the main control board that detect snow and ice on the surface, monitor the sidewalk or driveway temperature, and automatically activates the system to be turned on or off based on the snow condition and air temperature.

4. Owner shall be responsible for restoring the sidewalk, curb and gutter and landscaping that is altered due to the construction and installation of the Improvements, to the satisfaction of the Director of Streets and Facilities.

5. 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.

6. 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.

7. 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.

8. 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.

9. 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.

10. 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.

11. 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.

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

13. 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.

OWNER:

CITY OF KETCHUM:

By: \_\_\_\_\_  
Jenny Emery Davidson  
The Community Library Association  
Its: Executive Director

By: \_\_\_\_\_  
Neil Bradshaw  
The City of Ketchum  
Its: Mayor

STATE OF \_\_\_\_\_, )  
  ) ss.  
County of \_\_\_\_\_. )

On this \_\_\_\_ day of \_\_\_\_\_, 2022, before me, the undersigned Notary Public in and for said State, personally appeared JENNY EMERY DAVIDSON, known to me to be the Executive Director of THE COMMUNITY LIBRARY ASSOCIATION and the person who executed the foregoing instrument and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

\_\_\_\_\_  
Notary Public for \_\_\_\_\_  
Residing at \_\_\_\_\_  
Commission expires \_\_\_\_\_

STATE OF IDAHO )  
  ) ss.  
County of Blaine )

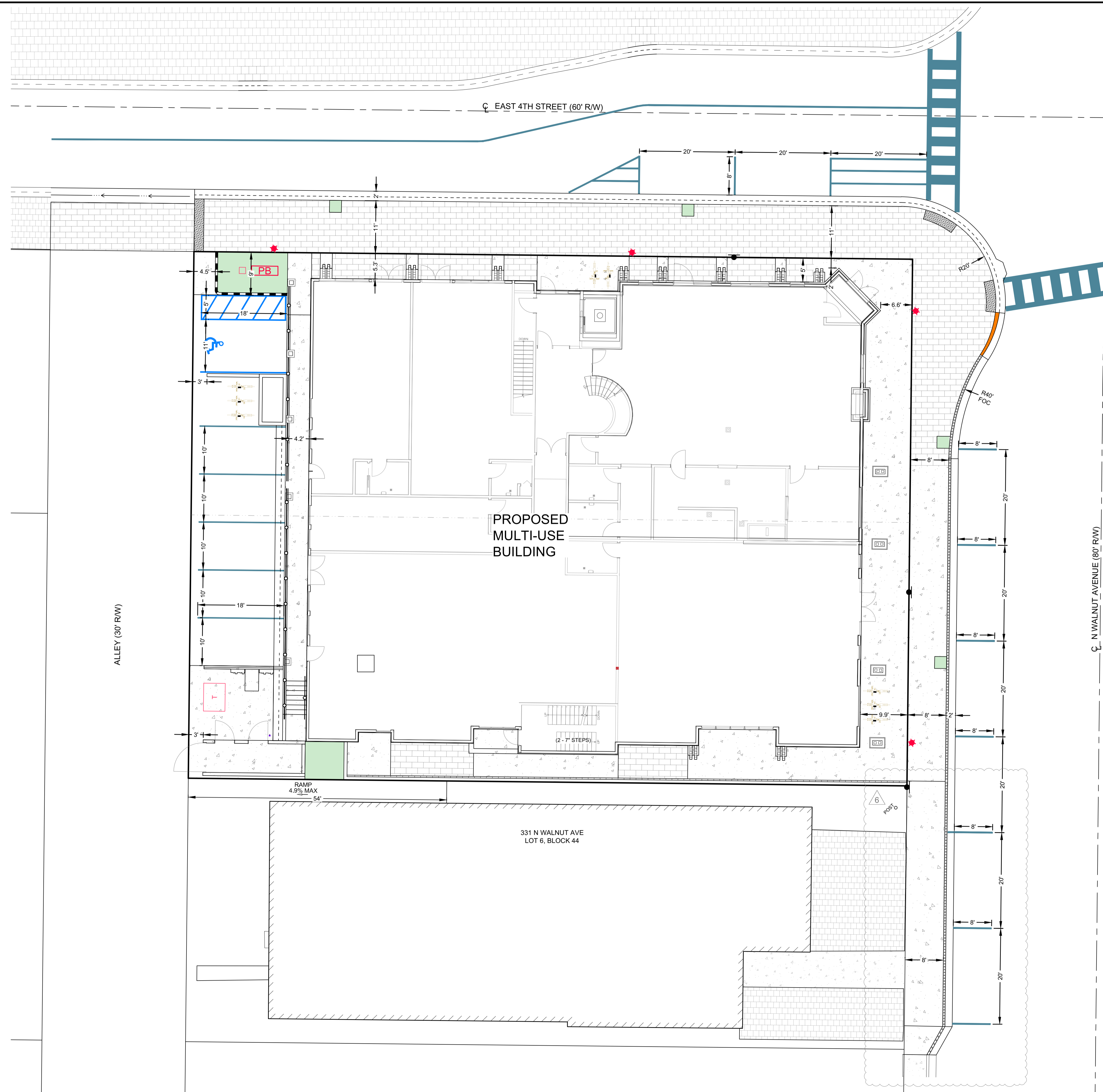
On this \_\_\_ day of \_\_\_\_\_, 2022, before me, the undersigned Notary Public in and for said State, personally appeared NEIL BRADSHAW, known or identified to me to be the Mayor of the CITY OF KETCHUM, IDAHO, and the person who executed the foregoing instrument on behalf of said municipal corporation and acknowledged to me that said municipal corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the day and year in this certificate first above written.

\_\_\_\_\_  
Notary Public for \_\_\_\_\_  
Residing at \_\_\_\_\_  
Commission expires \_\_\_\_\_

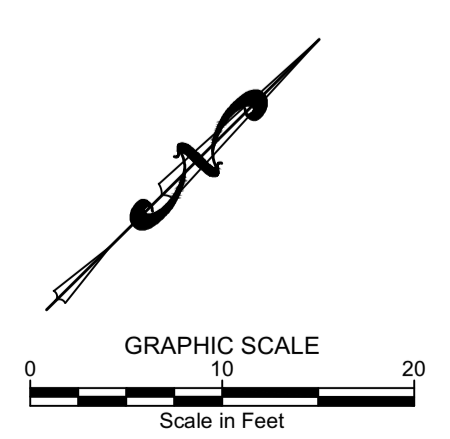
**EXHIBIT "A"**





**LEGEND**

EXISTING ITEMS	
	Property Line
	Adjoiner's Lot Line
	Centerline
	FD5/8 = Found 5/8" Rebar
	Curb & Gutter
	Valley Gutter
	Building
	Pavers
PROPOSED ITEMS	
	Asphalt
	Concrete
	6" Rolled Curb & Gutter
	Zero Reveal Curb & Gutter
	Curb Transition
	Vertical Curb
	ADA Access Truncated Dome
	Sign
	Road Paint
	ADA Road Paint
	ADA Parking Symbol
	Landscape Area
	Trench Drain
	Retaining/Landscape Wall
	Rolled to Vertical Curb Transition
	Pavers
	Transformer
	FOC = Face of Curb
	Bike Rack



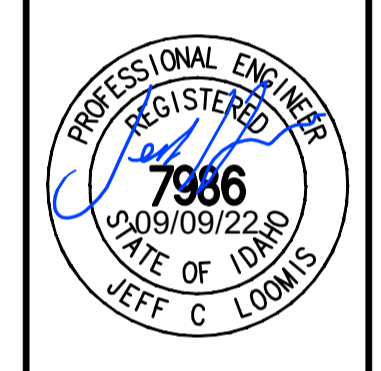
REUSE OF DRAWINGS: These drawings, or any portion thereof, shall not be used on any project or extensions of this Project except by agreement in writing with Galena Engineering, Inc.

PURPOSE: ISSUE FOR BUILDING PERMIT (01/21/2021)

NO.	DATE	BY	REVISIONS
A	05/05/21	SKS	RESPONSE TO PLANNING BUILDING PERMIT COMMENTS
A	06/18/21	SKS	RESPONSE TO PLANNING BUILDING PERMIT COMMENTS
A	05/04/22	SMF	SIDEWALK TYPE REVISIONS; CONC. FLOOR @ UT'S IN ALLEY
A	06/22/22	SMF	ADD NORTHWEST CANOPY COLUMNS
A	07/22/22	SMF	ADD 331 N WALNUT AVE. DESIGN
A	09/09/22	JCL	REVISIONS PER CITY COMMENTS (09/06/2022)

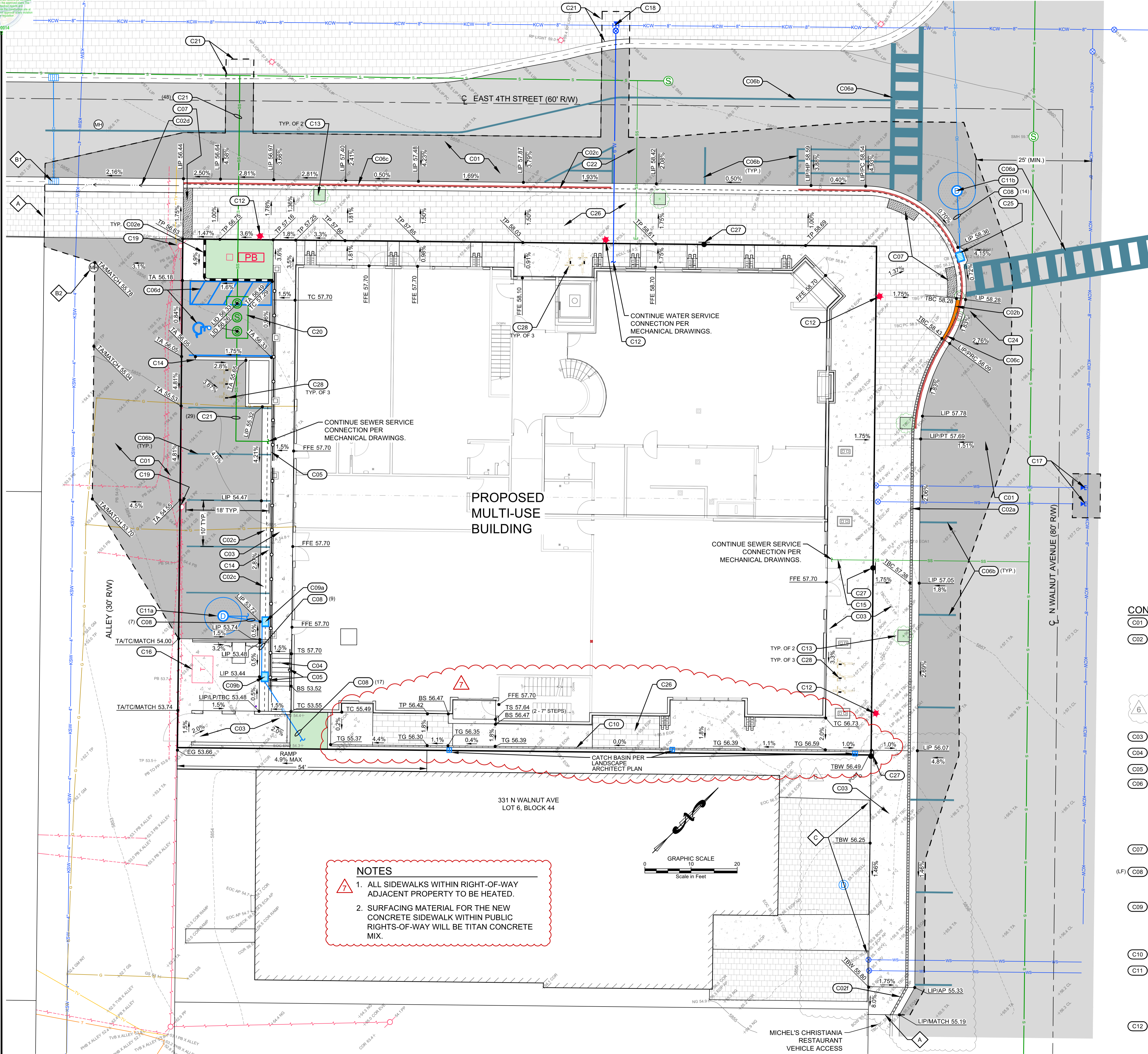
**GALENA ENGINEERING, INC.**  
 Civil Engineers & Land Surveyors  
 317 N. River Street  
 Hailey, Idaho 83433  
 (208) 768-1705  
 email: galena@galena-engineering.com

SKS/CT  
 DESIGNED BY  
 SKS/CT  
 DRAWN BY  
 SMF/JCL  
 CHECKED BY



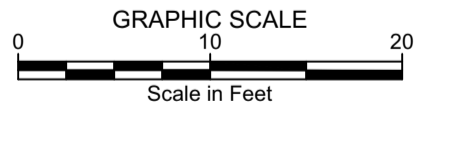
**GEOMETRY PLAN  
 4TH AND WALNUT**  
 LOCATED WITHIN SECTION 18, T.4 N., R.18 E., B.M., CITY OF KETCHUM, BLAINE COUNTY, IDAHO  
 PREPARED FOR WALNUT & FOURTH LLC

PROJECT INFORMATION  
 P:\sds\proj\78191\proj\Construction\1819-ENG-BASE\_2022-07-22.dwg 08/31/22 4:09:27 PM



**NOTES**

- ALL SIDEWALKS WITHIN RIGHT-OF-WAY ADJACENT PROPERTY TO BE HEATED.
- SURFACING MATERIAL FOR THE NEW CONCRETE SIDEWALK WITHIN PUBLIC RIGHTS-OF-WAY WILL BE TITAN CONCRETE MIX.

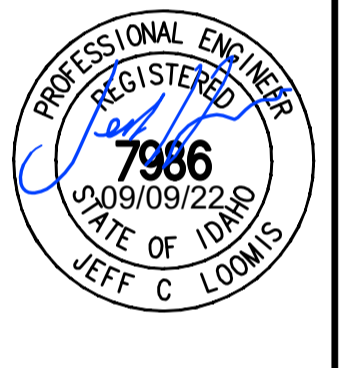


LEGEND	
<b>EXISTING ITEMS</b>	
	Property Line
	Adjacent Lot Line
	Centerline
	CP / CNTRL = Survey Control
	5' Contour Interval
	1' Contour Interval
	Curb & Gutter
	Valley Gutter
	FNC = Fence Line
	Building / Structure Overhang
	Edge of Asphalt
	Concrete Sidewalk
	Pavers
	RTW = Retaining Wall
	Concrete Wheel Stop
	CT = Conifer Tree
	DT = Deciduous Tree
	SGN = Sign
	B-Rack = Bike Rack
	GM = Gas Main
	GMTR = Gas Meter
	TVB = Cable TV Buried
	TVBOX = Cable TV Riser
	PHB = Buried Telephone Line
	PHBOX = Telephone Riser
	PB = Buried Power Line
	Overhead Power Line
	Light
	PMTR = Power Meter
	PP = Power Pole
	AC = Air Conditioner
	Sewer Main
	SS = Sewer Service
	SMH = Sewer Manhole
	SCO = Sewer Cleanout
	Sand & Grease Trap
	CB = Catch Basin
	DWELL = Dry Well
	WS = Water Service
	WMH = Hydronic System Manhole
	WV = Water Valve
	Ketchum City Water Line (8")
	Ketchum Spring Line (4") to be abandoned, summer 2021.
	AP = Angle Point
	BEG = Beginning
	BOW = Back of Walk
	BS = Bottom of Steps
	CC = Curb Cut
	CL = Centerline
	COR = Corner
	EOA = Edge of Asphalt
	EOC = Edge of Concrete
	EOP = Edge of Pavers
	EOW = Edge of Walk
	FDS/PIKE = Survey Control
	FFE = Finished Floor at Entry
	GS = Gas Service
	HP = High Point
	IC = Irregular Cap
	INT = Intersection
	LIP = Lip of Gutter
	LP = Low Point
	NC = No Cap
	NG = Natural Ground
	PC = Point of Curvature
	PRC = Point of Reverse Curve
	PT = Point of Tangent
	RTW = Retaining Wall
	TA = Top of Asphalt
	TBC = Top Back of Curb
	TC = Top of Concrete
	TG = Top of Grate
	THRESH = Threshold
	TP = Top of Pavers
	TS = Top of Steps
	TW = Top of Wall
<b>PROPOSED ITEMS</b>	
	Asphalt
	Concrete
	6" Rolled Curb & Gutter
	Zero Rolled Curb & Gutter
	Curb Transition
	No Parking Zone
	Vertical Curb
	ADA Access Truncated Dome
	Street Light
	Sign
	Drywell
	Storm Drain
	Catch Basin
	Sawcut Line
	Road Paint
	Grade
	Tree and Tree Grate
	Trench Drain
	Retaining/Landscape Wall
	Water Service
	Sewer Service
	Sewer Cleanout
	Grease Interceptor
	Transformer
	Landscape Area
	Rolled to Vertical Curb Transition
	Pavers
	Bike Rack

- CONSTRUCTION KEY NOTES**
- C01 CONSTRUCT ASPHALT ROADWAY / ASPHALT REPAIR. SEE DETAIL 1 / C0.1.
  - C02 CONSTRUCT CONCRETE CURB AND GUTTER.
    - 6" ROLLED C&G PER DETAIL 3 / C0.1.
    - CURB TRANSITION PER DETAIL 5 / C0.1.
    - ZERO ROLL OVER CURB AND GUTTER PER DETAIL 5 / C0.1.
    - CONCRETE VALLEY GUTTER PER DETAIL 2 / C0.1.
    - VERTICAL CURB PER DETAIL 7 / C0.2.
  - C03 CONSTRUCT CONCRETE SIDEWALK / FLAT WORK, WIDTH AS SHOWN HEREON. SEE DETAIL 8 / C0.2.
  - C04 CONSTRUCT CONCRETE STAIRS. SEE DETAIL 6 / C0.1.
  - C05 INSTALL HANDRAIL. SEE DETAIL 6 / C0.1.
  - C06 INSTALL ROAD STRIPING / PAINT.
    - WHITE CROSSWALK STRIPING. MATCH CITY PATTERNS.
    - YELLOW ASPHALT STRIPING (4" WIDE). MATCH CITY PATTERNS.
    - RED "NO PARKING" STRIPING ON CURB. MATCH CITY PATTERNS.
    - BLUE ADA PARKING STRIPING (4" WIDE) AND SYMBOL. SEE DETAIL 4 / C0.2 FOR DIMENSIONS.
  - C07 INSTALL CITY OF KETCHUM APPROVED CAST IRON TRUNCATED DOME DETECTABLE WARNING INSERT. SEE DETAIL 9 / C0.1.
  - (LF) C08 INSTALL 12" ADS N-12 STORM DRAIN PIPE WITH A MINIMUM SLOPE OF 2.0%. SEE DETAIL 7 / C0.1 FOR POTABLE AND NON-POTABLE WATER LINE SEPARATION AND DETAIL 8 / C0.1 FOR TRENCHING. 2' COVER MINIMUM.
  - C09 INSTALL CATCH BASIN. SEE DETAIL 1 / C0.2.
    - RIM = 53.52  
I.E. (IN) = 49.86  
I.E. (OUT) = 49.76
    - RIM = 53.24  
I.E. (IN) = 50.24  
I.E. (OUT) = 50.14
  - C10 INSTALL TRENCH DRAIN, SLOPE AT 1.0%. SEE DETAIL 3 / C0.2.
  - C11 CONSTRUCT 8" Ø DRYWELL. SEE DETAIL 2 / C0.2.
    - CONNECT ROOF DRAINS PER ARCHITECT.  
RIM = 53.85  
I.E. (IN) = 49.54  
I.E. (OUT) = 49.54
    - RIM = 58.66  
I.E. (IN, C25) = 54.55  
I.E. (IN, EXST. STORM DRAIN FROM NORTH) = 55.19.
  - C12 INSTALL CITY OF KETCHUM STANDARD STREET LIGHT. SEE DETAIL 5 / C0.2.
  - C13 INSTALL TREE WELL BOLLARDS AND MODULAR SUSPENDED PAVEMENT SYSTEM. SEE DETAIL 6 / C0.2.
  - C14 INSTALL RETAINING WALL PER ARCHITECT.
  - C15 RETAIN AND PROTECT EXISTING SEWER SERVICE.
  - C16 PROPOSED POWER BOX (TRANSFORMER, SECTOR BOX, ETC.) COORDINATE WITH IDAHO POWER FOR SIZE, TYPE, AND LOCATION.
  - C17 CUT, CAP, AND ABANDON EXISTING WATER SERVICE AT MAIN LINE.
  - C18 INSTALL 6" PVC WATER SERVICE, MECHANICAL ENGINEER TO CONFIRM SERVICE SIZE.
  - C19 RELOCATE UTILITIES. CONTRACTOR TO COORDINATE RELOCATION WITH UTILITY COMPANY.
  - C20 INSTALL 1,000 GAL. GREASE INTERCEPTOR SINGLE VAULT SYSTEM, OLDCASTLE PRECAST OR APPROVED EQUAL.
    - BOTTOM OF TANK = 46.83
    - TOP OF TANK = 54.00
    - I.E. (IN) = 51.10
    - I.E. (OUT) = 51.00
  - (LF) C21 INSTALL 4" PVC SEWER SERVICE. SLOPE = 2.0% MINIMUM.
  - C22 CUT AND PLUG EXISTING SEWER SERVICE AT RIGHT-OF-WAY. SERVICE TO BE ABANDONED IN PLACE.
  - C23 REPAIR CURB, GUTTER, AND PAVEMENT SIDEWALK. MATCH EXISTING MATERIALS, LAYERS, AND THICKNESSES.
  - C24 REMOVE AND DISPOSE OF EXISTING STORM VAULT.
  - C25 UTILIZE EXISTING CATCH BASIN. REMOVE EXISTING STORM DRAIN LINE TO STORM VAULT AND GROUT / FILL-IN HOLE. CONNECT TO NEW DRYWELL (C11). ADJUST RIM ELEV. ORIGINAL RIM = 58.17 NEW RIM = 58.16 I.E. (OUT, NORTH) = 54.87
  - C26 CONSTRUCT HEATED PAVEMENT SIDEWALK, WIDTH AS SHOWN HEREON. SEE DETAIL 4 / C0.1.
  - C27 INSTALL PARKING REGULATORY SIGN. COORDINATE FINAL LOCATION WITH CITY OF KETCHUM. SEE DETAIL 10 / C0.1 FOR SIGN BASE DETAIL.
  - C28 INSTALL BIKE RACKS PER ARCHITECTURAL SITE PLAN.
- MATCH EXISTING LINES AND GRADES
- RETAIN AND PROTECT EXISTING ITEM
    - CATCH BASIN
    - HYDRONIC SYSTEM MANHOLE
  - REGRADE AREA TO PROVIDE FOR A SMOOTH TRANSITION.

**GRADING, DRAINAGE, AND UTILITY PLAN**  
**4TH AND WALNUT**

LOCATED WITHIN SECTION 18, T.4 N., R.18 E., B.M., CITY OF KETCHUM, BLAINE COUNTY, IDAHO  
 PREPARED FOR WALNUT & FOURTH LLC



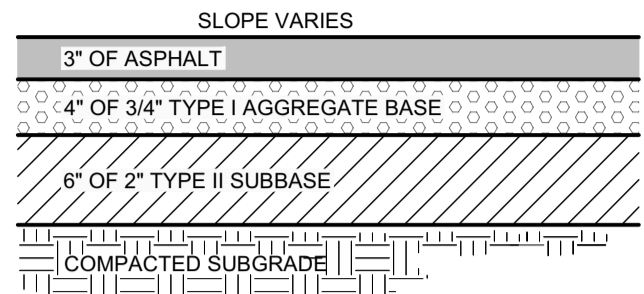
SKS/JCL DESIGNED BY  
 SKS/JCL DRAWN BY  
 SMF/JCL CHECKED BY

**GALENA ENGINEERING, INC.**  
 Civil Engineers & Land Surveyors  
 317 N. River Street  
 Hailey, Idaho 83433  
 email: galena@galena-engineering.com

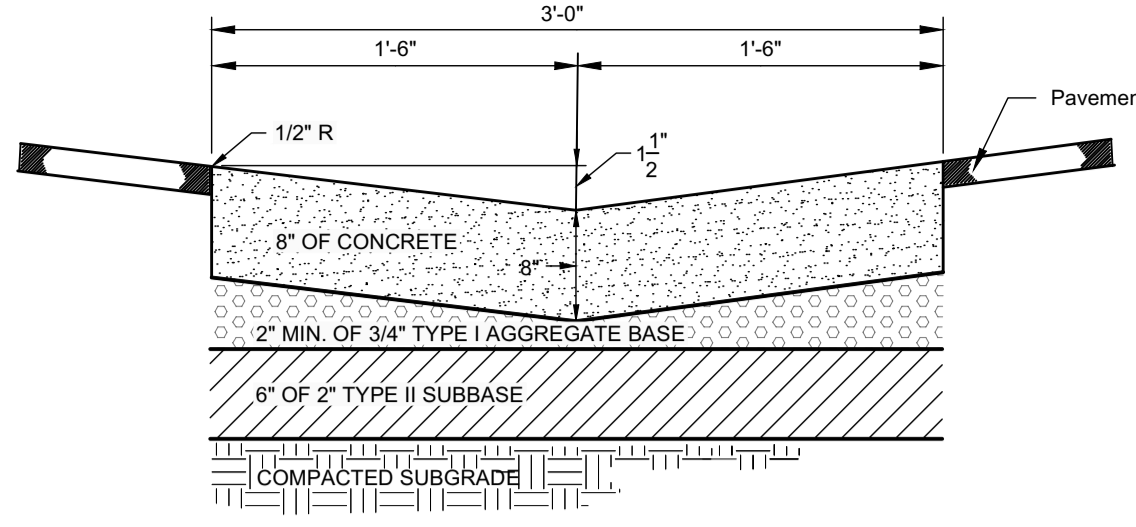
NO.	DATE	BY	REVISIONS
A	05/05/21	SKS	RESPONSE TO PLANNING BUILDING PERMIT COMMENTS
A	06/19/21	SKS	RESPONSE TO PLANNING BUILDING PERMIT COMMENTS
A	05/04/22	SMF	SIDEWALK TYPE REVISIONS; CONC. FLOOR @ UT'S IN ALLEY
A	06/22/22	SMF	ADD NORTHWEST CANOPY COLUMNS
A	07/22/22	SMF	ADD 331 N WALNUT AVE. DESIGN
A	09/09/22	JCL	REVISIONS PER CITY COMMENTS (09/06/2022)

**INSTRUCTION NOTES**

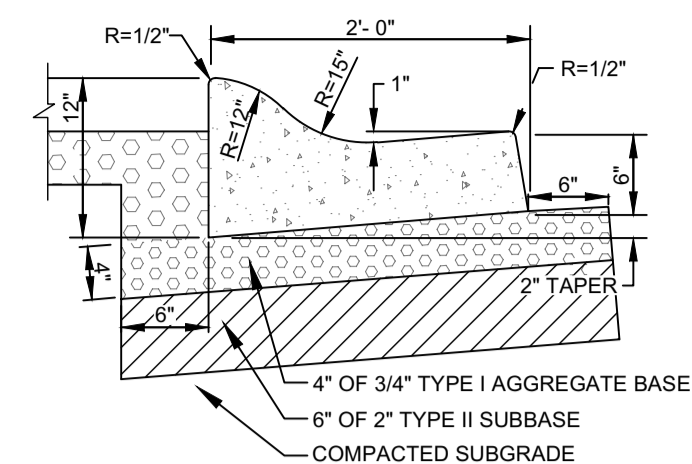
- CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE MOST CURRENT EDITION OF THE "IDAHO REGULATIONS FOR PUBLIC DRINKING WATER SYSTEMS," THE CURRENT EDITION OF THE "IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION" (ISPC), AND CITY OF KETCHUM STANDARDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND KEEPING A COPY OF THE ISPC 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.
- 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, INCLUDING BUT NOT LIMITED TO, EPA'S NPDES CONSTRUCTION GENERAL PERMIT.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
- CONSTRUCTION OF WATER MAINS AND ALL OTHER RELATED APPURTENANCES SHALL BE IN ACCORDANCE WITH THE IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ISPC), 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 (ISPC), 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 ANSINSF 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 ANSINSF STANDARD 60 CHEMICALS AND COMPOUNDS DURING INSTALLATION & DISINFECTION OF POTABLE WATER MAIN.
- CONTRACTOR SHALL COORDINATE LOCATIONS OF DRY UTILITY FACILITIES (POWER, CABLE, PHONE, TV) NOT SHOWN ON THE DRAWING WITH IDAHO POWER.
- ALL CLEARING & GRUBBING SHALL CONFORM TO ISPC SECTION 201.
- ALL EXCAVATION & EMBANKMENT SHALL CONFORM TO ISPC SECTION 202. EXCAVATED SUBGRADE SHALL BE COMPACTED AND ALL UNSUITABLE SECTIONS REMOVED AND REPLACED WITH STRUCTURAL FILL AS DETERMINED BY THE ENGINEER. MINIMUM COMPACTION OF PLACED MATERIAL SHALL BE 95% OF MAXIMUM LABORATORY DENSITY AS DETERMINED BY AASHTO T-99 OR ITS T-91.
- ALL 2" MINUS GRAVEL SHALL CONFORM TO ISPC 802, TYPE II (ITD STANDARD 703.04, 2"). SHALL BE PLACED IN CONFORMANCE WITH ISPC 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 ISPC 802, TYPE I (ITD STANDARD 703.04, 3/4" B). SHALL BE PLACED IN CONFORMANCE WITH ISPC 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 ITS T-91.
- ALL ASPHALTIC CONCRETE PAVEMENT WORK SHALL CONFORM TO ISPC SECTION(S) 805, 810, AND 811 FOR CLASS II PAVEMENT. ASPHALT AGGREGATE SHALL BE 1/2" (13MM) NOMINAL SIZE CONFORMING TO TABLE 803B IN ISPC SECTION 803. ASPHALT BINDER SHALL BE PG 58-28 CONFORMING TO TABLE A-1 IN ISPC SECTION 805.
- ALL EDGES OF EXISTING ASPHALT PAVING SHALL BE SAW CUT 24" TO PROVIDE A CLEAN PAVEMENT EDGE FOR MATCHING. NO WHEEL CUTTING SHALL BE ALLOWED. PRIOR TO REPLACING ASPHALT, THE UNDERLYING SURFACE INCLUDING VERTICAL SAWCUT JOINTS SHALL BE CLEANED OF ALL DEBRIS AND A TACK COAT SHALL BE APPLIED TO ALL CURBS, SAWCUTS, OR OVERLAY SURFACES.
- 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 FORM WORK SHALL CONFORM TO ISPC SECTION 701 AND 703. ALL CONCRETE SHALL BE 3,000 PSI MINIMUM, 28 DAY, AS DEFINED IN ISPC SECTION 703, TABLE 1-C. SURFACING MATERIAL FOR THE NEW CONCRETE SIDEWALK WITHIN PUBLIC RIGHTS-OF-WAY WILL BE TITAN CONCRETE MIX, SEE DETAILS 2, 3, AND 5, SHEET C0.1.
- ALL TRENCHING SHALL CONFORM TO ISPC STANDARD DRAWING SD-301. TRENCHES SHALL BE BACKFILLED AND COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99.
- TOPOGRAPHIC, SITE, AND BOUNDARY SURVEY SHOWN HEREON WAS CONDUCTED BY GALENA ENGINEERING, INC., 12/6/2019.
- 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 SET IN CONTROL SURVEYS 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.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIRING A MATERIALS TESTING COMPANY DURING CONSTRUCTION TO VERIFY ALL COMPACTION AND MATERIAL PLAN AND SPECIFICATION REQUIREMENTS ARE MET. QUALITY CONTROL DOCUMENTATION OF TESTING FOR WORK IN RIGHT-OF-WAY MEETING CITY OF KETCHUM CODE SECTION 12.04.040 (CONCRETE, AGGREGATE BASE COMPACTION, ASPHALT COMPACTION) WILL BE NECESSARY FOR CERTIFICATE OF OCCUPANCY.



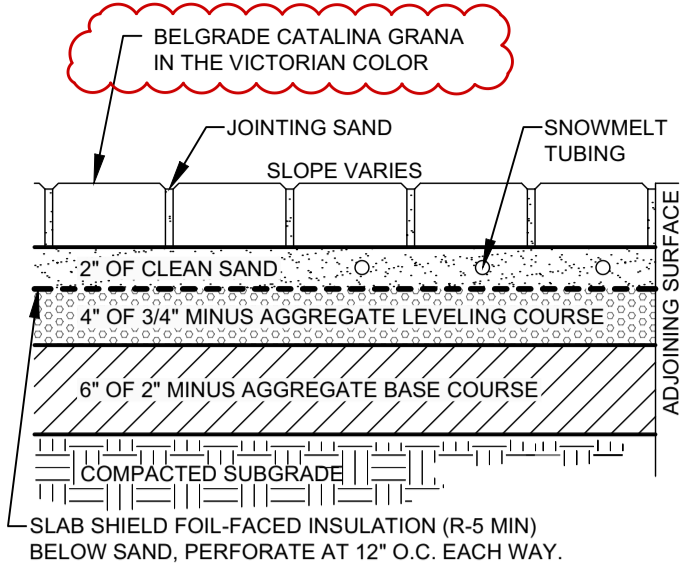
**1**  
C0.1 TYPICAL STREET ASPHALT SECTION  
N.T.S.



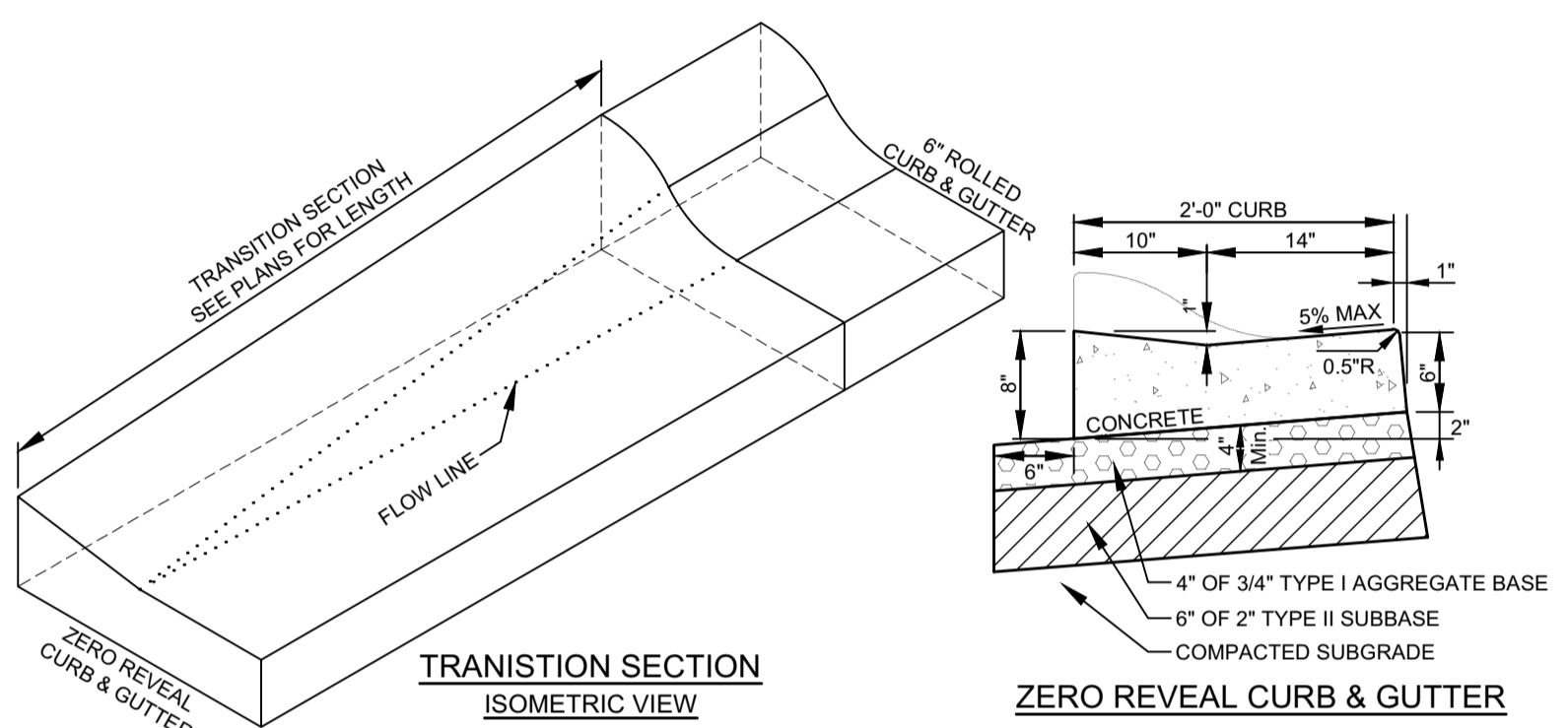
**2**  
C0.1 36" CONCRETE VALLEY GUTTER  
N.T.S.



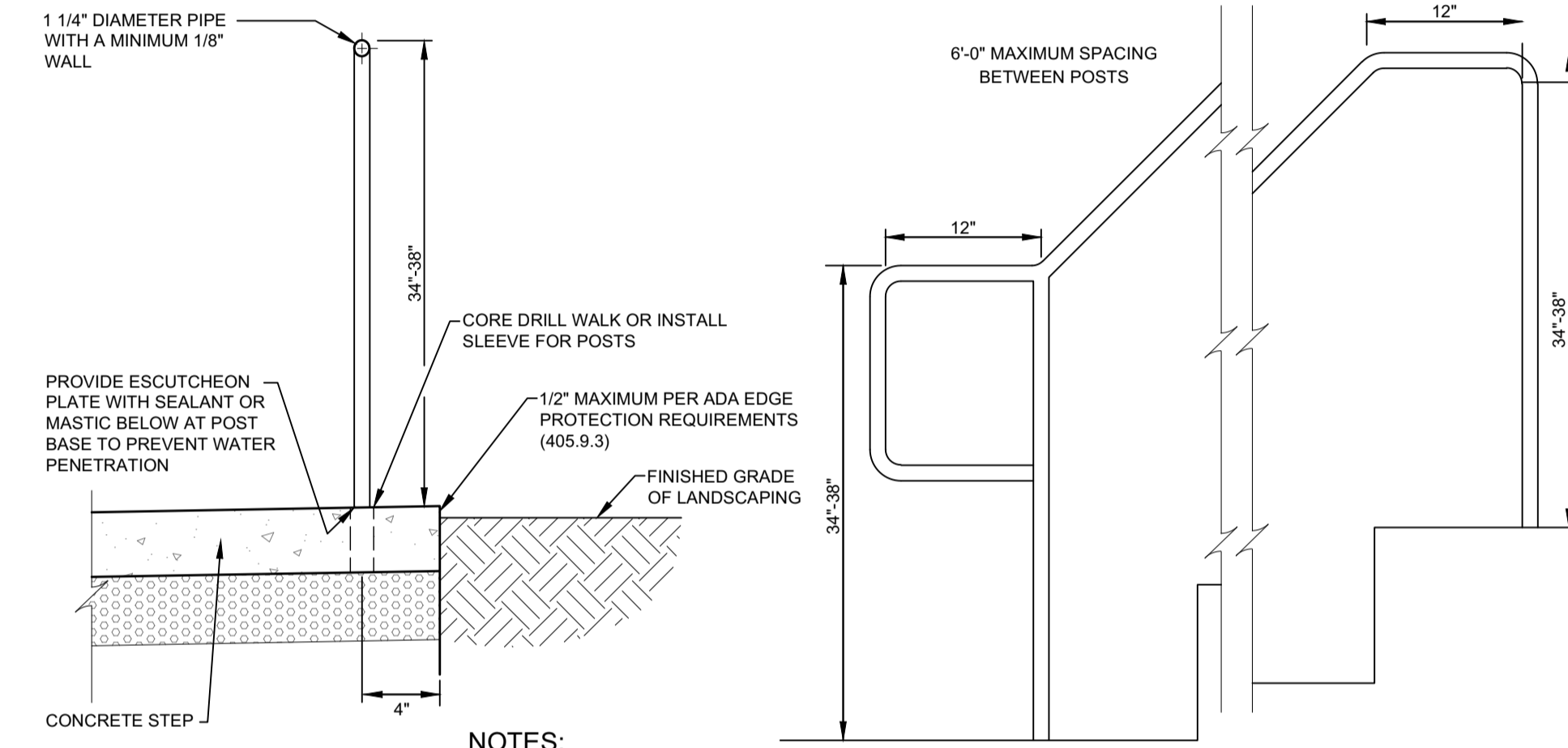
**3**  
C0.1 6" CONCRETE ROLLED CURB & GUTTER  
N.T.S.



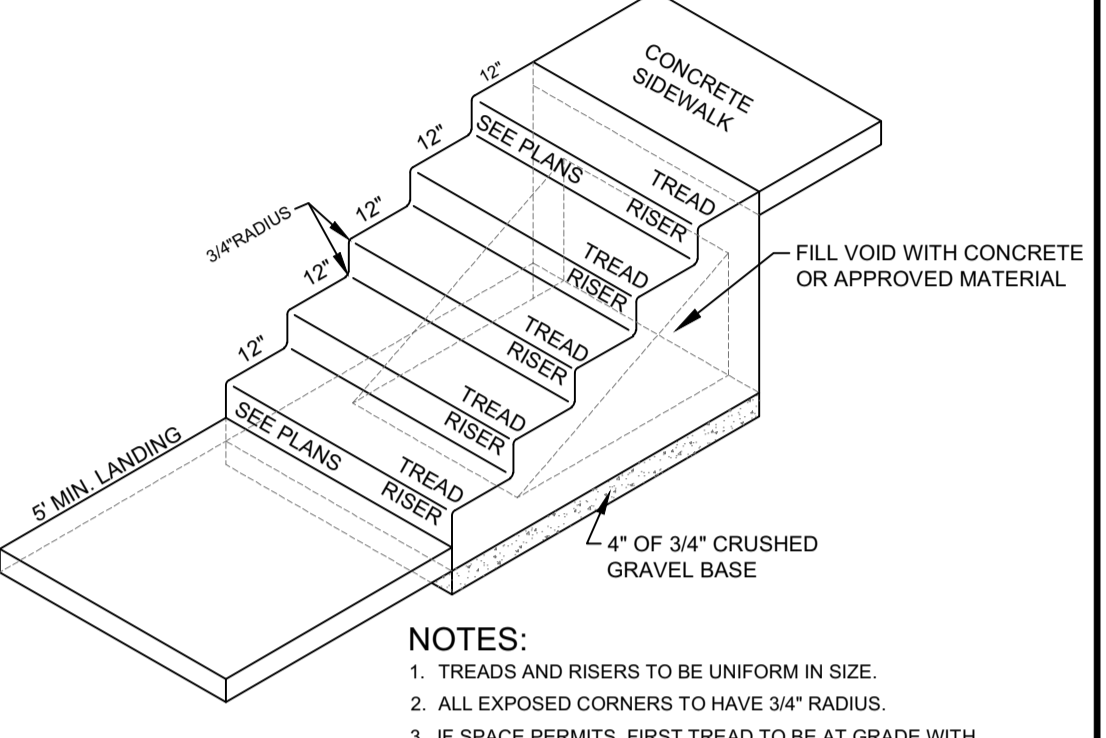
**4**  
C0.1 HEATED PAVER DETAIL  
N.T.S.



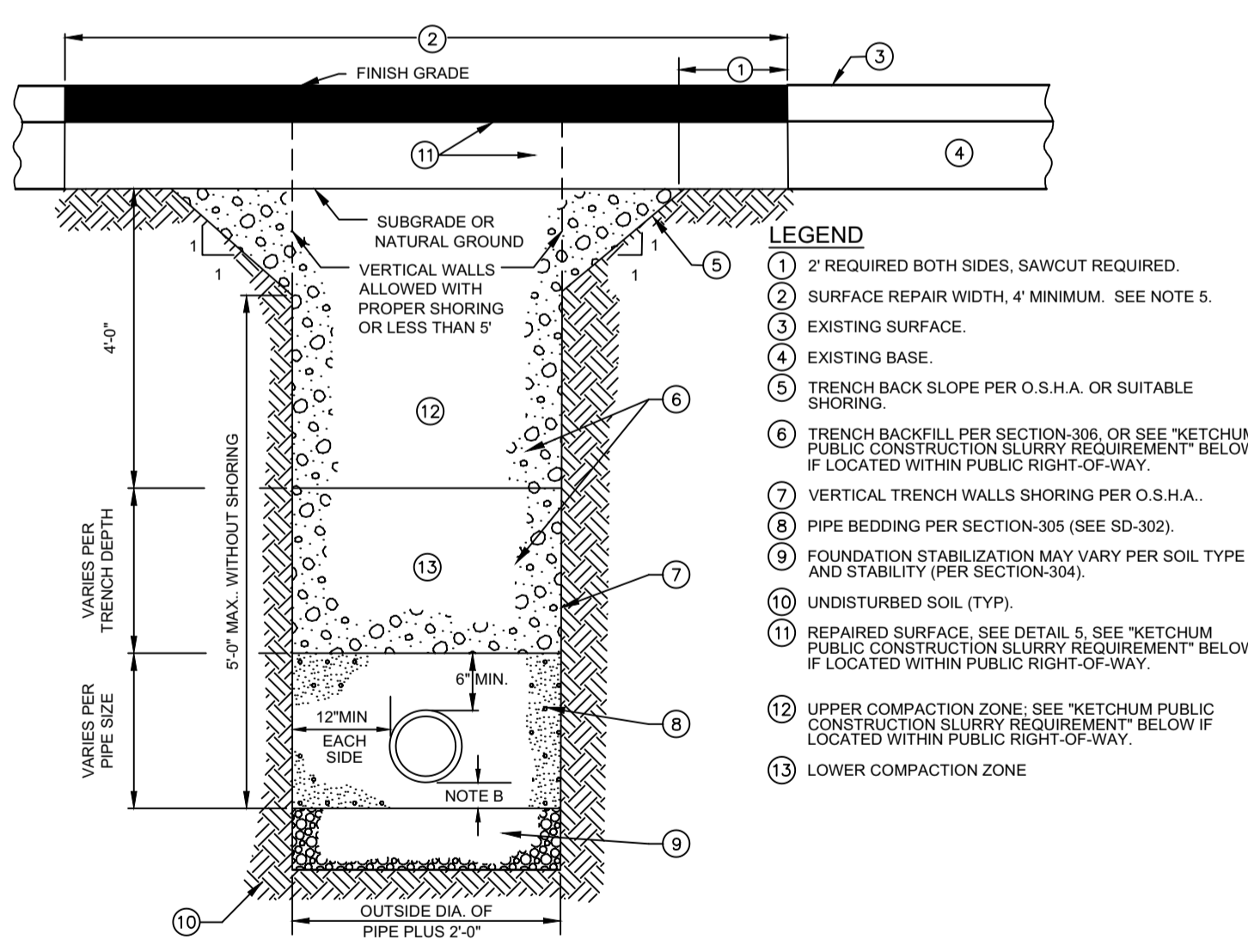
**5**  
C0.1 TYPICAL CURB TRANSITION DETAIL  
N.T.S.



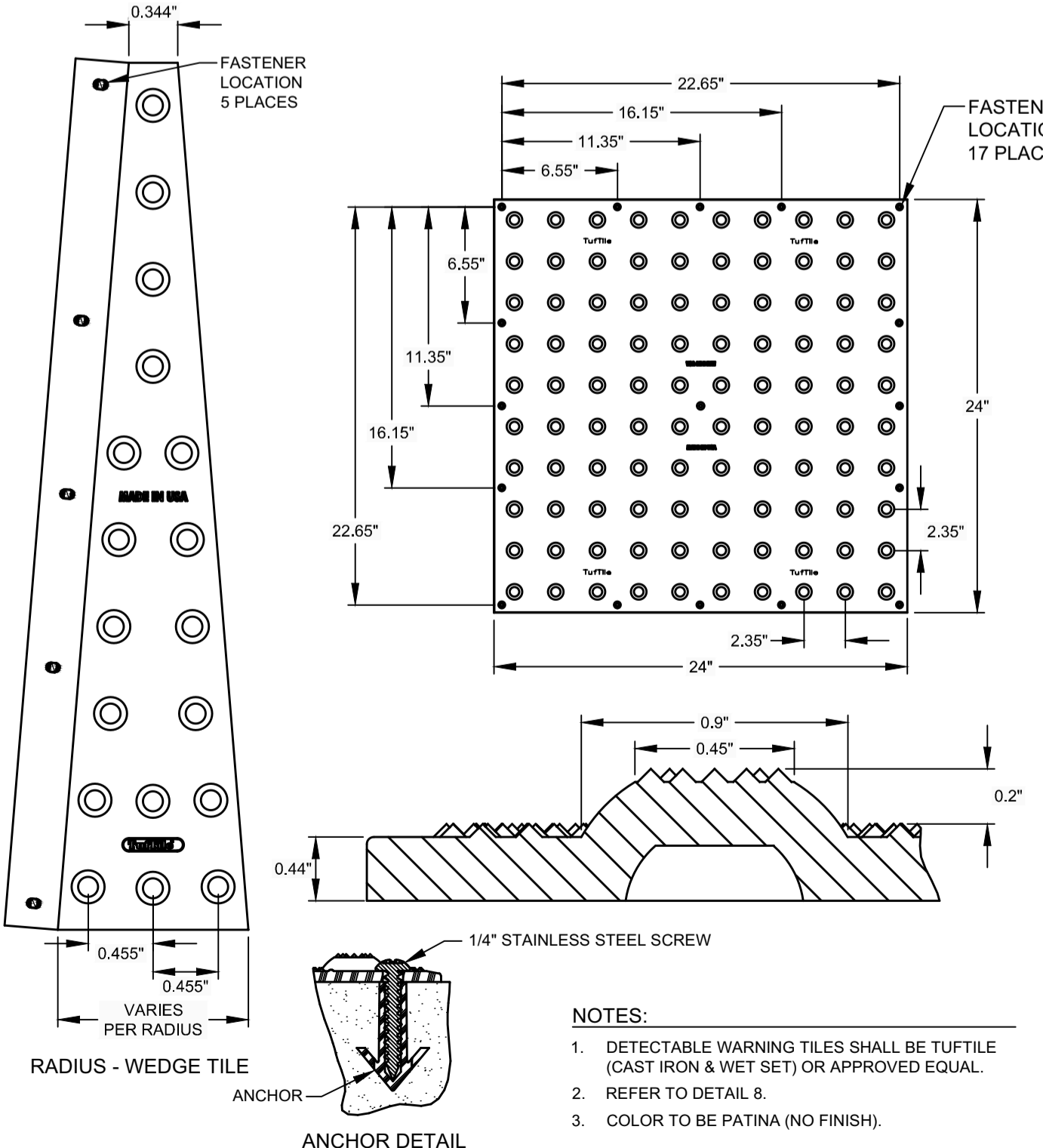
**6**  
C0.1 TYPICAL HANDRAIL AND STAIRS DETAIL  
N.T.S.



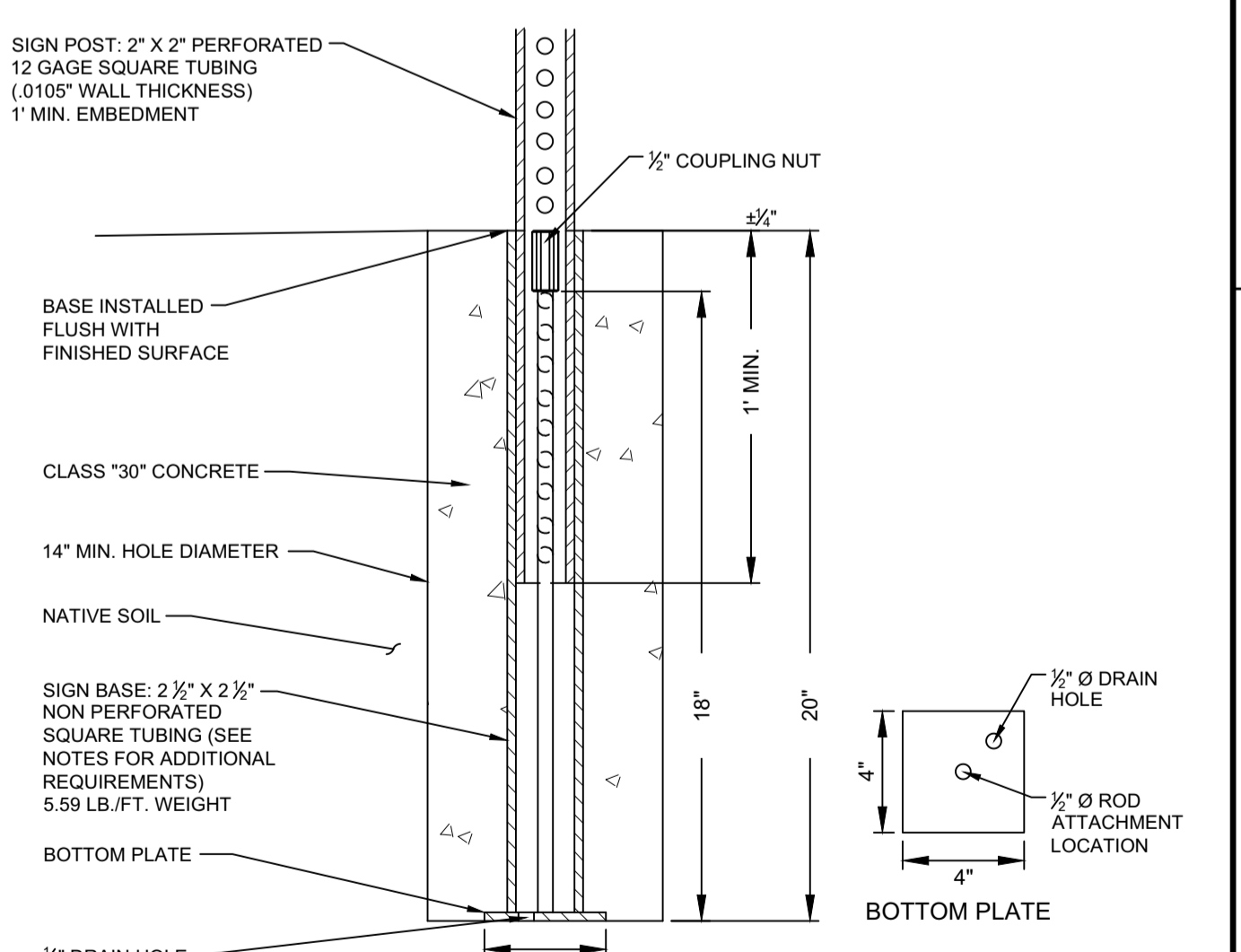
**7**  
C0.1 POTABLE AND NON-POTABLE WATER LINE (NPWL) SEPARATION  
N.T.S.



**8**  
C0.1 TYPICAL TRENCH  
N.T.S.



**9**  
C0.1 DETECTABLE WARNING PLATE  
N.T.S.



**10**  
C0.1 TYPICAL SIGN BASE  
N.T.S.

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

**NOTES AND DETAIL SHEET**  
**4TH AND WALNUT**  
LOCATED WITHIN SECTION 18, T.4 N., R.18 E., B.M., CITY OF KETCHUM, BLAINE COUNTY, IDAHO  
PREPARED FOR WALNUT & FOURTH LLC



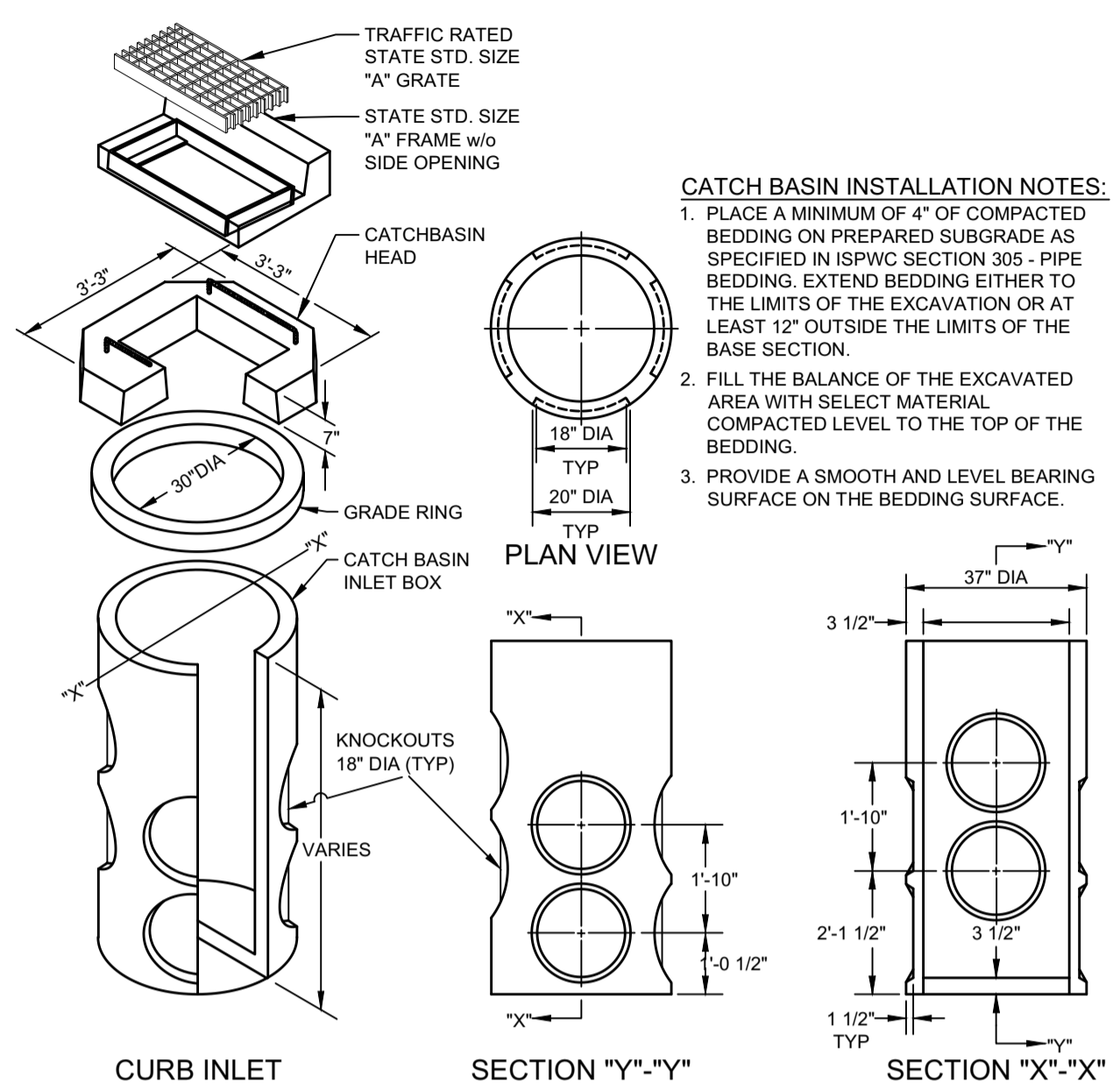
SKS/JCT  
DESIGNED BY  
SKS/JCT  
DRAWN BY  
SMF/JCL  
CHECKED BY

**GALENA**  
ENGINEERING, INC.  
Civil Engineers & Land Surveyors  
317 N. River Street  
Halley, Idaho 83333  
(208) 768-1705  
email: galena@galena-engineering.com

NO.	DATE	BY	REVISIONS
1	05/08/21	SKS	RESPONSE TO PLANNING BUILDING PERMIT COMMENTS
2	06/18/21	SKS	RESPONSE TO PLANNING BUILDING PERMIT COMMENTS
3	05/04/22	SMF	SIDEWALK TYPE REVISIONS - CONC. FLOOR @ UT'S IN ALLEY
4	06/22/22	SMF	ADD NORTHWEST CANOPY COLUMNS
5	07/22/22	SMF	ADD 331 N WALNUT AVE. DESIGN
6	09/09/22	JCL	REVISIONS PER CITY COMMENTS (09/06/2022)

**C0.1**

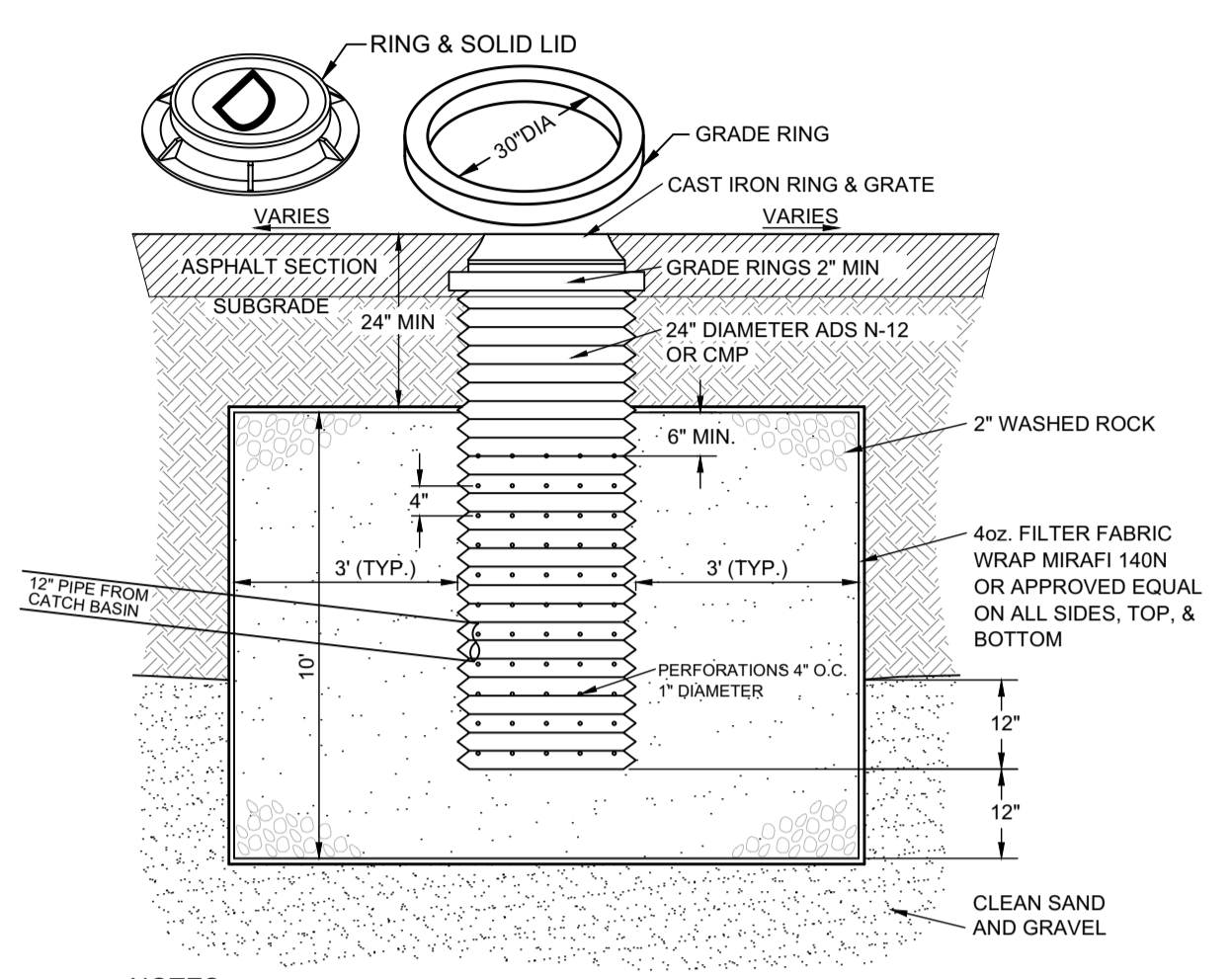
REUSE OF DRAWINGS: These drawings, or any portion thereof, shall not be used on any project or extension of this project without the written consent of Galena Engineering, Inc.



**1**  
C0.2 **30" DIAMETER CATCH BASIN**  
N.T.S.

**CATCH BASIN INSTALLATION NOTES:**

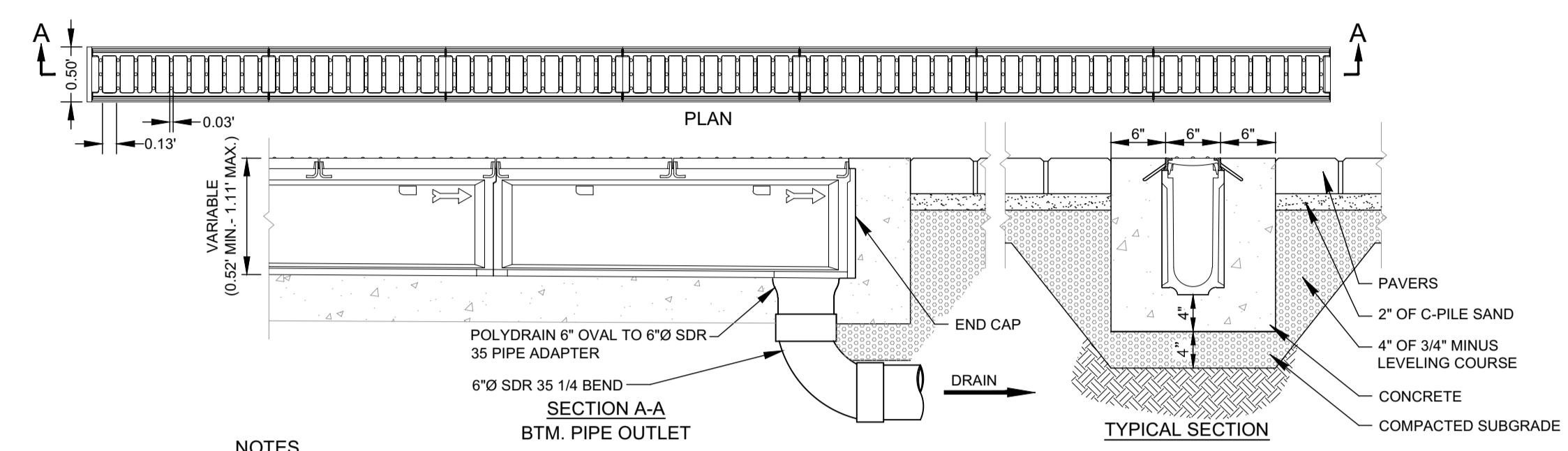
1. PLACE A MINIMUM OF 4" OF COMPACTED BEDDING ON PREPARED SUBGRADE AS SPECIFIED IN ISPGW SECTION 505 - PIPE BEDDING. EXTEND BEDDING EITHER TO THE LIMITS OF THE EXCAVATION OR AT LEAST 12" OUTSIDE THE LIMITS OF THE BASE SECTION.
2. FILL THE BALANCE OF THE EXCAVATED AREA WITH SELECT MATERIAL COMPACTED LEVEL TO THE TOP OF THE BEDDING.
3. PROVIDE A SMOOTH AND LEVEL BEARING SURFACE ON THE BEDDING SURFACE.



**2**  
C0.2 **DRYWELL DETAIL (8' Ø)**  
N.T.S.

**NOTES:**

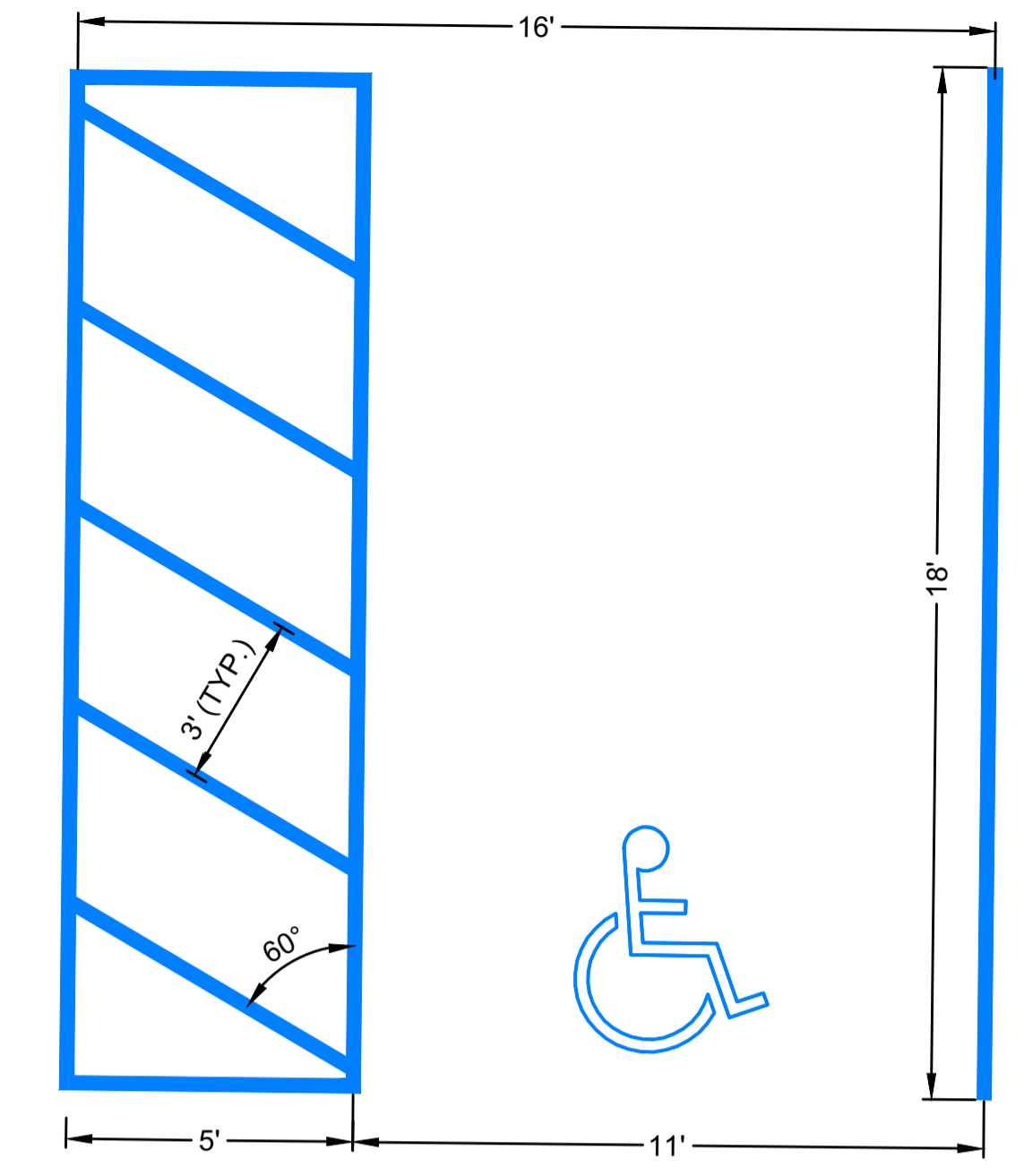
1. THE BED SHALL BE EXCAVATED A MINIMUM OF 24" INTO CLEAN SAND AND GRAVEL.
2. MAXIMUM DEPTH SHALL NOT EXCEED 12 FEET.
3. IF CLEAN SAND AND GRAVEL IS NOT ENCOUNTERED WITHIN 12 FEET, THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER.
4. GRATE OR SOLID LID AS APPROVED BY CITY OF KETCHUM.



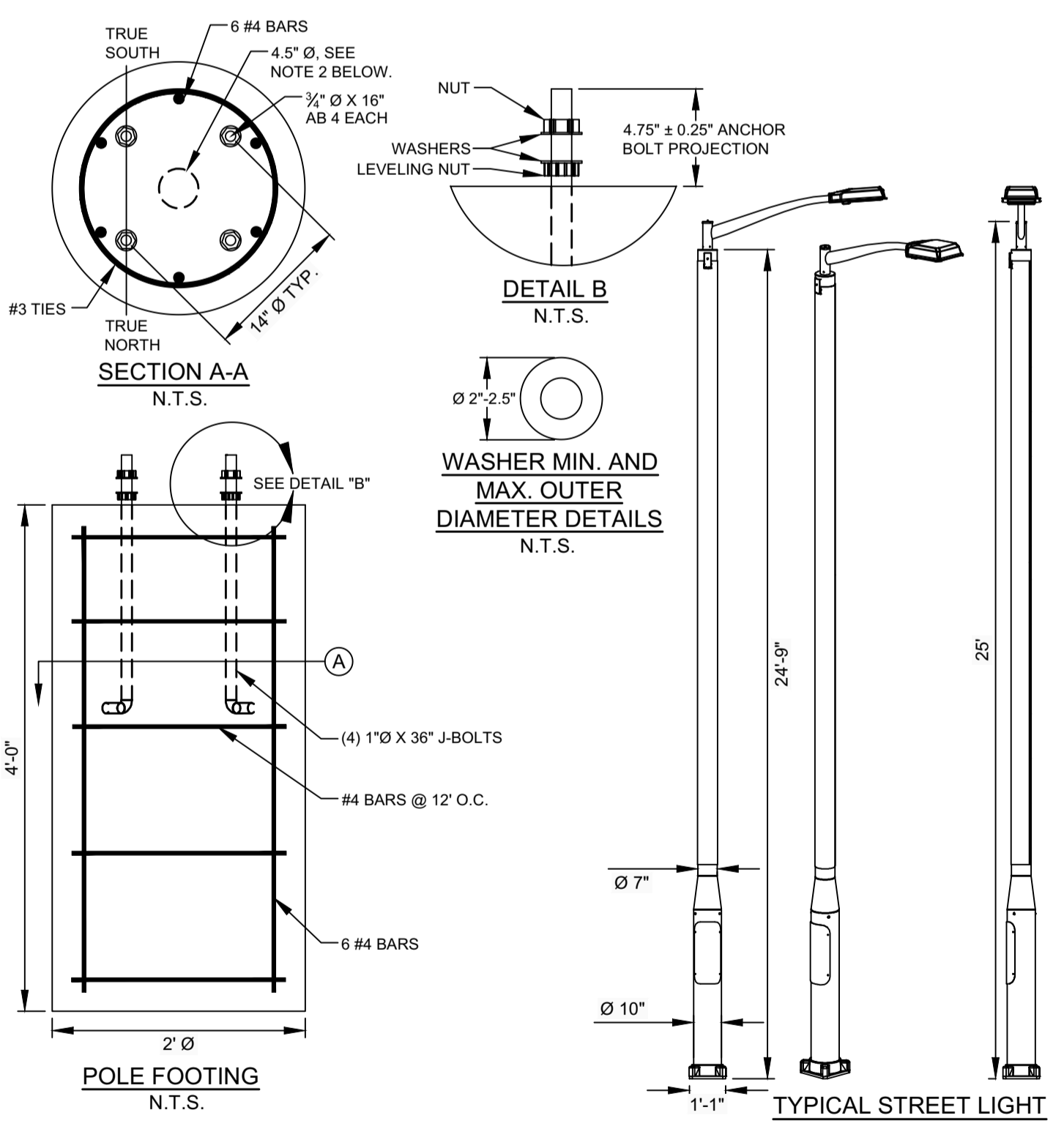
**3**  
C0.2 **TRENCH DRAIN DETAIL**  
(ABT INTERCEPTOR LINE DRAIN OR APPROVED EQUAL)  
N.T.S.

**NOTES:**

1. LINE DRAIN IS SUITABLE FOR APPLICATIONS FOR CONTROLLING SPREAD IN GUTTER FLOW CONDITIONS OR TO INTERCEPT SHEET FLOW. TYPICAL APPLICATION IS AT THE STREET CURB OR BARRIER.
2. THE FRAME AND GRATE IS SUITABLE FOR PEDESTRIAN AND BICYCLE TRAFFIC AND RATED FOR H-25 AND HS-25 LOADS.
3. CONCRETE THICKNESS, TYPE, AND AMOUNT OF REINFORCEMENT TO BE SAME AS ADJACENT PAVEMENT OR GREATER. PERFORM STRUCTURAL ANALYSIS TO DETERMINE REQUIREMENTS FOR APPLICATION.
4. TOP OF GRATE TO BE INSTALLED FLUSH TO 1/8" BELOW FINISHED GRADE. BEVEL CONCRETE TO TOP OF GRATE IF BELOW FLUSH.



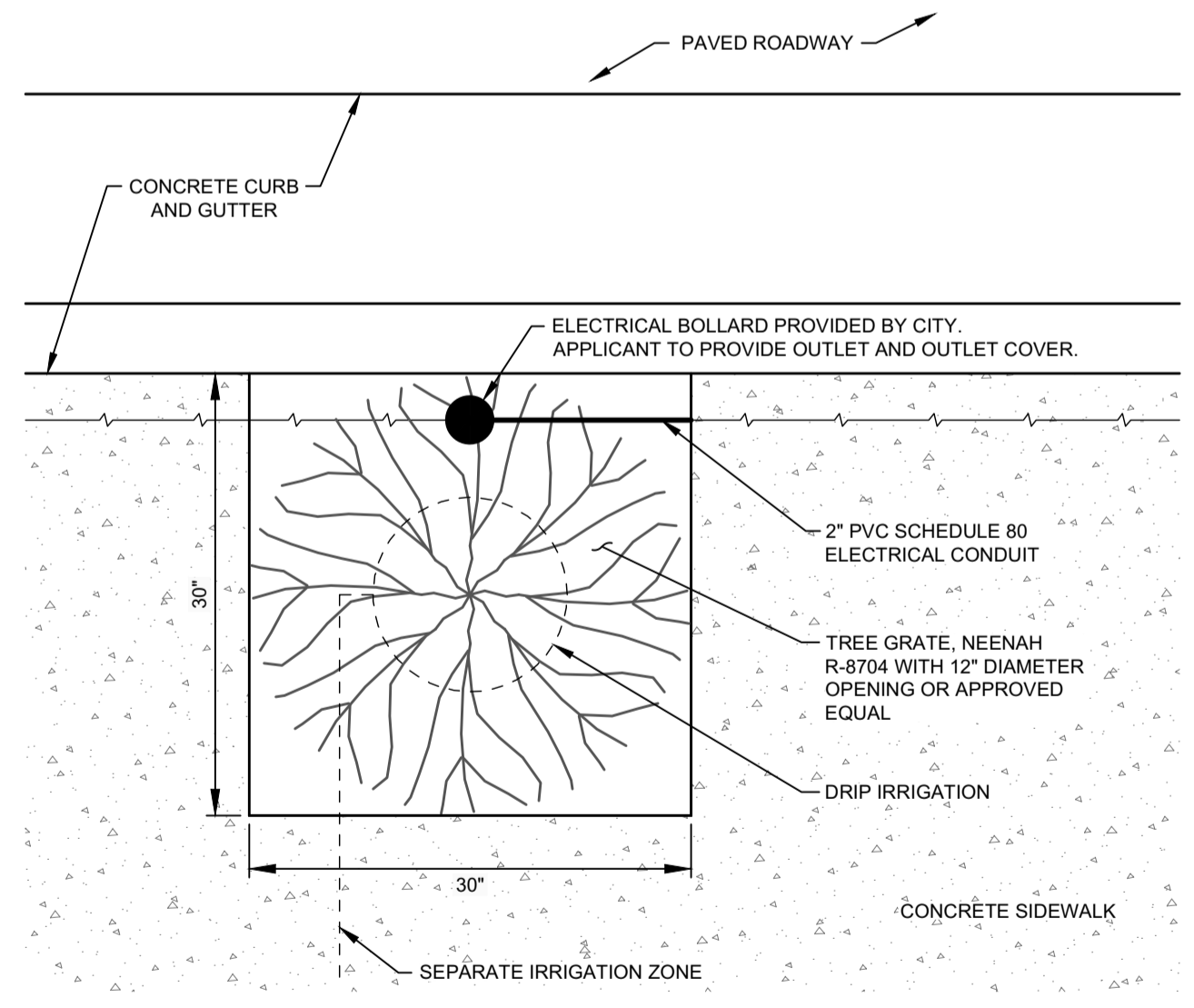
**4**  
C0.2 **ADA PARKING SPACE DIMENSIONS**  
N.T.S.



**5**  
C0.2 **TYPICAL STREET LIGHT**  
N.T.S.

**NOTES:**

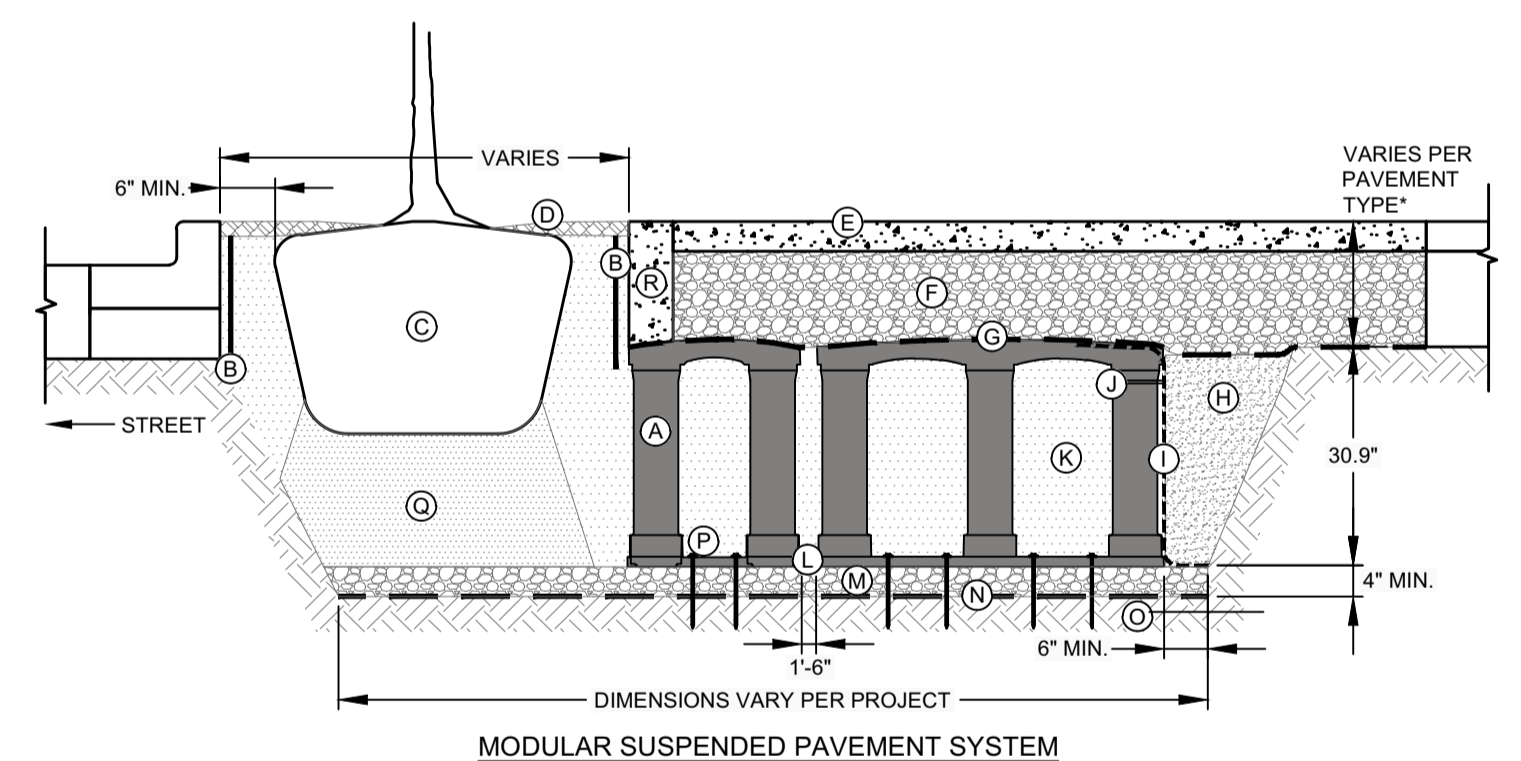
1. STREET LIGHT IS SOLARONE RFS DESIGN 158 LFP OR APPROVED EQUAL.
2. ANY CONDUITS AND/OR GROUNDING WIRES MUST BE HARDWIRED AND CONTAINED WITHIN A 4.5" Ø CIRCLE CENTERED ON THE FOUNDATION. GROUNDING ELECTRODE WIRE AND AC SUPPLY WIRE (IF REQUIRED) ARE 5' MIN. ABOVE THE BASE.
3. ANCHOR BOLT ORIENTATION TO TRUE NORTH/SOUTH IS ONLY RELEVANT FOR OFF-GRID SOLAR POLES. DISREGARD FOR GRID-TIED POLES.
4. GROUNDING WIRE MUST BE 60" FROM BASE SO IT CAN REACH THE GROUNDING LUG INSIDE THE POLE.
5. STREET LIGHT SHALL BE 25' IN HEIGHT OR AS APPROVED BY CITY OF KETCHUM.



**6**  
C0.2 **TREE WELL DETAILS**  
N.T.S.

**NOTES:**

1. TREE TO BE 3" MINIMUM CALIPER AUTUMN BLAZE MAPLE OR APPROVED EQUAL.
2. CITY OF KETCHUM REQUIRES DRIP IRRIGATION TO BE ON A SEPARATE ZONE WITH HUNTER/RAINWISE SMART CLOCK, OR APPROVED EQUAL, FOR REMOTE ACCESS BY CITY.
3. APPLICANT TO CONNECT AND PROVIDE CONDUITS, WIRING, AND SEPARATE CIRCUIT, OR TIE TO A CITY CIRCUIT FOR POWER.
4. NO DIRECT BURIAL WIRE PERMITTED.
5. TREE INSTALLATION TO BE MODULAR SUSPENDED PAVEMENT SYSTEM. SEE TREE WELL SECTION VIEW, DETAIL 2.



**KEY PLAN:**

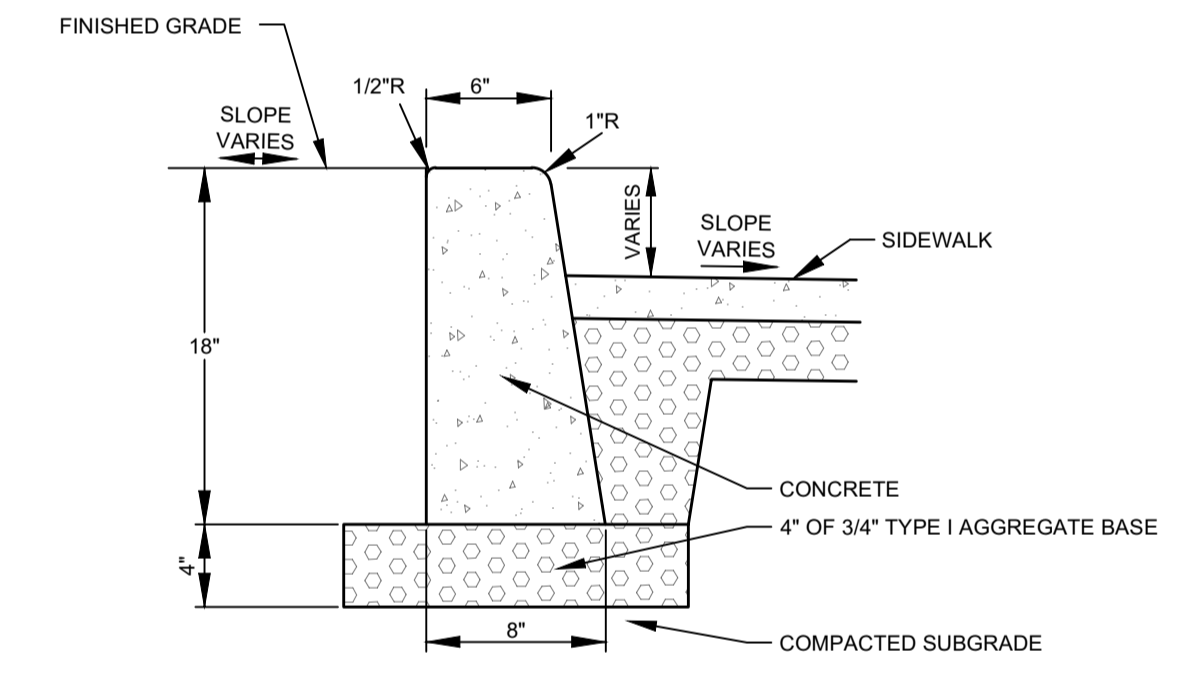
- SILVA CELL SYSTEM (DECK, BASE, AND POSTS) OR APPROVED EQUAL.
- DEEPROOT ROOT BARRIER, 12" OR 18", DEPTH DETERMINED BY THICKNESS OF PAVEMENT SECTION, INSTALL DIRECTLY ADJACENT TO CONCRETE EDGE RESTRAINT. PREVENTS ROOTS FROM DISTURBING PAVEMENT.
- TREE ROOT PACKAGE, SIZE VARIES.
- TREE OPENING TREATMENT, PER PROJECT SPECIFICATIONS.
- SURFACE TREATMENT, PER PROJECT.
- AGGREGATE BASE COURSE, DEPTH VARIES PER PROJECT.
- GEOTEXTILE TO KEEP AGGREGATE FROM MIGRATING DOWN THROUGH CELL DECK.
- BACKFILL, PER PROJECT SPECIFICATIONS.
- GEOGRID TO PROVIDE FOR VERTICAL SEPARATION BETWEEN PLANTING SOILS AND BACKFILL WHILE ALLOWING ROOT PENETRATION INTO ADJACENT SOILS. 6" (150 mm) TOE (OUTWARD FROM BASE) AND 12" (305 mm) EXCESS (OVER TOP OF DECK).
- CABLE TIE, ATTACHING GEOGRID TO SILVA CELL AT BASE OF UPPER POST FLARE.
- PLANTING SOIL, PER PROJECT SPECIFICATIONS, COMPACTED TO 70-80% PROCTOR.
- SILVA CELL BASE SLOPE, 10% MAX.
- 4" (100 mm) MIN AGGREGATE SUB BASE, COMPACTED TO 95% PROCTOR.
- GEOTEXTILE TO PROVIDE SEPARATION BETWEEN SUBGRADE AND AGGREGATE BASE.
- SUBGRADE, COMPACTED TO 95% PROCTOR.
- PIN, PER SILVA CELL SPECIFICATIONS, TO KEEP CELLS IN PLACE DURING CONSTRUCTION.
- PLANTING SOIL BELOW TREE ROOT PACKAGE, COMPACTED TO 85-90% PROCTOR.
- CONCRETE EDGE RESTRAINT TO STABILIZE EDGE AND PREVENT AGGREGATE MIGRATION INTO TREE OPENING.

**MINIMUM PAVEMENT PROFILE OPTIONS TO MEET H-20 LOADING**

PAVEMENT	+ AGGREGATE
4" CONCRETE	4" CONCRETE
3" PAVEMENT	+ 12" AGGREGATE
4" ASPHALT	+ 12" AGGREGATE
2.6" PAVEMENT	+ 5" CONCRETE

**NOTES:**

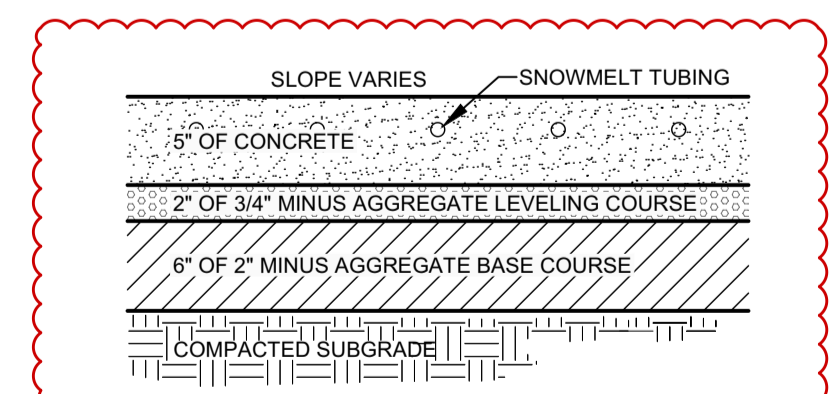
1. EXCAVATION SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE HEALTH AND SAFETY REGULATIONS.
2. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. A PROJECT SPECIFIC DETAIL WILL NEED TO BE PROVIDED TO CITY FOR REVIEW AND APPROVAL.



**7**  
C0.2 **CONCRETE VERTICAL CURB**  
N.T.S.

**NOTES:**

1. SUBBASE CAN BE 2" TYPE II OR 3/4" TYPE I CRUSHED AGGREGATE BASE COURSE.
2. MATERIALS SHALL CONFORM WITH CURRENT ISPGW STANDARDS, DIVISION 800 AGGREGATES AND ASPHALT.
3. PAVEMENT SECTION MAY BE MODIFIED IF A PROJECT SPECIFIC GEOTECHNICAL REPORT, STAMPED BY A LICENSED ENGINEER, IS PROVIDED.
4. 1/2-INCH PREFORMED EXPANSION JOINT MATERIAL (AASHTO M 213) AT TERMINAL POINTS OF RADI.
5. CONTINUOUS PLACEMENT PREFERRED, SCORE INTERVALS 10-FOOT MAXIMUM SPACING (8-FOOT W/SIDEWALK).



**8**  
C0.2 **TYPICAL CONCRETE SIDEWALK SECTION**  
N.T.S.

**NOTES:**

1. 1/2-INCH PREFORMED EXPANSION JOINT MATERIAL (AASHTO M 213) AT TERMINAL POINTS OF RADI.
2. CONTINUOUS PLACEMENT PREFERRED. SCORE AT INTERVALS TO MATCH WIDTH OF WALK NOT TO EXCEED 5 FEET SPACING.
3. 1/2" TRANSVERSE PREFORMED BITUMINOUS JOINTS AT THE TERMINUS POINTS FOR CURVE AND WHERE SIDEWALK IS PLACED BETWEEN TWO PERMANENT FOUNDATIONS.
4. MATERIALS AND CONSTRUCTION IN COMPLIANCE WITH ISPGW SPECIFICATIONS.



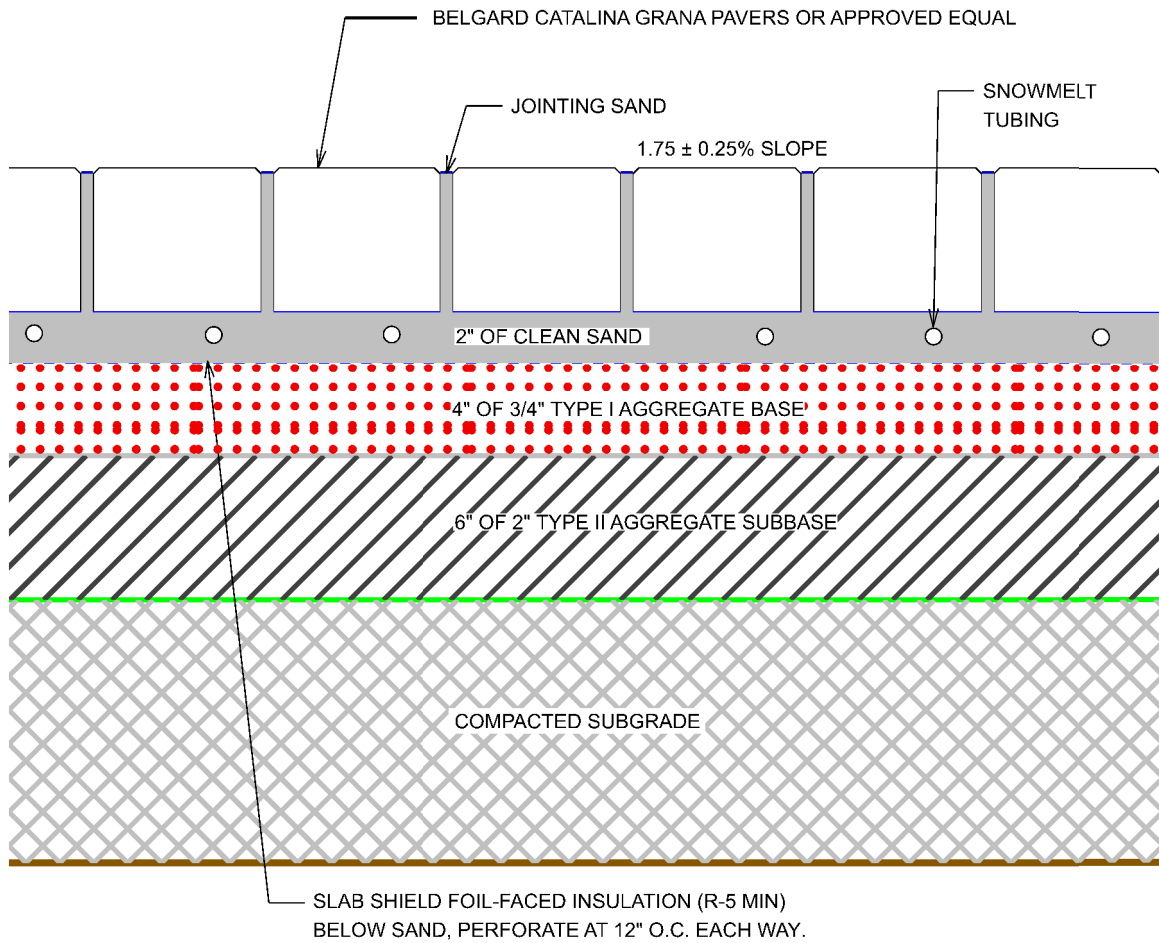
SKS/CT  
DESIGNED BY  
SKS/CT  
DRAWN BY  
SMF/JCL  
CHECKED BY

**GALENA ENGINEERING, INC.**  
Civil Engineers & Land Surveyors  
317 N. River Street  
Hailey, Idaho 83433  
(208) 768-1705  
email: galena@galena-engineering.com

NO.	DATE	BY	REVISIONS
1	05/05/21	SKS	RESPONSE TO PLANNING BUILDING PERMIT COMMENTS
2	06/15/21	SKS	RESPONSE TO PLANNING BUILDING PERMIT COMMENTS
3	05/04/22	SMF	SIDEWALK TYPE REVISIONS: CONC. FLOOR @ UT'S IN ALLEY
4	06/22/22	SMF	ADD NORTHWEST CANOPY COLUMNS
5	07/22/22	SMF	ADD 331 N WALNUT AVE. DESIGN
6	09/09/22	JCL	REVISIONS PER CITY COMMENTS (09/06/2022)

C0.2

**DETAIL SHEET**  
**4TH AND WALNUT**  
 LOCATED WITHIN SECTION 18, T.4 N., R.18 E., B.M., CITY OF KETCHUM, BLAINE COUNTY, IDAHO  
 PREPARED FOR WALNUT & FOURTH LLC  
 PROJECT INFORMATION  
 File: sds(09/18/19)dwg/Construction/18-ENR-BASE\_2022-07-22.dwg 08:31:22 4/8/22 PM



**NOTES:**

1. POLYMERIC SAND CAN BE USED AT EDGES TO PREVENT WEED, ANT INTERFERENCE.
2. MATERIALS SHALL CONFORM WITH CURRENT ISPWC AND CITY OF KETCHUM STANDARDS.
3. SNOWMELT TUBING RADII, FREQUENCY DEPENDS ON SNOW REMOVAL UPKEEP.
4. SNOWMELT REQUIRED FOR PROJECTS IN THE COMMUNITY CORE AND TOURIST ZONINGS.
5. PAVERS INSTALLED ON FOURTH STREET SHALL BE BELLGARD CATALINA GRANA IN THE COLOR VICTORIAN.

REVISION	APPROVED	DATE	CITY OF KETCHUM STANDARD DRAWING	DRAWING NO.
REV 3	CITY	3/8/2021		
			<b>PAVER SIDEWALK</b>	<b>16</b>

## Walnut & 4<sup>th</sup> ROW Snowmelt Narrative

The snowmelt system in the public right-of-way on 4th St. and Walnut Ave. in front of the Gold Mine & Walnut & 4th, will be installed in accordance with City of Ketchum standard drawing #16.

Our system includes: Tekmar snow and ice #090 "in ground sensor" used with the Tekmar snow melting #670 controls to automatically detect snow or ice on the sidewalk. These controls will be configured to shut off the system when the pavement temperature is above 50 degrees F. and precipitation is not falling. The system will be configured to shut off when the outdoor temperature is above 40 degrees F.

I have attached the city standard detail #16 and specs for the snowmelt system below for your reference.



# Lochinvar®

## FTXL 1.0 FIRE TUBE CONDENSING BOILER

Submittal Sheet

FTX1.0-Sub-01

### FTXL FIRE TUBE COMMERCIAL BOILERS

Job Name: \_\_\_\_\_  
 Location: \_\_\_\_\_  
 Engineer: \_\_\_\_\_  
 Agent/Wholesaler: \_\_\_\_\_  
 Contractor: \_\_\_\_\_

Model No. FTX1000  
 Type Gas: Natural  LP   
 Equipment Tag(s): \_\_\_\_\_

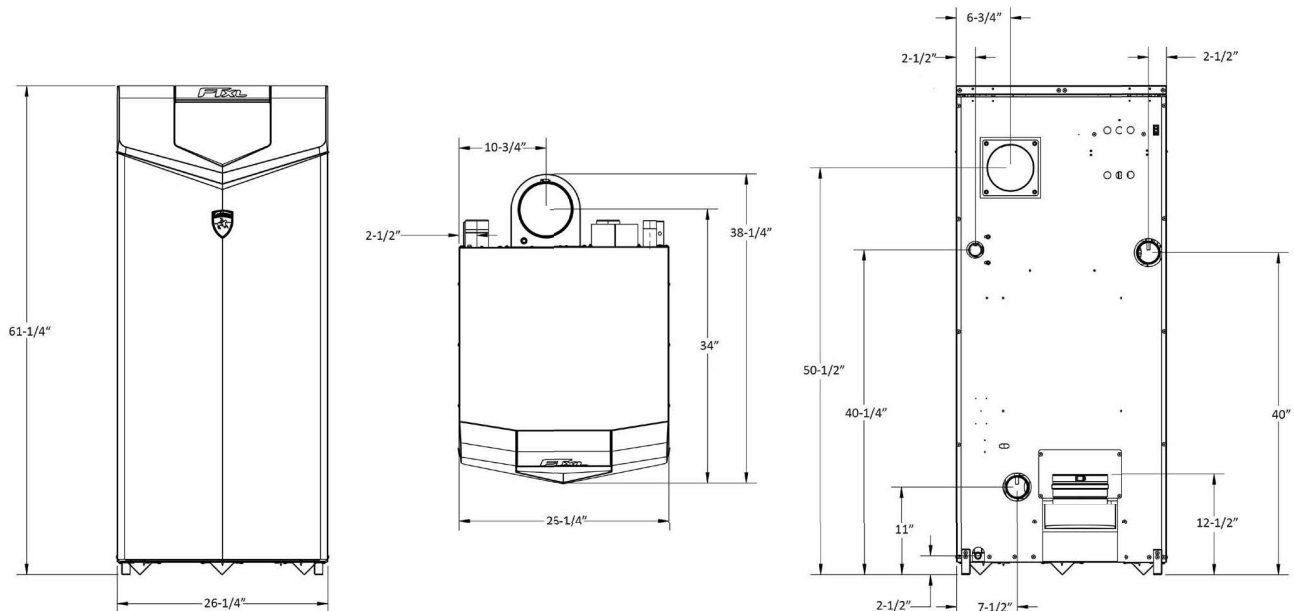
**NOTES:**

FOR EASE IN ORDERING  
BY MODEL NUMBER


FTX	1000	N	M13
FTXL Boiler	999,000 Btu/hr Input	Natural Gas	M13 Firing Control

This model is:

- FTXL Fire Tube boiler
- 999,000 Btu/hr
- Natural gas
- M13 Firing Controls



FTX1000

FTXL BOILER 								DIMENSIONS & SPECIFICATIONS							
Model Number	Input MBH			Gross Output MBH	Net AHRI Rating MBH	Comb. Eff. %	Therm. Eff. %	Flow (GPM) Min	Flow (GPM) Max	HEX Water Volume (Gal)	Water Conn.	Vent Size	Air Inlet	Gas Conn.	Ship. Wt. (lbs.)
	Min Btu/hr	Max Btu/hr	Turn down												
FTX1000(N,L)	99.9	999	10:1	982	854	99.0	98.3	30	150	19	2-1/2"	6"	6"	1-1/4"	670

\*Information subject to change without notice. Dimensions shown are approximate and should not be used for construction purposes. Dimensions are in inches. Select "N" or "L" for Natural or LP gas. The Net AHRI Water Ratings shown are based on a piping and pickup allowance of 1.15. Lochinvar should be consulted before selecting a boiler for installations having unusual piping and pickup requirements, such as intermittent system operation, extensive piping systems, etc. The ratings have been determined under the provisions governing forced draft burners.

# FTXL™

## FIRE TUBE BOILER



### Standard Features

- › **98.3% Thermal Efficiency**
- › **Modulating Burner with up to 10:1 Turndown**
  - Direct Spark Ignition
  - Low NOx Operation
  - Sealed Combustion
  - Low Gas Pressure Operation
- › **Stainless Steel Fire-Tube Heat Exchanger**
  - ASME-Certified, “H” Stamped
  - 160 psi Working Pressure
  - 50 psi Relief Valve
  - Combustion Analyzer Test Port
  - Fully Welded Design
- › **Vertical and Horizontal Direct Vent**
  - Direct Vent up to 100 feet
  - PVC, CPVC, Polypropylene or AL29-4C
- Factory Supplied Sidewall Vent Termination
- › **Smart System Control**
- › **Other Features**
  - On/Off Switch
  - Adjustable High Limit with Manual Reset
  - Automatic Reset High Limit
  - Manual Reset Low Water Cutoff
  - Flue Temperature Sensor
  - Low Air Pressure Switch
  - Temperature and Pressure Gauge
  - Condensate Trap
  - Zero Service Clearances
  - 10-Year Limited Warranty

### Smart System Features

- › **CON•X•US Remote Connect**
- › **SMART TOUCH™ Touch Screen Operating Control**
- › **Full Color 7” Touchscreen LCD Display**
- › **Cascading Sequencer with Built-in Redundancy**
  - Selectable Cascade Type:
    - Lead Lag/Efficiency Optimization
  - Multiple Size Boilers
  - Front-End Loading
- › **3 Reset Temperatures Inputs w/Independent Outdoor Reset Curves for Each**
  - Outdoor Sensor
- › **Four-Pump Control**
  - System Pump with Parameter for Continuous Operation
  - Boiler Pump with Variable-Speed Control
  - Domestic Hot Water Boiler Pump
  - Domestic Hot Water Recirculation Pump Control with Sensor
- › **Building Management System Integration**
  - 0-10 VDC Input to Control Modulation or Setpoint
  - 0-10 VDC Input from Variable-Speed System Pump
  - 0-10 VDC Modulation Rate Output Signal
  - 0-10 VDC Enable/Disable Signal
- › **Programmable System Efficiency Optimizers**
  - Space Heating Night Setback
  - DHW Night Setback
  - Anti-Cycling
  - Ramp Delay
  - Boost Time and Temperature
- › **High-Voltage Terminal Strip**
  - 120 VAC/60 Hertz/1 Phase
  - Pump Contacts for 3 Pumps
- › **Low-Voltage Terminal Strip**
  - Building Recirculation Pump Start/Stop
  - Building Recirculation Return Temp Sensor
  - Contacts
    - Proving Switch Contacts
    - Flow Switch Contacts
    - Alarm Contacts
    - Runtime Contacts
    - 3 Space Heat Thermostat Contacts
    - Tank Thermostat Contacts
    - System Sensor Contacts
    - Tank Sensor Contacts
    - Cascade Contacts
    - 0-10 VDC BMS Contacts
    - 0-10 VDC Boiler Rate Output Contacts
    - 0-10 VDC Boiler Pump Speed Contacts
    - 0-10 VDC System Pump Speed Contacts
    - ModBus Contacts
- › **Time Clock**
- › **Data Logging**
  - Ignition Attempts
  - Last 10 Lockouts
  - Space Heat Run Hours
  - Domestic Hot Water Run Hours
  - Custom Maintenance Reminder with Contact Info
  - Password Security
  - Customizable Freeze Protection Parameters

### Optional Equipment

- Alarm Bell
- BACnet MSTP Communications Kit
- BMS Gateway to BACnet or LonMark
- Common Vent Kit
- Condensate Neutralization Kit
- Constant-Speed Boiler Circulator
- Flow Switch
- High and Low Gas Pressure Switches w/Manual Reset
- ModBus Communication
- Motorized Isolation Valve
- Variable-Speed Boiler Circulator
- Wireless Outdoor Temperature Sensor
- 30 psi ASME Relief Valve
- 75 psi ASME Relief Valve
- 100 psi ASME Relief Valve
- 125 psi ASME Relief Valve
- 150 psi ASME Relief Valve
- › **Firing Controls**
  - M9 - Standard Construction
  - M13 - CSD-1/FM/GE Gap



Lochinvar, LLC  
300 Maddox Simpson Parkway  
Lebanon, Tennessee 37090  
P: 615.889.8900 / F: 615.547.1000  
Lochinvar.com





# tekmar® Submittal

## Snow / Ice Sensor 090



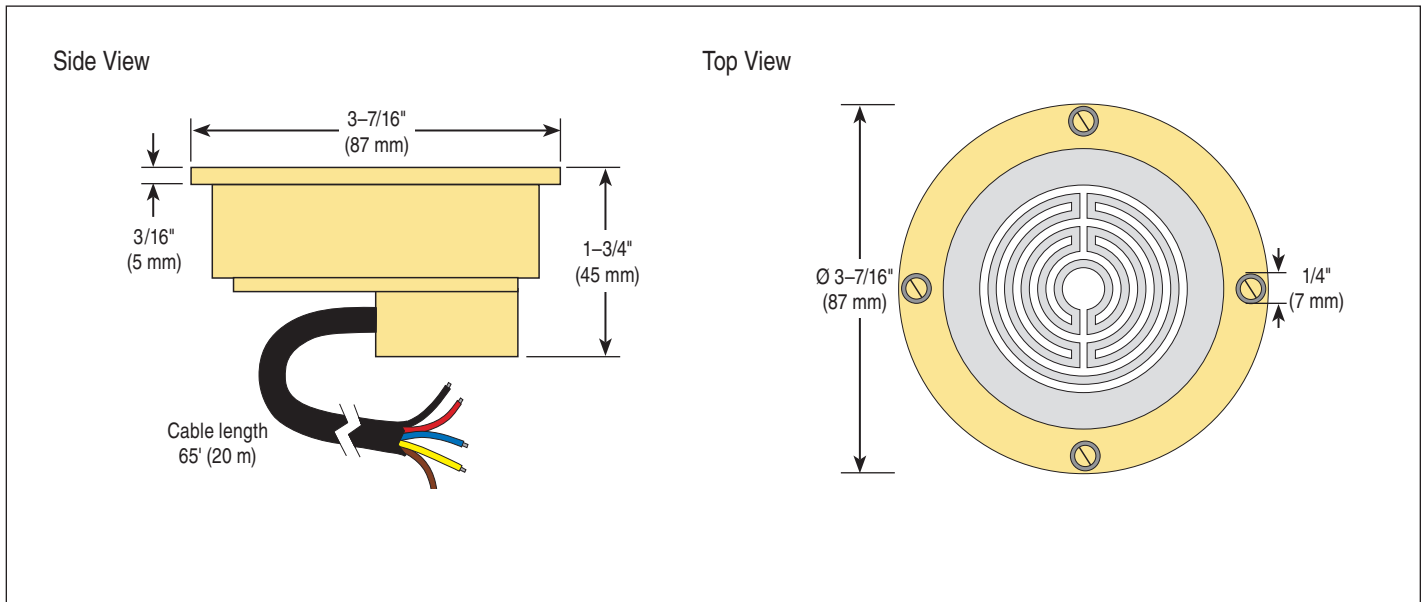
Snow Melting

**090\_C**  
02/16

Replaces: 10/13

Job \_\_\_\_\_ Designer \_\_\_\_\_ Contact \_\_\_\_\_

The Snow/Ice Sensor 090 is an in ground sensor used with tekmar snow melting controls to automatically detect snow or ice on a driveway or walkway. The 090 has 65 ft (20 m) of wire. This product can be used in applications ranging from residential driveways to commercial building fronts such as emergency access entries. This sensor allows tekmar snow melting controls to automatically operate the snow/ice melt system only when snow or ice is present, while also providing temperature feedback to the control.



### Specifications

Snow / Ice Sensor 090 In-slab, 65 ft. (20 m) Wire	
Literature	090_D, 090_C
Packaged weight	4.4 lb (2000 g)
Dimensions	1-3/4" H x 3-7/16" OD (45 mm H x 87 mm OD)
Sensor material	Silicon brass
Cable Material	65 ft. (20 m) 5 conductor stranded wire with polyethylene jacket
Approvals	CSA C US with tekmar Snow Melting Controls
Operating range	-30 to 170°F (-34 to 77°C)
Load rating	15,000 lb (66,723 N) distributed load, non-impact, installed in concrete according to the manual
Included	4 #4-40, 7/16" machined, stainless steel screws 4 #6-32, 3/8" flathead, slotted, stainless steel screws
Warranty	Limited 3 Year (See 090_D for full warranty)

### Energy Saving Features

- Automatic snow/ice detection so melting systems only operate when needed

### Additional Features

- Slab temperature sensing
- Long wire included so in field splicing is not necessary
- Designed for long life in driveway and walkway installations
- 65 ft (20 m) of cable

### SPECIAL REQUIREMENTS

The Snow / Ice Sensor 090 must be operated by a tekmar Snow Melting Control 654, 661, 662, 664, 665, 667 or 680. Operation of the sensor by 3rd party control systems may result in electrolysis failures not covered by the tekmar Limited Warranty.



tekmar Control Systems Ltd., A Watts Water Technologies Company. Head Office: 5100 Silver Star Road, Vernon, B.C. Canada V1B 3K4, 250-545-7749, Fax. 250-984-0815 Web Site: tekmarControls.com

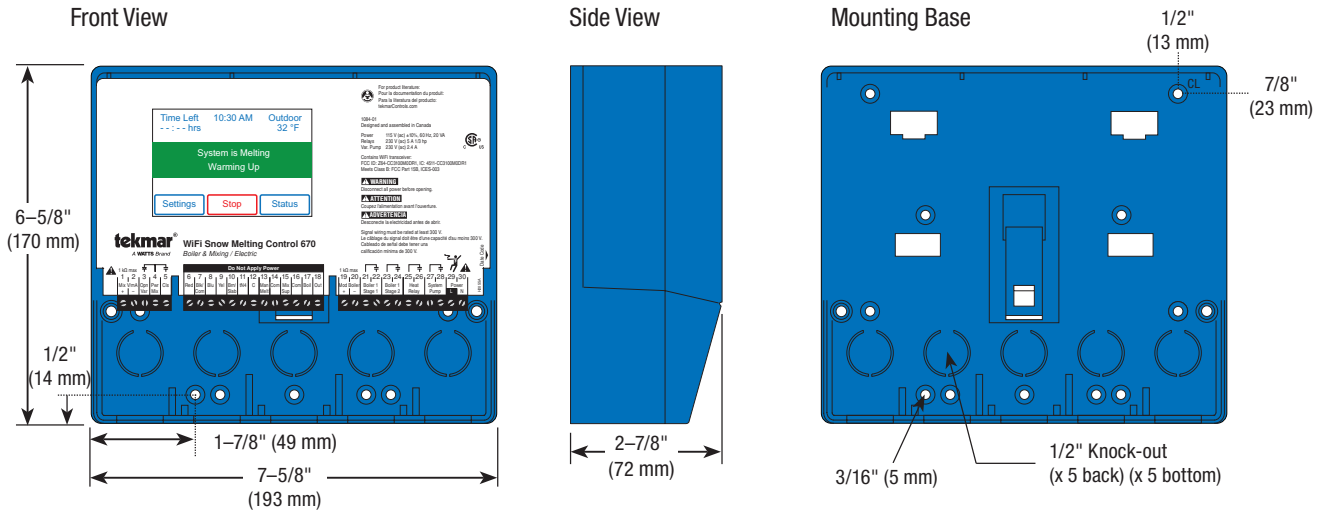


# Submittal

Job \_\_\_\_\_ Designer \_\_\_\_\_ Contact \_\_\_\_\_

## WiFi Snow Melting Control 670

The WiFi Snow Melting Control 670 operates hydronic and electric heating equipment designed to melt snow and/or ice from roads and walkway surfaces. The control works with the tekmar Snow/Ice Sensor 090 or Snow Sensor 095 to automatically detect snow or ice and operates a single boiler, steam valve, or electric cable to supply heat to the slab. Boiler return protection is provided to non-condensing boilers using a mixing valve or variable speed injection mixing pump. When connected to the Internet, the Watts® Home mobile app allows the 670 to be controlled remotely.



### Features

- Mobile app for iOS and Android
- Automatic software updates
- Automatic snow/ice detection
- Supports both inslab & retrofit aerial sensors
- Supports multiple zones with priority
- Idling
- Auto Storm
- Warm Weather Shut Down
- Cold Weather Cut Off
- EconoMelt
- Slab Protection
- Tandem Snow/Ice Detection
- Equipment exercising

### Specifications

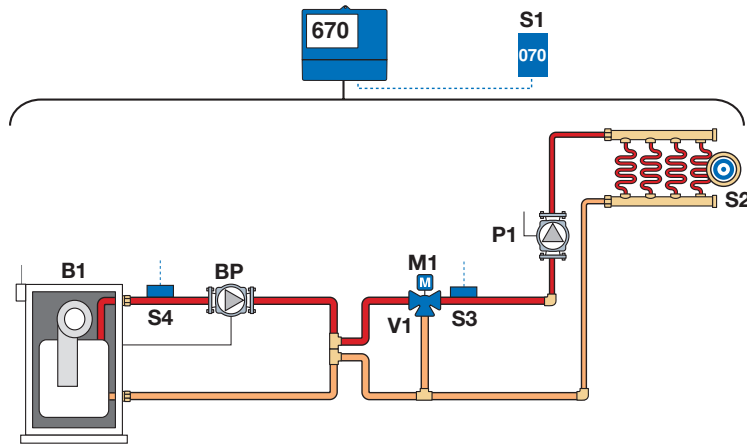
<b>WiFi Snow Melting Control 670 Boiler &amp; Mixing / Electric</b>	
Literature	670_A, 670_C, 670_D, 670_J, 670_U
Control	Microprocessor control. This is not a safety (limit) control
Packaged weight	4.3 lb. (1960 g)
Dimensions	6-5/8" H x 7-9/16" W x 2-13/16" D (170 x 193 x 72 mm)
Display	3.5" color touchscreen
Enclosure	Blue PVC plastic, NEMA type 1
Approvals	CSA C US, meets Class B: ICES & FCC Part 15
Ambient conditions	-4 to 122°F (-20 to 50°C), < RH 90% non-condensing, outdoor use permitted when installed inside a NEMA 3 enclosure
Power supply	115 V (ac) ±10%, 60 Hz, 20 VA
Relays	230 V (ac), 5 A, 1/3 hp
Boiler modulation output	0-10 V (dc) 500 Ω min impedance / 4-20 mA 1 kΩ max impedance
Injection mixing output	230 V (ac), 2.4 A, 1/6 hp, fuse T2.5 A 250V
Floating mixing output	230 V (ac), 5 A
Analog mixing output	0-10 V (dc) 500 Ω min impedance / 4-20 mA 1 kΩ max impedance
Manual melt call	Short or 0 - 32 V(ac)
Communications	WiFi 802.11n, 2.4 GHz, WPA2 encryption
Mobile app	Apple iOS 12 or higher, Android 8 or higher
Sensor	NTC thermistor, 10 kΩ @ 77°F (25°C ±0.2°C) β=3892
-Included	Outdoor Sensor 070 and 2 of Universal Sensor 082
-Optional	tekmar type # 072, 073, 082, 087, 090, 094, 095
Warranty	Limited 3 Year (See 670_D for full warranty)

tekmar product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact tekmar Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on tekmar products previously or subsequently sold.

**tekmar**<sup>®</sup>  
A WATTS Brand

# Sample Application Drawing

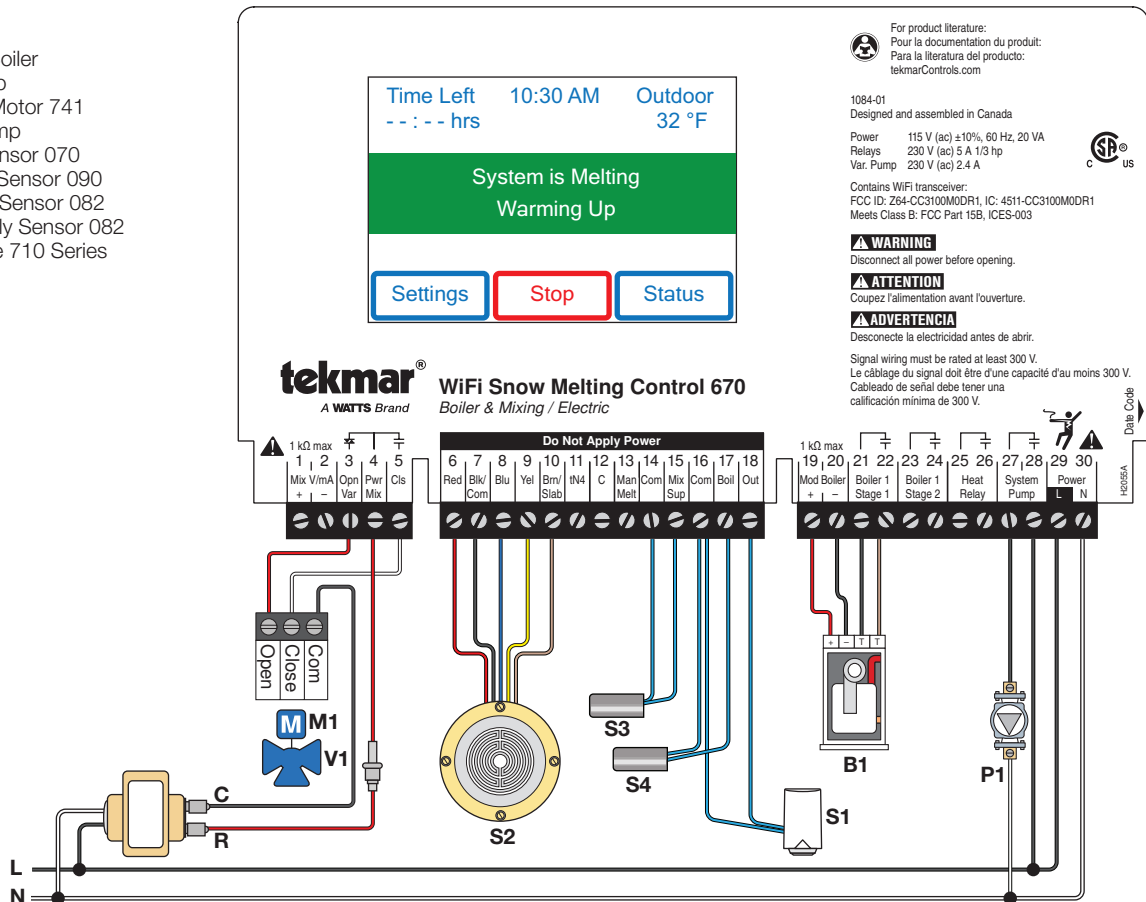
Sample Mechanical diagram



Sample Electrical diagram

## Legend

- B1 = Mod-Con Boiler
- BP = Boiler Pump
- M1 = Actuating Motor 741
- P1 = System Pump
- S1 = Outdoor Sensor 070
- S2 = Snow / Ice Sensor 090
- S3 = Mix Supply Sensor 082
- S4 = Boiler Supply Sensor 082
- V1 = Mixing Valve 710 Series



## NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.



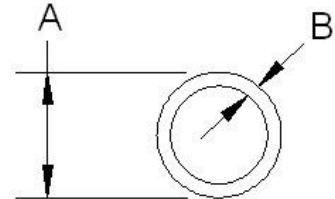
# PRODUCT SUBMITTAL 102

## RAUPEX O<sub>2</sub> barrier pipe



**Product:** RAUPEX® O<sub>2</sub> barrier pipe

**Date:** 11 February 2021 (supersedes 31 July 2019)



Article No.	Nominal Size in	Average OD A in (mm)	Minimum Wall Thickness B In (mm)	Weight lb/ft (kg/m)	Capacity gal/ft (l/m)
136008	3/8	0.500 (12.70)	0.070 (1.78)	0.05 (0.07)	0.0050 (0.0624)
136031	1/2	0.625 (15.88)	0.070 (1.78)	0.06 (0.08)	0.0098 (0.1222)
136880	5/8	0.750 (19.05)	0.083 (2.12)	0.08 (0.11)	0.0134 (0.1671)
136051	3/4	0.875 (22.22)	0.097 (2.47)	0.10 (0.15)	0.0189 (0.2356)
136011	1	1.125 (28.58)	0.125 (3.18)	0.17 (0.26)	0.0316 (0.3939)
136283	1 1/4	1.375 (34.92)	0.153 (3.88)	0.25 (0.37)	0.0467 (0.5827)
136293	1 1/2	1.625 (41.28)	0.181 (4.59)	0.35 (0.52)	0.0650 (0.8118)
136303	2	2.125 (53.98)	0.236 (6.00)	0.60 (0.90)	0.1114 (1.3906)

For updates to this publication, visit [na.rehau.com/resourcecenter](http://na.rehau.com/resourcecenter)

The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained therefrom. Before using, the user will determine suitability of the information for user's intended use and shall assume all risk and liability in connection therewith.

© 2021 REHAU

# PRODUCT SUBMITTAL 102

## RAUPEX O<sub>2</sub> barrier pipe



### TECHNICAL DESCRIPTION

Specification	English	SI	Standard	Specification	English	SI	Standard
Minimum Density	58 lb/ft <sup>3</sup>	926 kg/m <sup>3</sup>	ASTM F876	Tensile Strength	4194-4355 psi @ 68°F	26-30 N/mm <sup>2</sup> @ 20°C	--
Min. Degree of Crosslinking	70%	70%	ASTM F876		2610-2900 psi @ 176°F per ASTM D638	18-20 N/mm <sup>2</sup> @ 80°C per ASTM D638	
Max. Thermal Conductivity	2.84 Btu in./(ft <sup>2</sup> °F hr)	0.41 W/(m°C)	DIN 16892	Roughness	e=0.00028 in	e=0.007 mm	--
Coefficient of Linear Expansion	9.33X10 <sup>-4</sup> in/ft°F @ 68°F	0.14 mm/(m°C) @ 20°C	Mean @ 20-70°C per DIN 16892	Temperature Working Range	-40 to 200°F	-40 to 93°C	--
	1.33x10 <sup>-3</sup> in/ft°F @ 212°F	0.2 mm/(m°C) @ 100°C					
IZOD Impact Res.	No Break	No Break	--	O <sub>2</sub> Permeability	--	<=0.32 mg/m <sup>2</sup> /day @ 40°C	DIN 4726
Modulus of Elasticity	87,000-130,500 psi @ 68°F	600-900 N/mm <sup>2</sup> @ 20°C	Minimum @ 20°C per DIN 16892	Max. Short-term Exposure	150 psig @ 210°F (48 hr)	1035 kPa @ 99°C (48 hr)	ASTM F876
	43,500-58,000 psi @ 176°F	300-400 N/mm <sup>2</sup> @ 80°C		UV Resistance	See TB218		ASTM F2657

### FUNCTIONAL DESCRIPTION

RAUPEX O<sub>2</sub> barrier pipe is manufactured using REHAU's high-pressure peroxide method for crosslinked polyethylene (PEXa). RAUPEX pipe meets or exceeds the requirements of ASTM F876, F877, NSF 61, CSA B137.5 and PPI TR-3. RAUPEX O<sub>2</sub> barrier pipe is SDR9, red in color and for use with the EVERLOC+® compression-sleeve system certified to ASTM F877, the REHAU F1960 cold expansion fitting system certified to ASTM F1960, and RAUPEX compression nut fittings. See REHAU *Technical Bulletin TB261* for other compatible PEX fitting systems. RAUPEX O<sub>2</sub> barrier pipe has a co-extruded oxygen diffusion barrier that exceeds the strict requirements of DIN 4726. RAUPEX pipe is manufactured by REHAU using a quality management system which has been certified to the latest version of ISO 9001.

### LONG TERM STRENGTH

The maximum temperature and pressure ratings of the RAUPEX pipe are in accordance to ASTM F876, CSA B137.5 and PPI TR-3. The designer shall determine the actual conditions and apply the appropriate and additional design factors as required for any particular project. The temperature and pressure ratings apply to the application of RAUPEX pipe for conveying heating and cooling water at the 2.0 safety factor on allowable working pressure according to ASTM and CSA. According to the REHAU *PEXa Limited Warranty*, the RAUPEX pipe warranty period of 25 years is for operating conditions at or below 180°F (82.2°C) in permitted applications when the handling, use, installation and maintenance continually complies with all REHAU technical guidelines.

#### RAUPEX SDR9

maximum pressures and temperatures	design factors
160 psi @ 73.4°F (1055 kPa @ 23°C)	0.50 (per ASTM F876, CSA B137.5)
100 psi @ 180°F (690 kPa @ 82.2°C)	0.50 (per ASTM F876, CSA B137.5)
80 psi @ 200°F (550 kPa @ 93.3°C)*	0.50 (per ASTM F876, CSA B137.5)

\* REHAU defines Elevated Temperature Applications as those with operating conditions greater than 180°F (82.2°C).

When REHAU PEXa pipes are planned to be operated in Elevated Temperature Applications, contact REHAU Engineering to verify your project conditions comply with the REHAU *PEXa Limited Warranty* in accordance to REHAU *Technical Bulletin TB230 Elevated Temperature Applications*.

For updates to this publication, visit [na.rehau.com/resourcecenter](http://na.rehau.com/resourcecenter)

The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained therefrom. Before using, the user will determine suitability of the information for user's intended use and shall assume all risk and liability in connection therewith.

© 2021 REHAU