LIMITED IMPACT & MAJOR IMPACT SUBMITTAL REQUIREMENTS

448 East First Street, Suite 112
Salida, CO 81201
Phone: 719-530-2626 Fax: 719-539-5271
Email: planning@cityofsalida.com

An application is meant to highlight the requirements and procedures of the Land Use Code. With any development application, it is the responsibility of the applicant to read, understand, and follow all of the provisions of the Land Use Code.

1. PROCEDURE (Section 16-3-80)

A. Development Process (City Code Section 16-3-50) Any application for approval of a development permit shall include a written list of information which shall constitute the applicant's development plan, which shall be that information necessary to determine whether the proposed development complies with this Code. The development plan shall include the following, as further specified for each level of review on the pre-application checklist:

1. Pre-Application Conference (Limited Impact and Major Impact Review Applications)
2. Submit Application
4. Staff Review. Staff report or decision forwarded to the applicant (Administrative review)
5. Public Notice
6. Public Hearing with Planning Commission (Limited Impact and Major Impact Review Applications)
7. Public Notice
8. Hearing Conducted by City Council (Major Impact Review)

☑ **B. Application Contents** (City Code Section (16-3-50)

✔ 1. A General Development Agreement completed.

✔ 2. A copy of a current survey or the duly approved and recorded subdivision plat covering the subject lots where the proposal is for development on previously subdivided or platted lots;

✔ 3. A brief written description of the proposed development signed by the applicant;

✔ 4. Special Fee and Cost Reimbursement Agreement completed.

✔ 5. Public Notice.

a) List. A list shall be submitted by the applicant to the city of adjoining property owners' names and addresses. A property owner is considered adjoining if it is within 175 feet of the subject property regardless of public ways. The list shall be created using the current Chaffee County tax records.

b) Postage Paid Envelopes. Each name on the list shall be written on a postage-paid envelope. Postage is required for up to one ounce. Return Address shall be: City of Salida, 448 E. First Street, Suite 112, Salida, CO 81201.

c) Applicant is responsible for posting the property and submittal of notarized affidavits for proof of posting the public notice.

✔ 6. Applications for Limited Impact Review must submit six (**6**) copies of application materials and applications for Major Impact Review must submit twelve (**12**) copies of application materials.

☑ 7. Developments involving construction shall provide the following information:

(i) A development plan map, at a scale of one (1) inch equals fifty (50) feet or larger with title, date, north arrow and scale on a minimum sheet size of eight and one-half (8½) inches by eleven (11) inches, which depicts the area within the boundaries of the subject lot, including:

a. The locations of existing and proposed land uses, the number of dwelling units and the square footage of building space devoted to each use;

b. The location and dimensions, including building heights, of all existing and proposed Buildings or structures and setbacks from lot lines or building envelopes where exact dimensions are not available;

c. Parking spaces;

d. Utility distribution systems, utility lines, and utility easements;

e. Drainage improvements and drainage easements;

f. Roads, alleys, curbs, curb cuts and other access improvements;

g. Any other improvements;

h. Any proposed reservations or dedications of public right-of-way, easements or other public lands, and

i. Existing topography and any proposed changes in topography, using five-foot contour intervals or ten-foot contour intervals in rugged topography.

(ii) 24" x 36" paper prints certified by a licensed engineer and drawn to meet City specifications to depict the following:

a. Utility plans for water, sanitary sewer, storm sewer, electric, gas and telephone lines;

b. Plans and profiles for sanitary and storm sewers; and

c. Profiles for municipal water lines; and

d. Street plans and profiles.

(iii) Developments in the major impact review procedure shall provide a development plan map on paper prints of twenty-four (24) inches by thirty-six (36) inches, with north arrow and scale, and with title and date in lower right corner, at a scale of one (1) inch equals fifty (50) feet or larger which depicts the area within the boundaries of the subject lots and including those items in Section 16-3-40(a) (3).

☑ 8. Any request for zoning action, including review criteria for a requested conditional use (Sec. 16-4-190) or zoning variance (Sec. 16-4-180);

☑ 9. Any subdivision request including a plat meeting the requirements of Section 16-6-110;

☑ 10. Any other information which the Administrator determines is necessary to determine whether the proposed development complies with this Code, including but not limited to the following:

(i) A tabular summary of the development proposal, which identifies the total proposed development area in acres, with a breakdown of the percentages and amounts devoted to specific land uses; total number and type of proposed residential units; total number of square feet of proposed nonresidential space; number of proposed lots; and sufficient information to demonstrate that the plat conforms with all applicable dimensional standards and off-street parking requirements.

(ii) A description of those soil characteristics of the site which would have a significant influence on the proposed use of the land, with supporting soil maps, soil logs and classifications sufficient to enable evaluation of soil suitability for development purposes. Data furnished by the USDA Natural Resource Conservation Service or a licensed engineer shall be used. The data shall include the shrink/swell potential of the soils, the groundwater levels and the resulting foundation requirements. Additional data may be required by the City if deemed to be warranted due to unusual site conditions.

(iii) A report on the geologic characteristics of the area, including any potential natural or man-made hazards which would have a significant influence on the proposed use of the land, including but not limited to hazards from steep or unstable slopes, rockfall, faults, ground subsidence or radiation, a determination of what effect such factors would have, and proposed corrective or protective measures.

(iv) Engineering specifications for any improvements.

(v) A plan for erosion and sediment control, stabilization and revegetation.

(vi) A traffic analysis prepared by a qualified expert, including projections of traffic volumes to be generated by the development and traffic flow patterns, to determine the impacts of a proposed development on surrounding City streets and to evaluate the need for road improvements to be made.

(vii) A storm drainage analysis consisting of the following:

(a) A layout map (which may be combined with the topographic map) showing the method of moving storm sewer water through the subdivision shall be provided. The map shall also show runoff concentrations in acres of drainage area on each street entering each intersection. Flow arrows shall clearly show the complete runoff flow pattern at each intersection. The location, size and grades of culverts, drain inlets and storm drainage sewers shall be shown, as applicable.

(b) The applicant shall demonstrate the adequacy of drainage outlets by plan, cross-section and/or notes and explain how diverted stormwater will be handled after it leaves the subdivision. Details for ditches and culverts shall be submitted, as applicable.

(c) The projected quantity of stormwater entering the subdivision naturally from areas outside of subdivision and the quantities of flow at each pickup point shall be calculated.

(viii) Evidence of adequate water supply and sanitary sewer service - Data addressing the population planned to occupy the proposed subdivision and future development phases and other developments that may need to be served by extensions of the proposed water supply and sewage disposal systems. The resulting domestic, irrigation and fire flow demands shall be expressed in terms of gallons of water needed on an average day and at peak time, and the resulting amounts of sewage to be treated shall be expressed in gallons per day.

(ix) An analysis shall be submitted addressing how water for domestic use and for fire flows is to be provided, along with the collection and treatment of sewage generated by the property to be subdivided.

(x) A statement shall be submitted addressing the quantity, quality and availability of any water that is attached to the land.

(xi) A preliminary estimate of the cost of all required public improvements, tentative development schedule (with development phases identified), proposed or existing covenants and proposed maintenance and performance guarantees. The applicant shall submit, at least in summary or outline form, any agreements as may be required by Section 16-2-70, relating to improvements and dedications.

(xii) If intending to use solar design in the development, include a description of the steps that have been taken to protect and enhance the use of solar energy in the proposed subdivision. This shall include how the streets and lots have been laid out and how the buildings will be sited to enhance solar energy usage.

(xiii) If applicable, a report shall be submitted identifying the location of the one-hundred-year floodplain and the drainage ways near or affecting the property being subdivided. If any portion of a one-hundred-year floodplain is located on the property, the applicant shall also identify the floodway and floodway fringe area. The applicant shall also describe the steps that will be taken to ensure that development locating in the floodway fringe area is accomplished in a manner which meets Federal Insurance Administration standards.

(xiv) If applicable, a report shall be submitted on the location of wetlands, as defined by the U.S. Army Corp of Engineers, on or affecting the property being subdivided. The report shall outline the development techniques planned to ensure compliance with federal, state and local regulations.

(xv) A landscape plan, meeting the specifications of Section 16-8-90.

(xvi) If applicable, a description of how the proposal will comply with the standards of any of the overlays.

(xvii) A site plan for parks, trails and/or open space meeting the requirements of Section 16-6-110 below. If an alternate site dedication or fee in lieu of dedication is proposed, detailed information about the proposal shall be submitted.

(xviii) All development and subdivision naming shall be subject to approval by the City. No development or subdivision name shall be used which will duplicate or be confused with the name of any existing street or development in the City or the County;

☑ 11. An access permit from the Colorado Department of Transportation; and

☑ 12. A plan for locations and specifications of street lights, signs and traffic control devices.

2. REVIEW STANDARDS (If necessary, attach additional sheets)

The application for Limited or Major Impact Review shall comply with the following standards.

1. **Consistency with Comprehensive Plan**. The use shall be consistent with the City's Comprehensive Plan.

This development represents traditional neighborhood development with a dense mixture of uses taking advantage of existing infrastructure near the center of the city. (Pages 3-4 and 3-5)

2. **Conformance to Code**. The use shall conform to all other applicable provisions of this Land Use Code, including, but not limited to:

   a. Zoning District Standards. The purpose of the zone district in which it is located, the dimensional standards of that zone district, and any standards applicable to the particular use, all as specified in Article 5, Use and Dimensional Standards.

   The proposed subdivision conforms to the concurrently proposed Planned Development.

   b. Site Development Standards. The parking, landscaping, sign and improvements standards.

   Parking, landscaping, sign, and improvements per the concurrently proposed planned development.

3. **Use Appropriate and Compatible**. The use shall be appropriate to its proposed location and be compatible with the character of neighboring uses, or enhance the mixture of complementary uses and activities in the immediate vicinity.

The mixed use on this site provides a transition from commercial downtown to the surrounding residential neighborhoods.

4. **Nuisance**. The operating characteristics of the use shall not create a nuisance and the impacts of the use on surrounding properties shall be minimized with respect to noise, odors, vibrations, glare, and similar conditions.

No nuisances are anticipated.

5. **Facilities**. There shall be adequate public facilities in place to serve the proposed use, or the applicant shall propose necessary improvements to address service deficiencies which the use would cause.

Water main improvements are required to be built by the applicant from I Street to the east edge of the site, per the Planned Development.

6. **Environment**. The use shall not cause significant deterioration to water resources, wetlands, wildlife habitat, scenic characteristics, or other natural features. As applicable, the proposed use shall mitigate its adverse impacts on the environment.

No adverse environmental impacts are anticipated.

Residences at Salida Bottling Company

Planned Development & Major Subdivision

Revised 1/18/2022

Owner
Salida Bottling Company, LLC
9707 County Road 163
Salida, CO 81201

Architecture/Planning
Craft Design Studio
204 Spooner Lane
Mount Pleasant, SC 29464

Studio Mork
Downingtown, PA

Civil Engineer/Entitlement
Crabtree Group, Inc.
325 D St
Salida, CO

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N: Emergency Access
O: Staff Comments with Responses

Introduction

Residences at Salida Bottling Company is a Planned Development and concurrent major subdivision of 16 residential units and 1 commercial unit on 0.60 acres at 323 W 1st Street in Salida.

Existing Conditions

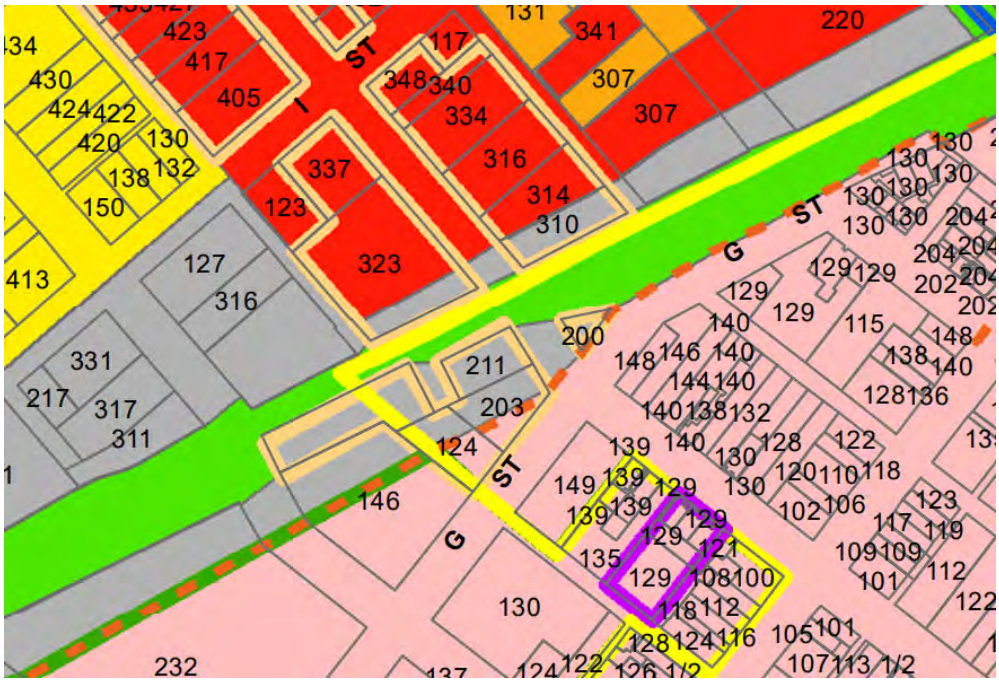
The photo below shows existing conditions at the site.

The subject parcel is currently an unpaved parking lot. As shown on the land survey in Appendix A, the subject parcel is made up of portions of lots 4 and 5 of block 19, all of lots 6 through 9 of block 19, abandoned Denver & Rio Grande Railroad right of way, and abandoned alley right of way, for a total of 8 existing lots as summarized below.

	Area (SF)	Area (Acres)
Lot 4	997	0.02
Lot 5	3497	0.08
Lot 6	3750	0.09
Lot 7	3750	0.09

Lot 8	3750	0.09
Lot 9	3750	0.09
D&RG abandoned ROW	6322	0.15
Alley abandoned ROW	296	0.01
Total	26112	0.60

The property is currently split zoned. D&RG abandoned right of way, which makes up 24% of the property, is zoned industrial (gray). The remainder is zoned C-1 Commercial (red). The entire property is within the Highway 291 Established Residential Overlay. See excerpt from zoning map below.



Current vehicle access to the site is from one driveway on 1st Street, and from the public alley behind the site.

Planned Development Narrative

A planned development plan is included in appendix B. This plan, upon approval, will be recorded with the Chaffee County Clerk to provide a record of the planned development entitlement for the property.

Sheet 1 of the planned development plan highlights changes to the use schedule and dimensional standards of the underlying zones required for the development. Sheet 1 also includes standard signature blocks for ownership, title report, survey by a professionally licensed surveyor, and city approval. Finally, this sheet includes the owner's method of meeting the inclusionary housing ordinance.

Sheet 2 of the planned development plan is the site plan, showing 1st Street sidewalk, driveway, and curb and gutter improvements, building setbacks, parking, site dimensions, and ground cover. A table of unit square footage is provided on this sheet to give a general sense of unit size, but these shall not be

construed as minimum or maximum required unit sizes. Landscaping notes address the requirements of Salida Municipal Code section 16-8-90.

Architecture

The architectural character of the project intends to complement the existing, historic downtown through use of building form, the employment of materials and details consistent with and inspired by the downtown and immediate, adjacent context. Sited adjacent to the downtown, the plan's design emphasizes the pedestrian experience through walkable connections and an emphasis on the public realm.

Sheets 1-3 of Appendix H shows urban and architectural precedent which balances both the use of the automobile and the pedestrian experience. Specifically, on Sheet 2, the historic Salida Bottling Works building formerly located on the site illustrates both the urban relationship of the historic building frontage as well as the traditional character of the architecture on the site.

Sheets 4-6 show the building footprints and landscaping on the site. The frontages along First Street are set back slightly from the road, with porches presenting a pedestrian frontage. A ground floor commercial space is located in the south east corner of the site, proximate to the downtown business district. Park-under residences are located in the center and rear of the project site.

Sheet 7 of Appendix H shows how buildings facing First Street and Monarch Spur Trail will have parapet wall roofs similar to those across First Street; buildings on the interior, towards the back of the development will have pitched roofs in character with the residential streets to the west and north of the site.

Sheets 8-10 illustrate elevation concepts for the project frontages facing Monarch Spur Trail and First Street. The elevations show distribution of various exterior materials, general architectural character and details, and opening proportions.

Sheets 8-10 are not final architectural elevations and are subject to vary throughout the design process. Elevations shown are intended to give a sense for the character, detailing and height of the proposed project.

Sheet 11-12 – Height Considerations – Two diagrams show an example of a pitched roof (3 story) house with 35’-0” Height Max. to Ridge. Proposed for Consideration, the Second diagram shows the same house with Ridge Height Max. at 40’-0”. This would only be proposed for “pitched roof” residential units tucked back into the block. Sheet 12 shows the “Flat Roof” (Parapeted) Residences proposed. Parapet falls under Max. height of 35’-0”. Requesting (with limitatations), Rooftop Access structures to be allowed to extend above 35’-0”. Proposed minimal footprint (max. 100 s.f.)

View Corridor Study

Appendix H, Sheets 14-15 In recognition of the significance of the view along First Street, viewing the Sawatch Range from the downtown, the view corridor study is intended to provide a sense for the scale of the buildings and the extent to which the project obscures the view of the Conoco gas station from downtown.

Major Subdivision Plat

See Appendix I for the major subdivision plat requested concurrently with the Planned Development. Note that the dimensional standards requested in the Planned Development are slightly more permissive than the subdivision plat. This is because lot line adjustments for design changes and/or construction tolerances are anticipated.

This subdivision plat does not include the condominium subdivision of two units on Lot 4. The condominium subdivision of two units will be platted after building construction. This is a permitted use per the Planned Development.

Civil Engineering

Public Works has indicated that to provide adequate fire flow, the existing 4" water main in 1st Street will need to be replaced with an 8" line per city standards prior to any certificates of occupancy being issued in the planned development. This water main upsize will extend from the east end of the 1st Street property frontage, to the existing 8" water main in I Street. Sewer service will require installation of a manhole in the existing 1st Street sewer main. It is anticipated that the city's standard subdivision improvement agreement will be required prior to this work.

Gas, communications, and electric will be connected to existing mains in the public alley behind the site.

The following variances to City of Salida public works standards are requested for the subdivision:

1. In subdivisions, public sewer mains are required to extend to the end of the property and provide sewer service to each individual lot. Public works has requested private HOA-owned sewer mains inside the Salida Bottling Co. development because there is no public right of way in which to run the new mains. Also, because this is an infill development, there is no opportunity for extension of the city's sewer collection system. The HOA documents will provide for maintenance of the private sewer mains inside the development.
2. Standard water services run from the public right of way directly onto the lot they will serve. In this subdivision, water service lines will first run through the HOA-owned lot, and then onto the lot they serve. This is acceptable because the lot to be served has an ownership interest in the HOA lot.

Civil engineering plans are included as Appendix J. Engineer's Opinion of Probable Cost for public improvements is included as Appendix K. Construction schedule is included as Appendix L. CDOT access permit is included as Appendix M. CDOT utility permit is required prior to utility work in Highway 291, as noted on the civil engineering plans. City of Salida will be the permittee on the utility permit.

Submittal Requirements Checklist

The following items are required for planned development applications per Salida municipal code Section 16-7-90.

(1) PD Development Plan

i-ix. See Appendix B Planned Development Plan.

(2) Written Narrative

i. See Appendix A Survey.

ii. See Appendix D Title Policy.

iii. The planning objective is to provide a high quality infill development which will add to the quality of Salida's downtown by providing excellent architecture, commercial space, deed restricted housing, market rate housing, and private open space.

iv. Fee in lieu of parks, trails, and open space shall be paid at time of building permit for each unit. All private open space shall be maintained by the lot owner, which in some cases is the HOA.

v. Phasing of private improvements shall not be restricted within the development. Safe access shall be provided to all occupied units during construction. Underground utilities for the entire site will need to be installed early in the construction process due to space constraints.

vi. See Appendix E, Geotechnical Report, and Appendix F, Limited Phase II Subsurface Investigation.

vii. See Architectural section above.

viii. See Appendix C, Drainage Report.

ix. See Appendix G, projected water and sewer demand.

x. All utilities are available near the site, and the project is within city limits.

xi. Trip generation from the site:

PROJECT: Residences at Salida Bottling Company - 323 W 1st St, Salida, CO

Summary of Trip Generation

Land Use	ITE Code	Intensity		Rate	Daily Trip Ends	AM Peak-Hour Trip Ends						PM Peak-Hour Trip Ends					
								In		Out				In		Out	
						Rate	Total	%	Trips	%	Trips	Rate	Total	%	Trips	%	Trips
Single Family Detached Housing	210	0	DU	9.57	0	0.75	0	25%	0	75%	0	1.01	0	63%	0	37%	0
Apartments	220	0	DU	6.65	0	0.51	0	20%	0	80%	0	0.62	0	65%	0	35%	0
Condominiums/Townhouses	230	16	DU	5.81	93	0.44	7	17%	1	83%	6	0.52	8	67%	6	33%	3
Lodging (Hotel)	310	0	RM	8.17	0	0.56	0	61%	0	39%	0	0.59	0	53%	0	47%	0
Office (General)	710	0.7	GLA	11.01	8	1.55	1	88%	1	12%	0	1.49	1	17%	0	83%	1
Retail (Specialty)	814	0.7	GLA	44.32	32	6.84	5	48%	2	52%	3	2.71	2	44%	1	56%	1
Sub-Totals					133		13		5		9		11		7		5
Total					133		13		5		9		11		7		5

GLA = gross leasable area in KSF

DU = dwelling unit

RM = number of room

Source: ITE Trip Generation, 8th Edition

xii. The city's fiscal impacts will be very minor because development of empty lots near the middle of town is the most efficient kind of development. The city will collect sales tax from the commercial unit in the development. Construction of the project will provide sales tax to the city. In addition, the development will provide two units of 80% AMI housing in downtown Salida, which will provide an opportunity for workers to live affordably, near downtown jobs.

Comments were received from city staff and JVA Consulting on January 10, 2022. Those comments, and responses in blue, are included as Appendix O. Per staff request, an emergency vehicle access exhibit was added as Appendix N.

RESIDENCES AT SALIDA BOTTLING COMPANY
PLANNED DEVELOPMENT PLAN

PART OF LOTS 4 & 5, ALL OF LOTS 6–9, BLOCK 19, CITY OF SALIDA, COLORADO 81201

CERTIFICATE OF OWNERSHIP:

KNOW ALL PERSONS BY THESE PRESENTS THAT THE UNDERSIGNED IS THE FEE OWNER OF THE FOLLOWING DESCRIBED PROPERTY:

A TRACT OF LAND LOCATED IN THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER (NW¼SW¼) OF SECTION 32, TOWNSHIP 50 NORTH, RANGE 9 EAST OF THE NEW MEXICO PRINCIPAL MERIDIAN, WITHIN THE CITY OF SALIDA, CHAFFEE COUNTY, COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
COMMENCING AT THE POINT OF INTERSECTION OF THE NORTH BOUNDARY OF THE SAID NW¼SW¼ WITH THE WESTERLY BOUNDARY OF AN EXTENSION OF WEST THIRD STREET IN THE CITY OF SALIDA, FROM WHENCE THE WEST QUARTER CORNER (BRASS CAP) OF SAID SECTION 32 BEARS SOUTH 89°51'25" WEST 1160.51 FEET;
THENCE SOUTH 41°11'36" EAST ALONG SAID WESTERLY STREET BOUNDARY EXTENSION A DISTANCE OF 39.78 FEET TO THE POINT OF BEGINNING OF THE TRACT HEREIN DESCRIBED;
THENCE PROCEEDING AROUND SAID TRACT SOUTH 41°11'36" EAST 41.31 FEET;
THENCE SOUTH 33°06'26" WEST 118.81 FEET;
THENCE SOUTH 00°08'35" EAST 39.48 FEET;
THENCE SOUTH 89°51'25" WEST PARALLEL WITH THE SAID NORTH BOUNDARY OF THE NW¼SW¼ A DISTANCE OF 88.17 FEET;
THENCE NORTH 00°08'35" WEST (AT A RIGHT ANGLE TO SAID NORTH BOUNDARY OF THE NW¼SW¼) A DISTANCE OF 170.0 FEET TO THE SOUTHERLY BOUNDARY OF GRAND AVENUE EXTENDED/COLORADO STATE HIGHWAY NO.291;
THENCE NORTH 89°51'25" EAST ALONG SAID SOUTHERLY AVENUE/HIGHWAY BOUNDARY A DISTANCE OF 126.19 FEET TO THE POINT OF BEGINNING.

ACKNOWLEDGEMENT:

IN WITNESS HEREOF, THE UNDERSIGNED HAVE CAUSED THESE PRESENTS TO BE EXECUTED ON THIS _____ DAY OF

_____ , 20____.

OWNER:

_____

STATE OF COLORADO }
} SS
COUNTY OF CHAFFEE }

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THIS _____ DAY OF _____,

_____

WITNESS MY HAND AND OFFICIAL SEAL

MY COMMISSION EXPIRES _____

NOTARY PUBLIC _____

CERTIFICATE OF TITLE INSURANCE COMPANY:

I, _____,

REPRESENTING _____ TITLE INSURANCE COMPANY IN THE STATE OF COLORADO DO CERTIFY THAT I HAVE EXAMINED THE TITLE TO THE REAL PROPERTY SHOWN AND DESCRIBED ON THESE PLATS AND FOUND TITLE VESTED IN SALIDA BOTTLING COMPANY, LLC, A COLORADO LIMITED LIABILITY COMPANY, FREE AND CLEAR OF ALL LIENS AND ENCUMBRANCES,

EXCEPT:_____

_____

_____
SIGNATURE

LAND SURVEYOR'S NOTES:

1) ELEVATIONS SHOWN HEREON BASED UPON N.A.V.D. 88
2) CONTOUR INTERVAL IS 1.0'
3) SITE BENCHMARK IS AN 1 1/2" ALUMINIUM CAP ON NO. 5 REBAR STAMPED L.S. 37937, HAVING AN ELEVATION OF 7059.64'
4) UNDERGROUND UTILITIES SHOWN AS MARKED ON THE SURFACE BY UTILITY NOTIFICATION CENTER OF COLORADO AND OTHERS. LANDMARK SURVEYING AND MAPPING ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF ANY UNDERGROUND UTILITIES DEPICTED HEREON.
5) FIELD WORK PERFROMED ON DECEMBER 21. SITE WAS SNOW COVERED AT TIME OF SURVEY. FEATURES MAY EXIST THAT WERE NOT VISIBLE AT THE TIME OF THE SURVEY.

LAND SURVEYOR'S STATEMENT:

I, SYDNEY ARTHUR SCHIEREN, A REGISTERED LAND SURVEYOR LICENSED TO PRACTICE IN THE STATE OF COLORADO, DO HEREBY STATE THAT THE BOUNDARY SURVEY AND TOPOGRAPHIC SURVEY INFORMATION SHOWN ON THIS PLANNED DEVELOPMENT PLAN WERE PREPARED UNDER MY DIRECT SUPERVISION AND CHECKING, AND THAT THE SURVEY INFORMATION SHOWN ON THE PLAT CONTAINED HEREIN IS BASED ON A MONUMENTED LAND SURVEY AS SHOWN, AND THAT SAID SURVEYS AND THE KNOWLEDGE PERTAINING TO SAID SURVEYS ARE TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

DATED THIS _____ DAY OF _____, 20_____.

_____
SIGNATURE

CITY COUNCIL APPROVAL:

THIS PLANNED DEVELOPMENT PLAN IS APPROVED FOR FILING.

DATED: _____, 20____.

BY:_____
MAYOR

COUNTY CLERK AND RECORDER'S CERTIFICATE:

THIS PLANNED DEVELOPMENT PLAN WAS FILED FOR RECORD IN THE OFFICE OF THE CLERK AND RECORDER OF CHAFFEE COUNTY, COLORADO, AT _____.M., ON THIS _____ DAY OF _____, A.D. 20__, UNDER RECEPTION NO. _____.

_____
CHAFFEE COUNTY CLERK AND RECORDER

INCLUSIONARY HOUSING

UNITS 9 AND 10, ON LOTS 9 AND 10, AS SHOWN ON SHEETS 2 AND 3 OF THIS PLANNED DEVELOPMENT PLAN, SHALL BE BUILT BY SALIDA BOTTLING COMPANY AND DEED RESTRICTED TO 80% OF AREA MEDIAN INCOME PER SALIDA MUNICIPAL CODE SECTION 16, ARTICLE 8, THUS SATISFYING THE INCLUSIONARY HOUSING REQUIREMENT FOR THE PLANNED DEVELOPMENT. NO MORE THAN 7 MARKET RATE RESIDENTIAL UNITS IN THE PLANNED DEVELOPMENT MAY RECEIVE CERTIFICATES OF OCCUPANCY PRIOR TO CERTIFICATES OF OCCUPANCY FOR UNITS 9 AND 10.

VICINITY MAP
NO SCALE

SCHEDULE OF USES

PROPERTY IS CURRENTLY SPLIT ZONED C-1 AND INDUSTRIAL. USES PER THIS PD SHALL BE PER THE "PD" COLUMN BELOW. HIGHLIGHTED CELLS INDICATE DEVIATION FROM EITHER OF THE UNDERLYING ZONES.

Proposed Schedule of Uses:

Residential Uses	**C-1**	**I**	**PD**	**Standards[1]**
Accessory buildings and structures.	P	P	P	Sec. 16-4-190(c)
Multiple principal residential structures	P	P	P	Sec. 16-4-190(b)
Accessory dwelling units	AR	AR	AR	Sec. 16-4-190(c)
Duplex dwelling units	P [3]	LR [3]	P	
Residential (3—4 units)*	AR [3]	AR [3]	AR	
Residential (5—19 units)	LR [3]	LR [3]	AR	
Residential (20 or more units)	MR [3]	MR [3]	MR	
Single-family dwelling units	AR [3]	AR [3]	AR	
One or more dwelling units on the same site as a commercial or industrial use	LR	LR	AR	
Residential Business Uses	**C-1**	**I**	**PD**	**Standards[1]**
Day care, home	P	P	P	Sec. 16-4-190(f)
Home Occupations	P	P	P	Sec. 16-4-190(g)
Home Businesses	P	P	AR	Sec. 16-4-190(g) AR to allow for review of required parking.
Bed & Breakfast Inns	P	AR	AR	AR to allow for review of required parking.
Short-term rental units	AR	AR	AR	Sec. 16-4-190(q) Subject to STR regulations in effect at time of STR license application.
Commercial, Personal Service and Office Uses	**C-1**	**I**	**PD**	**Standards[1]**
Eating and drinking establishments	P	LR	AR	AR to allow for review of required parking.
Professional offices	P	LR	AR	AR to allow for review of required parking.
Retail sales and rental establishments	P	LR	AR	Sec. 16-4-190(m) AR to allow for review of required parking.

Notes:

1 The standards referenced herein are in addition to all other applicable standards of this Land Use Code

3 An existing dwelling can be modified or rebuilt as a matter of right provided it is in conformance with the dimensional standards of Table 16-F.

* The allowed use is conditional in the SH 291 Corridor Overlay (291 CO). Refer to Section 16-5-50 regarding the SH 291 Corridor (291 CO) District.

SCHEDULE OF DIMENSIONAL STANDARDS

PROPERTY IS CURRENTLY SPLIT ZONED C-1 AND INDUSTRIAL. HIGHLIGHTED CELLS INDICATE WHERE PD EXCEEDS THE STANDARDS OF EITHER ZONE.

Dimensional Standards	C-1	I	PD/Site as whole	PD / Individual Lots	Notes
Min. lot size (sq. ft.)	5,625 5,063[6] 3,750[7]	5,625	N/A	350	
Density (Min. lot sq. footage per principal dwelling unit)	2,800 2,450[6]	2,800	1,632	N/A	
Min lot size (sq. ft.)—attached units	2,800 2,520[6]	2,800	N/A	350	
Min. lot frontage	37'-6" 25' 7	37'-6"	N/A	16'	Townhome lot frontage is measured on 1st Street or interior access easement
Min. lot frontage—attached units	20'	20'	N/A	16'	28' is narrowest residential building footprint facing 1st Street.
Max. lot coverage: structures (additive coverage total for structures uncovered parking cannot exceed 90% except C-2)	60% 66% [6]	60%	66%	100%	This does include covered balconies. Additive coverage for structures and uncovered parking/access for the entire site will not exceed 90%
Max. lot coverage: uncovered parking/access (additive coverage total for structures and uncovered parking cannot exceed 90% except in C-2) [5]	60%	30%	60%	80%	80% is for the HOA lot which is mainly vehicle access, with some landscaping.
Min. landscape area	10%	10%	10%	0%	
Min. setback from side lot line for a primary bldg.	5***	5***	5'	0'	
Min. setback from side lot line for a detached accessory bldg.	3', 5', or 10'[8]	3', 5', or 10'[8]	N/A	N/A	No accessory buildings allowed
Min. setback from rear lot line: principal bldg.	5' [2]	5' [2]	5'	0'	
Min. setback from rear lot line: accessory bldg.	5'	5'	N/A	N/A	No accessory buildings allowed
Min. setback from front lot line [4]	10'	10'	5'	0'	Unit 4 building only at 5'. All other buildings along 1st Street have 10' porch front setback and 15' building front setback to 1st Street.
Parking spaces, min.	19 or 20	19 or 20	19	1 / 3	1 per residential unit meets code for inclusionary housing development with site analyzed as a whole. 3 spaces for 700 square foot commercial.
Max. building height for a primary bldg.	35'	35'	40'	40'	Portions of buildings over 35' shall be setback 24' minimum from 1st St and Monarch Spur property lines. Height measured from finished floor or average post-construction grade around building perimeter, whichever is lower.
Max. building height for a detached accessory bldg.	25'	25'	N/A	N/A	
Maximum number of stories per Hwy 291 established residential overlay district	2	2	3	3	Lots 1-4: 2 story building; 3rd story rooftop access only. Lots 5-7: 3 story building; 4th story for rooftop access only. Lots 8-16: 3 story.

Notes:

2 If the property adjoins a residential zone district, setbacks on the side and rear lot line shall be the same as those in the residential zone.

4 A covered porch may encroach into the front yard setback by twenty-five (25) percent.

5 If a front-loaded garage is set back at least ten (10) feet behind the primary street-facing building façade, the lot coverage between the garage entrance and the primary, street-facing building façade shall not be included in the calculation of lot coverage for uncovered parking/access.

6 Standards for inclusionary housing development per Section 16-13-50.

7 Fifteen (15) percent of the single-family lots within an inclusionary housing development may be twenty-five (25) feet by one hundred fifty (150) feet.

8 See Section 16-4-190(c) for a description of side lot line setbacks for all accessory buildings, including ADUs

NOTES

1. LOT LINE ADJUSTMENTS FOR DESIGN CHANGES AND/OR CONSTRUCTION TOLERANCES ARE ANTICIPATED AND SHALL BE CONSIDERED "PRACTICAL NECESSITIES" PER SECTION 16-6-70 CITY OF SALIDA MUNICIPAL CODE.
2. FEES IN LIEU OF LAND DEDICATION FOR SCHOOL SITES, AND FEES IN LIEU OF OPEN SPACE, SHALL BE PAID AT TIME OF BUILDING PERMIT FOR EACH RESIDENTIAL UNIT.
3. OCCUPANTS OF ANY INCLUSIONARY HOUSING UNITS SHALL NOT BE RESPONSIBLE FOR HOMEOWNER'S ASSOCIATION ASSESSMENTS OR DUES BEYOND THOSE FAIRLY-PRICED SPECIFICALLY FOR UTILITIES, TRASH SERVICES, AND THE LIKE.
4. THE ACCESS EASEMENT SHOWN ON THE SUBDIVISION PLAT SHALL BE CONSIDERED "DIRECT ACCESS ONTO A PUBLIC STREET" PER CITY OF SALIDA MUNICIPAL CODE SECTION 16-8-20 (a).

SHEET INDEX

1. COVER SHEET
2. SITE PLAN

PD PLAN 1/18/22

PRIVATE ENGINEER'S NOTES TO CONTRACTOR

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES, CONDUITS OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN ON THESE DRAWINGS. THE CONTRACTOR FURTHER ASSUMES ALL LIABILITY AND RESPONSIBILITY FOR THE UTILITY PIPES, CONDUITS, OR STRUCTURES SHOWN OR NOT SHOWN ON THESE DRAWINGS.
CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE COUNTY, THE CITY, THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

PREPARED FOR:
SALIDA BOTTLING CO.
9707 CR 163
SALIDA, CO 81201
PHONE: ----

PREPARED UNDER THE DIRECTION OF:
_____ DATE

WILLIAM B. HUSSEY CRABTREE GROUP, INC
L.C.E. NO. 56989 EXP. DATE 10/31/2023

PREPARED BY:
CRABTREE GROUP INC.
ENGINEERING SMART GROWTH™
325 D STREET
SALIDA, CO 81201
PH: 719-539-1675
918 CUYAMA ROAD
OJAI, CA 93023
PH: 719-221-1799

SEAL

DATE	BY	MARK	REVISIONS	APPR.	DATE

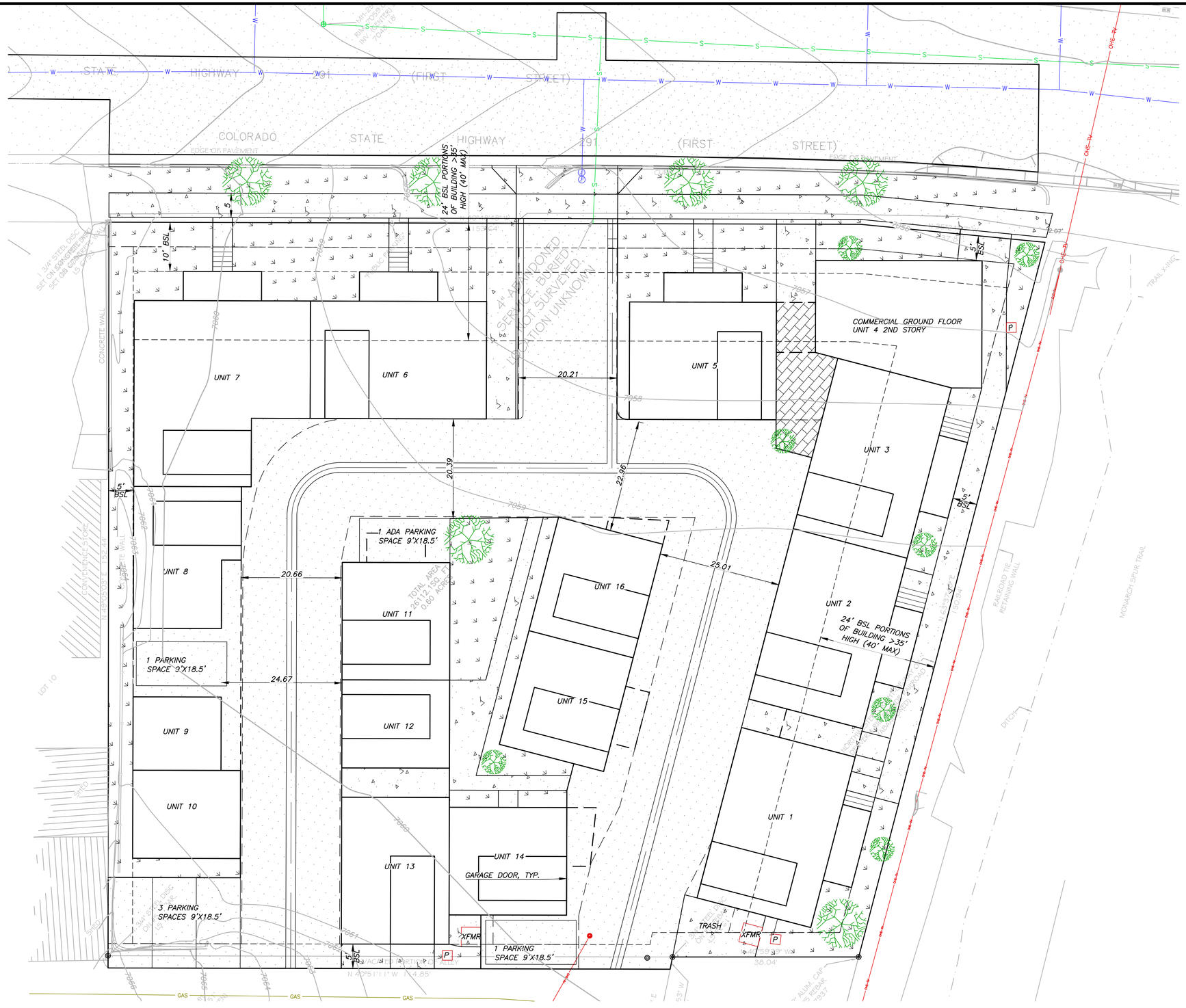
ENGINEER REVISION AGENCY

CITY OF SALIDA

DESIGNED BY WBH	APPROVED BY:
DRAWN BY WBH	
CHECKED BY WBH	AGENCY HEAD DATE
SCALE NONE	BENCHMARK: 1 1/2" ALUM. CAP ON #5 REBAR LS 37937 ELEV.=7059.64'
DATE JAN. 2022	

RESIDENCES AT SBC
SALIDA, CO
COVER SHEET
PD PLAN
OWNERSHIP, APPROVALS, CODE STUDY

SHEET NO. 1 OF 2 SHTS.
PROJECT NO. 20037



GRAPHIC SCALE

10' 0 10' 20' 30'

(CONTOUR INTERVAL = 1 FOOT)

LEGEND

- EXISTING WATER MAIN
- EXISTING SANITARY SEWER MAIN
- EXISTING GAS MAIN
- EXISTING OVERHEAD POWER/COMMUNICATION
- EXISTING UTILITY POLE WITH STREET LIGHT
- ASPHALT (OR PERVIOUS PAVERS)
- CONCRETE
- DECORATIVE PAVERS (OPTIONAL)
- LANDSCAPING
- 2' CONCRETE DRAINAGE PAN
- 2.5' CURB AND GUTTER
- LINE OF BUILDING OVERHANG
- BUILDING SETBACK LINE (BSL)
- TREE

Unit	Square Footage
1	1400
2	1400
3	1400
4	850
5	1000
6	1400
7	1400
8	1000
9	1000
10	800
11	800
12	800
13	1000
14	800
15	800
16	800
Commercial	725

NOTE: UNIT SIZES ARE APPROXIMATE AND SHALL NOT BE CONSTRUED AS MINIMUM OR MAXIMUM FOR THE FINAL ARCHITECTURAL PLANS.

LANDSCAPE PLAN REQUIREMENTS PER 16-8-90 (b)

1. NO EXISTING TREES ON SITE. IRRIGATION WILL BE PROVIDED WITH BACKFLOW PROTECTION PER PLUMBING CODE, AND DRIP AND SPRINKLER IRRIGATION AS NEEDED.
2. THE SITE AS A WHOLE WILL HAVE 2,612 SQUARE FEET OF LANDSCAPE SPACE TO MEET THE C-1 AND INDUSTRIAL ZONE STANDARDS. 60% OF THAT (1568 SF) WILL BE LIVING COVER. A MINIMUM OF 9 TREES WILL BE PLANTED, COUNTING STREET TREES ON 1ST STREET, MEETING THE C-1 MINIMUM OF 1 TREE PER 300 SQUARE FEET OF REQUIRED LANDSCAPE AREA.
3. LANDSCAPE WORK AS SHOWN IS ESTIMATED TO COST $40,000. MORE DETAILED ESTIMATES OBTAINED FROM LANDSCAPE CONTRACTORS SHALL SUPERSEDE THIS ESTIMATE.
4. EROSION CONTROL WILL MEET CDPHE REQUIREMENTS OF THE GENERAL CONSTRUCTION STORMWATER DISCHARGE PERMIT. SPECIFIC BEST MANAGEMENT PRACTICES WILL BE CHOSEN, INSTALLED, INSPECTED, AND MAINTAINED BY THE CONTRACTOR'S QUALIFIED STORMWATER MANAGER.
5. LANDSCAPE MAINTENANCE WILL INCLUDE WEEDING, MOWING, AND TRIMMING. MAINTENANCE WILL BE THE RESPONSIBILITY OF THE PROPERTY OWNER, WHICH IN SOME SITE AREAS IS THE HOA.
6. ALL PLANTS SHALL BE OF A VARIETY WHICH IS COMPATIBLE WITH LOCAL CLIMATE AND THE SOILS, DRAINAGE AND WATER CONDITIONS OF THE SITE.

PRIVATE ENGINEER'S NOTES TO CONTRACTOR

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PREPARED FOR:
SALIDA BOTTLING CO.
9707 CR 163
SALIDA, CO 81201
PHONE: ----

PREPARED UNDER THE DIRECTION OF:
DATE
WILLIAM B. HUSSEY
L.C.E. NO. 56989
CRABTREE GROUP, INC
EXP. DATE 10/31/2023

PREPARED BY:
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ENGINEERING SMART GROWTH™
325 D STREET, SALIDA, CO 81201, PH: 719-539-1676
918 CUYAMA ROAD, OJAI, CA 93023, PH: 719-221-1799

SEAL

DATE	BY	MARK	REVISIONS	APPR.	DATE
				REVISION	AGENCY

ENGINEER

CITY OF SALIDA

DESIGNED BY WBH
DRAWN BY WBH
CHECKED BY WBH
SCALE 1"=10'
DATE JAN. 2022

APPROVED BY:
AGENCY HEAD DATE

BENCHMARK: 1 1/2" ALUM. CAP ON #5 REBAR LS 37937 ELEV.=7059.64'

RESIDENCES AT SBC
SALIDA, CO
SITE PLAN
PD PLAN
GROUND COVER, LAYOUT, LANDSCAPING

SHEET NO. 2 OF 2 SHTS.
PROJECT NO. 20037

KYNDANCE MEWS

EARLS COURT - MT PLEASANT

EARLS COURT - MT PLEASANT

KYNDANCE MEWS

BROOKLYN MEWS

BATHURST MEWS

URBAN DESIGN IMAGE BOARD
PRINTED ON 11x17)

10.21.21

SALIDA BOTTLING WORKS SEEN FROM 1ST ST

1914 SANBORN SHOWING SALIDA BOTTLING WORKS; NTS

ARCHITECTURAL DESIGN SITE HISTORY
PRINTED ON 11x17)

10.21.21

MASONRY DETAILING

MASONRY DETAILING

MASONRY DETAILING

COMMERCIAL FRONTAGE

URBAN FLOOR LEVEL RELATIONSHIP

URBAN FLOOR LEVEL RELATIONSHIP

LANE FRONTAGE FENESTRATION

ARCHITECTURAL DESIGN IMAGE BOARD
PRINTED ON 11x17)

10.21.21

AERIAL CONTEXT
SCALE: 1" = 50'-0" (PRINTED ON 11x17)

10.21.21

UNIT DESCRIPTION

UNIT #	SQUARE FOOTAGE
1	1400
2	1400
3	1400
4*	850
5	1000
6	1400
7	1400
8	1000
9**	1000
10**	800
11	800
12	800
13	1000
14	800
15	800
16	800

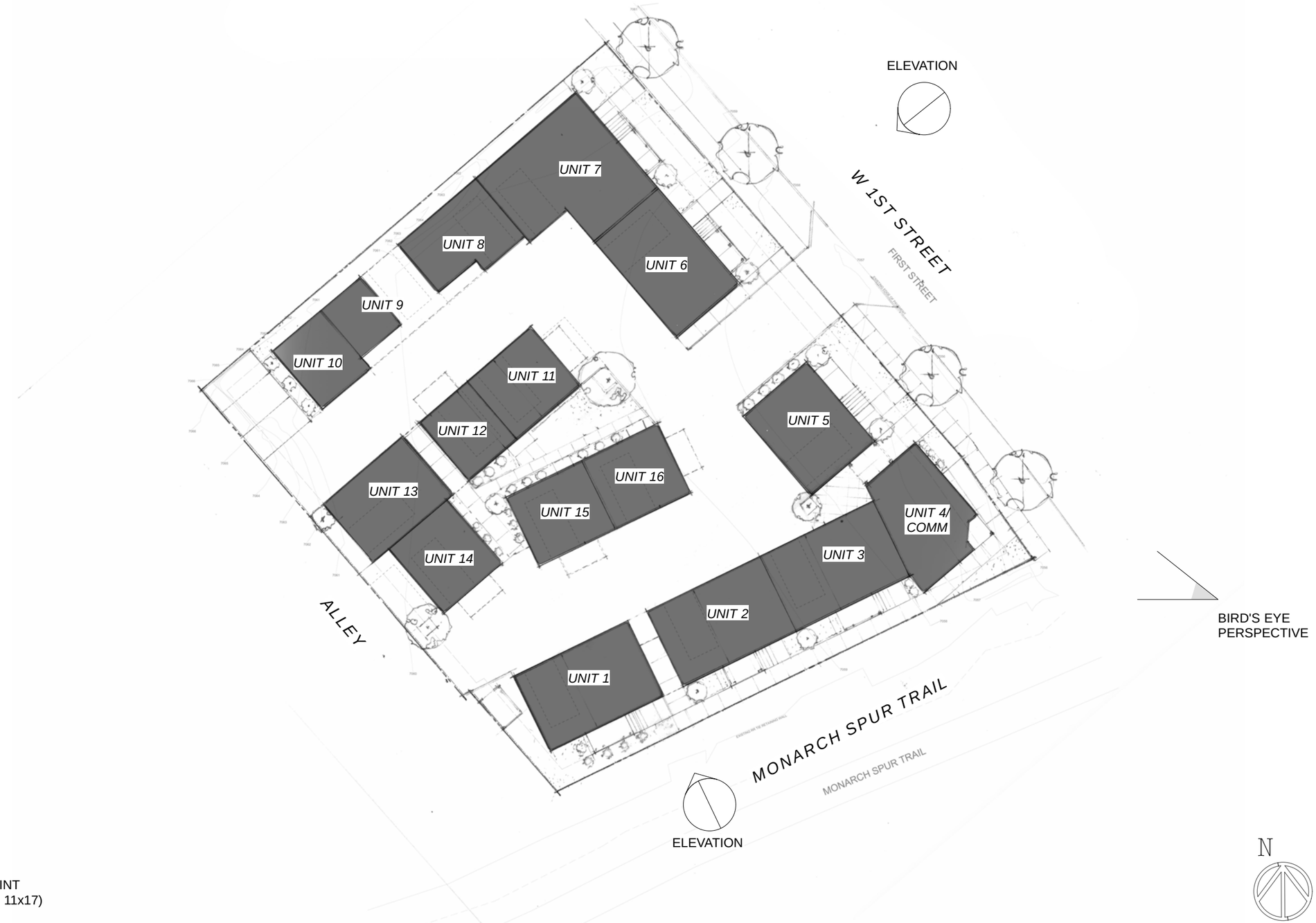
COMMERICAL*
725

* 2 STORY MIXED-USE BLDG
**AFFORDABLE UNIT

SITE PLAN
SCALE: 1" = 30'-0" (PRINTED ON 11x17)

10.21.21

N

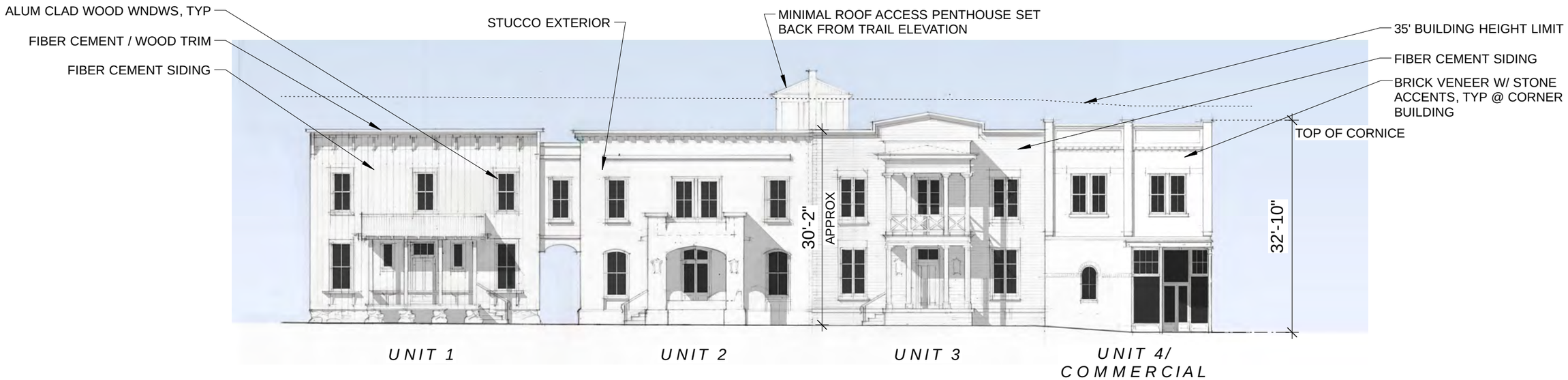


SITE PLAN - BUILDING FOOTPRINT
SCALE: 1" = 30'-0" (PRINTED ON 11x17)

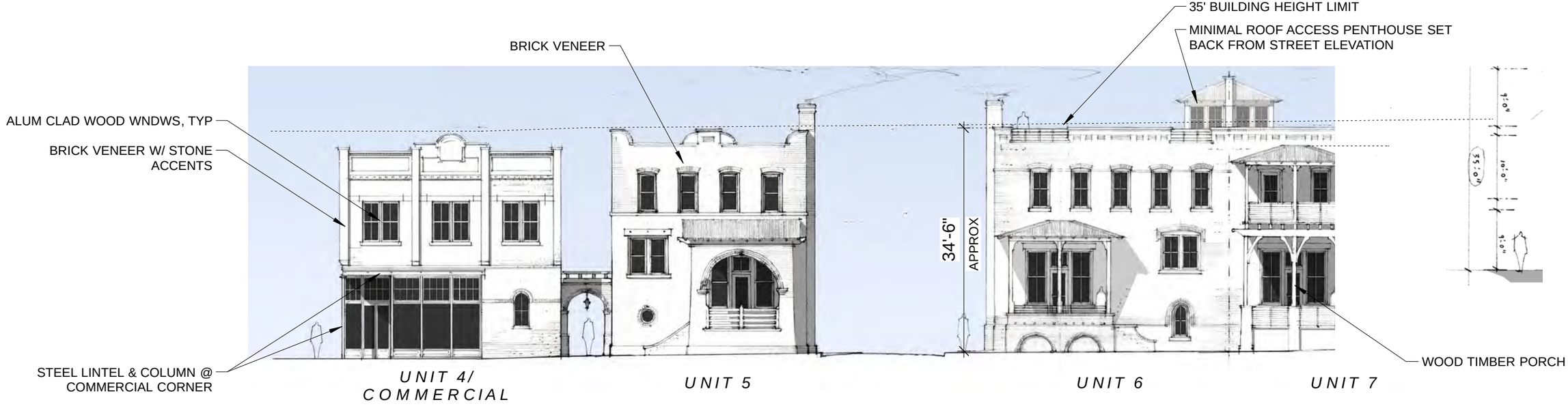
10.21.21

BIRD'S EYE PERSPECTIVE
(PRINTED ON 11x17)

10.21.21



CONCEPTUAL MONARCH SPUR TRAIL FRONTAGE ELEVATION



CONCEPTUAL FIRST STREET FRONTAGE ELEVATION

CONCEPTUAL FRONTAGE ELEVATIONS
SCALE: 1/16" = 1'-0" (PRINTED ON 11x17)

10.21.21

CONCEPTUAL MONARCH SPUR TRAIL FRONTAGE ELEVATION
SCALE: 3/32" = 1'-0" (PRINTED ON 11x17)

10.21.21

UNIT 4/COMMERCIAL

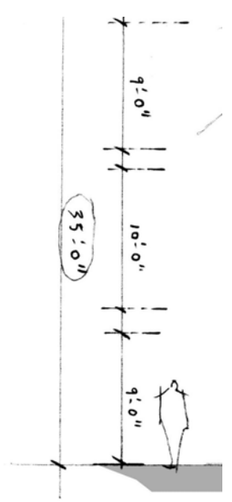
UNIT 5

UNIT 6

UNIT 5

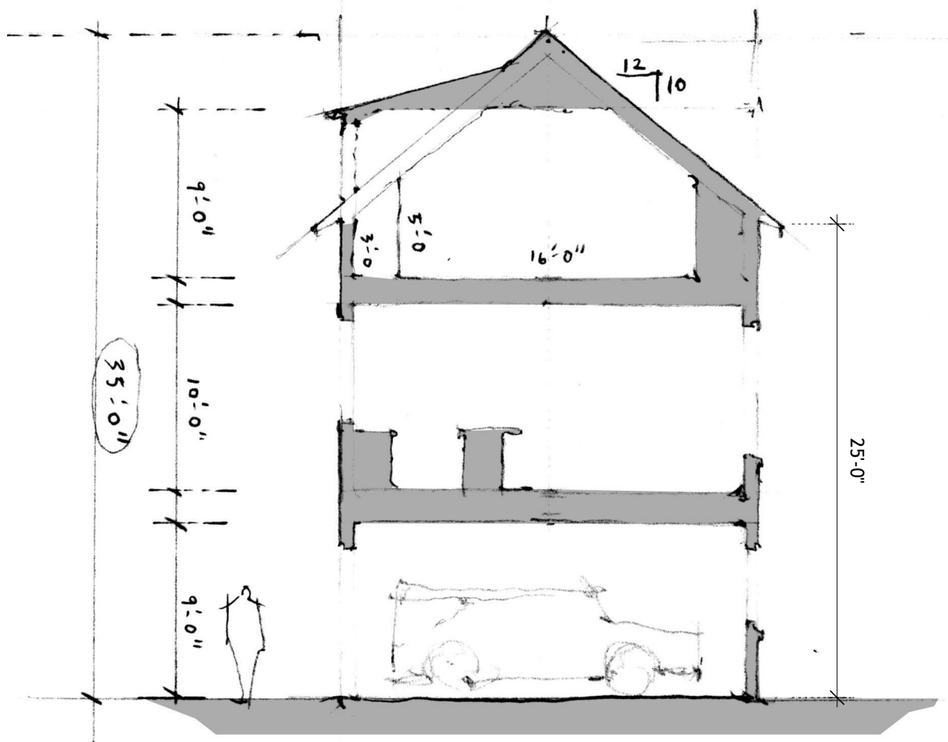
UNIT 6

UNIT 7

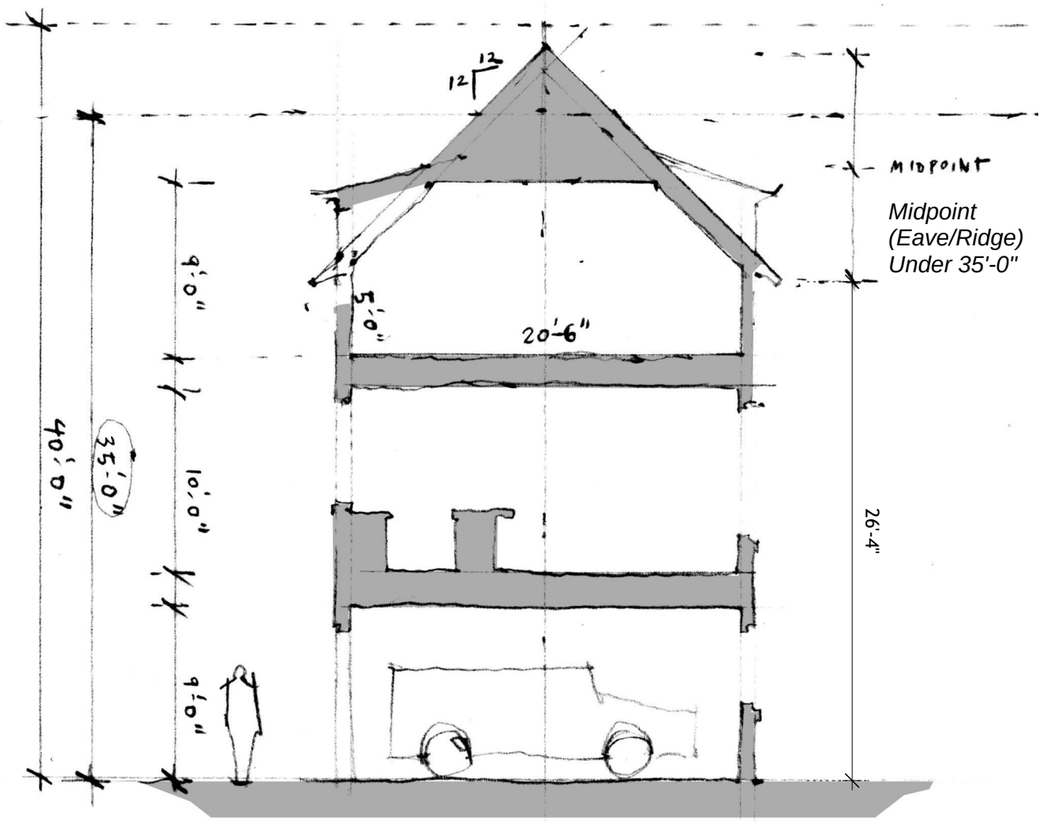


CONCEPTUAL FIRST STREET FRONTAGE ELEVATIONS
SCALE: 3/32" = 1'-0" (PRINTED ON 11x17)

10.21.21



RIDGE WITH 35'-0" HEIGHT MAX



RIDGE WITH 40'-0" HEIGHT MAX

HEIGHT CONSIDERATION
N.T.S.

10.21.21

Small Footprint Rooftop Access Penthouse Structure (Under 100 s.f.)

Face of Rooftop Structure 10-0" - 12'-0" Behind Front Face of Building - Not Likely Visible from Frontage

PARAPET MAX 35'-0" - Rooftop Access Structure Above (with Limited Footprint)

HEIGHT CONSIDERATION
N.T.S.

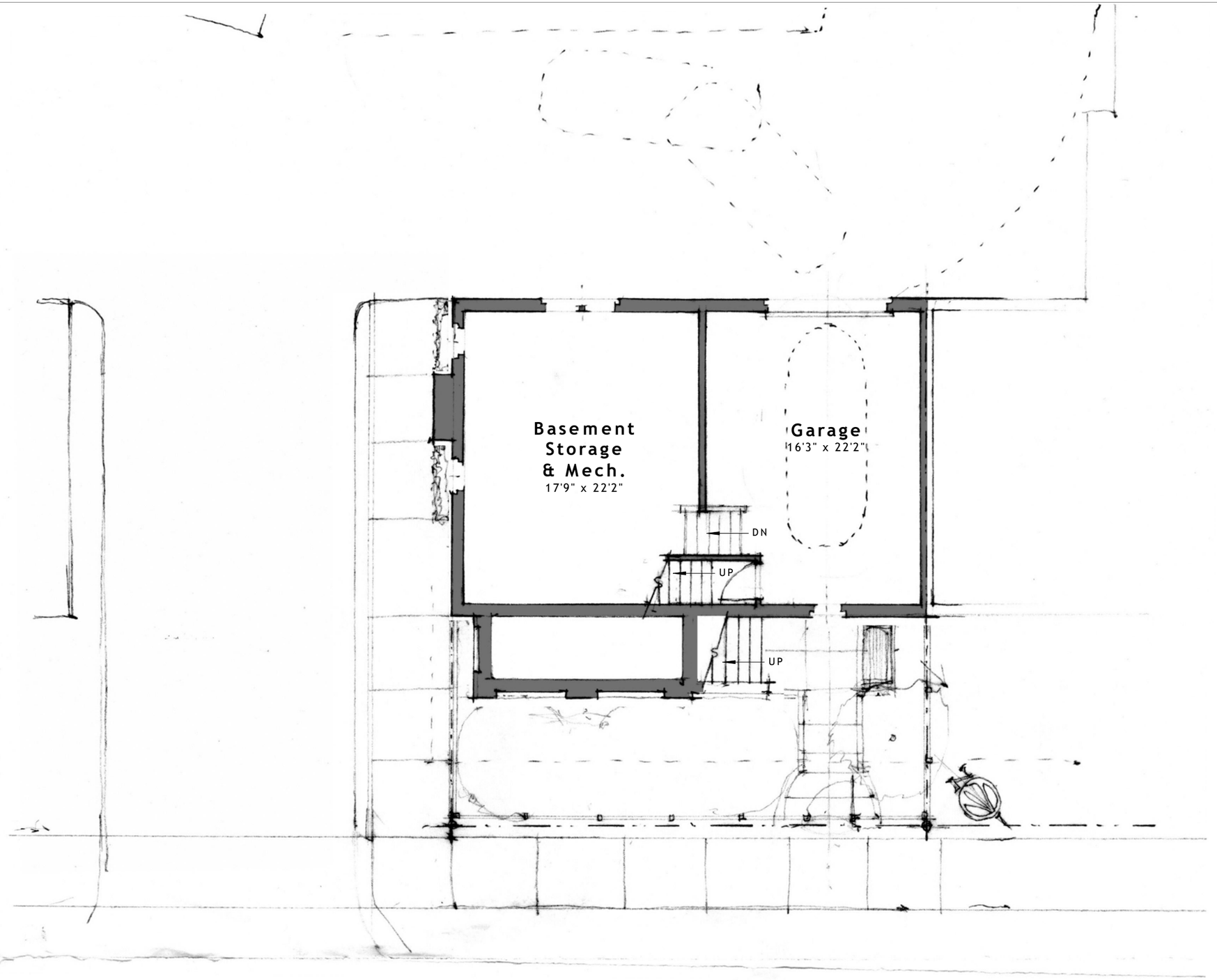
10.21.21

SITE PLAN - AERIAL CONTEXT
SCALE: 1" = 50'-0" (PRINTED ON 11x17)

10.21.21


UNIQUE
HOTEL
Storyville
LAUGHING
LADIES
CAFE
Antiques
Gifts


UNIQUE
HOTEL
Storyville
LAUGHING
LADIES
CAFE
Antiques
Gifts



Craft Design Studio
204 SPOONER LANE
MOUNT PLEASANT, SC 29464
www.craftdesign-studio.com
704.408.5501 (C)

Lot 6 House - 1st Street

Bottling District

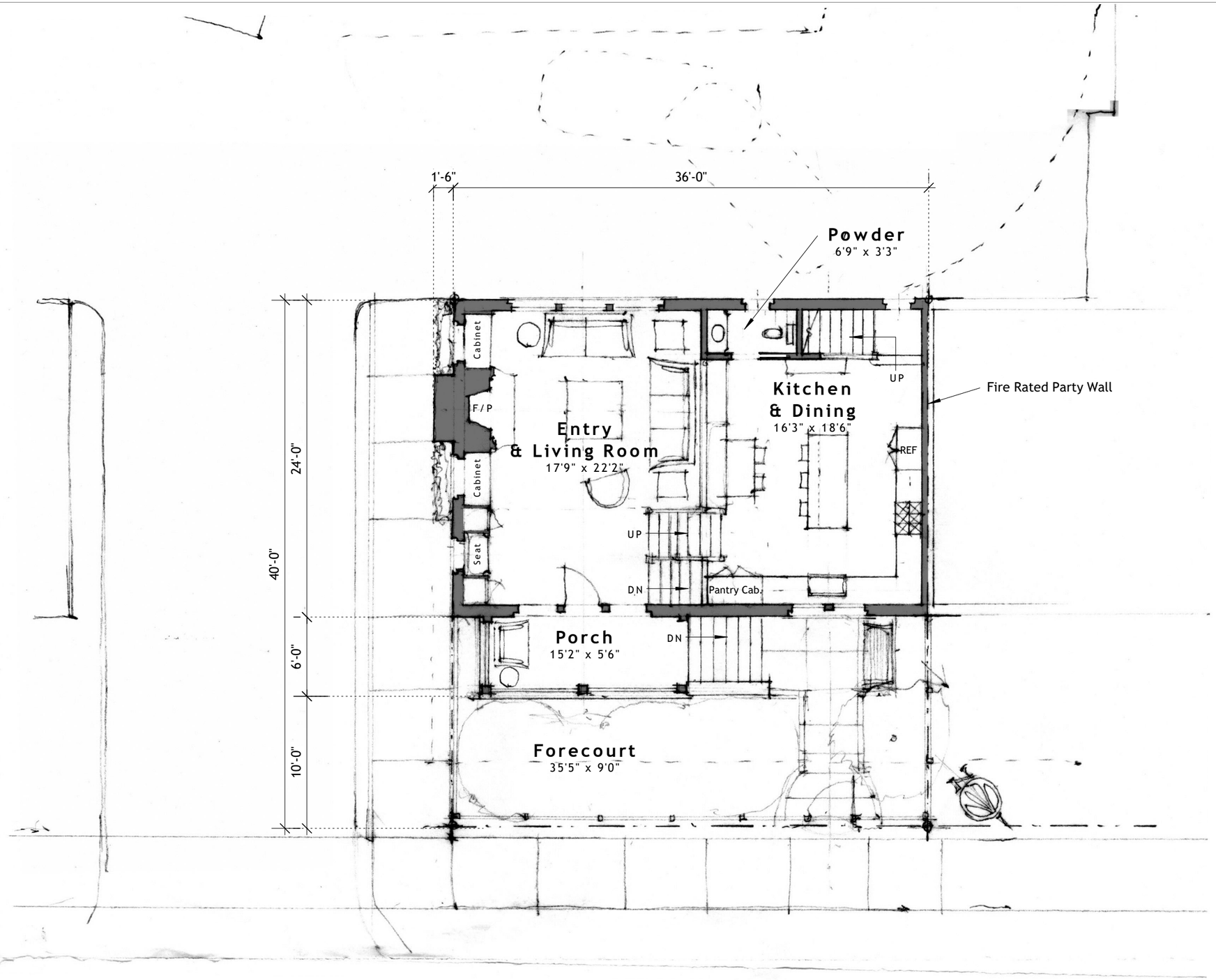
Salida - Colorado

Basement Level Plan

1/8" = 1'-0"

Schematic Design

12.10.21



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Lot 6 House - 1st Street

Bottling District

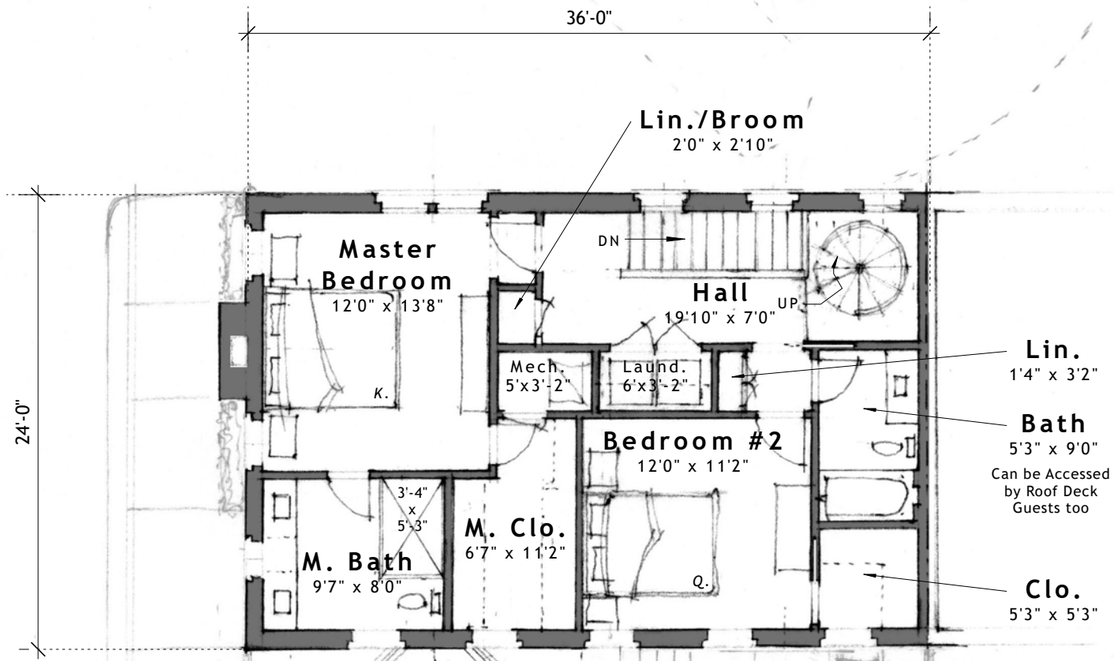
Salida - Colorado

1st Level Plan

1/8" = 1'-0"

Schematic Design

12.10.21



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Lot 6 House - 1st Street

Bottling District

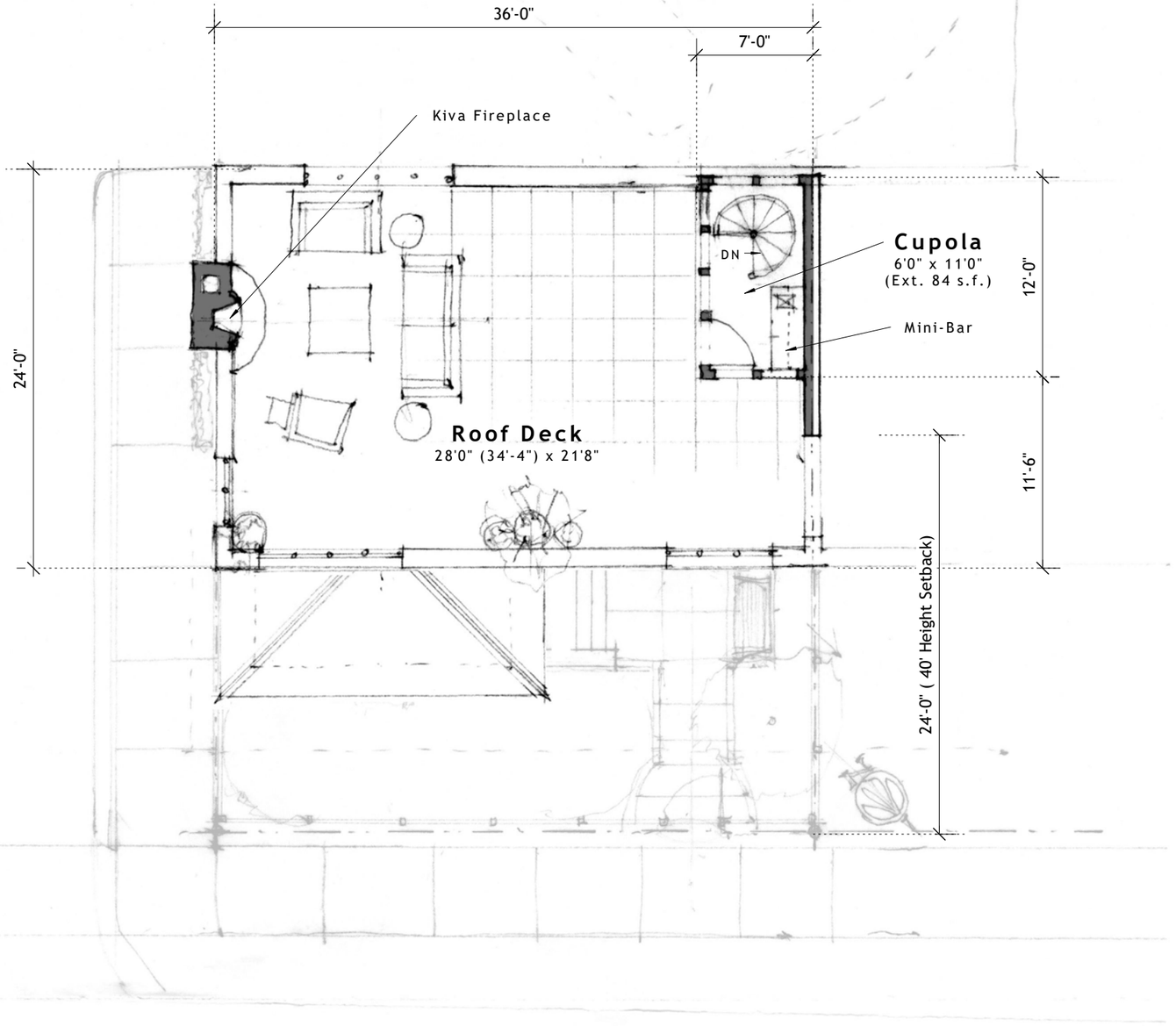
Salida - Colorado

2nd Level Plan

1/8" = 1'-0"

Schematic Design

12.10.21



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Lot 6 House - 1st Street

Bottling District

Salida - Colorado

Roof Level Plan

1/8" = 1'-0"

Schematic Design

12.10.21

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Lot 6 House - 1st Street

Bottling District

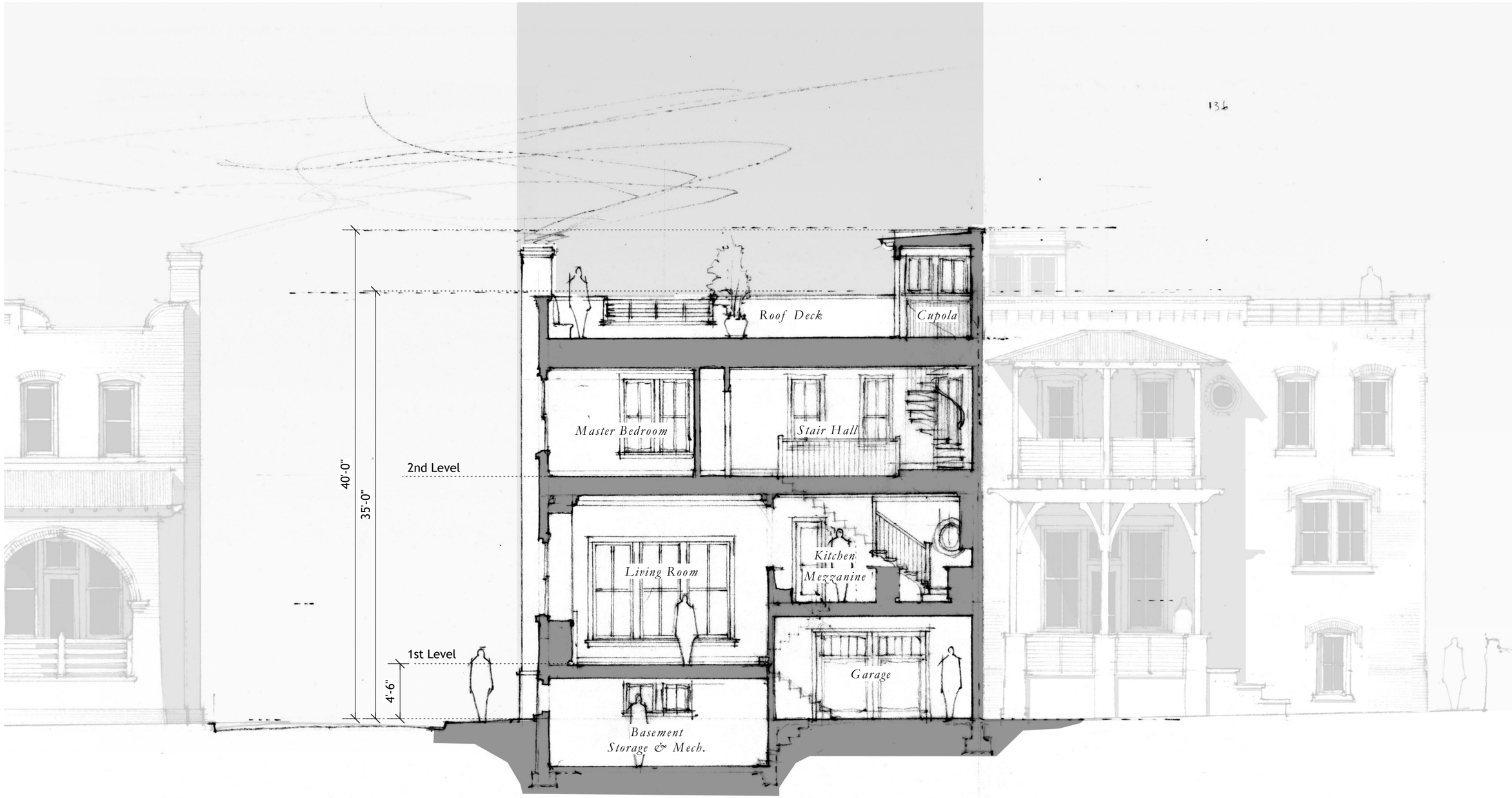
Salida - Colorado

Front Elevation

1/8" = 1'-0"

Schematic Design

12.10.21



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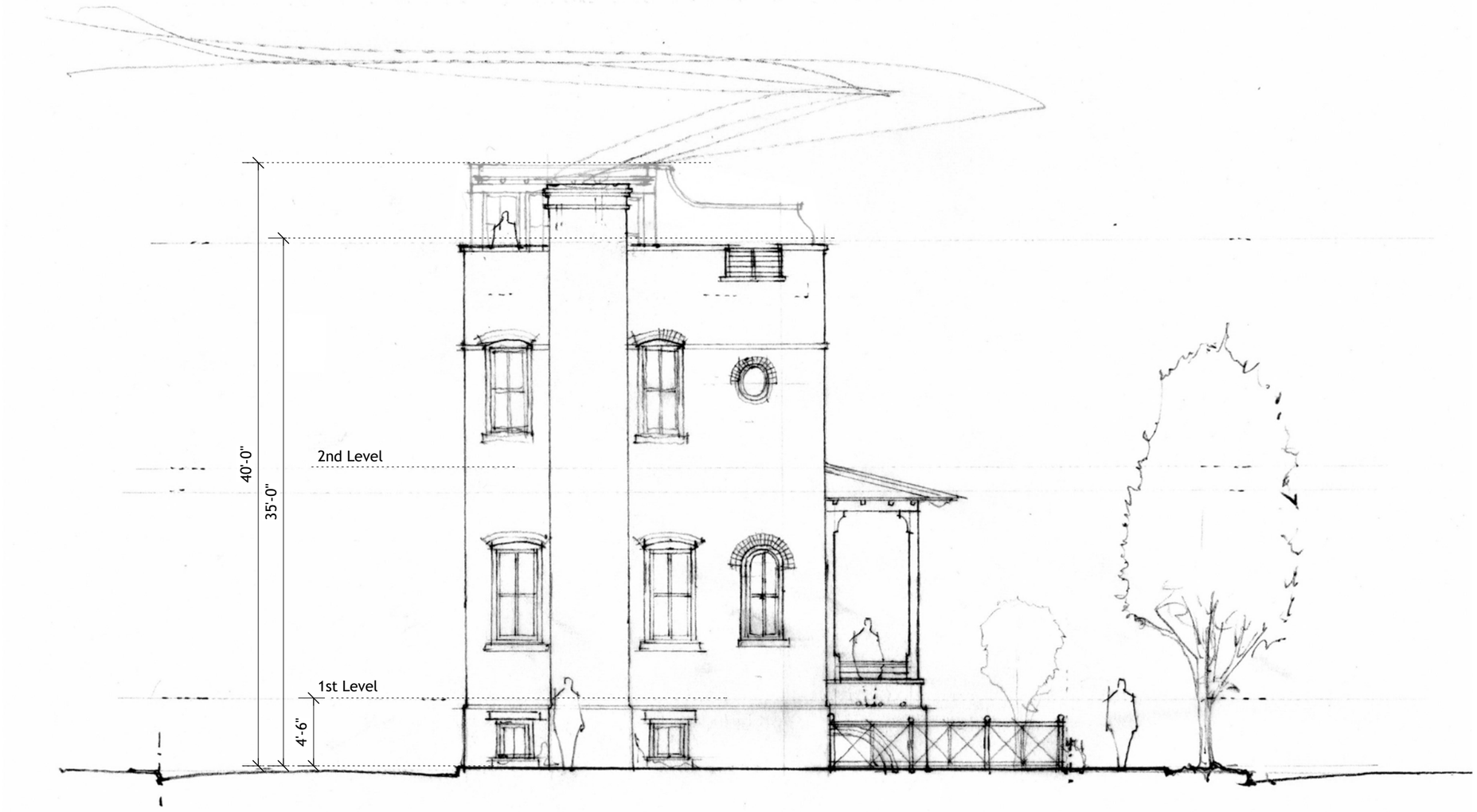
Lot 6 House - 1st Street

Bottling District

Salida - Colorado

Building Section
1/8" = 1'-0"

Schematic Design
12.10.21



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704.408.5501 (C)

Lot 6 House - 1st Street

Bottling District

Salida - Colorado

Left Side Elevation

1/8" = 1'-0"

Schematic Design

12.10.21

RESIDENCES AT SALIDA BOTTLING COMPANY

LOCATED IN BLOCK 19
CITY OF SALIDA
CHAFFEE COUNTY, COLORADO

CERTIFICATE OF DEDICATION AND OWNERSHIP

KNOW ALL PERSONS BY THESE PRESENTS THAT SALIDA BOTTLING COMPANY, LLC, THE FEE OWNER OF THE FOLLOWING DESCRIBED PROPERTY:

LOTS NO. 6, 7, 8 AND 9
BLOCK NO. 19
CITY OF SALIDA
CHAFFEE COUNTY, COLORADO
AND
FRACTIONAL LOTS FOUR (4) AND FIVE (5) IN BLOCK 19 OF THE CITY OF SALIDA AND A STRIP OF LAND BETWEEN SAID BLOCK 19 AND THE RIGHT-OF-WAY OF THE DENVER AND RIO GRANDE WESTERN RAILROAD (MONARCH BRANCH) ALL OF WHICH IS MORE PARTICULARLY DESCRIBED AS A TRACT OF LAND LOCATED WITHIN THE CITY OF SALIDA, CHAFFEE COUNTY, COLORADO AND BEING PART OF FRACTIONAL BLOCK NO. 19 OF ORIGINAL SALIDA AND PART OF THE ADJOINING RAILROAD RESERVATION LAND BEING DESCRIBED AS FOLLOWS:
BEGINNING AT THE COMMON CORNER OF LOTS 5 AND 6 OF SAID BLOCK NO. 19 LOCATED ON FIRST STREET;
THENCE SOUTH 48°49'24" WEST ALONG THE COMMON LOT LINE OF SAID LOTS 5 AND 6 FOR A DISTANCE OF 150.00 FEET TO THE NORTHEASTERLY ALLEY BOUNDARY OF SAID BLOCK NO. 19;
THENCE SOUTH 41°11'36" EAST ALONG SAID NORTHEASTERLY ALLEY BOUNDARY 53.76 FEET TO THE NORTHERLY BOUNDARY OF THE DENVER AND RIO GRANDE WESTERN RAILROAD-MONARCH BRANCH;
THENCE NORTH 63°13'57" EAST ALONG SAID RAILROAD BOUNDARY 154.88 FEET TO THE SOUTHWESTERLY BOUNDARY OF SAID FIRST STREET;
THENCE NORTH 41°11'36" WEST ALONG SAID STREET BOUNDARY 92.34 FEET TO THE POINT OF BEGINNING.
TOGETHER WITH
THAT PORTION OF THE FOLLOWING DESCRIBED ALLEY LOCATED WITHIN BLOCK 19, IN THE CITY OF SALIDA, CHAFFEE COUNTY, COLORADO, THAT ABUTS LOTS 5,6,7, 8 AND 9, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT THE INTERSECTION OF THE NORTHEASTERLY RIGHT-OF-WAY OF SAID ALLEY IN BLOCK 19 AND THE SOUTHEASTERLY BOUNDARY OF SAID BLOCK 19, FROM WHENCE THE INTERSECTION OF SAID SOUTHEASTERLY BOUNDARY OF BLOCK 19 AND THE NORTHEASTERLY RIGHT-OF-WAY OF SECOND STREET BEARS SOUTH 60°24'50" WEST, A DISTANCE OF 178.58 FEET;
THENCE SOUTH 60°24'50" WEST ALONG SAID SOUTHEASTERLY BOUNDARY OF BLOCK 19, A DISTANCE OF 2.69 FEET;
THENCE NORTH 40°46'31" WEST, A DISTANCE OF 215.34 FEET TO THE SOUTHEASTERLY RIGHT-OF-WAY OF 1 STREET;
THENCE NORTH 49°13'29" EAST ALONG SAID RIGHT-OF-WAY OF 1 STREET, A DISTANCE OF 2.42 FEET TO SAID NORTHEASTERLY RIGHT-OF-WAY OF THE ALLEY WITHIN BLOCK 19;
THENCE SOUTH 40°49'58" EAST ALONG SAID NORTHEASTERLY ALLEY RIGHT-OF-WAY, A DISTANCE OF 215.86 FEET TO THE POINT OF BEGINNING.

HAS LAID-OUT, PLATTED AND SUBDIVIDED THE SAME INTO LOTS, OUTLOTS AND EASEMENTS, AS SHOWN ON THIS PLAT UNDER THE NAME AND STYLE OF:

RESIDENCES AT SALIDA BOTTLING COMPANY

IN WITNESS WHEREOF THE UNDERSIGNED HAS CAUSED THESE PRESENTS TO BE EXECUTED THIS_____DAY OF_____2022

_____
BY: ERIC WARNER
MANAGER, SALIDA BOTTLING COMPANY, LLC

COUNTY OF _____)
) SS.
STATE OF _____)

THE FORGOING DEDICATION WAS ACKNOWLEDGED BEFORE ME THIS___DAY OF _____2022, BY ERIC WARNER.
WITNESS MY HAND AND SEAL.

MY COMMISSION EXPIRES_____.

_____
NOTARY PUBLIC

CERTIFICATION OF TITLE

I _____, A LICENSED TITLE INSURANCE AGENT IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT I HAVE EXAMINED THE TITLE TO THE PROPERTY HEREBY DEDICATED AND AS SHOWN AND DESCRIBED ON THIS PLAT AND FOUND TITLE VESTED IN SALIDA BOTTLING COMPANY, LLC, FREE AND CLEAR OF ALL LIENS AND ENCUMBRANCES EXCEPT AS LISTED BELOW:

_____

DATED THIS ____ DAY OF _____, 2022.

_____
TITLE AGENT

CLERK AND RECORDER'S CERTIFICATE

THIS PLAT WAS FILED IN THE OFFICE OF THE CLERK AND RECORDER OF CHAFFEE COUNTY, COLORADO, AT _____ __.M. ON THIS _____ DAY OF _____ , 2022 UNDER RECEPTION NUMBER _____.

_____
CHAFFEE COUNTY CLERK AND RECORDER

NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE SURVEYOR'S STATEMENT CONTAINED HEREON.

ACKNOWLEDGMENT OF LIEN HOLDER

_____, AS LIEN HOLDER, HEREBY ACKNOWLEDGES AND APPROVES THE TERMS, CONDITIONS AND DEDICATION AS DISCLOSED UPON THIS PLAT.

_____ _____
REPRESENTATIVE DATE

COUNTY OF _____)
) SS.
STATE OF _____)

THE FORGOING ACKNOWLEDGMENT OF LIEN HOLDER WAS ACKNOWLEDGED BEFORE ME THIS___DAY OF _____2022, BY _____. WITNESS MY HAND AND SEAL.

MY COMMISSION EXPIRES_____.

_____
NOTARY PUBLIC

CERTIFICATE OF STREET & UTILITY MAINTENANCE

PUBLIC NOTICE IS HEREBY GIVEN THAT NEITHER THE DEDICATED PUBLIC ROADS NOR THE PUBLIC UTILITIES SHOWN ON THIS PLAT WILL BE MAINTAINED BY THE CITY OF SALIDA UNTIL AND UNLESS THE SUBDIVIDER CONSTRUCTS THE STREETS, ROADS AND UTILITIES IN ACCORDANCE WITH THE SUBDIVISION AGREEMENT AS RECORDED AT RECEPTION NO._____, IF ANY, AND THE SUBDIVISION REGULATIONS IN EFFECT AT THE DATE OF THE RECORDING OF THIS PLAT, AND APPROVAL OF THE CITY HAS BEEN ISSUED TO THAT EFFECT. WHEN THE CITY APPROVES A STREET OR UTILITY FOR MAINTENANCE, THE STREET OR UTILITY SHALL BECOME PUBLIC IN ALL SENSES OF THE WORD AND THE SUBDIVIDER HAS NO FURTHER OBLIGATIONS IN REGARDS TO THAT PARTICULAR STREET OR UTILITY.

CITY COUNCIL APPROVAL

THIS PLAT IS APPROVED FOR FILING AND THE CITY HEREBY ACCEPTS THE DEDICATION OF THE STREETS AND ROADS SHOWN HEREON SUBJECT TO THE "STREET MAINTENANCE" SET FORTH ABOVE, AND FURTHER ACCEPTS THE DEDICATION OF THE EASEMENTS SHOWN HEREON.

SIGNED THIS ____ DAY OF _____. 2022.
CITY OF SALIDA

BY:_____
MAYOR

LAND SURVEYOR'S CERTIFICATE

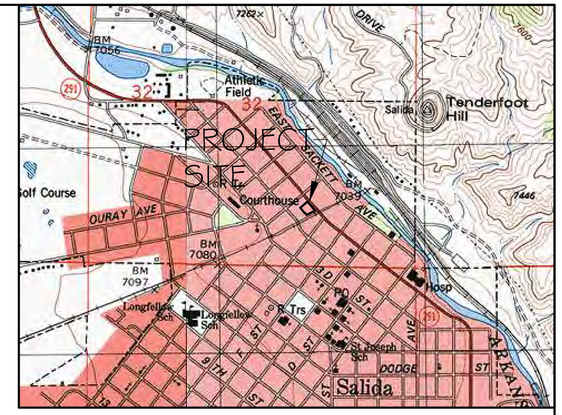
I, SYDNEY A. SCHIEREN, A REGISTERED LAND SURVEYOR LICENSED TO PRACTICE IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THIS LAND SURVEY WAS PERFORMED UNDER MY DIRECT SUPERVISION, AND THAT THIS PLAT REPRESENTS THE RESULTS OF SAID SURVEY AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

Markup 1/17/2022 WBH

_____
SYDNEY A. SCHIEREN
COLORADO P.L.S. 37937

PRELIMINARY DRAFT
INTENDED FOR REVIEW BY CLIENT AND AGENTS ONLY

COLORADO LICENSED SYDNEY ARTHUR SCHIEREN 37937 PROFESSIONAL LAND SURVEYOR



VICINITY MAP
NOT TO SCALE

GENERAL NOTES

1) BASIS OF BEARING FOR THIS SURVEY IS GRID NORTH FROM COLORADO STATE PLANE COORDINATE SYSTEM CENTRAL ZONE, BASED ON G.P.S. OBSERVATIONS ALONG THE NORTH EASTERLY ALLEY RIGHT-OF-WAY IN BLOCK 19, HAVING A BEARING OF NORTH 40°51'11" WEST.
2) LOTS WITHIN "RESIDENCES AT SALIDA BOTTLING COMPANY" SUBJECT TO "RESIDENCES AT SALIDA BOTTLING COMPANY PLANNED DEVELOPMENT" RECORDED AT RECEPTION NO._____
3) FEES-IN-LIEU FOR OPEN SPACE SHALL BE REQUIRED PRIOR TO ISSUANCE OF BUILDING PERMITS FOR EACH UNIT.
4) AS REQUIRED UNDER SECTION 16.6.140 OF THE SALIDA MUNICIPAL CODE, A PAYMENT IN LIEU OF LAND DEDICATION FOR FAIR CONTRIBUTIONS FOR PUBLIC SCHOOL SITES SHALL BE PAID BY THE OWNER OF EACH LOT WITHIN THIS SUBDIVISION PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR ANY NEW RESIDENCE ON SUCH LOT.
5) THE SUBDIVISION HAS COMPLIED WITH CHAPTER 16 OF THE SALIDA MUNICIPAL CODE AND IS SUBJECT TO THE TERMS OF THE EXECUTED SUBDIVISION IMPROVEMENT AND INCLUSIONARY HOUSING AGREEMENT, AS RECORDED AT RECEPTION NO._____.
6) BALCONIES, DECKS AND SIMILAR ARCHITECTURAL APPURTENANCES CANNOT ENCROACH INTO ANY UTILITY EASEMENT. BALCONY EASEMENTS DEPICTED HEREON SHALL INDICATE NO UTILITY EASEMENT IN THAT LOCATION. EAVES MAY ENCROACH UP TO ___ INCHES INTO THE H.O.A. OUTLOT AND THE PRIVATE ACCESS EASEMENT, BUT CANNOT ENCROACH INTO ANY UTILITY EASEMENT.
7) A COMMON WALL MAINTENANCE AGREEMENT SHALL BE ESTABLISHED AND RECORDED TO RUN WITH THE LAND COMPRISING THE PROPOSED TOWNHOME LOTS.

replace note 6 with: Foundations, eaves/soffits, and other architectural elements, except balconies, shall not extend more than 20" off the private lot. Where these extensions occur, they shall be either below ground or a minimum of 20' above ground. Balconies are allowed to extend off the private lot in their own easement. Balconies in utility or drainage easements shall have a minimum of 9.5' clear from ground to bottom of balcony. Balconies in fire apparatus access routes shall have a minimum of 13.5' clear from ground to bottom of balcony.

New note 8: The property HOA shall own and maintain all improvements on the Outlot, including private utilities.

REVISED:DECEMBER 7, 2021
DECEMBER 8, 2021
DECEMBER 20, 2021
JOB # 20219
DATE: NOVEMBER 11, 2021
SHEET 1 OF 2

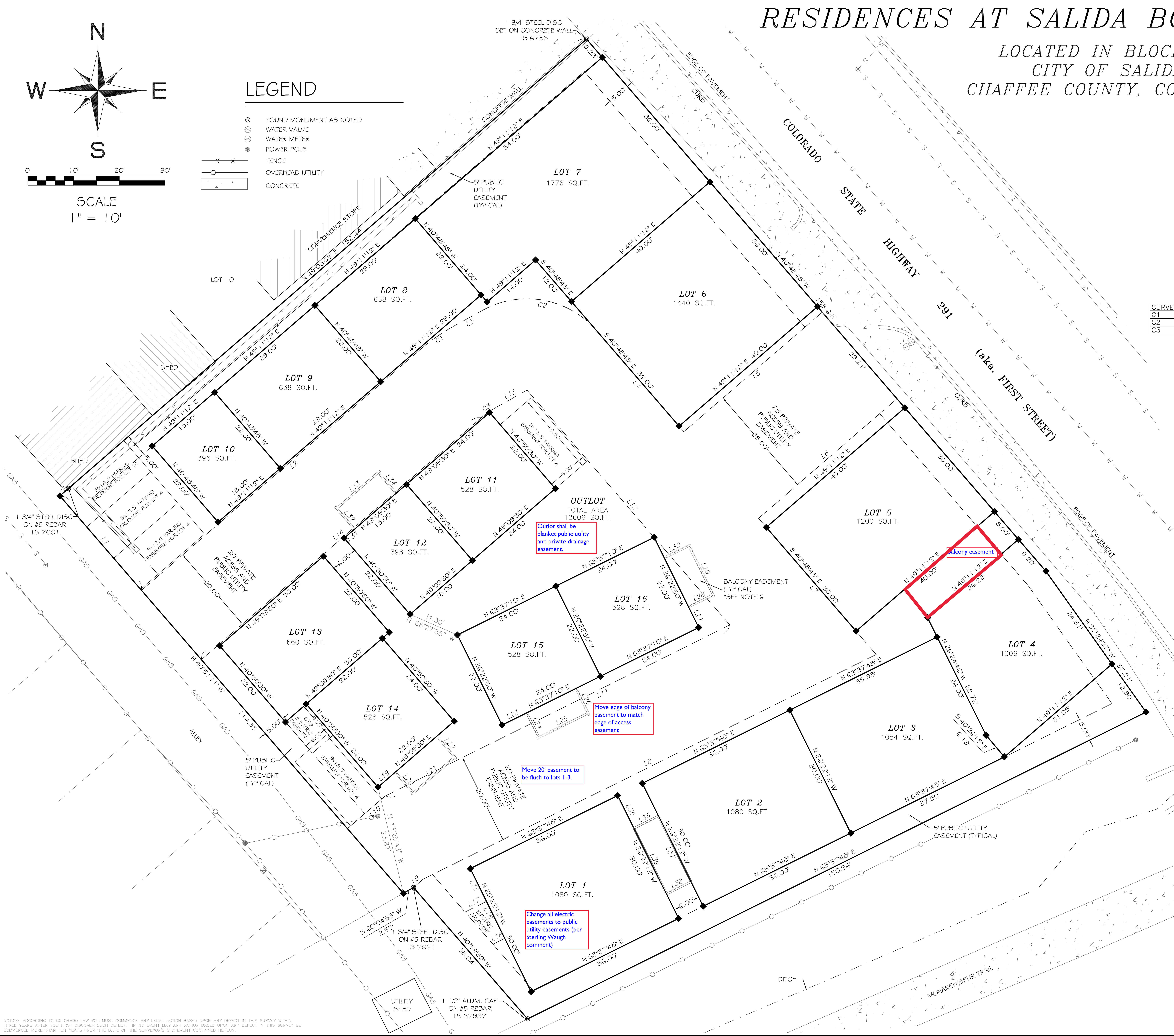
RESIDENCES AT SALIDA BOTTLING COMPANY

LOCATED IN BLOCK 19
CITY OF SALIDA
CHAFFEE COUNTY, COLORADO

LANDMARK SURVEYING & MAPPING
P.O. BOX 668 SALIDA, CO 81201
PH 719.539.4021 FAX 719.539.4031

RESIDENCES AT SALIDA BOTTLING COMPANY

LOCATED IN BLOCK 19
CITY OF SALIDA
CHAFFEE COUNTY, COLORADO



AREA TABLE	
LOTS	13,506 SQ.FT. 0.31 AC
OUTLOT	12,606 SQ.FT. 0.29 AC
TOTAL	26,112 SQ.FT. 0.60 AC

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	8.38'	40.00'	12°00'00"	N 55°11'12" E	8.36'
C2	27.23'	20.00'	78°00'00"	S 79°48'48" E	25.17'
C3	4.19'	20.00'	12°00'00"	S 55°11'12" W	4.18'

LINE	BEARING	DISTANCE
L1	S 40°51'11" E	27.30'
L2	N 49°11'12" E	80.91'
L3	N 61°11'12" E	7.52'
L4	S 40°48'48" E	29.27'
L5	N 49°10'39" E	40.00'
L6	S 49°10'39" W	40.00'
L7	S 40°48'48" E	39.33'
L8	S 63°37'10" W	110.59'
L9	S 49°08'49" W	2.75'
L10	N 49°08'49" E	10.92'
L11	N 63°37'10" E	84.10'
L12	N 40°48'48" W	67.79'
L13	S 61°11'12" W	7.52'
L14	S 49°11'12" W	80.89'
L15	S 26°22'12" E	8.00'
L16	S 26°22'12" E	9.00'
L17	S 63°37'48" W	5.22'
L18	S 63°37'48" W	2.87'
L19	N 49°09'30" E	4.99'
L20	S 40°50'30" E	6.00'
L21	N 49°09'30" E	12.00'
L22	N 40°50'30" W	6.00'
L23	N 63°37'10" E	6.00'
L24	S 26°22'50" E	6.00'
L25	N 63°37'10" E	12.00'
L26	N 26°22'50" W	6.00'
L27	N 26°22'50" W	5.00'
L28	N 63°37'10" E	6.00'
L29	N 26°22'50" W	12.00'
L30	S 63°37'10" W	6.00'
L31	N 49°09'30" E	3.00'
L32	N 40°50'30" W	6.00'
L33	N 49°09'30" E	12.00'
L34	S 40°50'30" E	6.00'
L35	S 26°22'12" E	8.00'
L36	N 63°37'48" E	6.00'
L37	S 26°22'12" E	16.00'
L38	S 63°37'48" W	6.00'
L39	N 26°22'12" W	16.00'

LAND SURVEYOR'S CERTIFICATE

I, SYDNEY A. SCHIEREN, A REGISTERED LAND SURVEYOR LICENSED TO PRACTICE IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THIS LAND SURVEY WAS PERFORMED UNDER MY DIRECT SUPERVISION, AND THAT THE PLAT REPRESENTS THE RESULTS OF SAID SURVEY AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

Markup 1/17/2022 WBH

PRELIMINARY DRAFT
INTENDED FOR REVIEW BY CLIENT AND AGENTS ONLY

SYDNEY A. SCHIEREN
COLORADO P.L.S. 37937

COLORADO LICENSED PROFESSIONAL LAND SURVEYOR — SYDNEY ARTHUR SCHIEREN 37937

NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE SURVEYOR'S STATEMENT CONTAINED HEREON.

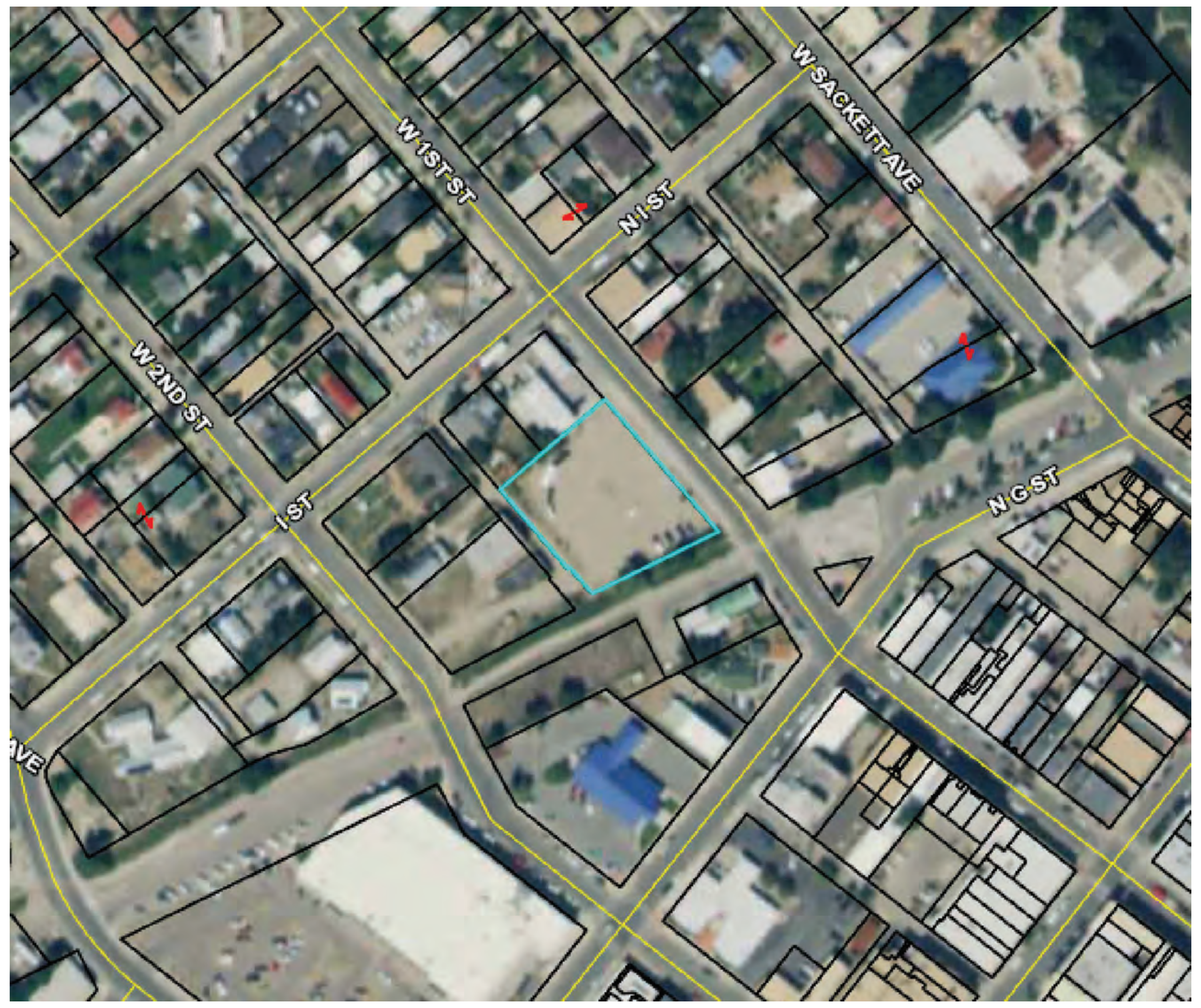
REVISED: DECEMBER 7, 2021	RESIDENCES AT SALIDA BOTTLING COMPANY
DECEMBER 20, 2021	LOCATED IN BLOCK 19, CITY OF SALIDA, CHAFFEE COUNTY, COLORADO
JOB # 20219	
DATE: NOVEMBER 11, 2021	LANDMARK SURVEYING & MAPPING
SHEET 2 OF 2	P.O. BOX 668 SALIDA, CO 81201 PH 719.539.4021 FAX 719.539.4031

RESIDENCES AT SBC

CIVIL ENGINEERING PLANS

SALIDA, CO

JANUARY, 2022



VICINITY MAP
(NO SCALE)

N

CIVIL ENGINEERING PLANS

SHEET INDEX

SHEET NO.	DESCRIPTION
1.	CIVIL COVER SHEET
2.	DETAILS
3.	DETAILS
4.	GRADING PLAN
5.	SEWER LINE A
6.	SEWER LINE B
7.	WATER MAIN 1ST ST
8.	UTILITY PLAN

GENERAL NOTES:

1. ANY CHANGES FROM THE PLAN, STANDARD NOTES, STANDARD DESIGNS, OR SPECIFICATIONS SHALL BE CONSIDERED NON-CONFORMING UNLESS APPROVED IN WRITING BY THE ENGINEER OF RECORD. INSTALLATIONS NOT CONFORMING TO THE ABOVE SHALL BE REMOVED AND REPLACED AND/OR CORRECTED AT THE CONTRACTOR'S EXPENSE.
2. THE CONTRACTOR SHALL PROVIDE SUBMITTALS FOR ALL MATERIALS A MINIMUM OF 1 WEEK PRIOR TO START OF CONSTRUCTION FOR REVIEW AND APPROVAL BY THE ENGINEER. ANY MATERIALS NOT RECEIVING APPROVAL PRIOR TO INSTALLATION MAY BE DISALLOWED FOR PAYMENT AND/OR BE REQUIRED TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.
3. THE CONTRACTOR SHALL PROVIDE CONSTRUCTION STAKING FOR ALL ALIGNMENTS AND GRADES BY A LICENSED SURVEYOR. CONSTRUCTION SURVEYING AND FIELD STAKES SHALL UTILIZE THE SAME HORIZONTAL AND VERTICAL DATUM AND BASIS OF BEARING AS THE DESIGN.
4. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION. CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING EXISTING CONDITIONS WITH DIGITAL PICTURES, TO BE STORED IN THE PROJECT ELECTRONIC FILES.
5. THE CONTRACTOR SHALL LOCATE ALL UTILITIES AND MONUMENTS OF EVERY NATURE, WHETHER SHOWN HEREON OR NOT, AND PROTECT THEM FROM DAMAGE. ALL UTILITIES AND MONUMENTS SHOULD BE FLAGGED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BEAR THE TOTAL EXPENSE OF REPAIR OR REPLACEMENT OF UTILITIES AND MONUMENTS DAMAGED OR DESTROYED.
6. ANY MONUMENTS DISTURBED DURING CONSTRUCTION MUST BE RESET BY A LICENSED SURVEYOR. NOTE THAT RESETTING OF SURVEY MONUMENTS BY ANYONE OTHER THAN A LICENSED SURVEYOR IS A CRIME.
7. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS INCLUDING BUT NOT LIMITED TO:
   - A. OSHA REGULATIONS
   - B. NPDES STORMWATER REGULATIONS
   - C. LOCAL, STATE, AND FEDERAL PERMITS
   - D. CLEAN WATER ACT
   - E. CITY OF SALIDA CONSTRUCTION STANDARDS AND SPECIFICATIONS.
   - F. LOCALLY ADOPTED BUILDING CODES

7\. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS NECESSARY FOR COMPLETION OF THE WORK, UNLESS SPECIFICALLY NOTED OTHERWISE.

8\. THE CONTRACTOR SHALL WARRANTY ALL WORK FOR A PERIOD OF ONE YEAR COMMENCING FROM THE TIME OF FINAL ACCEPTANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND REPLACEMENT OF ALL FAILURES DETERMINED BY THE ENGINEER TO BE CAUSED BY DEFECTS IN MATERIAL OR WORKMANSHIP DURING THE WARRANTY PERIOD.

9\. THE CONTRACTOR SHALL MAINTAIN A SET OF PLANS ON THE JOB SITE AT ALL TIMES AND PROVIDE SUBCONTRACTORS WITH A SET OF PLANS. THE CONTRACTOR SHALL MAINTAIN A RED-LINED SET OF PLANS, INDICATING ALL CONSTRUCTION CHANGES, AND KEEP IT UP TO DATE AT ALL TIMES. INCOMPLETE REDLINES SHALL BE SUFFICIENT CAUSE FOR REJECTION OF PAYMENT APPLICATIONS. A COMPLETED RED LINE SET SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO SUBSTANTIAL COMPLETION.

10\. ALL CONSTRUCTION SHALL COMPLY WITH THE CONSTRUCTION CONTRACT, THESE PLANS AND THE APPROVAL AGENCY CONSTRUCTION STANDARDS AND SPECIFICATIONS IN FORCE AT THE TIME OF THE BID AWARD. IN CASE OF CONFLICT THE FIRST LISTED IN THE ORDER ABOVE SHALL RULE.

11\. CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING WITH THE TESTING AGENCIES AND PROJECT ENGINEER TO ENSURE THAT ALL REQUIRED TESTING IS COMPLETED PRIOR TO PROCEEDING WITH THE WORK. RETESTING REQUIRED DUE TO FAILED MATERIAL TESTS AND/OR REQUESTS FOR TESTING OUTSIDE OF NORMAL BUSINESS HOURS SHALL BE AT THE CONTRACTOR'S EXPENSE.

12\. CONTRACTOR SHALL PROVIDE BUSINESSES AND PRIVATE RESIDENCES NOTICE A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK THAT WILL IMPACT ACCESS OR SERVICES TO THEIR PROPERTIES.

13\. CONTRACTOR SHALL PROVIDE THE APPLICABLE PUBLIC WORKS DEPARTMENT NOTICE A MINIMUM OF 7 DAYS PRIOR TO COMMENCING WORK THAT WILL IMPACT PUBLIC ACCESS OF SERVICES.

14\. THE CONTRACTOR SHALL AT ALL TIMES MAINTAIN PROPER BARRICADING, DUST CONTROL, TRAFFIC CONTROL, SHORING AND SAFETY MEASURES OF EVERY NATURE. ALL EXCAVATIONS LEFT OPEN OVERNIGHT MUST BE BARRICADED TO PREVENT VEHICULAR AND PEDESTRIAN ACCESS.

15\. THE CONTRACTOR SHALL OBTAIN WRITTEN AGREEMENT TO UTILIZE OFF-SITE PROPERTIES FOR STAGING OR STORAGE OF MATERIALS. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MINIMIZE ANY NUISANCE CONDITIONS ARISING FROM THEIR STAGING AND MATERIAL STORAGE AREAS.

16\. THE CONTRACTOR SHALL COORDINATE WITH THE APPLICABLE PUBLIC WORKS DEPARTMENT TO ARRANGE FOR ANY CONSTRUCTION WATER NEEDED PRIOR TO THE START OF CONSTRUCTION.

17\. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR APPROVAL BY THE GOVERNING ENTITY, WHICH MUST BE APPROVED PRIOR TO COMMENCING WITH THE WORK.

18\. CONTRACTOR SHALL KEEP WEIGHT TICKETS, BATCH TICKET, INVOICES, ETC. FOR ALL MATERIAL INCORPORATED INTO THE PROJECT. COPIES MUST BE SUBMITTED TO THE ENGINEER PRIOR TO PAYMENT FOR ITEMS.

19\. THE CONTRACTOR SHALL SCHEDULE THE WORK TO MINIMIZE THE DISTURBANCE OF MAIL DELIVERY TO ALL AFFECTED ADDRESS. WHEN NECESSARY, CONTRACTOR SHALL NOTIFY EXISTING RESIDENCES OF IMPENDING DISTURBANCE A MINIMUM OF ONE WEEK PRIOR TO REMOVING/OBSTRUCTING MAILBOXES.

20\. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING OR REPAIRING ANY DAMAGE TO PRIVATE PROPERTY IMPROVEMENTS AND FOR FINAL CLEAN UP AND STREET SWEEPING OF THE JOB SITE.

LEGEND

Symbol	Description
	PROJECT BOUNDARY/RIGHT-OF-WAY
	EXISTING/ADJACENT RIGHT-OF-WAY
	NEW PROPERTY LINE
	EXISTING LOT/PROPERTY LINE
	EDGE OF EXISTING ROADWAY
	EXISTING ROAD CENTERLINE
X	EXISTING FENCE LINE
OE-T-TV	EXISTING OVERHEAD ELECTRIC/TELEPHONE/TV
UGT	EXISTING UNDERGROUND TELEPHONE
G	EXISTING GAS LINE
E	EXISTING ELECTRIC LINE
S	EXISTING SEWER MAIN
8"S	NEW 8" SEWER MAIN
	NEW SEWER SERVICE LINE
W	EXISTING WATER MAIN
8"W	NEW 8" WATER MAIN
	NEW WATER SERVICE LINE
7185	EXISTING MAJOR CONTOUR
7186	EXISTING MINOR CONTOUR
	PUBLIC UTILITY EASEMENT
	SAW-CUT LINE
	LIMITS OF REMOVAL
	NEW SEWER MANHOLE
	NEW WATER TEE
	NEW WATER BEND
	NEW WATER VALVE
	NEW FIRE HYDRANT
	NEW CURB STOP (WATER)
W	NEW METER BOX (WATER)
7	CONSTRUCTION NOTE CALL-OUT
1.30%	NEW GRADIENT
D	DEPTH
R	RADIUS
PP	POWER POLE
TP	TOP OF PIPE
FH	FIRE HYDRANT
INV	INVERT
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
FG	FINISHED GRADE
FL	FLOWLINE
FS	FINISHED SURFACE

OWNER:

SALIDA BOTTLING CO.
9707 CR 163
SALIDA, CO 81201

SURVEYOR:

LANDMARK SURVEYING & MAPPING
202 N F ST
SALIDA, CO 81201
PH: (719) 539-4021
CONTACT: SYD SCHIEREN

BASIS OF BEARINGS:

GRID NORTH FROM COLORADO STATE PLANE COORDINATE SYSTEM CENTRAL ZONE

BEFORE YOU DIG, CALL: 811
IT'S THE LAW! DIG ALERT CALL AT LEAST TWO WORKING DAYS PRIOR TO EXCAVATING
UTILITY NOTIFICATION CENTER OF COLORADO
FOR WATER EMERGENCIES, WATER LEAKS, OR DAMAGED PIPELINES, THE CONTRACTOR SHALL CALL:
SALIDA PUBLIC WORKS – (719) 539-6257

REVIEW SET 1/18/22

RESIDENCES AT SBC - CIVIL ENGINEERING PLANS

PRIVATE ENGINEER'S NOTES TO CONTRACTOR

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES, CONDUITS OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN ON THESE DRAWINGS. THE CONTRACTOR FURTHER ASSUMES ALL LIABILITY AND RESPONSIBILITY FOR THE UTILITY PIPES, CONDUITS, OR STRUCTURES SHOWN OR NOT SHOWN ON THESE DRAWINGS.
CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE COUNTY, THE CITY, THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

PREPARED FOR:
SALIDA BOTTLING CO.
9707 CR 163
SALIDA, CO 81201

PREPARED UNDER THE DIRECTION OF: DATE
WILLIAM B. HUSSEY CRABTREE GROUP, INC
L.C.E. NO. 56989 EXP. DATE 10/31/2023

PREPARED BY:
CRABTREE GROUP INC.
ENGINEERING SMART GROWTH™
325 D STREET, SALIDA, CO 81201, PH: 719-539-1675
918 CUYAMA ROAD, OJAI, CA 93023, PH: 719-221-1799

SEAL: COLORADO LICENSED PROFESSIONAL ENGINEER, WILLIAM BERNARD HUSSEY, 1/18/2022, 56989

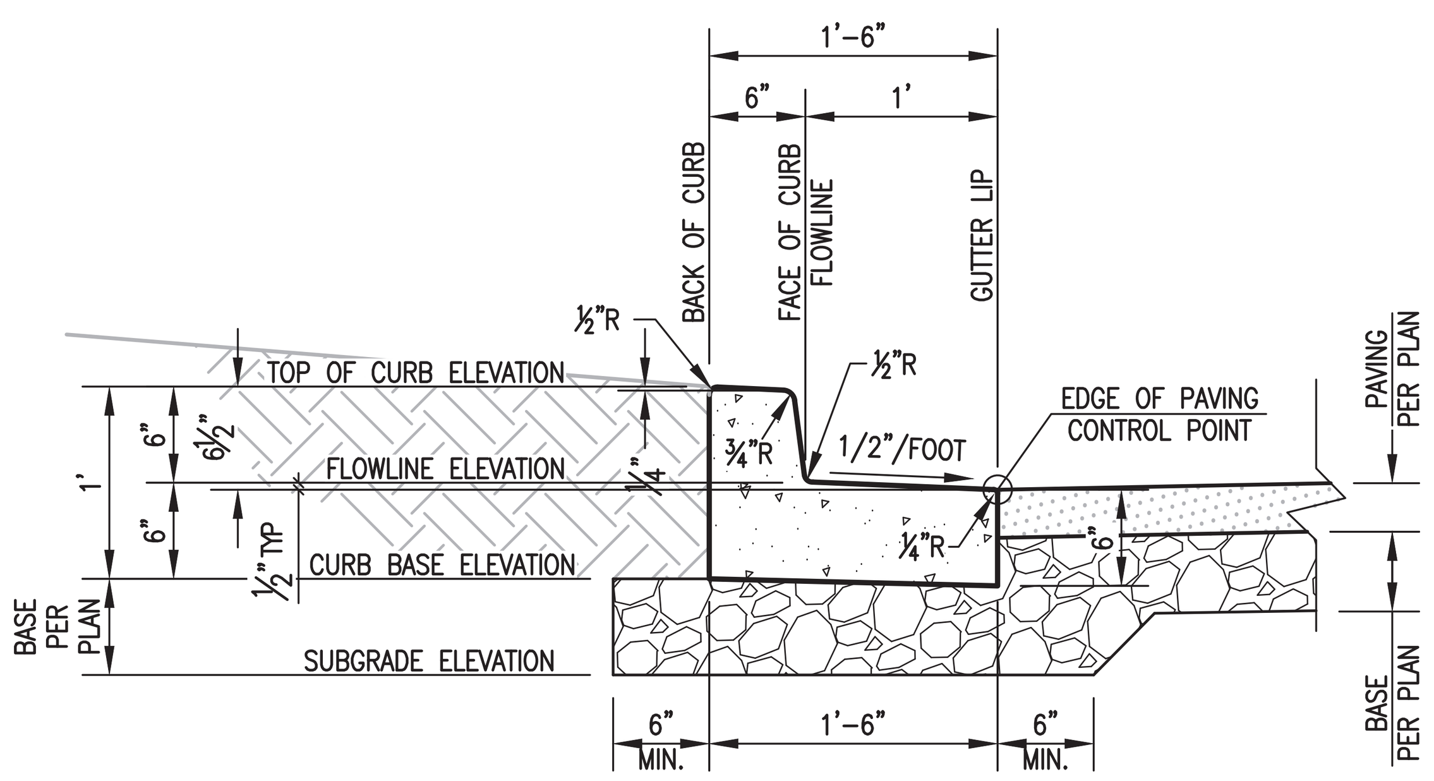
DATE	BY	MARK	REVISIONS	APPR.	DATE
ENGINEER				REVISION AGENCY	

CITY OF SALIDA

DESIGNED BY	WBH	APPROVED BY:
DRAWN BY	WBH	
CHECKED BY	WBH	AGENCY HEAD DATE
SCALE	NONE	BENCHMARK: 1 1/2" ALUM. CAP ON #5 REBAR LS 37937 ELEV.=7059.64'
DATE	JAN. 2022	

RESIDENCES AT SBC
SALIDA, CO
CIVIL ENGINEERING PLANS
COVER SHEET
NOTES, LEGEND, VICINITY MAP, SHEET INDEX

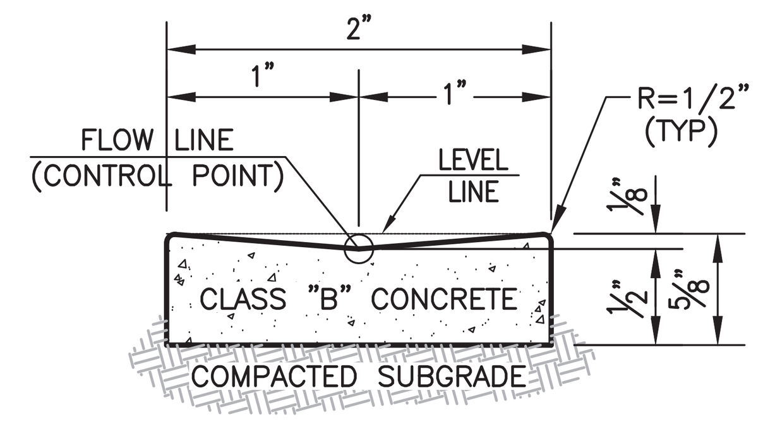
SHEET NO. 1 OF 8 SHTS.
PROJECT NO. 20037



DETAIL

23 18" "SPILL" CURB AND GUTTER

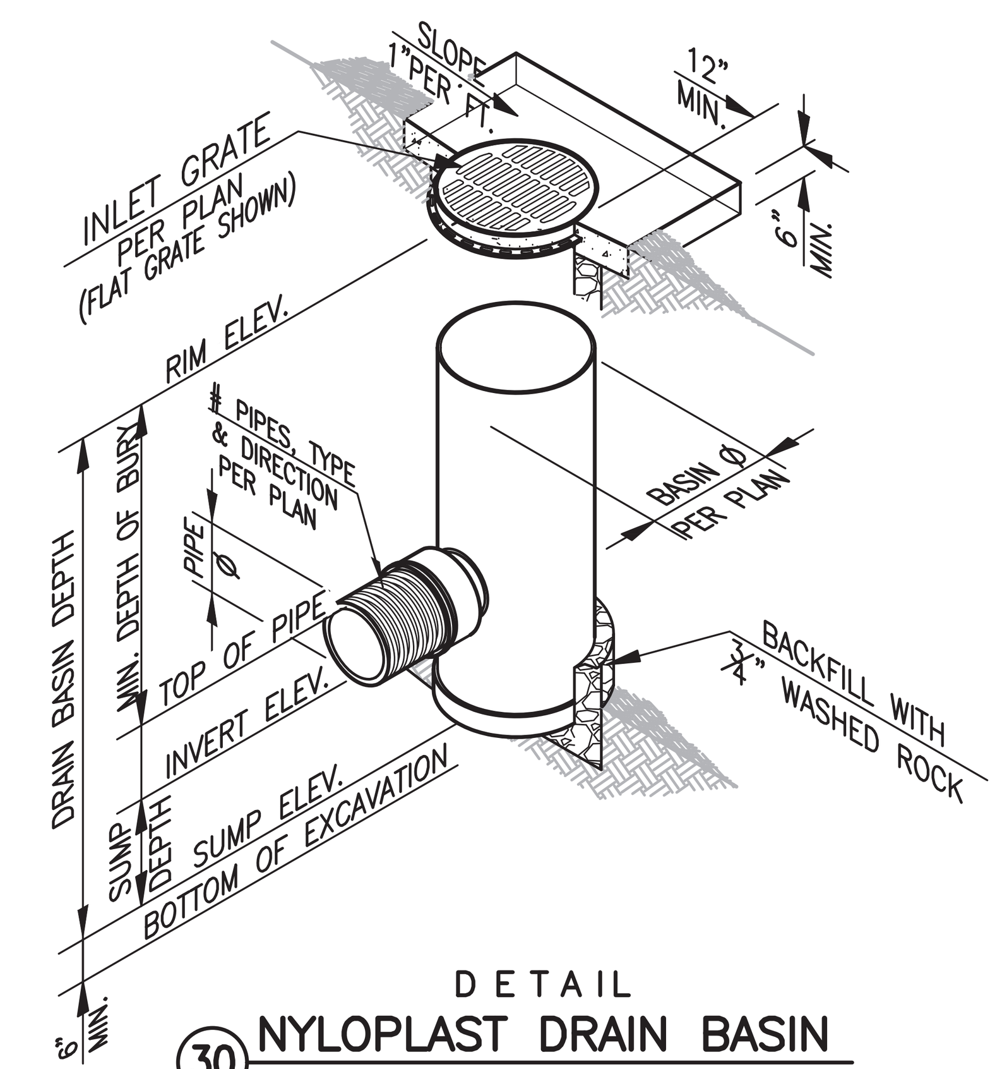
(NO SCALE)



DETAIL

24 2' RIBBON GUTTER

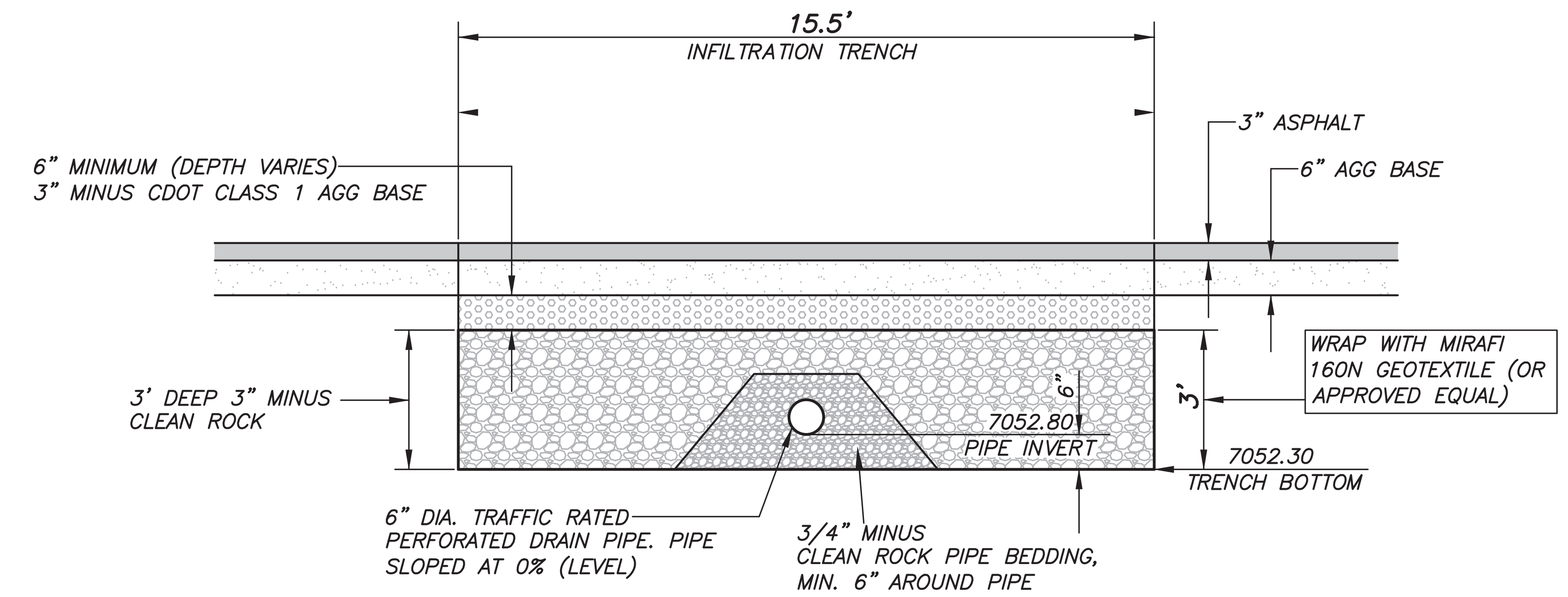
(NO SCALE)



DETAIL

30 NYLOPLAST DRAIN BASIN

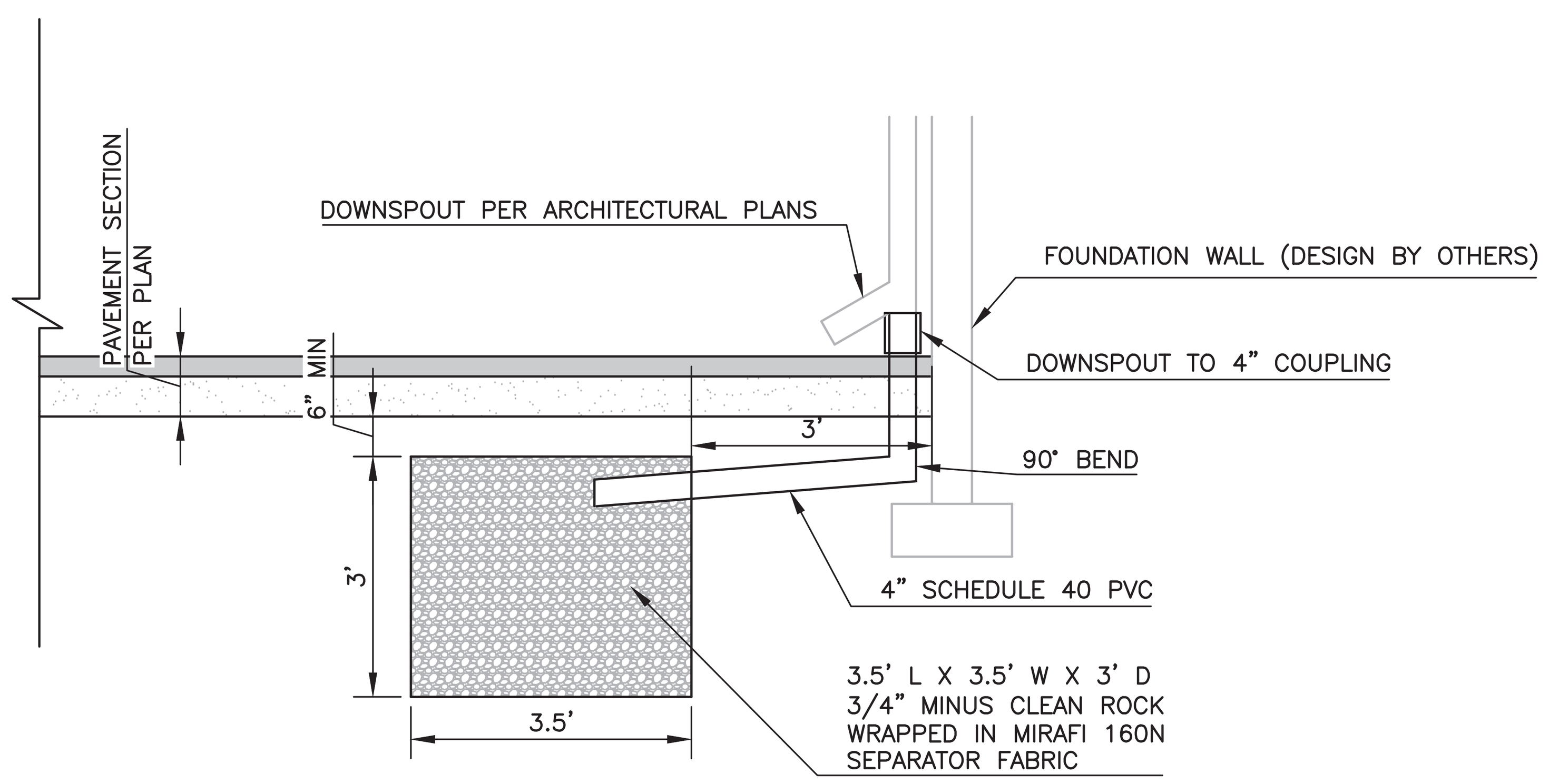
(NO SCALE)



DETAIL

31 INFILTRATION TRENCH

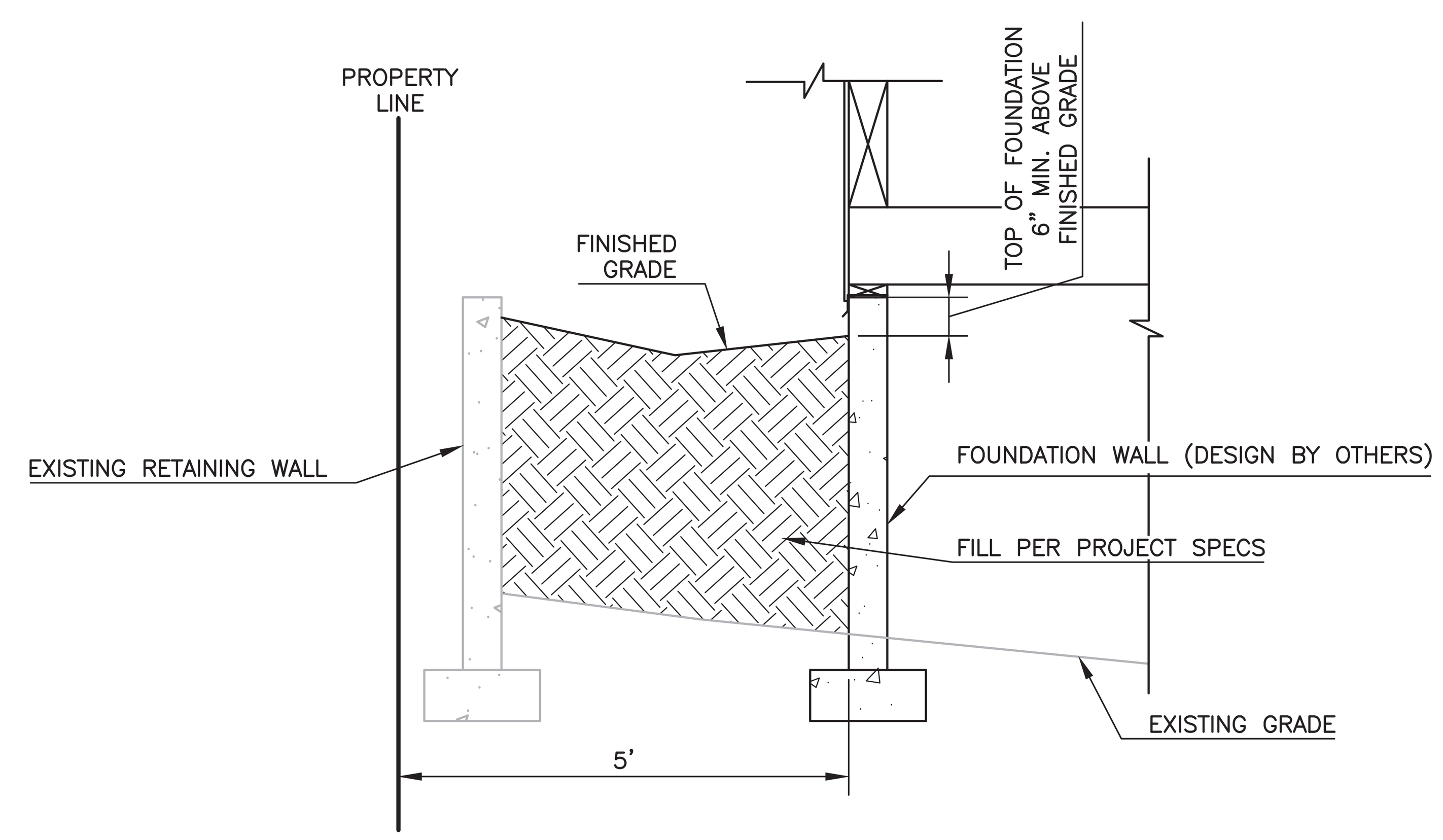
(NO SCALE)



DETAIL

32 DOWNSPOUT INFILTRATION

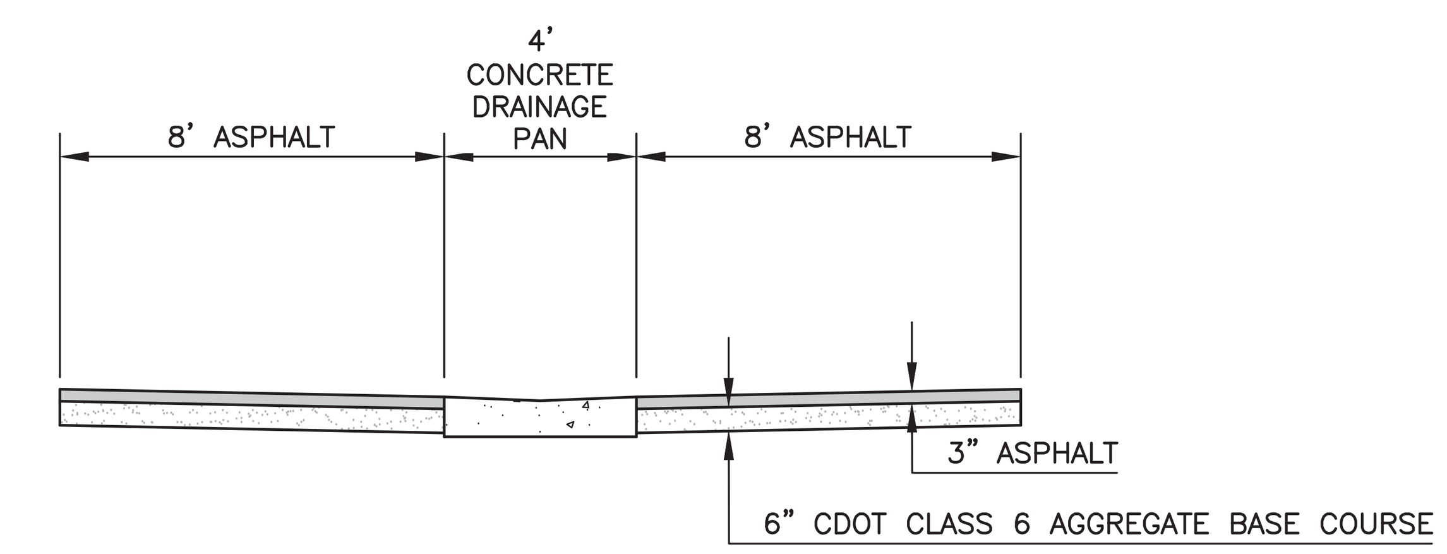
(NO SCALE)



SECTION A

NW PROPERTY LINE GRADING

(NO SCALE)



TYPICAL SECTION

PUBLIC ALLEY PAVING

(NO SCALE)

ALLEY PAVING HAS BEEN RECOMMENDED BY SALIDA PUBLIC WORKS. IF REQUIRED IN THE FINAL PD, THIS TYPICAL SECTION IS PROPOSED.

REVIEW SET 1/18/22

PRIVATE ENGINEER'S NOTES TO CONTRACTOR

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES, CONDUITS OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN ON THESE DRAWINGS. THE CONTRACTOR FURTHER ASSUMES ALL LIABILITY AND RESPONSIBILITY FOR THE UTILITY PIPES, CONDUITS, OR STRUCTURES SHOWN OR NOT SHOWN ON THESE DRAWINGS. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE COUNTY, THE CITY, THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

PREPARED FOR:
SALIDA BOTTLING CO.
9707 CR 163
SALIDA, CO 81201
PHONE: ----

PREPARED UNDER THE DIRECTION OF:
DATE
WILLIAM B. HUSSEY — CRABTREE GROUP, INC
L.C.E. NO. 56989 — EXP. DATE 10/31/2023

PREPARED BY:
CRABTREE GROUP INC.
ENGINEERING SMART GROWTH™
325 D STREET, SALIDA, CO 81201, PH: 719-539-1675
918 CUYAMA ROAD, OJAI, CA 93023, PH: 719-221-1799

SEAL
COLORADO LICENSED PROFESSIONAL ENGINEER — WILLIAM BERNARD HUSSEY — 1/18/2022 — 56989

DATE	BY	MARK	REVISIONS	APPR.	DATE
ENGINEER				REVISION AGENCY	

CITY OF SALIDA

DESIGNED BY	WBH	APPROVED BY:
DRAWN BY	WBH	
CHECKED BY	WBH	AGENCY HEAD — DATE
SCALE	NONE	BENCHMARK: 1 1/2" ALUM. CAP ON #5 REBAR LS 37937 ELEV.=7059.64'
DATE	JAN. 2022	

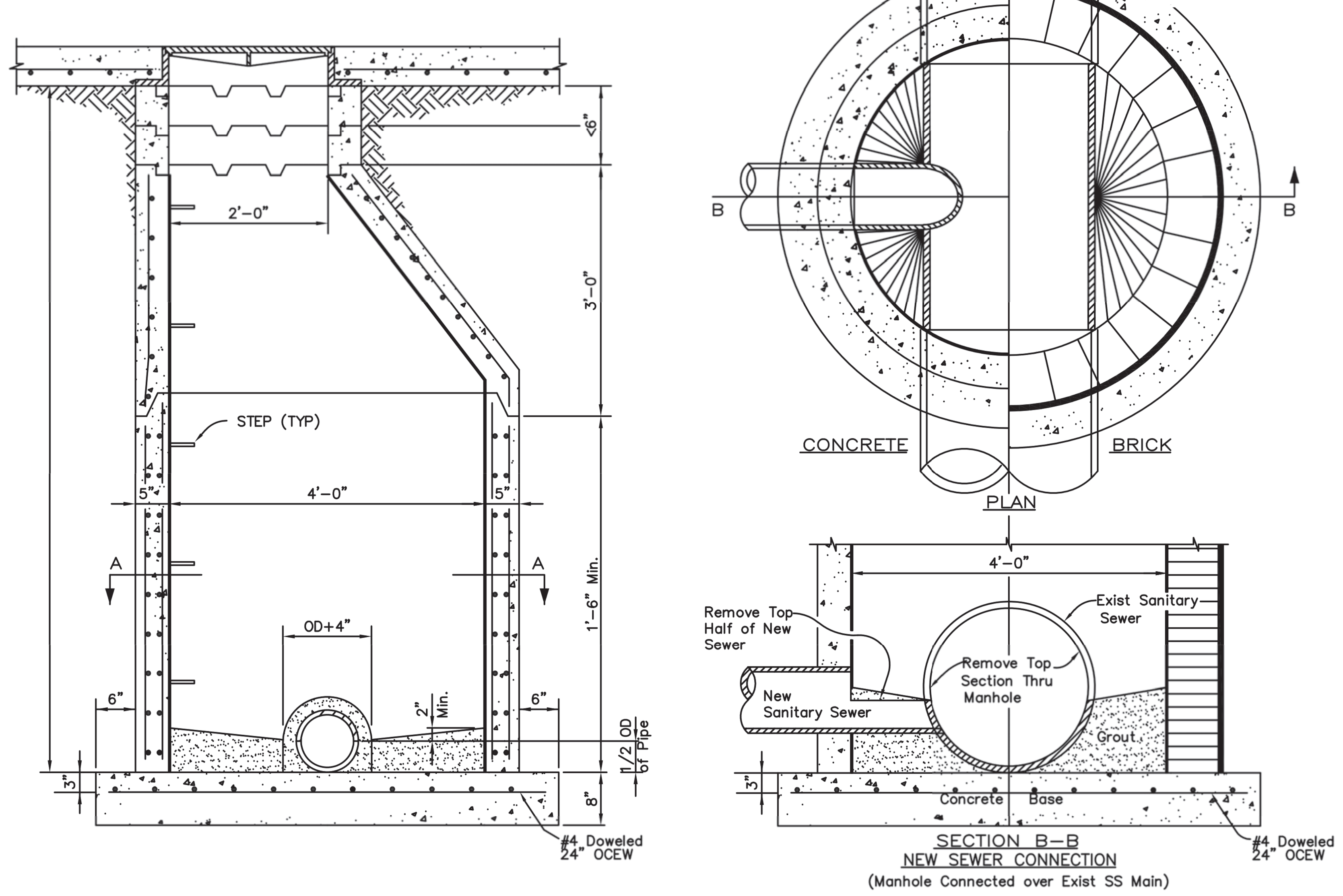
RESIDENCES AT SBC
SALIDA, CO
CIVIL ENGINEERING PLANS
DETAILS
GRADING AND DRAINAGE

SHEET NO. 2 OF 8 SHTS.
PROJECT NO. 20037

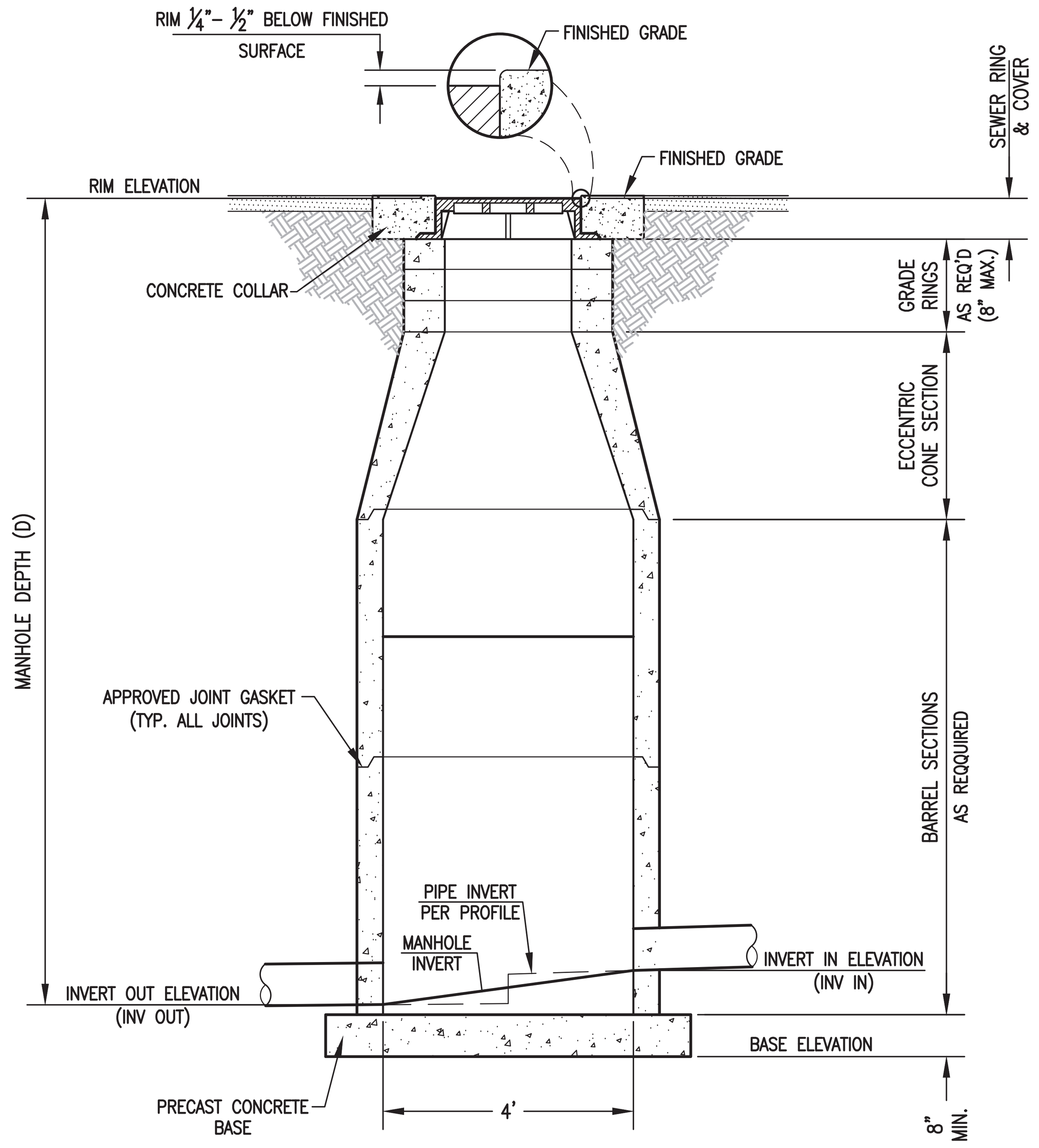
STREET MANHOLE RING & COVER:
DEETER 1266 OR APPROVED EQUAL
Street MH Ring & Cover 290 Lb. Min.
Street Manhole Ring & Cover to be Machined.

GENERAL NOTE:
Precast Manholes Shall Conform to ASTM Specification C 478, with Revisions.

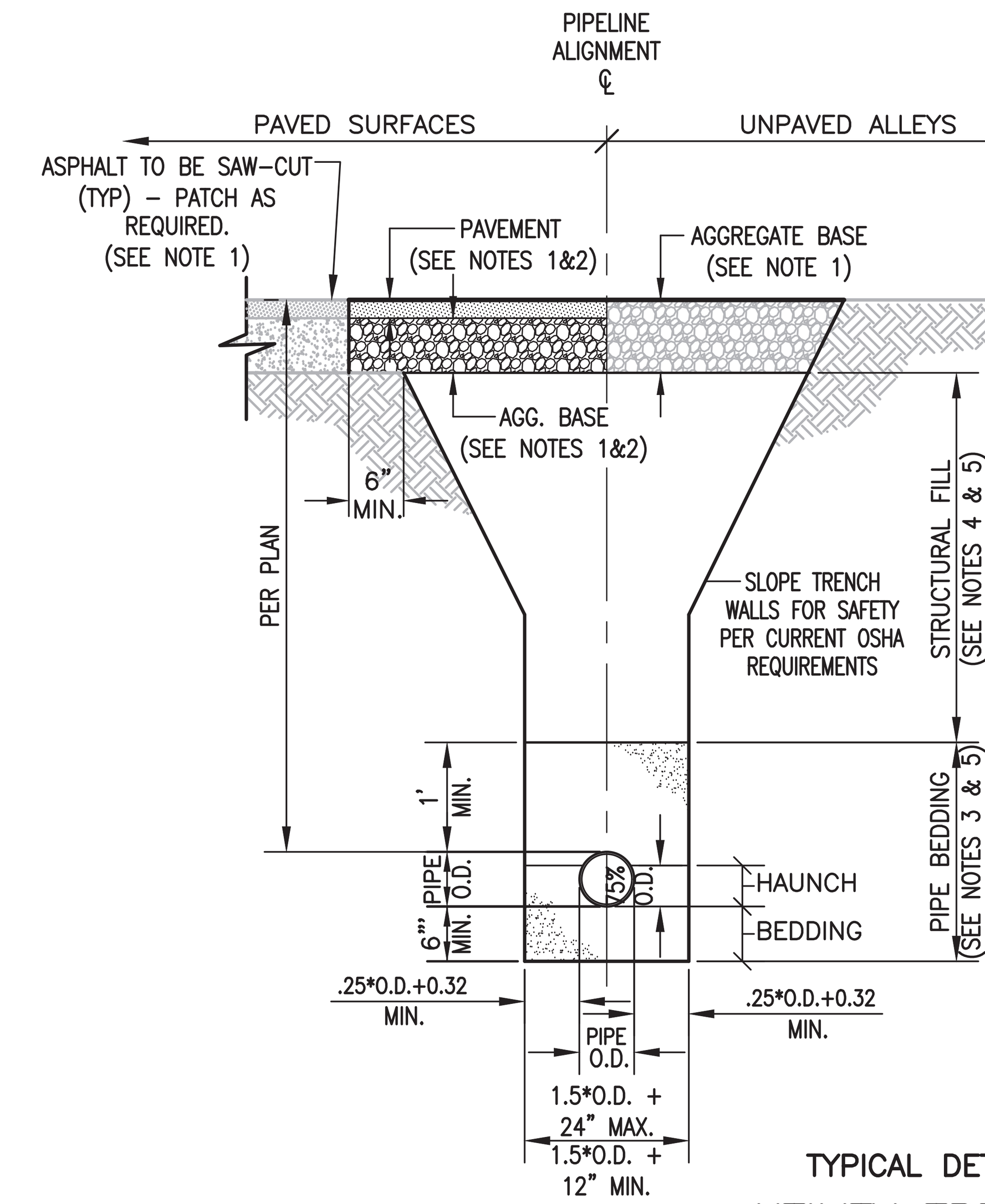
* SANITARY OR STORM SEWER



DETAIL
(40) SEWER MANHOLE
(NO SCALE)



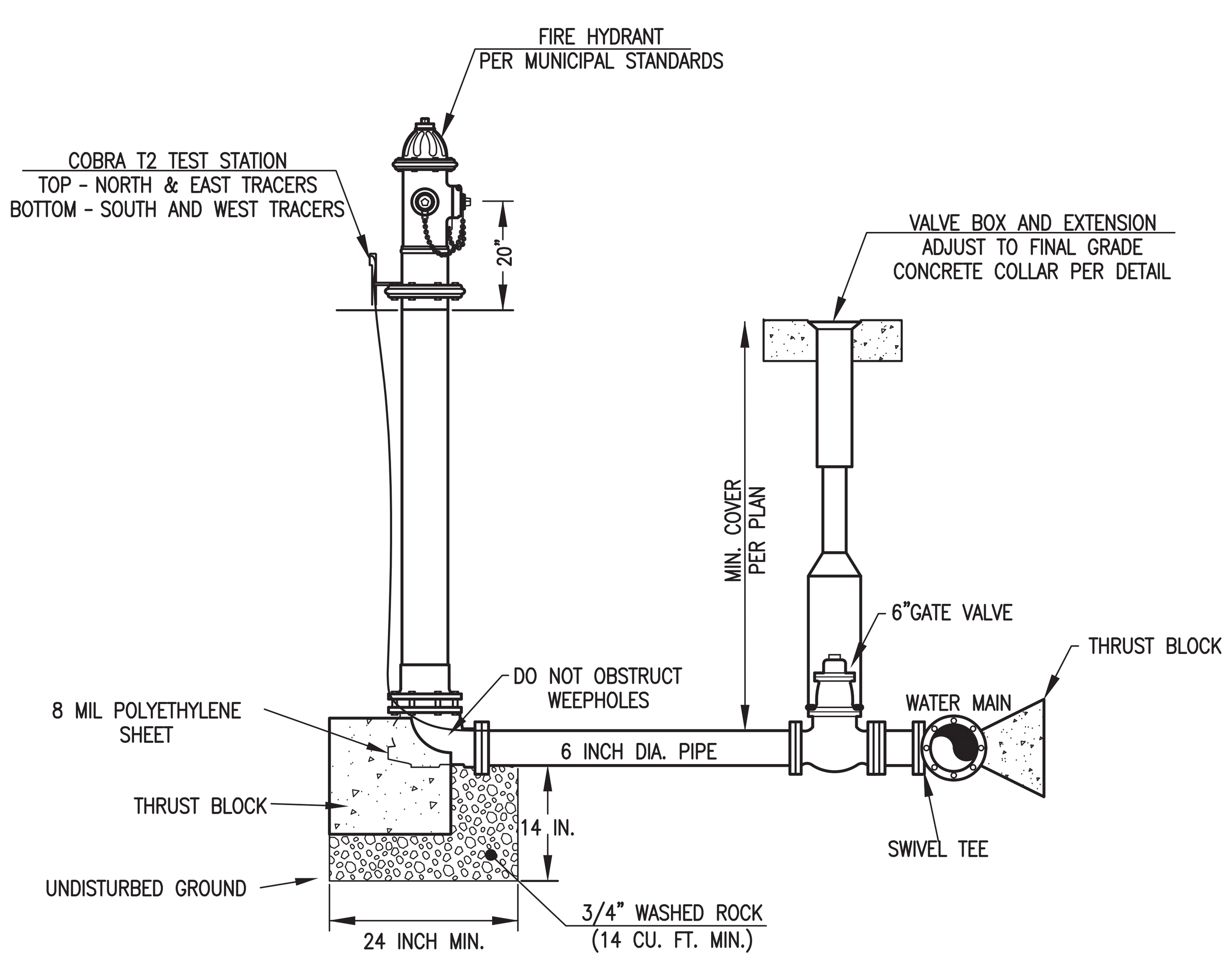
DETAIL
(41) SEWER MANHOLE
(NO SCALE)



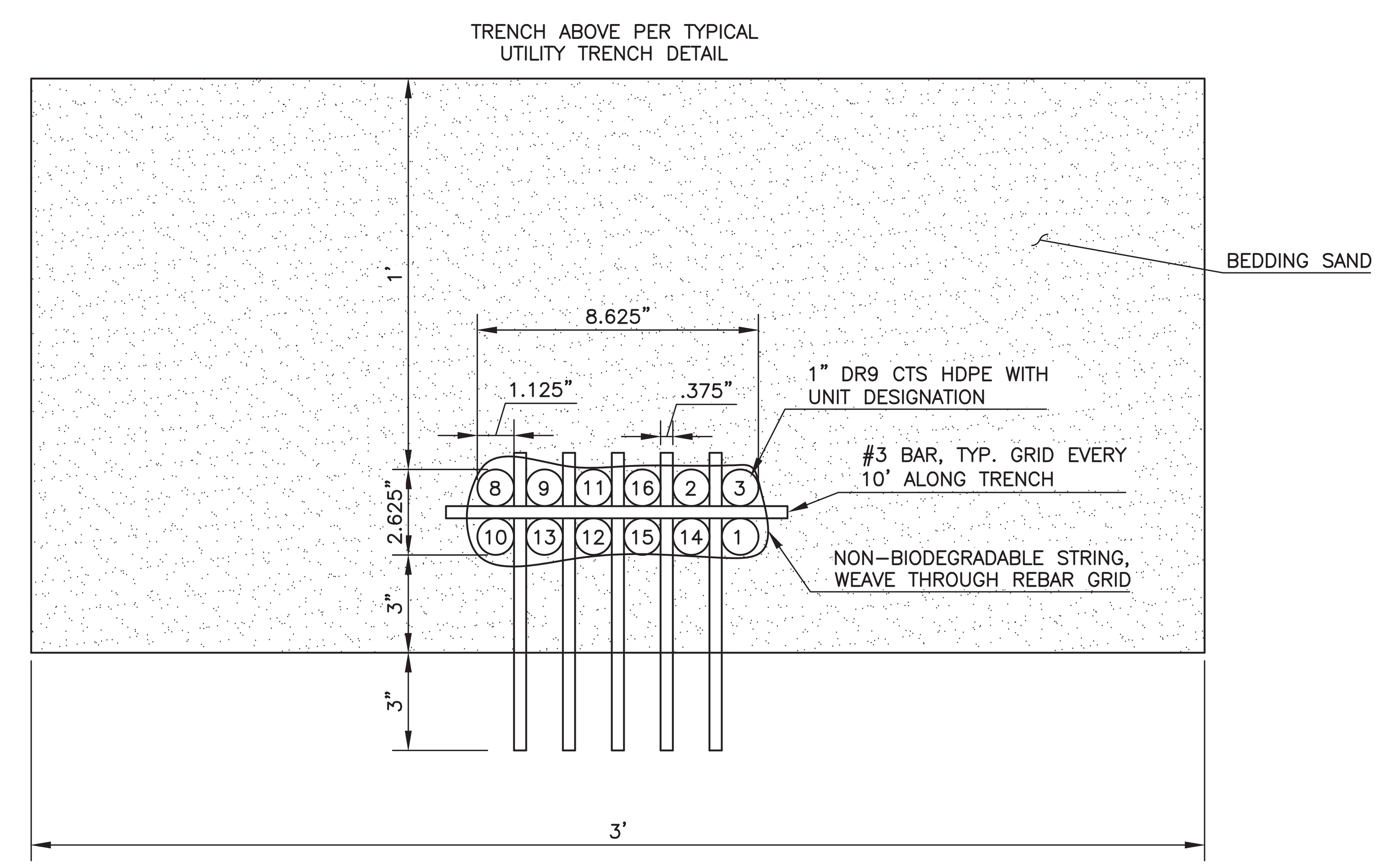
TYPICAL DETAIL
UTILITY TRENCH
(NO SCALE)

TRENCH SECTION NOTES

1. STREET AND ALLEY PATCHING SHALL COMPLY WITH THE APPROPRIATE CITY OF SALIDA OR CDOT PATCHING STANDARDS.
2. NEW ASPHALT OR ASPHALT OVERLAYS SHALL COMPLY WITH THE PROJECT SPECIFIC STANDARDS PROVIDED IN THE STREET AND/OR ASPHALT PATCHING NOTES.
3. PIPE BEDDING SHALL BE 3/4" CLEAN CRUSHED ROCK FOR SEWER MAINS. PIPE BEDDING SHALL BE CDOT CLASS 6 BASE COURSE FOR ALL OTHER UTILITIES.
4. STRUCTURAL FILL SHALL MEET CDOT CLASS 1 AGGREGATE BASE SPECIFICATIONS.
5. FILL AND BEDDING MATERIAL TO BE PLACED IN 8-INCH MAXIMUM LIFTS (COMPACTED DEPTH) TO THE FOLLOWING MINIMUM PERCENTAGES UNLESS NOTED OTHERWISE:
   A. STREETS, PARKING LOTS & ALLEYS: 95% MODIFIED PROCTOR (ASTM D1557)
   B. UTILITY EASEMENTS OUTSIDE THE STREET SECTION: 90% MODIFIED PROCTOR (ASTM 1557).MA
   C. UNDEVELOPED LAND: 80% MODIFIED PROCTOR (ASTM 1557).
6. EXCAVATED MATERIAL CONTAINING RUBBISH, FROZEN MATERIAL, ORGANIC DEBRIS, ASPHALT, CONCRETE OR OTHER DELETERIOUS MATERIALS NOT SUITABLE FOR STRUCTURAL FILL SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF MATERIAL IN A FASHION THAT COMPLIES WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS. THE OWNER MAY REQUIRE DOCUMENTATION OF PROPER DISPOSAL AS A CONDITION OF FINAL PAYMENT.
7. SEE WATER AND/OR SEWER GENERAL NOTES FOR PIPE SPECIFICATIONS.
8. INSTALL INSULATED GAUGE 12 TRACER WIRE, TAPED TO THE TOP OF PIPE, (FOR ALL NON-METALLIC PIPES) AND BROUGHT TO THE TOP OF EACH CLEANOUT.



DETAIL
(55) FIRE HYDRANT ASSEMBLY
(NO SCALE)



TRENCH SECTION B-B (LOOKING TOWARDS 1ST ST)
(56) WATER SERVICES IN COMMON TRENCH
(NO SCALE)

REVIEW SET 1/18/22

PRIVATE ENGINEER'S NOTES TO CONTRACTOR

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SALIDA BOTTLING CO.
9707 CR 163
SALIDA, CO 81201
PHONE: ----

PREPARED UNDER THE DIRECTION OF:
DATE
WILLIAM B. HUSSEY — CRABTREE GROUP, INC
L.C.E. NO. 56989 — EXP. DATE 10/31/2023

PREPARED BY:
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325 D STREET, SALIDA, CO 81201, PH: 719-539-1675
918 CUYAMA ROAD, OJAI, CA 93023, PH: 719-221-1799

SEAL
COLORADO LICENSED PROFESSIONAL ENGINEER — WILLIAM BERNARD HUSSEY — 56989 — 1/18/2022

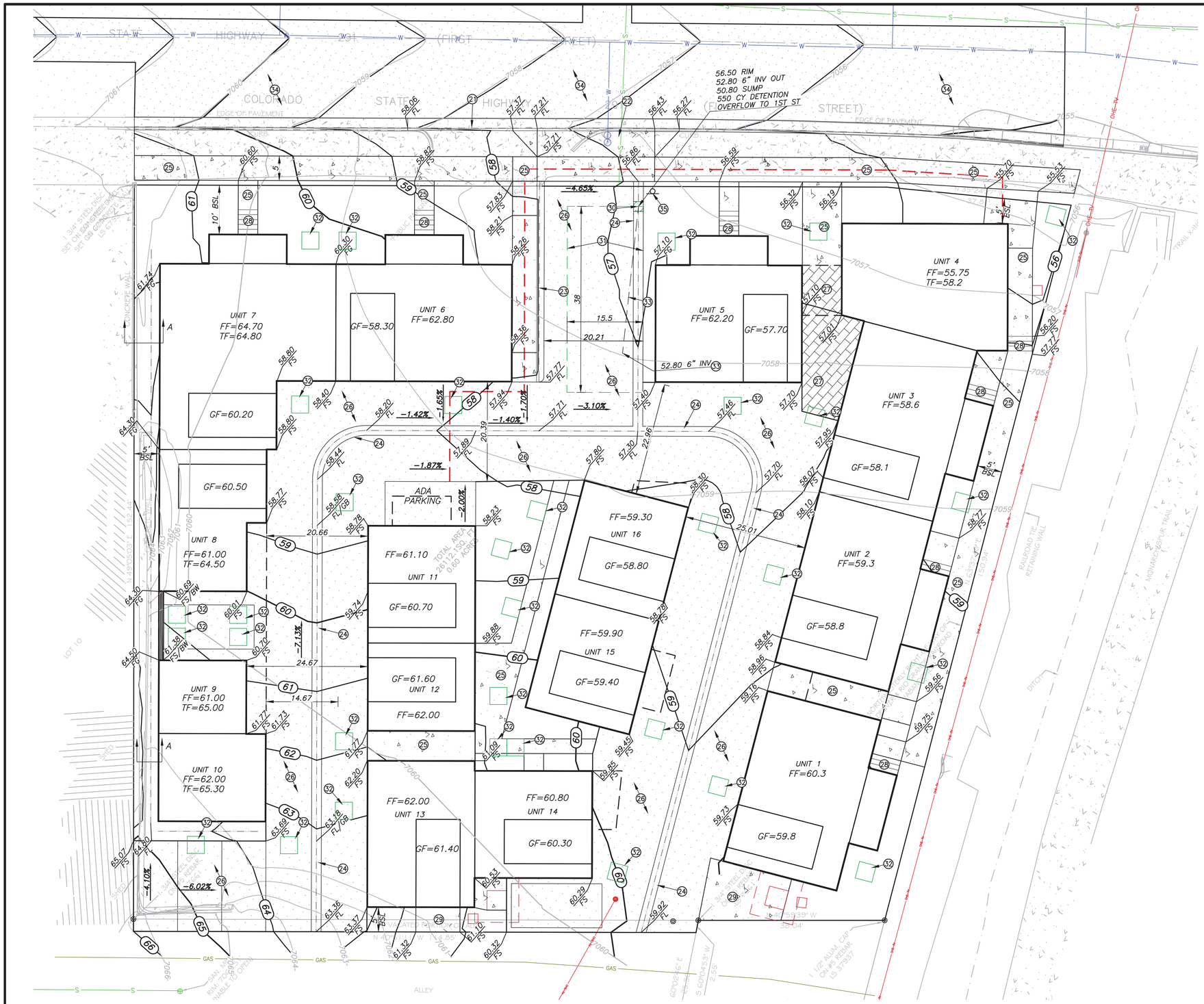
DATE	BY	MARK	REVISIONS	APPR.	DATE
ENGINEER				REVISION AGENCY	

CITY OF SALIDA

DESIGNED BY	WBH	APPROVED BY:
DRAWN BY	WBH	
CHECKED BY	WBH	AGENCY HEAD — DATE
SCALE	######	BENCHMARK: 1 1/2" ALUM. CAP ON #5 REBAR LS 37937 ELEV.=7059.64'
DATE	JAN. 2022	

RESIDENCES AT SBC
SALIDA, CO
CIVIL ENGINEERING PLANS
DETAILS
UTILITIES

SHEET NO. 3 OF 8 SHTS.
PROJECT NO. 20037



GRAPHIC SCALE

10' 0 10' 20' 30'

(CONTOUR INTERVAL = 1 FOOT)

CONSTRUCTION NOTES:

21	FURNISH AND INSTALL CURB AND GUTTER PER CDOT ACCESS PERMIT
22	FURNISH AND INSTALL DRIVEWAY PER CDOT ACCESS PERMIT
23	FURNISH AND INSTALL 18" SPILL CURB AND GUTTER PER DETAIL
24	FURNISH AND INSTALL 2' CONCRETE DRAINAGE PAN PER DETAIL
25	FURNISH AND INSTALL 4" CONCRETE SIDEWALK OVER 4" CDOT CLASS 6 AGGREGATE BASE COURSE
26	FURNISH AND INSTALL 3" ASPHALT PAVING OVER 6" CDOT CLASS 6 AGGREGATE BASE COURSE (OR BRICK PAVERS, SECTION TO BE DETERMINED)
27	FURNISH AND INSTALL BRICK PAVERS OVER LEVELING COURSE
28	STAIRS AS NEEDED
29	FURNISH AND INSTALL 6" CONCRETE DRIVEWAY OVER 6" CDOT CLASS 6 AGGREGATE BASE COURSE
30	FURNISH AND INSTALL 24" NYLOPLAST DRAIN BASIN WITH 2'X2' ROAD AND HIGHWAY GRATE INLET AND CONCRETE COLLAR
31	FURNISH AND INSTALL 3' DEPTH DRAIN ROCK FOR SITE DETENTION AND INFILTRATION, WRAPPED IN PERMEABLE SEPARATOR FABRIC
32	FURNISH AND INSTALL 3.5' WIDE X 3.5' LONG X 3' DEPTH DRAIN ROCK WRAPPED IN FILTER FABRIC FOR DOWNSPOUT DETENTION AND INFILTRATION
33	FURNISH AND INSTALL 6" TRAFFIC RATED PERFORATED PIPE
34	FURNISH AND INSTALL 4" ASPHALT OVER 6" CDOT CLASS 6 AGGREGATE BASE COURSE. FINAL THICKNESSES PER CDOT UTILITY PERMIT

ADA ACCESSIBLE ROUTE

REVIEW SET 1/18/22

PRIVATE ENGINEER'S NOTES TO CONTRACTOR

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PREPARED FOR:
SALIDA BOTTLING CO.
9707 CR 163
SALIDA, CO 81201
PHONE: ----

PREPARED UNDER THE DIRECTION OF: _____ DATE

WILLIAM B. HUSSEY — CRABTREE GROUP, INC
L.C.E. NO. 56989 — EXP. DATE 10/31/2023

PREPARED BY:
CRABTREE GROUP INC.
ENGINEERING SMART GROWTH™
925 D STREET, SALIDA, CO 81201, PH: 719-539-1675
918 CUYAMA ROAD, OJAI, CA 93023, PH: 719-221-1799

SEAL: COLORADO LICENSED — WILLIAM B. HUSSEY — 1/18/2022 — 56989 — PROFESSIONAL ENGINEER

DATE	BY	MARK	REVISIONS	APPR.	DATE
				REVISION AGENCY	

ENGINEER

CITY OF SALIDA

DESIGNED BY WBH — APPROVED BY:
DRAWN BY WBH
CHECKED BY WBH — AGENCY HEAD — DATE
SCALE 1"=10'
DATE JAN. 2022

BENCHMARK: 1 1/2" ALUM. CAP ON #5 REBAR LS 37937 ELEV.=7059.64'

RESIDENCES AT SBC
SALIDA, CO

CIVIL ENGINEERING PLANS
GRADING PLAN

SHEET NO. 4 OF 8 SHTS.
PROJECT NO. 20037

GRAPHIC SCALE

10' 0 10' 20' 30'

(CONTOUR INTERVAL = 1 FOOT)

CONSTRUCTION NOTES:

40	FURNISH AND INSTALL SANITARY SEWER MANHOLE ON EXISTING SEWER MAIN (PUBLIC)
41	FURNISH AND INSTALL SANITARY SEWER MANHOLE (PRIVATE)
42	FURNISH AND INSTALL 6" SEWER LINE (PRIVATE)
43	FURNISH AND INSTALL 4" SEWER SERVICE WITH CLEANOUT AND TRAFFIC RATED COVER AT BUILDING
44	FURNISH AND INSTALL 6" SANITARY SEWER CLEANOUT WITH TRAFFIC RATED COVER

SEWER PLANS

SEWER LINE A

SEE SHEET 6
SEWER LINE B

NOTES:
CDOT UTILITY PERMIT REQUIRED.
HOA DOCS SHALL PROVIDE FOR SEWER MAINTENANCE.

REVIEW SET 1/18/22

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SALIDA BOTTLING CO.
9707 CR 163
SALIDA, CO 81201
PHONE: ----

PREPARED UNDER THE DIRECTION OF:
DATE
WILLIAM B. HUSSEY CRABTREE GROUP, INC
L.C.E. NO. 56989 EXP. DATE 10/31/2023

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325 D STREET, SALIDA, CO 81201, PH: 719-539-1675
918 CUYAMA ROAD, OJAI, CA 93023, PH: 719-221-1799

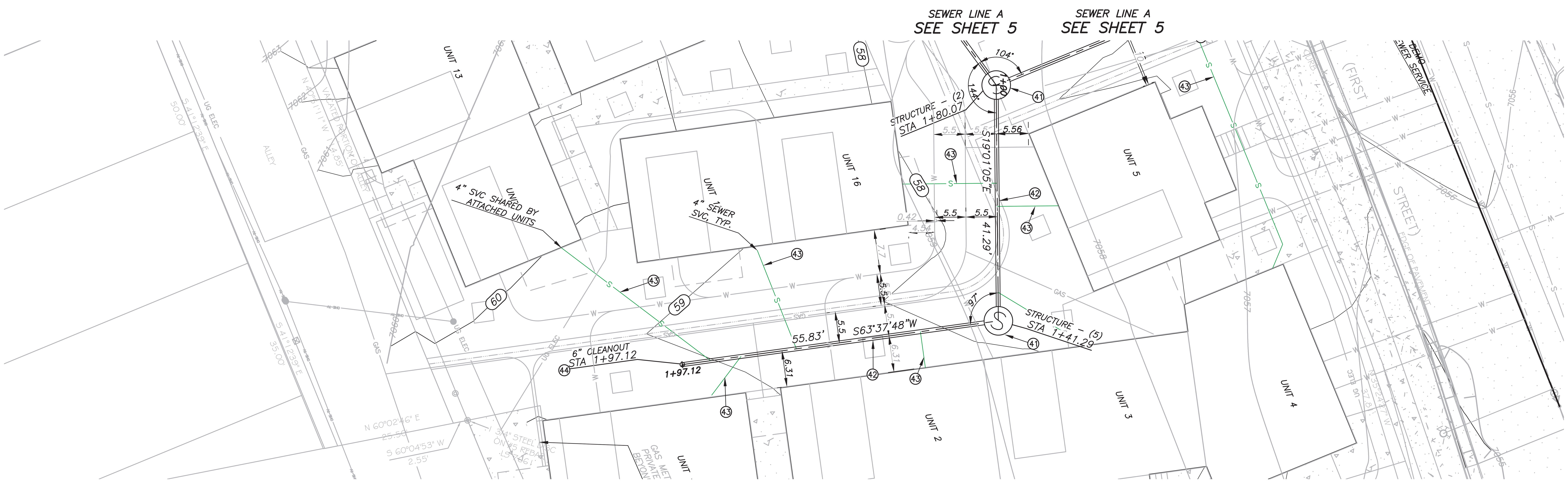
SEAL
COLORADO LICENSED PROFESSIONAL ENGINEER
WILLIAM BERNARD HUSSEY
56989
1/18/2022

DATE	BY	MARK	REVISIONS	APPR.	DATE
	ENGINEER			REVISION	AGENCY

CITY OF SALIDA
DESIGNED BY WBH
DRAWN BY WBH
CHECKED BY WBH
SCALE 1"=10'
DATE JAN. 2022
APPROVED BY:
AGENCY HEAD DATE
BENCHMARK: 1 1/2" ALUM. CAP ON #5 REBAR LS 37937 ELEV.=7059.64'

RESIDENCES AT SBC
SALIDA, CO
SEWER PLAN & PROFILE
SEWER PLANS
SEWER LINE A

SHEET NO. 5 OF 8 SHTS.
PROJECT NO. 20037



GRAPHIC SCALE

10' 0 10' 20' 30'

(CONTOUR INTERVAL = 1 FOOT)

CONSTRUCTION NOTES:

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SEWER PLANS

SEWER LINE B

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REVIEW SET 1/18/22

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COLORADO LICENSED PROFESSIONAL ENGINEER — WILLIAM BERNARD HUSSEY — 56989 — 1/18/2022

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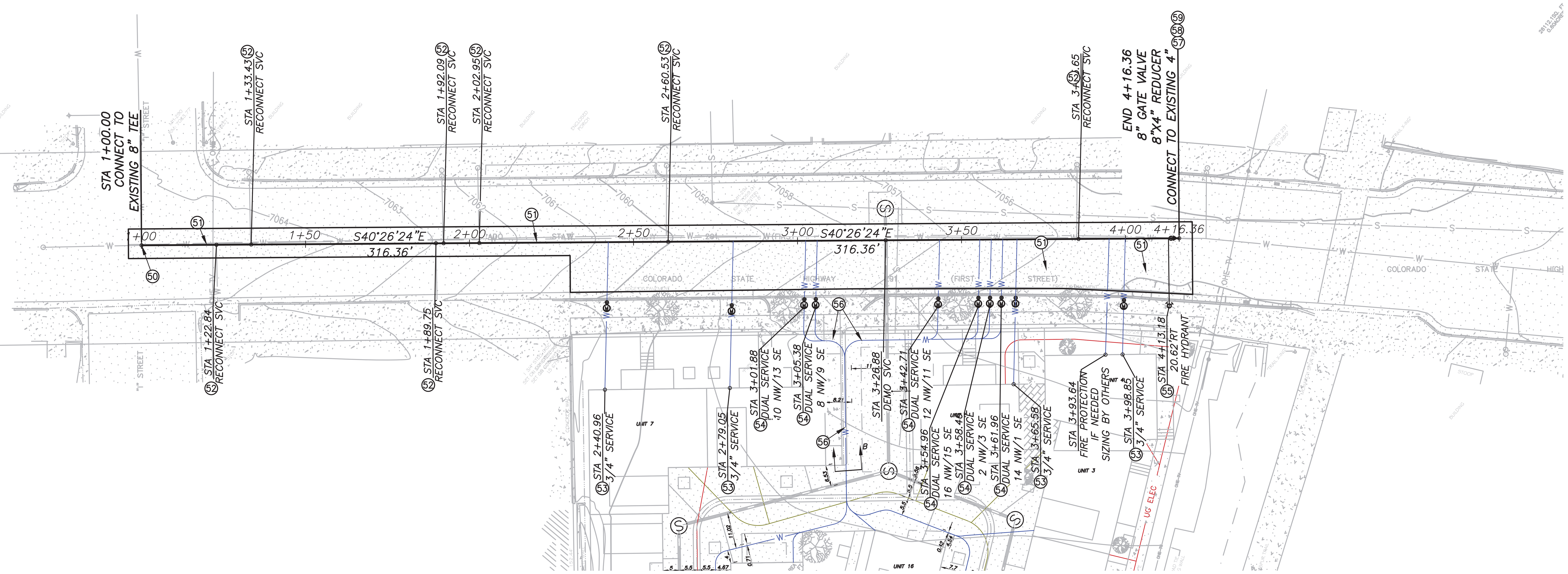
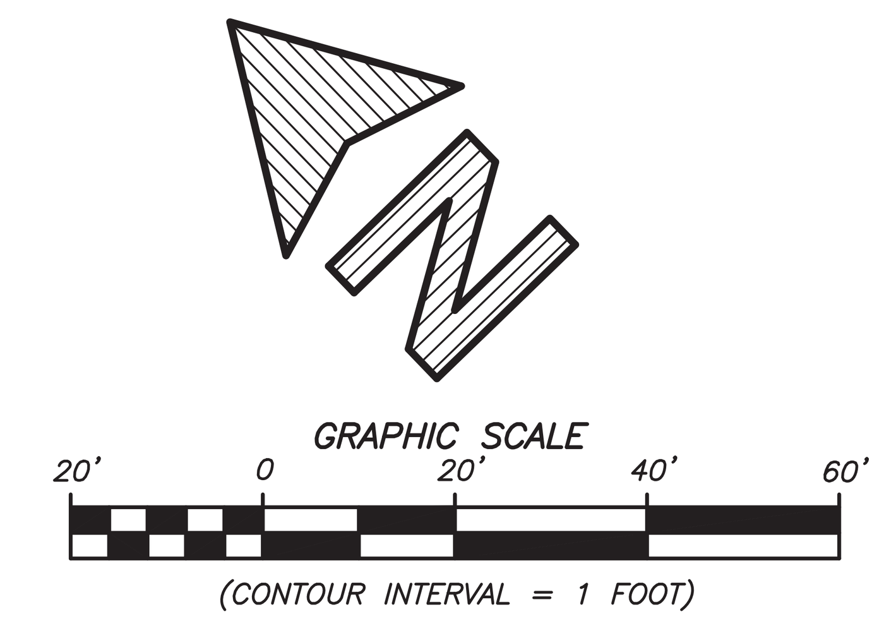
RESIDENCES AT SBC
SALIDA, CO
SEWER PLAN & PROFILE
SEWER PLANS
SEWER LINE B

SHEET NO. 6 OF 8 SHTS.
PROJECT NO. 20037





CONSTRUCTION NOTES:

50	CONNECT TO EXISTING 8" TEE
51	FURNISH AND INSTALL 8" WATER MAIN
52	RECONNECT EXISTING WATER SERVICE
53	FURNISH AND INSTALL 3/4" RESIDENTIAL WATER SERVICE ASSEMBLY
54	FURNISH AND INSTALL 3/4" RESIDENTIAL WATER SERVICE ASSEMBLY WITH DUAL METER PIT
55	FURNISH AND INSTALL FIRE HYDRANT ASSEMBLY
56	FURNISH AND INSTALL 3/4" WATER LINE IN COMMON TRENCH, UP TO 12 LINES PER TRENCH
57	FURNISH AND INSTALL 8" GATE VALVE
58	FURNISH AND INSTALL 8"X4" REDUCER
59	CONNECT TO EXISTING 4" WATER MAIN

WATER PLANS

WATER MAIN 1ST ST

NOTE: CDOT UTILITY PERMIT REQUIRED.

REVIEW SET 1/18/22

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SEAL
COLORADO LICENSED PROFESSIONAL ENGINEER 56989 1/18/2022

DATE	BY	MARK	REVISIONS	APPR.	DATE
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CITY OF SALIDA

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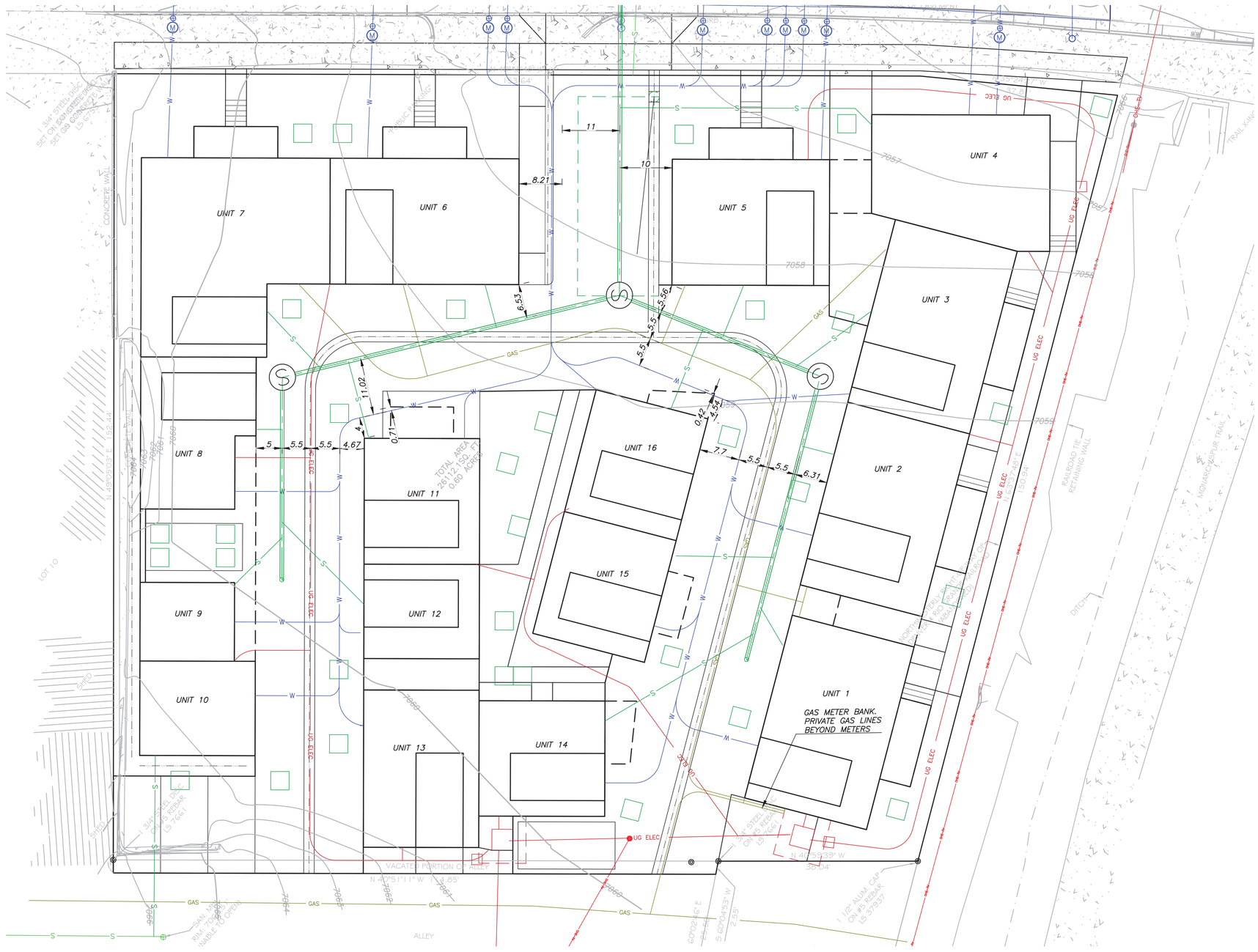
RESIDENCES AT SBC
SALIDA, CO
WATER PLAN & PROFILE
WATER PLANS
WATER MAIN 1ST ST

SHEET NO. 7 OF 8 SHTS.
PROJECT NO. 20037

S:\20035 323 WEST FIRST STREET\CAD\MODELS\20035-WATER.DWG 1/18/2022 3:48:10 PM



LEGEND

—W—W—	3/4" WATER SERVICE LINE, UP TO 12 COMMON TRENCH
—S—S—	SANITARY SEWER 4" SERVICE
═	6" SEWER MAIN
—GAS—	NATURAL GAS LINE
—OHE—TV—	EXISTING OVERHEAD POWER/COMMUNICATION
●	EXISTING UTILITY POLE WITH STREET LIGHT
—UG ELEC—	NEW UNDERGROUND ELECTRIC/PHONE
Ⓢ	SANITARY SEWER MANHOLE
⊕	CURB STOP/WATER VALVE
Ⓜ	WATER METER PIT (SINGLE OR DUAL
○	FIRE HYDRANT

UTILITY PLAN NOTES

1. THIS PLAN IS INTENDED AS A SCHEMATIC TO FACILITATE COORDINATION. FINAL DESIGNS OF ELECTRIC, GAS, AND COMMUNICATIONS UTILITIES WILL BE BY THE UTILITY OWNER AND/OR MEP ENGINEERS.

REVIEW SET 1/18/22

PRIVATE ENGINEER'S NOTES TO CONTRACTOR

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CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE COUNTY, THE CITY, THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

PREPARED FOR:
SALIDA BOTTLING CO.
9707 CR 163
SALIDA, CO 81201
PHONE: ----

PREPARED UNDER THE DIRECTION OF:
DATE
WILLIAM B. HUSSEY CRABTREE GROUP, INC
L.C.E. NO. 56989 EXP. DATE 10/31/2023

PREPARED BY:
CRABTREE GROUP INC.
ENGINEERING SMART GROWTH™
325 D STREET
SALIDA, CO 81201
PH: 719-539-1675
918 CUYAMA ROAD
OJAI, CA 93023
PH: 719-221-1799

SEAL
1/18/2022
56989
WILLIAM BERNARD HUSSEY

DATE	BY	MARK	REVISIONS	APPR.	DATE
ENGINEER				REVISION AGENCY	

CITY OF SALIDA

DESIGNED BY	WBH	APPROVED BY:
DRAWN BY	WBH	
CHECKED BY	WBH	AGENCY HEAD DATE
SCALE	1"=10'	BENCHMARK: 1 1/2" ALUM. CAP ON #5 REBAR LS 37937 ELEV.=7059.64'
DATE	JAN. 2022	

RESIDENCES AT SBC
SALIDA, CO
CIVIL ENGINEERING PLANS
UTILITY LAYOUT
UTILITY PLAN

SHEET NO. 8 OF 8 SHTS.
PROJECT NO. 20037

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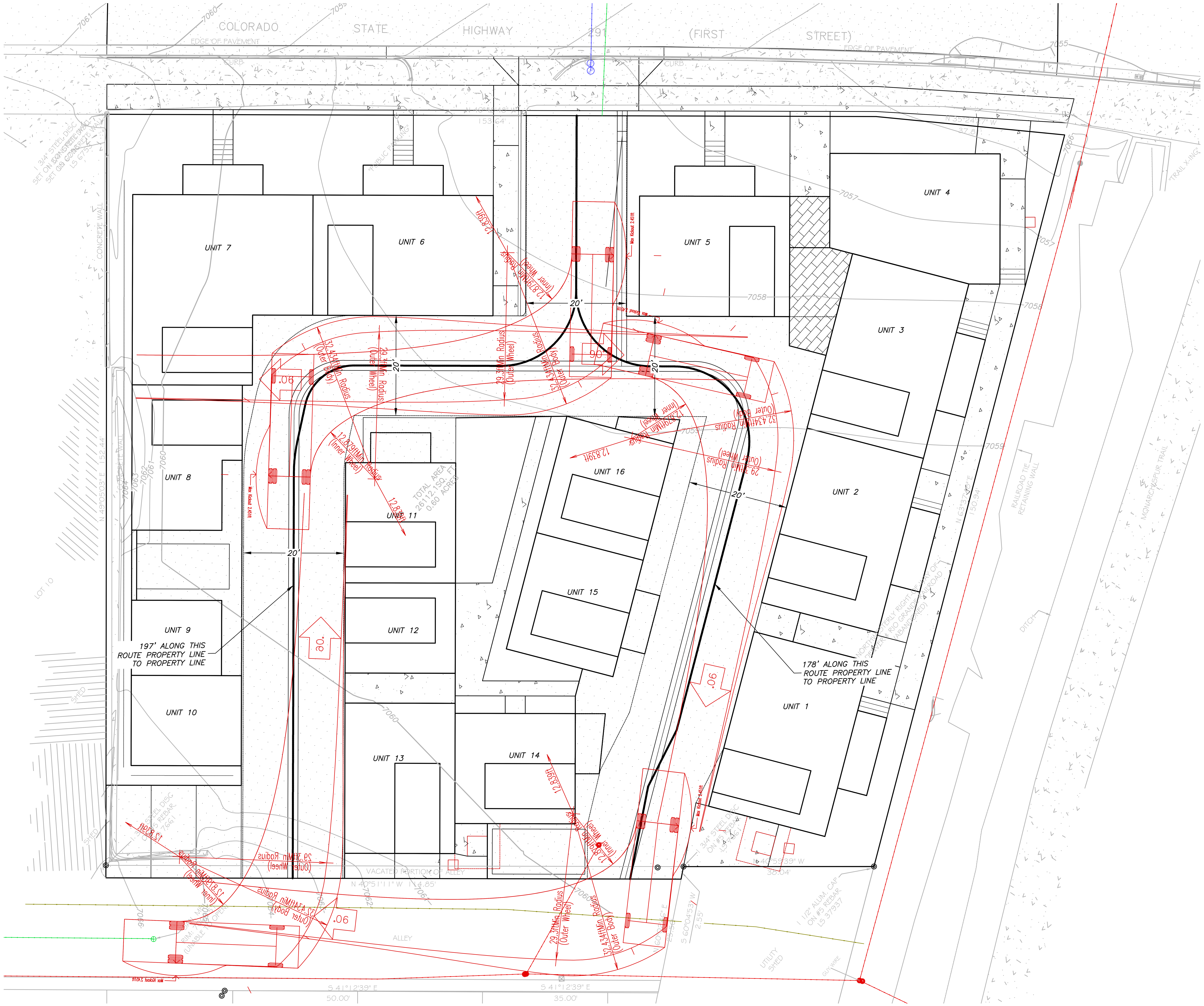

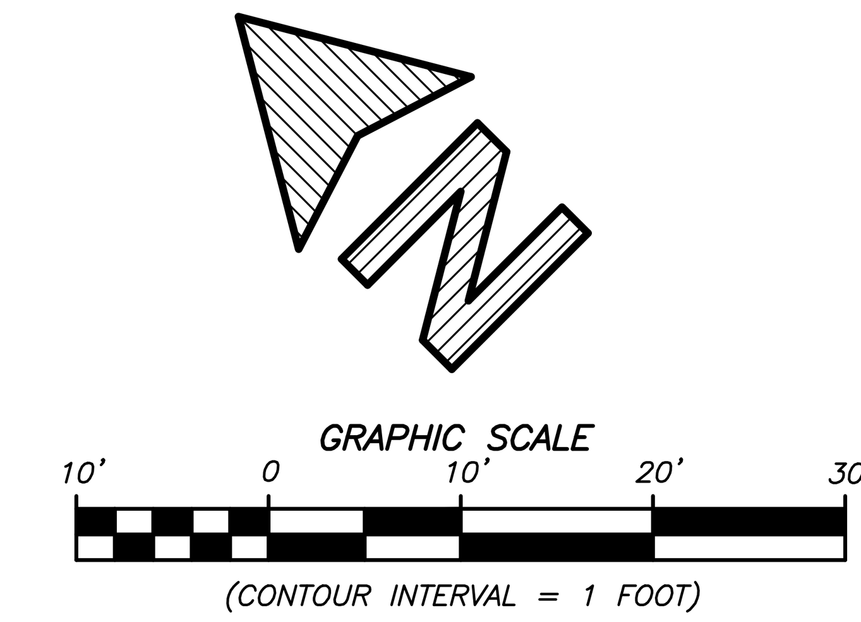

NOTES

1. PER SALIDA FIRE DEPARTMENT PLAN REVIEWER KATHY ROHRICH, A 32' PUMPER TRUCK WOULD BE THE LARGEST TRUCK BROUGHT INTO THE SITE, AND THE 35' TRASH TRUCK SHOWN HERE IS SUFFICIENT FOR ANALYSIS.
2. 20' WIDE FIRE APPARATUS ACCESS ROAD SHOWN HERE WILL HAVE 13.5' MINIMUM VERTICAL CLEARANCE.

PRIVATE ENGINEER'S NOTES TO CONTRACTOR

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES, CONDUITS OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN ON THESE DRAWINGS. THE CONTRACTOR FURTHER ASSUMES ALL LIABILITY AND RESPONSIBILITY FOR THE UTILITY PIPES, CONDUITS, OR STRUCTURES SHOWN OR NOT SHOWN ON THESE DRAWINGS.
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PREPARED FOR:
SALIDA BOTTLING CO.
9707 CR 163
SALIDA, CO 81201
PHONE: ----

PREPARED UNDER THE DIRECTION OF:
DATE
WILLIAM B. HUSSEY — CRABTREE GROUP, INC
L.C.E. NO. 56989 — EXP. DATE 10/31/2023

PREPARED BY:
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325 D STREET, SALIDA, CO 81201, PH: 719-539-1675
918 CUYAMA ROAD, OJAI, CA 93023, PH: 719-221-1799

SEAL

DATE	BY	MARK	REVISIONS	APPR.	DATE
ENGINEER				REVISION AGENCY	

CITY OF SALIDA
DESIGNED BY WBH
DRAWN BY WBH
CHECKED BY WBH
SCALE 1"=10'
DATE JAN. 2022
APPROVED BY:
AGENCY HEAD — DATE
BENCHMARK: 1 1/2" ALUM. CAP ON #5 REBAR LS 37937 ELEV.=7059.64'

RESIDENCES AT SBC
SALIDA, CO

EMERGENCY ACCESS

SHEET NO. 1 OF 1 SHTS.
PROJECT NO. 20037

COLORADO
Department of Transportation
Region 5

Region 5 Traffic Section
3803 North Main Avenue, Suite 100
Durango, Colorado

Permit No. **521066**

November 30, 2021

Eric Warner
Salida Bottle Company, LLC
777 Dunlavy Street, Apt 8204
Houston, Texas 77019

Dear Permittee:

1. Please review the attached State Highway Access Permit (Form #101) and all enclosed attachments.
2. If you choose NOT to act on the permit, please return the permit unsigned.
3. If you wish to APPEAL the Terms and Conditions of the permit, please refer to the attached Form 101, Pages 2 and 3 for an explanation of the appeal procedures.
4. If you ACCEPT the Permit and its Terms and Conditions and are authorized to sign as legal owner of the property or as an authorized representative, please sign and date the Access Permit form on the line marked "PERMITTEE". Your signature confirms your agreement to all the listed Terms and Conditions.
5. Provide a check or money order made payable to CDOT for the total amount due of $100.00.
6. **You must return the signed Access Permit signature pages, including the permit face page (Form #101) and the final page of the terms and conditions, with your payment to the Colorado Department of Transportation (CDOT) at the address noted below. The Department will return an executed copy of this permit.**
7. If you fail to sign and return the attached Access Permit within 60 days of the date of this transmittal letter, Colorado Department of Transportation will consider this permit withdrawn.
8. **As described in the attached Terms and Conditions, you must make a written request to obtain a Notice to Proceed. DO NOT begin any work within the State Highway Right-of-Way without a validated Access Permit and Notice to Proceed. Use of this permit without the Colorado Department of Transportation's validation shall be considered a violation of State Law.**

If you have any questions, please call Randee Reider at (970) 385-3626.

Please return Access Permit and attachments to:

Region 5 Traffic Section
3803 North Main Avenue, Suite 100
Durango, Colorado

COLORADO DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY ACCESS PERMIT

CDOT Permit No. **521066**

State Highway No / Mp / Side: 291A / 1.237 / Left

Permit Fee	Date of Transmittal	Region / Section / Patrol / Name	Local Jurisdiction
$100.00	11/30/21	5 / 07 / 17	Salida

The Permittee(s): The Applicant(s):

Eric Warner
Salida Bottle Company, LLC
777 Dunlavy Street
Apt 8204
Houston, Texas 77019
(832) 294-1354

is hereby granted permission to have an access to the state highway at the location noted below. The access shall be constructed, maintained and used in accordance with this permit, including the State Highway Access Code and any attachments, terms, conditions and exhibits. This permit may be revoked by the Issuing Authority if at any time the permitted access and its use violate any parts of this permit. The issuing authority, the Department and their duly appointed agents and employees shall be held harmless against any action for personal injury or property damage sustained by reason of the exercise of the permit.

Location: 240 feet south of "I" Street and 1,120 feet north of milepost 1.

Access to Provide Service to:

(Land Use Code)	(Size)	(Units)
814 - Variety Store	**740**	**SQ. FT.**
220 - Multifamily Housing (Low-Rise)	**16**	**EACH**
TOTAL:	**13**	**DHV**

Additional Information:

* See attached pages 2-3 of Form 101, and all other attachments, enclosures, and exhibits for additional terms and conditions. *

MUNICIPALITY OR COUNTY APPROVAL
Required only when the appropriate local authority retains issuing authority.

Signature	Print Name	Date	Title
N/A			

Upon the signing of this permit the permittee agrees to the terms and conditions and referenced attachments contained herein. All construction shall be completed in an expeditious and safe manner and shall be finished within 45 days from Initiation. The permitted access shall be completed in accordance with the terms and conditions of the permit prior to being used.

The permittee shall contact the Region 5 Access Manager with the Colorado Department of Transportation, at (970) 385-3626 at least thirty (30) days prior to beginning any work within the CDOT right-of-way or beginning the permitted use(s).

The person signing as the permittee must be the owner or legal representative of the property served by the permitted access and have full authority to accept the permit and its terms and conditions.

	Print Name	Date
Permittee Signature DocuSigned by: Eric Warner 632C81635D25423...	Eric Warner	12/8/2021 | 5:22 PM CST
Applicant Signature	Print Name	Date

This permit is not valid until signed by a duly authorized representative of the Department.
COLORADO DEPARTMENT OF TRANSPORTATION

Signature	Print Name	Title	Date (of issue)

Copy Distribution: Required: 1.Region 2.Applicant 3.Staff Access Section 4.Central Files. Make copies as necessary for: Local Authority, Inspector, MTCE Patrol, Traffic Engineer

The following paragraphs are excerpts of the State Highway Access Code. These are provided for your convenience but do not alleviate compliance with all sections of the Access Code. A copy of the State Highway Access Code is available from your local issuing authority (local government) or the Colorado Department of Transportation (Department). When this permit was issued, the issuing authority made its decision based in part on information submitted by the applicant, on the access category which is assigned to the highway, what alternative access to other public roads and streets is available, and safety and design standards. Changes in use or design not approved by the permit or the issuing authority may cause the revocation or suspension of the permit.

APPEALS

1. Should the permittee or applicant object to the denial of a permit application by the Department or object to any of the terms or conditions of a permit placed there by the Department, the applicant and permittee (appellant) have a right to appeal the decision to the [Transportation] Commission [of Colorado]. To appeal a decision, submit a request for administrative hearing to the Transportation Commission of Colorado within 60 days of transmittal of notice of denial or transmittal of the permit for signature. Submit the request to the Transportation Commission of Colorado, 4201 East Arkansas Avenue, Denver, Colorado 80222-3400. The request shall include reasons for the appeal and may include changes, revisions, or conditions that would be acceptable to the permittee or applicant.

2. Any appeal by the applicant or permittee of action by a local issuing authority shall be filed with the local authority and be consistent with the appeal procedures of the local authority.

3. In submitting the request for administrative hearing, the appellant has the option of including within the appeal a request for a review by the Department's internal administrative review committee pursuant to [Code] subsection 2.10. When such committee review is requested, processing of the appeal for formal administrative hearing, 2.9(5) and (6), shall be suspended until the appellant notifies the Commission to proceed with the administrative hearing, or the appellant submits a request to the Commission or the administrative law judge to withdraw the appeal. The two administrative processes, the internal administrative review committee, and the administrative hearing, may not run concurrently.

4. Regardless of any communications, meetings, administrative reviews or negotiations with the Department or the internal administrative review Committee regarding revisions or objections to the permit or a denial, if the permittee or applicant wishes to appeal the Department's decision to the Commission for a hearing, the appeal must be brought to the Commission within 60 days of transmittal of notice of denial or transmittal of the permit.

PERMIT EXPIRATION

1. A permit shall be considered expired if the access is not under construction within one year of the permit issue date or before the expiration of any authorized extension. When the permittee is unable to commence construction within one year after the permit issue date, the permittee may request a one year extension from the issuing authority. No more than two one-year extensions may be granted under any circumstances. If the access is not under construction within three years from date of issue the permit will be considered expired. Any request for an extension must be in writing and submitted to the issuing authority before the permit expires. The request should state the reasons why the extension is necessary, when construction is anticipated, and include a copy of page 1 (face of permit) of the access permit. Extension approvals shall be in writing. The local issuing authority shall obtain the concurrence of the Department prior to the approval of an extension, and shall notify the Department of all denied extensions within ten days. Any person wishing to reestablish an access permit that has expired may begin again with the application procedures. An approved Notice to Proceed, automatically renews the access permit for the period of the Notice to Proceed.

CONSTRUCTION

1. Construction may not begin until a Notice to Proceed is approved. (Code subsection 2.4]

2. The construction of the access and its appurtenances as required by the terms and conditions of the permit shall be completed at the expense of the permittee except as provided in subsection 2.14. All materials used in the construction of the access within the highway right-of-way or on permanent easements, become public property. Any materials removed from the highway right-of-way will be disposed of only as directed by the Department. All fencing, guard rail, traffic control devices and other equipment and materials removed in the course of access construction shall be given to the Department unless otherwise instructed by the permit or the Department inspector.

3. The permittee shall notify the individual or the office specified on the permit or Notice to Proceed at least two working days prior to any construction within state highway right-of-way. Construction of the access shall not proceed until both the access permit and the Notice to Proceed are issued. The access shall be completed in an expeditious and safe manner and shall be finished within 45 days from initiation of construction within the highway right-of-way. A construction time extension not to exceed 30 working days may be requested from the individual or office specified on the permit.

4. The issuing authority and the Department may inspect the access during construction and upon completion of the access to ensure that all terms and conditions of the permit are met. Inspectors are authorized to enforce the conditions of the permit during construction and to halt any activities within state right-of-way that do not comply with the provisions of the permit, that conflict with concurrent highway construction or maintenance work, that endanger highway property, natural or cultural resources protected by law, or the health and safety of workers or the public.

5. Prior to using the access, the permittee is required to complete the construction according to the terms and conditions of the permit. Failure by the permittee to abide

by all permit terms and conditions shall be sufficient cause for the Department or issuing authority to initiate action to suspend or revoke the permit and close the access. If in the determination of the Department or issuing authority the failure to comply with or complete the construction requirements of the permit create a highway safety hazard, such shall be sufficient cause for the summary suspension of the permit. If the permittee wishes to use the access prior to completion, arrangements must be approved by the issuing authority and Department and included in the permit. The Department or issuing authority may order a halt to any unauthorized use of the access pursuant to statutory and regulatory powers. Reconstruction or improvement of the access may be required when the permittee has failed to meet required specifications of design or materials. If any construction element fails within two years due to improper construction or material specifications, the permittee shall be responsible for all repairs. Failure to make such repairs may result in suspension of the permit and closure of the access.

6. The permittee shall provide construction traffic control devices at all times during access construction, in conformance with the M.U.T.C.D. as required by section 42-4-104, C.R.S., as amended.

7. A utility permit shall be obtained for any utility work within highway right-of-way. Where necessary to remove, relocate, or repair a traffic control device or public or private utilities for the construction of a permitted access, the relocation, removal or repair shall be accomplished by the permittee without cost to the Department or issuing authority, and at the direction of the Department or utility company. Any damage to the state highway or other public right-of-way beyond that which is allowed in the permit shall be repaired immediately. The permittee is responsible for the repair of any utility damaged in the course of access construction, reconstruction or repair.

8. In the event it becomes necessary to remove any right-of-way fence, the posts on either side of the access shall be securely braced with an approved end post before the fence is cut to prevent any slacking of the remaining fence. All posts and wire removed are Department property and shall be turned over to a representative of the Department.

9. The permittee shall ensure that a copy of the permit is available for review at the construction site at all times. The permit may require the contractor to notify the individual or office specified on the permit at any specified phases in construction to allow the field inspector to inspect various aspects of construction such as concrete forms, subbase, base course compaction, and materials specifications. Minor changes and additions may be ordered by the Department or local authority field inspector to meet unanticipated site conditions.

10. Each access shall be constructed in a manner that shall not cause water to enter onto the roadway or shoulder, and shall not interfere with the existing drainage system on the right-of-way or any adopted municipal system and drainage plan..

11. By accepting the permit, permittee agrees to save, indemnify, and hold harmless to the extent allowed by law, the issuing authority, the Department, its officers, and employees from suits, actions, claims of any type or character brought because of injuries or damage sustained by any person resulting from the permittee's use of the access permit during the construction of the access.

CHANGES IN ACCESS USE AND PERMIT VIOLATIONS

1. It is the responsibility of the property owner and permittee to ensure that the use of the access to the property is not in violation of the Code, permit terms and conditions or the Act. The terms and conditions of any permit are binding upon all assigns, successors-in-interest, heirs and occupants. If any significant changes are made or will be made in the use of the property which will affect access operation, traffic volume and or vehicle type, the permittee or property owner shall contact the local issuing authority or the Department to determine if a new access permit and modifications to the access are required.

2. When an access is constructed or used in violation of the Code, section 43-2-147(5)(c), C.R.S., of the Act applies. The Department or issuing authority may summarily suspend an access permit and immediately order closure of the access when its continued use presents an immediate threat to public health, welfare or safety. Summary suspension shall comply with article 4 of title 24, C.R.S.

MAINTENANCE

1. The permittee, his or her heirs, successors-in-interest, assigns, and occupants of the property serviced by the access shall be responsible for meeting the terms and conditions of the permit, the repair and maintenance of the access beyond the edge of the roadway including any cattle guard and gate, and the removal or clearance of snow or ice upon the access even though deposited on the access in the course of Department snow removal operations. Within unincorporated areas the Department will keep access culverts clean as part of maintenance of the highway drainage system. However, the permittee is responsible for the repair and replacement of any access-related culverts within the right-of-way. Within incorporated areas, drainage responsibilities for municipalities are determined by statute and local ordinance. The Department will maintain the roadway including auxiliary lanes and shoulders, except in those cases where the access installation has failed due to improper access construction and/or failure to follow permit requirements and specifications in which case the permittee shall be responsible for such repair. Any significant repairs such as culvert replacement, resurfacing, or changes in design or specifications, requires authorization from the Department.

Worker Safety and Health

All workers within the State Highway right of way shall comply with their employer's safety and health policies/procedures, and all applicable U.S. Occupational Safety and Health Administration (OSHA) regulations – including, but not limited to the applicable sections of 29 CFR Part 1910 – Occupational Safety and Health Standards and 29 CFR Part 1926 – Safety and Health Regulations for Construction.

Personal protective equipment (e.g. head protection, footwear, high visibility apparel, safety glasses, hearing protection, respirators, gloves, etc.) shall be worn as appropriate for the work being performed, and as specified in regulation. At a minimum, all workers in the State Highway right of way, except when in their vehicles, shall wear the following personal protective equipment:

- Head protection that complies with the ANSI Z89.1-1997 standard;
- At all construction sites or whenever there is danger of injury to feet, workers shall comply with OSHA's PPE requirements for foot protection per 29 CFR 1910.136, 1926.95, and 1926.96;
- High visibility apparel as specified in the Traffic Control provisions of this permit (at a minimum, ANSI/ISEA 107-1999, Class 2).

Where any of the above-referenced ANSI standards have been revised, the most recent version of the standard shall apply.

Environmental Clearance

It is the applicant's responsibility to contact the appropriate agencies and obtain all environmental clearances that apply to their activities. Such clearances may include but are not limited to Corps of Engineers 404 Permits or Colorado Discharge Permit System permits, or ecological, archeological, historical, or cultural resource clearances. The CDOT Environmental Clearances Information Summary presents contact information for agencies administering certain clearances and information about prohibited discharges; copy attached.

LEVEL 2 - ACCESS PERMIT TERMS & CONDITIONS
FULL-MOVEMENT ACCESS

A. PERMIT REQUIREMENTS SPECIFIC TO THIS ACCESS:

1. **Permit Number 521066 is issued by the Colorado Department of Transportation (CDOT) in accordance with the 1998 Access Code and is based upon the information submitted by the Permittee.**
   - **a. Any changes in the herein permitted type and use and/or volume of traffic using the access, drainage, or other operational aspects shall render this permit void, requiring that a new application be submitted for review based upon currently existing and anticipated future conditions.**
   - **b. Upon completion of the improvements identified in this permit, Permit Number 521066 shall replace and void all previous access permits for this location.**
   - **c. If the requirements of this Permit are not satisfied or this Permit expires, the access rights will revert to the access permit issued prior to this permit. If there is no valid prior permit then the access rights and uses shall revert to the historic use.**
   - **d. This permit is not valid unless the land uses enumerated herein have been approved by the local (City/County) Planning Authority.**

2. Permit Number **521066** is issued for the **reconstruction and continued use** of:
   a. A **Paved full-movement** access to **State Highway 291** for **Salida Bottle Company, LLC at approximate mile marker 1.237 Right**

3. The access shall be **Paved a distance of 20 feet** from the edge of traveled way and gravel surfaced any remaining distance within State Highway ROW. The access shall have a width of **24 feet** and be **constructed according to M-609-1, Type 3, see attached**.

4. The access shall be **perpendicular** to the travel lanes of the State Highway for a minimum distance of **40 feet from the edge of pavement or to the ROW, whichever is furthermost,** and beyond the back of sidewalk shall not exceed **eight percent (8%)** grade up or down to the ROW line.

5. **Temporary Traffic Control, with prior written approval by CDOT,** is required at all times during construction of the access in accordance with a **Traffic Control Plan (TCP)**. The TCP **shall be developed and implemented** by a **Traffic Control Supervisor (TCS) certified** by the **American Traffic Safety Services Association (ATSSA)** or the **Colorado Contractors Association (CCA).**

6. The category for this section of **SH 291** is **NR-C.** The access shall be in conformance with the State of Colorado State Highway Access Code, Volume Two, Code of Colorado Regulations 601-1, August 31, 1998 as amended.

7. The access shall serve a tract of land located at street address 323 West First Street, Salida, Colorado, 81201, parcel number 368132419160. The location of the access is shown in **EXHIBIT "A" (Location Map)**.

8. Incorporated as part of this permit are the following:
   a. State Highway Access Permit pages 1-3 and Page 101a
   b. Access Permit Terms and Conditions Pages **1 through 12**
   c. **EXHIBIT "A,"** (Location Map)
   d. **EXHIBIT "B,"** (Traffic Control Typical Application)
   e. CDOT M&S Standards M-208-1, M-210-1, M-608-1, and M-609-1, **Type 3**.
   f. CDOT Late Fall, Winter and Spring Special Provisions for Access Construction and Utility Installations
   g. CDOT Environmental Clearances Information Summary
   h. Water Quality Program Summary
   i. State Highway Access Permit Application (CDOT Form No. 137) received **November 2, 2021**

9. This Permit describes the access and improvements that will serve the following land uses:
   a. 16 Townhomes (ITE Code 220)
   b. 740 sq. ft. General Retail (ITE Code 814)
   Total – 13 DHV

10. For the Access Category of **NR-C,** the vehicular volumes using this access shall not exceed the following:
    a. An average Peak Hour Volume of **25 left-turning entrance movements** from the State Highway into the access.
    b. An average Peak Hour Volume of **50 right-turning entrance movements** from the State Highway into the access.

11. A passenger car equivalent of **two (2)** for **each vehicle or combination at or over 20 feet in length but less than 40 feet** and a passenger car equivalent of **three (3)** shall be used for **each bus and all trucks and combination at or over 40 feet in length or longer** when determining the volumes listed above.

12. Any changes in the type, use and/or volume of traffic using the access in excess of the values stated above will require a new permit and will require the installation of warranted access improvements within the earliest construction season. Such improvements include but are not limited to:
    a. Increasing the access width
    b. Increasing the access radii
    c. Improving the access surfacing
    d. Installing acceleration and deceleration lanes
    e. A full width overlay of the State Highway corresponding to the start and end of the acceleration and deceleration lanes

13. Any future warranted highway improvements shall be designed and constructed by the Permittee or the property owner at no cost to CDOT.

14. Under no circumstances will the access be allowed to continue operation in an unsafe manner. Failure to provide the warranted improvements will result in closure of the access.

15. At the access location, **SH 291** has a posted speed limit of **25 mph** with less than approximate **6:1 foreslopes** and an Average Daily Traffic of **4,300** which correlates to a minimum Clear Zone of **14** feet from the edge of traveled way. The Permittee/Contractor shall take the minimum Clear Zone into consideration during the design and construction of the access.

16. **Any damaged curb and gutter, sidewalk and abandoned curb cuts along the property adjacent to the State Highway shall be replaced as part of this project.**

17. "Right-of-Way" means the entire width between the boundary lines of every way publicly maintained when any part thereof is open to the use of the public for purposes of vehicular travel or the entire width of every way declared to be a public highway by any law of this state.

18. Internal site circulation and parking must be adequate to serve the land uses described here.

19. No backing into the Right-of-Way will be allowed under any circumstances.

20. No parking within the Right-of-Way will be allowed under any circumstances.

21. Both backing into the Right-of-Way and parking within the Right-of-Way are considered to be traffic offenses and can be ticketed by any law enforcement officer of the jurisdiction in which the access is located.

22. Any violation of the above provisions may be grounds for revocation by the Department of this access permit and may result in physical closure of the access.

B. REQUIREMENTS PRIOR TO NOTICE-TO-PROCEED (NTP) FOR CONSTRUCTION:

1. The Permittee/Contractor must contact **Ms. Randee Reider** at phone number **970-385-3626** or via email at **randee.reider@state.co.us** to schedule a meeting with one of our inspectors **thirty (30) working days prior to beginning any access improvements** or construction of any kind within the highway Right-of-Way (ROW). Failure to comply with this condition may result in revocation of this permit.

2. It is the responsibility of the Permittee/Applicant to determine which **environmental clearances** and/or regulations apply to the project, and to obtain any clearances that are required directly from the appropriate agency. Please refer to "CDOT Environmental Clearance Information Summary" for details. **FAILURE TO COMPLY WITH REGULATORY**

REQUIREMENTS MAY RESULT IN SUSPENSION OR REVOCATION OF THE CDOT ACCESS PERMIT, OR ENFORCEMENT ACTIONS BY OTHER AGENCIES.

3. A **written request for a Notice to Proceed** must be submitted to this issuing office along with the following items:

   a. The Permittee shall provide **written approval** from the Local Authority for the proposed land use that will be served by the access. Granting of an access permit in no way implies CDOT concurrence or non-concurrence with the Permittee's proposed land use.

   b. **The Permittee/Contractor is required to provide comprehensive general liability and property damage** insurance naming the Department (CDOT) as an additional insured party in the amounts of not less than **$1,000,000 per occurrence** and **automobile liability insurance of $1,000,000** combined single limit bodily injury and property damage for each accident, during the period of access construction. By accepting the permit, Permittee agrees to save, indemnify, and hold harmless to the extent allowed by law, the Department, its officers, and employees from suits, actions, claims of any type or character brought because of injuries or damage sustained by any person resulting from the Permittee's use of the access permit during the construction of the access. CDOT shall be listed as "Additional Insured", and CDOT shall be listed as "Certificate Holder" on the Certificate of Insurance (COI). Copies of insurance coverage shall be submitted to the Region 5 Access Manager prior to the issuing of the NTP. A copy of the insurance policy is required to be available at the construction site at all times for inspection.

   c. The **Traffic Control Supervisor (TCS)** shall provide a **Traffic Control Plan (TCP)** in accordance with the current edition of the Manual on Uniform Traffic Control Devices (MUTCD). The **TCP shall be submitted** to the Region 5 Access Manager for review and acceptance **a minimum of ten (10) working days prior to the desired implementation date. Exhibit "C,"** provides a typical application from the MUTCD as a basis for developing the TCP. If construction of the access improvements involves a Traffic Control application that differs from **Exhibit "C,"** the **TCS** shall submit a new TCP for review and acceptance. Traffic Control of any nature will not be allowed unless authorized in writing by CDOT.

C. GENERAL DESIGN REQUIREMENTS:

1. **Design of improvements** within the highway ROW shall be in compliance with the most current editions of the following manuals and documents except as indicated:
   a. CDOT Design Guide
   b. CDOT Drainage Design Manual
   c. CDOT Standard Plans M&S Standards
   d. AASHTO Roadside Design Guide
   e. AASHTO Policy on Geometric Design of Highways and Streets
   f. CDOT Standard Specifications for Road and Bridge Construction

g. CDOT Standard Special Provisions
h. Manual on Uniform Traffic Control Devices (MUTCD)
i. 1998 State Highway Access Code, Volume 2, Code of Regulations 601-1, as amended
j. ITE Traffic Engineering Handbook
k. ITE Trip Generation Manual, **6th Edition**
l. 2011 CDOT CAD Manual

2. **No grading, construction, structures or toes of slopes necessary for site development shall be placed within CDOT ROW.**

3. Permittee is required to comply with the **Americans with Disabilities Act Accessibility Guidelines (ADAAG)** that have been adopted by the U.S. Architectural and Transportation Barriers Compliance Board (Access Board), and incorporated by the U.S. Attorney General as a federal standard. These guidelines are defining traversable slope requirements and prescribing the use of a defined pattern of truncated domes as detectable warnings at street crossings. The current Standard Plans reflect these requirements.

4. It is the responsibility of the Permittee/Applicant to determine which **environmental clearances** and/or regulations apply to the project, and to obtain any clearances that are required directly from the appropriate agency. Please refer to "CDOT Environmental Clearance Information Summary" for details. **FAILURE TO COMPLY WITH REGULATORY REQUIREMENTS MAY RESULT IN SUSPENSION OR REVOCATION OF THE CDOT ACCESS PERMIT, OR ENFORCEMENT ACTIONS BY OTHER AGENCIES.**

4. ALL discharges are subject to the provisions of the Colorado Water Quality Control Act and the Colorado Discharge Permit Regulations. Prohibited discharges include substances such as: wash water, paint, automotive fluids, solvents, oils or soaps.

5. Unless otherwise identified by CDOT or the Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Division (WQCD) as not being a source of pollutants to the waters of the State, the following discharges to storm water systems are allowed without a Colorado Discharge Permit System permit: landscape irrigation, diverted stream flows, uncontaminated ground water infiltration to separate storm sewers, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, footing drains, water line flushing, flows from riparian habitats and wetlands, and flow from fire fighting activities, and water incidental to street sweeping (including associated sidewalks and medians) and that is not associated with construction. Discharges from these sources may still require separate CDPS permit coverage to be obtained by the discharger.

6. ANY OTHER DISCHARGES may require Colorado Discharge Permit(s) or separate permits from CDPHE or the appropriate agency before work begins. For additional information and forms, go to the CDPHE website at: http://www.cdphe.state.co.us/wq/PermitsUnits/wqcdpmt.html or contact the CDOT Water Quality Program Manager at 303-757-9343.

7. Discharges may also be subject to additional State and Local restrictions, such as MS4 (Municipal Separate Storm Water Sewerage Systems) requirements for permanent sediment control, TMDL (Total Maximum Daily Limit), TMAL (Total Maximum Annual Limit) or discharge.

D. DRAINAGE DESIGN REQUIREMENTS:

1. No site drainage from the constructed access shall enter onto the traveled way of the highway.

2. Drainage to the State Highway Right-of-Way shall not exceed the historical undeveloped rate of flow.

3. If the State Highway includes a drainage ditch at the proposed access location, the Permittee shall install a minimum of an 18" Corrugated Steel Pipe side drain culvert for drainage. The side drain culvert shall include steel end sections at both ends. The access drainage requirements to include the required side drain culvert size shall be discussed with the CDOT Maintenance representative prior to any construction of the access.

4. Required Cross Culverts under the State Highway, Side Drain Culverts under the Access, Curb, Gutter, Inlets, Sidewalk and Driveways shall conform to CDOT Standards and facilitate proper drainage along the State Highway.

E. PAVEMENT DESIGN REQUIREMENTS:

1. Materials shall conform with:
   a. Section 304 - Aggregate Base Course (ABC) - Class 6, with resistance values of at least 70 and 76 respectively when tested by the Hveem Stabilometer method.
   b. Section 403 - Hot Mix Asphalt Grading S or SX, PG 58-28.
   c. Section 412 & 601 - Concrete Pavement Class P or D = 4,500 psi

2. Unless a pavement design is submitted, pavements shall conform to the following compacted thicknesses:
   a. Hot Mix Asphalt (HMA) Pavement-
      i. HMA- 4 inches on the Access. Any pavement replaced on the State Highway shoulder shall match the existing pavement thickness.
      ii. ABC (Class 6)- 6 inches
      iii. ABC (Class 1 or 2)- 12 inches

   b. Concrete Pavement-
      i. Concrete- 6 inches
      ii. ABC (Class 6)- 6 inches

F. GENERAL CONSTRUCTION REQUIREMENTS:

1. **A COPY OF THIS PERMIT AND THE VALIDATED NOTICE TO PROCEED MUST BE ON THE JOB WITH THE CONTRACTOR AT ALL TIMES OR ANY WORK ONSITE AND OFFSITE WILL BE ORDERED TO BE IMMEDIATELY SUSPENDED UNTIL THIS TERM IS COMPLIED WITH.**

2. **Construction Activities** within the highway ROW shall be in compliance with the most current editions of the following manuals:
   a. CDOT Standard Specifications for Road and Bridge Construction
   b. CDOT Standard Special Provisions
   c. CDOT Standard Plans M&S Standards
   d. CDOT Construction Manual
   e. CDOT Field Materials Manual
   f. CDOT Laboratory Manual of Test Procedures
   g. Manual on Uniform Traffic Control Devices (MUTCD) Part IV and the Colorado Supplement
   h. **EXHIBIT "B,"** (Traffic Control Typical Application)

3. The Permittee/Contractor is responsible for obtaining any necessary additional **Federal, State and/or City/County permits or clearances** required for construction of the access. Approval of this access permit does not constitute verification of this action by the Permittee.

4. **Any removal of existing fence, in excess of opening required for the access, or installation of a fence that is erected adjacent to the highway ROW requires a separate CDOT Fencing Agreement.**

5. **Any landscaping** within CDOT ROW requires a separate **CDOT Landscaping Permit**.

6. **Any Utility work** within CDOT ROW requires a separate **CDOT Utility Permit**.

7. The Permittee will be responsible for **verification of existing utility locations.** The Permittee must notify owners or operators of **underground utility facilities** at least two (2) business days prior to beginning excavation in the vicinity of such facilities, as required under Section 9-1.5-103, Colorado Revised Statutes. **Call Utility Notification Center of Colorado** (UNCC), **811** or 1-800-922-1987 for marking of member utilities. Call non-member utilities directly.

8. The Permittee/Contractor shall coordinate access construction with any utility installations.

9. Any damage to utilities during construction shall be the Permittee's responsibility to repair or replace the utility at no cost to CDOT.

10. The Permittee/Contractor shall not make any changes to the access design without prior approval from the Region 5 Access Manager or other authorized Region 5 CDOT representative. If necessary, minor changes, corrections, and/or additions to this permit will be ordered by CDOT to meet unanticipated site conditions.

11. Any damage to any existing highway facilities shall be repaired by the Permittee prior to continuing other work.

G. SAFETY, WORKING TIMES AND TRAFFIC CONTROL:

1. CDOT reserves the right to suspend any construction activities, to include Traffic Control, that interfere with the safe operation of the State Highway. Any such suspensions shall require a written plan of action detailing how the Permittee/Contractor will prevent further safety infractions prior to recommencing construction activities.

2. All equipment, materials or any other non-crashworthy item shall be stored outside the clear zone during non-working times.

3. Existing highway signs requiring removal within the limits of the construction activities shall be removed and delivered to the CDOT Maintenance Shop for storage and future replacement by the Permittee unless otherwise agreed to by CDOT and Permittee. Installation shall be as directed by CDOT.

4. The Permittee/Contractor will be responsible for keeping the State Highway travel lanes and shoulders clear of any mud or debris tracked onto it throughout construction of the access on a daily basis or as otherwise directed by CDOT.

5. The existing paved shoulder edge shall not be saw cut back until the future pavement is ready to be installed.

6. Any pavement drop-offs that will be left overnight shall be delineated with appropriate channelizing devices and any reasonably obtained lateral buffer space.

7. The Permittee/Contractor shall comply with Revision of Section 107.06 of the CDOT Specifications regarding Safety, Health, and Sanitation Provisions.

8. No work within the highway ROW will be allowed on Saturdays, Sundays, legal holidays, or during periods of adverse weather conditions.

9. All construction activities within the state highway ROW will not be allowed to begin before sunrise and shall be required to cease prior to sunset. Traffic Control operations may begin one half hour before sunrise and continue until one half hour after sunset.

10. No disruption of traffic flow will be allowed during the morning (7:00 AM to 8:30 AM) and evening (4:30 PM to 6:00 PM) peak hour traffic flows, unless otherwise authorized in writing by CDOT.

H. SPECIFIC CONSTRUCTION REQUIREMENTS:

1. All existing ROW and survey control markers shall be protected during construction of this access. Any damage to these markers shall require resetting by a Colorado Professional Land Surveyor.

2. All **erosion control devices** shall be in place prior to the start of construction. Typical erosion control devices are shown in M-208-1.

3. For any **ROW fence** that must be removed, the posts on either side of the entrance must first be braced with an end post prior to cutting the fence as shown in M-607-1. Removed fencing material shall remain the property of CDOT and shall be given to the CDOT Maintenance representative.

4. If livestock animals roam freely within the property served by the access, the access shall close the break in the ROW fence with a gate conforming to CDOT Standard Plan M-607-1 or a Cattle Guard conforming to M-611-1. Gates shall be located so that the longest vehicle using the access can completely clear the highway when the gate is closed.

5. The Permittee/Contractor shall remove obstructions, clear and grub the proposed access location to the toe of fill or the top of cut. Cleared topsoil shall be stockpiled for final stabilization.

6. Prior to the placement of any fill, the surface to receive the fill shall be scarified a depth of 6 inches and compacted with moisture and density control. Any cut that shall subsequently receive Aggregate Base Course shall also be scarified and compacted in the same manner. Subsequent Fill shall also be constructed with moisture density control. The compaction shall conform to AASHTO T99 or AASHTO T180 as shown in the following table:

Soil Classification (AASHTO M 145)	AASHTO T99 Percent Min. Relative Compaction	AASHTO T180 Percent Min. Relative Compaction
A-1 through A-2-5	100	95
All others	95	90

7. Fill placed on slopes steeper than 4:1 shall be continuously benched into the existing slope.

8. Fill shall be placed in layers not to exceed 8 inches of loose material prior to compaction.

9. Fill material shall not have rock larger than 6 inches in diameter.

10. If a side drain culvert is required under the access fill, the fill shall first be constructed full width to a height of 1/3 the diameter of the culvert. The fill shall then be trenched for installation of the culvert. The trench width shall be the culvert diameter 18 inches on both sides. If the bottom of the trench is in rock, loose bedding material shall be 12 inches of Structure Backfill (Class I).

11. The culvert shall be installed with steel end sections and will connect the flowline of the roadside ditch crossing the access.

12. The culvert shall be backfilled with the same material and the same moisture density control as the rest of the fill. Backfill shall be brought up equally on both sides using 6 inch lifts of loose material prior to compaction.

13. Aggregate Base Course (ABC) shall be placed in layers not to exceed 6 inches once compacted. Compaction shall be 95% of AASHTO T180.

14. The final ABC shall have a smooth surface free of irregularities and any substance other than ABC.

15. The existing State Highway shoulder at the access location shall be saw cut a minimum of one (1) foot from the existing pavement edge to assure a straight edge for placement of adjacent pavement. If using asphalt pavement, the exposed vertical edge of the existing asphalt shall be coated with Emulsified Asphalt (Slow Setting).

16. For Hot Mix Asphalt (HMA) Pavement the following applies:
    a. The ABC shall not be frozen and the air and ABC surface temperatures shall be 50 degrees Fahrenheit and rising.
    b. The HMA shall be placed in layers not to exceed 2 inches compacted thickness.
    c. Longitudinal joints between layers shall be offset by 6 inches and shall not be in the wheel path.
    d. Any segregated areas shall be removed and replaced.
    e. The Permittee/Contractor shall use rolling equipment to compact the HMA immediately after placement.
    f. Compaction shall be 92 to 96 percent maximum theoretical density determined according to Colorado Procedure 51.
    g. The finished surface shall be smooth and conform to the lines and grades shown in M-609-1.

17. For Concrete Pavement the following applies:
    a. The ABC shall not be frozen and Concrete shall not be placed if the temperature is expected to fall below 45 degrees Fahrenheit or if the temperature of the delivered concrete is above 90 degrees.
    b. The concrete shall conform to the approved mix design and additional water added at the delivery site shall not exceed the maximum water cement ratio.
    c. The concrete shall be free of any foreign material.
    d. Concrete shall be placed on the ABC to require as little rehandling as possible and vibrated to insure consolidation.
    e. Concrete shall be struck off, screed, floated and finished in a manner that will leave a uniform surface of gritty texture. Additional water applied to the surface for finishing is not allowed.

f. The finished surface shall be smooth and conform to the lines and grades shown in M-609-1.
g. Immediately after finishing the entire concrete surface shall be cured by being kept moist with water and protected from the sun or sprayed uniformly with a membrane forming curing compound that is VOC compliant and meets AASHTO M148, Type 2.
h. The curing period shall be a minimum of 120 hours (5 days). If the forms are removed prior to the end of the curing period, the exposed concrete sides shall be cured for the remainder of the curing period in the same manner as the rest of the concrete.
i. Joints shall be constructed during the curing period to control cracking.
j. The concrete shall not be subjected to traffic until it has reached a compressive strength of 3,000 psi.

18. Shouldering material shall be placed to eliminate any vertical edges upon completion of the paving.

19. If a **mailbox** is to be installed, it shall be crashworthy and conform to M-210-1. The mailbox shall be located as far from the edge of travel way as possible and allow for mail delivery vehicles to stop completely outside of the traveled way.

I. FINAL STABILIZATION REQUIREMENTS:

1. **All areas disturbed** during the construction of the access **shall be immediately stabilized** upon completion of the access.

2. Break points at the top of cut slopes and in the bottom of ditches shall be rounded on construction for a pleasing appearance.

3. A minimum of 4 inches of topsoil shall be placed on all slopes which are to be seeded and mulched.

4. Soil preparation, seeding, and mulching shall be required within the ROW limits on all disturbed areas not surfaced. The following types and rates shall be used unless a separate Landscaping Permit states otherwise:

Seed Requirements:

COMMON NAME	BOTANICAL NAME	LBS. PLS\ACRE
Western Wheatgrass (V. Arriba)	Pascopyrum Smithii	16
Slender Wheatgrass (V. San Luis)	Elymus Trachycaulus	6
Indian Ricegrass (V. Paloma)	Oryzopsis Hymenoides	6
Hard Fescue (V. Durar)	Festuca Ovina Duriuscula	6
Alsike Clover	Trifolium Hybridium	4
Sand Dropseed	Sporobolus Cryptandrus	0.50
Total lbs/acre		38.50

Seed shall be mechanically drilled to a depth of 0.25 or 0.5 inches into the soil on slopes flatter than 3:1. Seed shall be broadcast on slopes 3:1 or steeper and raked into soil.

5. **Fertilizer Requirements:**

Nutrient Type	% AVAILABLE	LBS\ACRE
Nitrogen:	18	45
Phosphorus:	46	115

Fertilizer shall be incorporated to a depth of 2" to 4" into the topsoil.

6. **Mulching Requirements and Application:** 2 tons/acre straw mechanically crimped into soil on slopes flatter than 3:1. Place a soil retention blanket consisting of woven wood or straw coconut material on slopes 3:1 or steeper.

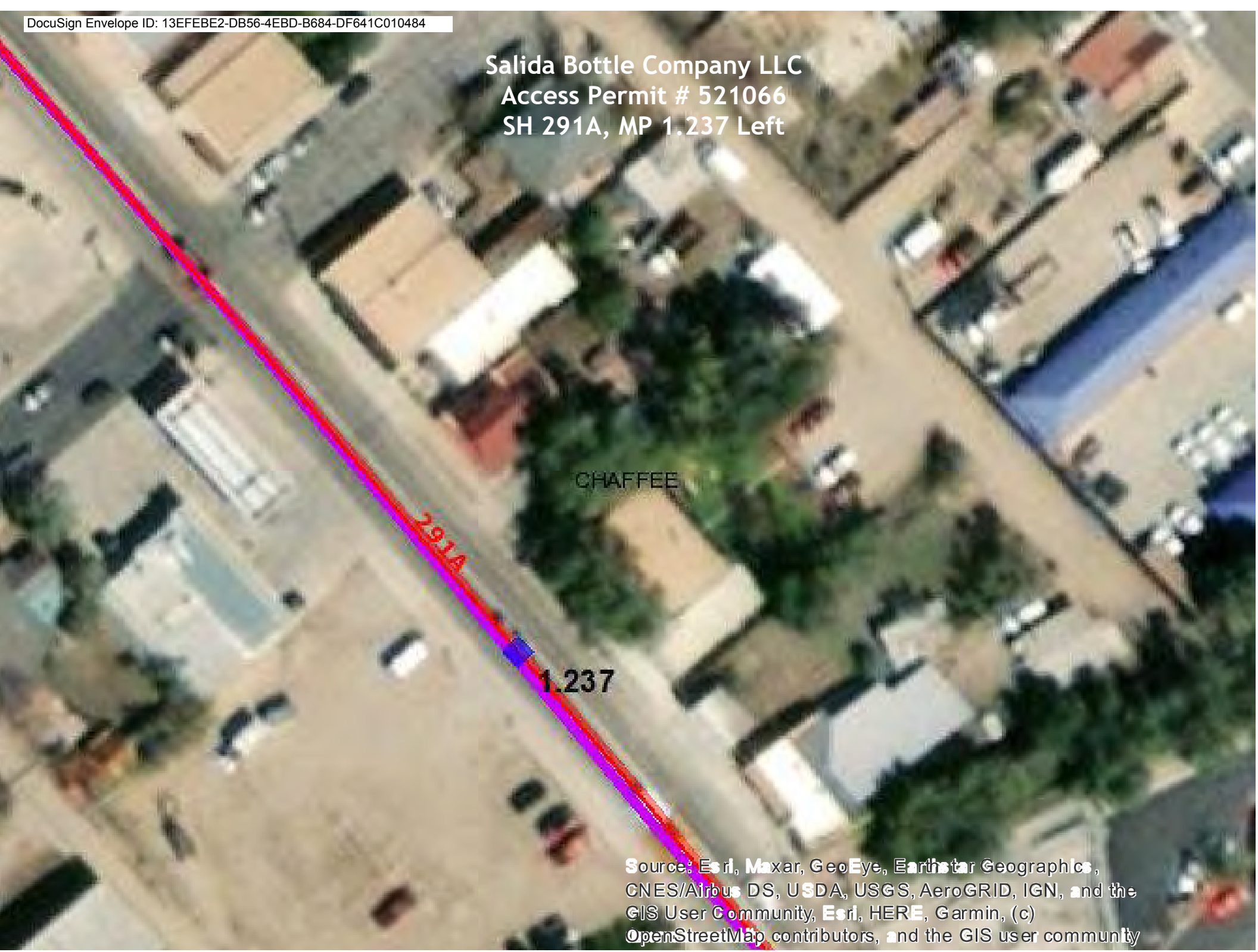
J. FINAL PROJECT ACCEPTANCE:

1. **Final Project Acceptance** will be by the Regional Transportation Director (RTD) or their authorized designee.

2. **Reconstruction or improvements** to the access will be required when the Permittee fails to meet the required design and/or materials specifications. If any construction element fails within two years of CDOT's final acceptance due to improper construction or materials, the Permittee is responsible for all such repairs.

APPLICANT: DocuSigned by: Eric Warner 632C81635D25423... DATE 12/8/2021 | 5:22 PM CST

Eric Warner for Salida Bottling Company, LLC



Notes for Figure 6H-6—Typical Application 6
Shoulder Work with Minor Encroachment

Guidance:

1. All lanes should be a minimum of 3 m (10 ft) in width as measured to the near face of the channelizing devices.
2. The treatment shown should be used on a minor road having low speeds. For higher-speed traffic conditions, a lane closure should be used.

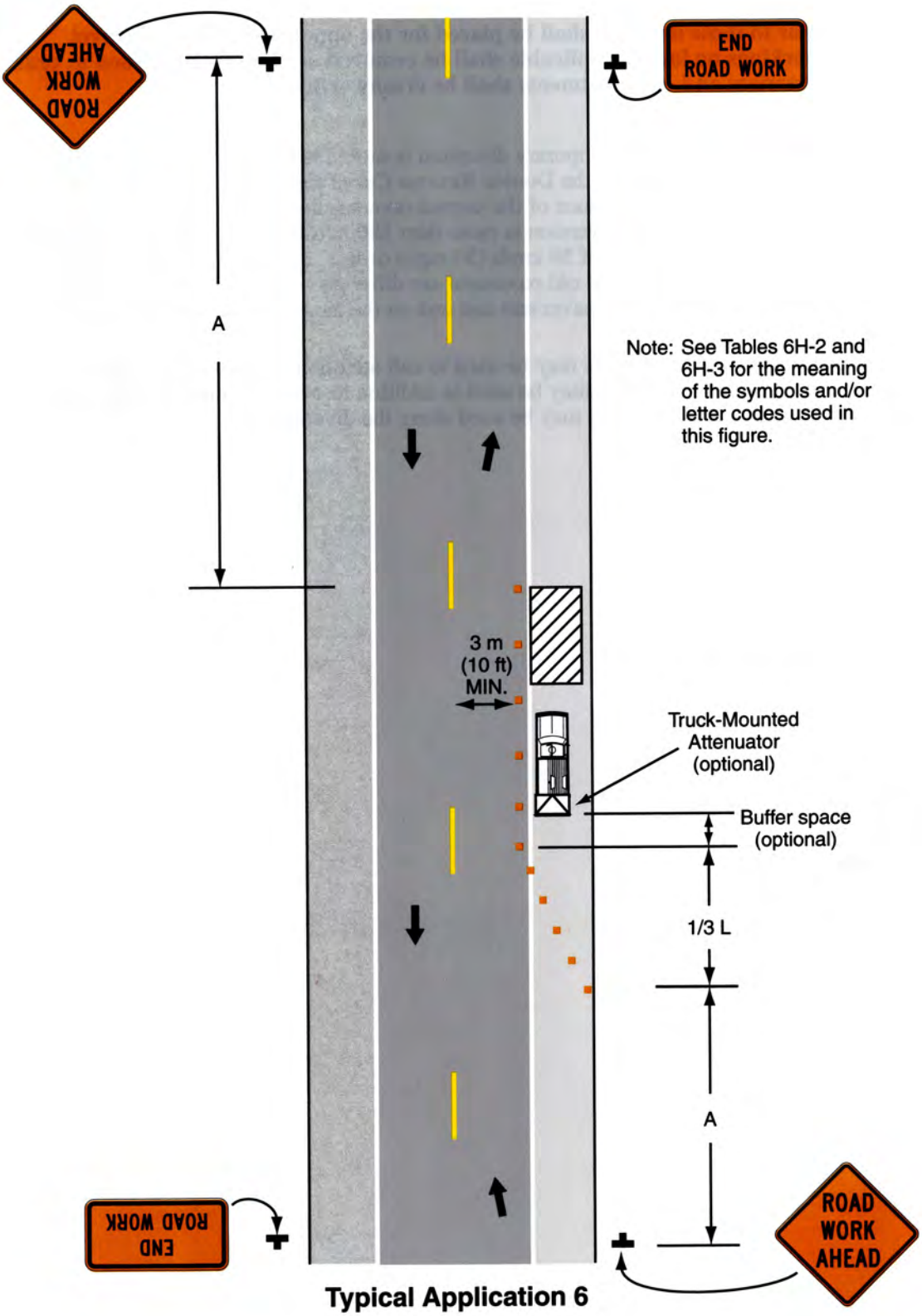
Option:

3. For short-term use on low-volume, low-speed roadways with vehicular traffic that does not include longer and wider heavy commercial vehicles, a minimum lane width of 2.7 m (9 ft) may be used.
4. Where the opposite shoulder is suitable for carrying vehicular traffic and of adequate width, lanes may be shifted by use of closely spaced channelizing devices, provided that the minimum lane width of 3 m (10 ft) is maintained.
5. Additional advance warning may be appropriate, such as a ROAD NARROWS sign.
6. Temporary traffic barriers may be used along the work space.
7. The shadow vehicle may be omitted if a taper and channelizing devices are used.
8. A truck-mounted attenuator may be used on the shadow vehicle.
9. For short-duration work, the taper and channelizing devices may be omitted if a shadow vehicle with activated high-intensity rotating, flashing, oscillating, or strobe lights is used.
10. Vehicle hazard warning signals may be used to supplement high-intensity rotating, flashing, oscillating, or strobe lights.

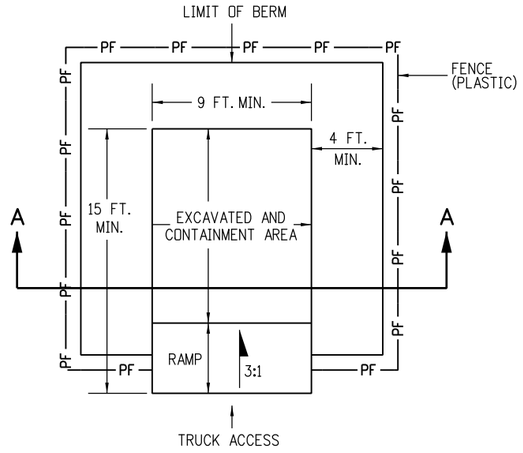
Standard:

11. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.

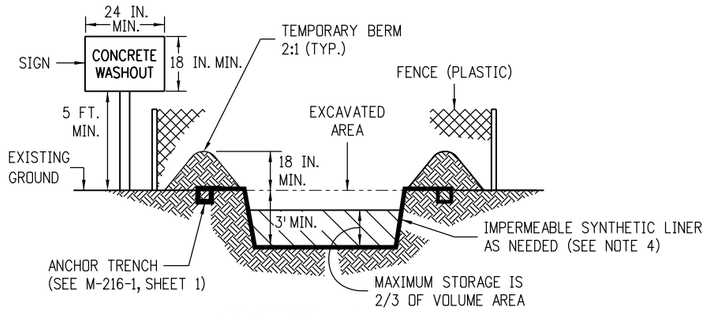
Figure 6H-6. Shoulder Work with Minor Encroachment (TA-6)



Typical Application 6



PLAN VIEW

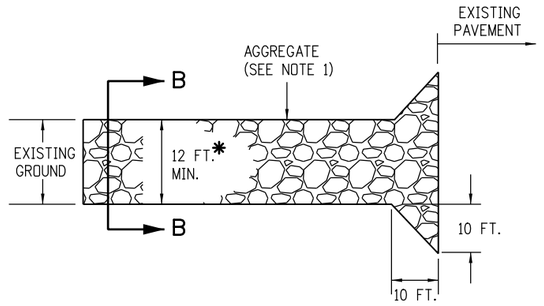


SECTION A-A

NOTES:

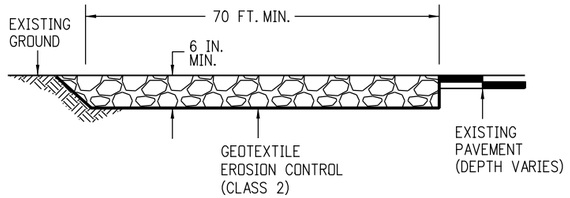
1. A FENCE (PLASTIC) CONFORMING TO SECTION 607 SHALL BE INSTALLED AROUND THE CONCRETE WASHOUT AREA, EXCEPT AT THE OPENING.
2. THE CONCRETE WASHOUT SIGN SHALL HAVE LETTERS AT LEAST 3 INCHES HIGH AND CONFORM TO SUBSECTION 630.02.
3. ALL MATERIALS AND LABOR TO COMPLETE THE CONCRETE WASHOUT STRUCTURE SHALL BE INCLUDED IN THE COST OF WORK AND NOT PAID FOR SEPARATELY.
4. THE BOTTOM OF EXCAVATION SHALL BE A MINIMUM OF FIVE FEET ABOVE GROUND WATER. IF NOT, THE BOTTOM OF EXCAVATION SHALL BE IN ACCORDANCE WITH 208.02 (j).
5. THE PAY ITEM NUMBER FOR CONCRETE WASHOUT STRUCTURE (EACH) IS 208-00045.

CONCRETE WASHOUT STRUCTURE

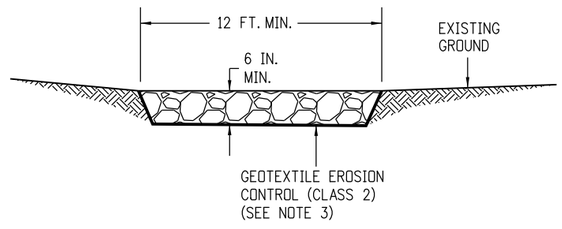


PLAN VIEW

* SHALL EXTEND FULL WIDTH OF INGRESS AND EGRESS OPERATION.



ELEVATION SECTION



SECTION B-B

NOTES:

1. AGGREGATE SHALL CONFORM TO SUBSECTION 208.02 (I).
2. THE CONTRACTOR SHALL PROTECT CURB AND GUTTER THAT CROSSES THE ENTRANCE FROM DAMAGE, WHILE NOT BLOCKING FLOW OF WATER THRU STRUCTURE. PROTECTION OF THE CURB AND GUTTER SHALL BE INCLUDED IN THE COST OF WORK AND NOT PAID FOR SEPARATELY.
3. GEOTEXTILE SHALL CONFORM TO SUBSECTION 712.08.
4. ALL MATERIALS AND LABOR TO COMPLETE THE VEHICLE TRACKING PAD SHALL BE INCLUDED IN THE COST OF WORK AND NOT PAID FOR SEPARATELY.
5. THE PAY ITEM NUMBER FOR VEHICLE TRACKING PAD (EACH) IS 208-00070.

VEHICLE TRACKING PAD

Computer File Information		Sheet Revisions	
Creation Date: 07/04/12 Initials: JBK		Date:	Comments
Last Modification Date: 04/01/19 Initials: LTA	(R-X)	07/16/15	Deleted the two Soil Retention Blanket detail sheets. They are now standard M-216-1 Soil Retention Covering.
Full Path: www.codot.gov/business/designsupport	(R-X)	03/29/16	Minor revisions to some dimensions and General Notes.
Drawing File Name: 2080101011.dgn	(R-X)	04/01/19	Revised to comply with the updated Stormwater Construction Permit (SCP) requirements.
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	(R-X)		

Colorado Department of Transportation
2829 West Howard Place
CDOT HQ, 3rd Floor
Denver, CO 80204
Phone: 303-757-9021 FAX: 303-757-9868
Division of Project Support JBK/LTA

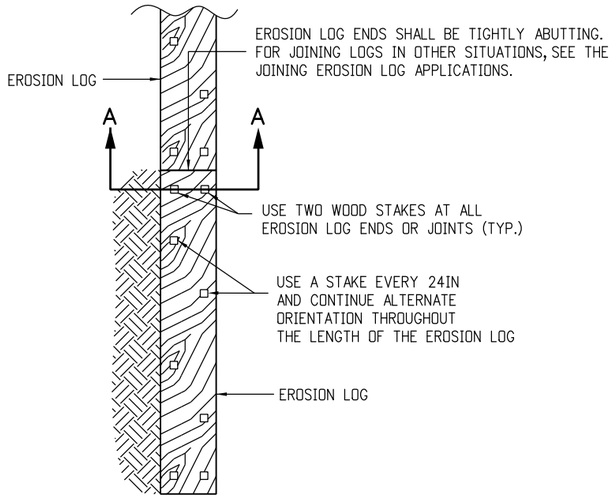
TEMPORARY EROSION CONTROL

Issued By: Project Development Branch July 4, 2012

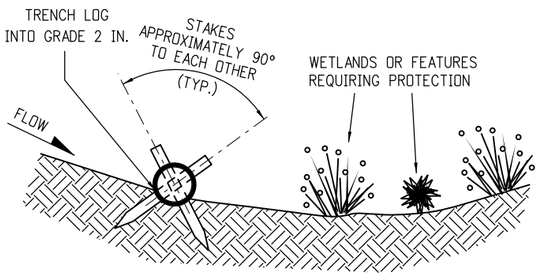
STANDARD PLAN NO.

M-208-1

Sheet No. 1 of 11



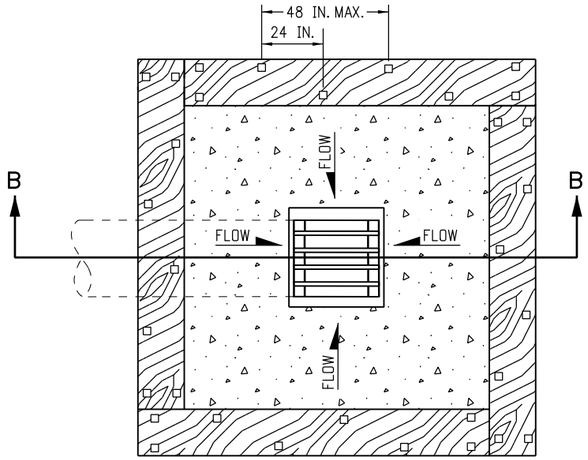
PLAN VIEW



SECTION A-A

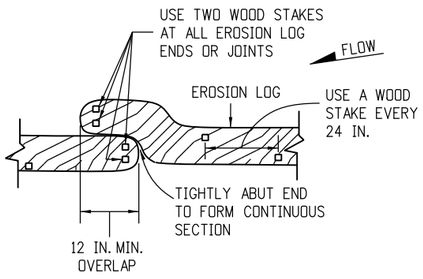
TYPICAL STAKE INSTALLATION

EROSION LOGS PAY ITEMS	
NUMBER	DESCRIPTION
208-00012	TYPE 1 (9 IN.)
208-00002	TYPE 1 (12 IN.)
208-00013	TYPE 1 (20 IN.)
208-00007	TYPE 2 (8 IN.)
208-00008	TYPE 2 (12 IN.)
208-00009	TYPE 2 (18 IN.)
208-00022	TYPE 3 (9 IN.)
208-00023	TYPE 3 (12 IN.)
208-00024	TYPE 3 (20 IN.)

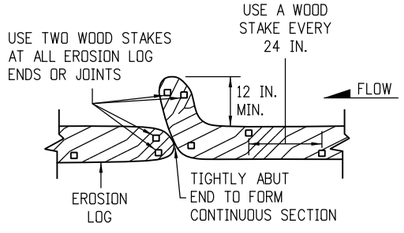


PLAN VIEW

NOTE: THE TOPS OF ALL STAKES SHALL NOT EXTEND MORE THAN 2 INCHES ABOVE THE TOPS OF EROSION LOGS.

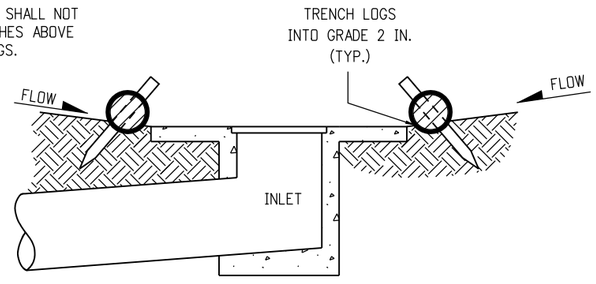


OVERLAP JOINING DETAIL



J-HOOK JOINING DETAIL

JOINING EROSION LOG APPLICATIONS



SECTION B-B

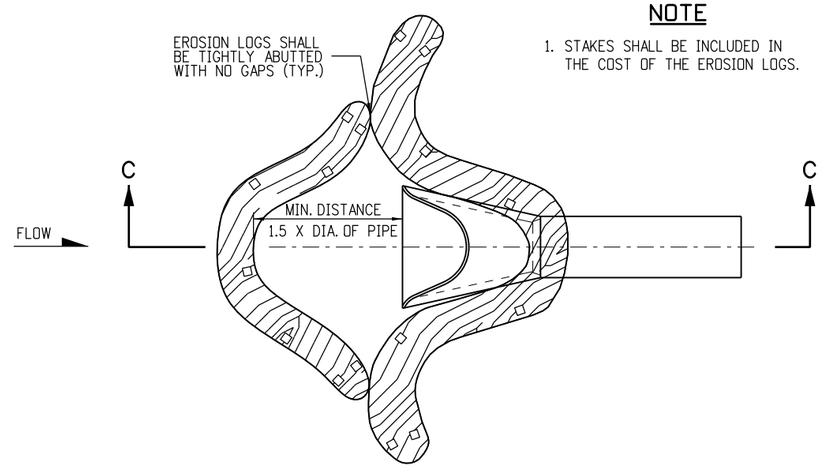
NOTE: LOCATE EROSION LOGS AT THE OUTSIDE EDGE OF THE CONCRETE APRON.

EROSION LOG FILTER AT DROP INLET

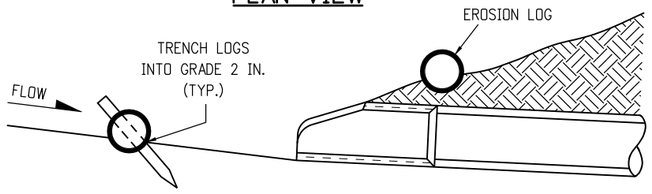
EROSION LOG APPLICATIONS

NOTE

1. STAKES SHALL BE INCLUDED IN THE COST OF THE EROSION LOGS.



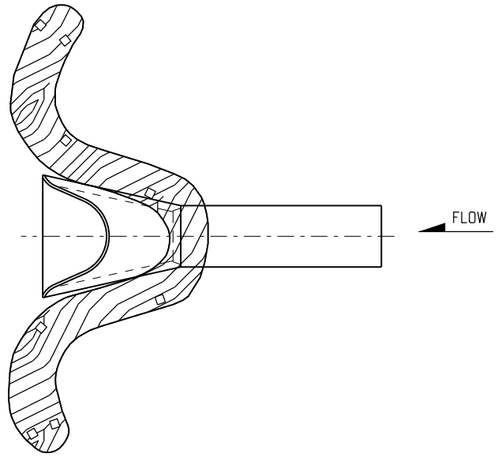
PLAN VIEW



SECTION C-C
(NOT ALL LOGS SHOWN)

NOTE: TOP OF STAKE SHALL NOT EXTEND PAST TOP OF EROSION LOG MORE THAN 2 IN.

EROSION LOG CULVERT INLET PROTECTION



EROSION LOG CULVERT OUTLET PROTECTION

Computer File Information		Sheet Revisions	
Creation Date: 07/04/12 Initials: JBK		Date:	Comments
Last Modification Date: 04/01/19 Initials: LTA	(R-X)	03/29/16	Minor revisions to some dimensions. Added Erosion Logs Pay Item table.
Full Path: www.codot.gov/business/designsupport	(R-X)	04/01/19	Revised to comply with the updated Stormwater Construction Permit (SCP) requirements.
Drawing File Name: 2080102011.dgn	(R-X)		
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	(R-X)		

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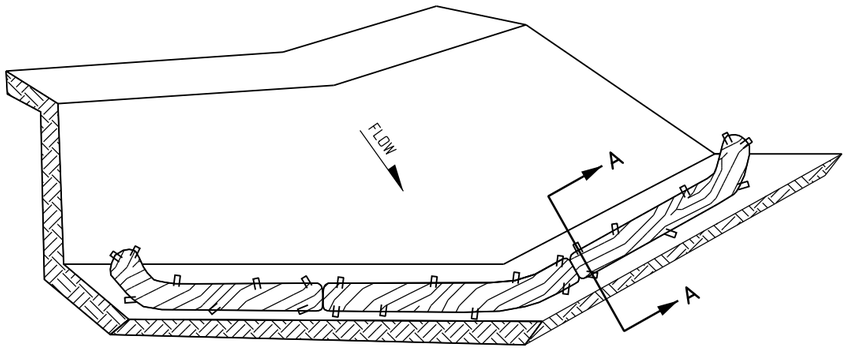
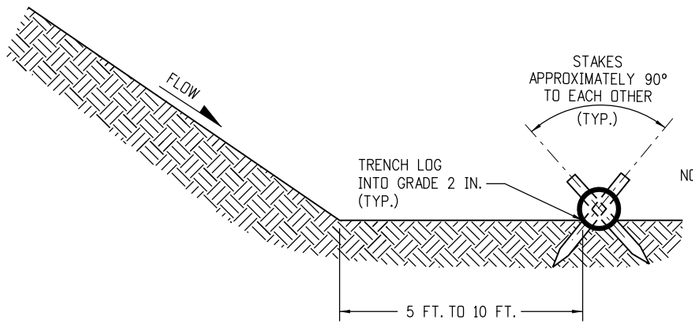


ISOMETRIC VIEW



NOTE: THE TOPS OF ALL STAKES SHALL NOT EXTEND MORE THAN 2 INCHES ABOVE THE TOPS OF EROSION LOGS.

SECTION A-A

NOTES:

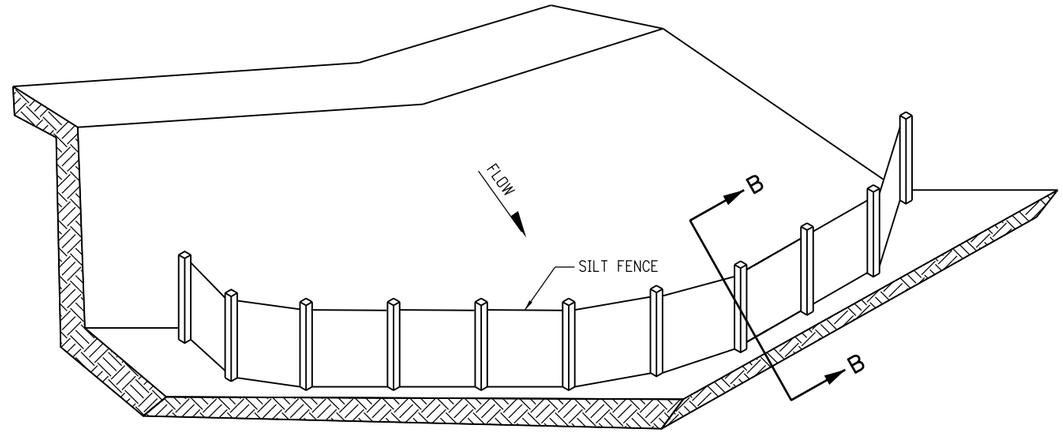
1. EROSION LOGS USED AT TOE OF SLOPE SHALL BE PLACED 5 TO 10 FEET BEYOND TOE OF SLOPE TO PROVIDE STORAGE CAPACITY.
2. EROSION LOGS SHALL BE PLACED ON THE CONTOUR WITH ENDS FLARED UP SLOPE.
3. SEE SHEET 2 OF 11 FOR JOINING LOGS DETAIL.

EROSION LOGS PAY ITEMS	
NUMBER	DESCRIPTION
208-00012	TYPE 1 (9 IN.)
208-00002	TYPE 1 (12 IN.)
208-00013	TYPE 1 (20 IN.)
208-00007	TYPE 2 (8 IN.)
208-00008	TYPE 2 (12 IN.)
208-00009	TYPE 2 (18 IN.)
208-00022	TYPE 3 (9 IN.)
208-00023	TYPE 3 (12 IN.)
208-00024	TYPE 3 (20 IN.)

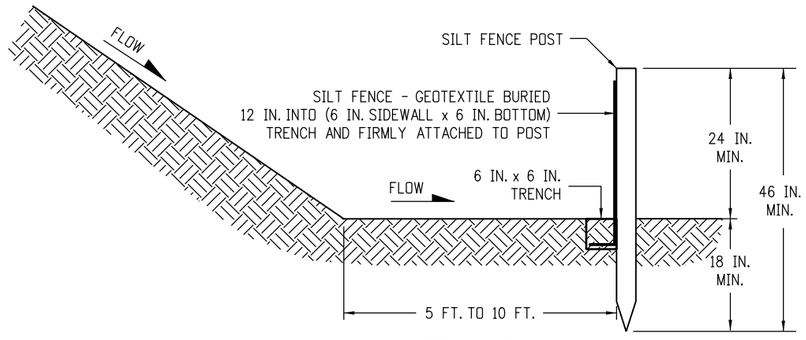
EROSION LOG TOE OF SLOPE PROTECTION

NOTES

1. SILT FENCE SHALL HAVE A MAXIMUM DRAINAGE AREA OF ONE-QUARTER ACRE PER 100 FEET OF SILT FENCE LENGTH; MAXIMUM SLOPE LENGTH BEHIND BARRIER IS 100 FEET.
2. SILT FENCE USED AT TOE OF SLOPE SHALL BE PLACED 5 TO 10 FEET BEYOND TOE OF SLOPE TO PROVIDE STORAGE CAPACITY.
3. SILT FENCE SHALL BE PLACED PARALLEL TO THE CONTOUR WITH ENDS FLARED UP SLOPE.
4. THE MAXIMUM LENGTH OF EROSION LOGS OR SILT FENCES WITHOUT A FLARED END TURNING UPSLOPE IS 150 FEET.



ISOMETRIC VIEW



SECTION B-B

SILT FENCE TOE OF SLOPE PROTECTION

NOTE: THE PAY ITEM NUMBER FOR SILT FENCE (LF) IS 208-00020.

TOE OF SLOPE PROTECTION APPLICATIONS

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Drawing File Name: 2080103011.dgn	(R-X)		
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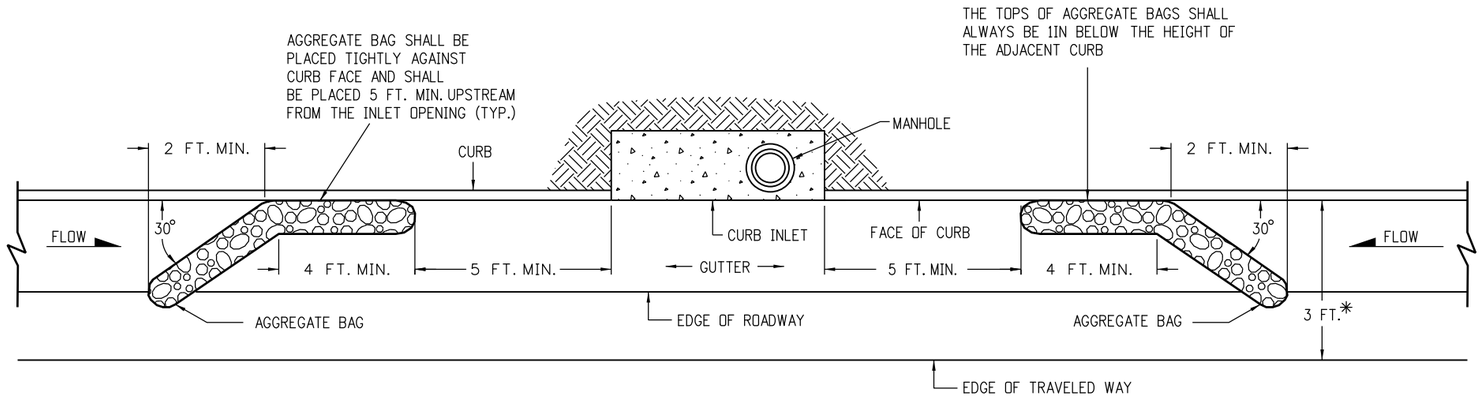
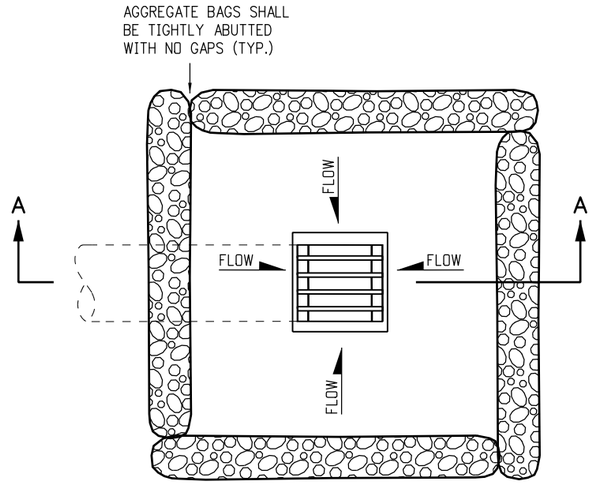


PLAN VIEW

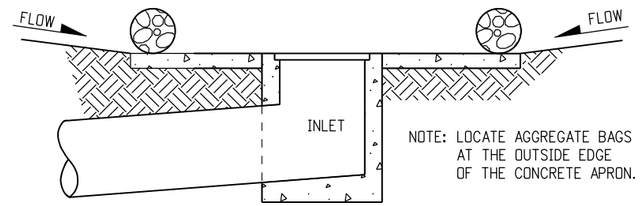
* NOTE: USE AGGREGATE BAGS ONLY WHEN THERE IS A MINIMUM CLEARANCE OF 3 FEET FROM THE EDGE OF THE TRAVELED WAY (INCLUDING CONDITIONS DURING DETOURS) TO THE FACE OF CURB.

LENGTH (L) OF INLET FT.	NUMBER OF AGGREGATE BAGS UPSTREAM OF INLET
0 - 5	1
6 - 10	2
L > 10	3

AGGREGATE BAGS AT STORM DRAIN INLET (TYPE I)



PLAN VIEW



SECTION A-A

AGGREGATE BAGS AT DROP INLET

AGGREGATE BAG APPLICATIONS

NOTE: THE PAY ITEM NUMBER FOR AGGREGATE BAG (LF) IS 208-00035

Computer File Information		Sheet Revisions	
Creation Date: 07/04/12 Initials: JBK		Date:	Comments
Last Modification Date: 04/01/19 Initials: LTA	R-X	03/29/16	Added some dimensions and Note.
Full Path: www.codot.gov/business/designsupport	R-X	04/01/19	Revised to comply with the updated Stormwater Construction Permit (SCP) requirements.
Drawing File Name: 2080104011.dgn	R-X		
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	R-X		

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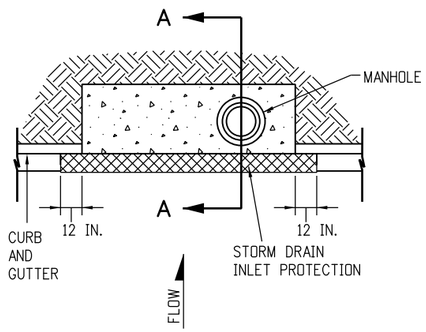
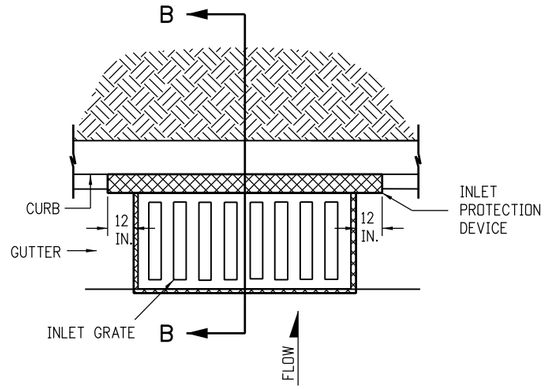
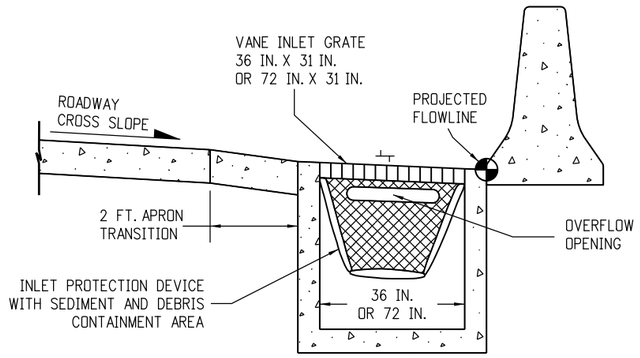


PLAN VIEW

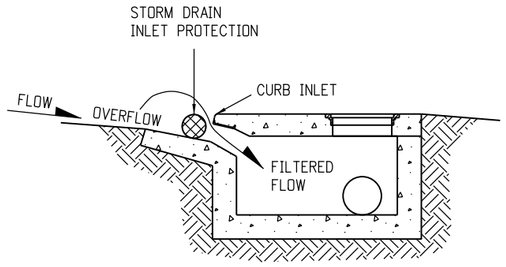


PLAN VIEW



OPTION A

STORM DRAIN INLET PROTECTION (TYPE III)

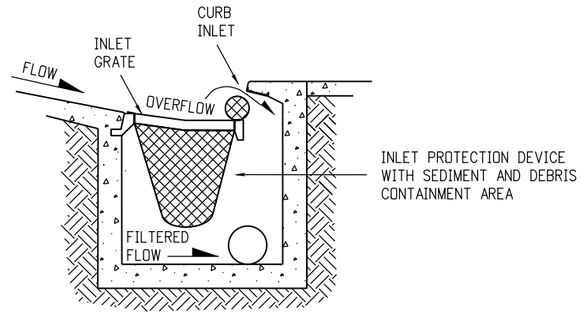


SECTION A-A

STORM DRAIN INLET PROTECTION (TYPE I)

NOTES:

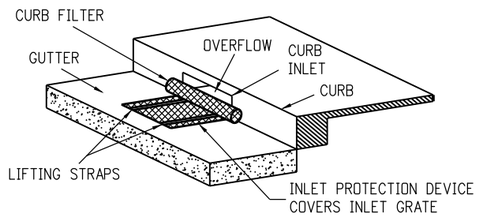
1. INLET PROTECTION DEVICE SHALL EXTEND 12 INCHES PAST EACH END OF THE INLET.
2. THE PAY ITEM NUMBERS FOR STORM DRAIN INLET PROTECTION (TYPE I) ARE 208-00051 (LF), 208-00053 84 INCHES (EACH), 208-00057 144 INCHES (EACH), AND 208-00058 204 INCHES (EACH).
3. FOR STORM DRAIN INLET TYPES I AND II, IF THERE IS A MINIMUM CLEARANCE OF 3 FEET FROM THE EDGE OF THE TRAVELED WAY TO THE FACE OF CURB, USE THE AGGREGATE BAGS AT STORM DRAIN INLET (TYPE I) DETAIL ON SHEET 4 INSTEAD.



SECTION B-B

OPTION A

STORM DRAIN INLET PROTECTION (TYPE II)

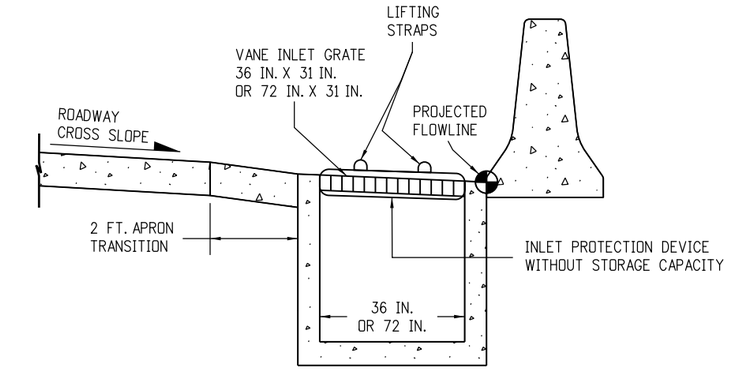


ISOMETRIC VIEW

OPTION B

STORM DRAIN INLET PROTECTION (TYPE II)

NOTE: THE PAY ITEM NUMBERS FOR STORM DRAIN INLET PROTECTION (TYPE II) ARE 208-00054 (EACH).



OPTION B

STORM DRAIN INLET PROTECTION (TYPE III)

NOTE: THE PAY ITEM NUMBER FOR STORM DRAIN INLET PROTECTION (TYPE III) (EACH) IS 208-00056.

STORM DRAIN INLET PROTECTION TYPES

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Full Path: www.codot.gov/business/designsupport	(R-X)	08/10/17	Added new Pay Item numbers for Type I and II.
Drawing File Name: 2080105011.dgn	(R-X)	04/01/19	Revised to comply with the updated Stormwater Construction Permit (SCP) requirements.
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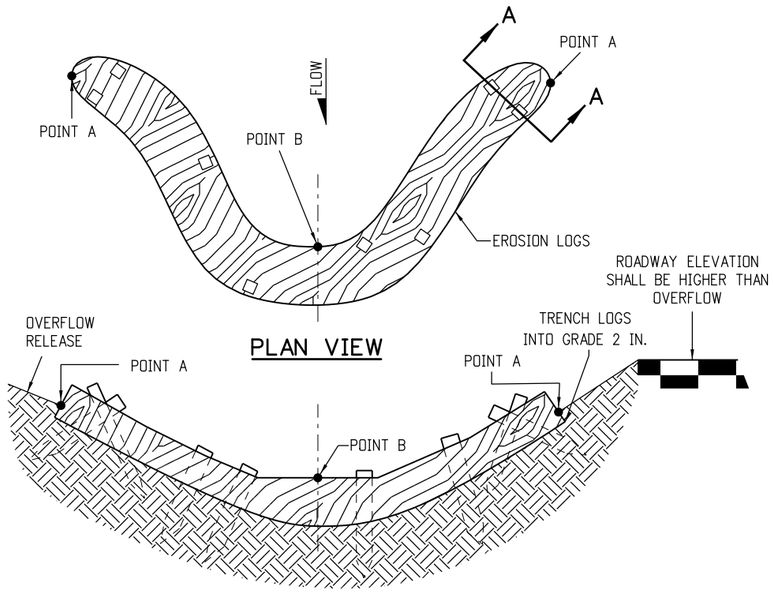
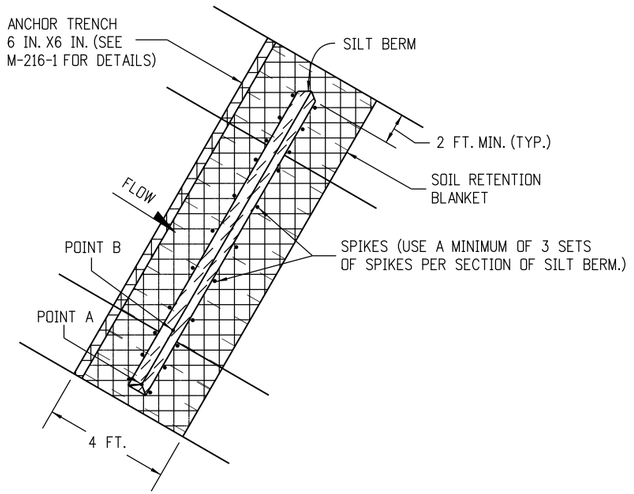


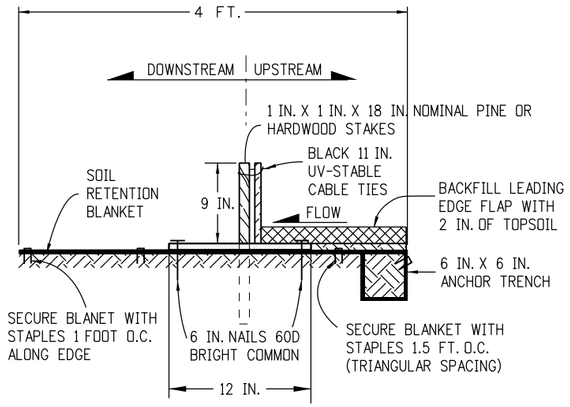
PLAN VIEW

NOTE: POINTS "A" SHALL BE A MINIMUM 4 IN. HIGHER THAN POINT "B".

ELEVATION

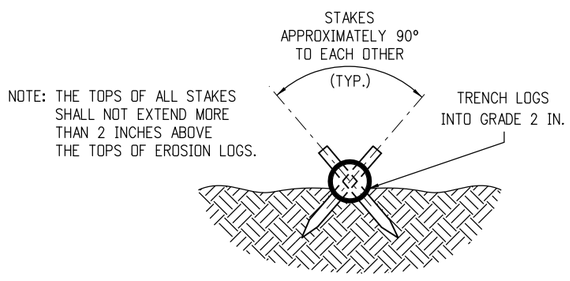


PLAN VIEW



NOTES:
1. MINIMUM 4 NAILS PER SEGMENT (UPSTREAM).
2. MINIMUM 2 NAILS PER SEGMENT (DOWNSTREAM).
3. MINIMUM 2 WOOD STAKES PER SEGMENT.

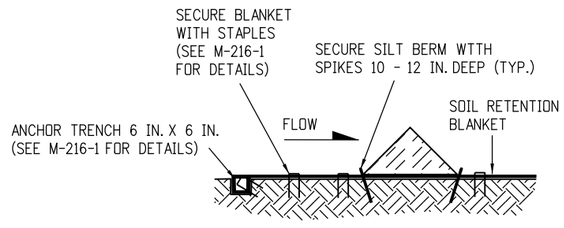
SILT BERM (2) SECTION VIEW



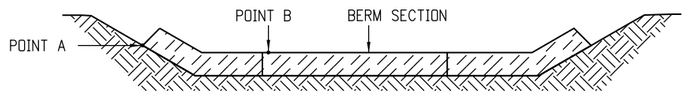
SECTION A-A

NOTES:
1. EROSION LOGS SHALL BE EMBEDDED 2 INCHES INTO THE SOIL.
2. EROSION LOGS SHALL BE TIGHTLY ABUTTED WITH NO GAPS.
3. V-SHAPED TEMPORARY DITCHES SHALL NOT BE USED. DITCHES SHAL BE GRADED IN A PARABOLIC OR TRAPEZOIDAL SHAPE.

EROSION LOG INSTALLATION



SILT BERM (1) SECTION VIEW



POINT "A" SHALL BE HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE BERM AND NOT AROUND THE ENDS.

FRONT VIEW

NOTES
1. ANCHOR SOIL RETENTION BLANKET INTO TRENCH WITH 8 INCHES MIN. STAPLES PLACED AT 1 FOOT INTERVALS ALONG EDGE.
2. FILL AND COMPACT TRENCH.
3. SECTIONS OF THE SILT BERM SHALL BE OVERLAPPED WITH NO GAPS.
4. FOR SLOPE AND CHANNEL SPACING SEE THE "SECTION VIEW ALONG DITCH FLOWLINE" DETAIL ON SHEET 11 OF 11.
5. SOIL RETENTION BLANKET SHALL ALWAYS BE REQUIRED.
6. THE PAY ITEM NUMBER FOR SILT BERM (LF) IS 208-00004.

SILT BERM INSTALLATION

DRAINAGE DITCH APPLICATIONS

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Full Path: www.codot.gov/business/designsupport	(R-X)		
Drawing File Name: 2080106011.dgn	(R-X)		
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	(R-X)		

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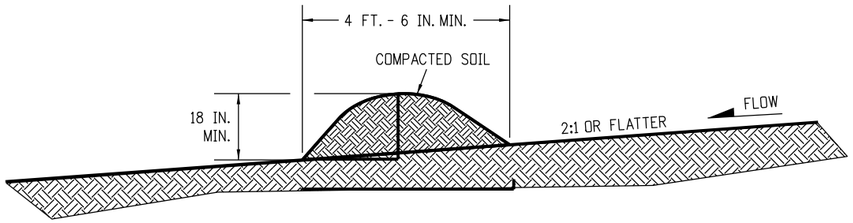
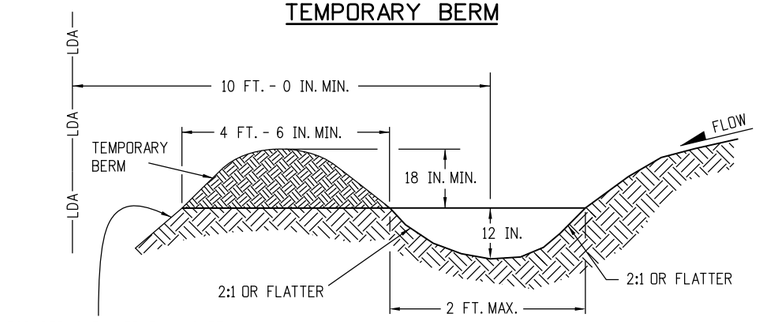


NOTES:

1. BERMS SHALL HAVE A HEIGHT OF 18 INCHES, SIDE SLOPES OF 2:1 OR FLATTER AND A MINIMUM BASE WIDTH OF 4 FT. -6 IN.
2. BERMS SHALL BE USED TO INTERCEPT AND DIVERT DRAINAGE TO A DESIGNATED OUTLET.
3. BERMS SHALL NOT BE USED WHERE DRAINAGE AREA EXCEEDS 10 ACRES.
4. BERMS SHALL BE CONSTRUCTED OUT OF ACCEPTABLE MATERIAL THAT CAN BE COMPACTED AND RECEIVE AT A MINIMUM HEAVY EQUIPMENT WHEEL ROLLED COMPACTION.
5. TEMPORARY BERMS SHALL BE CONSTRUCTED OUT OF EMBANKMENT (SUBSOIL) AND IN NO CIRCUMSTANCE CONSTRUCTED OUT OF SALVAGED TOPSOIL.
6. THE PAY ITEM NUMBER FOR TEMPORARY BERM (LF) IS 208-00300.

TEMPORARY BERM

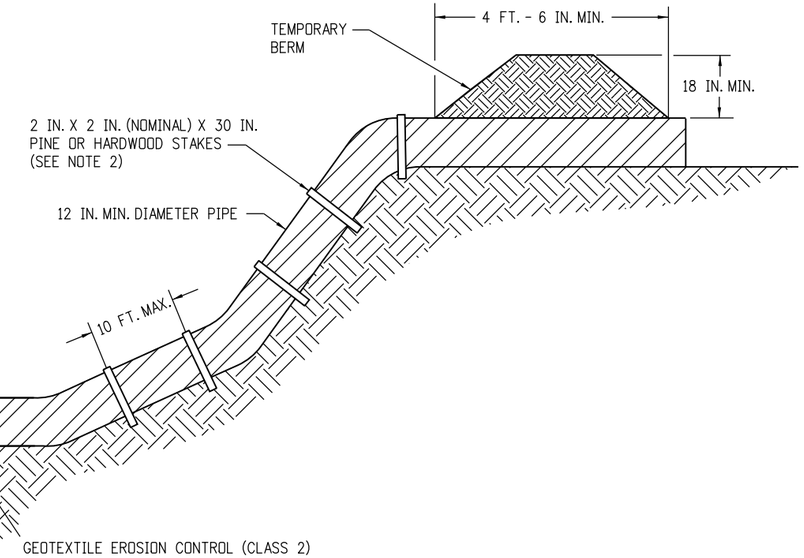


FOR BERMS TALLER THAN 2 FT.,
INSTALL TOE OF SLOPE CONTOL MEASURES.
SEE SHEET 3 OF 11 FOR DETAILS.

NOTES:

1. TEMPORARY DIVERSION DITCHES SHALL BE CONSTRUCTED ACROSS THE SLOPE TO INTERCEPT RUNOFF AND DIRECT IT TO A STABLE OUTLET OR SEDIMENT TRAP.
2. USE THE TEMPORARY DIVERSION DITCH IMMEDIATELY ABOVE A NEW CUT, FILL SLOPE, OR AROUND THE PERIMETER OF A DISTURBED AREA.
3. THE GRADIENT ALONG THE FLOW PATH SHALL HAVE A POSITIVE GRADE TO ASSURE DRAINAGE, BUT SHALL NOT BE SO STEEP AS TO RESULT IN EROSION DUE TO HIGH VELOCITY.
4. THE DIVERSION FLOWLINE SHALL ALWAYS BE LOCATED A MINIMUM 10 FEET FROM THE OUTSIDE LIMITS OF DISTURBED AREA BOUNDARY.
6. DIVERSION BERMS SHALL BE CONSTRUCTED OUT OF EMBANKMENT (SUBSOIL) AND IN NO CIRCUMSTANCE CONSTRUCTED OUT OF SALVAGED TOPSOIL.
5. THE PAY ITEM NUMBER FOR TEMPORARY DIVERSION (LF) IS 208-00301.

TEMPORARY DIVERSION



NOTES:

1. ANCHOR SIZE VARIES ACCORDING TO PIPE SIZE
2. TO SECURE THE PIPE, DRIVE STAKES INTO GROUND, THEN TIE A 12 GUAGE WIRE BETWEEN THEM ABOVE AND ACROSS THE PIPE'S WIDTH.
3. THE OUTLET SHALL BE ALIGNED WITH THE FLOW DIRECTION OF THE EXISTING GRADE. PERPENDICULAR DISCHARGE TO A CHANNEL SHALL NOT BE ACCEPTABLE.
4. THE GRADE AROUND THE INLET TO THE PIPE SHALL BE COMPACTED.
5. THE PAY ITEM NUMBER FOR TEMPORARY SLOPE DRAINS (LF) IS 208-00060.

TEMPORARY SLOPE DRAINS

GRADING APPLICATIONS

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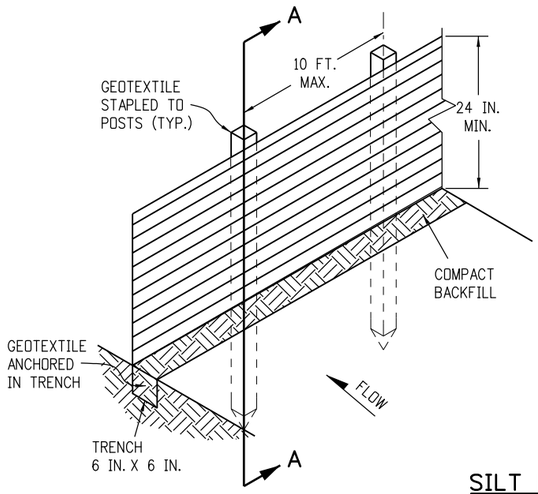
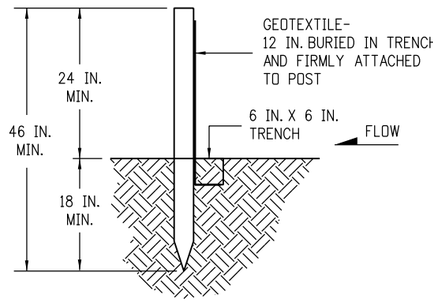


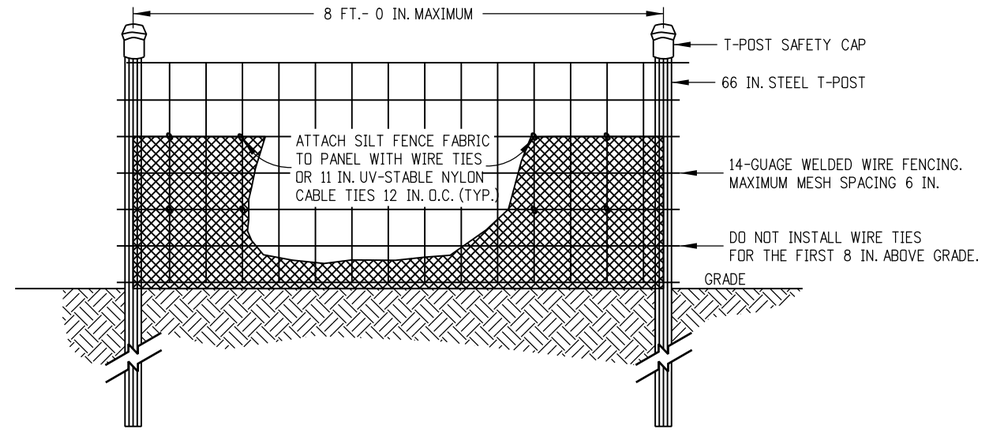


SECTION A-A

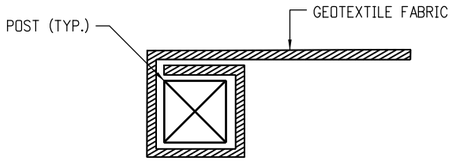
SILT FENCE

NOTES:

1. GEOTEXTILE SHALL BE ATTACHED TO WOOD POSTS WITH THREE OR MORE STAPLES PER POST. STAPLES SHALL BE HEAVY DUTY WIRE AND AT LEAST 1 INCH LONG.
2. WOOD POST SHALL BE 1 IN. X 1 IN. NOMINAL.
3. THE PAY ITEM NUMBER FOR SILT FENCE (LF) IS 208-00020.
4. THE SILT FENCE SHALL BE PLACED ON THE CONTOUR (AT THE SAME ELEVATION ±6 IN.). THE ENDS SHALL BE FLARED UP SLOPE (MINIMUM ELEVATION GAIN OF 18 IN.).



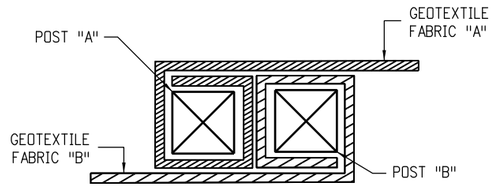
ELEVATION VIEW



END SECTION DETAIL (PLAN VIEW)

NOTE:

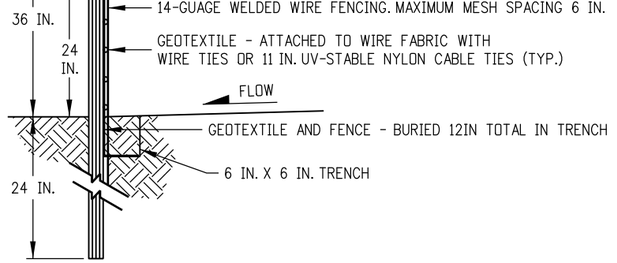
1. THE END OF THE SILT FENCE FABRIC SHALL BE WRAPPED APPROX. 6 INCHES AROUND A WOODEN POST ONE FULL TURN, THEN SECURED ALONG THE POST WITH 6 HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH LONG.



JOINING SECTION DETAIL (PLAN VIEW)

NOTES:

1. THE ENDS OF THE SILT FENCE FABRIC SHALL BE JOINED TOGETHER BY WRAPPING APPROX. 6 INCHES OF EACH END AROUND A WOODEN POST ONE FULL TURN, THEN SECURED ALONG THE POST WITH 6 HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH LONG.
2. POSTS SHALL BE TIGHTLY ABUTTED WITH NO GAPS TO PREVENT POTENTIAL FLOW-THROUGH OF SEDIMENT AT JOINT.



SIDE VIEW

NOTES:

1. THE ENDS OF THE SILT FENCE FABRIC SHALL BE JOINED TOGETHER BY WRAPPING APPROX. 6 INCHES OF EACH END AROUND A STEEL T-POST, THEN SECURED ALONG THE POST WITH WIRE TIES (MINIMUM 3 PER POST).
2. POSTS SHALL BE TIGHTLY ABUTTED WITH NO GAPS TO PREVENT POTENTIAL FLOW-THROUGH OF SEDIMENT AT JOINT.
3. SILT FENCES SHALL NOT BE USED FOR CHECK DAMS.
4. THE PAY ITEM NUMBER FOR SILT FENCE (REINFORCED) (LF) IS 208-00021.

SILT FENCE (REINFORCED)

SILT FENCE APPLICATIONS

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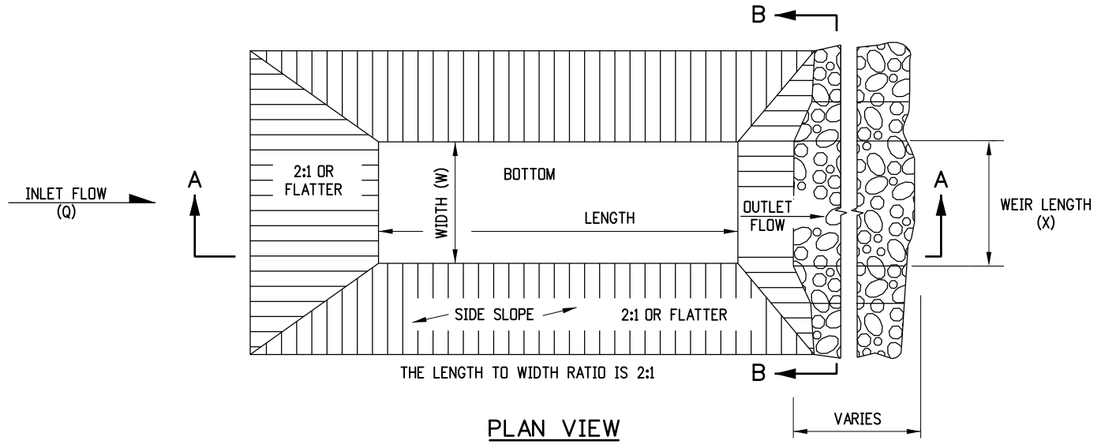
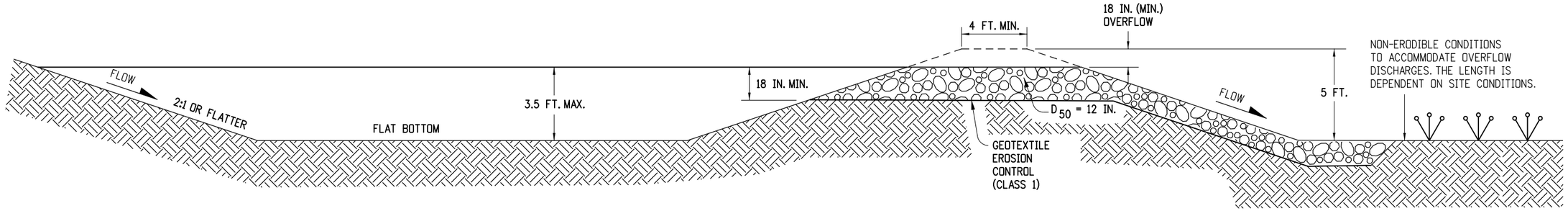


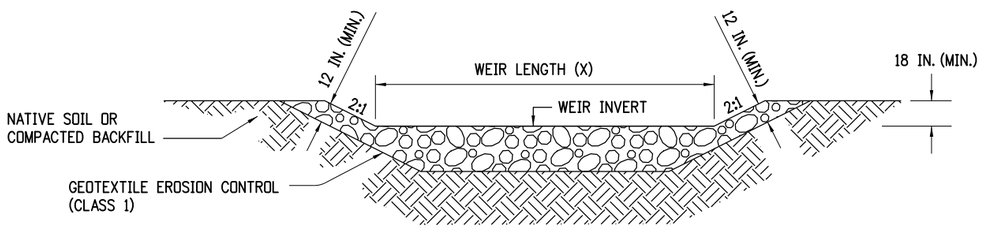
PLAN VIEW

NOTES

1. THE MAXIMUM DRAINAGE AREA IS 5 ACRES.
2. THE MAXIMUM STRUCTURE LIFE IS 2 YEARS.
3. THE STORAGE AREA IS 1800 CUBIC FEET PER ACRE.
4. THE MAXIMUM EMBANKMENT HEIGHT SHALL BE 5 FT. MEASURED ON THE DOWNSTREAM SIDE.
5. THE LENGTH/WIDTH RATIO MAY BE ADJUSTED TO MEET SITE CONDITIONS WHEN APPROVED BY THE ENGINEER.
6. WIDTH (W) OF SEDIMENT TRAP IS APPROXIMATELY EQUAL TO THE WEIR LENGTH (X).
7. SEDIMENT TRAP DESIGN SHALL BE APPROVED BY THE ENGINEER.
8. THE DOWN GRADE FROM WEIR SHALL BE STABLE AND NON-ERODIABLE.
9. THE PAY ITEM NUMBER FOR SEDIMENT TRAP (LF) IS 208-00033.



SECTION A-A



SECTION B-B

DRAINAGE AREA (ACRES)	WEIR LENGTH (FEET)
1	4
2	6
3	8
4	10
5	12

WEIR LENGTH TABLE

SEDIMENT TRAP

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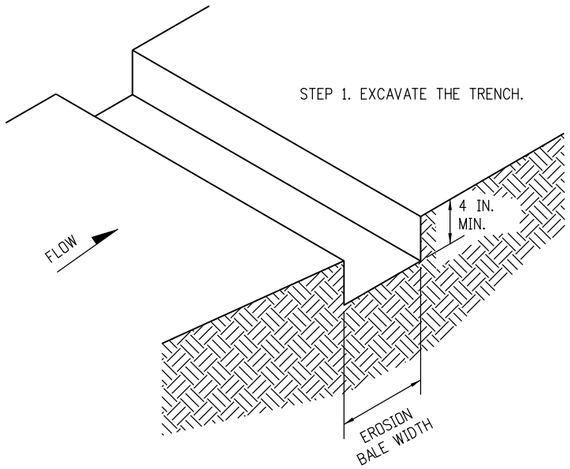
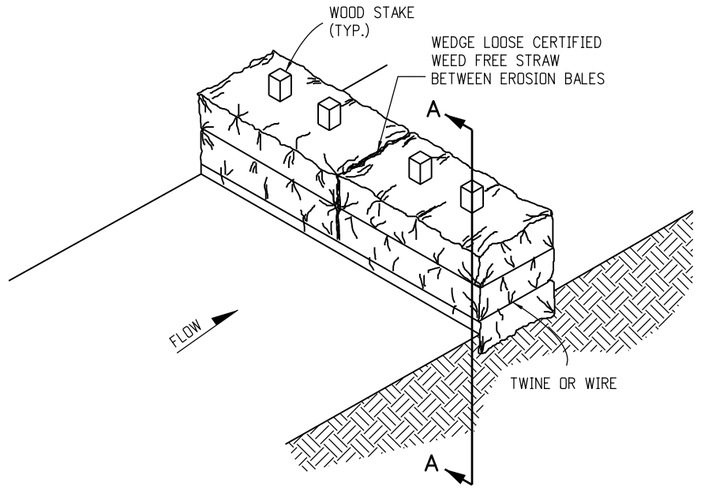
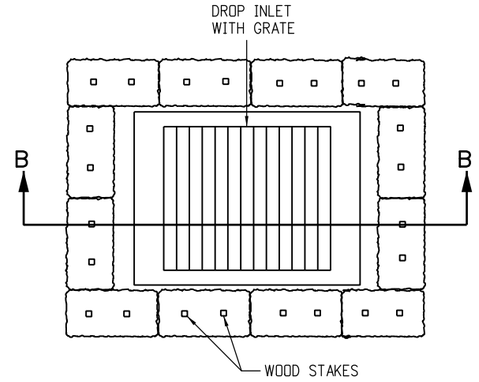


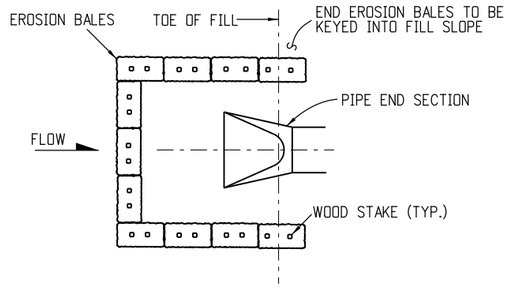


NOTES

1. STAKES SHALL BE WOOD AND SHALL BE 2 IN. X 2 IN. X 30 IN. NOMINAL.
2. EROSION BALES SHALL BE 18 IN. X 18 IN. X 36 IN.
3. EROSION BALES SHALL BE ENTRENCHED 4 IN. MINIMUM INTO THE SOIL, THIGHTLY ABUTTED WITH NO GAPS, STAKED, AND BACKFILLED AROUND THE ENTIRE OUTSIDE PERIMETER.
4. EROSION BALES CANNOT BE USED FOR CHECK DAMS.
5. EROSION BALE FILTER SHALL BE LOWER THAN BERM ELEVATION OR USED IN A SUMP CONDITION.
6. THE PAY ITEM NUMBER FOR EROSION BALES (WEED FREE) (EA) IS 208-00011.

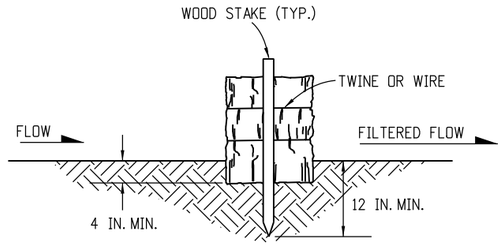


PLAN VIEW



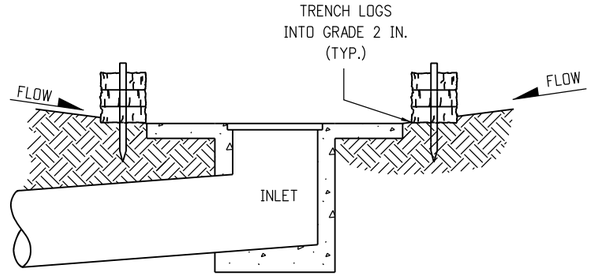
PLAN VIEW

EROSION BALE CULVERT INLET PROTECTION



SECTION A-A

EROSION BALE TRENCHING AND STAKING



SECTION B-B

NOTE: LOCATE EROSION BALES AT THE OUTSIDE EDGE OF THE CONCRETE APRON.

EROSION LOG FILTER AT DROP INLET

EROSION BALE APPLICATIONS

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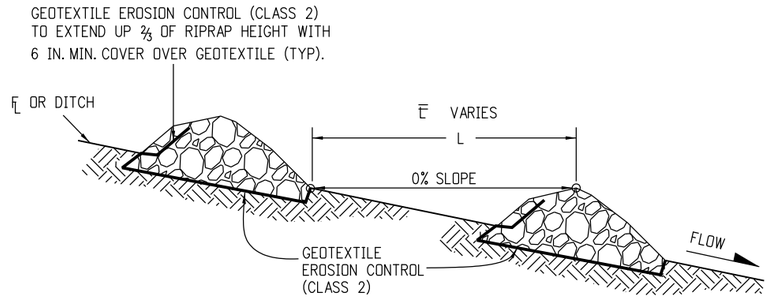
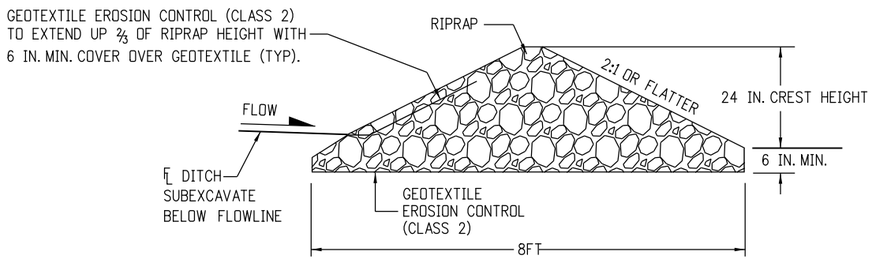


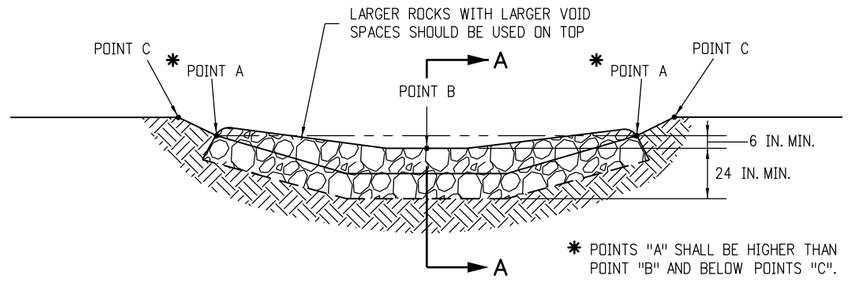
SECTION VIEW ALONG DITCH FLOWLINE



SECTION A-A

NOTES:

1. RIPRAP SIZE D_{50} = 6IN OR AS SHOWN ON THE PLANS.
2. THE GEOTEXTILE EROSION CONTROL SHALL BE CLASS 2 AND CONFORM TO THE REQUIREMENTS OF SUBSECTION 712.08.
3. THE ENDS OF RIPRAP CHECK DAM SHALL BE A MINIMUM OF 6 IN. HIGHER THAN CENTER OF CHECK DAM.
4. FOR USE AS TEMPORARY CHECK DAMS ONLY AND NOT FOR PERMANENT INSTALLATIONS.
5. THE PAY ITEM NUMBER FOR ROCK CHECK DAM (EA) IS 208-00041.



TYPICAL SECTION VIEW

NOTE: ALL MATERIALS AND LABOR TO COMPLETE THE ROCK CHECK DAM SHALL BE INCLUDED IN THE COST OF WORK.

ROCK CHECK DAM

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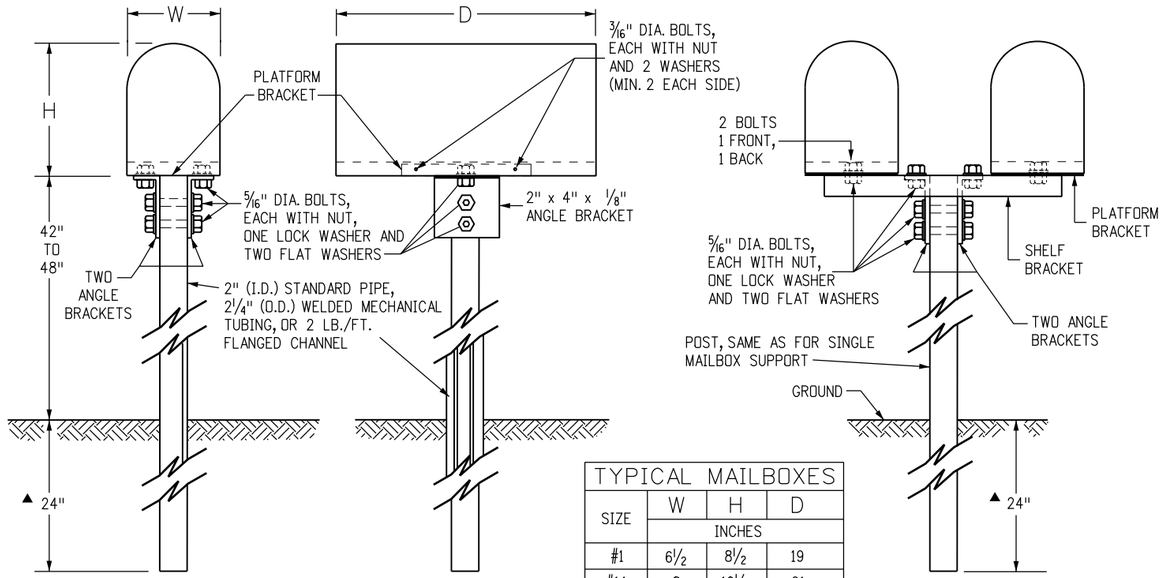
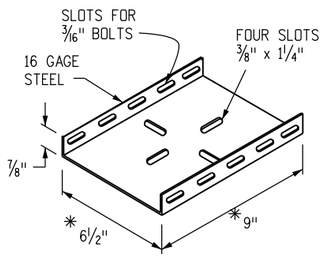


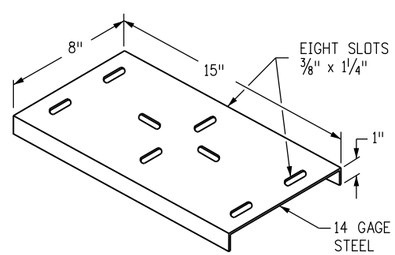
▲ 30 IN. WITH POST MOUNTING SOCKET MAY BE USED, SEE DETAIL ON SHEET 2 OF 2.

TYPICAL MAILBOXES			
SIZE	W	H	D
	INCHES		
#1	6½	8½	19
#1A	8	10½	21
#2	11½	13½	23½

SINGLE (TYPE 1) AND DOUBLE (TYPE 2) MAILBOX SUPPORTS



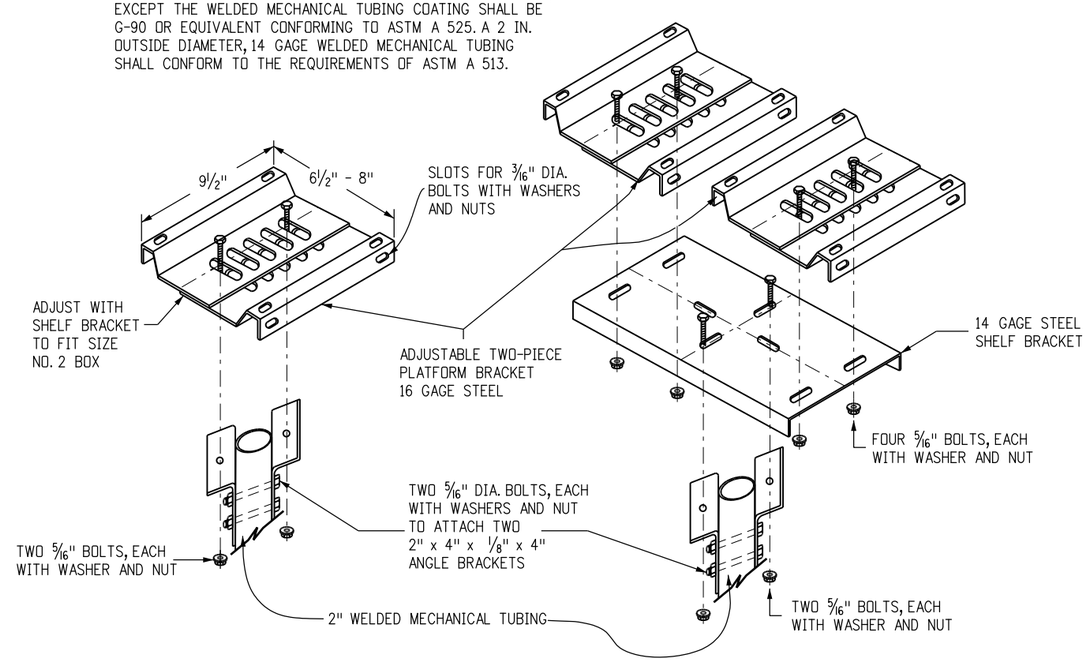
PLATFORM BRACKET



SHELF BRACKET

GENERAL NOTES

1. WHEN A MAILBOX TURNOUT IS REQUIRED, THE NECESSARY PAY QUANTITIES WILL BE SHOWN ON THE PLANS.
2. A SINGLE MAILBOX SHALL BE RESET AT THE FINAL DESIGNATED LOCATION ON A NEW TYPE 1 SUPPORT. TWO MAILBOXES RESET AT THE SAME LOCATION SHALL BE RESET ON ONE DOUBLE (TYPE 2) SUPPORT OR ON TWO SINGLE (TYPE 1) SUPPORTS AS DESIGNATED. THREE, FOUR, OR FIVE MAILBOXES SHALL BE RESET ON A MULTIPLE (TYPE 3) SUPPORT. AN EXISTING MAILBOX THAT IS MOUNTED ON A CANTILEVER SUPPORT SHALL BE RESET ON A CANTILEVER (TYPE 4) SUPPORT. ALL WORK AND MATERIALS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR "RESET MAILBOX STRUCTURE (TYPE _)".
3. WHEN THE ENGINEER DETERMINES THAT THE EXISTING MAILBOX CAN NOT BE REUSED, A NEW METAL MAILBOX OF SIMILAR SIZE SHALL BE SUPPLIED AND ERECTED BY THE CONTRACTOR. A NEW PLASTIC MAILBOX CONFORMING TO POSTAL SERVICE SPECIFICATIONS MAY BE USED AS AN ALTERNATIVE WHEN APPROVED BY THE ENGINEER. AN EXISTING MAILBOX LARGER THAN A SIZE NO. 2 SHALL BE REPLACED WITH A NEW SIZE NO. 2 MAILBOX. THE COST OF SUPPLYING THE NEW MAILBOX WILL BE PAID FOR IN ACCORDANCE WITH SUBSECTION 109.04(b). EXCEPTION: A CUSTOM BUILT, RURAL-TYPE MAILBOX MAY BE RESET IF THE MAILBOX OWNER OBTAINS PRIOR WRITTEN APPROVAL FROM THE POSTMASTER.
4. THE ADDRESS INFORMATION THAT APPEARED ON THE ORIGINAL MAILBOX SHALL BE PLACED ON THE APPROACH SIDE OF THE REPLACEMENT MAILBOX. SIZE AND STYLE OF LETTERING AND MATERIALS ARE SUBJECT TO THE ENGINEER'S APPROVAL.
6. POSTS, BRACKETS, AND ALL MOUNTING HARDWARE SHALL BE GALVANIZED IN CONFORMANCE WITH AASHTO M 232 AND M 111, EXCEPT THE WELDED MECHANICAL TUBING COATING SHALL BE G-90 OR EQUIVALENT CONFORMING TO ASTM A 525. A 2 IN. OUTSIDE DIAMETER, 14 GAGE WELDED MECHANICAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 513.
6. EXACT DIMENSIONS OF ANGLES, PLATFORM AND SHELF BRACKETS, BOLT HOLES, SLOTS AND MULTIPLE MAILBOX SUPPORT COMPONENTS MAY VARY FROM THOSE SHOWN OR IMPLIED HEREIN SO THAT ALL COMPONENTS WILL FIT TOGETHER PROPERLY.
7. PLASTIC NEWSPAPER RECEPTACLES MAY BE REMOUNTED BELOW THE MAILBOX ON THE SUPPORT. PLASTIC NEWSPAPER RECEPTACLES SHALL BE MOUNTED IN THEIR INTENDED ORIENTATION USING A GALVANIZED U-BOLT AND HARDWARE OR OTHER MOUNTING SYSTEM APPROVED BY THE ENGINEER. ASSOCIATED COSTS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE WORK.
8. ON ROADS WITH CURB AND GUTTER, THE MAILBOX SUPPORT SHALL BE LOCATED IN THE GROUND SO THE FRONT OF THE MAILBOX SHALL BE 8 IN. TO 12 IN. BACK FROM THE CURB FACE. THE HEIGHT SHALL BE 42 IN. TO 48 IN. MEASURED FROM THE GUTTER FLOW LINE TO THE BOTTOM OF THE MAILBOX.
9. ON ROADS WITH SIDEWALK ATTACHED TO CURB AND GUTTER, THE MAILBOX SUPPORT SHALL BE LOCATED IN THE GROUND BEHIND THE SIDEWALK. THE FRONT OF THE MAILBOX SHALL BE IN LINE WITH OR SLIGHTLY BEHIND THE EDGE OF THE SIDEWALK. THE MOUNTING HEIGHT SHALL BE 42 IN. TO 48 IN. ABOVE THE SIDEWALK.
10. THE GROUND SURROUNDING THE MAILBOX SUPPORTS SHALL BE FIRM, UNDISTURBED GROUND, OR WELL COMPACTED REGRADED SOIL. THE SUPPORTS ARE NORMALLY DRIVEN, BUT THEY MAY BE PLACED IN A DUG HOLE WITH WELL COMPACTED BACKFILL.
11. PROPRIETARY MAILBOX SUPPORT SYSTEMS LISTED ON THE CDOT APPROVED PRODUCTS LIST WILL BE ACCEPTED AS EQUIVALENT ALTERNATIVES.



SINGLE AND DOUBLE MAILBOX SUPPORTS ALTERNATIVE

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MAILBOX SUPPORTS

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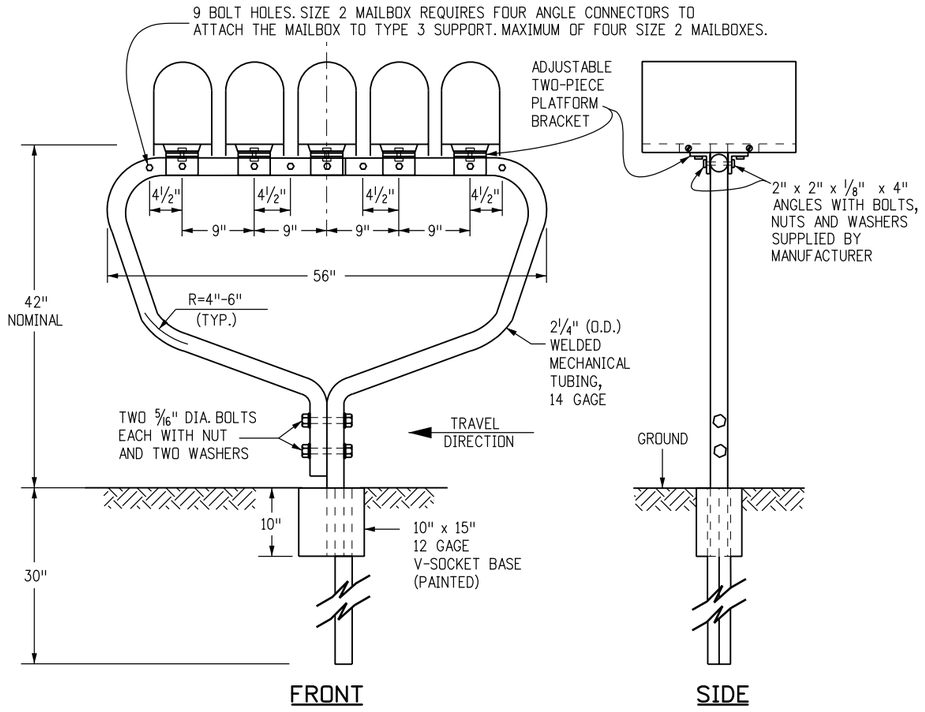
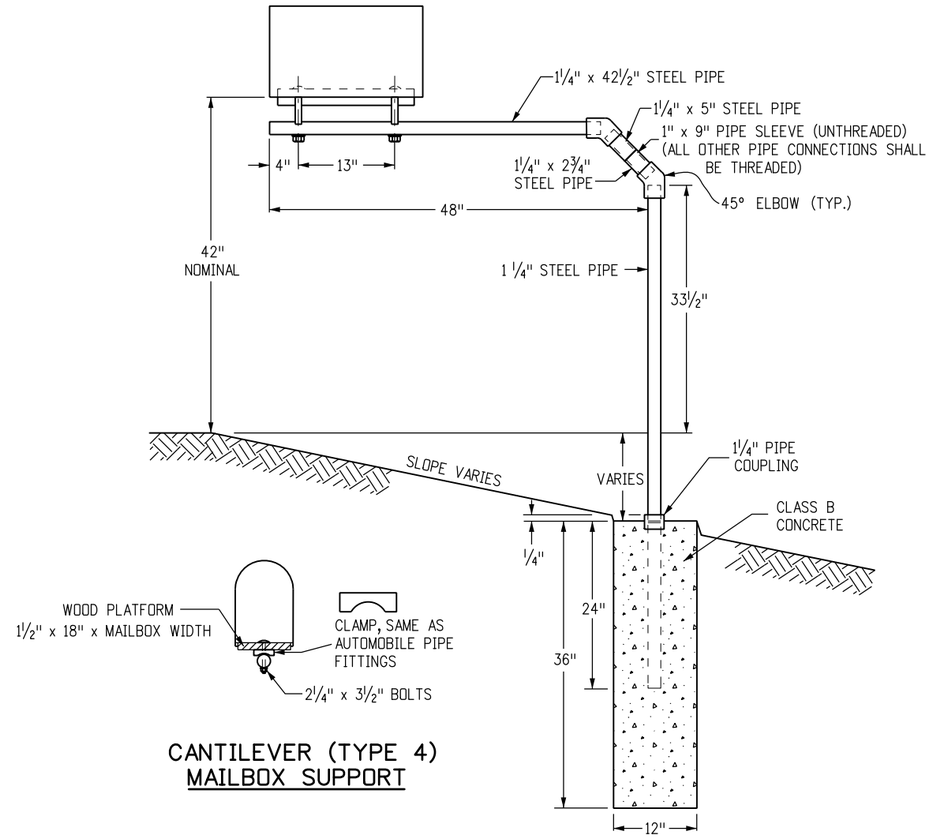
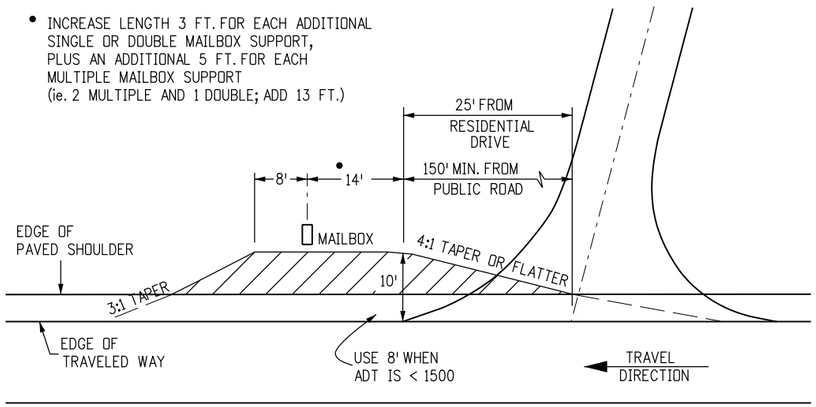


MULTIPLE (TYPE 3) MAILBOX SUPPORT
FOR 3, 4, OR 5 MAILBOXES OR APPROVED EQUAL

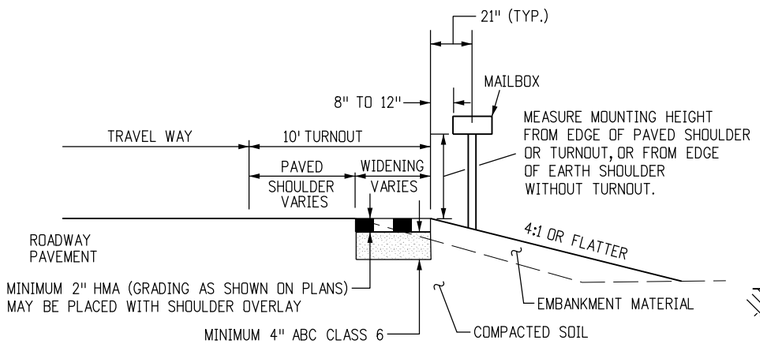
FIVE SIZE 1 MAILBOXES SHOWN



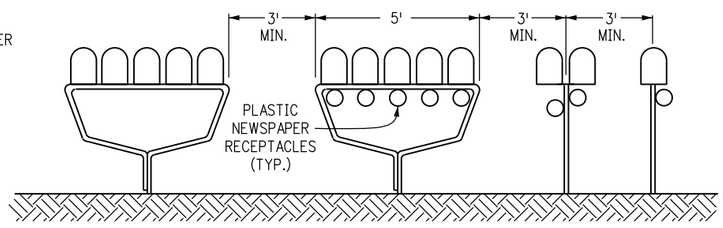
CANTILEVER (TYPE 4) MAILBOX SUPPORT



MAILBOX TURNOUT



TURNOUT TYPICAL SECTION



SUPPORT SPACING

NOTE: SEE SHEET 1, GENERAL NOTE 7, FOR MOUNTING PLASTIC NEWSPAPER RECEPTACLES.

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MAILBOX SUPPORTS

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STANDARD PLAN NO.
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Sheet No. 2 of 2

CURB RAMP GENERAL NOTES:

1. IN NEW CONSTRUCTION OR FULL-DEPTH RECONSTRUCTION, PROVIDE A SEPARATE CURB RAMP FOR EACH MARKED OR UNMARKED PEDESTRIAN STREET CROSSING. CURB RAMPS SHALL BE CONTAINED WHOLLY WITHIN THE WIDTH OF THE PEDESTRIAN STREET CROSSING OR CROSSWALK THEY SERVE, OR AS SHOWN ON THE CONTRACT PLANS.

2. ALTERATIONS ARE DEFINED AS CHANGES TO AN EXISTING HIGHWAY THAT AFFECT PEDESTRIAN ACCESS, CIRCULATION, OR USE. ALTERATIONS INCLUDE, BUT ARE NOT LIMITED TO, RESURFACING, REHABILITATION, RECONSTRUCTION, CURB RAMP RETROFITS, HISTORIC RESTORATION, OR CHANGES OR REARRANGEMENT TO STRUCTURAL PARTS OR ELEMENTS OF A PEDESTRIAN FACILITY.

3. A WALKABLE SURFACE IS DEFINED AS A PAVED SURFACE ADJACENT TO A CURB RAMP OR TURNING SPACE, WITHOUT RAISED OBSTACLES, THAT COULD BE MISTAKENLY TRAVERSED BY A USER WHO IS VISUALLY IMPAIRED.

4. IN ALTERATIONS, WHERE AN EXISTING PHYSICAL CONSTRAINT PREVENTS PROVIDING A SEPARATE CURB RAMP FOR EACH PEDESTRIAN STREET CROSSING, A SINGLE DIAGONAL RAMP (ON THE APEX) SHALL BE PERMITTED TO SERVE BOTH PEDESTRIAN STREET CROSSINGS. THE USE OF A SINGLE DIAGONAL RAMP SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION. DIAGONAL RAMPS ARE NOT ACCEPTABLE IN NEW CONSTRUCTION OR FULL-DEPTH RECONSTRUCTION.

5. DETECTABLE WARNINGS SURFACES (DWS) ARE INTENDED TO INDICATE THE BOUNDARY BETWEEN A PEDESTRIAN ROUTE AND VEHICULAR ROUTE WHERE THERE IS A FLUSH RATHER THAN CURBED CONNECTION. DWS ARE NOT INTENDED TO PROVIDE WAYFINDING. DWS SHALL BE PROVIDED AT THE FOLLOWING LOCATIONS;
   1. CURB RAMPS, BLENDED TRANSITIONS, AND DEPRESSED CORNERS AT PEDESTRIAN STREET CROSSINGS;
   2. PEDESTRIAN REFUGE ISLANDS (6 FEET IN WIDTH OR GREATER);
   3. BOARDING PLATFORMS AT TRANSIT STOPS WHERE THE EDGE OF THE PLATFORM IS NOT PROTECTED TO PEDESTRIAN CROSS TRAFFIC; AND
   4. BOARDING AREAS AT SIDEWALK OR STREET LEVEL TRANSIT STOPS WHERE THE AREA IS NOT PROTECTED TO PEDESTRIAN CROSS TRAFFIC.

6. DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH THE ADJACENT GUTTER, HIGHWAY, OR PEDESTRIAN ACCESS ROUTE SURFACE, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT. FEDERAL YELLOW COLOR IS PREFERRED, HOWEVER, OTHER COLORS MAY BE USED IF APPROVED BY THE ENGINEER.

7. IN ALTERATIONS, TO AVOID CHASING GRADE INDEFINITELY ON STEEP ROADWAYS, A CURB RAMPS LENGTH IS NOT REQUIRED TO EXCEED 15 FEET REGARDLESS OF THE RESULTING RAMP RUNNING SLOPE.

8. ALL SLOPES ARE MEASURED WITH RESPECT TO A LEVEL PLANE.

9. DRAINAGE STRUCTURES, TRAFFIC SIGNAL EQUIPMENT, OR OTHER OBSTRUCTIONS SHALL NOT BE INSTALLED ON THE CURB RAMP, OR TURNING SPACE AREAS.

10. IN NEW CONSTRUCTION, PULL BOXES, METER BOXES, MAINTENANCE HOLE COVERS, VAULT LIDS, OR SIMILAR, SHALL NOT BE CONSTRUCTED WITHIN ANY PART OF CURB RAMP OR TURNING SPACE. IN ALTERATIONS, WHERE THESE ITEMS CANNOT BE RELOCATED OUTSIDE OF THE CURB RAMP OR TURNING SPACE, THEY MUST NOT CREATE A VERTICAL DISCONTINUITY GRATER THAN 1/2 INCH. ANY VERTICAL DISCONTINUITY BETWEEN 1/4 INCH AND 1/2 INCH SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 1V:2H. THE BEVEL SHALL BE APPLIED ACROSS THE ENTIRE SURFACE DISCONTINUITY.

11. CONSTRUCTION OF ANY REQUIRED PEDESTRIAN CURB SHALL BE INCLUDED IN THE BID PRICE OF THE CONCRETE CURB RAMP AND WILL NOT BE PAID FOR SEPARATELY.

12. ALL CURB RAMP JOINTS AND GRADE BREAKS SHALL BE FLUSH (0'-1/8"). THE JOINT BETWEEN THE ROADWAY SURFACE AND THE GUTTER PAN SHALL BE FLUSH.

13. THE CONTRACTOR SHALL VERIFY REMOVAL LIMITS ARE SUFFICIENT TO PROVIDE POSITIVE DRAINAGE, MAINTAIN EXISTING DRAINAGE PATTERNS, AND AVOID PONDING IN THE FINAL CONFIGURATION.

14. FLARED SIDE SLOPES MAY EXCEED 10.0% ONLY WHERE THEY ABUT A NON-WALKABLE SURFACE, OR WHERE THE ADJACENT RAMP SURFACE IS BLOCKED TO PEDESTRIAN TRAFFIC.

15. THE CHANGE IN GRADE AT THE BOTTOM OF THE CURB RAMP SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 13.33%. THE COUNTER SLOPE OF THE GUTTER AT THE FOOT OF A RAMP, TURNING SPACE, OR BLENDED TRANSITION SHALL NOT EXCEED 5.0%.

16. GRADE BREAKS AT THE TOP AND BOTTOM OF RAMP RUNS SHALL BE PERPENDICULAR TO THE DIRECTION OF THE RAMP RUN. GRADE BREAKS SHALL NOT BE PERMITTED ON THE SURFACE OF THE RAMP RUN OR TURNING SPACE. SURFACE SLOPES THAT MEET AT GRADE BREAKS SHALL BE FLUSH.

17. A BROOM FINISH, WITH SWEEPS PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAFFIC, SHALL BE APPLIED TO ALL RAMP AND TURNING SPACE SURFACES.

18. IN ALTERATIONS, WHERE A RAMP OR TURNING SPACE MUST TIE INTO AN EXISTING GRADE THAT CANNOT BE ALTERED, THE RAMP OR TURNING SPACE MAY BE WARPED TO TRANSITION TO THE REQUIRED CROSS SLOPE. THE TRANSITION TO THE REQUIRED CROSS SLOPE SHALL BE SPREAD EVENLY OVER THE LENGTH OF THE RAMP OR TURNING SPACE TO MINIMIZE THE DEGREE OF WARPING. THE RATE OF CHANGE ON A RAMP OR TURNING SPACE SHALL NOT EXCEED 3% PER LINEAR FOOT.

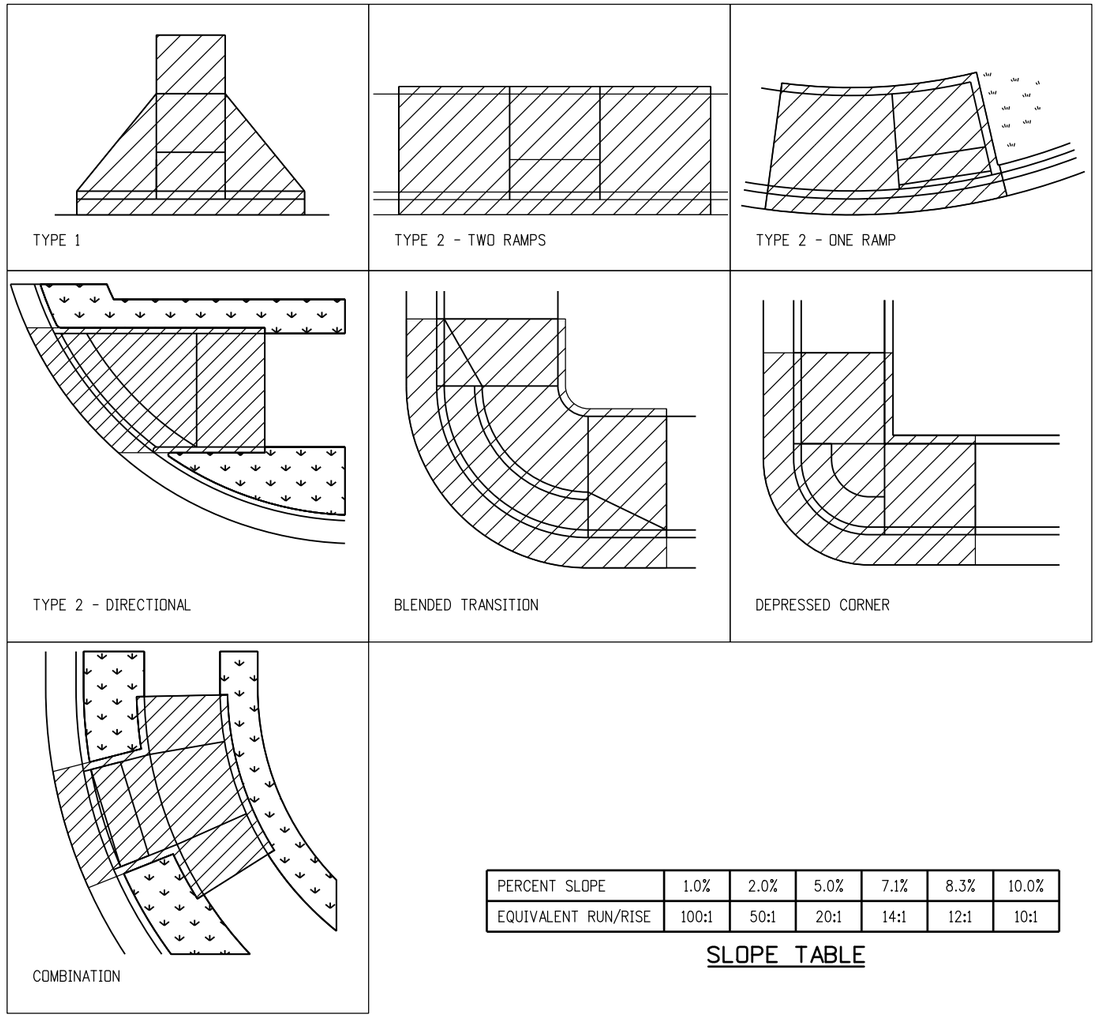
19. DESIGN AND CONSTRUCT CURB RAMPS, TURNING SPACES, AND FLARE SLOPES WITH THE FLATTEST SLOPES POSSIBLE. THE SLOPES INDICATED IN THESE DETAILS SHOW THE MAXIMUM SLOPES ALLOWABLE. PREFERRED VALUES TO BE USED DURING DESIGN, LAYOUT, AND CONSTRUCTION ARE:
   - RAMP RUNNING SLOPE 7.5%
   - RAMP CROSS SLOPE 1.5%
   - TURNING SPACE RUNNING SLOPE 1.5%
   - TURNING SPACE CROSS SLOPE 1.5%
   - FLARE SLOPE 8.0-9.0%

20. WHERE SNOW REMOVAL EQUIPMENT WILL BE USED TO CLEAR THE PEDESTRIAN ACCESS ROUTE, CONSULT THE ENGINEER PRIOR TO CONSTRUCTION TO ENSURE THE WIDTH AND THICKNESS OF CURB RAMPS IS SUFFICIENT TO ACCOMODATE SUCH EQUIPMENT.

21. PROVIDE EXPANSION JOINT MATERIAL 1/2" THICK WHERE CURB RAMPS ADJOIN ANY RIGID PAVEMENT, OR STRUCTURE. THE TOP OF THE JOINT FILLER MATERIAL SHALL BE FLUSH WITH ADJOINING CONCRETE SURFACES. THE EXPANSION JOINT MATERIAL SHALL EXTEND FOR THE FULL DEPTH OF THE CONCRETE SURFACE.

22. PROVIDE TIE BAR REINFORCING BETWEEN INDEPEDENTLY POURED CONCRETE CURB RAMPS OR TURNING SPACES AND CURB AND GUTTER. DRILL AND GROUT NO. 4 12 INCH LONG REINFORCEMENT BARS (EPOXY COATED) AT 18 INCHES CENTER TO CENTER MINIMUM.

CURB RAMP PAY AREAS



PERCENT SLOPE	1.0%	2.0%	5.0%	7.1%	8.3%	10.0%
EQUIVALENT RUN/RISE	100:1	50:1	20:1	14:1	12:1	10:1

SLOPE TABLE

GENERAL NOTES & PAY AREAS

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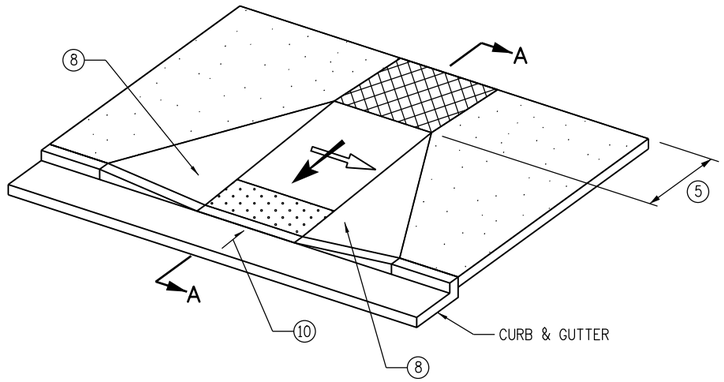
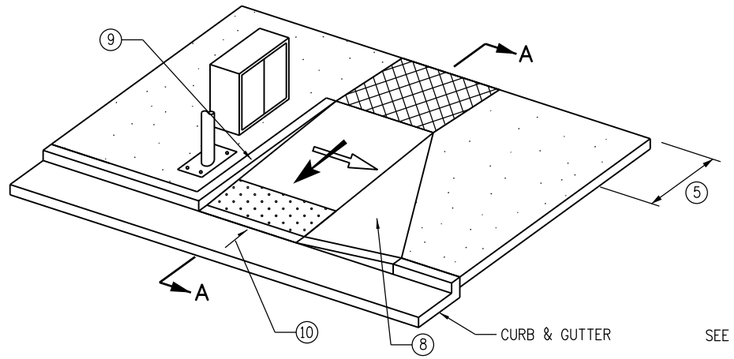
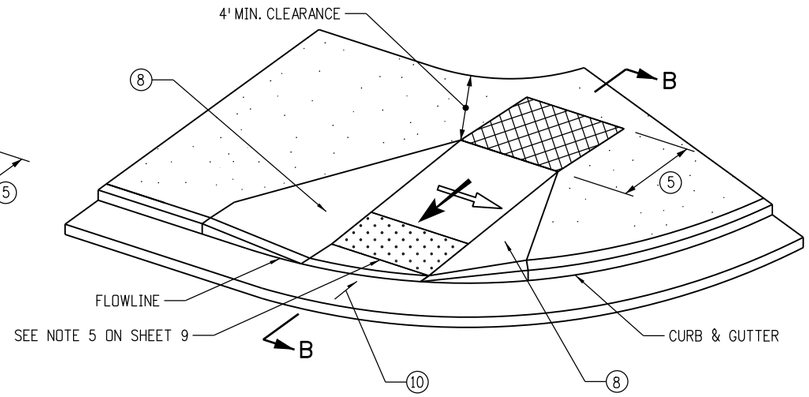


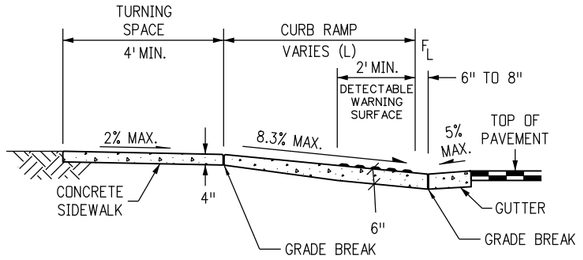
PERPENDICULAR RAMP
(TYPICAL)



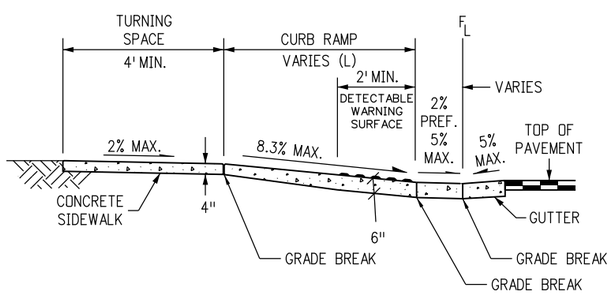
PERPENDICULAR RAMP
(WITH VERTICAL RETURN CURB)



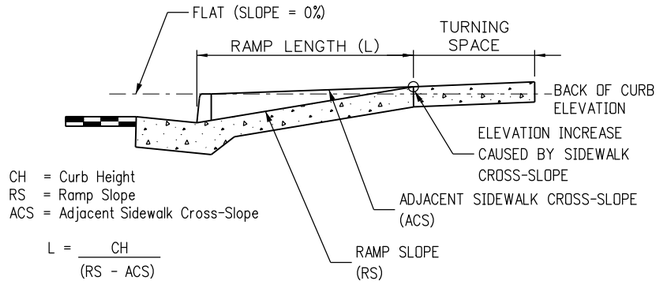
PERPENDICULAR RAMP
(DIRECTIONAL)



SECTION A-A



SECTION B-B



EXAMPLE: CH = 6" (0.5 ft.), RS = 7.5% (0.075), ACS = 1.5% (0.015)
L = 0.5/(0.075-0.015) = 8.3 ft.

DETAIL A - RAMP LENGTH

SIDEWALK

TURNING SPACE (3) (4) (5)

DETECTABLE WARNING SURFACE (DWS)

PERPENDICULAR RAMP NOTES

(1) RAMP WIDTH - PROVIDE 5 FT. OR GREATER WHERE POSSIBLE. IF SITE CONSTRAINTS DO NOT PERMIT, PROVIDE 4 FT. MINIMUM. RAMPS SERVICING SHARED USE PATHS SHALL MATCH THE WIDTH OF THE PATH.

(2) RAMP RUNNING SLOPE - 8.3% MAX.

(3) TURNING SPACE RUNNING SLOPE - 2.0% MAX. TURNING SPACE RUNNING SLOPE IS MEASURED IN THE SAME DIRECTION AS THE RAMP RUNNING SLOPE.

(4) RAMP AND TURNING SPACE CROSS SLOPE - 2.0% TYPICAL. AT CROSSINGS WITHOUT YIELD OR STOP CONTROL, OR WITH A SIGNAL WHERE VEHICLES CAN PROCEED THROUGH THE INTERSECTION WITHOUT SLOWING OR STOPPING, THE CROSS SLOPE OF RAMPS AND TURNING SPACES MAY EQUAL THE HIGHWAY GRADE. AT MIDBLOCK PEDESTRIAN STREET CROSSINGS THE RAMP AND TURNING SPACE CROSS SLOPE MAY EQUAL THE HIGHWAY GRADE.

(5) TURNING SPACE DIMENSIONS - PROVIDE A TURNING SPACE AT THE TOP OF PERPENDICULAR RAMPS WITH A WIDTH EQUAL TO THE WIDTH OF THE CURB RAMP. TURNING SPACE LENGTH MUST BE 4 FT. MINIMUM, MEASURED IN THE DIRECTION OF THE RAMP RUN. WHEN A TURNING SPACE IS CONSTRAINED AT THE BACK OF SIDEWALK, INCREASE LENGTH TO 5 FT. MINIMUM IN THE DIRECTION OF THE RAMP RUN.

(6) RAMP ALIGNMENT - RAMPS SHALL BE ALIGNED TO BE FULLY CONTAINED WITHIN THE CROSSWALK OR STREET CROSSING THEY SERVE. PROVIDE ONE RAMP FOR EACH STREET CROSSING DIRECTION. IN ALTERATIONS, WHERE EXISTING PHYSICAL CONSTRAINTS PREVENT PROVIDING ONE CURB RAMP FOR EACH CROSSING DIRECTION, A SINGLE DIAGONAL CURB RAMP (ON THE APEX OF A CORNER) SHALL BE PERMITTED TO SERVE BOTH PEDESTRIAN STREET CROSSINGS. IF A DIAGONAL RAMP IS USED, A CLEAR SPACE 4 FT. X 4FT. MUST BE PROVIDED AT THE BASE OF THE RAMP. THE CLEAR SPACE MUST BE WITHIN BOTH CROSSWALKS AND WHOLLY OUTSIDE OF ANY ADJACENT VEHICULAR TRAVEL LANES. DIAGONAL RAMPS ARE NOT ACCEPTABLE IN NEW CONSTRUCTION, OR FULL-DEPTH RECONSTRUCTION.

(7) RAMP LENGTH - PERPENDICULAR RAMP LENGTH IS DEPENDENT UPON THE RAMP SLOPE, HEIGHT OF CURB, AND ADJACENT SIDEWALK CROSS-SLOPE WHICH MUST BE INTERCEPTED. SEE DETAIL A FOR CALCULATING RAMP LENGTH WHEN CHASING SIDEWALK CROSS-SLOPE. WHERE TERRAIN IS SLOPING A RAMP IS NOT REQUIRED TO CHASE GRADE MORE THAN 15 FT. REGARDLESS OF THE RESULTING RAMP SLOPE.

(8) RAMP FLARES - WHERE A RAMP EDGE ABUTS A WALKABLE SURFACE, A FLARED SIDE SHALL BE PROVIDED. RAMP FLARE SLOPES SHALL NOT EXCEED 10.0%.

(9) VERTICAL CURB RETURNS - VERTICAL CURB RETURNS MAY BE USED ONLY WHERE A RAMP ABUTS A NON-WALKABLE SURFACE, OR WHERE A RAMP IS PROTECTED FROM PEDESTRIAN CROSS TRAFFIC (FOR EXAMPLE BY A SIGNAL CABINET OR UTILITY POLE WHICH BLOCKS PASSAGE).

(10) GUTTER COUNTER SLOPE - 5.0% MAX.

TYPE 1 PERPENDICULAR CURB RAMPS

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CURB RAMPS

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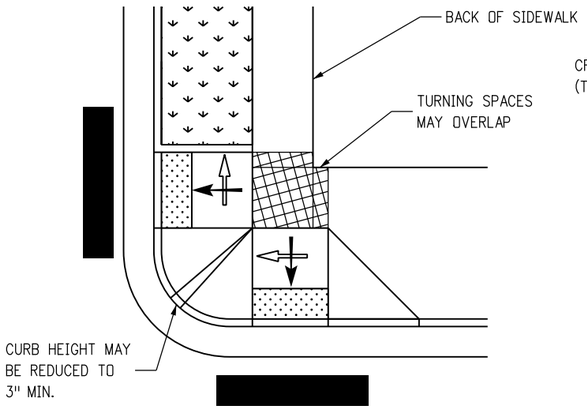
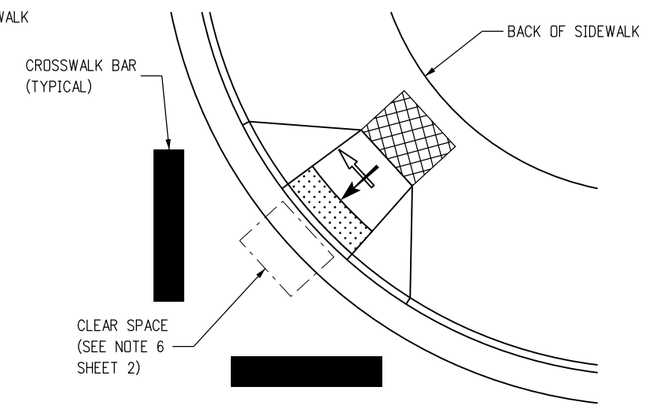
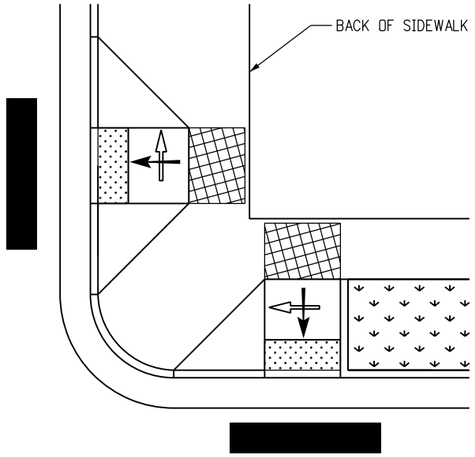


TYPE 1 RAMPS FOR WIDE SIDEWALK
(3" REDUCED CURB)



TYPE 1 RAMP
(DIAGONAL)

NOT ALLOWABLE IN NEW CONSTRUCTION/FULL DEPTH RECONSTRUCTION
SEE GENERAL NOTE 4



TYPE 1 RAMPS FOR WIDE SIDEWALK

TURNING SPACE
(SEE NOTES 3, 4, 5 - SHEET 2)

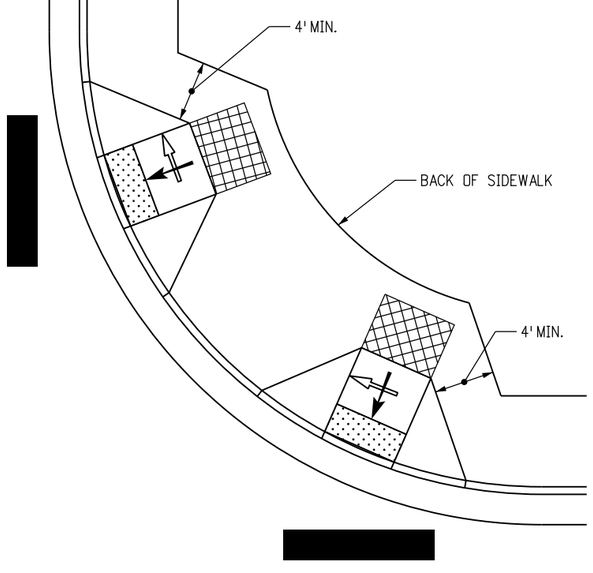
DETECTABLE WARNING SURFACE (DWS)
SEE DWS SHEETS FOR PLACEMENT DETAILS

RAMP RUNNING SLOPE

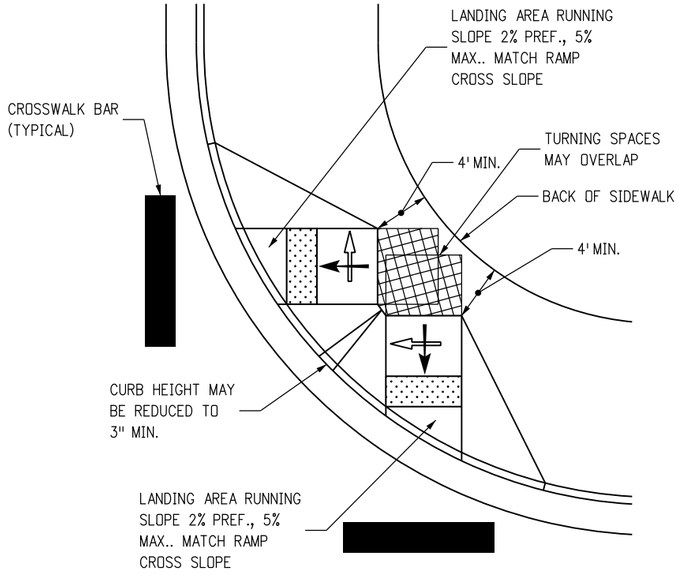
RAMP CROSS SLOPE

NOTE

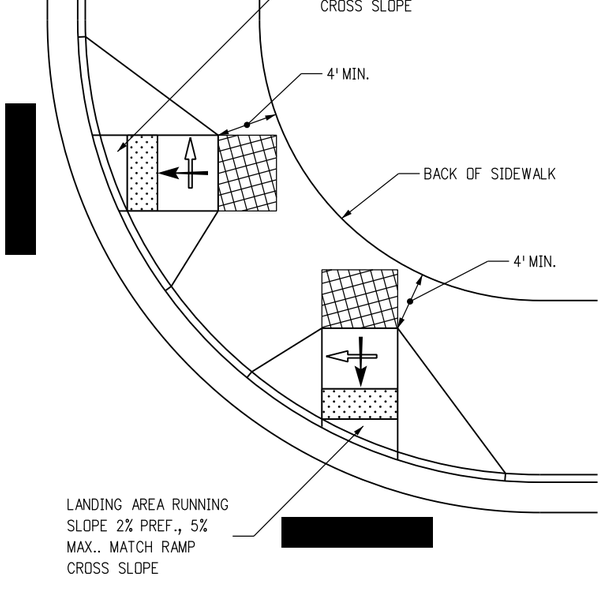
PLACEMENTS SHOWN ARE TYPICAL CONFIGURATIONS ONLY AND NOT INDICATIVE OF ALL OPTIONS. OTHER RAMP CONFIGURATIONS MAY BE ACCEPTABLE AS LONG AS THEY CONFORM TO THE CRITERIA IN THESE STANDARDS, AND ARE APPROVED BY THE ENGINEER.



TYPE 1 PERPENDICULAR RAMPS



TYPE 1 DIRECTIONAL RAMPS
(3" REDUCED CURB)



TYPE 1 DIRECTIONAL RAMPS
(LARGE RADIUS)

TYPE 1 CURB RAMPS TYPICAL CONFIGURATIONS

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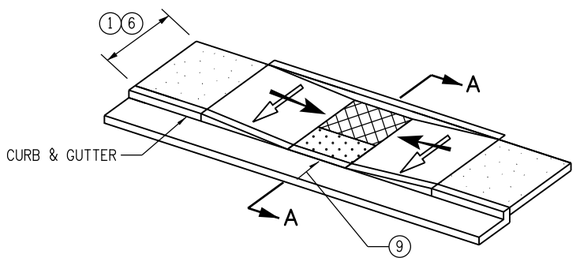
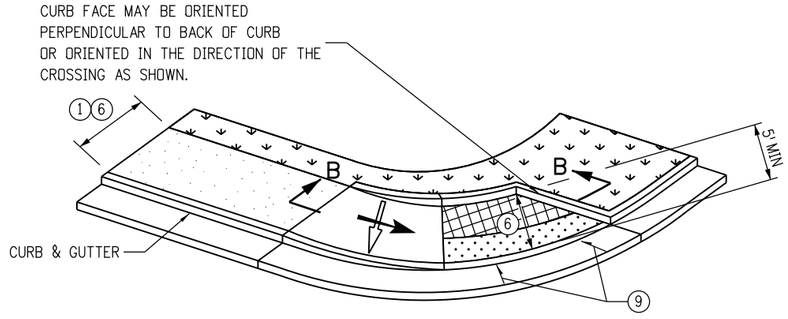
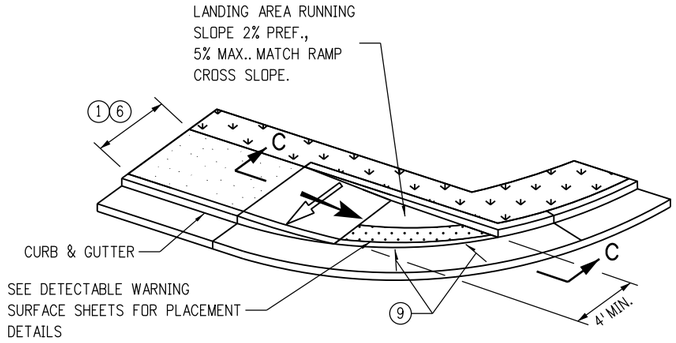


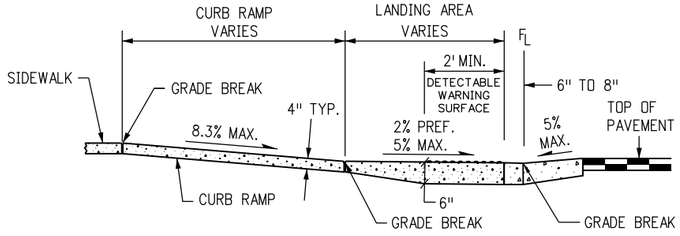
PARALLEL RAMP
(TYPICAL)



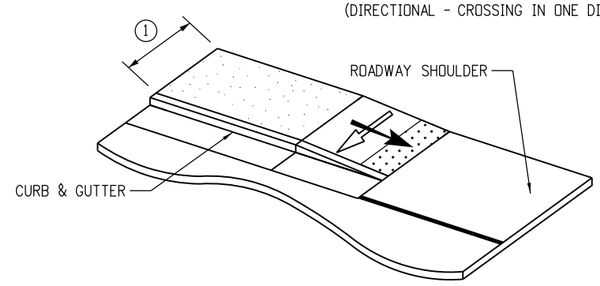
PARALLEL RAMP
(SIDEWALK ENDS)



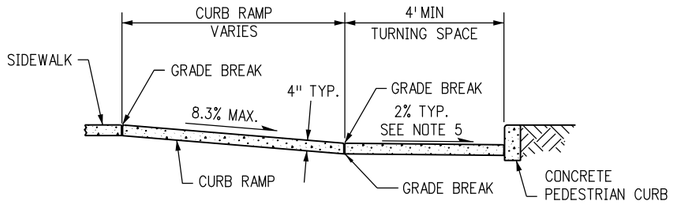
PARALLEL RAMP
(DIRECTIONAL - CROSSING IN ONE DIRECTION ONLY)



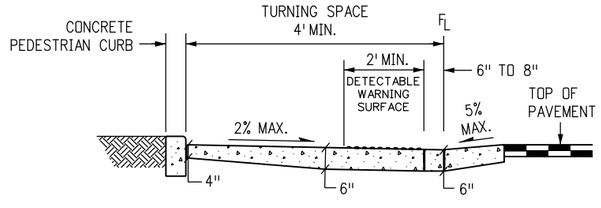
SECTION C-C



SIDEWALK TO SHOULDER TRANSITION



SECTION B-B



SECTION A-A

SIDEWALK

TURNING SPACE (4) (5) (6)

DETECTABLE WARNING SURFACE (DWS)

PARALLEL RAMP NOTES

(1) RAMP WIDTH - PROVIDE A RAMP WIDTH EQUAL TO THE ADJOINING SIDEWALK, PROVIDE 4 FT. WIDTH MINIMUM. RAMPS SERVICING SHARED USE PATHS SHALL MATCH THE WIDTH OF THE PATH.

(2) RAMP RUNNING SLOPE - 8.3% MAX.

(3) RAMP CROSS SLOPE - 2.0% MAX.

(4) TURNING SPACE RUNNING SLOPE - 2.0% MAX. TURNING SPACE RUNNING SLOPE IS MEASURED PERPENDICULAR TO THE BACK OF CURB.

(5) TURNING SPACE CROSS SLOPE - 2.0% TYPICAL, AT CROSSINGS WITHOUT YIELD OR STOP CONTROL, OR WITH A SIGNAL WHERE VEHICLES CAN PROCEED THROUGH THE INTERSECTION WITHOUT SLOWING OR STOPPING, THE CROSS SLOPE OF THE TURNING SPACE MAY EQUAL THE HIGHWAY GRADE. AT MIDBLOCK PEDESTRIAN STREET CROSSINGS THE TURNING SPACE CROSS SLOPE MAY EQUAL THE HIGHWAY GRADE. TURNING SPACE CROSS SLOPE IS MEASURED IN THE DIRECTION OF THE RAMP RUN.

(6) TURNING SPACE DIMENSIONS - PROVIDE A TURNING SPACE AT THE BOTTOM OF PARALLEL RAMPS WITH A WIDTH EQUAL TO THE WIDTH OF THE CURB RAMP. PROVIDE 4 FT. MINIMUM, MEASURED IN THE DIRECTION OF THE RAMP RUN. IF THE TURNING SPACE IS CONSTRAINED ON TWO SIDES, PROVIDE 5 FT. MEASURED IN THE DIRECTION OF PEDESTRIAN STREET CROSSING. THE TURNING SPACE MAY CONTAIN THE DETECTABLE WARNING SURFACE.

(7) RAMP ALIGNMENT - RAMPS SHALL BE ALIGNED SO THE TURNING SPACE IS FULLY CONTAINED WITHIN THE CROSSWALK OR STREET CROSSING THEY SERVE. PROVIDE ONE RAMP FOR EACH STREET CROSSING DIRECTION. IN ALTERATIONS, WHERE EXISTING PHYSICAL CONSTRAINTS PREVENT PROVIDING ONE CURB RAMP FOR EACH CROSSING DIRECTION, A SINGLE DIAGONAL CURB RAMP (ON THE APEX OF A CORNER) SHALL BE PERMITTED TO SERVE BOTH PEDESTRIAN STREET CROSSINGS. DIAGONAL RAMPS ARE NOT ACCEPTABLE IN NEW CONSTRUCTION, OR FULL-DEPTH RECONSTRUCTION.

(8) RAMP LENGTH - PARALLEL RAMP LENGTH IS DEPENDENT UPON THE RAMP SLOPE AND THE CHANGE OF ELEVATION FROM THE TURNING SPACE TO THE SIDEWALK. WHERE TERRAIN IS SLOPING A RAMP IS NOT REQUIRED TO CHASE GRADE MORE THAN 15 FT. REGARDLESS OF THE RESULTING RAMP SLOPE.

(9) GUTTER COUNTER SLOPE - 5.0% MAX.

TYPE 2 PARALLEL CURB RAMPS

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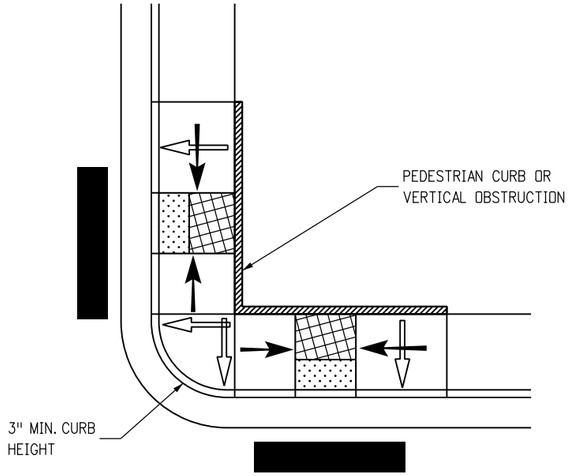
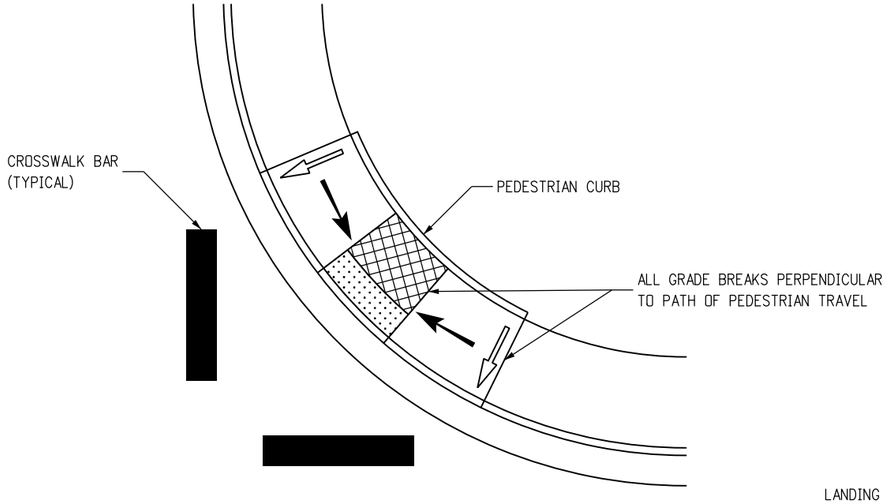
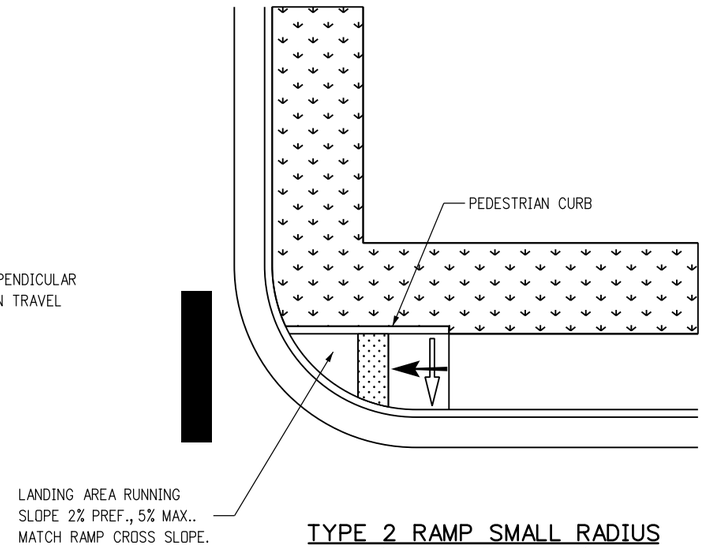


TYPE 2 RAMPS SMALL RADIUS
(3" REDUCED CURB)



TYPE 2 RAMP (DIAGONAL)
NOT ALLOWABLE IN NEW CONSTRUCTION/FULL-DEPTH RECONSTRUCTION
SEE NOTE GENERAL NOTE 4



TYPE 2 RAMP SMALL RADIUS
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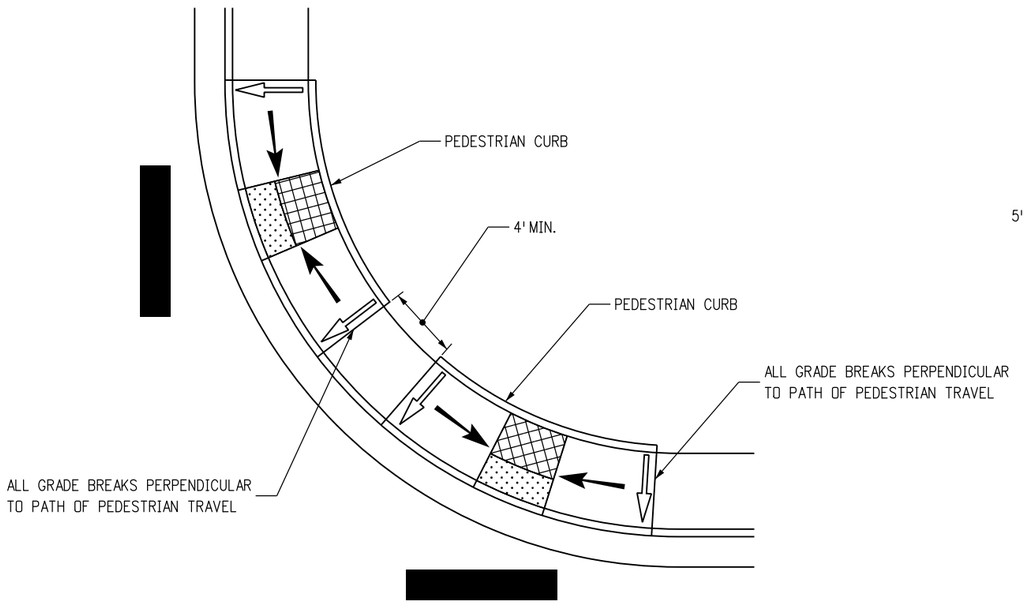
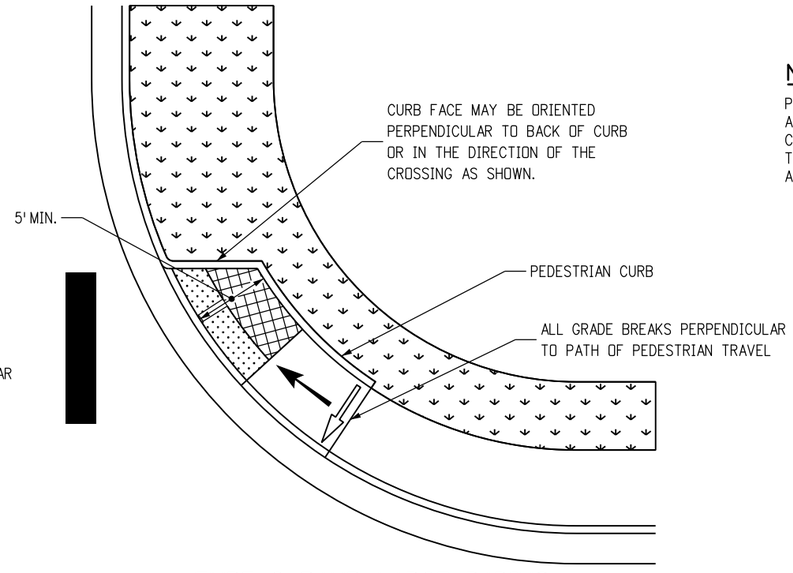


TYPE 2 RAMPS LARGE RADIUS



TYPE 2 RAMP LARGE RADIUS
(CROSSING IN ONE DIRECTION)

NOTE
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TURNING SPACE
(SEE NOTE 4, 5, 6 - SHEET 4)

DETECTABLE WARNING SURFACE (DWS)
SEE DWS SHEETS FOR PLACEMENT
DETAILS

RAMP RUNNING SLOPE

RAMP CROSS SLOPE

TYPE 2 CURB RAMPS TYPICAL CONFIGURATIONS

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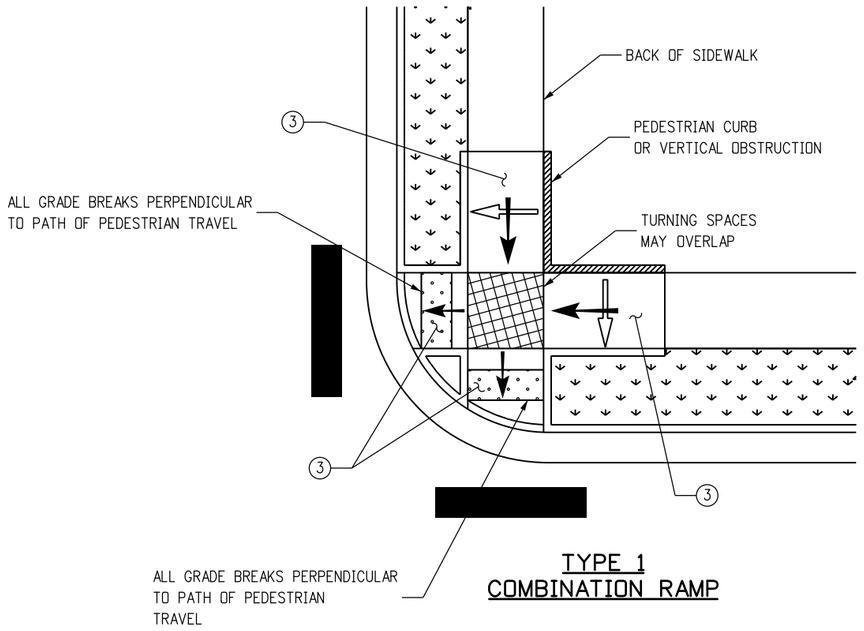
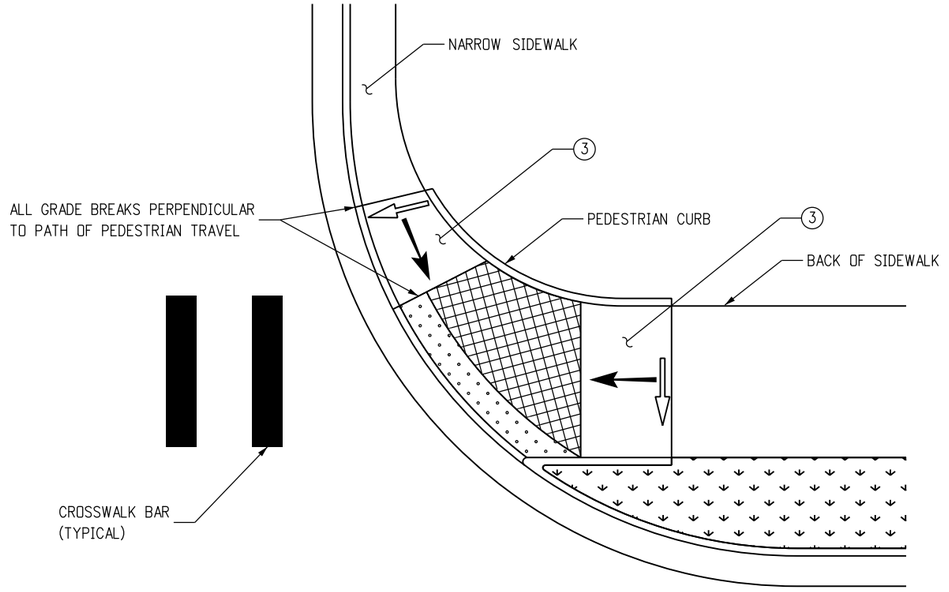
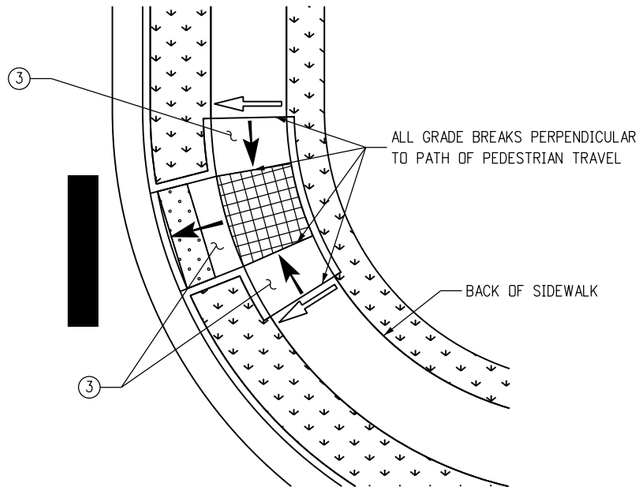


TYPE 1
COMBINATION RAMP



TYPE 1/TYPE 2
COMBINATION RAMP



TYPE 1/TYPE 2
COMBINATION RAMP

COMBINATION CURB RAMP NOTES:

1. THE CURB RAMP PLACEMENTS SHOWN ARE TYPICAL CONFIGURATIONS ONLY AND NOT INDICATIVE OF ALL OPTIONS. OTHER CURB RAMP CONFIGURATIONS MAY BE ACCEPTABLE AS LONG AS THEY CONFORM TO THE CRITERIA IN THESE STANDARDS, AND ARE APPROVED BY THE ENGINEER.

2. RAMP AND TURNING SPACE CROSS SLOPE - 2.0% TYPICAL. AT CROSSINGS WITHOUT YIELD OR STOP CONTROL, OR WITH A SIGNAL WHERE VEHICLES CAN PROCEED THROUGH THE INTERSECTION WITHOUT SLOWING OR STOPPING, THE CROSS SLOPE OF THE RAMP AND TURNING SPACE MAY EQUALTHE HIGHWAY GRADE. AT MIDBLOCK PEDESTRIAN STREET CROSSINGS THE RAMP AND TURNING SPACE CROSS SLOPE MAY EQUAL THE HIGHWAY GRADE.

3. WHERE IT IS ACCEPTABLE FOR A RAMP OR TURNING SPACE CROSS SLOPE TO EXCEED 2.0% AND MATCH THE HIGHWAY GRADE, THE RAMP ABOVE THE TURNING SPACE MAY BE WARPED TO TIE INTO THE ADJOINING SIDEWALK CROSS SLOPE. THE TRANSITION TO THE SIDEWALK CROSS SLOPE SHALL BE SPREAD EVENLY OVER THE LENGTH OF THE RAMP TO MINIMIZE WARPING. THE RATE OF CHANGE IN CROSS SLOPE MAY NOT EXCEED 3.0% PER LINEAR FOOT.

TURNING SPACE (2) (3)

DETECTABLE WARNING SURFACE (DWS)
SEE DWS SHEETS FOR PLACEMENT DETAILS

RAMP RUNNING SLOPE

RAMP CROSS SLOPE (2) (3)

COMBINATION CURB RAMPS TYPICAL CONFIGURATIONS

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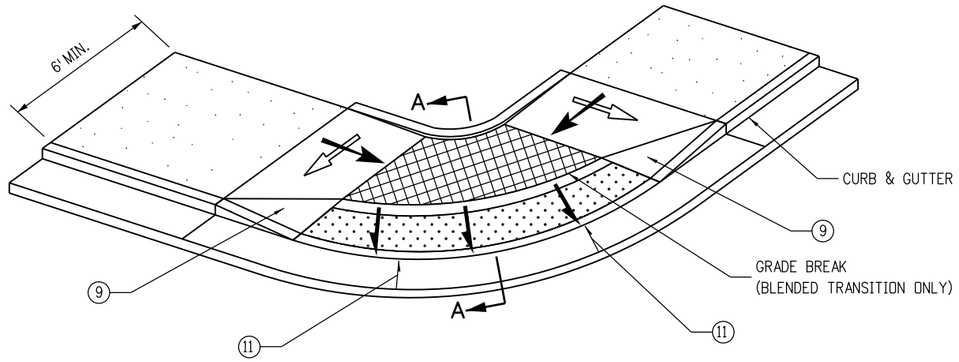
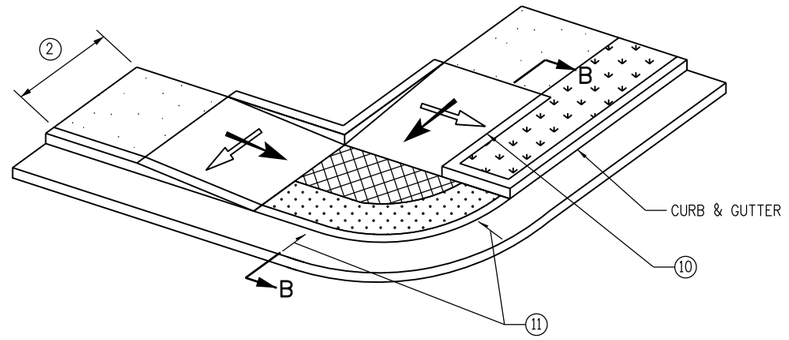
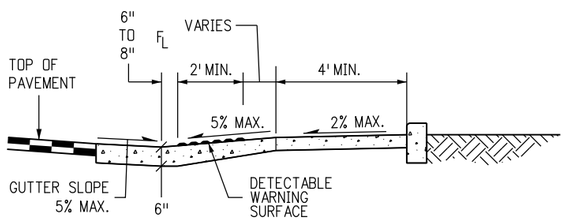


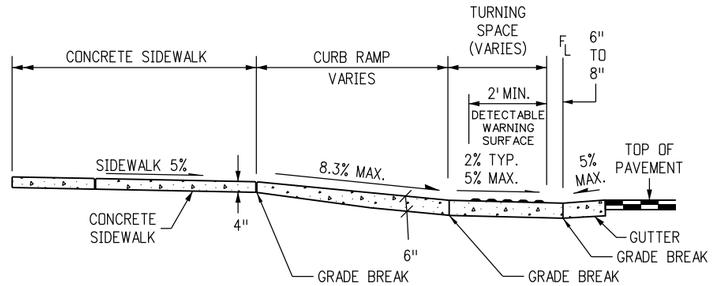
BLENDED TRANSITION



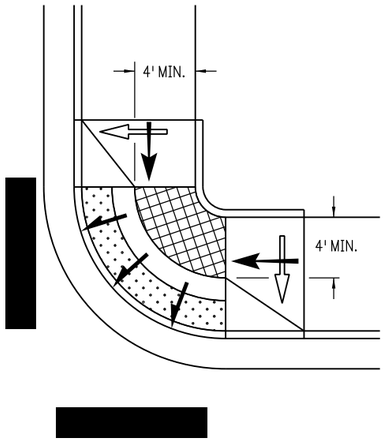
DEPRESSED CORNER



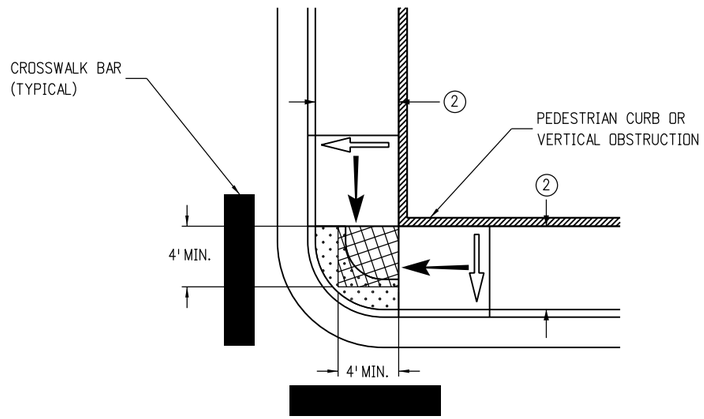
SECTION A-A



SECTION B-B



BLENDED TRANSITION



DEPRESSED CORNER

SIDEWALK

TURNING SPACE (4) (5) (6)

DETECTABLE WARNING SURFACE (DWS)

BLENDED TRANSITION & DEPRESSED CORNER NOTES

(1) PERPENDICULAR AND PARALLEL RAMP CONFIGURATIONS ARE PREFFERED. BLENDED TRANSITIONS AND DEPRESSED CORNERS SHOULD ONLY BE USED WHERE SITE CONDITIONS MAKE THEM A MORE APPROPRIATE OPTION, OR WHERE PERPENDICULAR OR PARALLEL RAMPS CANNOT BE INSTALLED DUE TO A PHYSICAL SITE CONSTRAINT.

(2) RAMP WIDTH - PROVIDE 5 FT. OR GREATER WHERE POSSIBLE. IF SITE CONSTRAINTS DO NOT PERMIT, PROVIDE 4FT. WIDTH MINIMUM. RAMPS SERVICING SHARED USE PATHS SHALL MATCH THE WIDTH OF THE PATH.

(3) RAMP RUNNING SLOPE - 8.3% MAX.

(4) BLENDED TRANSITION RUNNING SLOPE - 5.0% MAX.

(5) RAMP AND TURNING SPACE CROSS SLOPE - 2.0% TYPICAL. AT CROSSINGS WITHOUT YIELD OR STOP CONTROL, OR WITH A SIGNAL WHERE VEHICLES CAN PROCEED THROUGH THE INTERSECTION WITHOUT SLOWING OR STOPPING, THE CROSS SLOPE OF RAMPS AND TURNING SPACES MAY EQUAL THE HIGHWAY GRADE.

(6) TURNING SPACE DIMENSIONS - PROVIDE A 4 FT. X 4 FT. MIN. TURNING SPACE AT THE BOTTOM OF RAMP RUNS. THE TURNING SPACE MAY CONTAIN THE DETECTABLE WARNING SURFACES.

(7) RAMP ALIGNMENT - TURNING SPACE SHALL BE ALIGNED TO BE FULLY CONTAINED WITHIN THE CROSSWALK OR STREET CROSSING(S) THEY SERVE.

(8) RAMP LENGTH - RAMP LENGTH IS DEPENDENT UPON THE RAMP SLOPE AND THE CHANGE OF ELEVATION FROM THE TURNING SPACE TO THE SIDEWALK. WHERE TERRAIN IS SLOPING A RAMP IS NOT REQUIRED TO CHASE GRADE MORE THAN 15 FT. REGARDLESS OF THE RESULTING RAMP SLOPE.

(9) RAMP FLARES - WHERE A RAMP EDGE ABUTS A WALKABLE SURFACE, A FLARED SIDE MUST BE PROVIDED. RAMP FLARE SLOPES SHALL NOT EXCEED 10.0%.

(10) VERTICAL CURB RETURNS - VERTICAL CURB RETURNS MAY BE USED ONLY WHERE A RAMP ABUTS A NON-WALKABLE SURFACE, OR WHERE A RAMP IS PROTECTED FROM PEDESTRIAN CROSS TRAFFIC (FOR EXAMPLE BY A SIGNAL CABINET OR UTILITY POLE WHICH BLOCKS PASSAGE).

(11) GUTTER COUNTER SLOPE - 5.0% MAX.

(12) DWS PLACEMENT - DWS SHALL BE PLACED AROUND THE RADIUS AND LOCATED AT THE BACK OF CURB ON BLENDED TRANSITION AND DEPRESSED CORNER RAMPS.

TYPE 5 - DEPRESSED CORNER/BLENDED TRANSITION

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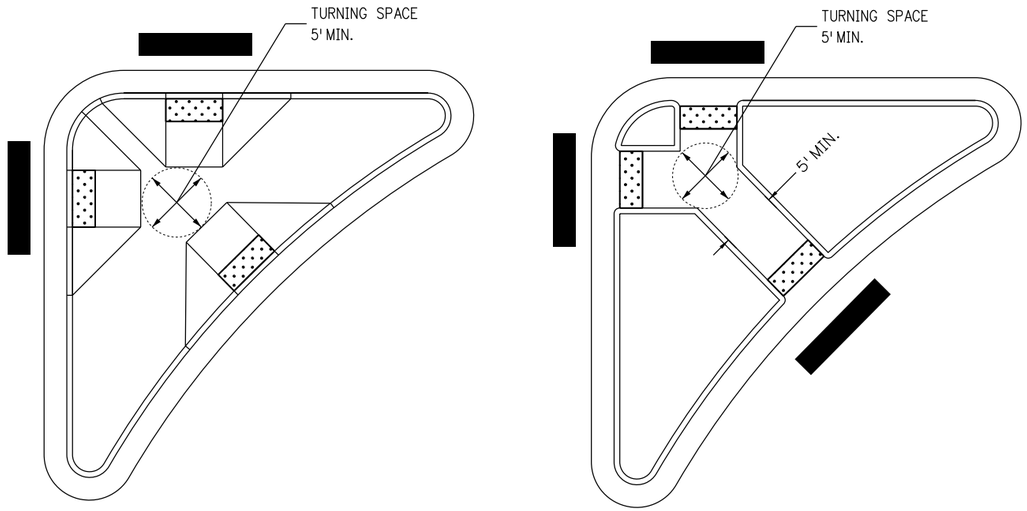
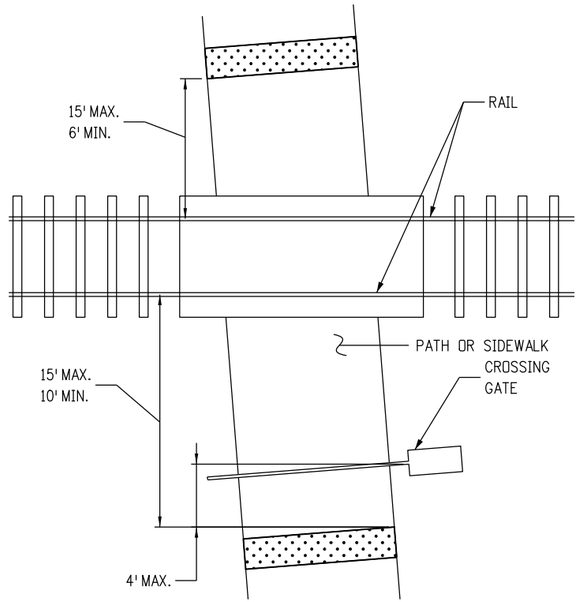


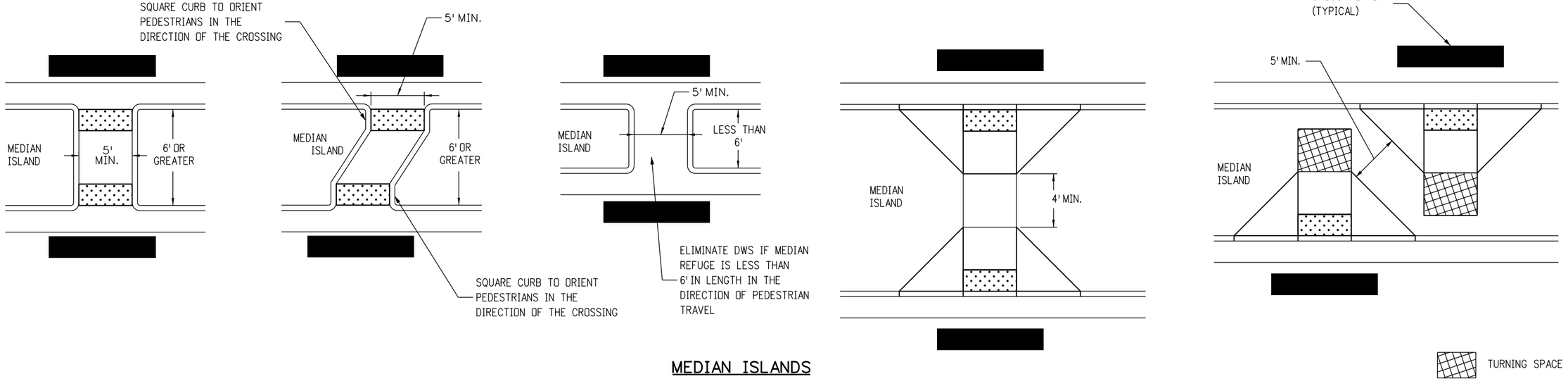
INTERSECTION ISLANDS



AT-GRADE RAIL CROSSING

NOTES:

1. DETECTABLE WARNING SURFACES SHALL BE PLACED IN ALIGNMENT WITH THE BACK OF CURB.
2. FLARED SIDES ARE PREFERENTIAL ON RAISED INTERSECTION ISLANDS AND SHOULD BE PROVIDED ON ISLANDS WHICH SERVE SHARED USE PATHS, OR AT LOCATIONS WHERE BICYCLE USE IS EXPECTED.
3. FOR CUT-THROUGH MEDIAN ISLANDS, DETECTABLE WARNING SURFACES SHALL BE PLACED IN ALIGNMENT WITH THE BACK OF CURB AND BE SEPARATED BY A MINIMUM 2 FOOT SPACE WITHOUT DWS. IF A 2 FOOT SEPARATION BETWEEN DETECTABLE WARNING SURFACES CANNOT BE PROVIDED NO DETECTABLE WARNING SURFACE SHALL BE INSTALLED.
4. CURB RAMP AND CUT-THROUGH WIDTHS SHOULD BE THE SAME WIDTH AS ANY SIDEWALK OR SHARED USE PATH WHICH THEY SERVE.



MEDIAN ISLANDS

MEDIANS / RAILROADS / ISLANDS

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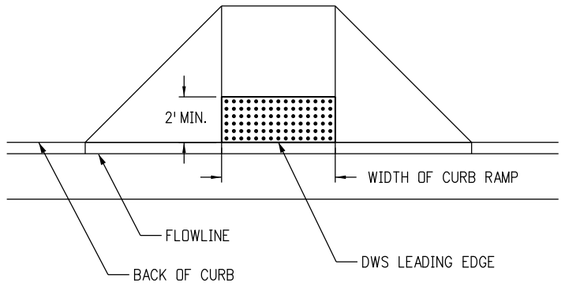
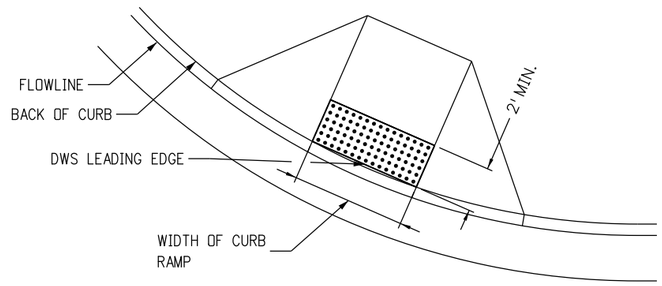
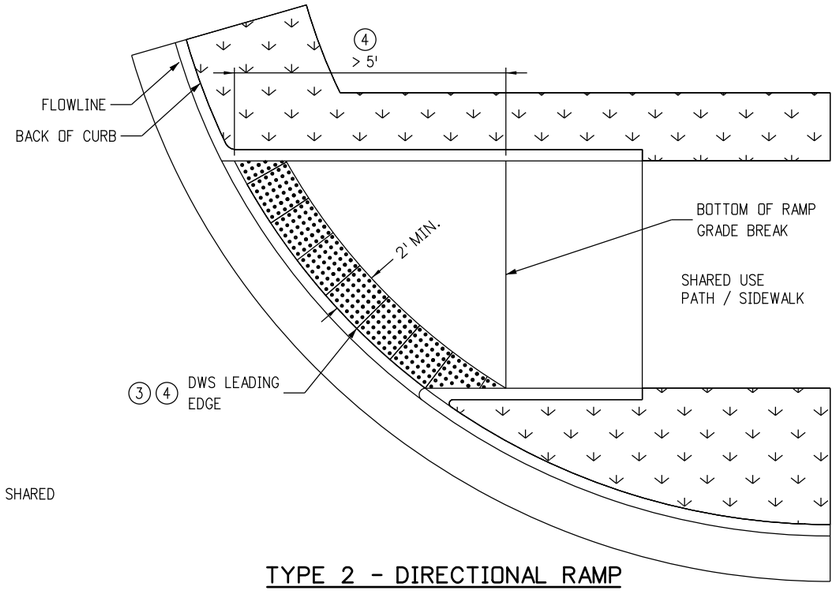


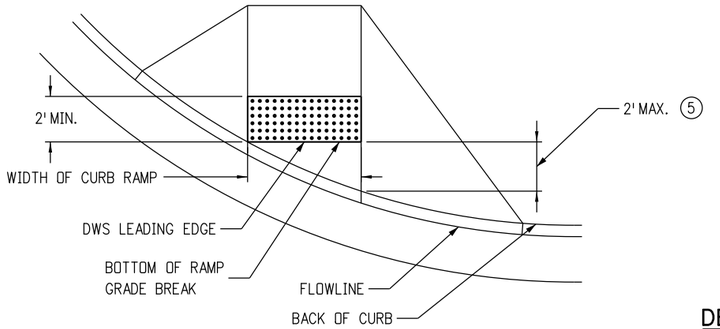
TYPE 1 CURB RAMP
(PERPENDICULAR ON TANGENT)



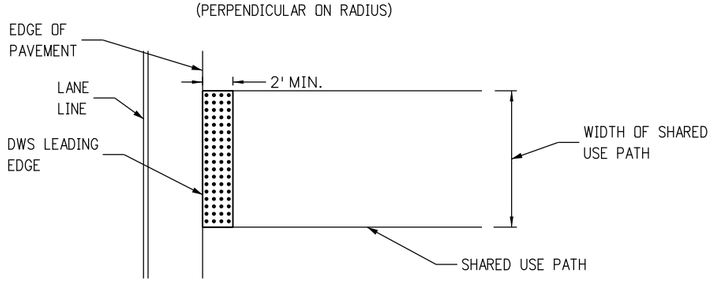
TYPE 1 CURB RAMP
(PERPENDICULAR ON RADIUS)



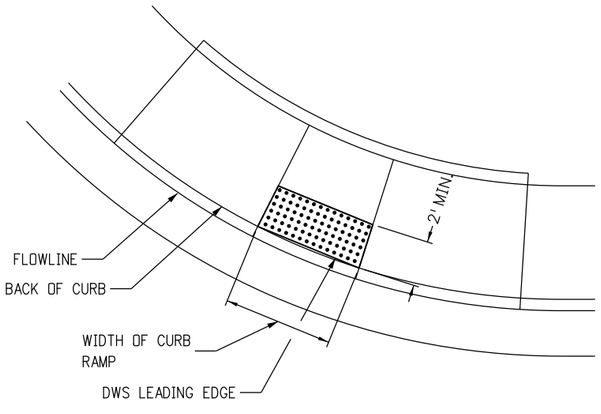
TYPE 2 - DIRECTIONAL RAMP



TYPE 1 CURB RAMP
(DIRECTIONAL ON RADIUS)



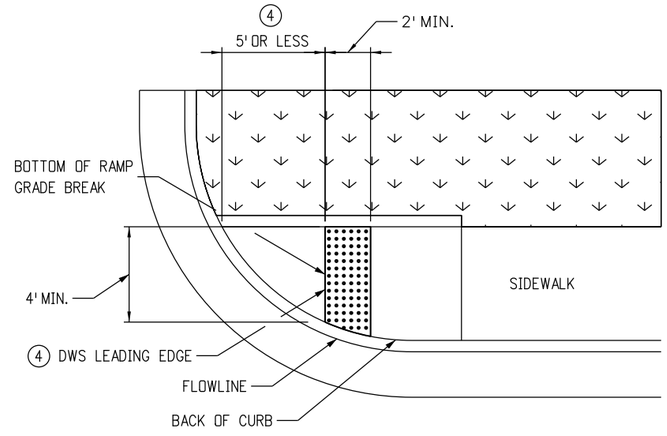
SHARED USE PATH CROSSING



TYPE 2 CURB RAMP

DETECTABLE WARNING SURFACE NOTES:

1. DETECTABLE WARNING SURFACES (DWS) SHALL BE INSTALLED AT SIDEWALK, OR SHARED USE PATH, TO STREET TRANSITIONS, AND SHALL CONSIST OF TRUNCATED DOME SURFACES. ANY TRUNCATED DOME PANELS OR PAVERS WHICH ARE USED MUST BE ON THE CDOT APPROVED PRODUCTS LIST (APL).
2. THE DETECTABLE WARNING SURFACE SHALL SPAN THE FULL WIDTH OF THE CURB RAMP, SHARED USE PATH, OR OTHER ROADWAY ENTRANCE AS APPLICABLE. A GAP OF 2 INCHES FROM THE EDGE OF THE DETECTABLE WARNING SURFACE TO THE EDGE OF THE CURB RAMP OR SHARED USE PATH IS PERMITTED.
3. WHEN DETECTABLE WARNING SURFACES ARE PLACED ON A SLOPE GREATER THAN 5.0%, TRUNCATED DOMES SHOULD BE ALIGNED IN THE DIRECTION OF THE RAMP RUN; OTHERWISE DOMES ARE NOT REQUIRED TO BE ALIGNED. TRUNCATED DOMES SHALL BE IN A SQUARE GRID OR RADIAL PATTERN. WHEN PLACED RADIALLY, PLACE ADJACENT DWS PLATES EDGE TO EDGE. EDGES OF CUT PLATES SHALL BE STRAIGHT.
4. LOCATE ONE CORNER OF THE DWS LEADING EDGE AT THE BACK OF CURB. NO POINT ON THE LEADING EDGE OF THE DWS MAY BE MORE THAN 5 FT. FROM THE BACK OF CURB. WHEN ANY POINT OF THE LEADING EDGE OF THE DWS WILL BE GREATER THAN 5 FT. FROM THE BACK OF CURB, PLACE THE DWS RADIALLY AT THE BACK OF CURB.
5. WHERE PERPENDICULAR DIRECTIONAL RAMPS ABUT A WALKABLE SURFACE, THE LEADING EDGE OF THE DWS SHALL NOT BE PLACED FURTHER THAN 2 FEET FROM THE BACK OF CURB. IF THE RADIUS OF A CORNER MAKES THIS IMPOSSIBLE, ORIENT THE CURB RAMP PERPENDICULAR TO THE CURB AND GUTTER.
6. IF THE DETECTABLE WARNING SURFACE IS CUT, GRIND OFF THE REMAINING PORTION OF ANY CUT TRUNCATED DOMES. SEAL ALL CUT PANEL EDGES WITH AN APL SEALANT TO PREVENT WATER DAMAGE.
7. TRUNCATED DOME PLATES SHALL BE EMBEDED IN THE CONCRETE CURB RAMP WHILE THE CONCRETE IS PLASTIC.
8. DWS SHALL NOT BE PLACED OVER GRADE BREAKS.



TYPE 2 - DIRECTIONAL RAMP

DETECTABLE WARNING SURFACE (DWS)

DETECTABLE WARNING SURFACE PLACEMENT

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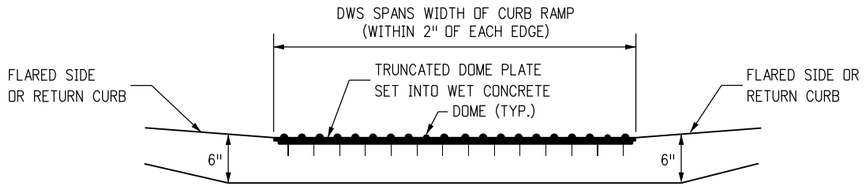
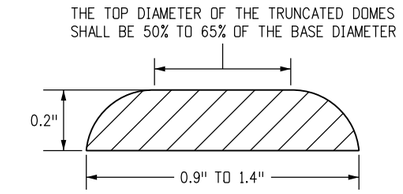
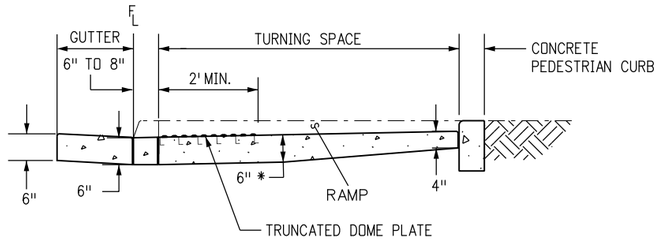


SECTION VIEW OF DETECTABLE WARNING SURFACE PLATE

(LOOKING AT PERPENDICULAR RAMP RUN FROM STREET)

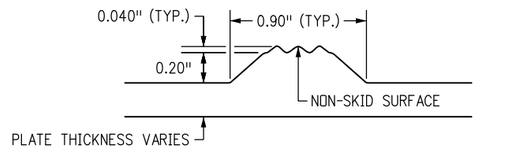


ELEVATION VIEW OF SINGLE TRUNCATED DOME

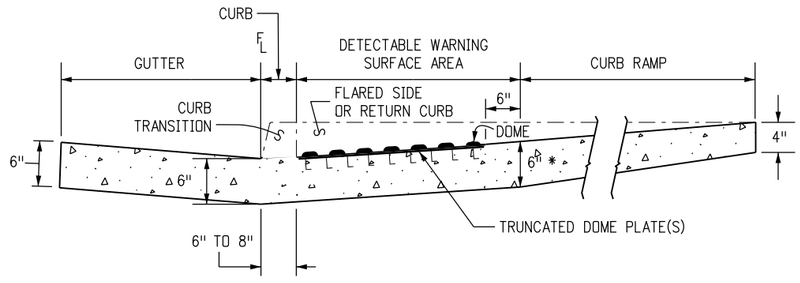


SECTION VIEW FOR PARALLEL CURB RAMP TYPES

(LOOKING PERPENDICULAR TO TURNING SPACE)

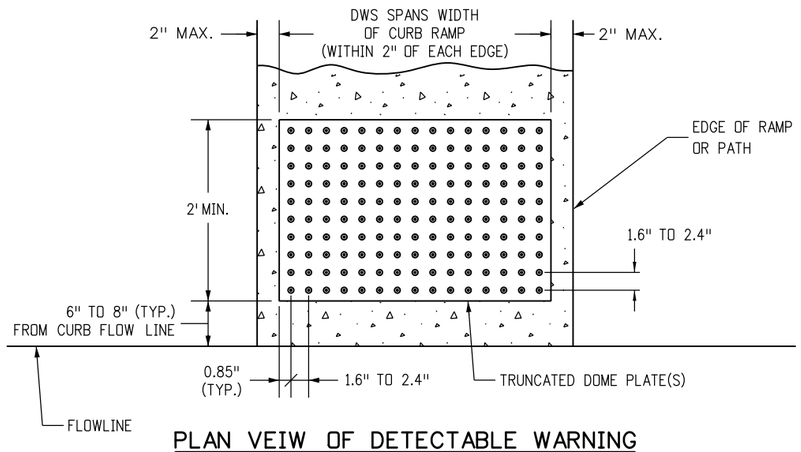


ELEVATION VIEW OF TRUNCATED DOME FOR DETECTABLE WARNING PLATE



SECTION VIEW FOR PERPENDICULAR CURB RAMP TYPES

(LOOKING PERPENDICULAR TO RAMP RUN)



PLAN VEIW OF DETECTABLE WARNING SURFACE PLATE

DETECTABLE WARNING SURFACE DETAILS

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STATE OF COLORADO

DEPARTMENT OF TRANSPORTATION

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(970) 385-8360
(970) 385-8361 Fax

LATE FALL, WINTER AND SPRING SPECIAL PROVISIONS FOR ACCESS CONSTRUCTION AND UTILITY INSTALLATIONS

It's that time of year again when work within the Right of Way (ROW) becomes a special concern. Due to Southwest Colorado's unpredictable weather, utility work in the ROW can create several types of hazards for the traveling public, contractors and their personnel. The condition of the highway can change quickly. Mud tracked onto the highway by equipment, or ice and snowpack are just a few of the conditions that make the roadway more hazardous for all concerned. The terrain within the ROW must be kept clear of hazards as well. Holes, trenches, equipment and materials can make the terrain "unrecoverable" for a driver should his/her vehicle leave the highway. **Activities must be shut down when the roadway is other than dry.** The use of frozen materials for backfilling will only lead to settlement. The contractor must make extra effort to compact the excavation. In the spring, any settlement of backfill shall be repaired. The re-vegetation shall take place yet this fall or early next spring.

COLORADO DEPARTMENT OF TRANSPORTATION
Environmental Clearances Information Summary

PURPOSE - This summary is intended to inform entities external to CDOT that may be entering the state highway right-of-way to perform work related to their own facilities (such as Utility, Special Use or Access Permittees), about some of the more commonly encountered environmental permits/clearances that may apply to their activities. This listing is not all-inclusive—additional environmental or cultural resource permits/clearances may be required in certain instances. Appropriate local, state and federal agencies should be contacted for additional information if there is any uncertainty about what permits/clearances are required for a specific activity. **IMPORTANT: Please Review The Following Information Carefully – Failure to Comply With Regulatory Requirements May Result In Suspension or Revocation of Your CDOT Permit, Or Enforcement Actions By Other Agencies.**

CLEARANCE CONTACTS - As indicated in the permit/clearance descriptions listed below, the following agencies may be contacted for additional information:

- Colorado Department of Public Health and Environment (CDPHE): General Information – (303) 692-2000
  Water Quality Control Division (WQCD): (303) 692-3500
  Environmental Permitting Website https://www.colorado.gov/pacific/cdphe/all-permits
- CDOT Water Quality Program Manager: (303) 512-4053 https://www.codot.gov/programs/environmental/water-quality
- CDOT Asbestos Project Manager: (303) 512-5519
- Colorado Office of Archaeology and Historic Preservation: (303) 866-5216
- U.S. Army Corps of Engineers, District Regulatory Offices:
  Omaha District (Northeastern CO), Denver Office (303) 979-4120
  http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/Colorado.aspx
  Sacramento District (Western CO), Grand Junction Office (970) 243-1199
  http://www.spk.usace.army.mil/Missions/Regulatory.aspx
  Albuquerque District (Southeastern CO), Pueblo Office (719) 543-9459
  http://www.spa.usace.army.mil/Missions/RegulatoryProgramandPermits.aspx
- CDOT Utilities, Special Use and Access Permitting: (303) 757-9654 https://www.codot.gov/business/permits

Wildlife Resources - Disturbance of wildlife shall be avoided to the maximum extent practicable. Entry into areas of known or suspected threatened or endangered species habitat requires special authorization from the CDOT permitting office. If any threatened or endangered species are encountered during the progress of the permitted work, work in the subject area shall be halted and the CDOT Regional Permitting Office and Region Planning and Environmental Manager shall be contacted immediately. Authorization must be provided by CDOT prior to the continuation of work. Information about threatened or endangered species may be obtained from the CDOT website, http://www.codot.gov/programs/environmental/wildlife/guidelines, or the Colorado Parks and Wildlife (CPW) website, http://www.cpw.state.co.us/learn/Pages/SOC-ThreatenedEndangeredList.aspx. Additional guidance may be provided by the appropriate Region Planning and Environmental Manager (RPEM).

Cultural Resources - The applicant must request a file search of the permit area through the Colorado Office of Archaeology and Historic Preservation (OAHP), Denver, to ascertain if historic or archaeological resources have previously been identified (https://www.historycolorado.org/file-access; 303-866-5216). Inventory of the permit area by a qualified cultural resources specialist may be necessary, per the recommendation of CDOT. If archaeological sites/artifacts or historic resources are encountered as the project progresses, all work in the subject area shall be halted and the CDOT Regional Permitting Office and Region Planning and Environmental Manager shall be contacted immediately. Authorization must be provided by CDOT prior to the continuation of work. Additional guidance may be provided by the Regional Permitting Office and RPEM.

Paleontological Resources - The level of effort required for paleontological resources is dependent on the amount of ground disturbance, including rock scaling, digging, trenching, boring, ground leveling, and similar activities.

- If the permit will involve extensive ground disturbance (generally involving more than one mile of CDOT ROW), a full review will be required by a qualified paleontologist, including map, file, and locality searches, with final recommendations provided by the CDOT paleontologist upon receipt of the report. Based on results of the review, a survey or inventory of the permit area may be necessary.
- If the permit will involve a small amount of ground disturbance (less than one mile of ROW), the applicant must request a fossil locality search through the University of Colorado Museum of Natural History (https://www.colorado.edu/cumuseum/research-collections/paleontology/policies-procedure) and the Denver Museum of Nature and Science (https://www.dmns.org/science/earth-sciences/earth-sciences-collections/). The museum collections manager will provide information about localities in the project area. If there are no known localities, the permit requirement for paleontology is complete upon submitting that information to CDOT. If there are known localities, the CDOT paleontologist will be contacted by the museum with details, and additional recommendations will be made if necessary. Note that museum staff are not required to disclose the details of fossil localities to the permit applicant, nor is detailed locality information required for the permit application to proceed.
- If the permit involve no ground disturbance, no action is required for paleontological resources. If fossils are encountered during the permitted action, all work in the immediate area of the find should stop and the CDOT Staff Paleontologist and the Region Environmental Manager should be contacted immediately. Authorization must be provided by CDOT prior to the continuation of work. Additional guidance may be provided by the Regional Permitting Office in the Permit Special Provisions. Contact Information: See the museum websites listed above. The CDOT Paleontologist is not able to conduct locality searches independently. For further information contact CDOT Paleontologist Nicole Peavey at nicole.peavey@state.co.us or (303)757-9632.

Hazardous Materials, Solid Waste - The Solid Wastes Disposal Sites and Facilities Act C.R.S. 30-20-100, et al, and Regulations Pertaining to Solid Waste Disposal Sites and Facilities (6 CCR 1007-2), prohibit solid waste disposal without an approved Certificate of Designation (a landfill permit). The Colorado Hazardous Waste Act C.R.S. 25-15-301 et al, and the Colorado Hazardous Waste Regulations (6 CCR 1007-3) prohibit the transfer, storage or disposal (TSD) of hazardous waste except at permitted TSD sites. There are no permitted landfills or TSD sites within the State Highway Right of Way. Therefore, all solid or hazardous wastes that might be generated by the activities of entities entering the State Highway Right of Way must be removed from the ROW and disposed of at a permitted facility or designated collection point (e.g., for solid waste, a utility or construction company's own dumpster). If pre-existing solid waste or hazardous materials contamination (including oil or petroleum contaminated soil, asbestos, chemicals, mine tailings, etc.) is encountered during the performance of work, the permittee shall halt work in the affected area and immediately contact the CDOT Regional Permitting Office for direction as to how to proceed. ***Contact Information:*** Theresa Santangelo-Dreiling, CDOT Hazardous Materials Management Supervisor: (303) 512-5524.

Asbestos Containing Materials, Asbestos Contaminated Soil - All work on asbestos containing materials (ACM) must comply with the applicable requirements of the CDPHE Air Pollution Control Division's (APCD) Regulation 8. Disposal of ACM, and work done in asbestos-contaminated soil, must comply with the CDPHE Hazardous Materials and Waste Management Division's (HMWMD) Solid Waste Regulations. The application for any CDOT permit must specifically identify any ACM involved in the work for which authorization is being requested. Additional guidance or requirements may be specified in the permit special provisions. ***Contact Info:*** CDPHE APCD and HMWMD Regulations can be accessed via the CDPHE Environmental Permitting Website listed above. Additional information **concerning clearance on CDOT projects** is available from the CDOT Asbestos Project Manager (303) 512-5519, or Theresa Santangelo-Dreiling, Hazardous Materials Management Supervisor: (303) 512-5524.

Transportation of Hazardous Materials - No person may offer or accept a hazardous material for transportation in commerce unless that person is registered in conformance with the United States Department of Transportation regulations at 49 CFR, Part 171. The hazardous material must be properly classed, described, packaged, marked, labeled, and in condition for shipment as required or authorized by applicable requirements, or an exemption, approval or registration has been issued. Vehicles requiring a placard, must obtain authorization and a State HAZMAT Permit from the Colorado Public Utilities Commission. ***Contact Information:*** For authorization and more info call the Federal Motor Safety Carrier Administration, US DOT for inter- and intra-state HAZMAT Registration (303) 969-6748. Colorado Public Utilities Commission: (303) 894-2868.

Discharge of Dredged or Fill Material – 404 Permits Administered By the U.S. Army Corps of Engineers, and Section 401 Water Quality Certifications Issued by the CDPHE WQCD - Clean Water Act section 404 permits are often required for the discharge of dredged or fill material into waters of the U.S., including wetlands. Several types of section 404 permits exist, including nationwide, regional general, and individual permits. Nationwide permits are the most commonly authorized type for activities with relatively minor impacts. If an individual 404 permit is required, section 401 water quality certification from the CDPHE WQCD is also required. Contact the appropriate Corps District Regulatory Office for information about what type of 404 permit may be required (contact information above). Contact the CDPHE Water Quality Control Division at (303) 692-3500.

Working on or in any stream or its bank - In order to protect and preserve the state's fish and wildlife resources from actions that may obstruct, diminish, destroy, change, modify, or vary a natural existing stream or its banks or tributaries, it may be necessary to obtain a Senate Bill 40 certification from the Colorado Department of Natural Resources. A stream is defined as 1) represented by a solid blue line on USGS 7.5' quadrangle maps; and/or 2) intermittent streams providing live water beneficial to fish and wildlife; and/or 3) segments of streams supporting 25% or more cover within 100 yards upstream or downstream of the project; and/or 4) segments of streams having wetlands present within 200 yards upstream or downstream of the project measured by valley length. The CPW application, as per guidelines agreed upon by CDOT and CPW, can be accessed at https://www.codot.gov/programs/environmental/wildlife/guidelines.

Erosion and Sediment Control Practices - Any activities that disturb one or more acres of land require a Stormwater Construction Permit (SCP) from the CDPHE-WQCD. Erosion & sediment control requirements will be specified in that permit. In situations where a stormwater permit is *not* required, all reasonable erosion and sediment control measures should be taken to minimize erosion and sedimentation. Control practices should be in accordance with CDOT Standard Specifications 107.25, 208, 213 and 216 (https://www.codot.gov/business/designsupport/cdot-construction-specifications). The CDOT Erosion Control and Stormwater Quality Guide (website: https://www.codot.gov/programs/environmental/landscape-architecture/erosion-storm-quality) can also be used to design erosion/sediment controls. ***Contact Information:*** Contact the CDPHE-WQCD at (303) 692-3500. Website: https://www.colorado.gov/pacific/cdphe/wq-construction-general-permits

Site Stabilization - All disturbances require a stabilization plan, native seeding or landscape design plan according to applicable CDOT Standard Specifications 212-217 and 623. The CDOT Erosion Control and Stormwater Quality Guide should also be used to plan restoration of disturbed vegetation. Website: https://www.codot.gov/programs/environmental/landscape-architecture/erosion-storm-quality

Stormwater Discharge From Industrial Facilities - Discharges of stormwater runoff from certain types of industrial facilities, such as concrete batch plants - require a CDPS Stormwater Permit. ***Contact Information:*** Contact the CDPHE-WQCD at (303) 692-3500. Website: https://colorado.gov/pacific/cdphe/wq-commerce-and-industry-permits

Concrete Washout - Waste generated from concrete activities shall NOT be allowed to flow into the drainage ways, inlets, receiving waters, or in the CDOT ROW. Concrete waste shall be placed in a temporary concrete washout facility and must be located a minimum of 50 feet from state waters, drainageways, and inlets. Concrete washout shall be in accordance to CDOT specifications and guidelines at https://www.codot.gov/business/designsupport/cdot-construction-specifications and refer to the specifications and their revisions for sections 101, 107 and 208.

Construction Dewatering (Discharge or Infiltration) and Remediation Activities - Discharges of water encountered during excavation or work in wet areas may require a Construction Dewatering or Remediation Activities Discharge Permit. ***Contact***

Information: Contact the CDPHE-WQCD at (303) 692-3500. For Applications and Instructions: https://www.colorado.gov/pacific/cdphe/wq-construction-general-permits.

Municipal Separate Storm Sewer System (MS4) Requirements - When working in a MS4 area, discharges to the storm sewer system are subject to CDOT's or other municipalities' MS4 Permit. For activities within the boundaries of a municipality that has a MS4 permit, the owner of such activity should contact the municipality regarding stormwater related requirements. All discharges to the CDOT highway drainage system or within the Right of Way (ROW) must comply with the applicable provisions of the Colorado Water Quality Control Act, the Water Quality Control Commission (WQCC) Regulations (https://www.colorado.gov/pacific/cdphe/wqcc-regulations-and-policies-and-water-quality-statutes) and the CDOT MS4 Permit #COS-000005 (https://www.codot.gov/programs/environmental/water-quality/documents). Discharges are subject to inspection by CDOT and CDPHE. For CDOT-related MS4 programs and requirements, go to: https://www.codot.gov/programs/environmental/water-quality/stormwater-programs.

Post-Construction Permanent Water Quality - When working in a CDOT MS4 area and the activity disturbs one or more acres, permanent water quality control measures may be required. Information on the requirements can be found under the CDOT Permanent Water Quality MS4 Program at: https://www.codot.gov/programs/environmental/water-quality/stormwater-programs/pwq-permanent-water-quality

Discharges to Storm Sewer Systems

Prohibited Discharges - All discharges are subject to the provisions of the Colorado Water Quality Control Act and the Colorado Discharge Permit Regulations. Prohibited discharges include, but are not limited to, substances such as wash water, paint, automotive fluids, solvents, oils or soaps and sediment.

Allowable Discharges - The following discharges to stormwater systems are allowed without a permit from the CDPHE-WQCD: landscape irrigation, diverted stream flows, uncontaminated ground water infiltration to separate storm sewers, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, uncontaminated springs, footing drains, water line flushing, flows from riparian habitats and wetlands, and flow from firefighting activities. ***Contact Information:*** Contact the CDPHE-WQCD at (303) 692-3500. Information can also be found in the CDOT Illicit Discharge MS4 Program PDD at: https://www.codot.gov/programs/environmental/water-quality/stormwater-programs/idde.html.

Spill Reporting - Spills shall be contained and cleaned up as soon as possible. Spills shall NOT be washed down into the storm drain or buried. All spills shall be reported to the CDOT Illicit Discharge Hotline at (303) 512-4426 (4H20), as well as the Regional Permitting Office and Regional Maintenance Supervisor. Spills on highways, into waterways, any spill in the highway right-of-way exceeding 25 gallons, or that may otherwise present an immediate danger to the public shall be reported by calling 911, and shall also be reported to the CDPHE at 1-877-518-5608. More information can be found at https://www.colorado.gov/pacific/cdphe/emergency-reporting-line.

Disposal of Drilling Fluids - Drilling fluids used in operations such as Horizontal Directional Drilling may be classified as "discharges" or "solid wastes," and in general, should be pumped or vacuumed from the construction area, removed from the State Highway Right of Way, and disposed of at permitted facilities that specifically accept such wastes. Disposal of drilling fluids into storm drains, storm sewers, roadside ditches or any other type of man-made or natural waterway is prohibited by Water Quality Control and/or Solid Waste regulations. Small quantities of drilling fluid solids (less than 1 cubic yard of solids) may be left on-site after either being separated from fluids or after infiltration of the water, provided: 1) the drilling fluid consists of only water and bentonite clay, or, if required for proper drilling properties, small quantities of polymer additives that are approved for use in drinking water well drilling; 2) the solids are fully contained in a pit, and are not likely to pose a nuisance to future work in the area, 3) the solids are covered and the area restored as required by CDOT permit requirements (Utility, Special Use, or Access Permits, etc.). ***Contact Information:*** Contact CDPHE (telephone #'s listed above).

Noxious Weeds and Invasive Species Management Plan - Noxious Weeds and Invasive Species guidance can be found by contacting the Colorado Department of Agriculture (https://www.colorado.gov/pacific/agconservation/noxiousweeds) and the Colorado Division of Parks and Wildlife (http://cpw.state.co.us/aboutus/Pages/RS-NoxiousWeeds.aspx). In either case, management plans involving the control of noxious weeds associated with the permitted activity and cleaning of equipment will be required.

COLORADO
Department of Transportation

What is stormwater runoff?

Stormwater runoff occurs when precipitation from rain or snowmelt flows over the ground. Impervious surfaces like roads and sidewalks prevent stormwater from naturally soaking into the ground

Why is stormwater runoff a problem?

Stormwater can pick up debris, chemicals, dirt and other pollutants and flow into CDOT's storm drain system or directly into a stream, river, lake, wetland or reservoir. Anything that enters CDOT's storm drain system is discharged untreated into the waterways we use for fishing, swimming, and providing drinking water.

Dredged spoil, dirt, slurry, solid waste, incinerator residue, sewage, sewage sludge, garbage, trash, chemical waste, biological nutrient, biological material, radioactive material, heat, pH, wrecked or discarded equipment, rock, sand, any industrial, municipal, or agricultural waste.

Tips for Reporting an Illicit Discharge

Call the illicit discharge hotline at **(303) 512-4426**
From a safe distance try to estimate the amount of the discharge.
Identify characteristics of the discharge (color, odor, algae, etc.).
Obtain information on the vehicle dumping the waste (if applicable).
Do not approach!
Call *CSP for illicit dumping.
If possible, take a photo, record a license plate.

REMEMBER:
Never get too close to the illicit discharge, it may be dangerous!!!

For more information on CDOT Utility Permits:

https://www.codot.gov/business/permits/utilitiesspecialuse

For more information on CDOT Access Permits:

https://www.codot.gov/business/permits/accesspermits

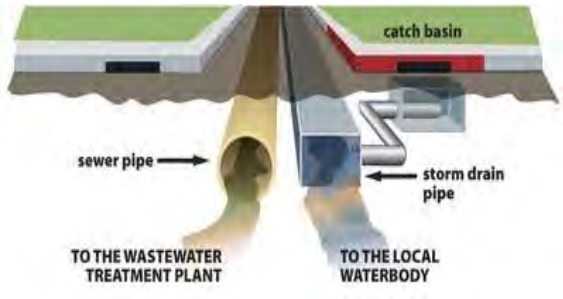
For more information on CDOT Water Quality Program:

Water Quality Program Manager
4201 E. Arkansas Ave.
Shumate Building
Denver, Colorado 80222
303-757-9343

COLORADO
Department of Transportation

Water Quality Program Industrial Facilities Program

CDOT has a Municipal Separate Storm Sewer System permit, otherwise known as (MS4) from the Colorado Department of Public Health and Environment. The permit states that only stormwater can be discharged from CDOT's storm drain system



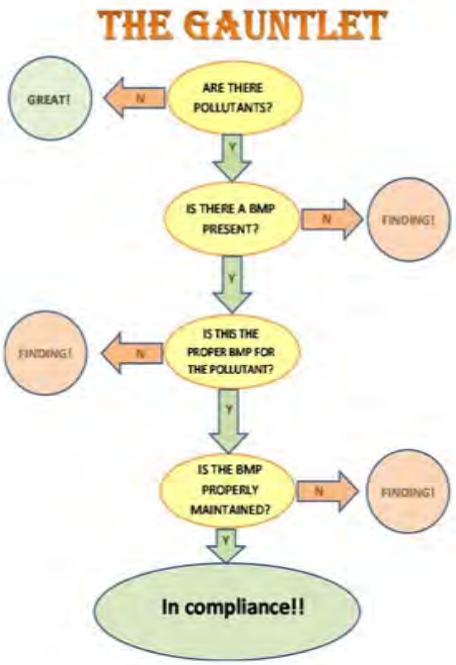
As part of the permit, CDOT has several different programs to prevent pollutants from entering into the storm drain system:

- Construction Site Program
- New Development Redevelopment Program
- Illicit Discharge Program
- Industrial Facilities Program
- Public Education and Outreach Program
- Pollution Prevention and Good Housekeeping Program
- Wet Weather Monitoring Program

COLORADO
Department of Transportation

Control Measures for Industrial Facilities

Industrial facilities can use control measures (CM) otherwise known as Best Management Practices (BMP) during the construction of a facility and when operating the facility. Control measures are schedules of activities, maintenance procedures, and other management practices to prevent and reduce pollution entering into CDOT's storm drain system. Control Measures also include treatment, operating procedures, and practices to control site run off which can include structural and non-structural controls.



CDOT defines a utility, or utility facility as any privately, publicly, or cooperatively owned line, facility, or system producing, transmitting or distributing the following:

- ✓ Communications
- ✓ Cable television
- ✓ Power
- ✓ Electricity
- ✓ Light
- ✓ Heat Gas
- ✓ Oil
- ✓ Crude Products
- ✓ Water
- ✓ Stream
- ✓ Waste
- ✓ Stormwater not connected with highway drainage
- ✓ Similar Commodity

COLORADO
Department of Transportation

Industrial Facilities Program Elements:

1. Educate and outreach to owners or operators that have potential to contribute substantial pollutant to water.
2. Report and include information on discharge and water quality concerns. Provide written notification within 15 days of discovery to CDPHE.
3. Submit an annual report to CDPHE containing the number of informational brochures distributed; name and title of each individual trained.

Education

There are instances when a utility company or other entity doing work in the state highway right-of-way will require some type of environmental permit or clearance for that work. CDOT has put together an Environmental Clearances Information Summary for those applying for a CDOT Utility and Special Use Permit or Access Permit to obtain all required clearances. This fact sheet is given to each permittee and is available at: http://www.coloradodot.info/programs/environmental/resources/guidance-standards/Environmental%20Clearances%20Info%20Summary.pdf

COLORADO DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY ACCESS PERMIT APPLICATION

Issuing authority application acceptance date:

Instructions:
- Contact the Colorado Department of Transportation (CDOT) or your local government to determine your issuing authority.
- Contact the issuing authority to determine what plans and other documents are required to be submitted with your application.
- Complete this form (some questions may not apply to you) and attach all necessary documents and Submit it to the issuing authority.
- Submit an application for each access affected.
- If you have any questions contact the issuing authority.
- For additional information see CDOT's Access Management website at **https://www.codot.gov/business/permits/accesspermits**

Please print or type

1) Property owner (Permittee)		2) Applicant or Agent for permittee (if different from property owner)	
Salida Bottling Company, LLC			
Street address		Mailing address	
777 Dunlavy Street, Apt 8204			
City, state & zip	Phone #	City, state & zip	Phone # (required)
Houston, TX 77019	832-294-1354		
E-mail address		E-mail address if available	
ewarner497@gmail.com			

3) Address of property to be served by permit (required)
323 W 1st Street, Salida, CO 81201

4) Legal description of property: If within jurisdictional limits of Municipality, city and/or County, which one?

county	subdivision	block	lot	section	township	range
Chaffee		19	4-9	32	50N	9E

5) What State Highway are you requesting access from?
291

6) What side of the highway?
☐ N ☐ S ☐ E ☒ W

7) How many feet is the proposed access from the nearest mile post?
1120 feet ☒ N ☐ S ☐ E ☐ W) from: 1

How many feet is the proposed access from the nearest cross street?
240 feet ☐ N ☒ S ☐ E ☐ W) from: I Street

8) What is the approximate date you intend to begin construction?
4/1/2022

9) Check here if you are requesting a:
☒ new access ☐ temporary access (duration anticipated:) ☐ improvement to existing access
☒ change in access use ☒ removal of access ☐ relocation of an existing access (provide detail)

10) Provide existing property use
Rented by City of Salida for public parking. Parking lot currently has 1 access to SH 291.

11) Do you have knowledge of any State Highway access permits serving this property, or adjacent properties in which you have a property interest?
☒ no ☐ yes, if yes - what are the permit number(s) and provide copies: and/or, permit date:

12) Does the property owner own or have any interests in any adjacent property?
☒ no ☐ yes, if yes - please describe:

13) Are there other existing or dedicated public streets, roads, highways or access easements bordering or within the property?
☐ no ☒ yes, if yes - list them on your plans and indicate the proposed and existing access points.

14) If you are requesting agricultural field access - how many acres will the access serve?

15) If you are requesting commercial or industrial access please indicate the types and number of businesses and provide the floor area square footage of each.

business/land use	square footage	business	square footage
General Commercial	725		

16) If you are requesting residential developement access, what is the type (single family, apartment, townhouse) and number of units?

type	number of units	type	number of units
townhouse	16		

17) Provide the following vehicle count estimates for vehicles that will use the access. Leaving the property then returning is two counts.

Indicate if your counts are ☒ peak hour volumes or ☐ average daily volumes.	# of passenger cars and light trucks at peak hour volumes	# of multi unit trucks at peak hour volumes
	13	0
# of single unit vehicles in excess of 30 ft.	# of farm vehicles (field equipment)	**Total count of all vehicles**
	0	13

18) Check with the issuing authority to determine which of the following documents are required to complete the review of your application.

a) Property map indicating other access, bordering roads and streets.
b) Highway and driveway plan profile.
c) Drainage plan showing impact to the highway right-of-way.
d) Map and letters detailing utility locations before and after development in and along the right-of-way.
e) Subdivision, zoning, or development plan.
f) Proposed access design.
g) Parcel and ownership maps including easements.
h) Traffic studies.
i) Proof of ownership.

1- It is the applicant's responsibility to contact appropriate agencies and obtain all environmental clearances that apply to their activities. Such clearances may include Corps of Engineers 404 Permits or Colorado Discharge Permit System permits, or ecological, archeological, historical or cultural resource clearances. The CDOT Environmental Clearances Information Summary presents contact information for agencies administering certain clearances, information about prohibited discharges, and may be obtained from Regional CDOT Utility/Special Use Permit offices or accessed via the CDOT Planning/Construction-Environmental-Guidance webpage: **https://www.codot.gov/programs/environmental/resources/guidance-standards/environmental-clearances-info-summary-august-2017/view**

2- All workers within the State Highway right of way shall comply with their employer's safety and health policies/procedures, and all applicable U.S. Occupational Safety and Health Administration (OSHA) regulations - including, but not limited to the applicable sections of 29 CFR Part 1910 - Occupational Safety and Health Standards and 29 CFR Part 1926 - Safety and Health Regulations for Construction.

Personal protective equipment (e.g. head protection, footwear, high visibility apparel, safety glasses, hearing protection, respirators, gloves, etc.) shall be worn as appropriate for the work being performed, and as specified in regulation. At a minimum, all workers in the State Highway right of way, except when in their vehicles, shall wear the following personal protective equipment: High visibility apparel as specified in the Traffic Control provisions of the documentation accompanying the Notice to Proceed related to this permit (at a minimum, ANSI/ISEA 107-1999, class 2); head protection that complies with the ANSI Z89.1-1997 standard; and at all construction sites or whenever there is danger of injury to feet, workers shall comply with OSHA's PPE requirements for foot protection per 29 CFR 1910.136, 1926.95, and 1926.96. If required, such footwear shall meet the requirements of ANSI Z41-1999.

Where any of the above-referenced ANSI standards have been revised, the most recent version of the standard shall apply.

3- The Permittee is responsible for complying with the Revised Guidelines that have been adopted by the Access Board under the American Disabilities Act (ADA). These guidelines define traversable slope requirements and prescribe the use of a defined pattern of truncated domes as detectable warnings at street crossings. The new Standards Plans and can be found on the Design and Construction Project Support web page at:
https://www.codot.gov/business/civilrights/ada/resources-engineers

If an access permit is issued to you, it will state the terms and conditions for its use. Any changes in the use of the permitted access not consistent with the terms and conditions listed on the permit may be considered a violation of the permit.

The applicant declares under penalty of perjury in the second degree, and any other applicable state or federal laws, that all information provided on this form and submitted attachments are to the best of their knowledge true and complete.

I understand receipt of an access permit does not constitute permission to start access construction work.

Applicant or Agent for Permittee signature	Print name	Date
	Eric Warner	July 16,2021

If the applicant is not the owner of the property, we require this application also to be signed by the property owner or their legally authorized representative (or other acceptable written evidence). This signature shall constitute agreement with this application by all owners-of-interest unless stated in writing. If a permit is issued, the property owner, in most cases, will be listed as the permittee.

Property owner signature	Print name	Date

Water Demand Estimate and Meter Sizing Using Fixture Values

(Based on AWWA M22 Manual, Second Edition)

Project	CHT River Ridge Lot 1
Residential, Non-Residential, M.F.	Residential Multi-Family
Pressure Zone at Project	60

Fixture or Appliance	Fixture Value (at 60 psi)	Number of Fixtures	Subtotal Fixture Value	UPC DFU	DFU Total
Toilet (tank)	4	30	120	4	120
Toilet (flush valve)	35	0	0		0
Urinal (wall or stall)	16	0	0		0
Urinal (flush valve)	35	0	0		0
Shower (single head)	2.5	16	40	2	32
Sink (lavatory)	1.5	30	45	1	30
Kitchen Sink	2.2	16	35.2	2	32
Utility Sink	4	1	4	2	2
Dishwasher	2	17	34	2	34
Bathtub	8	9	72	2	18
Clothes Washer	6	16	96	3	48
					316
Hose connections (with 50 ft of hose)					
1/2 in.	5		0		
5/8 in.	9		0		
3/4 in.	12		0		
Miscellaneous					
Bedpan washers	10		0		
Drinking fountains	2		0		
Dental units	2		0		
Combined Fixture Value			446.2		
Demand (gpm) - See Curves			43		
Pressure Adjustment Factor			1		
Total Adjusted demand (gpm)			**43**		
Minimum Meter Size			1"		
Service Line Velocity (fps)			**6.4**		
Minimum Service Size (HDPE)			**2"**		

	800 SF	1000 SF	1400 SF	COMMERCIAL
	1	2	3	1
	1	1	1	
	1	2	3	1
	1	1	1	
				1
	1	1	1	1
		1	1	
	1	1	1	

6" sewer at 1% OK up to 700 DFU

Approved by: _____

calculated
user inputted

Salida Bottling Co - Public
Improvements Schedule
Prepared 12/21/21

			Week Starting:	5/2/2022	5/8/2022	5/14/2022	5/20/2022	5/26/2022	6/1/2022	6/7/2022	6/13/2022	6/19/2022	6/25/2022	7/1/2022	7/7/2022	7/13/2022	7/19/2022	7/25/2022	7/31/2022	8/6/2022
Item	Notes	Start	End	May-22					Jun-22					Jul-22						
Sanitary sewer	Manhole and 6" pipe into site	5/2/2022	5/7/2022	X																
Water main upsize and services		5/8/2022	5/22/2022		X	X	X													
Concrete	Curb, driveway, and sidewalk in highway right of way	5/23/2022	6/3/2022					X	X											
asphalt patching		6/4/2022	6/20/2022							X	X	X								
	Add one month for alley paving if required																			

Engineer's Opinion of Probable Cost
Salida Bottling Co. - Public Infrastructure

Prepared by: Crabtree Group, Inc.

Owner: Salida Bottling Co., LLC **January 18, 2020**

Item	Qnty	Unit	Description	Unit Cost	Total Cost
BASE ITEMS					
1	193	LF	FURNISH AND INSTALL CURB AND GUTTER PER CDOT ACCESS PERMIT	$ 60.00	$ 11,580.00
2	31	SY	FURNISH AND INSTALL DRIVEWAY PER CDOT ACCESS PERMIT	$ 80.00	$ 2,480.00
3	107	SY	FURNISH AND INSTALL 4" CONCRETE SIDEWALK OVER 4" CDOT CLASS 6 AGGREGATE BASE COURSE	$ 70.00	$ 7,490.00
4	1	EA	PLUG EXISTING SEWER SERVICE LINE AT MAIN	$ 1,000.00	$ 1,000.00
5	1	EA	FURNISH AND INSTALL SANITARY SEWER MANHOLE ON EXISTING SEWER MAIN (PUBLIC)	$ 8,000.00	$ 8,000.00
6	40	LF	FURNISH AND INSTALL 6" SEWER LINE (PRIVATE, TO PROPERTY LINE)	$ 80.00	$ 3,200.00
7	1	EA	REMOVE AND DISPOSE OF EXISTING WATER SERVICE ASSEMBLY	$ 1,000.00	$ 1,000.00
8	1	EA	REMOVE AND DISPOSE OF EXISTING 8"X4" REDUCER	$ 500.00	$ 500.00
9	1	EA	CONNECT TO EXISTING 8" TEE	$ 1,000.00	$ 1,000.00
10	318	LF	FURNISH AND INSTALL 8" WATER MAIN	$ 75.00	$ 23,850.00
11	7	EA	RECONNECT EXISTING WATER SERVICE	$ 800.00	$ 5,600.00
12	4	EA	FURNISH AND INSTALL 3/4" RESIDENTIAL WATER SERVICE ASSEMBLY	$ 2,000.00	$ 8,000.00
13	6	EA	FURNISH AND INSTALL 3/4" RESIDENTIAL WATER SERVICE ASSEMBLY WITH DUAL METER PIT	$ 3,000.00	$ 18,000.00
14	1	EA	FURNISH AND INSTALL FIRE HYDRANT ASSEMBLY	$ 7,000.00	$ 7,000.00
15	1	EA	FURNISH AND INSTALL 8" GATE VALVE	$ 1,200.00	$ 1,200.00
16	1	EA	FURNISH AND INSTALL 8"X4" REDUCER	$ 1,000.00	$ 1,000.00
17	1	EA	CONNECT TO EXISTING 4" WATER MAIN	$ 800.00	$ 800.00
18	570	SY	ASPHALT PATCHING PER CDOT STANDARDS	$ 50.00	$ 28,500.00
19	1	LS	TRAFFIC CONTROL	$ 25,000.00	$ 25,000.00
				SUBTOTAL	**$ 155,200.00**
				WITH 25% CONTINGENCY	**$ 194,000.00**
ALLEY PAVING					
20	225	LF	FURNISH AND INSTALL 4' CONCRETE DRAINAGE PAN	$ 65.00	$ 14,625.00
21	30	SY	6" CONCRETE DRIVEWAY OVER 6" CDOT CLASS 6 AGGREGATE BASE COURSE	$ 80.00	$ 2,400.00
22	400	SY	FURNISH AND INSTALL 3" ASPHALT OVER 6" CDOT CLASS 6 AGGREGATE BASE COURSE	$ 35.00	$ 14,000.00
				SUBTOTAL	**$ 31,025.00**
				WITH 25% CONTINGENCY	**$ 38,781.25**

AEI Consultants

March 19, 2019

LIMITED PHASE II SUBSURFACE INVESTIGATION

Property Identification:
323 West 1st Street
Salida, Colorado 81201

AEI Project No. 400082

Prepared for:
High Country Bank
7360 West Highway 50
Salida, Colorado 81201

Prepared by:
AEI Consultants
2420 West 26th Avenue, Suite 400D
Denver, Colorado 80211
(720) 238-4582

Environmental & Engineering Due Diligence

Site Investigation & Remediation

Energy Performance & Benchmarking

Industrial Hygiene

Construction Consulting

Construction, Site Stabilization & Stormwater Services

Zoning Analysis Reports & ALTA Surveys

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AEI Consultants

March 19, 2019

Mr. Joe Smith
High Country Bank
7360 West Highway 50
Salida, Colorado 81201

Subject: **Limited Phase II Subsurface Investigation**
323 West 1st Street
Salida, Colorado 81201
AEI Project No. 400082

AEI Consultants (AEI) prepared the following report to document the results of a Limited Phase II Subsurface Investigation (Phase II) performed at the above referenced property, hereafter referred to as the "Site" (See Figure 1). The investigation was completed in general accordance with the authorized scope of services outlined in AEI's proposal 62462, signed February 21, 2019.

1.0 SITE DESCRIPTION

The Site consists of a vacant 0.64-acre gravel-surfaced parking lot. The Site is located on the west side of the intersection of West 1st Street and the Monarch Spur Trail in a mixed commercial and residential area of Salida, Colorado (Figure 2).

The Site is slopes gently to the east with elevations ranging between 7,065 to 7,070 feet above mean sea level. Based on the regional topographic gradient, the direction of groundwater flow beneath the Site is inferred to be to the northeast. The Arkansas River is located approximately 678 feet to the northwest.

Based on a review of the Geologic Map of Colorado, the Site is underlain by the Dry Union Formation, which is comprised of sedimentary deposits of the Tertiary Period. According to the United States Department of Agriculture (USDA) Soil Survey, soils at the Site are described as the Dominson Series. Soils from this series are classified as gravelly sandy loam.

Refer to Section 4.1 below for additional information on the site geology and groundwater conditions.

2.0 BACKGROUND

According to a February 4, 2019 Phase I Environmental Site Assessment (ESA) completed by AEI, the Site was developed with several buildings that included warehousing, livery, blacksmiths, outbuilding storage, and a dwelling along West First Street from 1886 through 1904. From 1909 through 1945, the Site was occupied by an auto wrecking business (315 West First Street), the Salida Street Department warehouse (323-327 West First Street), and a beverage bottling operation (309 West First Street). By 1950, with the exception of the auto wrecking and bottling buildings, all of the former structures on the Site had been demolished and replaced with a garage

building occupied by the City of Salida Public Works Department (Salida PWD) (323 West First Street). The two remaining commercial buildings (309 and 315 West First Street) were demolished sometime between 1979 and 1984 and the Site was solely occupied by Salida PWD garage (323 West First Street). The Salida PWD continued to operate on the Site until 2009, when the last remaining building was demolished. The Site has been used as a surface parking lot since that time.

During the Phase I ESA, AEI identified the following concerns:

- According to a 1945 Sanborn map, a former commercial building with frontage along West First Street (315 West First Street), was occupied at the time by an auto wrecking business. The same Sanborn map also depicted two gasoline underground storage tanks (USTs) within the street in front of this building. While the noted location on the map may not correlate to their actual location, the USTs are presumed to have been associated with this former building and business its operations. AEI cannot rule out the possibility that USTs were historically present on the Site as early as 1945. By 1950, a portion of the Site was redeveloped with a commercial garage building. This building was occupied by the Salida PWD until 2009. According to interviews conducted during this AEI assessment and information from prior reports, operations conducted within the former garage building included fleet vehicle/equipment repair, storage, and offices. In particular, Mr. Kevin Nelson, Inspector with the City of Salida, stated that there were no in-ground features present, such as oil change pits, hydraulic lifts, floor drains/trench drains, or oil/water separators within the garage/repair area of the building. However, Mr. Nelson did state that a concrete sump was present in one of the newer (1995) additions to the building that was used to collect snow melt/wash water from any vehicles or equipment brought in to the building. The sump was reported to be connected to the municipal sewer system and no other inline debris collection system (e.g., separator) was reported to be in use with the sump.

  AEI did not uncover any other records regarding the disposition of any former building features during building demolitions. Further, AEI did not uncover any records regarding the removal of the two tanks associated with the former 315 West First Street building. Therefore, based on the unconfirmed disposition of past features of concern, length of time the Site was occupied for automotive wrecking (in at least 1945) and fleet maintenance by the City of Salida (more than 55 years), further investigation of the sump was recommended.

- The Site is listed as a UST site in the regulatory database report and within Colorado Division of Labor and Employment (CDLE) Division of Oil and Public Safety (OPS) records. According to the regulatory database report, the Site is reported to have utilized three galvanized steel USTs that have been permanently closed. The three UST capacities and contents were noted to include the following: one 1,000-gallon gasoline, one 1,000-gallon diesel fuel, and one 500-gallon gasoline.

  Records reviewed from OPS included a two-page UST Notification Form from 1986 noting that the three USTs were still in use at that time, did not contain any internal or external protection, and were owned by the City of Salida. No additional details were reported on the 1986 form. However, a one-page letter enclosed in the OPS files that was sent from the City of Salida to

the OPS noted that the City of Salida has discontinued the use of all three USTs effective March 16, 1990 and that the USTs were planned for removal as soon as possible. However, no additional records were identified during this assessment which confirmed the UST removal date(s), the condition of the USTs at the time of removal, or any subsurface sampling at the time of removal to confirm no release had occurred. Based on the unconfirmed disposition of the USTs and undocumented analysis of the subsurface conditions at the time, AEI recommended additional investigation.

3.0 INVESTIGATION EFFORTS

AEI was requested to perform additional investigation, including the collection of soil and groundwater samples in the area of the former USTs and the repair shop, to evaluate if the former operations had adversely impacted the property.

3.1 Health and Safety Plan

A site-specific health and safety plan was prepared, reviewed by onsite personnel, and kept onsite for the duration of the fieldwork.

3.2 Permitting and Utility Clearance

Drilling permits were not required for this investigation. The public underground utility locating service Colorado 811 was notified to identify public utilities in the work area. Private utility locating was conducted by Ground Penetrating Radar Systems (GPRS) of Denver, Colorado to identify underground utilities on the subject property.

3.3 Geophysical Survey

On February 28, 2019, a geophysical survey was conducted by GPRS (Appendix A). The purpose of the survey was to determine if any USTs remain on the Site or to locate disturbed soils that may represent former UST basins. The geophysical survey was conducted using ground penetrating radar (GPR). The geophysical survey did not identify any anomalies indicative of USTs or disturbed soils indicative of a former UST basin.

The client should be aware of the inherent limitations of geophysical surveying methods and that above and underground utilities and other man-made or natural features (i.e. automobiles, debris piles, tree roots, reinforced concrete, certain soil conditions, etc.), if in the area of the survey, may decrease the effectiveness of the survey. The client should be aware that the lack of a detection of a feature from a geophysical survey does not mean that the feature does not exist, only that it was not detected.

3.4 Drilling and Soil Sample Collection

On February 28, 2019, four soil borings (SB-1 through SB-4) were advanced by Site Services of Golden, Colorado using a truck-mounted hollow stem auger. The borings were advanced to depths between 14 and 28 feet below ground surface (bgs). The location and purpose of each boring are listed below:

- Boring SB-1 was advanced near the location of the former Salida PWD UST for the collection of soil and groundwater samples.
- Boring SB-2 was advanced near the location of the former UST identified in Sanborn Maps for the collection of soil and groundwater samples.
- Boring SB-3 was advanced near the southern portion of the former Salida PWD building for the collection of soil and groundwater samples.
- Boring SB-4 was advanced near the former Salida PWD UST for the collection of soil samples.

The borings were advanced using 6 5/8-inch outer diameter auger. Soil samples were collected by advancing a five-foot long California split spoon. After each interval, the spoon was retrieved, the spoon barrel disassembled, and the sample liner transferred to the onsite geologist.

Soils from borings SB-1 through SB-4 were evaluated for the purposes of lithologic logging, headspace testing, and sample collection for laboratory analyses. Soil samples were obtained by removing the soil from the split-spoon, placed in four-ounce glass jars, and capped. Upon collection, each sample was labeled with the project name, boring number, sample depth, and date/time of sampling. After labeling, each sample was entered onto chain-of-custody documentation and placed into an iced cooler for transportation to a State of Colorado-certified laboratory for analyses.

Soils were visually inspected for the potential presence of impacted soils. Recovered soils were described on detailed boring logs in general conformance with the United Soil Classification System (USCS). The boring logs for borings SB-1 through SB-4 are presented in Appendix B.

Headspace field measurements were measured with a photoionization detector (PID) equipped with an electrodeless 10.6 eV ultraviolet lamp for detecting the potential presence of organic vapors in the soil samples. To initiate the headspace testing procedure, soil samples were removed from the spoon, placed into labeled, plastic bags, and sealed for conducting the tests. Due to the weather conditions at the time of sampling the plastic bags were placed on the dashboard with the defrost running to assist with the volatilization of any contaminants in the sample. After a sufficient duration of time had elapsed for vapor build-up inside the bags, each bag was then punctured with the PID probe tip to measure the concentration of any gases in the headspace. Measurements of the headspace were obtained in the parts per million (ppm) range for total organic vapors. The results of the headspace tests (PID readings) for borings SB-1 through SB-4 were recorded on the boring logs, presented in Appendix B.

Down-hole equipment was decontaminated prior to drilling and between successive boring locations.

3.5 Groundwater Sample Collection

On February 28, 2019, groundwater samples were collected from borings SB-1, SB-2 and SB-3 by inserting temporary PVC casing into the boreholes and collecting the samples using a new PVC tubing and a foot valve.

3.6 Boring Abandonment

Following completion of sample collection and removal of tooling, the borings were backfilled with soil cuttings and hydrated bentonite chips and completed at the surface to match the surrounding conditions.

3.8 Laboratory Analyses

The soil and groundwater samples were labeled and placed into a cooler with ice following sampling. The samples were transferred under appropriate chain-of-custody documentation to SGS Accutest of Wheat Ridge, Colorado. Laboratory analytical documentation is provided in Appendix C.

Two soil samples from borings SB-1 and SB-4 were analyzed for:

- Benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8260
- Polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8270

Two soil samples from borings SB-2 and SB-3 were analyzed for:

- Volatile organic compounds (VOCs) by EPA Method 8260
- PAHs by EPA Method 8270

One groundwater sample from boring SB-1 was analyzed for:

- BTEX by EPA Method 8260
- PAHs by EPA Method 8270

Two groundwater samples from borings SB-2 and SB-3 were analyzed for:

- VOCs by EPA Method 8260
- PAHs by EPA Method 8270

3.9 Investigation Derived Wastes

No investigation derived waste was created during this investigation.

4.0 FINDINGS

The Colorado Department of Public Health and Environment (CDPHE) Hazardous Materials and Waste Management Division has the responsibility for overseeing soil and groundwater cleanups in Colorado.

The soil analytical results were compared with the Environmental Protection Agency (EPA) Regional Screening Levels (RSLs) for Residential sites and the EPA's RSLs for Worker Protection (Commercial sites) (both dated November of 2017), and the CDPHE Groundwater Protection Values Soil Cleanup Table (CGWPVSC) dated March of 2014.

The Colorado Department of Public Health and Environment (CDPHE) Hazardous Materials and Waste Management Division has the responsibility for overseeing soil and groundwater cleanups

in Colorado under a variety of regulatory programs. Soil sampling results were compared to the Soil Remediation Objectives (SROs) listed in the CDPHE's Dry Cleaner Remediation Guidance Document, dated March 2006.

The groundwater analytical results were compared to the Colorado Basic Standards for Groundwater (CBSGW), which were issued by the CDPHE's Water Quality Control Commission (WQCC) in January of 1987, with amended rules taking effect in December of 2016.

The OPS has established the Tier 1 Risk Based Screening Levels (Tier 1 RBSL) for UST-related volatile organic compounds (VOCs) and polynuclear aromatic hydrocarbons (PAHs). The Tier 1 RBSLs were revised in October of 2005 and published in the Petroleum Storage Tank Owner/Operator Guidance Document to assist owners and/or operators in conducting release investigations, performing initial response actions, preparing site characterization reports, and preparing and implementing corrective action plans.

4.1 Geology and Hydrogeology

Unconsolidated sediment encountered in each of the borings generally consisted of sands with gravel, cobble and boulders (Appendix B). AEI attempted to collect blow counts in the borings, however due to cobbles and boulders in the subsurface, blow counts exceeded 50 after two to four inches. In boring SB-2 a six-inch thick concrete pad was encountered at 0.4 feet bgs.

Saturated soils were encountered at 19 feet bgs in borings SB-1, SB-2 and SB-3. Groundwater was measured in boring SB-1, SB-2 and SB-3 at depths ranging between 18.5 and 20.5 feet bgs. Groundwater was not encountered in boring SB-4.

4.2 Soil Sample Analytical Results

The following information is a summary of the soil sample analytical test results (Appendix C). This information has also been included in Table 1.

- Toluene was reported at a concentration of 0.0019 in boring SB-2. The concentration does not exceed the regulatory screening levels.
- All 18 PAHs were reported in the soil sample collected from boring SB-2. Of the PAHs, only benzo(a)pyrene exceeded any of the regulatory screening levels. The reported concentration of benzo(a)pyrene at 0.159 milligrams per kilogram (mg/kg) exceeded the OPS Tier 1 RBSL for soil exposure of 0.062 mg/kg and the EPA RBSL for residential exposure of 0.11 mg/kg; however, it was below the OPS Groundwater Protection Level of 4.8 mg/kg.
- The reported concentrations of all remaining VOCs and PAHs in the samples from borings (SB-1, SB-3 and SB-4) were below the laboratory method detection limits.

4.3 Groundwater Sample Analytical Results

The following information is a summary of the groundwater sample analytical test results (Appendix C). This information has also been included in Table 2.

- Methyl ethyl ketone (MEK) was reported in borings SB-2 and SB-3 at 22.2 and 9.9 micrograms per liter (µg/L), respectively, which do not exceed the regulatory screening levels.
- The remaining VOCs and PAHs were not reported above the laboratory method detection limits.

5.0 SUMMARY AND CONCLUSIONS

AEI has completed a Phase II at the Site. The purpose of the Phase II at the Site was to assess the potential for USTs at the Site and to evaluate current conditions related to the former operation of USTs and repair operations associated with the DPW. A total of four borings (SB-1 through SB-4) were advanced at the Site for the collection of soil and groundwater samples. A geophysical survey using GPR was conducted at the site in an attempt to locate any USTs that may remain on the Site or locate disturbed soils indicative of former UST basins.

A summary of the investigation findings includes:

- The geophysical survey did not identify any anomalies indicative of USTs at the Site.
- Toluene was reported at a concentration of 0.0019 mg/kg in the soil sample collected at 8.5 feet bgs in boring SB-2. The concentration of toluene does not exceed any of the regulatory screening levels.
- The remaining VOCs were not reported in soil samples collected from the remaining borings above the laboratory method detection limits.
- All 18 PAHs were reported in boring SB-2, completed at the reported location of the former UST identified in Sanborn Maps from 1945. Of the reported PAHs in boring SB-2, only benzo(a)pyrene exceeded any of the regulatory screening levels. The reported concentration of benzo(a)pyrene at 0.159 mg/kg exceeded the OPS Tier 1 RBSL for soil exposure of 0.062 mg/kg and the EPA RBSL for residential exposure of 0.11 mg/kg but was below the OPS Tier 1 Groundwater Protection Level of 4.8 mg/kg.
- PAHs were not reported in soil samples collected from the remaining borings above the laboratory method detection limits.
- Methyl ethyl ketone was reported in the groundwater samples from borings SB-2 and SB-3 at 22.2 and 9.9 µg/L, respectively, which do not exceed the regulatory screening levels.
- The remaining VOCs and PAHs in groundwater were not reported above the laboratory method detection limits

Although benzo(a)pyrene was reported in boring SB-2 at concentrations exceeding the regulatory levels for soil exposure, this concentration is below the OPS Tier 1 screening level based on groundwater protection. Based on the depth of the impacted soils at 8.5 feet bgs and the lack of groundwater impacts, the only potential exposure route would be to workers during excavation or utility construction. Direct contact with the soil at 8.5 feet bgs appears unlikely. Based on the depth of the impacts and lack of groundwater impacts AEI does not recommend any additional investigation. However it is recommended that a Material Management Plan (MMP) be created for the Site so workers are aware of potential exposure to impacted soils and proper soil management, sampling and disposal protocols are established if the soils are disturbed.

6.0 REPORT LIMITATIONS AND RELIANCE

This report presents a summary of work completed by AEI Consultants. The completed work includes observations and descriptions of site conditions encountered. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples are chosen to provide the requested information, subject to scope of work for which AEI was retained and limitations inherent in this type of work, but it cannot be assumed that they are representative of areas not sampled. This report should not be regarded as a guarantee that no further contamination beyond that which could have been detected within the scope of this investigation is present beneath the subject property. Undocumented, unauthorized releases of hazardous material, the remains of which are not readily identifiable by visual inspection and are of different chemical constituents, are difficult and often impossible to detect within the scope of a chemical specific investigation.

Any conclusions and/or recommendations are based on these analyses and observations, and the governing regulations. Conclusions beyond those stated and reported herein should not be inferred from this document. These services were performed in accordance with generally accepted practices, in the environmental engineering and construction field, which existed at the time and location of the work. No other warranty, either expressed or implied, has been made.

This investigation was prepared for the sole use and benefit of High Country Bank. All reports, both verbal and written, whether in draft or final, are for the benefit of High Country Bank. This report has no other purpose and may not be relied upon by any other person or entity without the written consent of AEI. Either verbally or in writing, third parties may come into possession of this report or all or part of the information generated as a result of this work. In the absence of a written agreement with AEI granting such rights, no third parties shall have rights of recourse or recovery whatsoever under any course of action against AEI, its officers, employees, vendors, successors or assigns. Reliance is provided in accordance with AEI's Proposal and Standard Terms & Conditions executed by High Country Bank. The limitation of liability defined in the Terms and Conditions is the aggregate limit of AEI's liability to the client and all relying parties.

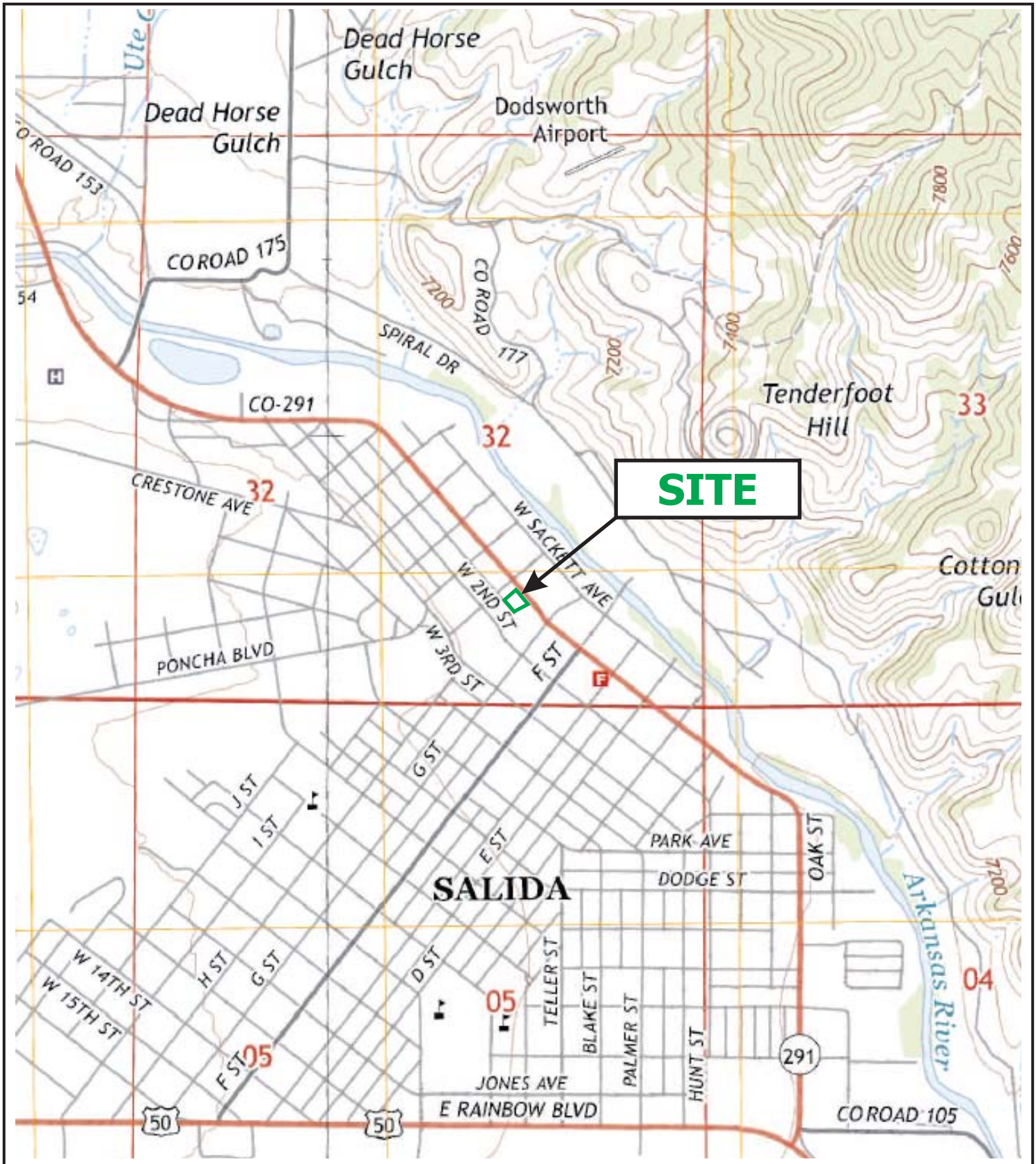
If there are any questions regarding our investigation, please do not hesitate to contact AEI at 720.238.4582.

Sincerely,
AEI Consultants

Jason Grubb, PG
Senior Geologist

David Provance, PG
Senior Author

FIGURES



LEGEND

N

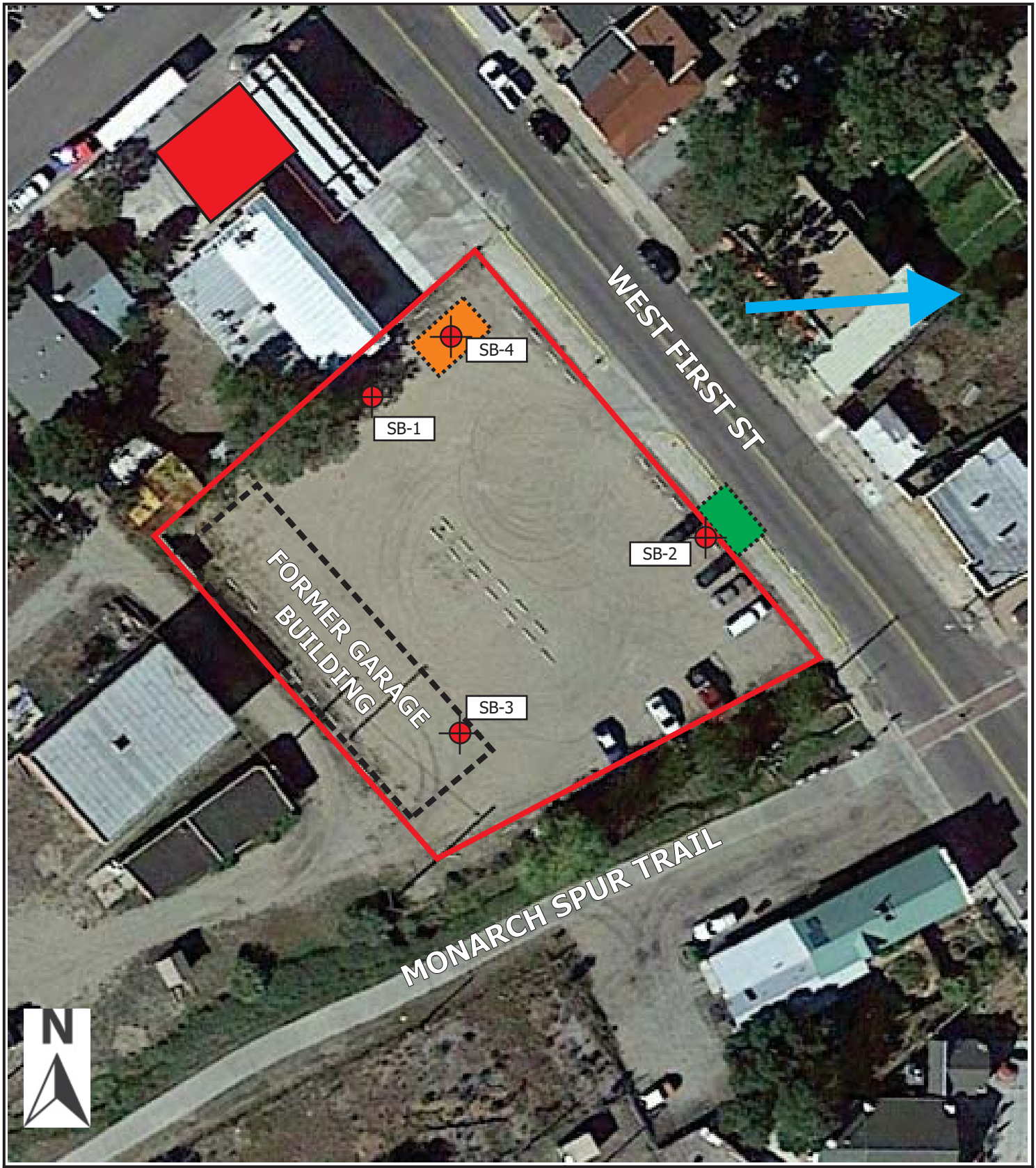
Map: SALIDA EAST, COLORADO
Date: 2013
Source: USGS

AEI Consultants
2420 West 26th Avenue, Suite 400D, Denver, Colorado

SITE LOCATION MAP

323 WEST 1ST STREET
SALIDA, COLORADO 81201

FIGURE 1
Project No. 400846



LEGEND

- Approximate Property Boundary
- Soil Boring
- Off-Site UST Basin
- Inferred Direction of Groundwater Flow
- Former UST Basin
- 1945 Sanborn UST

AEI Consultants

2420 West 26th Avenue, Suite 400-D, Denver, Colorado

SITE MAP

323 WEST FIRST STREET
SALIDA, COLORADO 81201

FIGURE 2
Project No. 400082

TABLES

TABLE 1: SOIL SAMPLE DATA SUMMARY
323 West First Street, Salida, Colorado 81201

Analysis	Units	SB-1 2/28/2019 14 (feet bgs)	SB-2 2/28/2019 8.5 (feet bgs)	SB-3 2/28/2019 9 (feet bgs)	SB-4 2/28/2019 7.5 (feet bgs)	Comparision Values				
						OPS Tier 1 RBSL		CDPHE	EPA RSL	
						Soil Exposure	GW Protection	GWPVSC	Residential	Commercial
		VOCs								
Toluene	mg/kg	*< 0.001*	0.0019 J	*< 0.001*	*< 0.001*	4000	140	50	490	4,700
Remaining VOCs	mg/kg	<MDL	<MDL	<MDL	<MDL	varies	varies	varies	varies	varies
		PAHs								
Acenaphthene	mg/kg	*< 0.017*	0.0659 J	*< 0.017*	*< 0.017*	3,600	> Sat	N/A	360	4,500
Acenaphthylene	mg/kg	*< 0.017*	0.0788	*< 0.017*	*< 0.017*	N/A	N/A	N/A	N/A	N/A
Anthracene	mg/kg	*< 0.017*	0.115	*< 0.017*	*< 0.017*	18,000	> Sat	N/A	1,800	23,000
Benzo(a)anthracene	mg/kg	*< 0.017*	0.157	*< 0.017*	*< 0.017*	0.62	1.6	1,000	1.1	21
Benzo(b)fluoranthene	mg/kg	*< 0.017*	0.245	*< 0.017*	*< 0.017*	0.62	4.5	1,000	1.1	21
Benzo(k)fluoranthene	mg/kg	*< 0.017*	0.0842	*< 0.017*	*< 0.017*	6.2	4.4	1,000	11	210
Benzo(g,h,i)perylene	mg/kg	*< 0.017*	0.136	*< 0.017*	*< 0.017*	N/A	N/A	N/A	N/A	N/A
Benzo(a)pyrene	mg/kg	*< 0.017*	**0.159**	*< 0.017*	*< 0.017*	**0.062**	4.8	1,000	**0.11**	2.1
Chrysene	mg/kg	*< 0.017*	0.238	*< 0.017*	*< 0.017*	62	1.5	1,000	110	2,100
Dibenzo(a,h)anthracene	mg/kg	*< 0.017*	0.0302 J	*< 0.017*	*< 0.017*	0.062	14	1,000	0.11	2.1
Fluoranthene	mg/kg	*< 0.017*	0.435	*< 0.017*	*< 0.017*	2,300	> Sat	1,000	240	3,000
Fluorene	mg/kg	*< 0.017*	0.0868	*< 0.017*	*< 0.017*	2,400	> Sat	N/A	240	3,000
Indeno(1,2,3-cd)pyrene	mg/kg	*< 0.017*	0.147	*< 0.017*	*< 0.017*	0.62	> Sat	1,000	1.1	21
1-Methylnaphthalene	mg/kg	*< 0.024*	0.11	*< 0.024*	*< 0.024*	N/A	N/A	N/A	18	73
2-Methylnaphthalene	mg/kg	*< 0.031*	0.115	*< 0.030*	*< 0.031*	N/A	N/A	N/A	24	300
Naphthalene	mg/kg	*< 0.024*	0.087	*< 0.024*	*< 0.024*	850	> Sat	23	3.8	17
Phenanthrene	mg/kg	*< 0.017*	0.354	*< 0.017*	*< 0.017*	N/A	N/A	N/A	N/A	N/A
Pyrene	mg/kg	*< 0.017*	0.382	*< 0.017*	*< 0.017*	1,800	> Sat	1,000	180	2,300

Notes:

mg/kg	milligrams per kilogram
<MDL	less than the method detection limit
NA	not analyzed
bgs	below ground surface
N/A	not applicable
VOCs	volatile organic compounds
PAHs	polynuclear aromatic hydrocarbons
> Sat	denotes that even at a concentration equal to the saturation of the chemical, a hazard quotient of 1 and a concer risk of 1^{E-6} is not exceeded
Bold	Result exceeds applicable Comparision Value
J	estimated value, analyte detected below the quantitation limit

Comparision Values:
OPS: Colorado Department of Labor and Employment Division of Oil and Public Safety
Tier 1 RBSL: Tier 1 Risk Based Screening Levels
CDPHE: Colorado Department of Public Health and Environment
GWPVSC: Groundwater Protection Values Soil Cleanup
EPA: Environmental Protection Agency
RSL: Risk Based Screening Levels

TABLE 2: GROUNDWATER SAMPLE DATA SUMMARY
323 West First Street, Salida, Colorado 81201

Analysis	Units	SB-1 2/28/2019 20.1 (feet bgs)	SB-2 2/28/2019 18.5 (feet bgs)	SB-3 2/28/2019 20.55 (feet bgs)	Comparision Values OPS Tier 1 RBSL	 CDPHE CBSGW
		VOCs				
MEK	µg/L	NA	22.2	9.9 J	N/A	N/A
Remaining VOCs	µg/L	<MDL	<MDL	<MDL	varies	varies
		PAHs				
PAHs	µg/L	<MDL	<MDL	<MDL	varies	varies

Notes:

µg/L	micrograms per liter
<MDL	less than the method detection limit
NA	not analyzed
bgs	below ground surface
N/A	not applicable
MEK	methyl ethyl ketone
VOCs	volatile organic compounds
PAHs	polynuclear aromatic hydrocarbons
Bold	Result exceeds applicable Comparision Value
J	estimated value, analyte detected below the quantitation limit

Comparision Values:
OPS: Colorado Department of Labor and Employment Division of Oil and Public Safety
Tier 1 RBSL: Tier 1 Risk Based Screening Levels
CDPHE: Colorado Department of Public Health and Environment
CBSGW: Colorado Basic Standards for Groundwater

APPENDIX A

GEOPHYSICAL SURVEY REPORT

GPRS SUBSURFACE SCANNING SOLUTIONS

Subsurface Investigation for Storage Tanks/Utilities

Prepared For: AEI Consultants

Prepared By:
Jordan Bradish
Project Manager-CO/WY
3/6/2019

GPRS SUBSURFACE SCANNING SOLUTIONS

March, 6, 2019

AEI Consultants
Attn: Jason Grubb
Site: 323 West First St., Salida, CO

We appreciate the opportunity to provide this report for our work completed on 2/28/2019 at the above address in Salida, CO.

PURPOSE

The purpose of this project was to search for underground storage tanks (USTs), UST-related piping and/or underground utilities prior to drilling three soil boring locating. The interior of the buildings on site were excluded from the scope of this project.

EQUIPMENT

- **400 MHz GPR Antenna.** The antenna is mounted in a stroller frame which rolls over the surface. The surface needs to be reasonably smooth and unobstructed in order to obtain readable scans. Obstructions such as curbs, landscaping, and vegetation will limit the feasibility of GPR. The data is displayed on a screen and marked in the field in real time. GPR works by sending pulses of energy into a material and recording the strength and the time required for the return of the reflected signal. Reflections are produced when the energy pulses enter into a material with different electrical properties from the material it left. The strength of the reflection is determined by the contrast in signal speed between the two materials. The total depth achieved can be as much as 8' or more with this antenna but can vary widely depending on the conductivity of the materials. Depths provided should always be treated as estimates as their accuracy can be affected by multiple factors. For more information, please visit: Link
- **Electromagnetic Pipe Locator.** The EM locator can detect the electromagnetic fields from live power or radio frequency signals. It can also be used in conjunction with a transmitter to connect directly to accessible, metallic pipes, risers, or tracer wires. A current is sent through the pipe or tracer wire at a specific frequency and the resulting EM field can then be detected by the receiver. The receiver is moved over the surface without coming in contact with the ground so it is not affected by terrain. Depths provided should always be treated as estimates as their accuracy can be affected by multiple factors. Depths achieved can be as much as 20' depending on the type of signal being traced or methods used. For more information, please visit: Link

PROCESS

The EM pipe locator was used to connect to accessible, traceable pipes that may be tank-related such as vent pipes or product lines. A current is induced onto the pipe which creates an electromagnetic field that can be traced using the receiver. We can then attempt to trace these pipes to their origin or end point and paint or flag their locations.

Initial GPR scans were collected in order to evaluate the data and calibrate the equipment. Based on these findings, a scanning strategy is formed, typically consisting of scanning the entire area in a grid with 3'-5' scan spacing in order to locate any potential UST's that may remain at the site. With this site, due to obstructions, some area's were limited to shorter scans. The GPR data is interpreted in real time and anomalies in the data are located and marked on the surface along with their depths using spray paint, pin flags, etc. Depths are dependent on the dielectric of the materials being scanned so depth accuracy can vary throughout a site. Relevant scan examples were saved and will be provided in this report.

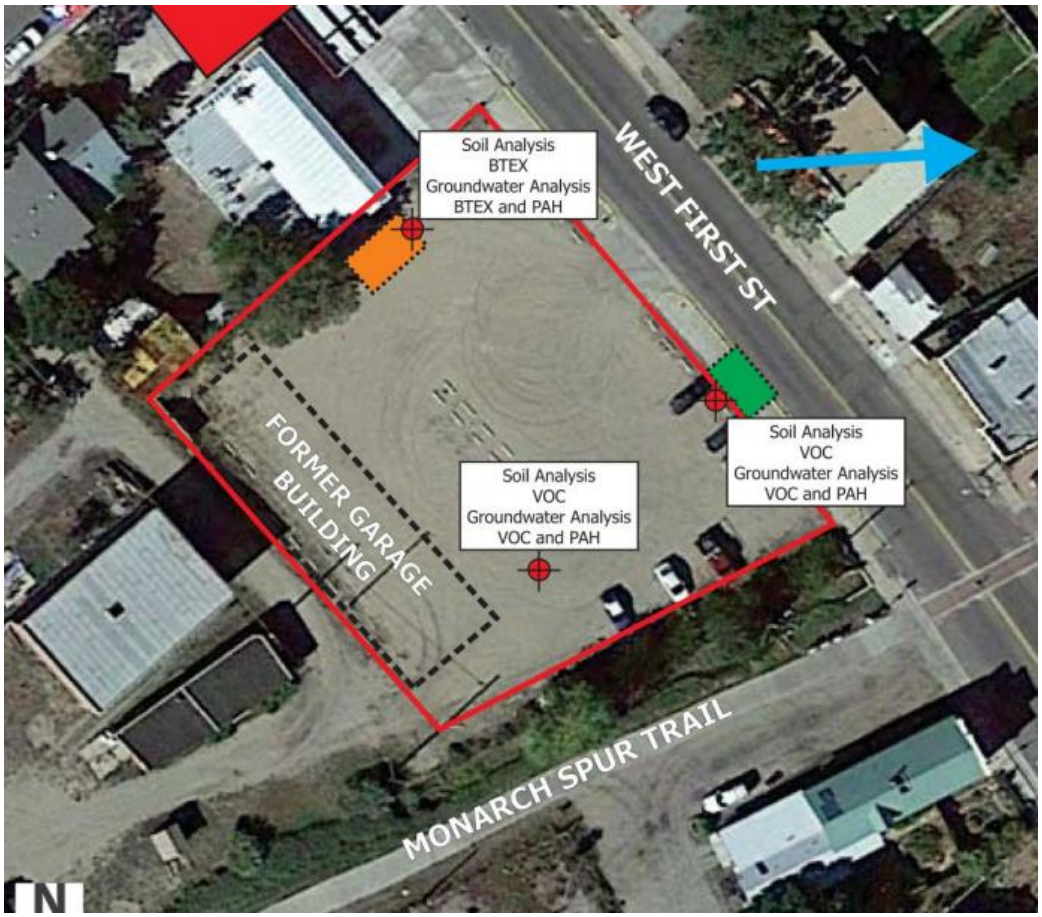
LIMITATIONS

Please keep in mind that there are limitations to any subsurface investigation. The equipment may not achieve maximum effectiveness due to soil conditions, above ground obstructions, reinforced concrete, and a variety of other factors. No subsurface investigation or equipment can provide a complete image of what lies below. Our results should always be used in conjunction with as many methods as possible including consulting existing plans and drawings, exploratory excavation or potholing, visual inspection of above ground features, and utilization of services such as One Call/811.

FINDINGS

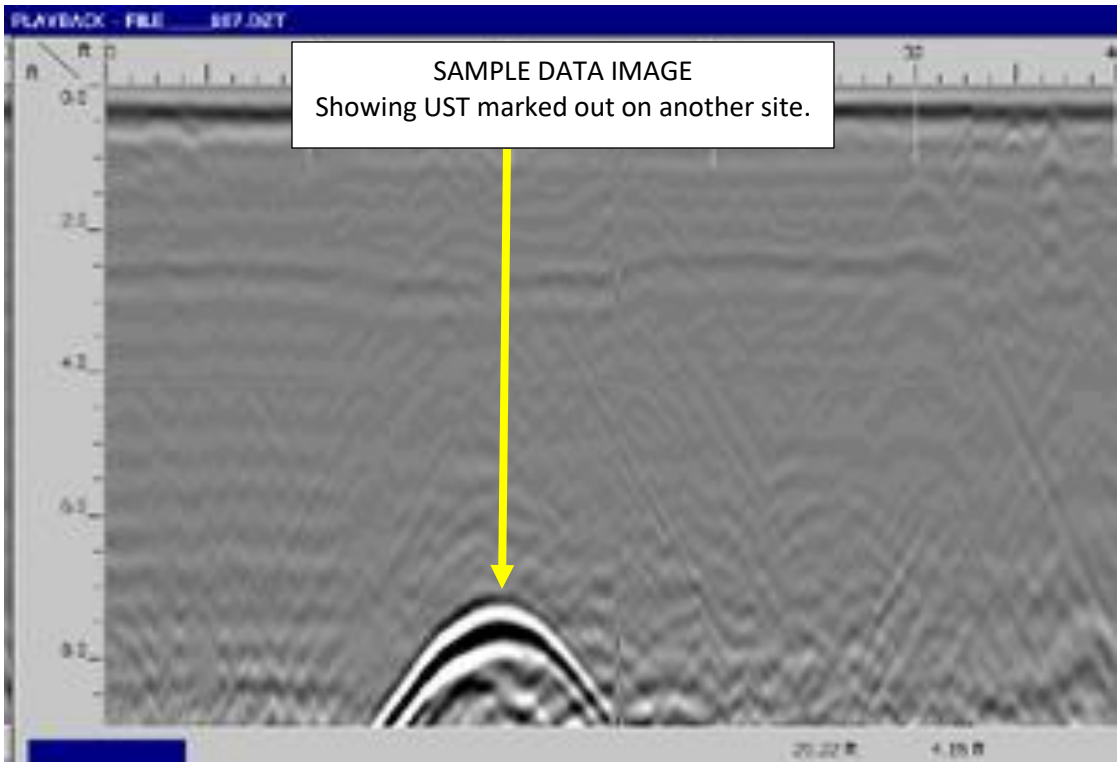
We found that the soil allowed for maximum GPR depth penetration of 2'-3' in most areas. We were able to locate one unknown line with the RD. We were not able to locate any known utilities on site. The data seen on site wasn't consistent with UST data signatures

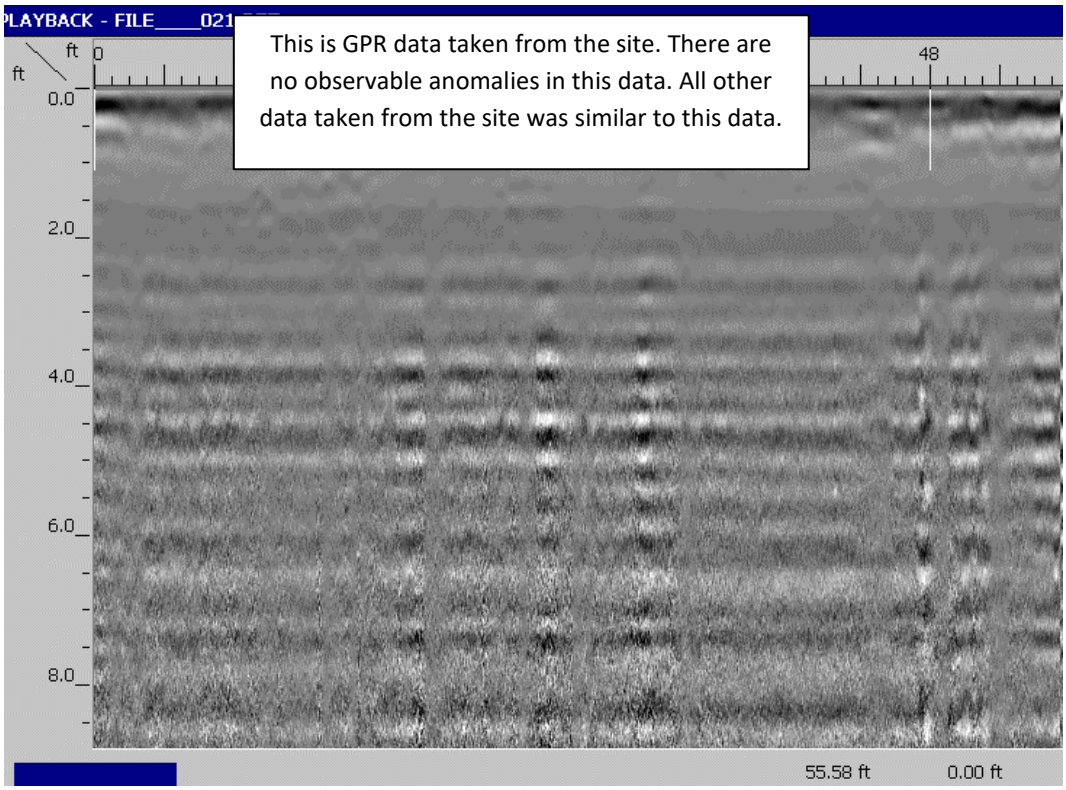
The following pages will provide photos and further explanation of our findings.



Scan Area Outlined in Red	N	323 West First Street	GPRS

Site Map with Findings Red = Unknown Line	N	323 West First Street	GPRS


SAMPLE DATA IMAGE
Showing UST marked out on another site.


PLAYBACK - FILE____021
This is GPR data taken from the site. There are no observable anomalies in this data. All other data taken from the site was similar to this data.
ft
0
48
0.0
2.0
4.0
6.0
8.0
55.58 ft
0.00 ft

CLOSING

GPRS, Inc. has been in business since 2001, specializing in underground storage tank location, concrete scanning, utility locating, and shallow void detection for projects throughout the United States. I encourage you to visit our website (www.gprsinc.com) and contact any of the numerous references listed.

GPRS appreciates the opportunity to offer our services, and we look forward to continuing to work with you on future projects. Please feel free to contact us for additional information or with any questions you may have regarding this report.

Signed,

Jordan Bradish

Jordan Bradish
Project Manager – CO/WY

GPRS SUBSURFACE SCANNING SOLUTIONS

Direct: 720.340.6200
jordan.bradish@gprsinc.com
www.gprsinc.com

APPENDIX B

BORING LOGS

AEI CONSULTANTS
2420 West 26th Avenue, Suite 400D
Denver, Colorado 80211
Telephone: 720-238-4582

BORING NUMBER SB-1

CLIENT High Country Bank
PROJECT NAME Eric Warner
PROJECT NUMBER 400082
PROJECT LOCATION Salida, CO
DATE STARTED 2/28/19 **COMPLETED** 2/28/19
GROUND ELEVATION _____ **HOLE SIZE** 6.25 inches
DRILLING CONTRACTOR Site Services
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING ---
LOGGED BY Jason Grubb **CHECKED BY** David Provance
AT END OF DRILLING ---
NOTES
AFTER DRILLING 20.10 ft

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0					(SW) Very fine to coarse sand with sub-angular to sub-round gravel Moist	
					3.5	
5			0.0		(SW) Very fine to coarse sand with sub-angular to sub-round gravel and cobbles Moist	
10			0.0		11.5	
	SB-1 14'		0.2		Gravel, cobble and boulders with sand Moist	
15					18.0	
			0.2		19.0 (SW) Very fine to coarse grained sand and rounded gravel and cobble Wet	
20					(SW) Very fine to coarse grained sand and rounded gravel and cobble Saturated	
					24.0	

Bottom of borehole at 24.0 feet.

AEI CONSULTANTS
2420 West 26th Avenue, Suite 400D
Denver, Colorado 80211
Telephone: 720-238-4582

BORING NUMBER SB-2

CLIENT High Country Bank
PROJECT NAME Eric Warner
PROJECT NUMBER 400082
PROJECT LOCATION Salida, CO
DATE STARTED 2/28/19 **COMPLETED** 2/28/19
GROUND ELEVATION **HOLE SIZE** 6.25 inches
DRILLING CONTRACTOR Site Services
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING ---
LOGGED BY Jason Grubb **CHECKED BY** David Provance
AT END OF DRILLING ---
NOTES
AFTER DRILLING 18.50 ft

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0					0.4 (SW-SM) Very fine to coarse grained silty sand Moist	
					0.8 Concrete	
			0.2		(SW) Very fine to coarse grained sand with sub-rounded to rounded gravel Moist	
5						
	SB-2 8.5'				8.5	
			1.8		9.0 Boulder	
10					(SW) Very fine to coarse grained sand with sub-rounded to rounded gravel Moist	
			0.9			
15						
					19.0	
			0.1		(SW) Very fine to coarse grained sand with sub-rounded to rounded gravel Saturated	
20						
					24.0	

Bottom of borehole at 24.0 feet.

AEI CONSULTANTS
2420 West 26th Avenue, Suite 400D
Denver, Colorado 80211
Telephone: 720-238-4582

BORING NUMBER SB-3

CLIENT High Country Bank
PROJECT NAME Eric Warner
PROJECT NUMBER 400082
PROJECT LOCATION Salida, CO
DATE STARTED 2/28/19 **COMPLETED** 2/28/19
GROUND ELEVATION **HOLE SIZE** 6.25 inches
DRILLING CONTRACTOR Site Services
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING ---
LOGGED BY Jason Grubb **CHECKED BY** David Provance
AT END OF DRILLING ---
NOTES
AFTER DRILLING 20.55 ft

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0					(SW-SM) Very fine to coarse grained silty sand with subangular to subrounded gravel Moist	
5			0.0		5.0 (SW) Very fine to coarse grained sand with subrounded to rounded gravel, cobbles and boulders Moist	
10	SB-3 9'		0.1			
15			0.0			
20			0.0		19.0 (SW) Very fine to coarse grained sand with subrounded to rounded gravel, cobbles and boulders Saturated	
					24.0 Bottom of borehole at 24.0 feet.	

AEI CONSULTANTS
2420 West 26th Avenue, Suite 400D
Denver, Colorado 80211
Telephone: 720-238-4582

BORING NUMBER SB-4

CLIENT High Country Bank
PROJECT NAME Eric Warner
PROJECT NUMBER 400082
PROJECT LOCATION Salida, CO
DATE STARTED 2/28/19 **COMPLETED** 2/28/19
GROUND ELEVATION _____ **HOLE SIZE** 6.25 inches
DRILLING CONTRACTOR Site Services
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING ---
LOGGED BY Jason Grubb **CHECKED BY** David Provance
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0					(SP-SM) Very fine to medium grained silty sand Moist	
			0.2		3.5 (SW) Very fine to coarse grained sand with subangular to subrounded gravel and cobble Moist	
5					4.5 (SW) Very fine to coarse grained sand with subrounded to rounded gravel, cobble and boulders Moist	
	SB-4 7.5'		0.1		7.5 Refusal at 7.5 feet. Bottom of borehole at 7.5 feet.	

APPENDIX C

LABORATORY ANALYTICAL REPORTS

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

AEI Consultants

Vacant Lot

400082 PO#186735

SGS Job Number: DA13922

Sampling Date: 02/28/19

Report to:

AEI Consultants
2500 Camino Diablo,
Walnut Creek, CA 94597
jgrubb@aeiconsultants.com; jsmith@aeiconsultants.com;
bcampbell@aeiconsultants.com
ATTN: Jason Grubb

Total number of pages in report: **58**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Scott Heideman
Laboratory Director

Client Service contact: Carissa Cumine 303-425-6021

Certifications: CO (CO00049), ID (CO00049), NE (NE-OS-06-04), ND (R-027), NJ (CO007), OK (D9942) UT (NELAP CO00049), LA (LA150028), TX (T104704511), WY (8TMS-L)

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Sample Summary

AEI Consultants

Job No: DA13922

Vacant Lot
Project No: 400082 PO#186735

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
DA13922-1	02/28/19	10:38	JG	03/01/19	SO	Soil	SB-1 14'
DA13922-2	02/28/19	11:38	JG	03/01/19	AQ	Ground Water	SB-1 GW
DA13922-3	02/28/19	12:12	JG	03/01/19	SO	Soil	SB-2 8.5'
DA13922-4	02/28/19	13:25	JG	03/01/19	AQ	Ground Water	SB-2 GW
DA13922-5	02/28/19	14:22	JG	03/01/19	SO	Soil	SB-3 9'
DA13922-6	02/28/19	15:54	JG	03/01/19	AQ	Ground Water	SB-3 GW
DA13922-7	02/28/19	17:03	JG	03/01/19	SO	Soil	SB-4 7.5'

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: DA13922
Account: AEI Consultants
Project: Vacant Lot
Collected: 02/28/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
DA13922-1	**SB-1 14'**					
No hits reported in this sample.						
DA13922-2	**SB-1 GW**					
No hits reported in this sample.						
DA13922-3	**SB-2 8.5'**					
Toluene		1.9 J	2.2	1.1	ug/kg	SW846 8260B
Acenaphthene		65.9 J	72	18	ug/kg	SW846 8270C
Acenaphthylene		78.8	72	18	ug/kg	SW846 8270C
Anthracene		115	72	18	ug/kg	SW846 8270C
Benzo(a)anthracene		157	72	18	ug/kg	SW846 8270C
Benzo(b)fluoranthene		245	72	18	ug/kg	SW846 8270C
Benzo(k)fluoranthene		84.2	72	18	ug/kg	SW846 8270C
Benzo(g,h,i)perylene		136	72	18	ug/kg	SW846 8270C
Benzo(a)pyrene		159	72	18	ug/kg	SW846 8270C
Chrysene		238	72	18	ug/kg	SW846 8270C
Dibenzo(a,h)anthracene		30.2 J	72	18	ug/kg	SW846 8270C
Fluoranthene		435	72	18	ug/kg	SW846 8270C
Fluorene		86.8	72	18	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene		147	72	18	ug/kg	SW846 8270C
1-Methylnaphthalene		110	72	25	ug/kg	SW846 8270C
2-Methylnaphthalene		115	72	32	ug/kg	SW846 8270C
Naphthalene		87.0	72	25	ug/kg	SW846 8270C
Phenanthrene		354	72	18	ug/kg	SW846 8270C
Pyrene		382	72	18	ug/kg	SW846 8270C
DA13922-4	**SB-2 GW**					
Methyl ethyl ketone		22.2	10	5.0	ug/l	SW846 8260B
DA13922-5	**SB-3 9'**					
No hits reported in this sample.						
DA13922-6	**SB-3 GW**					
Methyl ethyl ketone		9.9 J	10	5.0	ug/l	SW846 8260B
DA13922-7	**SB-4 7.5'**					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	SB-1 14'		
Lab Sample ID:	DA13922-1	**Date Sampled:**	02/28/19
Matrix:	SO - Soil	**Date Received:**	03/01/19
Method:	SW846 8260B	**Percent Solids:**	97.9
Project:	Vacant Lot		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V51526.D	1	03/05/19 16:01	MB	n/a	n/a	V5V2714
Run #2							

	Initial Weight	Final Volume
Run #1	5.05 g	5.0 ml
Run #2		

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.51	ug/kg	
108-88-3	Toluene	ND	2.0	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	2.0	0.51	ug/kg	
1330-20-7	Xylene (total)	ND	2.0	1.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		70-131%
2037-26-5	Toluene-D8	97%		70-130%
460-00-4	4-Bromofluorobenzene	99%		70-130%
17060-07-0	1,2-Dichloroethane-D4	105%		70-130%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-1 14'		
Lab Sample ID:	DA13922-1	**Date Sampled:**	02/28/19
Matrix:	SO - Soil	**Date Received:**	03/01/19
Method:	SW846 8270C SW846 3546	**Percent Solids:**	97.9
Project:	Vacant Lot		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G141565.D	1	03/05/19 20:31	DC	03/05/19	OP17541	E1G2414
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	68	17	ug/kg	
208-96-8	Acenaphthylene	ND	68	17	ug/kg	
120-12-7	Anthracene	ND	68	17	ug/kg	
56-55-3	Benzo(a)anthracene	ND	68	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	68	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	68	17	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	68	17	ug/kg	
50-32-8	Benzo(a)pyrene	ND	68	17	ug/kg	
218-01-9	Chrysene	ND	68	17	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	68	17	ug/kg	
206-44-0	Fluoranthene	ND	68	17	ug/kg	
86-73-7	Fluorene	ND	68	17	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	68	17	ug/kg	
90-12-0	1-Methylnaphthalene	ND	68	24	ug/kg	
91-57-6	2-Methylnaphthalene	ND	68	31	ug/kg	
91-20-3	Naphthalene	ND	68	24	ug/kg	
85-01-8	Phenanthrene	ND	68	17	ug/kg	
129-00-0	Pyrene	ND	68	17	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	60%		23-130%
4165-60-0	Nitrobenzene-d5	55%		12-131%
1718-51-0	Terphenyl-d14	88%		29-141%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-1 GW		
Lab Sample ID:	DA13922-2	**Date Sampled:**	02/28/19
Matrix:	AQ - Ground Water	**Date Received:**	03/01/19
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Vacant Lot		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7V59020.D	1	03/05/19 20:53	CH	n/a	n/a	V7V3009
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		70-130%
17060-07-0	1,2-Dichloroethane-D4	101%		70-130%
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	105%		70-130%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-1 GW		
Lab Sample ID:	DA13922-2	**Date Sampled:**	02/28/19
Matrix:	AQ - Ground Water	**Date Received:**	03/01/19
Method:	SW846 8270C SW846 3510C	**Percent Solids:**	n/a
Project:	Vacant Lot		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G141533.D	1	03/04/19 21:00	DC	03/04/19	OP17533	E1G2412
Run #2							

	Initial Volume	Final Volume
Run #1	1020 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	2.0	0.69	ug/l	
208-96-8	Acenaphthylene	ND	2.0	0.59	ug/l	
120-12-7	Anthracene	ND	2.0	0.69	ug/l	
56-55-3	Benzo(a)anthracene	ND	2.0	0.69	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	2.0	0.88	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	2.0	0.88	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	2.0	0.98	ug/l	
50-32-8	Benzo(a)pyrene	ND	2.0	0.98	ug/l	
218-01-9	Chrysene	ND	2.0	0.69	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	2.0	1.3	ug/l	
206-44-0	Fluoranthene	ND	2.0	0.88	ug/l	
86-73-7	Fluorene	ND	2.0	0.59	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	2.0	1.4	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	0.69	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	0.69	ug/l	
91-20-3	Naphthalene	ND	2.0	0.78	ug/l	
85-01-8	Phenanthrene	ND	2.0	0.59	ug/l	
129-00-0	Pyrene	ND	2.0	0.69	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	47%		19-130%
321-60-8	2-Fluorobiphenyl	49%		20-130%
1718-51-0	Terphenyl-d14	27%		13-149%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-2 8.5'		
Lab Sample ID:	DA13922-3	**Date Sampled:**	02/28/19
Matrix:	SO - Soil	**Date Received:**	03/01/19
Method:	SW846 8260B	**Percent Solids:**	92.8
Project:	Vacant Lot		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V51527.D	1	03/05/19 16:25	MB	n/a	n/a	V5V2714
Run #2							

	Initial Weight	Final Volume
Run #1	5.00 g	5.0 ml
Run #2		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	54	24	ug/kg	
107-02-8	Acrolein	ND	22	16	ug/kg	
107-13-1	Acrylonitrile	ND	11	8.6	ug/kg	
71-43-2	Benzene	ND	1.1	0.54	ug/kg	
108-86-1	Bromobenzene	ND	2.2	0.54	ug/kg	
74-97-5	Bromochloromethane	ND	2.2	0.65	ug/kg	
75-27-4	Bromodichloromethane	ND	2.2	0.54	ug/kg	
75-25-2	Bromoform	ND	2.2	1.1	ug/kg	
104-51-8	n-Butylbenzene	ND	2.2	0.54	ug/kg	
135-98-8	sec-Butylbenzene	ND	2.2	0.54	ug/kg	
98-06-6	tert-Butylbenzene	ND	2.2	0.54	ug/kg	
75-15-0	Carbon disulfide	ND	2.2	0.54	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.2	0.54	ug/kg	
108-90-7	Chlorobenzene	ND	2.2	0.54	ug/kg	
75-00-3	Chloroethane	ND	2.2	0.86	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	4.3	1.4	ug/kg	
67-66-3	Chloroform	ND	2.2	0.54	ug/kg	
95-49-8	o-Chlorotoluene	ND	2.2	0.54	ug/kg	
106-43-4	p-Chlorotoluene	ND	2.2	0.54	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	11	7.5	ug/kg	
124-48-1	Dibromochloromethane	ND	2.2	0.65	ug/kg	
106-93-4	1,2-Dibromoethane	ND	2.2	0.54	ug/kg	
95-50-1	o-Dichlorobenzene	ND	2.2	0.54	ug/kg	
541-73-1	m-Dichlorobenzene	ND	2.2	0.54	ug/kg	
106-46-7	p-Dichlorobenzene	ND	2.2	0.54	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	2.2	0.54	ug/kg	
75-34-3	1,1-Dichloroethane	ND	2.2	0.54	ug/kg	
107-06-2	1,2-Dichloroethane	ND	2.2	0.54	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	2.2	0.54	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	2.2	0.54	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	2.2	0.54	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.2	0.54	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-2 8.5'		
Lab Sample ID:	DA13922-3	**Date Sampled:**	02/28/19
Matrix:	SO - Soil	**Date Received:**	03/01/19
Method:	SW846 8260B	**Percent Solids:**	92.8
Project:	Vacant Lot		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	2.2	0.54	ug/kg	
594-20-7	2,2-Dichloropropane	ND	2.2	0.54	ug/kg	
563-58-6	1,1-Dichloropropene	ND	2.2	0.54	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.2	0.54	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.2	0.54	ug/kg	
100-41-4	Ethylbenzene	ND	2.2	0.54	ug/kg	
87-68-3	Hexachlorobutadiene	ND	2.2	0.59	ug/kg	
591-78-6	2-Hexanone	ND	11	5.4	ug/kg	
98-82-8	Isopropylbenzene	ND	2.2	0.54	ug/kg	
99-87-6	p-Isopropyltoluene	ND	2.2	0.54	ug/kg	
74-83-9	Methyl bromide	ND	2.2	0.54	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	2.2	0.54	ug/kg	
74-87-3	Methyl chloride	ND	2.2	0.97	ug/kg	
74-95-3	Methylene bromide	ND	2.2	0.65	ug/kg	
75-09-2	Methylene chloride	ND	4.3	3.2	ug/kg	
78-93-3	Methyl ethyl ketone	ND	11	5.4	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	11	5.4	ug/kg	
91-20-3	Naphthalene	ND	4.3	3.2	ug/kg	
103-65-1	n-Propylbenzene	ND	2.2	0.54	ug/kg	
100-42-5	Styrene	ND	2.2	0.54	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2.2	0.54	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.2	0.54	ug/kg	
127-18-4	Tetrachloroethylene	ND	2.2	0.54	ug/kg	
108-88-3	Toluene	1.9	2.2	1.1	ug/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	2.2	1.1	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	2.2	1.1	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.2	0.54	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.2	0.54	ug/kg	
79-01-6	Trichloroethylene	ND	2.2	0.54	ug/kg	
75-69-4	Trichlorofluoromethane	ND	2.2	1.1	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	2.2	0.54	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	2.2	0.54	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	2.2	0.54	ug/kg	
108-05-4	Vinyl Acetate	ND	11	5.4	ug/kg	
75-01-4	Vinyl chloride	ND	2.2	0.54	ug/kg	
1330-20-7	Xylene (total)	ND	2.2	1.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		70-131%

ND = Not detected MDL = Method Detection Limit
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E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-2 8.5'		
Lab Sample ID:	DA13922-3	**Date Sampled:**	02/28/19
Matrix:	SO - Soil	**Date Received:**	03/01/19
Method:	SW846 8260B	**Percent Solids:**	92.8
Project:	Vacant Lot		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	101%		70-130%
17060-07-0	1,2-Dichloroethane-D4	101%		70-130%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-2 8.5'		
Lab Sample ID:	DA13922-3	**Date Sampled:**	02/28/19
Matrix:	SO - Soil	**Date Received:**	03/01/19
Method:	SW846 8270C SW846 3546	**Percent Solids:**	92.8
Project:	Vacant Lot		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G141568.D	1	03/05/19 21:56	DC	03/05/19	OP17541	E1G2414
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	65.9	72	18	ug/kg	J
208-96-8	Acenaphthylene	78.8	72	18	ug/kg	
120-12-7	Anthracene	115	72	18	ug/kg	
56-55-3	Benzo(a)anthracene	157	72	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	245	72	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	84.2	72	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	136	72	18	ug/kg	
50-32-8	Benzo(a)pyrene	159	72	18	ug/kg	
218-01-9	Chrysene	238	72	18	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	30.2	72	18	ug/kg	J
206-44-0	Fluoranthene	435	72	18	ug/kg	
86-73-7	Fluorene	86.8	72	18	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	147	72	18	ug/kg	
90-12-0	1-Methylnaphthalene	110	72	25	ug/kg	
91-57-6	2-Methylnaphthalene	115	72	32	ug/kg	
91-20-3	Naphthalene	87.0	72	25	ug/kg	
85-01-8	Phenanthrene	354	72	18	ug/kg	
129-00-0	Pyrene	382	72	18	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	72%		23-130%
4165-60-0	Nitrobenzene-d5	61%		12-131%
1718-51-0	Terphenyl-d14	91%		29-141%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-2 GW		
Lab Sample ID:	DA13922-4	**Date Sampled:**	02/28/19
Matrix:	AQ - Ground Water	**Date Received:**	03/01/19
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Vacant Lot		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7V59021.D	1	03/05/19 21:17	CH	n/a	n/a	V7V3009
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	20	ug/l	
107-02-8	Acrolein	ND	10	7.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	4.0	ug/l	
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.50	ug/l	
74-97-5	Bromochloromethane	ND	2.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	0.50	ug/l	
75-25-2	Bromoform	ND	2.0	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.50	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.70	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	0.70	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	2.0	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.50	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.50	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	4.0	3.0	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	p-Dichlorobenzene	ND	2.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.80	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	

ND = Not detected MDL = Method Detection Limit
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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-2 GW		
Lab Sample ID:	DA13922-4	**Date Sampled:**	02/28/19
Matrix:	AQ - Ground Water	**Date Received:**	03/01/19
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Vacant Lot		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	2.0	0.50	ug/l	
594-20-7	2,2-Dichloropropane	ND	2.0	1.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	2.0	0.60	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.0	2.0	ug/l	
591-78-6	2-Hexanone	ND	10	2.5	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.50	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.50	ug/l	
74-83-9	Methyl bromide	ND	4.0	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.5	ug/l	
78-93-3	Methyl ethyl ketone	22.2	10	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
91-20-3	Naphthalene	ND	4.0	2.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.50	ug/l	
100-42-5	Styrene	ND	1.0	0.50	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	1.0	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	3.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	1.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.50	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.50	ug/l	
108-05-4	Vinyl Acetate	ND	10	5.0	ug/l	
75-01-4	Vinyl chloride	ND	2.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		70-130%

ND = Not detected MDL = Method Detection Limit
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E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-2 GW		
Lab Sample ID:	DA13922-4	**Date Sampled:**	02/28/19
Matrix:	AQ - Ground Water	**Date Received:**	03/01/19
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Vacant Lot		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	101%		70-130%
2037-26-5	Toluene-D8	96%		70-130%
460-00-4	4-Bromofluorobenzene	99%		70-130%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-2 GW		
Lab Sample ID:	DA13922-4	**Date Sampled:**	02/28/19
Matrix:	AQ - Ground Water	**Date Received:**	03/01/19
Method:	SW846 8270C SW846 3510C	**Percent Solids:**	n/a
Project:	Vacant Lot		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G141534.D	1	03/04/19 21:28	DC	03/04/19	OP17533	E1G2412
Run #2							

	Initial Volume	Final Volume
Run #1	1020 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	2.0	0.69	ug/l	
208-96-8	Acenaphthylene	ND	2.0	0.59	ug/l	
120-12-7	Anthracene	ND	2.0	0.69	ug/l	
56-55-3	Benzo(a)anthracene	ND	2.0	0.69	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	2.0	0.88	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	2.0	0.88	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	2.0	0.98	ug/l	
50-32-8	Benzo(a)pyrene	ND	2.0	0.98	ug/l	
218-01-9	Chrysene	ND	2.0	0.69	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	2.0	1.3	ug/l	
206-44-0	Fluoranthene	ND	2.0	0.88	ug/l	
86-73-7	Fluorene	ND	2.0	0.59	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	2.0	1.4	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	0.69	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	0.69	ug/l	
91-20-3	Naphthalene	ND	2.0	0.78	ug/l	
85-01-8	Phenanthrene	ND	2.0	0.59	ug/l	
129-00-0	Pyrene	ND	2.0	0.69	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	60%		19-130%
321-60-8	2-Fluorobiphenyl	59%		20-130%
1718-51-0	Terphenyl-d14	22%		13-149%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-3 9'		
Lab Sample ID:	DA13922-5	**Date Sampled:**	02/28/19
Matrix:	SO - Soil	**Date Received:**	03/01/19
Method:	SW846 8260B	**Percent Solids:**	98.4
Project:	Vacant Lot		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V51528.D	1	03/05/19 16:48	MB	n/a	n/a	V5V2714
Run #2							

	Initial Weight	Final Volume
Run #1	5.00 g	5.0 ml
Run #2		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	51	22	ug/kg	
107-02-8	Acrolein	ND	20	15	ug/kg	
107-13-1	Acrylonitrile	ND	10	8.1	ug/kg	
71-43-2	Benzene	ND	1.0	0.51	ug/kg	
108-86-1	Bromobenzene	ND	2.0	0.51	ug/kg	
74-97-5	Bromochloromethane	ND	2.0	0.61	ug/kg	
75-27-4	Bromodichloromethane	ND	2.0	0.51	ug/kg	
75-25-2	Bromoform	ND	2.0	1.0	ug/kg	
104-51-8	n-Butylbenzene	ND	2.0	0.51	ug/kg	
135-98-8	sec-Butylbenzene	ND	2.0	0.51	ug/kg	
98-06-6	tert-Butylbenzene	ND	2.0	0.51	ug/kg	
75-15-0	Carbon disulfide	ND	2.0	0.51	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.0	0.51	ug/kg	
108-90-7	Chlorobenzene	ND	2.0	0.51	ug/kg	
75-00-3	Chloroethane	ND	2.0	0.81	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	4.1	1.3	ug/kg	
67-66-3	Chloroform	ND	2.0	0.51	ug/kg	
95-49-8	o-Chlorotoluene	ND	2.0	0.51	ug/kg	
106-43-4	p-Chlorotoluene	ND	2.0	0.51	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	7.1	ug/kg	
124-48-1	Dibromochloromethane	ND	2.0	0.61	ug/kg	
106-93-4	1,2-Dibromoethane	ND	2.0	0.51	ug/kg	
95-50-1	o-Dichlorobenzene	ND	2.0	0.51	ug/kg	
541-73-1	m-Dichlorobenzene	ND	2.0	0.51	ug/kg	
106-46-7	p-Dichlorobenzene	ND	2.0	0.51	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.51	ug/kg	
75-34-3	1,1-Dichloroethane	ND	2.0	0.51	ug/kg	
107-06-2	1,2-Dichloroethane	ND	2.0	0.51	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	2.0	0.51	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	0.51	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	0.51	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.0	0.51	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-3 9'		
Lab Sample ID:	DA13922-5	**Date Sampled:**	02/28/19
Matrix:	SO - Soil	**Date Received:**	03/01/19
Method:	SW846 8260B	**Percent Solids:**	98.4
Project:	Vacant Lot		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	2.0	0.51	ug/kg	
594-20-7	2,2-Dichloropropane	ND	2.0	0.51	ug/kg	
563-58-6	1,1-Dichloropropene	ND	2.0	0.51	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.51	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.51	ug/kg	
100-41-4	Ethylbenzene	ND	2.0	0.51	ug/kg	
87-68-3	Hexachlorobutadiene	ND	2.0	0.56	ug/kg	
591-78-6	2-Hexanone	ND	10	5.1	ug/kg	
98-82-8	Isopropylbenzene	ND	2.0	0.51	ug/kg	
99-87-6	p-Isopropyltoluene	ND	2.0	0.51	ug/kg	
74-83-9	Methyl bromide	ND	2.0	0.51	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	0.51	ug/kg	
74-87-3	Methyl chloride	ND	2.0	0.91	ug/kg	
74-95-3	Methylene bromide	ND	2.0	0.61	ug/kg	
75-09-2	Methylene chloride	ND	4.1	3.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	10	5.1	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	10	5.1	ug/kg	
91-20-3	Naphthalene	ND	4.1	3.0	ug/kg	
103-65-1	n-Propylbenzene	ND	2.0	0.51	ug/kg	
100-42-5	Styrene	ND	2.0	0.51	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2.0	0.51	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.51	ug/kg	
127-18-4	Tetrachloroethylene	ND	2.0	0.51	ug/kg	
108-88-3	Toluene	ND	2.0	1.0	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	1.0	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.51	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.51	ug/kg	
79-01-6	Trichloroethylene	ND	2.0	0.51	ug/kg	
75-69-4	Trichlorofluoromethane	ND	2.0	1.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.51	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.51	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.51	ug/kg	
108-05-4	Vinyl Acetate	ND	10	5.1	ug/kg	
75-01-4	Vinyl chloride	ND	2.0	0.51	ug/kg	
1330-20-7	Xylene (total)	ND	2.0	1.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		70-131%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-3 9'		
Lab Sample ID:	DA13922-5	**Date Sampled:**	02/28/19
Matrix:	SO - Soil	**Date Received:**	03/01/19
Method:	SW846 8260B	**Percent Solids:**	98.4
Project:	Vacant Lot		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	98%		70-130%
460-00-4	4-Bromofluorobenzene	99%		70-130%
17060-07-0	1,2-Dichloroethane-D4	98%		70-130%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-3 9'		
Lab Sample ID:	DA13922-5	**Date Sampled:**	02/28/19
Matrix:	SO - Soil	**Date Received:**	03/01/19
Method:	SW846 8270C SW846 3546	**Percent Solids:**	98.4
Project:	Vacant Lot		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G141562.D	1	03/05/19 19:07	DC	03/05/19	OP17541	E1G2414
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	68	17	ug/kg	
208-96-8	Acenaphthylene	ND	68	17	ug/kg	
120-12-7	Anthracene	ND	68	17	ug/kg	
56-55-3	Benzo(a)anthracene	ND	68	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	68	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	68	17	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	68	17	ug/kg	
50-32-8	Benzo(a)pyrene	ND	68	17	ug/kg	
218-01-9	Chrysene	ND	68	17	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	68	17	ug/kg	
206-44-0	Fluoranthene	ND	68	17	ug/kg	
86-73-7	Fluorene	ND	68	17	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	68	17	ug/kg	
90-12-0	1-Methylnaphthalene	ND	68	24	ug/kg	
91-57-6	2-Methylnaphthalene	ND	68	30	ug/kg	
91-20-3	Naphthalene	ND	68	24	ug/kg	
85-01-8	Phenanthrene	ND	68	17	ug/kg	
129-00-0	Pyrene	ND	68	17	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	68%		23-130%
4165-60-0	Nitrobenzene-d5	61%		12-131%
1718-51-0	Terphenyl-d14	90%		29-141%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-3 GW		
Lab Sample ID:	DA13922-6	**Date Sampled:**	02/28/19
Matrix:	AQ - Ground Water	**Date Received:**	03/01/19
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Vacant Lot		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7V59022.D	1	03/05/19 21:40	CH	n/a	n/a	V7V3009
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	20	ug/l	
107-02-8	Acrolein	ND	10	7.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	4.0	ug/l	
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.50	ug/l	
74-97-5	Bromochloromethane	ND	2.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	0.50	ug/l	
75-25-2	Bromoform	ND	2.0	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.50	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.70	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	0.70	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	2.0	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.50	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.50	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	4.0	3.0	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	p-Dichlorobenzene	ND	2.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.80	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-3 GW		
Lab Sample ID:	DA13922-6	**Date Sampled:**	02/28/19
Matrix:	AQ - Ground Water	**Date Received:**	03/01/19
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Vacant Lot		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	2.0	0.50	ug/l	
594-20-7	2,2-Dichloropropane	ND	2.0	1.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	2.0	0.60	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.0	2.0	ug/l	
591-78-6	2-Hexanone	ND	10	2.5	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.50	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.50	ug/l	
74-83-9	Methyl bromide	ND	4.0	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.5	ug/l	
78-93-3	Methyl ethyl ketone	9.9	10	5.0	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
91-20-3	Naphthalene	ND	4.0	2.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.50	ug/l	
100-42-5	Styrene	ND	1.0	0.50	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	1.0	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	3.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	1.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.50	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.50	ug/l	
108-05-4	Vinyl Acetate	ND	10	5.0	ug/l	
75-01-4	Vinyl chloride	ND	2.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		70-130%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-3 GW		
Lab Sample ID:	DA13922-6	**Date Sampled:**	02/28/19
Matrix:	AQ - Ground Water	**Date Received:**	03/01/19
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Vacant Lot		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	98%		70-130%
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	98%		70-130%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-3 GW		
Lab Sample ID:	DA13922-6	**Date Sampled:**	02/28/19
Matrix:	AQ - Ground Water	**Date Received:**	03/01/19
Method:	SW846 8270C SW846 3510C	**Percent Solids:**	n/a
Project:	Vacant Lot		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G141561.D	1	03/05/19 18:39	DC	03/04/19	OP17533	E1G2414
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.9	0.67	ug/l	
208-96-8	Acenaphthylene	ND	1.9	0.57	ug/l	
120-12-7	Anthracene	ND	1.9	0.67	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.9	0.67	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.9	0.86	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.9	0.86	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.9	0.95	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.9	0.95	ug/l	
218-01-9	Chrysene	ND	1.9	0.67	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.9	1.2	ug/l	
206-44-0	Fluoranthene	ND	1.9	0.86	ug/l	
86-73-7	Fluorene	ND	1.9	0.57	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.9	1.3	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.9	0.67	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.9	0.67	ug/l	
91-20-3	Naphthalene	ND	1.9	0.76	ug/l	
85-01-8	Phenanthrene	ND	1.9	0.57	ug/l	
129-00-0	Pyrene	ND	1.9	0.67	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	54%		19-130%
321-60-8	2-Fluorobiphenyl	58%		20-130%
1718-51-0	Terphenyl-d14	28%		13-149%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-4 7.5'		
Lab Sample ID:	DA13922-7	**Date Sampled:**	02/28/19
Matrix:	SO - Soil	**Date Received:**	03/01/19
Method:	SW846 8260B	**Percent Solids:**	97.3
Project:	Vacant Lot		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V51529.D	1	03/05/19 17:12	MB	n/a	n/a	V5V2714
Run #2							

	Initial Weight	Final Volume
Run #1	5.02 g	5.0 ml
Run #2		

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.51	ug/kg	
108-88-3	Toluene	ND	2.0	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	2.0	0.51	ug/kg	
1330-20-7	Xylene (total)	ND	2.0	1.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		70-131%
2037-26-5	Toluene-D8	98%		70-130%
460-00-4	4-Bromofluorobenzene	99%		70-130%
17060-07-0	1,2-Dichloroethane-D4	101%		70-130%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-4 7.5'		
Lab Sample ID:	DA13922-7	**Date Sampled:**	02/28/19
Matrix:	SO - Soil	**Date Received:**	03/01/19
Method:	SW846 8270C SW846 3546	**Percent Solids:**	97.3
Project:	Vacant Lot		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G141566.D	1	03/05/19 21:00	DC	03/05/19	OP17541	E1G2414
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	68	17	ug/kg	
208-96-8	Acenaphthylene	ND	68	17	ug/kg	
120-12-7	Anthracene	ND	68	17	ug/kg	
56-55-3	Benzo(a)anthracene	ND	68	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	68	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	68	17	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	68	17	ug/kg	
50-32-8	Benzo(a)pyrene	ND	68	17	ug/kg	
218-01-9	Chrysene	ND	68	17	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	68	17	ug/kg	
206-44-0	Fluoranthene	ND	68	17	ug/kg	
86-73-7	Fluorene	ND	68	17	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	68	17	ug/kg	
90-12-0	1-Methylnaphthalene	ND	68	24	ug/kg	
91-57-6	2-Methylnaphthalene	ND	68	31	ug/kg	
91-20-3	Naphthalene	ND	68	24	ug/kg	
85-01-8	Phenanthrene	ND	68	17	ug/kg	
129-00-0	Pyrene	ND	68	17	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	81%		23-130%
4165-60-0	Nitrobenzene-d5	74%		12-131%
1718-51-0	Terphenyl-d14	93%		29-141%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

SGS North America Inc. - Wheat Ridge
4036 Youngfield Street, Wheat Ridge, CO 80033
TEL: 303-425-6021 FAX: 303-425-6854
www.sgs.com/ehsusa

Page 1 of 1

Bottle Order Control #	FED-EX Tracking #
SGS Quote #	SGS Job # DA13922

Client / Reporting Information

Company: AEI Consultants
Street: 2420 W 26th Ave
City, State: Denver, CO
Project Contact: Jason Grubb
Phone:
Email:
Sampler(s) Name(s): Jason Grubb

Project Information

Project Name: Vacant Lot
Street: 323 W 1ST St
City, State: Salida, CO
Project #: 400082
Client Purchase Order #: 186735
Project Manager: Jason Grubb

Billing Information (if different from Report to)

Company: AEI
Street Address:
City, State ZIP: Walnut Crk, CA
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB-Equipment Blank
RB - Rinse Blank
TB - Trip Blank

Field ID / Point of Collection	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: NONE	HCl	NaOH	HNO3	H2SO4	DI Water	MEOH	ENCORE	Na2S2O3	NaHSO3	BTEX	VOC	PAH	LAB USE ONLY
SB-1 14'	2/28	10:38	JG	SO	2	2										X		X	01
SB-1 GW		11:38	JG	GW	5	2	3									X		X	02
SB-2 8.5'		12:12	JG	SO	2	2											X	X	03
SB-2 GW		13:25	JG	GW	5	2	3										X	X	04
SB-3 9'		14:22	JG	SO	2	2											X	X	05
SB-3 GW		15:54	JG	GW	5	2	3										X	X	06
SB-4 7.5'	↓	17:03	JG	SO	2	2										X		X	07
																			TB-08

Turnaround Time (Business days)

- [ ] Standard 10 Business Days
- [x] 5 Business Days RUSH
- [ ] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENC
- Emergency & Rush T/A data available via LabLink. RUSH TAT approval needed.

Special Reporting Instructions

- [ ] Report in PPB
- [ ] Report in PPM
- [ ] Report MDLs

Data Deliverable Information

- [ ] Commercial "A" (Level 1, Results Only)
- [x] Commercial "B" (Level 2, Results + QC Summary)
- [ ] COMMBN (Results/QC/Narrative)
- [ ] COMMBN+ [Results/QC/Narrative (+ chromatograms)]
- [ ] REDT2
- [ ] FULT1
- [ ] EDD Format _____

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler: 1	Date/Time: 3/1 15:08	Received By: 1	Relinquished By: 2	Date/Time:	Received By: 2
Relinquished by Sampler: 3	Date/Time:	Received By: 3	Relinquished By: 4	Date/Time:	Received By: 4

Custody Seal # Intact [x] Not Intact [ ] Absent [ ] | Preserved where applicable [x] | Cooler Temp. °C: 5.1 | Therm. ID: T136 | On Ice [x]

http://www.sgs.com/en/terms-and-conditions

SGS Accutest Sample Receipt Summary

Job Number: DA13922 **Client:** AEI **Project:** VACANT LOT

Date / Time Received: 3/1/2019 3:08:00 PM **Delivery Method:** **Airbill #'s:** HD

Cooler Temps (Initial/Adjusted): #1: (5.7/5.7);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Bar Therm;		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☑		☐	☐
2. Trip Blank listed on COC:	☑		☐	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

DA13922: Chain of Custody
Page 2 of 2

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V2714-MB	5V51520.D	1	03/05/19	MB	n/a	n/a	V5V2714

The QC reported here applies to the following samples: **Method:** SW846 8260B

DA13922-1, DA13922-3, DA13922-5, DA13922-7

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	22	ug/kg	
107-02-8	Acrolein	ND	20	15	ug/kg	
107-13-1	Acrylonitrile	ND	10	8.0	ug/kg	
71-43-2	Benzene	ND	1.0	0.50	ug/kg	
108-86-1	Bromobenzene	ND	2.0	0.50	ug/kg	
74-97-5	Bromochloromethane	ND	2.0	0.60	ug/kg	
75-27-4	Bromodichloromethane	ND	2.0	0.50	ug/kg	
75-25-2	Bromoform	ND	2.0	1.0	ug/kg	
104-51-8	n-Butylbenzene	ND	2.0	0.50	ug/kg	
135-98-8	sec-Butylbenzene	ND	2.0	0.50	ug/kg	
98-06-6	tert-Butylbenzene	ND	2.0	0.50	ug/kg	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.0	0.50	ug/kg	
108-90-7	Chlorobenzene	ND	2.0	0.50	ug/kg	
75-00-3	Chloroethane	ND	2.0	0.80	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	4.0	1.3	ug/kg	
67-66-3	Chloroform	ND	2.0	0.50	ug/kg	
95-49-8	o-Chlorotoluene	ND	2.0	0.50	ug/kg	
106-43-4	p-Chlorotoluene	ND	2.0	0.50	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	7.0	ug/kg	
124-48-1	Dibromochloromethane	ND	2.0	0.60	ug/kg	
106-93-4	1,2-Dibromoethane	ND	2.0	0.50	ug/kg	
95-50-1	o-Dichlorobenzene	ND	2.0	0.50	ug/kg	
541-73-1	m-Dichlorobenzene	ND	2.0	0.50	ug/kg	
106-46-7	p-Dichlorobenzene	ND	2.0	0.50	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/kg	
75-34-3	1,1-Dichloroethane	ND	2.0	0.50	ug/kg	
107-06-2	1,2-Dichloroethane	ND	2.0	0.50	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	2.0	0.50	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	0.50	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	0.50	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/kg	
142-28-9	1,3-Dichloropropane	ND	2.0	0.50	ug/kg	
594-20-7	2,2-Dichloropropane	ND	2.0	0.50	ug/kg	
563-58-6	1,1-Dichloropropene	ND	2.0	0.50	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.50	ug/kg	

Method Blank Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V2714-MB	5V51520.D	1	03/05/19	MB	n/a	n/a	V5V2714

The QC reported here applies to the following samples: **Method:** SW846 8260B

DA13922-1, DA13922-3, DA13922-5, DA13922-7

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	2.0	0.50	ug/kg	
87-68-3	Hexachlorobutadiene	ND	2.0	0.55	ug/kg	
591-78-6	2-Hexanone	ND	10	5.0	ug/kg	
98-82-8	Isopropylbenzene	ND	2.0	0.50	ug/kg	
99-87-6	p-Isopropyltoluene	ND	2.0	0.50	ug/kg	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	0.50	ug/kg	
74-87-3	Methyl chloride	ND	2.0	0.90	ug/kg	
74-95-3	Methylene bromide	ND	2.0	0.60	ug/kg	
75-09-2	Methylene chloride	ND	4.0	3.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	10	5.0	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	10	5.0	ug/kg	
91-20-3	Naphthalene	ND	4.0	3.0	ug/kg	
103-65-1	n-Propylbenzene	ND	2.0	0.50	ug/kg	
100-42-5	Styrene	ND	2.0	0.50	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2.0	0.50	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.50	ug/kg	
127-18-4	Tetrachloroethylene	ND	2.0	0.50	ug/kg	
108-88-3	Toluene	ND	2.0	1.0	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	1.0	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.50	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.50	ug/kg	
79-01-6	Trichloroethylene	ND	2.0	0.50	ug/kg	
75-69-4	Trichlorofluoromethane	ND	2.0	1.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.50	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.50	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.50	ug/kg	
108-05-4	Vinyl Acetate	ND	10	5.0	ug/kg	
75-01-4	Vinyl chloride	ND	2.0	0.50	ug/kg	
1330-20-7	Xylene (total)	ND	2.0	1.0	ug/kg	

Method Blank Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V2714-MB	5V51520.D	1	03/05/19	MB	n/a	n/a	V5V2714

The QC reported here applies to the following samples: **Method:** SW846 8260B

DA13922-1, DA13922-3, DA13922-5, DA13922-7

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	70-131%
2037-26-5	Toluene-D8	97%	70-130%
460-00-4	4-Bromofluorobenzene	97%	70-130%
17060-07-0	1,2-Dichloroethane-D4	101%	70-130%

Method Blank Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7V3009-MB	7V59006.D	1	03/05/19	CH	n/a	n/a	V7V3009

The QC reported here applies to the following samples: **Method:** SW846 8260B

DA13922-2, DA13922-4, DA13922-6

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	20	ug/l	
107-02-8	Acrolein	ND	10	7.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	4.0	ug/l	
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.50	ug/l	
74-97-5	Bromochloromethane	ND	2.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	0.50	ug/l	
75-25-2	Bromoform	ND	2.0	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.50	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.70	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	0.70	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	2.0	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.50	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.50	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	4.0	3.0	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	p-Dichlorobenzene	ND	2.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.80	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	2.0	0.50	ug/l	
594-20-7	2,2-Dichloropropane	ND	2.0	1.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	2.0	0.60	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.50	ug/l	

Method Blank Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7V3009-MB	7V59006.D	1	03/05/19	CH	n/a	n/a	V7V3009

The QC reported here applies to the following samples: **Method:** SW846 8260B

DA13922-2, DA13922-4, DA13922-6

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.0	2.0	ug/l	
591-78-6	2-Hexanone	ND	10	2.5	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.50	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.50	ug/l	
74-83-9	Methyl bromide	ND	4.0	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.5	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
91-20-3	Naphthalene	ND	4.0	2.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.50	ug/l	
100-42-5	Styrene	ND	1.0	0.50	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	1.0	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	3.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	1.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.50	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.50	ug/l	
108-05-4	Vinyl Acetate	ND	10	5.0	ug/l	
75-01-4	Vinyl chloride	ND	2.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	1.0	ug/l	

Method Blank Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7V3009-MB	7V59006.D	1	03/05/19	CH	n/a	n/a	V7V3009

The QC reported here applies to the following samples: **Method:** SW846 8260B

DA13922-2, DA13922-4, DA13922-6

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	112%	70-130%
17060-07-0	1,2-Dichloroethane-D4	97%	70-130%
2037-26-5	Toluene-D8	100%	70-130%
460-00-4	4-Bromofluorobenzene	104%	70-130%

Blank Spike Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V2714-BS	5V51517.D	1	03/05/19	MB	n/a	n/a	V5V2714

The QC reported here applies to the following samples: **Method:** SW846 8260B

DA13922-1, DA13922-3, DA13922-5, DA13922-7

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	224	90	30-198
107-02-8	Acrolein	250	198	79	66-137
107-13-1	Acrylonitrile	125	125	100	70-130
71-43-2	Benzene	50	47.9	96	68-130
108-86-1	Bromobenzene	50	45.3	91	70-130
74-97-5	Bromochloromethane	50	50.5	101	70-130
75-27-4	Bromodichloromethane	50	48.8	98	70-130
75-25-2	Bromoform	50	50.0	100	68-130
104-51-8	n-Butylbenzene	50	48.0	96	68-130
135-98-8	sec-Butylbenzene	50	46.7	93	69-130
98-06-6	tert-Butylbenzene	50	45.8	92	70-130
75-15-0	Carbon disulfide	50	54.8	110	67-130
56-23-5	Carbon tetrachloride	50	49.3	99	67-130
108-90-7	Chlorobenzene	50	45.6	91	70-130
75-00-3	Chloroethane	50	50.5	101	69-130
110-75-8	2-Chloroethyl vinyl ether	50	47.0	94	68-130
67-66-3	Chloroform	50	48.1	96	70-130
95-49-8	o-Chlorotoluene	50	45.3	91	67-130
106-43-4	p-Chlorotoluene	50	45.7	91	68-130
96-12-8	1,2-Dibromo-3-chloropropane	50	47.0	94	68-130
124-48-1	Dibromochloromethane	50	48.0	96	70-130
106-93-4	1,2-Dibromoethane	50	46.7	93	70-130
95-50-1	o-Dichlorobenzene	50	46.0	92	70-130
541-73-1	m-Dichlorobenzene	50	46.3	93	69-130
106-46-7	p-Dichlorobenzene	50	45.0	90	69-130
75-71-8	Dichlorodifluoromethane	50	48.4	97	33-173
75-34-3	1,1-Dichloroethane	50	49.7	99	70-130
107-06-2	1,2-Dichloroethane	50	46.8	94	70-130
75-35-4	1,1-Dichloroethylene	50	51.9	104	70-130
156-59-2	cis-1,2-Dichloroethylene	50	49.9	100	70-130
156-60-5	trans-1,2-Dichloroethylene	50	50.1	100	69-130
78-87-5	1,2-Dichloropropane	50	47.9	96	70-130
142-28-9	1,3-Dichloropropane	50	46.2	92	70-130
594-20-7	2,2-Dichloropropane	50	50.3	101	67-130
563-58-6	1,1-Dichloropropene	50	49.3	99	70-130
10061-01-5	cis-1,3-Dichloropropene	50	49.7	99	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V2714-BS	5V51517.D	1	03/05/19	MB	n/a	n/a	V5V2714

The QC reported here applies to the following samples: **Method:** SW846 8260B

DA13922-1, DA13922-3, DA13922-5, DA13922-7

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
10061-02-6	trans-1,3-Dichloropropene	50	48.7	97	68-130
100-41-4	Ethylbenzene	50	46.6	93	69-130
87-68-3	Hexachlorobutadiene	50	47.7	95	67-130
591-78-6	2-Hexanone	250	240	96	58-130
98-82-8	Isopropylbenzene	50	46.5	93	70-130
99-87-6	p-Isopropyltoluene	50	46.7	93	70-130
74-83-9	Methyl bromide	50	45.2	90	57-130
1634-04-4	Methyl Tert Butyl Ether	50	49.1	98	70-130
74-87-3	Methyl chloride	50	45.9	92	51-137
74-95-3	Methylene bromide	50	50.3	101	70-130
75-09-2	Methylene chloride	50	50.0	100	69-130
78-93-3	Methyl ethyl ketone	250	269	108	61-136
108-10-1	4-Methyl-2-pentanone	250	248	99	69-130
91-20-3	Naphthalene	50	48.8	98	70-130
103-65-1	n-Propylbenzene	50	46.1	92	68-130
100-42-5	Styrene	50	48.2	96	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	47.0	94	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	46.6	93	68-130
127-18-4	Tetrachloroethylene	50	47.7	95	68-130
108-88-3	Toluene	50	45.7	91	65-130
87-61-6	1,2,3-Trichlorobenzene	50	47.5	95	70-130
120-82-1	1,2,4-Trichlorobenzene	50	46.9	94	70-130
71-55-6	1,1,1-Trichloroethane	50	48.3	97	68-130
79-00-5	1,1,2-Trichloroethane	50	47.2	94	70-130
79-01-6	Trichloroethylene	50	48.6	97	70-130
75-69-4	Trichlorofluoromethane	50	50.8	102	70-130
96-18-4	1,2,3-Trichloropropane	50	43.3	87	68-130
95-63-6	1,2,4-Trimethylbenzene	50	46.4	93	66-130
108-67-8	1,3,5-Trimethylbenzene	50	46.2	92	68-130
108-05-4	Vinyl Acetate	250	268	107	70-130
75-01-4	Vinyl chloride	50	48.3	97	65-130
1330-20-7	Xylene (total)	150	139	93	69-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V2714-BS	5V51517.D	1	03/05/19	MB	n/a	n/a	V5V2714

The QC reported here applies to the following samples: **Method:** SW846 8260B

DA13922-1, DA13922-3, DA13922-5, DA13922-7

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	70-131%
2037-26-5	Toluene-D8	98%	70-130%
460-00-4	4-Bromofluorobenzene	98%	70-130%
17060-07-0	1,2-Dichloroethane-D4	102%	70-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7V3009-BS	7V59004.D	1	03/05/19	CH	n/a	n/a	V7V3009

The QC reported here applies to the following samples: **Method:** SW846 8260B

DA13922-2, DA13922-4, DA13922-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	111%	70-130%
17060-07-0	1,2-Dichloroethane-D4	96%	70-130%
2037-26-5	Toluene-D8	98%	70-130%
460-00-4	4-Bromofluorobenzene	100%	70-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7V3009-BS	7V59009.D	1	03/05/19	CH	n/a	n/a	V7V3009

The QC reported here applies to the following samples: **Method:** SW846 8260B

DA13922-2, DA13922-4, DA13922-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	250	189	76	70-130
107-02-8	Acrolein	250	165	66	10-281
107-13-1	Acrylonitrile	125	136	109	58-136
71-43-2	Benzene	50	49.9	100	70-130
108-86-1	Bromobenzene	50	47.7	95	70-130
74-97-5	Bromochloromethane	50	53.7	107	70-130
75-27-4	Bromodichloromethane	50	51.0	102	70-130
75-25-2	Bromoform	50	47.6	95	61-130
104-51-8	n-Butylbenzene	50	53.2	106	69-130
135-98-8	sec-Butylbenzene	50	50.2	100	70-130
98-06-6	tert-Butylbenzene	50	49.4	99	70-130
75-15-0	Carbon disulfide	50	56.8	114	67-130
56-23-5	Carbon tetrachloride	50	54.5	109	70-130
108-90-7	Chlorobenzene	50	49.7	99	70-130
75-00-3	Chloroethane	50	57.0	114	64-138
110-75-8	2-Chloroethyl vinyl ether	50	48.1	96	68-130
67-66-3	Chloroform	50	55.5	111	70-130
95-49-8	o-Chlorotoluene	50	49.3	99	70-130
106-43-4	p-Chlorotoluene	50	50.1	100	70-130
96-12-8	1,2-Dibromo-3-chloropropane	50	52.4	105	65-130
124-48-1	Dibromochloromethane	50	48.8	98	65-130
106-93-4	1,2-Dibromoethane	50	50.0	100	70-130
95-50-1	o-Dichlorobenzene	50	51.7	103	63-130
541-73-1	m-Dichlorobenzene	50	49.8	100	65-130
106-46-7	p-Dichlorobenzene	50	49.9	100	68-130
75-71-8	Dichlorodifluoromethane	50	54.9	110	10-200
75-34-3	1,1-Dichloroethane	50	54.1	108	70-130
107-06-2	1,2-Dichloroethane	50	53.2	106	67-131
75-35-4	1,1-Dichloroethylene	50	56.4	113	70-130
156-59-2	cis-1,2-Dichloroethylene	50	56.4	113	70-130
156-60-5	trans-1,2-Dichloroethylene	50	55.9	112	70-130
78-87-5	1,2-Dichloropropane	50	51.2	102	70-130
142-28-9	1,3-Dichloropropane	50	48.8	98	70-130
594-20-7	2,2-Dichloropropane	50	53.9	108	32-148
563-58-6	1,1-Dichloropropene	50	54.3	109	70-130
10061-01-5	cis-1,3-Dichloropropene	50	50.3	101	68-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7V3009-BS	7V59009.D	1	03/05/19	CH	n/a	n/a	V7V3009

The QC reported here applies to the following samples: **Method:** SW846 8260B

DA13922-2, DA13922-4, DA13922-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-02-6	trans-1,3-Dichloropropene	50	49.1	98	64-130
100-41-4	Ethylbenzene	50	49.5	99	69-130
87-68-3	Hexachlorobutadiene	50	55.0	110	51-134
591-78-6	2-Hexanone	250	219	88	69-130
98-82-8	Isopropylbenzene	50	51.9	104	70-130
99-87-6	p-Isopropyltoluene	50	51.6	103	70-130
74-83-9	Methyl bromide	50	59.2	118	56-136
74-87-3	Methyl chloride	50	59.4	119	48-147
74-95-3	Methylene bromide	50	53.3	107	70-130
75-09-2	Methylene chloride	50	55.2	110	70-130
108-10-1	4-Methyl-2-pentanone	250	234	94	70-130
78-93-3	Methyl ethyl ketone	250	248	99	69-130
1634-04-4	Methyl Tert Butyl Ether	50	54.4	109	70-130
91-20-3	Naphthalene	50	56.7	113	61-130
103-65-1	n-Propylbenzene	50	48.7	97	70-130
100-42-5	Styrene	50	53.0	106	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	51.2	102	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	49.1	98	60-130
127-18-4	Tetrachloroethylene	50	50.8	102	70-130
108-88-3	Toluene	50	48.8	98	70-130
87-61-6	1,2,3-Trichlorobenzene	50	55.9	112	55-130
120-82-1	1,2,4-Trichlorobenzene	50	55.0	110	65-130
71-55-6	1,1,1-Trichloroethane	50	54.5	109	70-130
79-00-5	1,1,2-Trichloroethane	50	49.1	98	68-130
79-01-6	Trichloroethylene	50	51.6	103	70-130
75-69-4	Trichlorofluoromethane	50	54.3	109	68-146
96-18-4	1,2,3-Trichloropropane	50	51.0	102	70-130
95-63-6	1,2,4-Trimethylbenzene	50	50.0	100	70-130
108-67-8	1,3,5-Trimethylbenzene	50	51.6	103	70-130
108-05-4	Vinyl Acetate	250	268	107	49-131
75-01-4	Vinyl chloride	50	60.8	122	57-144
1330-20-7	Xylene (total)	150	151	101	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7V3009-BS	7V59009.D	1	03/05/19	CH	n/a	n/a	V7V3009

The QC reported here applies to the following samples: **Method:** SW846 8260B

DA13922-2, DA13922-4, DA13922-6

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	110%	70-130%
17060-07-0	1,2-Dichloroethane-D4	99%	70-130%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	96%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
DA13920-1MS	5V51523.D	1	03/05/19	MB	n/a	n/a	V5V2714
DA13920-1MSD	5V51524.D	1	03/05/19	MB	n/a	n/a	V5V2714
DA13920-1	5V51522.D	1	03/05/19	MB	n/a	n/a	V5V2714

The QC reported here applies to the following samples: **Method:** SW846 8260B

DA13922-1, DA13922-3, DA13922-5, DA13922-7

CAS No.	Compound	DA13920-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		277	364	131	279	327	117	11	5-239/30
107-02-8	Acrolein	ND		277	174	63	279	152	54	13	5-183/30
107-13-1	Acrylonitrile	ND		139	140	101	140	128	92	9	37-162/30
71-43-2	Benzene	ND		55.5	50.2	90	55.8	45.6	82	10	48-130/30
108-86-1	Bromobenzene	ND		55.5	41.5	75	55.8	38.6	69	7	27-136/30
74-97-5	Bromochloromethane	ND		55.5	54.5	98	55.8	48.1	86	12	58-130/30
75-27-4	Bromodichloromethane	ND		55.5	50.0	90	55.8	45.3	81	10	47-130/30
75-25-2	Bromoform	ND		55.5	48.4	87	55.8	44.8	80	8	33-130/30
104-51-8	n-Butylbenzene	ND		55.5	30.3	55	55.8	30.1	54	1	5-168/30
135-98-8	sec-Butylbenzene	ND		55.5	33.2	60	55.8	32.4	58	2	12-149/30
98-06-6	tert-Butylbenzene	ND		55.5	34.9	63	55.8	34.3	61	2	20-147/30
75-15-0	Carbon disulfide	ND		55.5	56.0	101	55.8	49.8	89	12	37-143/30
56-23-5	Carbon tetrachloride	ND		55.5	48.3	87	55.8	43.6	78	10	37-136/30
108-90-7	Chlorobenzene	ND		55.5	42.8	77	55.8	40.9	73	5	26-130/30
75-00-3	Chloroethane	ND		55.5	54.8	99	55.8	54.2	97	1	43-148/30
110-75-8	2-Chloroethyl vinyl ether	ND		55.5	53.1	96	55.8	53.9	97	1	56-134/30
67-66-3	Chloroform	ND		55.5	51.1	92	55.8	46.5	83	9	56-130/30
95-49-8	o-Chlorotoluene	ND		55.5	39.0	70	55.8	36.7	66	6	5-202/30
106-43-4	p-Chlorotoluene	ND		55.5	37.7	68	55.8	36.7	66	3	5-227/30
96-12-8	1,2-Dibromo-3-chloropropane	ND		55.5	45.9	83	55.8	43.1	77	6	7-187/30
124-48-1	Dibromochloromethane	ND		55.5	47.3	85	55.8	44.8	80	5	41-130/30
106-93-4	1,2-Dibromoethane	ND		55.5	51.1	92	55.8	47.2	85	8	51-132/30
95-50-1	o-Dichlorobenzene	ND		55.5	36.7	66	55.8	35.4	63	4	12-139/30
541-73-1	m-Dichlorobenzene	ND		55.5	37.0	67	55.8	35.9	64	3	13-139/30
106-46-7	p-Dichlorobenzene	ND		55.5	35.5	64	55.8	35.2	63	1	13-136/30
75-71-8	Dichlorodifluoromethane	ND		55.5	51.0	92	55.8	49.5	89	3	26-173/30
75-34-3	1,1-Dichloroethane	ND		55.5	54.0	97	55.8	48.5	87	11	58-130/30
107-06-2	1,2-Dichloroethane	ND		55.5	51.1	92	55.8	46.4	83	10	59-130/30
75-35-4	1,1-Dichloroethylene	ND		55.5	54.1	97	55.8	48.6	87	11	55-130/30
156-59-2	cis-1,2-Dichloroethylene	ND		55.5	53.1	96	55.8	48.6	87	9	55-130/30
156-60-5	trans-1,2-Dichloroethylene	ND		55.5	54.3	98	55.8	48.6	87	11	49-130/30
78-87-5	1,2-Dichloropropane	ND		55.5	51.4	93	55.8	46.0	82	11	59-130/30
142-28-9	1,3-Dichloropropane	ND		55.5	49.5	89	55.8	46.2	83	7	55-130/30
594-20-7	2,2-Dichloropropane	ND		55.5	54.0	97	55.8	47.6	85	13	43-136/30
563-58-6	1,1-Dichloropropene	ND		55.5	49.4	89	55.8	45.8	82	8	42-132/30
10061-01-5	cis-1,3-Dichloropropene	ND		55.5	50.4	91	55.8	45.5	81	10	40-133/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
DA13920-1MS	5V51523.D	1	03/05/19	MB	n/a	n/a	V5V2714
DA13920-1MSD	5V51524.D	1	03/05/19	MB	n/a	n/a	V5V2714
DA13920-1	5V51522.D	1	03/05/19	MB	n/a	n/a	V5V2714

The QC reported here applies to the following samples: **Method:** SW846 8260B

DA13922-1, DA13922-3, DA13922-5, DA13922-7

CAS No.	Compound	DA13920-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND		55.5	49.0	88	55.8	45.8	82	7	40-130/30
100-41-4	Ethylbenzene	ND		55.5	42.9	77	55.8	40.1	72	7	25-144/30
87-68-3	Hexachlorobutadiene	ND		55.5	20.4	37	55.8	19.9	36	2	5-153/30
591-78-6	2-Hexanone	ND		277	292	105	279	266	95	9	43-149/30
98-82-8	Isopropylbenzene	ND		55.5	39.0	70	55.8	37.6	67	4	21-143/30
99-87-6	p-Isopropyltoluene	ND		55.5	33.9	61	55.8	32.5	58	4	12-151/30
74-83-9	Methyl bromide	ND		55.5	51.6	93	55.8	51.4	92	0	5-167/30
1634-04-4	Methyl Tert Butyl Ether	ND		55.5	55.1	99	55.8	50.1	90	10	66-130/30
74-87-3	Methyl chloride	ND		55.5	48.1	87	55.8	48.6	87	1	34-162/30
74-95-3	Methylene bromide	ND		55.5	52.1	94	55.8	47.7	85	9	55-130/30
75-09-2	Methylene chloride	ND		55.5	54.0	97	55.8	49.2	88	9	58-130/30
78-93-3	Methyl ethyl ketone	ND		277	324	117	279	303	109	7	41-169/30
108-10-1	4-Methyl-2-pentanone	ND		277	275	99	279	251	90	9	54-147/30
91-20-3	Naphthalene	ND		55.5	33.7	61	55.8	33.5	60	1	5-164/30
103-65-1	n-Propylbenzene	ND		55.5	37.2	67	55.8	36.1	65	3	21-144/30
100-42-5	Styrene	ND		55.5	43.6	79	55.8	41.2	74	6	12-159/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		55.5	46.0	83	55.8	42.6	76	8	38-131/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		55.5	48.4	87	55.8	44.1	79	9	33-149/30
127-18-4	Tetrachloroethylene	ND		55.5	43.2	78	55.8	39.6	71	9	27-134/30
108-88-3	Toluene	4.3		55.5	48.4	79	55.8	45.1	73	7	34-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		55.5	25.4	46	55.8	25.8	46	2	5-157/30
120-82-1	1,2,4-Trichlorobenzene	ND		55.5	27.5	50	55.8	28.2	51	3	5-164/30
71-55-6	1,1,1-Trichloroethane	ND		55.5	49.8	90	55.8	45.6	82	9	45-130/30
79-00-5	1,1,2-Trichloroethane	ND		55.5	49.5	89	55.8	46.4	83	6	30-152/30
79-01-6	Trichloroethylene	ND		55.5	47.6	86	55.8	43.3	78	9	31-147/30
75-69-4	Trichlorofluoromethane	ND		55.5	51.0	92	55.8	50.0	90	2	55-133/30
96-18-4	1,2,3-Trichloropropane	ND		55.5	48.1	87	55.8	43.4	78	10	51-134/30
95-63-6	1,2,4-Trimethylbenzene	ND		55.5	38.8	70	55.8	36.1	65	7	5-174/30
108-67-8	1,3,5-Trimethylbenzene	ND		55.5	38.0	68	55.8	35.9	64	6	26-138/30
108-05-4	Vinyl Acetate	ND		277	136	49	279	112	40	19	5-158/30
75-01-4	Vinyl chloride	ND		55.5	53.8	97	55.8	52.7	94	2	55-138/30
1330-20-7	Xylene (total)	ND		166	129	77	167	120	72	7	24-143/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
DA13920-1MS	5V51523.D	1	03/05/19	MB	n/a	n/a	V5V2714
DA13920-1MSD	5V51524.D	1	03/05/19	MB	n/a	n/a	V5V2714
DA13920-1	5V51522.D	1	03/05/19	MB	n/a	n/a	V5V2714

The QC reported here applies to the following samples: **Method:** SW846 8260B

DA13922-1, DA13922-3, DA13922-5, DA13922-7

CAS No.	Surrogate Recoveries	MS	MSD	DA13920-1	Limits
1868-53-7	Dibromofluoromethane	103%	104%	99%	70-131%
2037-26-5	Toluene-D8	98%	100%	99%	70-130%
460-00-4	4-Bromofluorobenzene	99%	100%	101%	70-130%
17060-07-0	1,2-Dichloroethane-D4	102%	102%	98%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
DA12204-5MS	7V59007.D	1	03/05/19	CH	n/a	n/a	V7V3009
DA12204-5MSD	7V59008.D	1	03/05/19	CH	n/a	n/a	V7V3009
DA12204-5	7V59012.D	1	03/05/19	CH	n/a	n/a	V7V3009

The QC reported here applies to the following samples: **Method:** SW846 8260B

DA13922-2, DA13922-4, DA13922-6

CAS No.	Compound	DA12204-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	302	121	250	286	114	5	60-133/30
107-02-8	Acrolein	ND		250	158	63	250	178	71	12	10-281/30
107-13-1	Acrylonitrile	ND		125	128	102	125	134	107	5	47-151/30
71-43-2	Benzene	ND		50	51.6	103	50	49.8	100	4	67-130/30
108-86-1	Bromobenzene	ND		50	49.3	99	50	48.2	96	2	70-130/30
74-97-5	Bromochloromethane	ND		50	54.5	109	50	51.5	103	6	70-130/30
75-27-4	Bromodichloromethane	8.6		50	57.5	98	50	58.2	99	1	70-130/30
75-25-2	Bromoform	0.85	J	50	47.3	93	50	47.8	94	1	60-130/30
104-51-8	n-Butylbenzene	ND		50	52.2	104	50	49.3	99	6	51-143/30
135-98-8	sec-Butylbenzene	ND		50	49.4	99	50	48.7	97	1	69-130/30
98-06-6	tert-Butylbenzene	ND		50	49.1	98	50	48.1	96	2	47-158/30
75-15-0	Carbon disulfide	ND		50	52.7	105	50	56.0	112	6	64-130/30
56-23-5	Carbon tetrachloride	ND		50	52.3	105	50	53.9	108	3	70-130/30
108-90-7	Chlorobenzene	ND		50	50.1	100	50	48.1	96	4	70-130/30
75-00-3	Chloroethane	ND		50	58.8	118	50	57.8	116	2	58-139/30
110-75-8	2-Chloroethyl vinyl ether	ND		50	49.7	99	50	51.8	104	4	10-174/30
67-66-3	Chloroform	6.3		50	58.7	105	50	59.6	107	2	70-130/30
95-49-8	o-Chlorotoluene	ND		50	50.2	100	50	47.9	96	5	70-130/30
106-43-4	p-Chlorotoluene	ND		50	50.4	101	50	49.2	98	2	70-130/30
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	48.8	98	50	47.8	96	2	62-130/30
124-48-1	Dibromochloromethane	5.7		50	54.5	98	50	53.9	96	1	65-130/30
106-93-4	1,2-Dibromoethane	ND		50	50.2	100	50	49.9	100	1	70-130/30
95-50-1	o-Dichlorobenzene	ND		50	50.5	101	50	48.4	97	4	63-130/30
541-73-1	m-Dichlorobenzene	ND		50	49.4	99	50	48.4	97	2	65-130/30
106-46-7	p-Dichlorobenzene	ND		50	49.5	99	50	47.7	95	4	66-130/30
75-71-8	Dichlorodifluoromethane	ND		50	54.9	110	50	54.0	108	2	10-200/30
75-34-3	1,1-Dichloroethane	ND		50	55.8	112	50	54.7	109	2	61-130/30
107-06-2	1,2-Dichloroethane	ND		50	47.4	95	50	51.8	104	9	63-135/30
75-35-4	1,1-Dichloroethylene	ND		50	50.5	101	50	55.0	110	9	67-130/30
156-59-2	cis-1,2-Dichloroethylene	ND		50	54.7	109	50	52.8	106	4	70-130/30
156-60-5	trans-1,2-Dichloroethylene	ND		50	53.0	106	50	55.7	111	5	70-130/30
78-87-5	1,2-Dichloropropane	ND		50	49.5	99	50	51.9	104	5	70-130/30
142-28-9	1,3-Dichloropropane	ND		50	50.6	101	50	49.0	98	3	70-130/30
594-20-7	2,2-Dichloropropane	ND		50	51.3	103	50	53.7	107	5	32-153/30
563-58-6	1,1-Dichloropropene	ND		50	53.8	108	50	53.9	108	0	70-130/30
10061-01-5	cis-1,3-Dichloropropene	ND		50	52.0	104	50	52.2	104	0	68-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
DA12204-5MS	7V59007.D	1	03/05/19	CH	n/a	n/a	V7V3009
DA12204-5MSD	7V59008.D	1	03/05/19	CH	n/a	n/a	V7V3009
DA12204-5	7V59012.D	1	03/05/19	CH	n/a	n/a	V7V3009

The QC reported here applies to the following samples: **Method:** SW846 8260B

DA13922-2, DA13922-4, DA13922-6

CAS No.	Compound	DA12204-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND		50	51.8	104	50	50.4	101	3	64-130/30
100-41-4	Ethylbenzene	ND		50	49.9	100	50	47.8	96	4	69-130/30
87-68-3	Hexachlorobutadiene	ND		50	51.2	102	50	49.0	98	4	41-140/30
591-78-6	2-Hexanone	ND		250	245	98	250	256	102	4	69-130/30
98-82-8	Isopropylbenzene	ND		50	51.6	103	50	48.9	98	5	70-130/30
99-87-6	p-Isopropyltoluene	ND		50	51.7	103	50	49.2	98	5	70-130/30
74-83-9	Methyl bromide	ND		50	64.8	130	50	61.1	122	6	47-147/30
74-87-3	Methyl chloride	ND		50	60.8	122	50	60.3	121	1	48-147/30
74-95-3	Methylene bromide	ND		50	50.6	101	50	52.0	104	3	70-130/30
75-09-2	Methylene chloride	ND		50	50.5	101	50	53.8	108	6	70-130/30
108-10-1	4-Methyl-2-pentanone	ND		250	248	99	250	257	103	4	70-130/30
78-93-3	Methyl ethyl ketone	ND		250	275	110	250	295	118	7	69-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		50	51.9	104	50	53.1	106	2	69-130/30
91-20-3	Naphthalene	ND		50	51.0	102	50	50.6	101	1	55-130/30
103-65-1	n-Propylbenzene	ND		50	49.9	100	50	48.3	97	3	62-132/30
100-42-5	Styrene	ND		50	50.3	101	50	48.6	97	3	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		50	49.9	100	50	47.9	96	4	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	48.2	96	50	48.4	97	0	60-130/30
127-18-4	Tetrachloroethylene	ND		50	51.5	103	50	49.3	99	4	67-130/30
108-88-3	Toluene	ND		50	47.0	94	50	47.8	96	2	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		50	51.8	104	50	49.9	100	4	52-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		50	52.2	104	50	49.5	99	5	60-130/30
71-55-6	1,1,1-Trichloroethane	ND		50	52.0	104	50	53.7	107	3	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		50	51.0	102	50	49.3	99	3	68-130/30
79-01-6	Trichloroethylene	ND		50	51.4	103	50	51.9	104	1	70-130/30
75-69-4	Trichlorofluoromethane	ND		50	55.9	112	50	53.6	107	4	54-157/30
96-18-4	1,2,3-Trichloropropane	ND		50	50.4	101	50	52.1	104	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		50	51.4	103	50	48.7	97	5	65-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		50	50.7	101	50	49.0	98	3	44-155/30
108-05-4	Vinyl Acetate	ND		250	277	111	250	285	114	3	47-133/30
75-01-4	Vinyl chloride	ND		50	60.8	122	50	59.7	119	2	55-144/30
1330-20-7	Xylene (total)	ND		150	147	98	150	143	95	3	67-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
DA12204-5MS	7V59007.D	1	03/05/19	CH	n/a	n/a	V7V3009
DA12204-5MSD	7V59008.D	1	03/05/19	CH	n/a	n/a	V7V3009
DA12204-5	7V59012.D	1	03/05/19	CH	n/a	n/a	V7V3009

The QC reported here applies to the following samples: **Method:** SW846 8260B

DA13922-2, DA13922-4, DA13922-6

CAS No.	Surrogate Recoveries	MS	MSD	DA12204-5	Limits
1868-53-7	Dibromofluoromethane	106%	108%	102%	70-130%
17060-07-0	1,2-Dichloroethane-D4	102%	101%	103%	70-130%
2037-26-5	Toluene-D8	100%	100%	98%	70-130%
460-00-4	4-Bromofluorobenzene	97%	100%	100%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
DA12204-5MS	7V59010.D	1	03/05/19	CH	n/a	n/a	V7V3009
DA12204-5MSD	7V59011.D	1	03/05/19	CH	n/a	n/a	V7V3009
DA12204-5	7V59012.D	1	03/05/19	CH	n/a	n/a	V7V3009

The QC reported here applies to the following samples: **Method:** SW846 8260B

DA13922-2, DA13922-4, DA13922-6

CAS No.	Compound	DA12204-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD

CAS No.	Surrogate Recoveries	MS	MSD	DA12204-5	Limits
1868-53-7	Dibromofluoromethane	105%	104%	102%	70-130%
17060-07-0	1,2-Dichloroethane-D4	102%	103%	103%	70-130%
2037-26-5	Toluene-D8	96%	102%	98%	70-130%
460-00-4	4-Bromofluorobenzene	101%	98%	100%	70-130%

* = Outside of Control Limits.

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP17533-MB	1G141528.D	1	03/04/19	DC	03/04/19	OP17533	E1G2412

The QC reported here applies to the following samples: **Method:** SW846 8270C

DA13922-2, DA13922-4, DA13922-6

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	2.0	0.70	ug/l	
208-96-8	Acenaphthylene	ND	2.0	0.60	ug/l	
120-12-7	Anthracene	ND	2.0	0.70	ug/l	
56-55-3	Benzo(a)anthracene	ND	2.0	0.70	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	2.0	0.90	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	2.0	0.90	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	2.0	1.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	2.0	1.0	ug/l	
218-01-9	Chrysene	ND	2.0	0.70	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	2.0	1.3	ug/l	
206-44-0	Fluoranthene	ND	2.0	0.90	ug/l	
86-73-7	Fluorene	ND	2.0	0.60	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	2.0	1.4	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	0.70	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	0.70	ug/l	
91-20-3	Naphthalene	ND	2.0	0.80	ug/l	
85-01-8	Phenanthrene	ND	2.0	0.60	ug/l	
129-00-0	Pyrene	ND	2.0	0.70	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	79%	19-130%
321-60-8	2-Fluorobiphenyl	73%	20-130%
1718-51-0	Terphenyl-d14	86%	13-149%

Method Blank Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP17541-MB	1G141557.D	1	03/05/19	DC	03/05/19	OP17541	E1G2414

The QC reported here applies to the following samples: **Method:** SW846 8270C

DA13922-1, DA13922-3, DA13922-5, DA13922-7

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	67	17	ug/kg	
208-96-8	Acenaphthylene	ND	67	17	ug/kg	
120-12-7	Anthracene	ND	67	17	ug/kg	
56-55-3	Benzo(a)anthracene	ND	67	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	67	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	67	17	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	67	17	ug/kg	
50-32-8	Benzo(a)pyrene	ND	67	17	ug/kg	
218-01-9	Chrysene	ND	67	17	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	67	17	ug/kg	
206-44-0	Fluoranthene	ND	67	17	ug/kg	
86-73-7	Fluorene	ND	67	17	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	67	17	ug/kg	
90-12-0	1-Methylnaphthalene	ND	67	23	ug/kg	
91-57-6	2-Methylnaphthalene	ND	67	30	ug/kg	
91-20-3	Naphthalene	ND	67	23	ug/kg	
85-01-8	Phenanthrene	ND	67	17	ug/kg	
129-00-0	Pyrene	ND	67	17	ug/kg	

CAS No.	Surrogate Recoveries		Limits
321-60-8	2-Fluorobiphenyl	82%	23-130%
4165-60-0	Nitrobenzene-d5	76%	12-131%
1718-51-0	Terphenyl-d14	93%	29-141%

Blank Spike Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP17533-BS	1G141529.D	1	03/04/19	DC	03/04/19	OP17533	E1G2412

The QC reported here applies to the following samples: **Method:** SW846 8270C

DA13922-2, DA13922-4, DA13922-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	34.3	69	48-130
208-96-8	Acenaphthylene	50	39.1	78	48-130
120-12-7	Anthracene	50	40.9	82	64-130
56-55-3	Benzo(a)anthracene	50	42.5	85	68-130
205-99-2	Benzo(b)fluoranthene	50	43.5	87	68-130
207-08-9	Benzo(k)fluoranthene	50	43.4	87	67-130
191-24-2	Benzo(g,h,i)perylene	50	42.3	85	66-130
50-32-8	Benzo(a)pyrene	50	43.6	87	66-130
218-01-9	Chrysene	50	42.4	85	65-130
53-70-3	Dibenzo(a,h)anthracene	50	44.3	89	64-130
206-44-0	Fluoranthene	50	42.4	85	63-130
86-73-7	Fluorene	50	39.8	80	57-130
193-39-5	Indeno(1,2,3-cd)pyrene	50	44.6	89	64-130
90-12-0	1-Methylnaphthalene	50	32.5	65	36-130
91-57-6	2-Methylnaphthalene	50	31.4	63	32-130
91-20-3	Naphthalene	50	30.3	61	29-130
85-01-8	Phenanthrene	50	40.5	81	64-130
129-00-0	Pyrene	50	42.0	84	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	73%	19-130%
321-60-8	2-Fluorobiphenyl	74%	20-130%
1718-51-0	Terphenyl-d14	81%	13-149%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP17541-BS	1G141558.D	1	03/05/19	DC	03/05/19	OP17541	E1G2414

The QC reported here applies to the following samples: **Method:** SW846 8270C

DA13922-1, DA13922-3, DA13922-5, DA13922-7

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	1670	1570	94	55-130
208-96-8	Acenaphthylene	1670	1600	96	55-130
120-12-7	Anthracene	1670	1550	93	70-130
56-55-3	Benzo(a)anthracene	1670	1600	96	70-130
205-99-2	Benzo(b)fluoranthene	1670	1610	97	70-130
207-08-9	Benzo(k)fluoranthene	1670	1630	98	70-130
191-24-2	Benzo(g,h,i)perylene	1670	1680	101	70-130
50-32-8	Benzo(a)pyrene	1670	1620	97	70-130
218-01-9	Chrysene	1670	1620	97	70-130
53-70-3	Dibenzo(a,h)anthracene	1670	1740	104	70-130
206-44-0	Fluoranthene	1670	1590	95	70-130
86-73-7	Fluorene	1670	1590	95	62-130
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1710	103	70-130
90-12-0	1-Methylnaphthalene	1670	1510	91	47-130
91-57-6	2-Methylnaphthalene	1670	1510	91	46-130
91-20-3	Naphthalene	1670	1500	90	45-130
85-01-8	Phenanthrene	1670	1530	92	70-130
129-00-0	Pyrene	1670	1550	93	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
321-60-8	2-Fluorobiphenyl	85%	23-130%
4165-60-0	Nitrobenzene-d5	77%	12-131%
1718-51-0	Terphenyl-d14	92%	29-141%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP17533-MS	1G141531.D	1	03/04/19	DC	03/04/19	OP17533	E1G2412
OP17533-MSD	1G141532.D	1	03/04/19	DC	03/04/19	OP17533	E1G2412
DA12204-4	1G141530.D	1	03/04/19	DC	03/04/19	OP17533	E1G2412

The QC reported here applies to the following samples: **Method:** SW846 8270C

DA13922-2, DA13922-4, DA13922-6

CAS No.	Compound	DA12204-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	33.1	66	50	37.6	75	13	31-130/30
208-96-8	Acenaphthylene	ND		50	38.0	76	50	43.2	86	13	31-130/30
120-12-7	Anthracene	ND		50	39.9	80	50	43.7	87	9	38-140/30
56-55-3	Benzo(a)anthracene	ND		50	41.3	83	50	43.5	87	5	44-149/30
205-99-2	Benzo(b)fluoranthene	ND		50	42.6	85	50	44.6	89	5	44-153/30
207-08-9	Benzo(k)fluoranthene	ND		50	42.4	85	50	45.0	90	6	44-151/30
191-24-2	Benzo(g,h,i)perylene	ND		50	42.1	84	50	44.5	89	6	45-149/30
50-32-8	Benzo(a)pyrene	ND		50	42.5	85	50	45.3	91	6	40-148/30
218-01-9	Chrysene	ND		50	42.3	85	50	44.3	89	5	40-153/30
53-70-3	Dibenzo(a,h)anthracene	ND		50	43.4	87	50	46.6	93	7	43-153/30
206-44-0	Fluoranthene	ND		50	42.0	84	50	44.5	89	6	42-148/30
86-73-7	Fluorene	ND		50	38.2	76	50	42.6	85	11	34-134/30
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	43.7	87	50	45.9	92	5	42-153/30
90-12-0	1-Methylnaphthalene	ND		50	32.2	64	50	37.3	75	15	25-130/30
91-57-6	2-Methylnaphthalene	ND		50	31.6	63	50	36.7	73	15	23-130/30
91-20-3	Naphthalene	ND		50	29.6	59	50	34.8	70	16	21-130/30
85-01-8	Phenanthrene	ND		50	39.2	78	50	42.9	86	9	42-140/30
129-00-0	Pyrene	ND		50	41.8	84	50	43.3	87	4	46-148/30

CAS No.	Surrogate Recoveries	MS	MSD	DA12204-4	Limits
4165-60-0	Nitrobenzene-d5	66%	77%	74%	19-130%
321-60-8	2-Fluorobiphenyl	68%	79%	73%	20-130%
1718-51-0	Terphenyl-d14	79%	82%	78%	13-149%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA13922
Account: AEICCOD AEI Consultants
Project: Vacant Lot

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP17541-MS	1G141563.D	1	03/05/19	DC	03/05/19	OP17541	E1G2414
OP17541-MSD	1G141564.D	1	03/05/19	DC	03/05/19	OP17541	E1G2414
DA13922-5	1G141562.D	1	03/05/19	DC	03/05/19	OP17541	E1G2414

The QC reported here applies to the following samples: **Method:** SW846 8270C

DA13922-1, DA13922-3, DA13922-5, DA13922-7

CAS No.	Compound	DA13922-5 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		1690	1270	75	1690	1280	76	1	10-167/30
208-96-8	Acenaphthylene	ND		1690	1440	85	1690	1440	85	0	10-167/30
120-12-7	Anthracene	ND		1690	1510	89	1690	1510	89	0	22-143/30
56-55-3	Benzo(a)anthracene	ND		1690	1620	96	1690	1580	93	3	15-152/30
205-99-2	Benzo(b)fluoranthene	ND		1690	1660	98	1690	1630	96	2	17-155/30
207-08-9	Benzo(k)fluoranthene	ND		1690	1600	94	1690	1620	96	1	10-172/30
191-24-2	Benzo(g,h,i)perylene	ND		1690	1670	99	1690	1680	99	1	10-153/30
50-32-8	Benzo(a)pyrene	ND		1690	1650	97	1690	1660	98	1	19-151/30
218-01-9	Chrysene	ND		1690	1640	97	1690	1610	95	2	21-147/30
53-70-3	Dibenzo(a,h)anthracene	ND		1690	1740	103	1690	1740	103	0	16-152/30
206-44-0	Fluoranthene	ND		1690	1610	95	1690	1590	94	1	14-151/30
86-73-7	Fluorene	ND		1690	1440	85	1690	1460	86	1	10-196/30
193-39-5	Indeno(1,2,3-cd)pyrene	ND		1690	1690	100	1690	1730	102	2	15-153/30
90-12-0	1-Methylnaphthalene	ND		1690	1300	77	1690	1300	77	0	10-199/30
91-57-6	2-Methylnaphthalene	ND		1690	1310	77	1690	1300	77	1	10-188/30
91-20-3	Naphthalene	ND		1690	1260	74	1690	1280	76	2	10-194/30
85-01-8	Phenanthrene	ND		1690	1500	89	1690	1490	88	1	22-144/30
129-00-0	Pyrene	ND		1690	1560	92	1690	1540	91	1	16-152/30

CAS No.	Surrogate Recoveries	MS	MSD	DA13922-5	Limits
321-60-8	2-Fluorobiphenyl	73%	73%	68%	23-130%
4165-60-0	Nitrobenzene-d5	66%	67%	61%	12-131%
1718-51-0	Terphenyl-d14	92%	90%	90%	29-141%

* = Outside of Control Limits.

January 12, 2021

Mr. Paul Inge
Paul Inge Custom Building
8315 CR 144
Salida, CO 81201

Subject: Geotechnical Engineering Study
323 West 1st Street, Salida, CO

Project No. 20-464

Dear Mr. Inge:

This geotechnical engineering study was performed to provide foundation recommendations for the subject project. As requested, representatives of Mountain Engineering and Testing (MET) visited the subject site on December 21, 2020 to record the subsurface conditions in two exploratory test pits at the site. The project was performed based on our proposal P-20-168 signed on December 17, 2020.

Proposed Construction: This report was compiled for the proposed construction of approximately 16-17 residential 3 story structures with a partial basement 4 to 6 feet deep, at the subject location. Construction of the structures is proposed along the entirety of the lot with parking in the cutting the lot in half (see Figure 1). Grading plans were not provided, however, no significant fills or cuts are anticipated aside from the excavation for the basements.

Foundation loads are anticipated to be light to moderate and typical for the type of construction. If loads, locations or conditions including fills or cuts are significantly different from those described above or depicted in this report, MET should be notified to reevaluate the recommendations contained herein.

Site Conditions**:** The 0.67 acre lot is located on 1st Street one block northeast of downtown Salida, Colorado. The lot is bordered by 1st Street to the northeast, residential and commercial lots to the northwest and southwest and the Monarch Spur trail to the southeast. The area of the proposed buildings footprints is on a graded gravel parking lot that slopes gently to the east (1%-2%). The site has been previously developed for various purposes previous to its current use as a gravel parking lot.

Subsurface Conditions: Subsurface conditions at the site were observed in five test pits dug just outside the proposed footprints of the structures provided on the site plan. The footprints of the structures were not staked in the field prior to MET's arrival on-site. The approximate locations of the test pits are shown on Figure 1. The test pit logs and legend are presented on Figures 2-6.

The density of the native soil was evaluated with a ⅝-inch penetrometer driven into the various strata with blows from a 10-pound hammer falling 12 inches. This test is similar to the standard penetration test described by ASTM D 1586. Depths at which penetrometer testing were performed and the corresponding resistance values are shown on the test pit logs, Figures 2 and 3.

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The subsurface conditions encountered in Test Pits 1-4 consisted of between 0.5-3.5 feet of loose to medium dense manmade fill at the surface, containing various types of debris and rubble. The fill was underlain by brown medium dense to dense gravely sand with cobble to the end of excavation at 8 feet.

Subsurface conditions encountered in test pit 5 were similar with 2 feet of medium dense manmade fill at the surface underlain by brown medium dense sandy gravel with cobble to the end of excavation at 8 feet. Test pits 1-5 were concluded at depths of 8 feet due to the relative density of the soil and rock content encountered.

A sample of the native gravely sand with cobble was collected from Test Pit 1 at a depth of 4 feet. The results of gradation testing performed on the sample obtained from test pit Test Pit 1 are shown on Figure 7 and the Figure 2 test pit log.

Ground water was not encountered in the test pits at the time of excavation. Seasonal ground water was estimated at a depth greater than six feet. In the limited phase II subsurface investigation performed by AEI Consultants on March 19, 2019 four soil borings were completed. Groundwater was encountered at depth ranging from 18.5-20.5 feet in the 3 boring that depths exceeded 7.5 feet.

Ground water observations by MET and AEI Consultants are based on conditions current at the time of the fieldwork performed and may not be indicative of other times or locations. Ground water levels may fluctuate with varying seasonal and weather conditions. It should be expected that groundwater may be encountered for excavations deeper than explorations contained in this report, particularly on the southern edge of the property during annual high water runoff in the ditch located along the Monarch Spur Trail.

Foundation Recommendations: The presence of manmade fills, rubble, and debris is of particular importance to avoid placement of foundation elements. Foundation elements should only be placed on undisturbed, native soils or compacted structural fill to minimize the potential of differential or excessive settlement. The following design and construction criteria are recommended for a shallow foundation system bearing on the undisturbed, native, dense to very dense gravelly cobble with sand or structural fill with an estimated settlement of less than 0.60 inches. The following design and construction criteria are recommended for a spread footing foundation system.

- Footings (interior and exterior) should have a minimum embedment of 48 inches (minimum partial basement depth) from the native surface and bear on the dense gravelly sand, sandy gravel or on structural fill designed for:
    - An allowable soil bearing pressure of 3,000 psf.
    - An allowable coefficient of friction of 0.41.

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- Exterior footings and footings beneath unheated areas should be placed at least 24 inches below the exterior grade for frost protection.
- Spread footings should have a minimum width of 16 inches for continuous footings and 24 inches for isolated pads.
- Continuous foundations walls expected to span greater than 8 feet should have additional reinforcement top and bottom sufficient to achieve the expected span, under the maximum expected factored load.
- Subgrade soils disturbed by excavation operations should be re-compacted prior to placement of foundation elements. If the presence of large rocks makes disturbing the native soil below the footing elevation unavoidable, then the rocks should be removed and replaced with compacted structural fill.
- MET recommends a 4-6 inch layer of compacted structural fill be placed on native cobble soils to avoid point loading of rock or cobble on foundation elements.
- If fill material/soils, contaminated soils, rubble, soft or yielding soils, or any deleterious materials are encountered during excavation, MET should be contacted to assess the soil conditions and recommend remedial measures. At a minimum, those soils/materials should be completely removed to native subgrade soils and replaced with compacted structural fill. Any structural fill should be compacted in 6 inch lifts per the recommendations discussed in "Fill Materials" until the desired footing elevation is achieved.
- Compacted fill placed against the sides of the foundations to resist lateral loads should be a granular material. Requirements for fill placed and compacted to resist lateral loads are discussed below in "Fill Materials, Placement and Compaction."
- **Once the excavation is exposed, but prior to placement of any fill or footing formwork, a representative of MET must be called out to verify the nature and density of the foundation excavations to ensure that relatively uniform soil conditions are present and to confirm that MET's recommendations are consistent with actual conditions. If MET is not able to verify the soil conditions, MET cannot be held responsible for recommendations that may be inconsistent with actual conditions.**

Lateral Earth Pressures: The lateral equivalent fluid pressures for soils above a free water surface are recommended below:

Backfill Material	Active	Passive	At Rest
On-site Gravelly Sand	34 pcf	400 pcf	53 pcf
Imported Structural Fill	34 pcf	400 pcf	53 pcf

All foundation walls should be designed for appropriate surcharge pressures such as adjacent buildings, traffic, construction materials and equipment. The pressures recommended above assume drained conditions behind the walls and a horizontal backfill surface. If water or sloping backfill conditions occur, we should be contacted to reevaluate our recommendations.

The native on-site soils, exclusive of organic matter or other deleterious matter, can be used as foundation wall backfill. However, the on-site materials placed within 3 feet of foundation walls should **not** contain materials greater than 3 inches in diameter.

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Floor Slabs: A minimum depth of 6 inches of compacted structural fill or gravel is recommended below floor slabs placed in accordance with the recommendations in the "Fill Material, Placement and Compaction" section of this report. Topsoil, fills, and deleterious material; if encountered below slab areas, should be removed and replaced with the structural fill material recommended under the heading “Fill Materials, Placement and Compaction” in this report.

Floor slab control joints should be used to reduce damage due to shrinkage cracking. Joint spacing is dependent on slab thickness and aggregate size, and should be consistent with recognized guidelines such the Portland Cement Association (PCA) and the American Concrete Institute (ACI). A vapor retarder membrane is recommended for slabs with moisture sensitive floor coverings to reduce moisture in the concrete slab. Concrete placement and curing should be in accordance with the American Concrete Institute recommendations. Improper curing techniques and/or high slump concrete can cause excessive shrinkage, cracking and/or curling of the concrete slab. Floor slab control joints should be used to reduce damage due to shrinkage cracking.

Concrete placement and curing should be in accordance with the American Concrete Institute recommendations. Improper curing techniques and/or high slump concrete can cause excessive shrinkage, cracking and/or curling of the concrete slab.

Site Clearing and Subgrade Preparation: Strip and remove existing vegetation, debris, rubble, contaminated soils, and other deleterious materials from the proposed subgrade areas. All exposed surfaces should be free of mounds and depressions that could prevent uniform compaction.

Stripped materials consisting of vegetation and organic materials should be used to revegetate exposed areas after completion of grading operations. Organic materials should only be placed in non-structural areas. **Onsite rounded or subrounded cobble is not suitable for stabilization aggregate or structural fill.**

Fill Materials, Placement and Compaction: The on-site gravel, exclusive of topsoil and materials greater than 3 inches in diameter, will be suitable for use as fill. Only crushed aggregate should be placed below the ground water elevation. **Imported** structural fill should conform to the following:

Sieve Size	**Percent Finer**
2 inch	100
No. 4 Sieve	30-70
No. 50 Sieve	10-50
No. 200 Sieve	5-20

Plasticity
Liquid Limit . . . . . 30 max.
Plasticity Index . . . . . 10 max.

Frozen soils should not be used as fill or backfill, and fill should not be placed over frozen ground. The subgrade preparation during winter should follow ACI 306 Chapter 6 when temperatures fall below freezing.

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The following compaction recommendations are provided for structural fill depths less than five (5) feet. If fill materials are placed in excess of five feet, we should be contacted to review the conditions and provide additional recommendations, if necessary. The compaction and moisture contents shown in the following table are recommended for granular soils.

FILL AREA	MIN. COMPACTION	MOISTURE CONTENT
Below Foundations	98% Std. Proctor (ASTM D698) or 93% Mod. Proctor (ASTM D1557)	Optimum Moisture, +/- 3%
Below Floor Slabs	95% Std. Proctor (ASTM D698) or 90% Mod. Proctor (ASTM D1557)	Optimum Moisture, +/- 3%
Landscape & Wall Backfill	90% Std. Proctor (ASTM D698)	Optimum Moisture, +/- 3%

Compliance: Performance of the foundations supported on compacted fills or prepared subgrade depend upon compliance with the above earthwork recommendations. To assess compliance, observation and testing of subgrade soils and fill materials should be performed under the direction of the geotechnical engineer.

Surface Drainage: The exterior ground surface within 10 feet of the building should have a minimum positive slope of 6 inches over 10 feet. A minimum slope of 2½ inches over 10 feet is recommended in paved areas. Drains and roof downspouts should discharge well beyond the limits of all backfill.

Subsurface Drain System: Increases in moisture of the subgrade soils increase the risk of foundation settlement, and therefore should be reduced or prevented. A perimeter drain system is recommended to reduce moisture seepage into the subgrade soils. The drain should consist of perforated 4-inch diameter, rigid PVC pipe surrounded with free-draining granular material. To prevent contamination of the free-draining granular material filter fabric consisting of Mirafi 140N or approved equal should be placed between the native soils and the gravel collector. The PVC pipe should have a minimum 1% grade and should be sloped to a sump and pump or to a suitable gravity outlet. Clean outs should be provided at minimum intervals of 50 feet.

Concrete: Based on the granular soils encountered in the test pits, we recommend a Type II cement type. Material testing of the foundation concrete for slump, air content and compressive strength is recommended during placement.

Limitations: This study has been conducted in accordance with generally accepted geotechnical engineering practices in this area for use by the client for design purposes. The conclusions and recommendations submitted in this letter are based upon the data obtained from the exploratory test pits and the proposed type of construction. The nature and extent of subsurface variations across the

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site may not become evident until excavation is performed. If during construction, fill, soil, rock or water conditions appear to be different from those described herein, this office should be advised at once so reevaluation of the recommendations may be made. We recommend on-site observation of excavations by a representative of the geotechnical engineer.

The scope of services for this project does not include either specifically or by implication any environmental or biological (e.g. mold, fungi, and bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential of such contamination or pollution, other studies should be undertaken.

Please contact me at 719-539-2312 at your convenience if you have any questions of if we can be of further assistance.

Sincerely,

MOUNTAIN ENGINEERING AND TESTING, INC.

Frank J Block, P.E.
Project Engineer

Attachments:

Figure 1	Test Pit Location Plan
Figures 2 - 6	Logs of Exploratory Test Pits
Figure 7	Legend of Test Pit Log
Figure 8	Gradation Test Results
Appendix A	General Fill Recommendations

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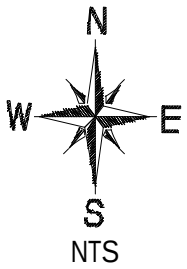

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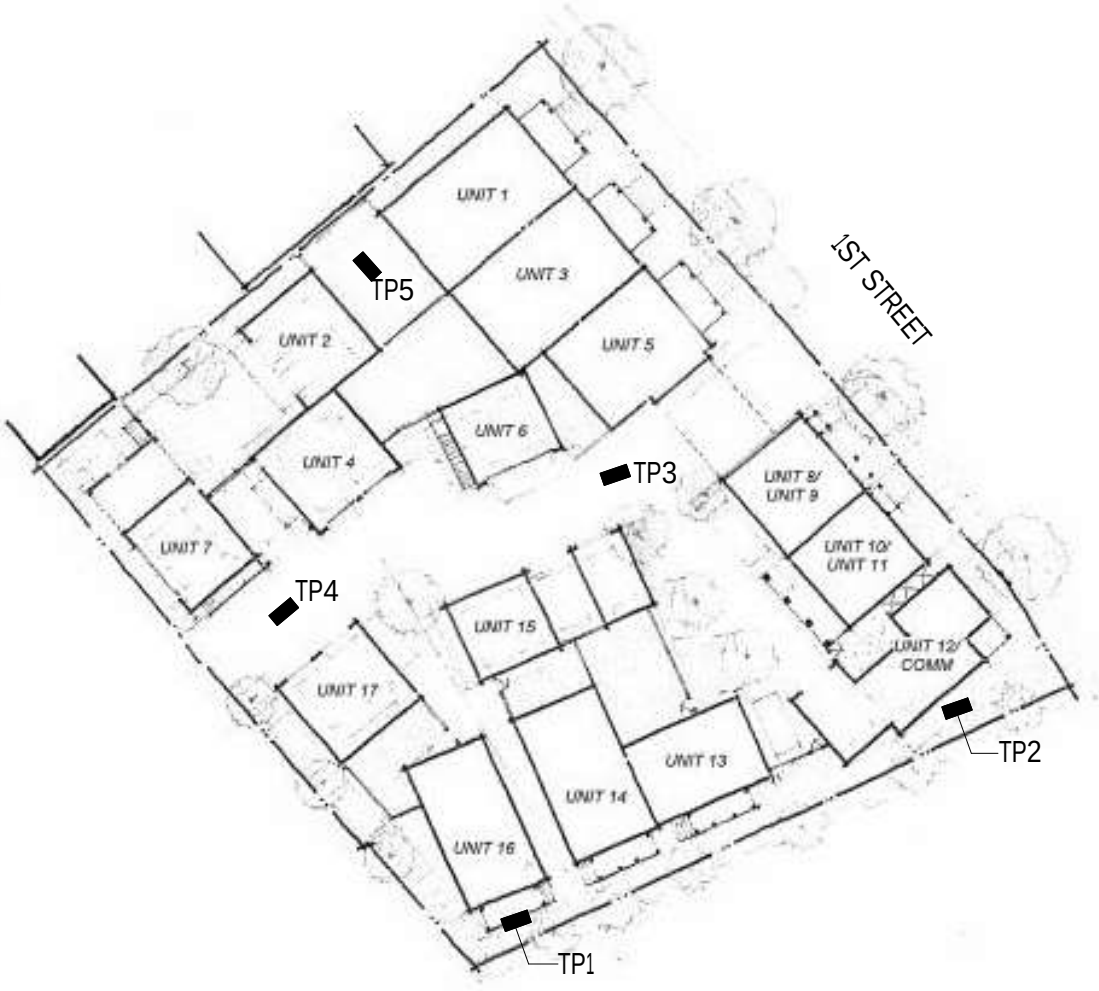

SYMBOLS

TP1 TEST PIT NUMBER AND APPROXIMATE LOCATION

GEOTECHNICAL ENGINEERING STUDY
PROPOSED HOUSING DEVELOPMENT
323 WEST 1ST STREET, SALIDA, CO

TEST PIT LOCATION PLAN

FIGURE: 1

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TEST PIT LOG NUMBER TP1

PROJECT NAME	PROJECT LOCATION			PROJECT NUMBER
GEOTECHNICAL ENGINEERING STUDY PROPOSED HOUSING DEVELOPMENT	323 WEST 1ST STREET, SALIDA, CO			20-464
SURFACE CONDITIONS	**COORDINATES**	**ELEVATION**	**TOTAL DEPTH**	**WATER DEPTH**
GRADED LOT	38° 32.2268' 105° 59.6207'	7069 FT	8 FT	+8 FT
METHOD OF EXCAVATION	**CONTRACTOR**	**DATE**	**GEOLOGIST**	**CHECKED BY**
CAT 308 EXCAVATOR	Y&K EXCAVATION	12/21/20	STEFAN WHITING	FRANK BLOCK

SAMPLE TYPE & NUMBER	PENETROMETER BLOW COUNTS	DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION OF MATERIAL
			MISCELLANIOUS MANMADE FILL, BROWN, LOOSE, VARIOUS DEBRIS CONSISTING OF WOOD, BRICK AND LUMBER, DRY-MOIST.
	50/12" (N=8)	2	GRAVELLY SAND WITH COBBLE AND SILT (SM), BROWN, DENSE TO VERY DENSE, WELL GRADED, FINE GRAINED SAND, SUB-ROUNDED GRAVEL TO 3", SUB-ROUNDED COBBLE TO 12", TRACE ROUNDED BOULDERS TO 18", DRY-MOIST.
	100/3" (N=61)	4	BULK @ 4 FT +4 = 30.3%; LL = NV -200 = 13.5%; PI = NP WC = 5.3%
		6	
		8	END AT 8' (REFUSAL)
		10	
		12	
		14	

FIGURE 2

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TEST PIT LOG NUMBER TP2

PROJECT NAME	PROJECT LOCATION	PROJECT NUMBER
GEOTECHNICAL ENGINEERING STUDY PROPOSED HOUSING DEVELOPMENT	323 WEST 1ST STREET, HOWARD, CO	20-464

SURFACE CONDITIONS	COORDINATES	ELEVATION	TOTAL DEPTH	WATER DEPTH
GRADED LOT	38° 32.2411' 105° 59.6052'	7069 FT	8 FT	+8 FT

METHOD OF EXCAVATION	CONTRACTOR	DATE	GEOLOGIST	CHECKED BY
CAT 308 EXCAVATOR	Y&K EXCAVATION	12/21/20	STEFAN WHITING	FRANK BLOCK

SAMPLE TYPE & NUMBER	PENETROMETER BLOW COUNTS	DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION OF MATERIAL
		0	MISCILANIOUS MANMADE FILL, BROWN, LOOSE, VARIOUS DEBRIS CONSISTING OF WOOD, BRICK AND LUMBER, DRY-MOIST.
	95/12" (N=15)	2	GRAVELLY SAND WITH COBBLE AND SILT (SM), LIGHT BROWN, MEDIUM DENSE, WELL GRADED FINE GRAINED SAND, SUB-ROUNDED GRAVEL TO 3", SUB-ROUNDED COBBLE TO 12", DRY-MOIST.
	48/12" (N=7)	4	
		6	
		8	END AT 8' (REFUSAL)
		10	
		12	
		14	

FIGURE 3

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TEST PIT LOG NUMBER TP3

PROJECT NAME	PROJECT LOCATION			PROJECT NUMBER
GEOTECHNICAL ENGINEERING STUDY PROPOSED HOUSING DEVELOPMENT	323 WEST 1ST STREET, HOWARD, CO			20-464
SURFACE CONDITIONS	**COORDINATES**	**ELEVATION**	**TOTAL DEPTH**	**WATER DEPTH**
GRADED LOT	38° 32.2445' 105° 59.6173'	7070 FT	8 FT	+8 FT
METHOD OF EXCAVATION	**CONTRACTOR**	**DATE**	**GEOLOGIST**	**CHECKED BY**
CAT 308 EXCAVATOR	Y&K EXCAVATION	12/21/20	STEFAN WHITING	FRANK BLOCK

SAMPLE TYPE & NUMBER	PENETROMETER BLOW COUNTS	DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION OF MATERIAL
	25/12" (N=4)	2	MISCILANIOUS MANMADE FILL, BROWN, LOOSE, VARIOUS DEBRIS CONSISTING OF WOOD, BRICK AND LUMBER, DRY-MOIST.
	100/5" (N=37)	4	GRAVELLY SAND WITH COBBLE AND SILT (SM), BROWN, DENSE, WELL GRADED FINE GRAINED SAND, SUB-ROUNDED GRAVEL TO 3", SUB-ROUNDED COBBLE TO 12", TRACE ROUNDED BOULDERS TO 18", DRY-MOIST.
		6	
		8	END AT 8' (REFUSAL)
		10	
		12	
		14	

FIGURE 4

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TEST PIT LOG NUMBER TP4

PROJECT NAME	PROJECT LOCATION			PROJECT NUMBER
GEOTECHNICAL ENGINEERING STUDY PROPOSED HOUSING DEVELOPMENT	323 WEST 1ST STREET, HOWARD, CO			20-464
SURFACE CONDITIONS	**COORDINATES**	**ELEVATION**	**TOTAL DEPTH**	**WATER DEPTH**
GRADED LOT	38° 32.2371' 105° 59.6291'	7070 FT	8 FT	+8 FT
METHOD OF EXCAVATION	**CONTRACTOR**	**DATE**	**GEOLOGIST**	**CHECKED BY**
CAT 308 EXCAVATOR	Y&K EXCAVATION	12/21/20	STEFAN WHITING	FRANK BLOCK

SAMPLE TYPE & NUMBER	PENETROMETER BLOW COUNTS	DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION OF MATERIAL
	100/11" (N=17)	2	MISCILANIOUS MANMADE FILL, BROWN, MEDIUM DENSE, VARIOUS DEBRIS CONSISTING OF WOOD, BRICK AND LUMBER, DRY-MOIST.
	100/5" (N=37)	4	GRAVELLY SAND WITH COBBLE AND SILT (SM), LIGHT BROWN, DENSE, WELL GRADED, FINE GRAINED SAND, SUB-ROUNDED GRAVEL TO 3", SUB-ROUNDED COBBLE TO 12", DRY-MOIST.
		6	
		8	END AT 8' (REFUSAL)
		10	
		12	
		14	

FIGURE 5

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TEST PIT LOG NUMBER TP5

PROJECT NAME	PROJECT LOCATION			PROJECT NUMBER
GEOTECHNICAL ENGINEERING STUDY PROPOSED HOUSING DEVELOPMENT	323 WEST 1ST STREET, HOWARD, CO			20-464
SURFACE CONDITIONS	**COORDINATES**	**ELEVATION**	**TOTAL DEPTH**	**WATER DEPTH**
GRADED LOT	38° 32.2565' 105° 59.6372'	7071 FT	8 FT	+8 FT
METHOD OF EXCAVATION	**CONTRACTOR**	**DATE**	**GEOLOGIST**	**CHECKED BY**
CAT 308 EXCAVATOR	Y&K EXCAVATION	12/21/20	STEFAN WHITING	FRANK BLOCK

SAMPLE TYPE & NUMBER	PENETROMETER BLOW COUNTS	DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION OF MATERIAL
		0	MISCILANIOUS MANMADE FILL, BROWN, MEDIUM DENSE, VARIOUS DEBRIS CONSISTING OF WOOD, BRICK AND LUMBER, DRY-MOIST.
	100/7" (N=26)	2	SANDY GRAVEL WITH COBBLE AND (GW), LIGHT BROWN, MEDIUM DENSE, WELL GRADED, FINE GRAINED SAND, SUB-ROUNDED GRAVEL TO 3", SUB-ROUNDED COBBLE TO 10", DRY-MOIST.
	100/8" (N=23)	4	
		6	
		8	END AT 8' (REFUSAL)
		10	
		12	
		14	

FIGURE 6

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LEGEND AND NOTES

PARTICLE SIZE IDENTIFICATION

Clay - Particles finer than 0.005 millimeters.

Silt - Particles finer than 0.074 millimeters and larger than 0.005 millimeters.

Sand - Particles finer than No. 4 Sieve and larger than the No. 200 Sieve .

Gravel - From 1/4-inch to 3 inches in diameter.

Cobble - From 3 to 12 inches in diameter.

Boulder - Larger than 12 inches in diameter.

SOIL DESCRIPTION MODIFIERS

Trace - Represents 0 to 5 percent by weight.

With (Coarse Grained Material) - Represents 15 to 29 percent by weight.

With (Fine Grained Material) - Represents 5 to 12 percent by weight.

NOTES

100/6" - (N=15) Indicates the number of blows required to drive a 5/8-inch penetrometer into the various strata with blows from a 10-pound hammer falling 12 inches. Number in parenthesis represents our calculated N-Value.

— — — — Dashed line between materials shown on the test pit logs are approximate and the transitions may be gradual.

DATE ▼ Groundwater level and the date of measurement.

The exploratory test pits were located based on the features shown on site plan.

Test pits are drawn to depth.

The exploratory test pit locations and elevations should be considered accurate only to the degree implied by the method used.

LABORATORY TEST RESULTS

+4 = Percent retained on No. 4 sieve;
-200 = Percentage passing the No. 200 sieve;
LL = Liquid Limit;
PI = Plasticity Index;
NP = Non-plastic;
MC = Moisture Content (%);
WSS = Water Soluble Sulfates (ppm);
DD = Dry Density (pcf);

FIGURE: 7

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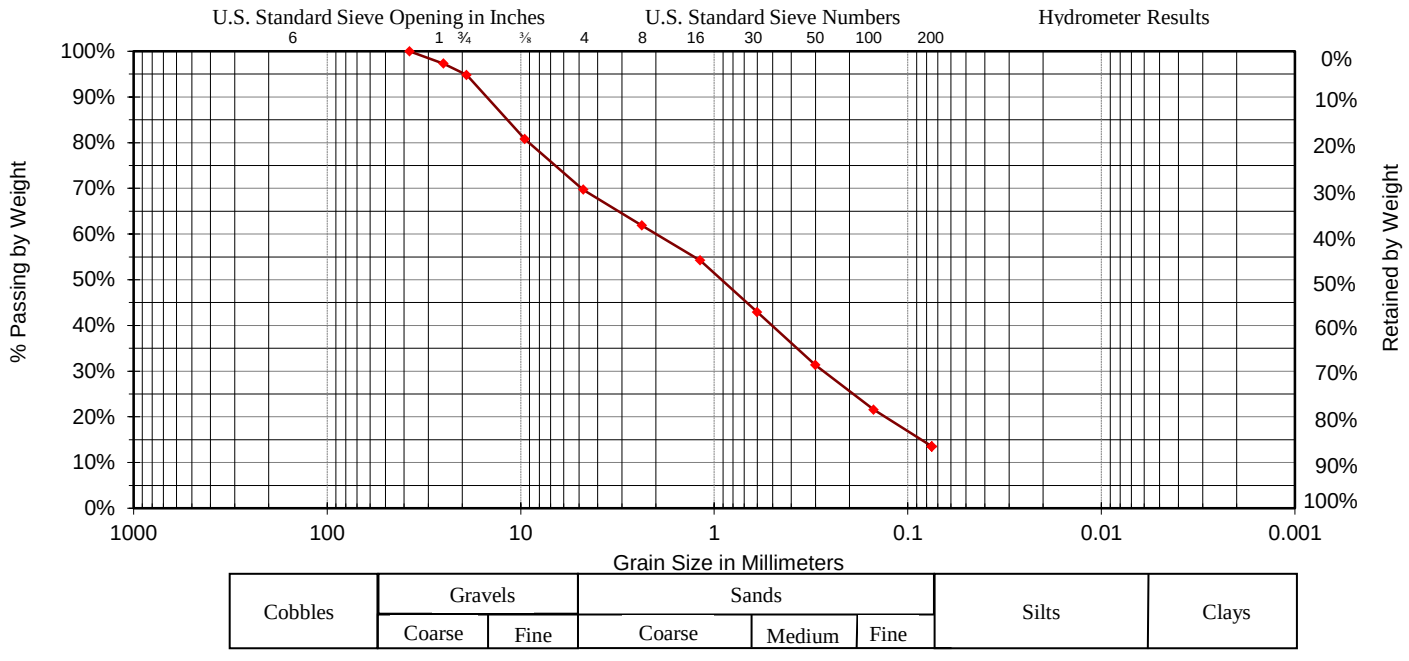
Gradation Test Results
ASTM C136



Date :	12/28/20	D_{10} = 0.06	**USCS Classification (ASTM D2487)**	**Gravel**
Sample #:	1	D_{30} = 0.28	SM, Silty Sand with Gravel	30.3%
Sample Use:	Classification	D_{60} = 2.08	**AASHTO Classification**	**Sand**
Source:	Test Pit	C_C = 0.68	A-1-b	56.2%
Client:	Paul Inge	$C_{U=}$ 37.37	**Atterberg Classification**	**Silt & Clay**
Project Location:	Salida, CO	Liquid Limit= NV	NP, Non-Plastic	13.5%
Test Pit #:	1	Plastic Limit= NP	**Water Soluble Sulfates**	**Moisture Content**
Depth:	4 Feet	Plasticity Index= NP	N/A	5.3%

Coarse Section

Sieve Size US (in.)	Sieve Size Metric (mm)	Cumulative Percent Retained	Cumulative Percent Passing	Specs Max	Specs Min
1.50"	37.50	0%	100%		
1.00"	25.00	3%	97%		
3/4"	19.00	5%	95%		
3/8"	9.50	19%	81%		
#4	4.75	30%	70%		

Fines Section

Sieve Size US (in.)	Sieve Size Metric (mm)	Cumulative Percent Retained	Cumulative Percent Passing	Specs Max	Specs Min
#8	2.360	38%	62%		
#16	1.180	46%	54%		
#30	0.600	57%	43%		
#50	0.300	69%	31%		
#100	0.150	78%	22%		
#200	0.075	86.5%	13.5%		

Project Name: 323 W 1st Street	Project Number: 20-464	Figure: 8

1537 G Street
Salida, CO 81201
(719)539-2312
Fax(719)530-9111

MOUNTAIN
ENGINEERING AND TESTING, INC.

2035 1/2 Grande Avenue
Monte Vista, CO 81144
(719)628-2069

Appendix A
General Engineered Fill Recommendations

A. Clearing and Grubbing
    a. Areas where excavation or fill placement will be undertaken shall be cleared of all trees, stumps, roots, brush, rubbish, organic soil, or other objectionable matter as determined by the Soil Engineer. Organic soil which is suitable for topsoil shall be stockpiled for later use in landscaping,

B. Preparation of Area to be Filled
    a. Scarification: After vegetation and other unsuitable material have been removed, the ground surface of the area to be filled shall be scarified to a depth of at least six (6) inches, and the ground surface is free from ruts, ridges and other uneven features.

    b. Benching: Where fills are placed upon hillsides or slopes where the slope ratio of the original ground exceeds 5 horizontal to 1 vertical (20%), the original ground slope shall be stepped or benched, and the surfaces of benches scarified to a depth of at least six (6) inches. Ground slopes which are flatter than 5 horizontal to 1 vertical shall be benched when considered necessary by the Soil Engineer.

    c. Subgrade Compaction: After the foundation for the fill has been scarified and benched as necessary, the ground surface shall be bladed until it is uniform size and brought to the proper moisture content for compaction. The ground surface shall then be compacted to the densities recommended in the geotechnical report.

    d. Existing Earth Fill: Any unsuitable existing fill on the site shall be removed until undisturbed native soil is exposed. The native soil shall then be scarified, prepared, and compacted and suitable structural fill shall be placed, in accordance with these guidelines.

C. Compacted Fill
    a. Fill Materials: Material for fill shall consist of suitable soil as identified in soil reports and/or approved by the Soil Engineer. The fill materials used shall be free of vegetation, frozen material, or other deleterious material. The fill shall no contain particles having a diameter greater than three (3) inches.

    b. Rock: The maximum rock size in fill materials shall be three (3) inches. Large rocks shall not be allowed to nest and voids between rocks shall be carefully filled with properly compacted soil. No large rocks will be permitted within twelve (12) inches of finished grade.

    c. Fill Placement: Fill shall be placed in uniform, level layers which do not exceed six (6) inches thickness after compaction. Each layer shall be placed, mixed, and spread in such a manner as to insure uniformity of each layer, and to prevent the formation of layers or zones of material which differ significantly in characteristics from the surrounding fill.

d. Moisture Control: Prior to compaction, the fill material shall be brought to its Proctor optimum moisture content, plus or minus 3% to insure even and uniform moisture conditions within the layer. The contractor may be required to add water to material in the excavation or borrow areas prior to transporting to the fill if, in the opinion of the Soil Engineer, proper moisture control cannot be obtained by adding water directly to the fill surface.

e. Compaction Procedure: After each layer has been spread, mixed, and brought to the proper moisture content, it shall be mechanically compacted to the recommended density. Other levels of compaction may also be specified by the Soil Engineer depending upon the type of soil encountered. Compaction of each layer shall be continuous over the entire area of the layer, and compaction equipment shall make sufficient passes to insure uniform and adequate compaction of each layer.

f. Compaction of Slopes: The face slopes of fills shall be properly compacted. Compaction on face slopes of fills may be accomplished progressively in increments of three (3) to five (5) feet in fill height, or may be done after the fill is brought to its total height.

D. Quality Control

a. Moisture Density Tests: Prior to commencement of fill operations, a Proctor test, shall be made for each soil material anticipated in the excavation and borrow areas. Additional Proctor tests shall be made during construction if different materials are encountered, or if soil mixtures on the fill warrant additional testing. Occasional single-point density tests shall be performed if necessary to verify the appropriateness of the Proctor values being used.

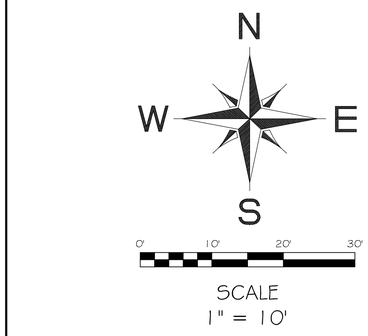
b. Density Testing: Field density tests shall be made by the Soil Engineer of the compaction of each layer of fill. At least one test shall be made for each layer of fill, and sufficient suitable compaction of each layer has been achieved. Density tests shall be taken in the compacted material below the disturbed surface. When these tests indicate that the density of any layer of fill or portion thereof has not been properly compacted, the particular layer or portion shall be reworked until the required density has been obtained.

E. Seasonal Limits

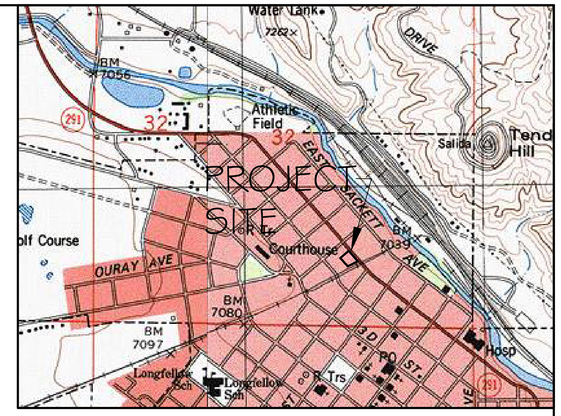
a. No fill material shall be placed, spread, or rolled while it is frozen or thawing, or during unfavorable weather conditions. When fill operations are interrupted by weather conditions, fill operations shall not be resumed until the moisture content and density of the previously placed fill are tested for density.

WARNER–HOMER TOPOGRAPHIC SURVEY

PART OF LOTS 4 & 5, ALL OF LOTS 6–9, BLOCK 19, CITY OF SALIDA, COLORADO 81201



SCALE
1" = 10'



VICINITY MAP
NOT TO SCALE

GENERAL NOTES

1) ELEVATIONS SHOWN HEREON BASED UPON N.A.V.D. 88
2) CONTOUR INTERVAL IS 1.0'
3) SITE BENCHMARK IS AN 1 1/2" ALUMINIUM CAP ON NO. 5 REBAR STAMPED L.S. 37937, HAVING AN ELEVATION OF 7059.64'
4) UNDERGROUND UTILITIES SHOWN AS MARKED ON THE SURFACE BY UTILITY NOTIFICATION CENTER OF COLORADO AND OTHERS. LANDMARK SURVEYING AND MAPPING ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF ANY UNDERGROUND UTILITIES DEPICTED HEREON.
5) THIS TOPOGRAPHIC SURVEY DOES NOT CONSTITUTE A BOUNDARY SURVEY.
6) FIELD WORK PERFROMED ON DECEMBER 21. SITE WAS SNOW COVERED AT TIME OF SURVEY. FEATURES MAY EXIST THAT WERE NOT VISIBLE AT THE TIME OF THE SURVEY.

LEGEND

- FOUND MONUMENT AS NOTED
- WV — WATER VALVE
- WM — WATER METER
- PP — POWER POLE
- FENCE
- OVERHEAD UTILITY
- CONCRETE

LAND SURVEYOR'S CERTIFICATE

I, SYDNEY A. SCHIEREN, A REGISTERED LAND SURVEYOR LICENSED TO PRACTICE IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THIS LAND SURVEY WAS PERFORMED UNDER MY DIRECT SUPERVISION, AND THAT THE PLAT REPRESENTS THE RESULTS OF SAID SURVEY AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

COLORADO LICENSED SYDNEY ARTHUR SCHIEREN 37937 PROFESSIONAL LAND SURVEYOR

SYDNEY A. SCHIEREN
COLORADO P.L.S. 37937

REVISED:
JOB # 20219
DATE: JANUARY 6, 2020
SHEET 1 OF 1

WARNER–HOMER TOPOGRAPHIC SURVEY

PART OF LOTS 4 & 5, ALL OF LOTS 6–9, BLOCK 19, CITY OF SALIDA, COLORADO 81201

LANDMARK SURVEYING & MAPPING
P.O. BOX 668 SALIDA, CO 81201
PH 719.539.4021 FAX 719.539.4031

Invoice

Remit payment to:

Central Colorado Title & Escrow
1055 East Highway 50
Salida, CO 81201

Billed to:

Wes Hill & Associates
129 E. U.S. Highway 50
Salida, CO 81201

Invoice number: 19-08153
Invoice date: January 24, 2019
Please pay before:
Our file number: 19-08153
Your reference number: 323 W 1ST/WARNER

Property:

323 West First Street
Salida, CO 81201
Chaffee County

Brief legal: PT LOTS 4 & 5 ALL LOTS 6-9 AND PT VAC ALLEY BLK 19 SALIDA

DESCRIPTION	AMOUNT
Owner's Policy (Coverage $900,000.00)	1,295.00
Loan Policy (Coverage $687,000.00)	150.00
CO-130 (Extended Coverage)	85.00
Tax Certificate	10.00
Invoice total amount due:	$ 1,540.00

THIS INVOICE IS FOR INFORMATIONAL PURPOSES ONLY. THESE ITEMS WILL BE COLLECTED AT CLOSING FROM BUYER OR SELLER DEPENDING ON THE TERMS OF THE EXECUTED PURCHASE CONTRACT.

NOTES:
Owners Policy Reissue Rate

First American Title™	ALTA Commitment for Title Insurance
	ISSUED BY **First American Title Insurance Company**
Schedule A	

Transaction Identification Data for reference only:

Issuing Agent: Brett Eakins
Issuing Office: Central Colorado Title & Escrow
Issuing Office's ALTA® Registry ID: 1076574
Loan ID No.:
Commitment No.: 19-08153
Issuing Office File No.: 19-08153
Property Address: 323 West First Street, Salida, CO 81201

SCHEDULE A

1. Commitment Date: January 11, 2019 at 07:45 AM

2. Policy or Policies to be issued:

   (a) ☒ ALTA Owners Policy (06/17/06)
   Proposed Insured: Eric Warner and Kristin Homer
   Proposed Policy Amount: $900,000.00

   (b) ☒ ALTA Loan Policy (06/17/06)
   Proposed Insured: To Be Determined, its successors and/or assigns as their respective interests may appear.
   Proposed Policy Amount: $687,000.00

3. The estate or interest in the Land described or referred to in this Commitment is Fee Simple.

4. The Title is, at the Commitment Date, vested in:

   323 W 1st, LLC, a Colorado limited liability company

5. The Land is described as follows:

   SEE SCHEDULE C ATTACHED HERETO

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by First American Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I—Requirements; Schedule B, Part II—Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

First American Title™	ALTA Commitment for Title Insurance
	ISSUED BY **First American Title Insurance Company**
Schedule BI & BII	

Commitment No: 19-08153

SCHEDULE B, PART I

Requirements

All of the following Requirements must be met:

1. The Proposed Insured must notify the Company in writing of the name of any party not referred to in this Commitment who will obtain an interest in the Land or who will make a loan on the Land. The Company may then make additional Requirements or Exceptions.

2. Pay the agreed amount for the estate or interest to be insured.

3. Pay the premiums, fees, and charges for the Policy to the Company.

4. Documents satisfactory to the Company that convey the Title or create the Mortgage to be insured, or both, must be properly authorized, executed, delivered, and recorded in the Public Records.

5. Payment of all taxes and assessments now due and payable as shown on a certificate of taxes due from the County Treasurer or the County Treasurer's Authorized Agent.

6. Evidence that all assessments for common expenses, if any, have been paid.

7. Final Affidavit and Agreement executed by Owners and/or Purchasers must be provided to the Company

8. Warranty Deed sufficient to convey the fee simple estate or interest in the land described or referred to herein, to the Proposed Insured, Schedule A, Item 2A.

9. Deed of Trust sufficient to mortgage the fee simple estate or interest in the land described or referred to herein, to the Proposed Insured, Schedule A, Item 2B.

10. Deed from RJPA Holdings, LLC to 323 W 1st, LLC, a Colorado limited liability company, conveying that portion of subject property described in Quit Claim Deed recorded July 24, 2015 as Reception No. 421429.

11. Please be advised that our search did not disclose any open Deeds of Trust of Record. If you have knowledge of an outstanding obligation, please contact us immediately for further review prior to closing.

12. Recorded Statement of Authority signed by the member (s) of 323 W 1st, LLC, authorized to transact business on behalf of the company.

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Schedule BI & BII (Cont.)

13. A survey in form, content and certification acceptable to the Company as the basis for issuing endorsement Form 110.1, in connection with the Owner's policy to be issued hereunder.

    NOTE: Upon issuance of the policy (following satisfaction of all requirements), exceptions identified in Schedule B.2 as items 1 through 4 will be deleted or insured over and, upon proof of payment of taxes and assessments due and payable, exception 5 will be revised to read: Taxes and assessments for the year 2019 and subsequent years, a lien not yet due and payable.

Commitment No.: 19-08153

SCHEDULE B, PART II

Exceptions

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

The Policy will not insure against loss or damage resulting from the terms and provisions of any lease or easement identified in Schedule A, and will include the following Exceptions unless cleared to the satisfaction of the Company:

1. Any facts, rights, interests or claims which are not shown by the Public Records, but which could be ascertained by an inspection of the Land or by making inquiry of persons in possession thereof.

2. Easements, or claims of easements, not shown by the Public Records.

3. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, and any facts which a correct land survey and inspection of the Land would disclose, and which are not shown by the Public Records.

4. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown in the Public Records.

5. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I—Requirements are met.

   Note: Exception number 5. will be removed from the policy provided the Company conducts the closing and settlement service for the transaction identified in the commitment

6. Any and all unpaid taxes, assessments and unredeemed tax sales.

7. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof.

8. Any water rights, claims of title to water, in, on or under the Land.

Schedule BI & BII (Cont.)

9. Subject to any vested and accrued water rights for mining, agricultural, manufacturing or other purposes, and rights to ditches and reservoirs used in connection with such water rights as may be recognized and acknowledged by the local customs, laws and decisions of Court and also subject to the right of the proprietor of a vein or lode to extract and remove his ore therefrom, should the same be found to penetrate or intersect the premises hereby granted, as provided by law, in U.S. Patent issued February 12, 1881 and recorded August 4, 1881 in Book 19 at Page 130.

10. NOTE: The following notices pursuant to CRS 9-1.5-103 concerning underground facilities have been filed with the Clerk and Recorder. These statements are general and do not necessarily give notice of underground facilities within the subject property:
a) Mountain Bell Telephone Company - filed October 2, 1981, Reception No. 211211;
b) Public Service Company of Colorado - filed November 2, 1981, Reception No. 211929;
c) Western Slope Gas Company - December 11, 1981, Reception No. 212569 and filed May 24, 1985, Reception No. 234357; (Company name amended to "Western Gas Supply Company" by certificates recorded June 27, 1988 in Book 497 at Page 103); merged with Public Service Company of Colorado per instrument recorded January 25, 1993 in Book 531 at Page 694.
d) Greeley Gas Company - filed November 18, 1981, at Reception No. 212196.
e) Letter from Utility Notification Center of Colorado disclosing local facilities access through "One Call System" recorded September 14, 1988 in Book 498 at Page 950.

11. Any existing leases or tenancies.

First American Title™	ALTA Commitment for Title Insurance
	ISSUED BY **First American Title Insurance Company**

Schedule C

File No.: 19-08153

The Land referred to herein below is situated in the County of Chaffee, State of Colorado, and is described as follows:

Lots No. 6, 7, 8 and 9
Block No. 19
City of Salida
Chaffee County, Colorado
and
Fractional Lots Four (4) and Five (5) in Block 19 of the City of Salida and a strip of land between said Block 19 and the right-of-way of the Denver and Rio Grande Western Railroad (Monarch branch) all of which is more particularly described as a Tract of land located within the City of Salida, Chaffee County, Colorado and being part of fractional Block No. 19 of Original Salida and part of the adjoining railroad reservation land being described as follows:
Beginning at the common corner of Lots 5 and 6 of said Block No. 19 located on First Street;
Thence South 48°48'24" West along the common lot line of said Lots 5 and 6 for a distance of 150.00 feet to the Northeasterly alley boundary of said Block No. 19;
Thence South 41°11'36" East along said Northeasterly alley boundary 53.76 feet to the Northerly boundary of the Denver and Rio Grande Western Railroad - Monarch Branch;
Thence North 63°13'57" East along said railroad boundary 154.88 feet to the Southwesterly boundary of said First Street;
Thence North 41°11'36" West along said street boundary 92.34 feet to the point of beginning.

TOGETHER WITH
THAT PORTION OF THE FOLLOWING DESCRIBED ALLEY LOCATED WITHIN BLOCK 19, IN THE CITY OF SALIDA, CHAFFEE COUNTY, COLORADO, THAT ABUTS LOTS 5,6,7, 8 AND 9, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE NORTHEASTERLY RIGHT-OF-WAY OF SAID ALLEY IN BLOCK 19 AND THE SOUTHEASTERLY BOUNDARY OF SAID BLOCK 19, FROM WHENCE THE INTERSECTION OF SAID SOUTHEASTERLY BOUNDARY OF BLOCK 19 AND THE NORTHEASTERLY RIGHT-OF-WAY OF SECOND STREET BEARS SOUTH 60°24'50" WEST, A DISTANCE OF 178.58 FEET;

THENCE SOUTH 60°24'50" WEST ALONG SAID SOUTHEASTERLY BOUNDARY OF BLOCK 19, A DISTANCE OF 2.69 FEET;

THENCE NORTH 40°46'31" WEST, A DISTANCE OF 215.34 FEET TO THE SOUTHEASTERLY RIGHTOF-WAY OF I STREET;

THENCE NORTH 49°13'29" EAST ALONG SAID RIGHT-OF-WAY OF I STREET, A DISTANCE OF 2.42 FEET TO SAID NORTHEASTERLY RIGHT-OF-WAY OF THE ALLEY WITHIN BLOCK 19;

THENCE SOUTH 40°49'58" EAST ALONG SAID NORTHEASTERLY ALLEY RIGHT-OF-WAY, A DISTANCE OF 215.86 FEET TO THE POINT OF BEGINNING.

>

First American Title™	ALTA Commitment for Title Insurance
	ISSUED BY **First American Title Insurance Company**
Commitment	

COMMITMENT FOR TITLE INSURANCE

Issued By

FIRST AMERICAN TITLE INSURANCE COMPANY

NOTICE

IMPORTANT—READ CAREFULLY: THIS COMMITMENT IS AN OFFER TO ISSUE ONE OR MORE TITLE INSURANCE POLICIES. ALL CLAIMS OR REMEDIES SOUGHT AGAINST THE COMPANY INVOLVING THE CONTENT OF THIS COMMITMENT OR THE POLICY MUST BE BASED SOLELY IN CONTRACT.

THIS COMMITMENT IS NOT AN ABSTRACT OF TITLE, REPORT OF THE CONDITION OF TITLE, LEGAL OPINION, OPINION OF TITLE, OR OTHER REPRESENTATION OF THE STATUS OF TITLE. THE PROCEDURES USED BY THE COMPANY TO DETERMINE INSURABILITY OF THE TITLE, INCLUDING ANY SEARCH AND EXAMINATION, ARE PROPRIETARY TO THE COMPANY, WERE PERFORMED SOLELY FOR THE BENEFIT OF THE COMPANY, AND CREATE NO EXTRACONTRACTUAL LIABILITY TO ANY PERSON, INCLUDING A PROPOSED INSURED.

THE COMPANY'S OBLIGATION UNDER THIS COMMITMENT IS TO ISSUE A POLICY TO A PROPOSED INSURED IDENTIFIED IN SCHEDULE A IN ACCORDANCE WITH THE TERMS AND PROVISIONS OF THIS COMMITMENT. THE COMPANY HAS NO LIABILITY OR OBLIGATION INVOLVING THE CONTENT OF THIS COMMITMENT TO ANY OTHER PERSON.

COMMITMENT TO ISSUE POLICY

Subject to the Notice; Schedule B, Part I—Requirements; Schedule B, Part II—Exceptions; and the Commitment Conditions, ***First American Title Insurance Company***, a Nebraska Corporation (the "Company"), commits to issue the Policy according to the terms and provisions of this Commitment. This Commitment is effective as of the Commitment Date shown in Schedule A for each Policy described in Schedule A, only when the Company has entered in Schedule A both the specified dollar amount as the Proposed Policy Amount and the name of the Proposed Insured.

If all of the Schedule B, Part I—Requirements have not been met within six months after the Commitment Date, this Commitment terminates and the Company's liability and obligation end.

First American Title Insurance Company

Dennis J. Gilmore, President

Jeffrey S. Robinson, Secretary

Central Colorado Title & Escrow
1055 East Hwy 50
Salida, CO 81201
719.539.1001
719.539.1661 Fax
www.centralcoloradotitle.com

A Policy-Issuing Agent of First American Title Insurance Company

If this jacket was created electronically, it constitutes an original document.
This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by First American Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I—Requirements; Schedule B, Part II—Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

COMMITMENT CONDITIONS

1. **DEFINITIONS**
   (a) "Knowledge" or "Known": Actual or imputed knowledge, but not constructive notice imparted by the Public Records.
   (b) "Land": The land described in Schedule A and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways, or waterways, but this does not modify or limit the extent that a right of access to and from the Land is to be insured by the Policy.
   (c) "Mortgage": A mortgage, deed of trust, or other security instrument, including one evidenced by electronic means authorized by law.
   (d) "Policy": Each contract of title insurance, in a form adopted by the American Land Title Association, issued or to be issued by the Company pursuant to this Commitment.
   (e) "Proposed Insured": Each person identified in Schedule A as the Proposed Insured of each Policy to be issued pursuant to this Commitment.
   (f) "Proposed Policy Amount": Each dollar amount specified in Schedule A as the Proposed Policy Amount of each Policy to be issued pursuant to this Commitment.
   (g) "Public Records": Records established under state statutes at the Commitment Date for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge.
   (h) "Title": The estate or interest described in Schedule A.

2. If all of the Schedule B, Part I—Requirements have not been met within the time period specified in the Commitment to Issue Policy, this Commitment terminates and the Company's liability and obligation end.

3. The Company's liability and obligation is limited by and this Commitment is not valid without:
   (a) the Notice;
   (b) the Commitment to Issue Policy;
   (c) the Commitment Conditions;
   (d) Schedule A;
   (e) Schedule B, Part I—Requirements;
   (f) Schedule B, Part II—Exceptions; and
   (g) a counter-signature by the Company or its issuing agent that may be in electronic form.

4. **COMPANY'S RIGHT TO AMEND**
   The Company may amend this Commitment at any time. If the Company amends this Commitment to add a defect, lien, encumbrance, adverse claim, or other matter recorded in the Public Records prior to the Commitment Date, any liability of the Company is limited by Commitment Condition 5. The Company shall not be liable for any other amendment to this Commitment.

5. **LIMITATIONS OF LIABILITY**
   (a) The Company's liability under Commitment Condition 4 is limited to the Proposed Insured's actual expense incurred in the interval between the Company's delivery to the Proposed Insured of the Commitment and the delivery of the amended Commitment, resulting from the Proposed Insured's good faith reliance to:
      (i) comply with the Schedule B, Part I—Requirements;
      (ii) eliminate, with the Company's written consent, any Schedule B, Part II—Exceptions; or
      (iii) acquire the Title or create the Mortgage covered by this Commitment.
   (b) The Company shall not be liable under Commitment Condition 5(a) if the Proposed Insured requested the amendment or had Knowledge of the matter and did not notify the Company about it in writing.
   (c) The Company will only have liability under Commitment Condition 4 if the Proposed Insured would not have incurred the expense had the Commitment included the added matter when the Commitment was first delivered to the Proposed Insured.
   (d) The Company's liability shall not exceed the lesser of the Proposed Insured's actual expense incurred in good faith and described in Commitment Conditions 5(a)(i) through 5(a)(iii) or the Proposed Policy Amount.
   (e) The Company shall not be liable for the content of the Transaction Identification Data, if any.
   (f) In no event shall the Company be obligated to issue the Policy referred to in this Commitment unless all of the Schedule B, Part I—Requirements have been met to the satisfaction of the Company.

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by First American Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I—Requirements; Schedule B, Part II—Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

(g) In any event, the Company's liability is limited by the terms and provisions of the Policy.

6. LIABILITY OF THE COMPANY MUST BE BASED ON THIS COMMITMENT

(a) Only a Proposed Insured identified in Schedule A, and no other person, may make a claim under this Commitment.
(b) Any claim must be based in contract and must be restricted solely to the terms and provisions of this Commitment.
(c) Until the Policy is issued, this Commitment, as last revised, is the exclusive and entire agreement between the parties with respect to the subject matter of this Commitment and supersedes all prior commitment negotiations, representations, and proposals of any kind, whether written or oral, express or implied, relating to the subject matter of this Commitment.
(d) The deletion or modification of any Schedule B, Part II—Exception does not constitute an agreement or obligation to provide coverage beyond the terms and provisions of this Commitment or the Policy.
(e) Any amendment or endorsement to this Commitment must be in writing and authenticated by a person authorized by the Company.
(f) When the Policy is issued, all liability and obligation under this Commitment will end and the Company's only liability will be under the Policy.

7. IF THIS COMMITMENT HAS BEEN ISSUED BY AN ISSUING AGENT

The issuing agent is the Company's agent only for the limited purpose of issuing title insurance commitments and policies. The issuing agent is not the Company's agent for the purpose of providing closing or settlement services.

8. PRO-FORMA POLICY

The Company may provide, at the request of a Proposed Insured, a pro-forma policy illustrating the coverage that the Company may provide. A pro-forma policy neither reflects the status of Title at the time that the pro-forma policy is delivered to a Proposed Insured, nor is it a commitment to insure.

9. ARBITRATION

The Policy contains an arbitration clause. All arbitrable matters when the Proposed Policy Amount is $2,000,000 or less shall be arbitrated at the option of either the Company or the Proposed Insured as the exclusive remedy of the parties. A Proposed Insured may review a copy of the arbitration rules at http://www.alta.org/arbitration.

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by First American Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I—Requirements; Schedule B, Part II—Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

First American Title™

DISCLOSURE STATEMENT

Pursuant to C.R.S. 30-10-406(3)(a) all documents received for recording or filing in the Clerk and Recorder's office shall contain a top margin of at least one inch and a left, right and bottom margin of at least one-half of an inch. The Clerk and Recorder will refuse to record or file any document that does not conform to the requirements of this section.

NOTE: If this transaction includes a sale of the property and the price exceeds $100,000.00, the seller must comply with the disclosure/withholding provisions of C.R.S. 39-22-604.5 (Nonresident withholding).

NOTE: Colorado Division of Insurance Regulations 8-1-2 requires that "Every title insurance company shall be responsible to the proposed insured(s) subject to the terms and conditions of the title commitment, other than the effective date of the title commitment, for all matters which appear of record prior to the time of recording whenever the title insurance company, or its agent, conducts the closing and settlement service that is in conjunction with its issuance of an owner's policy of title insurance and is responsible for the recording and filing of legal documents resulting from the transaction which was closed.

Pursuant to C.R.S. 10-11-122, the company will not issue its owner's policy or owner's policies of title insurance contemplated by this commitment until it has been provided a Certificate of Taxes due or other equivalent documentation from the County Treasurer or the County Treasurer's authorized agent; or until the Proposed Insured has notified or instructed the company in writing to the contrary.

The subject property may be located in a special taxing district. A Certificate of Taxes due listing each taxing jurisdiction shall be obtained from the County Treasurer or the County Treasurer's authorized agent. Information regarding special districts and the boundaries of such districts may be obtained from the Board of County Commissioners, the County Clerk and Recorder, or the County Assessor.

NOTE: Pursuant to CRS 10-11-123, notice is hereby given:

This notice applies to owner's policy commitments containing a mineral severance instrument exception, or exceptions, in Schedule B, Section 2.

- **A. That there is recorded evidence that a mineral estate has been severed, leased, or otherwise conveyed from the surface estate and that there is a substantial likelihood that a third party holds some or all interest in oil, gas, other minerals, or geothermal energy in the property; and**
- **B. That such mineral estate may include the right to enter and use the property without the surface owner's permission.**

NOTE: Pursuant to Colorado Division of Insurance Regulations 8-1-2, Affirmative mechanic's lien protection for the Owner may be available (typically by deletion of Exception no. 4 of Schedule B, Section 2 of the Commitment from the Owner's Policy to be issued) upon compliance with the following conditions:

- **A. The land described in Schedule A of this commitment must be a single family residence which includes a condominium or townhouse unit.**
- **B. No labor or materials have been furnished by mechanics or material-men for purposes of construction on the land described in Schedule A of this Commitment within the past 6 months.**
- **C. The Company must receive an appropriate affidavit indemnifying the Company against un-filed mechanic's and material-men's liens.**
- **D. The Company must receive payment of the appropriate premium.**
- **E. If there has been construction, improvements or major repairs undertaken on the property to be purchased within six months prior to the Date of the Commitment, the requirements to obtain coverage for unrecorded liens will include: disclosure of certain construction information; financial information as to the seller, the builder and or the contractor; payment of the appropriate premium, fully executed Indemnity Agreements satisfactory to the company, and, any additional requirements as may be necessary after an examination of the aforesaid information by the Company.**

No coverage will be given under any circumstances for labor or material for which the insured has contracted for or agreed to pay.

NOTE: Pursuant to C.R.S. 38-35-125(2) no person or entity that provides closing and settlement services for a real estate transaction shall disburse funds as a part of such services until those funds have been received and are available for immediate withdrawal as a matter of right.

NOTE: C.R.S. 39-14-102 requires that a real property transfer declaration accompany any conveyance document presented for recordation in the State of Colorado. Said declaration shall be completed and signed by either the grantor or grantee.

NOTE: Pursuant to CRS 10-1-128(6)(a), It is unlawful to knowingly provide false, incomplete, or misleading facts or information to an insurance company for the purpose of defrauding or attempting to defraud the company. Penalties may include imprisonment, fines, denial of insurance and civil damages. Any insurance company or agent of an insurance company who knowingly provides false, incomplete, or misleading facts or information to a policyholder or claimant for the purpose of defrauding or attempting to defraud the policyholder or claimant with regard to a settlement or award payable from insurance proceeds shall be reported to the Colorado division of insurance within the department of regulatory agencies.

NOTE: Pursuant to Colorado Division of Insurance Regulations 8-1-3, notice is hereby given of the availability of an ALTA Closing Protection Letter which may, upon request, be provided to certain parties to the transaction identified in the commitment.

Nothing herein contained will be deemed to obligate the company to provide any of the coverages referred to herein unless the above conditions are fully satisfied.

First American Title™

Privacy Information

We Are Committed to Safeguarding Customer Information

In order to better serve your needs now and in the future, we may ask you to provide us with certain information. We understand that you may be concerned about what we will do with such information – particularly any personal or financial information. We agree that you have a right to know how we will utilize the personal information you provide to us. Therefore, together with our subsidiaries we have adopted this Privacy Policy to govern the use and handling of your personal information.

Applicability

This Privacy Policy governs our use of the information that you provide to us. It does not govern the manner in which we may use information we have obtained from any other source, such as information obtained from a public record or from another person or entity. First American has also adopted broader guidelines that govern our use of personal information regardless of its source. First American calls these guidelines its Fair Information Values.

Types of Information

Depending upon which of our services you are utilizing, the types of nonpublic personal information that we may collect include:

- Information we receive from you on applications, forms and in other communications to us, whether in writing, in person, by telephone or any other means;
- Information about your transactions with us, our affiliated companies, or others; and
- Information we receive from a consumer reporting agency.

Use of Information

We request information from you for our own legitimate business purposes and not for the benefit of any nonaffiliated party. Therefore, we will not release your information to nonaffiliated parties except: (1) as necessary for us to provide the product or service you have requested of us; or (2) as permitted by law. We may, however, store such information indefinitely, including the period after which any customer relationship has ceased. Such information may be used for any internal purpose, such as quality control efforts or customer analysis. We may also provide all of the types of nonpublic personal information listed above to one or more of our affiliated companies. Such affiliated companies include financial service providers, such as title insurers, property and casualty insurers, and trust and investment advisory companies, or companies involved in real estate services, such as appraisal companies, home warranty companies and escrow companies. Furthermore, we may also provide all the information we collect, as described above, to companies that perform marketing services on our behalf, on behalf of our affiliated companies or to other financial institutions with whom we or our affiliated companies have joint marketing agreements.

Former Customers

Even if you are no longer our customer, our Privacy Policy will continue to apply to you.

Confidentiality and Security

We will use our best efforts to ensure that no unauthorized parties have access to any of your information. We restrict access to nonpublic personal information about you to those individuals and entities who need to know that information to provide products or services to you. We will use our best efforts to train and oversee our employees and agents to ensure that your information will be handled responsibly and in accordance with this Privacy Policy and First American's Fair Information Values. We currently maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard your nonpublic personal information.

Information Obtained Through Our Web Site

First American Financial Corporation is sensitive to privacy issues on the Internet. We believe it is important you know how we treat the information about you we receive on the Internet.
In general, you can visit First American or its affiliates' Web sites on the World Wide Web without telling us who you are or revealing any information about yourself. Our Web servers collect the domain names, not the e-mail addresses, of visitors. This information is aggregated to measure the number of visits, average time spent on the site, pages viewed and similar information. First American uses this information to measure the use of our site and to develop ideas to improve the content of our site.
There are times, however, when we may need information from you, such as your name and email address. When information is needed, we will use our best efforts to let you know at the time of collection how we will use the personal information. Usually, the personal information we collect is used only by us to respond to your inquiry, process an order or allow you to access specific account/profile information. If you choose to share any personal information with us, we will only use it in accordance with the policies outlined above.

Business Relationships

First American Financial Corporation's site and its affiliates' sites may contain links to other Web sites. While we try to link only to sites that share our high standards and respect for privacy, we are not responsible for the content or the privacy practices employed by other sites.

Cookies

Some of First American's Web sites may make use of "cookie" technology to measure site activity and to customize information to your personal tastes. A cookie is an element of data that a Web site can send to your browser, which may then store the cookie on your hard drive.
FirstAm.com uses stored cookies. The goal of this technology is to better serve you when visiting our site, save you time when you are here and to provide you with a more meaningful and productive Web site experience.

Fair Information Values

Fairness We consider consumer expectations about their privacy in all our businesses. We only offer products and services that assure a favorable balance between consumer benefits and consumer privacy.
Public Record We believe that an open public record creates significant value for society, enhances consumer choice and creates consumer opportunity. We actively support an open public record and emphasize its importance and contribution to our economy.
Use We believe we should behave responsibly when we use information about a consumer in our business. We will obey the laws governing the collection, use and dissemination of data.
Accuracy We will take reasonable steps to help assure the accuracy of the data we collect, use and disseminate. Where possible, we will take reasonable steps to correct inaccurate information. When, as with the public record, we cannot correct inaccurate information, we will take all reasonable steps to assist consumers in identifying the source of the erroneous data so that the consumer can secure the required corrections.
Education We endeavor to educate the users of our products and services, our employees and others in our industry about the importance of consumer privacy. We will instruct our employees on our fair information values and on the responsible collection and use of data. We will encourage others in our industry to collect and use information in a responsible manner.
Security We will maintain appropriate facilities and systems to protect against unauthorized access to and corruption of the data we maintain.

JANUARY 17, 2022

DRAINAGE REPORT

RESIDENCES AT SALIDA BOTTLING COMPANY

BILL HUSSEY, PE
Crabtree Group Inc.
Salida, Colorado

Project #20037

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Contents

1 Introduction 1
2 Existing Conditions 1
3 Soils 1
4 Precipitation 1
5 Runoff Analysis 2
6 Conclusion 2

1 INTRODUCTION

Residences at Salida Bottling Company is a proposed development in the City of Salida, at the west corner of Highway 291 (1st Street) and the Monarch Spur Trail. Improvements to the site will include landscaping, pedestrian and vehicle access pavement, and buildings.

2 EXISTING CONDITIONS

The subject site is currently a parking lot with road base surface. Existing stormwater flow on site consists of sheet flow from southwest to northeast. There is no evidence of significant off-site generated stormwater runoff entering the site. Runoff generated on site currently discharges to Highway 291, which slopes down from northwest to southeast, and the Salida Ditch, which slopes down from southwest to northeast.

3 SOILS

Information for the on-site soils was obtained from the USDA Web Soil Survey (U.S. Department of Agriculture, n.d.). The soils consist of Dominson gravelly sandy loam, which is assigned to Hydrologic Soils Group A. Web Soil Survey data is included in Appendix A.

4 PRECIPITATION

Precipitation amounts for the Design Storms was obtained from the NOAA precipitation frequency estimates for the subject area. The Design Storms utilized in the analysis are summarized in 1 below.

TABLE 1

Storm Return Period (yr)	24-hour Rainfall Amount (in.)
2	1.34
5	1.64
10	1.89
25	2.26
50	2.55
100	2.85

5 RUNOFF ANALYSIS

The runoff Analysis was performed utilizing the methods described in the Natural Resources Conservation Service (NRCS) Technical Release #55 (TR-55), with a Type II storm distribution. Predevelopment peak site runoff for the 25-year, 24 hour is 0.33 cfs. Postdevelopment peak site runoff for the 25-year, 24 hour storm is 1.304 cfs.

Therefore, per TR-55 Figure 6-1, a minimum of 1,191 cubic feet of stormwater detention is needed to mitigate the additional runoff caused by development of the site. Surface detention will be provided per the civil engineering plans.

TR-55 calculations are included in Appendix C.

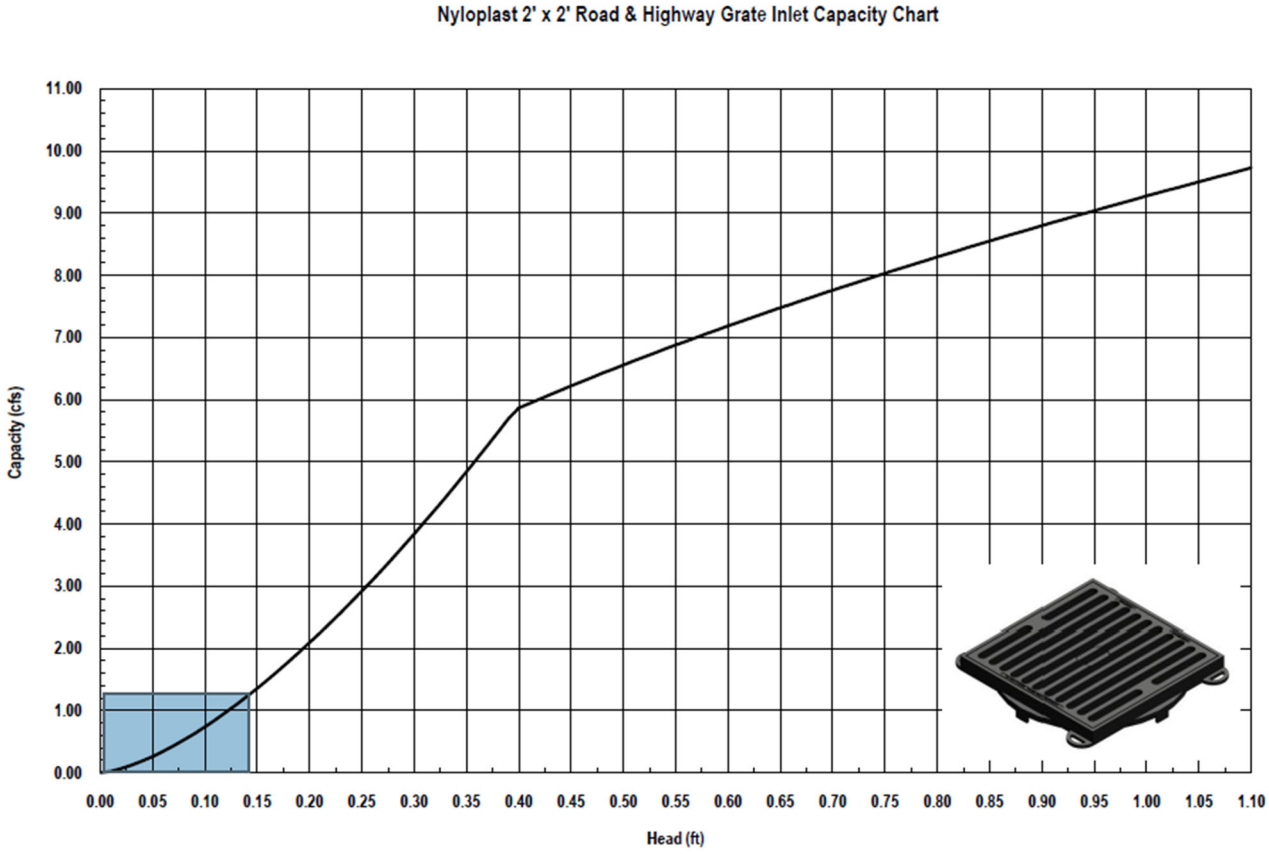
6 CONCLUSION

The development of the site is expected to increase the on-site generated stormwater flows after completion of construction. To mitigate this impact, a minimum of 1,191 cubic feet (CF) of on-site stormwater detention is incorporated in the site plan. Incorporation of the stormwater storage into the site design will mitigate the impact of the development to the stormwater flows in the area.

Since approximately half of the site impervious area is building roof, approximately half of the required detention was designed as downspout infiltration basins. Considering two downspouts per lot, a total volume (including rock) of 36.75 CF, and 40% voids in the drain rock, the total detention volume of the downspout infiltration basins is 470 CF. Downspout infiltration basins will have the added benefit of reducing ice buildup on the pavement during freeze/thaw cycles.

The remainder of the required detention, 700 CF, is provided at the low point of the private access drive. Dimensions are per the civil engineering plans, and 40% voids assumed in the drain rock.

Per the calculation in Appendix C, the 25-year, 24-hour storm will produce a maximum runoff of 1.3 cfs. Therefore, a 2’x2’ Nyloplast Highway Inlet Grate with 0.15’ sump is sufficient to accept the maximum runoff into the infiltration gallery at the bottom of the private access drive. Note that this is conservative because the site plan distributes detention among roof drain infiltration basins as well as the main infiltration basin.



Nyloplast
3130 Verona Avenue • Buford, GA 30518
(866) 888-8479 / (770) 932-2443 • Fax: (770) 932-2490

Finally, exfiltration from the perforated pipe in the main infiltration basin is calculated in Appendix D. It is sufficient to pass the 25-year, 24-hour peak flow.

This analysis assumes that the vehicle access lane is asphalt. If pervious pavers are installed, less detention will be required.

Note that the deepest infiltration area is 4’ deep. Per appendix A soil data, site soils infiltrate at 2 to 6 inches per hour under 1’ of head. 48 inches divided by 2 inches/hour equals 24 hours to completely infiltrate the detained stormwater.

Because the site is located at the bottom of the Salida Ditch watershed, it may be beneficial to detain only the 2 year storm on site for water quality purposes, and avoid adding to the peak flow of the Salida Ditch in larger storms.

APPENDIX A: SOILS REPORT

Soil Map—Chaffee-Lake Area, Colorado, Parts of Chaffee and Lake Counties

Map Scale: 1:579 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 5 10 20 30

Feet
0 25 50 100 150

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Chaffee-Lake Area, Colorado, Parts of Chaffee and Lake Counties
Survey Area Data: Version 14, Sep 2, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 18, 2020—May 21, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DoD	Dominson gravelly sandy loam, 1 to 9 percent slopes	0.6	100.0%
Totals for Area of Interest		**0.6**	**100.0%**

Chaffee-Lake Area, Colorado, Parts of Chaffee and Lake Counties

DoD—Dominson gravelly sandy loam, 1 to 9 percent slopes

Map Unit Setting

National map unit symbol: jq8d
Elevation: 7,200 to 8,800 feet
Mean annual precipitation: 11 to 16 inches
Frost-free period: 75 to 100 days
Farmland classification: Not prime farmland

Map Unit Composition

Dominson and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dominson

Setting

Landform: Alluvial fans, fan terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium and/or moderately coarse-textured gravelly outwash

Typical profile

H1 - 0 to 11 inches: gravelly sandy loam
H2 - 11 to 60 inches: very gravelly loamy sand

Properties and qualities

Slope: 1 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: Very low (about 2.9 inches)

Interpretive groups

Land capability classification (irrigated): 6s
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: R048AY316CO - Dry Mountain Outwash
Hydric soil rating: No

Minor Components

St. elmo

Percent of map unit:
Hydric soil rating: No

Data Source Information

Soil Survey Area: Chaffee-Lake Area, Colorado, Parts of Chaffee and Lake Counties
Survey Area Data: Version 14, Sep 2, 2021

APPENDIX B: NOAA PRECIPITATION ESTIMATES

NOAA Atlas 14, Volume 8, Version 2
Location name: Salida, Colorado, USA*
Latitude: 38.5373°, Longitude: -105.9937°
Elevation: 7059.85 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Michael Yekta, Geoffery Bonnin

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.176** (0.138-0.229)	**0.208** (0.163-0.271)	**0.277** (0.216-0.361)	**0.349** (0.271-0.458)	**0.471** (0.364-0.673)	**0.582** (0.434-0.835)	**0.709** (0.509-1.04)	**0.854** (0.586-1.29)	**1.07** (0.703-1.66)	**1.25** (0.792-1.94)
10-min	**0.257** (0.202-0.335)	**0.305** (0.239-0.396)	**0.405** (0.317-0.529)	**0.511** (0.397-0.671)	**0.689** (0.533-0.985)	**0.853** (0.636-1.22)	**1.04** (0.745-1.53)	**1.25** (0.858-1.89)	**1.57** (1.03-2.43)	**1.83** (1.16-2.84)
15-min	**0.314** (0.246-0.408)	**0.371** (0.291-0.483)	**0.494** (0.386-0.645)	**0.623** (0.484-0.818)	**0.841** (0.650-1.20)	**1.04** (0.775-1.49)	**1.27** (0.909-1.86)	**1.53** (1.05-2.31)	**1.91** (1.26-2.97)	**2.24** (1.41-3.47)
30-min	**0.398** (0.312-0.517)	**0.496** (0.389-0.645)	**0.683** (0.534-0.892)	**0.863** (0.670-1.13)	**1.15** (0.878-1.62)	**1.40** (1.04-1.99)	**1.67** (1.19-2.44)	**1.98** (1.35-2.97)	**2.42** (1.59-3.75)	**2.79** (1.77-4.33)
60-min	**0.461** (0.362-0.600)	**0.602** (0.472-0.783)	**0.850** (0.664-1.11)	**1.07** (0.834-1.41)	**1.41** (1.07-1.96)	**1.69** (1.24-2.37)	**1.99** (1.41-2.87)	**2.31** (1.57-3.44)	**2.76** (1.80-4.24)	**3.12** (1.98-4.84)
2-hr	**0.525** (0.417-0.674)	**0.708** (0.562-0.909)	**1.02** (0.805-1.31)	**1.29** (1.01-1.66)	**1.67** (1.27-2.27)	**1.98** (1.47-2.72)	**2.30** (1.64-3.25)	**2.63** (1.80-3.84)	**3.09** (2.04-4.66)	**3.45** (2.21-5.27)
3-hr	**0.574** (0.460-0.731)	**0.767** (0.613-0.977)	**1.09** (0.868-1.39)	**1.37** (1.08-1.75)	**1.76** (1.34-2.36)	**2.07** (1.54-2.82)	**2.39** (1.72-3.35)	**2.72** (1.88-3.93)	**3.17** (2.10-4.73)	**3.52** (2.27-5.33)
6-hr	**0.714** (0.579-0.896)	**0.905** (0.733-1.14)	**1.23** (0.989-1.55)	**1.50** (1.20-1.90)	**1.89** (1.46-2.50)	**2.19** (1.66-2.95)	**2.51** (1.83-3.46)	**2.84** (1.98-4.04)	**3.28** (2.21-4.82)	**3.63** (2.37-5.41)
12-hr	**0.929** (0.763-1.15)	**1.11** (0.908-1.37)	**1.41** (1.15-1.75)	**1.67** (1.35-2.08)	**2.04** (1.60-2.65)	**2.33** (1.79-3.09)	**2.64** (1.95-3.59)	**2.96** (2.10-4.15)	**3.40** (2.31-4.91)	**3.74** (2.48-5.49)
24-hr	**1.16** (0.966-1.42)	**1.34** (1.11-1.64)	**1.64** (1.36-2.01)	**1.90** (1.56-2.34)	**2.27** (1.80-2.90)	**2.56** (1.99-3.33)	**2.86** (2.14-3.82)	**3.18** (2.28-4.37)	**3.60** (2.49-5.12)	**3.94** (2.64-5.69)
2-day	**1.36** (1.14-1.63)	**1.57** (1.32-1.89)	**1.92** (1.61-2.32)	**2.22** (1.85-2.69)	**2.62** (2.11-3.29)	**2.93** (2.30-3.74)	**3.24** (2.46-4.25)	**3.56** (2.58-4.81)	**3.98** (2.77-5.54)	**4.30** (2.92-6.10)
3-day	**1.47** (1.25-1.75)	**1.71** (1.45-2.04)	**2.10** (1.77-2.51)	**2.42** (2.03-2.91)	**2.86** (2.31-3.55)	**3.19** (2.53-4.03)	**3.53** (2.69-4.58)	**3.87** (2.83-5.17)	**4.31** (3.03-5.95)	**4.65** (3.18-6.53)
4-day	**1.56** (1.33-1.85)	**1.81** (1.54-2.15)	**2.22** (1.89-2.64)	**2.56** (2.16-3.06)	**3.02** (2.46-3.73)	**3.38** (2.68-4.24)	**3.73** (2.86-4.81)	**4.09** (3.00-5.43)	**4.55** (3.21-6.24)	**4.91** (3.38-6.85)
7-day	**1.78** (1.54-2.09)	**2.05** (1.76-2.40)	**2.48** (2.13-2.92)	**2.84** (2.42-3.36)	**3.33** (2.74-4.07)	**3.72** (2.99-4.61)	**4.10** (3.18-5.22)	**4.49** (3.33-5.88)	**5.00** (3.57-6.76)	**5.39** (3.75-7.42)
10-day	**1.98** (1.72-2.31)	**2.27** (1.97-2.64)	**2.73** (2.36-3.18)	**3.11** (2.67-3.65)	**3.64** (3.01-4.40)	**4.04** (3.27-4.97)	**4.45** (3.48-5.62)	**4.86** (3.64-6.32)	**5.41** (3.89-7.24)	**5.82** (4.08-7.94)
20-day	**2.57** (2.26-2.95)	**2.94** (2.59-3.37)	**3.53** (3.10-4.07)	**4.02** (3.50-4.64)	**4.67** (3.92-5.55)	**5.17** (4.24-6.24)	**5.65** (4.47-7.01)	**6.14** (4.65-7.83)	**6.76** (4.92-8.89)	**7.23** (5.13-9.69)
30-day	**3.05** (2.71-3.47)	**3.50** (3.10-3.98)	**4.21** (3.72-4.80)	**4.78** (4.20-5.47)	**5.53** (4.67-6.49)	**6.09** (5.03-7.27)	**6.62** (5.28-8.11)	**7.15** (5.45-9.01)	**7.81** (5.72-10.1)	**8.28** (5.92-11.0)
45-day	**3.65** (3.27-4.11)	**4.18** (3.74-4.71)	**5.02** (4.47-5.67)	**5.68** (5.03-6.44)	**6.53** (5.55-7.57)	**7.14** (5.94-8.43)	**7.72** (6.20-9.34)	**8.27** (6.35-10.3)	**8.94** (6.60-11.5)	**9.41** (6.78-12.3)
60-day	**4.15** (3.74-4.64)	**4.75** (4.27-5.32)	**5.67** (5.08-6.37)	**6.39** (5.69-7.21)	**7.31** (6.24-8.40)	**7.96** (6.65-9.30)	**8.55** (6.90-10.3)	**9.11** (7.03-11.2)	**9.76** (7.24-12.4)	**10.2** (7.39-13.3)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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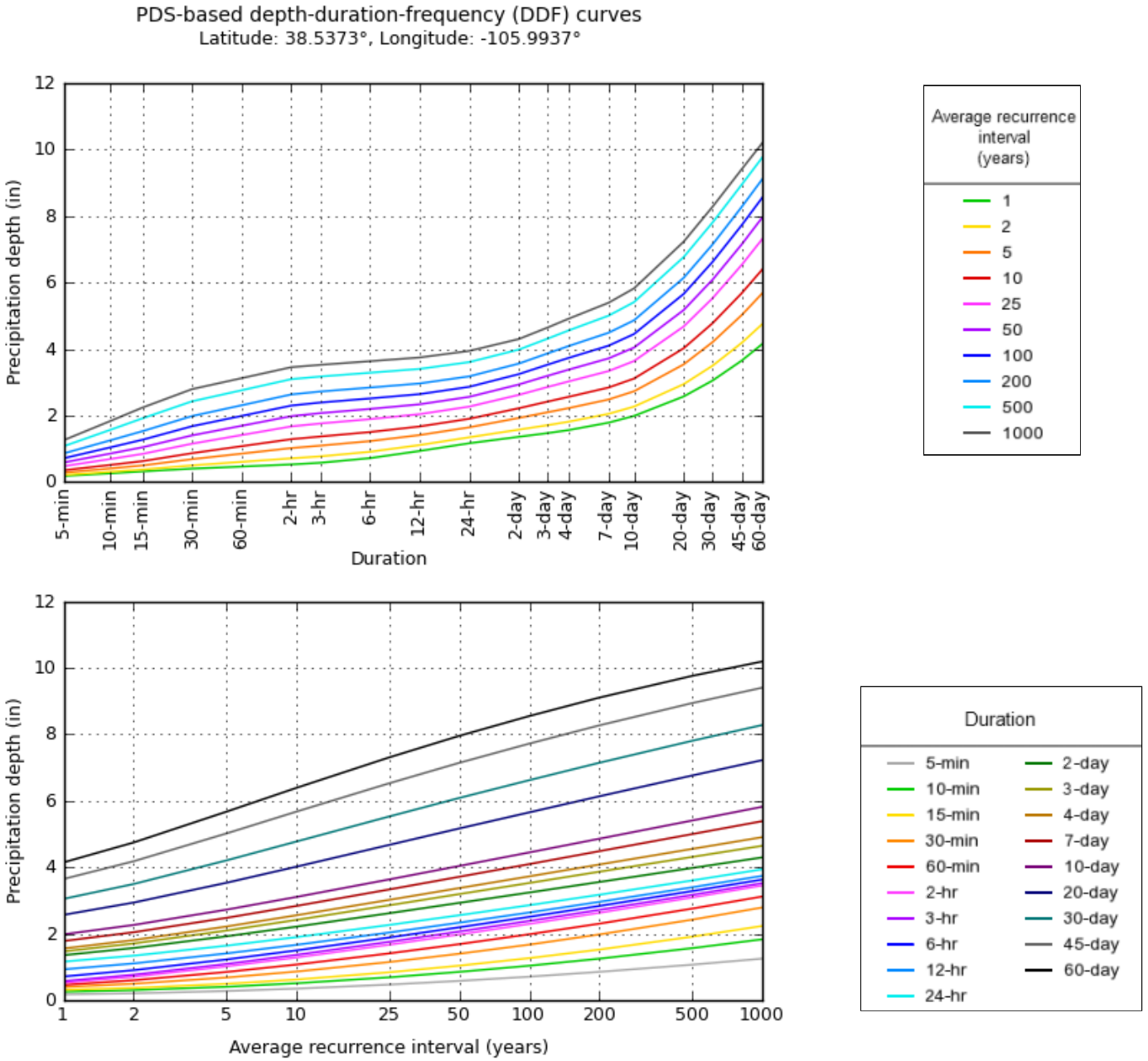
PF graphical



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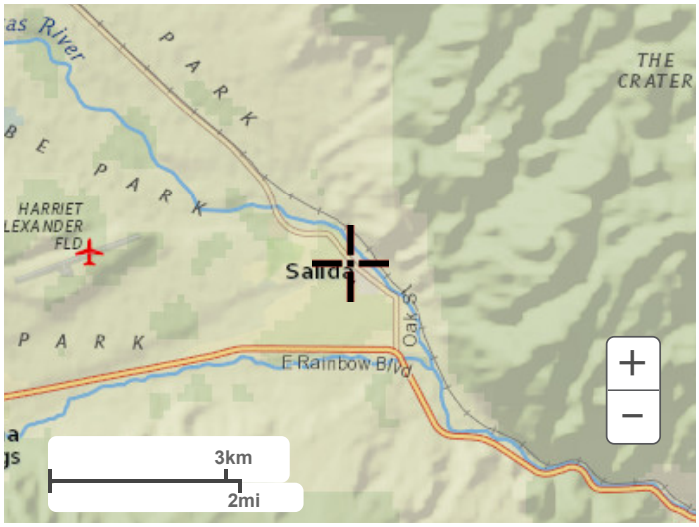
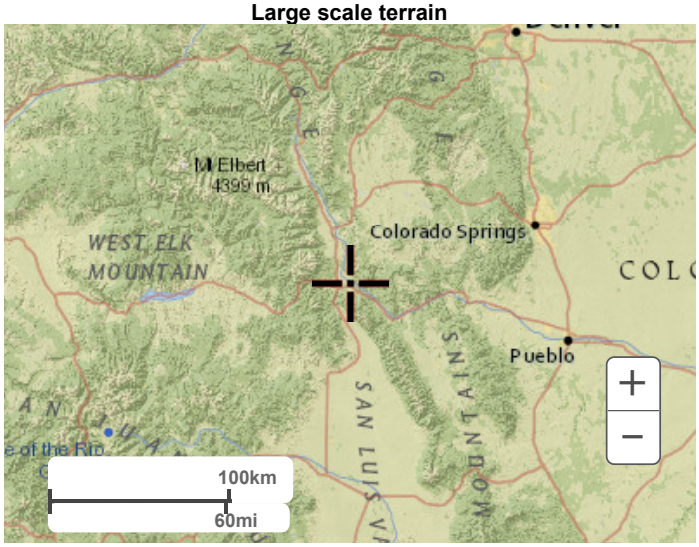
Maps & aerials

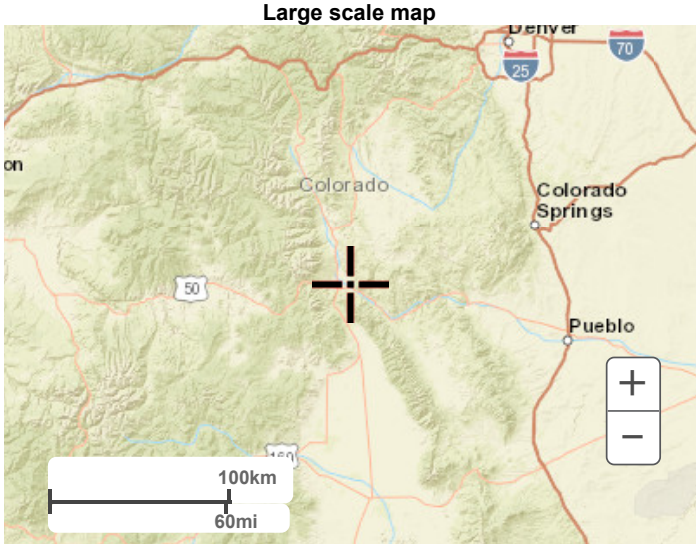
Small scale terrain



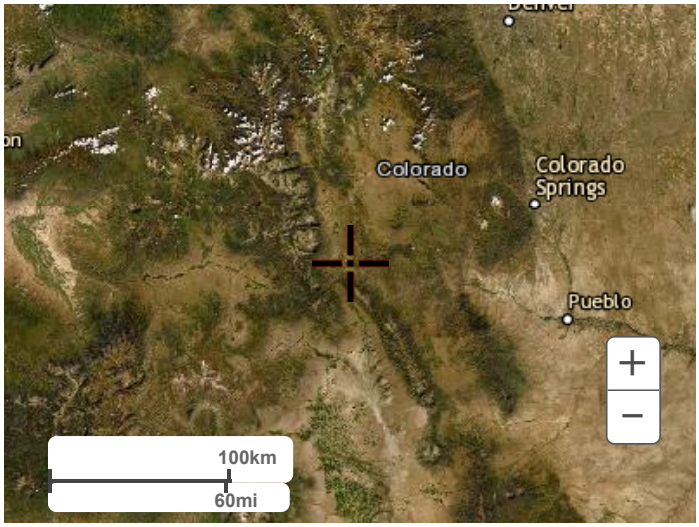
Large scale terrain



Large scale map



Large scale aerial



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National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

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APPENDIX C: HYDROLOGIC ANALYSIS

CRABTREE GROUP INC.
ENGINEERING SMART GROWTH™

325 D Street
Salida, CO 81201
(719) 539-1675
www.crabtreegroup.net

DRAINAGE CALCULATIONS

Project Name: **Residences at Salida Bottling Company**
Project #: 20037
Location: Salida, CO

Client Name: **Salida Bottling Company**
Client Address:
Client Phone #:

Prepared By: WBH Date: 1/17/2022
Checked by: Date:

Area Name:

Storm Return Period (yr)		24-hour Rainfall Amount (in.)
2		1.34
5		1.64
10		1.9
25		2.27
50		2.56
100		2.86

Source:

Rainfall Distribution: II

PRE-DEVELOPMENT RUNOFF CALCULATIONS

Pre-Developed Curve Number

Land Use Description	HSG	Curve No.	Area (acres)	Area (%)
Gravel Road/Parking Lot	A	76	0.60	100%
		Totals	**0.60**	**100%**

Weighted Curve Number **76**

Time to Concentration

Sheet Flow

Surface Cover	Length (ft)	Slope ($^{ft}/_{ft}$)	Manning's n	T_t (hrs)
Range (natural)	100	0.020	0.130	0.225

Shallow Flow

Surface Cover	Length (ft)	Slope ($^{ft}/_{ft}$)	Velocity Coefficient	T_t (hrs)
Unpaved	100	0.020	16.135	0.012

Channel Flow

Length (ft.)	Slope ($^{ft}/_{ft}$)	n-Value	Flow Area (ft^2)	Wetted Perimeter (ft)	Tt (hrs)

Total Travel Time **0.237**

Peak Discharge

Storm	2-yr	10-yr	25-yr	50-yr	100-yr
24-hr Precipitation (P)	1.34	1.9	2.27	2.56	2.86
Initial Abstraction (I_a)	0.632	0.632	0.632	0.632	0.632
I_a/P	0.471	0.332	0.278	0.247	0.221
Unit Peak Discharge (q_u)	386	597	630	649	666
Runoff (Q)	0.13	0.36	0.56	0.73	0.92
Peak Discharge (q_p)	**0.047**	**0.203**	**0.331**	**0.445**	**0.575**

POST-DEVELOPMENT RUNOFF CALCULATIONS

Post-Developed Curve Number

Land Use Description	HSG	Curve No.	Area (acres)	Area (%)
Impervious	A	98	0.52	86%
Open space (grass cover>75%)	A	39	0.08	14%
		Totals	**0.60**	**100%**

Weighted Curve Number **90**

Time to Concentration

Sheet Flow

Surface Cover	Length (ft)	Slope ($^{ft}/_{ft}$)	Manning's n	T_t (hrs)
Range (natural)	20	0.020	0.130	0.062

Shallow Flow

Surface Cover	Length (ft)	Slope ($^{ft}/_{ft}$)	Velocity Coefficient	T_t (hrs)

Channel Flow

Length (ft.)	Slope ($^{ft}/_{ft}$)	n-Value	Flow Area (ft^2)	Wetted Perimeter (ft)	Tt (hrs)
180	0.03	0.012	0.05	2.00	0.027

Total Travel Time (hrs) **0.089**

Peak Discharge

Storm	2-yr	10-yr	25-yr	50-yr	100-yr
24-hr Precipitation (P)	1.34	1.9	2.27	2.56	2.86
Initial Abstraction (I_a)	0.222	0.222	0.222	0.222	0.222
I_a/P	0.166	0.117	0.098	0.087	0.078
Unit Peak Discharge (q_u)	981	1,026	1,045	1,055	1,064
Runoff (Q)	0.56	1.01	1.33	1.58	1.86
Peak Discharge (q_p)	**0.517**	**0.974**	**1.304**	**1.573**	**1.858**

MINIMUM DETENTION CALCULATIONS

1. Data:

   Drainage area A_m= 0.0009 $mi.^2$

   Rainfall distribution II

		1st Stage	2nd Stage
2. Frequency	yr	2	25
3. Peak Inflow discharge q_i (from Post-Developed worksheet)	cfs	0.517	1.304
4. Peak outflow discharge q_p (from Pre-Developed worksheet)	cfs	0.047	0.331
5. Compute q_p/q_i		0.09	0.25
6. Vs/Vr ($V_s/V_r=C_0+C_1(q_0/q_i)+C_2(q_0/q_i)^2+C_3(q_0/q_i)^3$)		0.56	0.41
7. Runoff, Q (from Post-Developed worksheet)		0.56	1.33
8. Runoff Vol. V_r ($V_r=QA_m53.33$)	cu-ft	1,221	2,891
9. Storage vol, V_s	cu-ft	690	1,191
10. Maximum storage E_{max} (from plot)			

APPENDIX D: MAIN INFILTRATION BASIN PIPE EXFILTRATION

Infiltration basin pipe flow

Flow through an orifice

$$V = \sqrt{2gh}$$

$h = 1.5'$ is conservative, at the moment the infiltration basin is full

$$\sqrt{2 \cdot 32.2 \cdot 1.5} = 9.82 \text{ ft/s} = V$$

Area of $\frac{3}{8}$" hole: $0.000767 \text{ ft}^2 = A$

single hole: $Q = VA = 0.00753 \text{ cfs}$

$$\frac{1.3 \text{ cfs}}{0.00753 \frac{\text{cfs}}{\text{hole}}} = 173 \text{ holes, min.}$$

6" ASTM F758 pipe has (2) $\frac{3}{8}$" holes every 3 linear inches, or 8 holes per foot

$$\frac{173 \text{ holes}}{8 \frac{\text{holes}}{\text{ft}}} = 22 \text{ ft, min}$$