



PUBLIC NOTICE
WOODLAND PARK PLANNING COMMISSION
Thursday, April 14, 2022, 6:30 P.M.
Council Chambers – 220 W. South Avenue
AGENDA

Zoom link from the calendar at the bottom of the front page of the City website (www.city-woodlandpark.org). Public input is important to the Planning Commission and comments are encouraged in writing in advance.

- 1. CALL TO ORDER & ROLL**
- 2. PLEDGE OF ALLEGIANCE**
- 3. APPROVE MINUTES:** March 10, 2022
- 4. PUBLIC HEARINGS**

A. Continued from March 10, 2022: CUP#2021-03 – Tamarac Contractor Services: consider a request by Skip Howes (Applicant) and the Tamarac Land Company (Property Owner) for a Conditional Use Permit (CUP) pursuant to §18.09.090.G.1. *Contractors & Construction Services* use on 4.22 acres in a portion of the W1/2 of the SW1/4 of Section 12, Township 12 South, Range 69 West of the 6th Principal Meridian, lying SW of “Tamarac Tech Park Filing No. 2” and lying NW of “Tamarac Tech Park Filing No. 1” with an address of 1010 Research Drive. **(QJ)**

**- Request for continuance to the April 28, 2022
Planning Commission Meeting**

The City Council Public Hearing is currently scheduled for Thursday, May 5, 2022, 7:00 P.M.

B. PUD 2021-03, SUB 2021-14, & SPR 2021-05: The Pines at Stone Ridge PUD Amendment, Preliminary Plat, & Site Plan Review: Request by Jeffery Webb (applicant) and Craig O’Boyle, Go Beyond, LLC (Property Owner) for approval of a PUD Amendment, Preliminary Plat, and Site Plan Review to create 49 townhomes and 20 patio homes on the +/-9.01 acre tracts located southeast of Ridgestone Drive and Research Drive, zoned PUD and legally described as Tracts A & F, Stone Ridge Subdivision (a portion of Sections 12, 13 & 14, T12S, R69W of the 6th PM, in the City of Woodland Park, Teller County, CO). **(QJ)**

The City Council Public Hearing is currently scheduled for Thursday, May 19, 2022, 7:00 P.M.

- 5. REPORTS**
- 6. ADJOURN**

For more information, please contact the Planning Department 719.687.5283

WOODLAND PARK PLANNING COMMISSION MEETING MINUTES *for* March 10, 2022

Council Chambers, 220 W South Avenue, Woodland Park

This meeting was a hybrid meeting with in-person and virtual attendance. The Zoom meeting link is in the calendar on the City website front page. Public input is very important to the Planning Commission. Comments were encouraged in writing in advance of the meeting to be submitted by mail to the Planning Department at PO Box 9007, Woodland Park, CO, 80866 or email to kschminke@city-woodlandpark.org.

1. ORDER AND ROLL CALL:

Chair Ken Hartsfield called the meeting to order at 6:31 pm. A three minute recess was called for technical difficulties.

Present Commissioner Hartsfield
Present Commissioner Lee Brown
Present Commissioner Kenneth Kennedy
Present Commissioner Larry Larsen
Present Commissioner Shawn Nielsen (via Zoom)
Staff Present: Planning Director Karen Schminke and Planner 1 David Burgess

Commissioner Carrol Harvey was absent and excused, Commissioner Al Bunge was absent.

2. **APPROVAL OF MINUTES:** The January 27, 2022 minutes were approved as presented.

3. PUBLIC HEARINGS:

A. Tabled from January 27, 2022: CUP#2021-03 – Tamarac Contractor Services: consider a request by Skip Howes (Applicant) and the Tamarac Land Company (Property Owner) for a Conditional Use Permit (CUP) pursuant to §18.09.090.G.1. *Contractors & Construction Services* use on 4.22 acres in a portion of the W1/2 of the SW1/4 of Section 12, Township 12 South, Range 69 West of the 6th Principal Meridian, lying SW of “Tamarac Tech Park Filing No. 2” and lying NW of “Tamarac Tech Park Filing No. 1” with an address of 1010 Research Drive. **(QJ)**

Planning Director Schminke used a PowerPoint presentation to supplement her Staff Report to the Commission. She described the Request, property history summary, surrounding zoning, site conditions in 2004 and 2022, current uses, and the Site Plans for each of the three proposed lots, while noting that a Subdivision is not part of the this application.

Director Schminke then reviewed the CUP Criteria. The site was developed prior to annexation in 1997, and was not zoned at that time. It has been used exclusively for contractor services since 1993. This use has not created any concerns or conflicts with CUP Criteria or neighbors. She noted a possible oversight in the City Comp Plans’ future uses, the 2010 plan shows the area as SC but the 2030 plan shows the future use as SR. Comp Plans only provide guidance and are not binding. Staff recommends to formalize the existing use with conditions, especially to mitigate existing run-off, and one cohesive site plan instead of three, as there is no subdivision yet. The Water Tap is allocated, but not purchased. No increase in traffic expected. The City will not take ownership of the Loy Gulch lot unless drainage improvements are made. Water and wastewater connections will be issued at building permit time, roto-millings on surface support air quality and need to mitigate existing run-off. Trash containers and roll-offs need to be identified on site plan. There are no significant safety hazards. The proposed second driveway will be 20-

ft wide. There are no proposed building changes, existing trees will be retained, add fence screening for outdoor storage, and remove debris to clean up site.

Since this case was tabled on January 27, 2022, the public notice requirements were met twice. Comments were received from the City Engineer and NETCFPD.

Staff finds substantial compliance with CUP standards and recommends approval of this CUP with 14 conditions.

1. Prior to Nov. 1, 2022-clean litter and debris/construct fencing
2. Final Drainage report approved by City Engineer by May 27, 2022
3. Prior to Nov. 1, 2022, onsite detention and water quality control facilities installed to mitigate existing runoff.
4. All applicable fees to be paid
5. Amended proposed site plan showing material storage area, equipment parking areas, screening/fence details, landscaping, snow storage, potential indoor storage, lighting description
6. Hours of operation: dawn to dusk, M-F
7. Lighting-downcast/shield/warm/max 25' high
8. No storage of explosive materials
9. No odor/smoke/vibration/glare/particulates
10. CUP is not a noise relief permit
11. Open space = 15% of lot
12. Preserve existing trees
13. Prior to Sale or Build – Final Plat, Site Plan, ZDPs, BPs for new construction
14. Loy Gulch may be a separate tract; improvements required before City will accept ownership unless the owner improves Loy Gulch to a level acceptable.

The owner and applicant, Skip Howes, of Scott Homes representing Tamarac Land Co., provided additional information about the site and reminded the Commission that this case is only for approval of a conditional use permit for an existing use. The request for the second driveway is what triggered the CUP process. If the driveway is not approved, then the site will continue to operate as before. Only two lots in the City are zoned for contractor services. Three site plans were submitted to give the City a concept of what might happen in the future. FEMA conducted a LOMR in 2015 and redesigned Loy Gulch's flow rates. All the runoff from the site was taken into account and no onsite detention was recommended. Future development or platting would trigger that requirement. If you don't like what we are doing, we'll just keep doing it. That being said, he agreed with most of the conditions except: He'd like Planning Commission to pick out a fence they like. Because the engineer's workload, the Final Drainage Report may not be ready by May 27. He is not proposing changes to the onsite detention, so is unclear when staff would like to see that. Since applicable fees for the driveway were already paid, the driveway should not be a condition of approval. He will pay tap fees when tap is pulled. The current site plans were concept only, and Mr. Howes does not believe that final concept plans are applicable to the current CUP application. Also, the hours of operation must have a provision for emergencies, as Lamb Construction, the other tenant on the property, is the backup for CWP utilities and needs to. Since there is currently no curb and gutter along Research Drive, and it's not in City's master plan, he is unsure if the sidewalk requirement is necessary. The applicant is essentially looking for a motion for CUP as submitted because he has definitions that aren't part of the city code, the driveway is approved, and then the

Commission can let City Council hash out stuff not agreed on. He went on to say that he is here to try to comply, then that he thought he was in compliance.

Commissioner Brown asked Mr. Howes what he would like the Commission to approve. Mr. Howes said he was really looking for some guidance on definitions of materials and equipment.

Chairman Hartsfield opened public comment. With no persons wishing to speak, he closed the public comment and turned deliberation back to the Commissioners.

The Commission clarified the purpose of the meeting: to review a CUP application, not a driveway permit; the possibility of tabling the case and directing staff to come to consensus understanding with applicant on definitions; to change the language from "revoked" to "suspend" or "not in compliance," the objective is to bring the use into compliance with zoning; staff had a different perspective about the preliminary drainage report and the need to address site runoff as the preliminary drainage report does address an onsite detention facility.

Mr. Howes agreed with conditions #1, 4, 7, 9, 10, 11, 12, and 14. Since the property is already being used for Contractor Services and outside storage, he suggested a condition to address fees when more development or a subdivision occurs. For Conditions #2, 3, Mr. Howes noted the contention is that the City wants a detention pond now, but the current drainage report is based on the present, not the future possibilities. The Planning Commission would like to see a unified site plan with setbacks and uses, which would satisfy Condition #5. Mr. Howes would like an emergency provision added to Condition #6, and questioned the sidewalk requirements implied by Condition #13. Commissioner Larsen noted that the City asked Mr. Howes to apply for a CUP so the use would then comply with what the applicant would like to do on their property.

MOTION: Commissioner Brown moved, and Commissioner Nielsen seconded, that the Planning Commission continue CUP 2021-03 to April 14, 2022 at 6:30 pm. They asked the applicant to work with staff to present revised conditions of approval, a single concept plan, and to document the existing conditions of the driveway, the proposed second driveway, and setbacks.

YES: Brown, Kennedy, Larsen, Nielsen, and Hartsfield. **NO:** None
Motion PASSES 5-0.

This item will be continued by the Planning Commission on April 14, 2022 at 6:30 PM, and City Council Public Hearing to review this item is being rescheduled for Thursday, May 5, 2022, 7:00 P.M.

4. REPORTS:

- A.** Director Schminke updated the Planning Commission that The Haven at Paradise has been purchased by a new developer, they have submitted construction drawings, and a final plat may be submitted before the preliminary plat expires, so another extension is not needed.

- B.** Short term rentals are still being worked on at the staff level. Director Schminke will present the research at some point in the future. Staff will get the Commissioners a meeting schedule, contact sheet, and a copy of the 2030 Comp Plan. Title 16, 17, 18 Code revisions are not complete yet, but will be distributed when completed.

5. ADJOURN: The meeting adjourned at 8:48 pm.

Approved this _____ day of _____, 2022 by _____
Ken Hartsfield, Chair



City of Woodland Park Planning Commission Memo

Public Hearing: April 14, 2022

TO: Woodland Park Planning Commission

FROM: Karen Schminke, AICP, Planning Director

DATE: April 8, 2022

RE: AGENDA ITEM 4.A.

The applicant is respectfully requesting that this case be continued to the April 28, 2022, Planning Commission meeting. He has been working diligently with his engineer, JPS Engineering, and his surveyor, Rampart Surveys, as well as working closely with City Engineer Ben Schmitt, P.E., and me personally.

He has taken Mr. Schmitt's advice to consider breaking up the site to better administer water quality and detention. This will require more engineering time to produce an optimal design that satisfies City engineering specifications and requirements.

We are encouraged by his demonstrated intention to continue working well with staff and design professionals to "get it right", and produce a quality end product that will better serve the contracting community for many years to come.

RECOMMENDATION:

Move to continue this case to the April 28, 2022 Planning Commission meeting.



City of Woodland Park

Staff Report for Planning Commission

Meeting Date: April 14, 2022

<u>Agenda Item</u>	<u>Department</u>	<u>Presenter</u>
4B	Planning	Karen Schminke, AICP Planning Director

ITEM

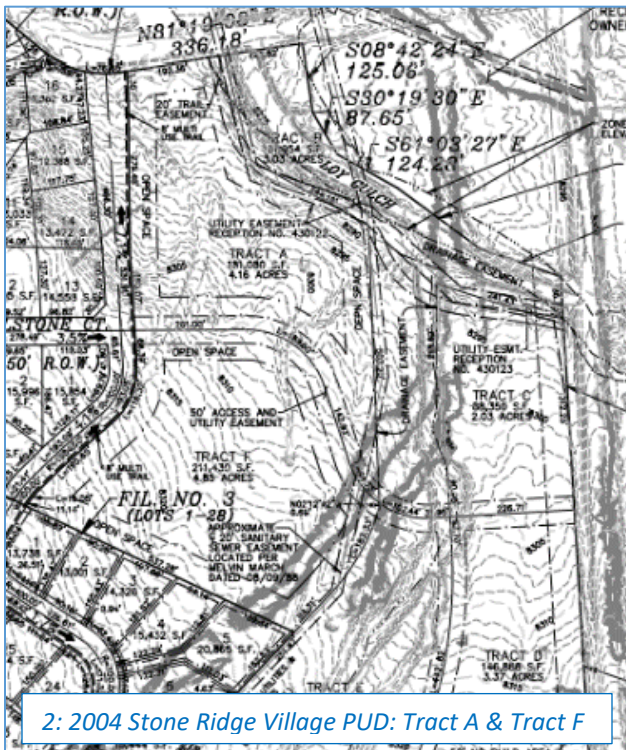
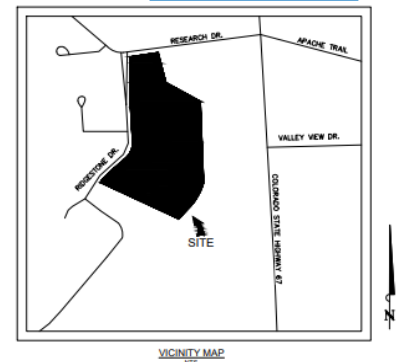
PUD #2021-03 & SUB #2021-14 & SPR#2021-05: Request by Jeffery Webb (applicant) and Craig O'Boyle, Go Beyond, LLC (Property Owner) for approval of a PUD Amendment, Preliminary Plat, and Site Plan Review to create 49 townhomes and 20 patio homes on the +/-9.01 acre tracts located southeast of Ridgestone Drive and Research Drive, zoned PUD and legally described as Tracts A & F, Stone Ridge Subdivision (a portion of Sections 12, 13 & 14, T12S, R69W of the 6th PM, in the City of Woodland Park, Teller County, CO).

BACKGROUND

Annexation of the 200-acre Stone Ridge Village property was approved by City Council on July 18, 2002. Two years later, a PUD zone district was established with approval of a PUD Final Development Plan and Preliminary Plat. Stone Ridge PUD is a unique blend of single-family residential neighborhoods, a variety of multi-family units, commercial tracts for offices, churches, institutional uses and neighborhood services with more than 51 acres of public open space.

The Preliminary Plat and PUD Final Development Plan were approved March 18, 2004. Stone Ridge Village Filings No. 1 and No. 2 were approved October 5, 2006 with 71 single-family lots. Stone Ridge Village Filing No. 3 was approved on September 21, 2017 with 28 lots on 11.87 acres. Stone Ridge Village Filing No. 4 was approved on July 18, 2019 with 21 lots 9.44 acres.

1: Vicinity Map

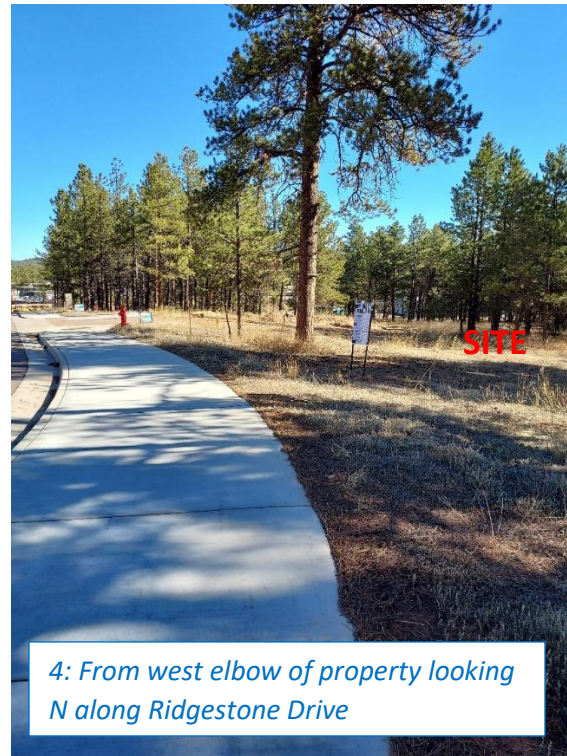
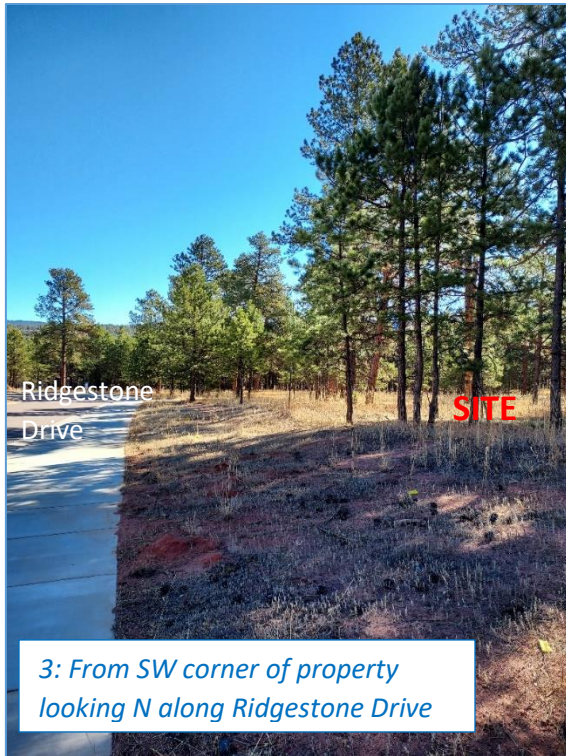


This application pertains to Tract A (4.16 acres) and Tract F (4.85 acres) which are shown in the northeast portion of the 2004 PUD Final Development Plan and Preliminary Plat. The approved preliminary plat shows a 50' access and utility easement between these two Tracts and the approved uses allow for a total of 77 dwelling units with 58 apartment units on Tract A and 19 patio homes on Tract F.

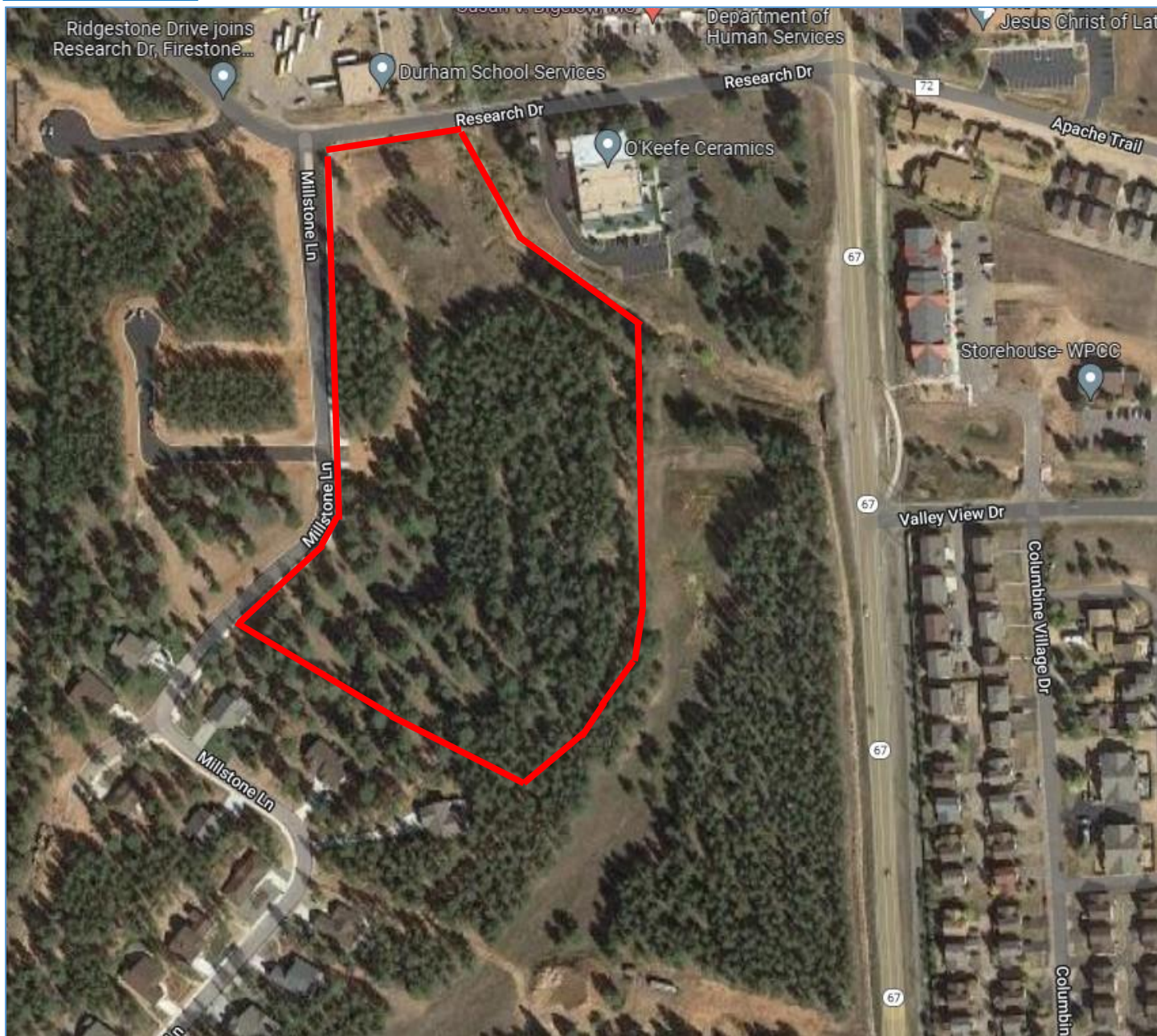
The proposed modifications to the previous PUD are to allow townhomes instead of apartments; an integrated design with 20 patio homes and 49 townhouses intermixed; two entrances from Ridgestone Drive with an internal road that loops through the property; and the open space is changed from a linear strip on the perimeter of each Tract to a larger central area with several smaller areas and trail connections. Lot sizes for patio homes are a minimum of 3,581 SF with the average being 4,672 SF; townhomes have a minimum lot size of 1,862 SF with an average of 2,452 SF. The anticipated building footprints are 2,185 SF for patio homes and 1,287 SF for townhomes.

SITE & SURROUNDING PROPERTIES

The subject property is located at the southeast corner of Research Drive and Ridgestone Drive. It slopes from south to north with approximately 40' of elevation drop toward Loy Gulch which is adjacent to the northeast corner of the property. Vegetation includes mature Ponderosa Pine trees as well as younger Ponderosa Pine trees and a grassy meadow.

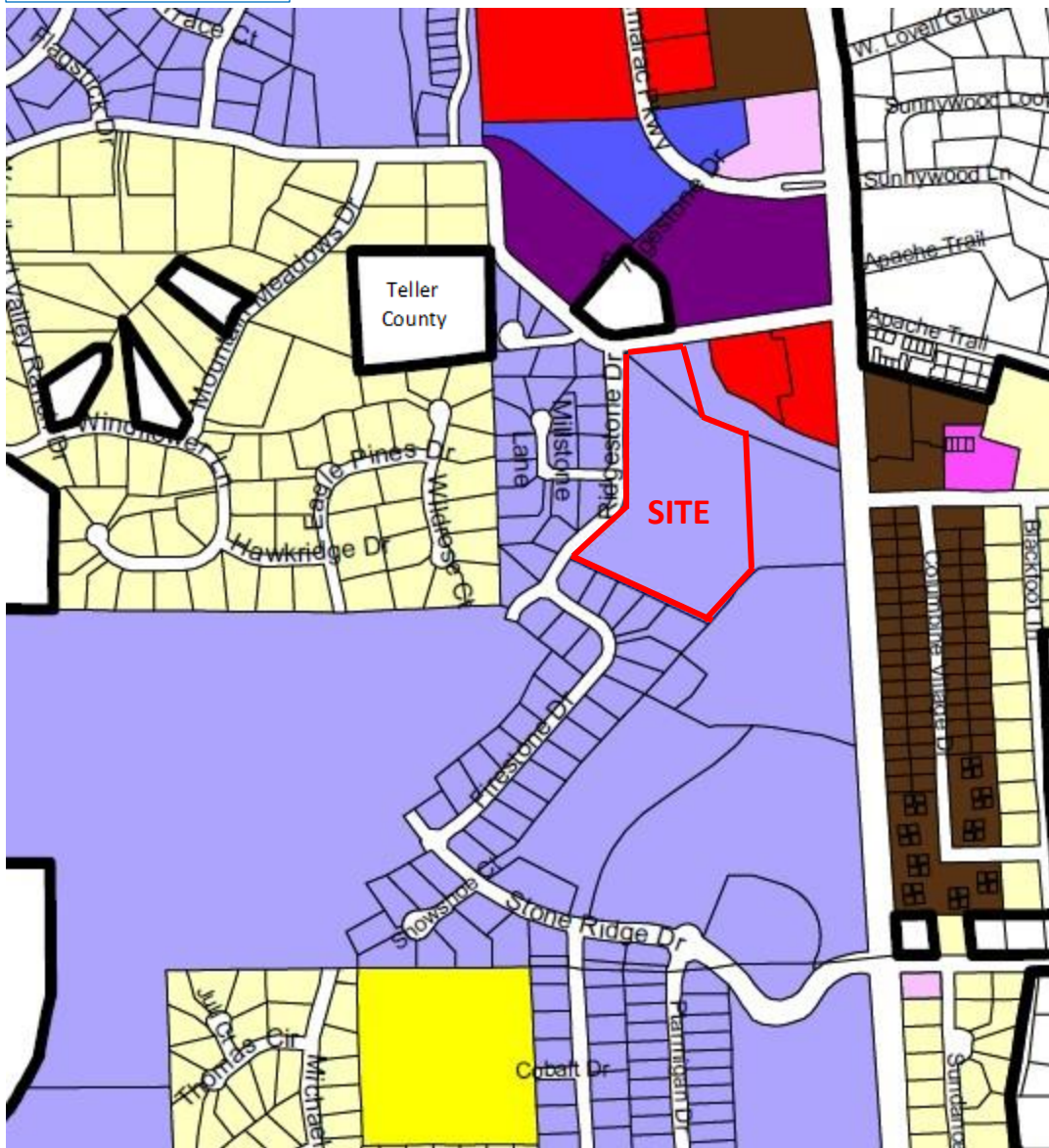


6: Satellite Photo



The PUD amendment area is surrounded by the following properties, zoning designations, and uses:

	USE	ZONE
North	Teller County: Bus barn facility and large parking lot	SC
East	Open space tract and undeveloped tracts for future Commercial uses	PUD
South & West	Existing Stone Ridge subdivision with single family homes	PUD



CODE COMPLIANCE - CHAPTER 18.30 PLANNED UNIT DEVELOPMENT (PUD)¹

The following applicable sections of *Chapter 18.30* were considered in the evaluation and analysis of this PUD amendment:

§18.30.010 Purpose.

A. The purpose of the PUD district is to provide more flexibility and latitude of design, to provide for a greater variety of principle and accessory uses in the development or redevelopment of lands, to meet the technological changes in concepts and to encourage initiative and more efficient allocation and creative development of parks, recreation areas and open space.

Complies. The proposed PUD amendment would provide greater flexibility in the design and development of the site that is more compatible with the existing neighborhood and provides more useful recreation areas and open space. As originally approved, the PUD zone allows for up to 14 DU/acre for the apartments on Tract A and 4 DU/acre for the patio homes on Tract F, which is a combined density of 8.5 DU/acre for these uses. The revised integrated design of townhomes and patio homes is proposing a maximum density of 7.7 DU/acre. No detached accessory buildings (i.e. garages, sheds, etc.) are permitted and only one (1) residential use per lot is allowed (accessory dwelling units are not permitted). There will be an HOA that will be responsible for the ownership and maintenance of the open space tracts.

B. To best accomplish these objectives, and in order to develop an acceptable plan that is in keeping with other chapters of this title, it is essential that the proponents coordinate their development with the planning commission.

Complies. Everything related to a PUD zone district is approvable by the Planning Commission with the exception of the dimensional standards (§18.30.110). In this case, the PUD zone district was approved for this land in 2004 and remains in place and valid to this day.

§18.30.020 Where district may be established.

Not applicable. The PUD zone district for this land was established in 2004 with Ordinance No. 991, Series 2004.

§18.30.030 Requirements for approval.

Not applicable. The PUD zone district for this land was established in 2004. The PUD Final Development Plan Municipal Code compliance is assessed below.

§18.30.070 Modification of subdivision requirements.

This section allows for the waiver or modification of subdivision specifications that are contained in the Municipal Code for any associated subdivision within a PUD area if it is found that such specifications are not required in the interest of the PUD and that modifications of such specifications are not inconsistent with the interests of the city.

As of the date of completing this staff report the applicant has not made a request to reduce the right-of-way for the streets in this development. However, given the requirement from CORE for 15 easements on each side of the right-of-way staff is anticipating a request to reduce the right-of-way width from 50 feet to something smaller. The MC section in question is:

1. *§17.40.140:* Reduce the width of the local street right-of-way (ROW) with curb and gutter from 50 to ??? feet.

Staff hopes to bring a specific recommendation to the Planning Commissions April 14th meeting.

18.30.080 Final plan requirements—Approval.

A. The development plan of the PUD district shall meet the requirements of accepted land planning practices;

¹ Referenced parts of the City's Municipal Code are shown in italics throughout.

promote public health, safety, and general welfare; provide adequate light, air, privacy and convenience; lessen and avoid congestion of the public streets and highways; conserve the values of surrounding properties; and protect against fire, panic, explosion, noxious fumes, flooding along natural watercourses, and other hazards.

Complies. The proposed PUD amendment meets accepted land planning practices. It promotes public health, safety and general welfare in the design, it provides adequate light, air, privacy and convenience within and adjacent to the site. The change in housing types from patio homes and apartments to patio homes and townhouses will better harmonize with surrounding residential neighborhoods in design and character while keeping useable open space. Fire protection is available from the Northeast Teller Fire Protection District. All construction would have to comply with the International Building Codes, International Fire Code, local fire protection standards, drainage and flood control specifications and other codes and regulations, as applicable.

The PUD amendment conforms to the City's *Envision Woodland Park 2030* Comprehensive Plan and specifically with the guiding principle to "Promote Woodland Park as a Welcoming Community (by encouraging) a varied housing supply to meet the needs of Woodland Park's diverse population." Furthermore, the project is compatible with several of the Comprehensive Plan's overarching goals including:

- Land Use and Growth Goal 1: Provide opportunities for growth and development, while preserving community and environmental quality.
- Housing Goal 1: Provide a balanced and diverse housing supply that is well-designed, well-maintained, and available to all citizens throughout the entire community.
- Housing Objective 1.1: Promote stable and safe neighborhoods that provide a variety of housing options.
- Housing Action 1.1.1: Encourage each new project or subdivision to add to the mix of housing models and styles to ensure that housing types enable people to remain in the community as their needs change and protect existing neighborhoods' property values and character.
- Community Character and Design Goal 1: Promote design efforts that enhance Woodland Park's small town atmosphere and provide present day conveniences while protecting the mountain environment.

The proposed PUD amendment also complies with the Comprehensive Plan Map which shows the 9.01-acre tract is designated "Multi-Family Residential" which represents a medium to high density housing option to accommodate attached units such as townhomes or duplexes, as well as multi-family housing.



- B. *The proponents of a PUD shall, after review of the preliminary plan with the Planning Commission, submit a final plan of development to the Planning Commission for its consideration, upon which plan the Commission shall advertise and hold at least one public hearing. The development plan shall include, but not be limited to, the following information:*

If approved, this PUD amendment will serve as the Final Development Plan for the site.

- Location and size of area involved;*
Complies. The PUD amendment consists of 9.01 acres of land located west of Highway 67 and is at the southeast corner of Research Drive and Ridgestone Drive (see above Figure 1: Location).
- All improvements of surrounding properties lying adjacent to the proposed PUD district;*
Complies. Surrounding property uses and improvements remain unchanged.
- The dwelling unit per tract density of residential areas included in the plan;*
Complies. The applicant is proposing 20 patio homes and 49 townhomes at a density of 7.7 DU/acre.
- Areas proposed to be conveyed, dedicated, or reserved for parks, parkways, playgrounds, school sites, public*

buildings and similar public and semi-public uses;

Complies. The PUD amendment proposes 2.05 acres in nine tracts of open space including trails. The largest is Tract I in the center of the development. The other tracts are distributed throughout the project and support a more open feel. Park land dedication was met with the original PUD approval.

- 5) *The location and width of proposed streets, public ways, easements and other similar public and private facilities;*

Complies. There are two access points into the development from Ridgestone Drive. Currently all interior roads are proposed to be private local roads with curb and gutter shown with a 50-foot wide ROW width and a 24-foot wide asphalt surface that are open to the public. Given the easement requirements from CORE (15' on each side of the right-of-way) the road right-of-way width may be reduced. Other easements of varying width will be necessary for water and sewer mains and will be platted with the Final Plat. Other easements may be required and can be determined at Final Plat.

The Traffic Impact Study for this project assumed 75 new dwellings which is greater than the 69 that are shown in this proposal. Using the larger study number, 75 new residential lots will generate about 515 new vehicle-trips on the average weekday. During the weekday morning peak hour of adjacent street traffic, eight vehicles would enter the site while 24 would exit. During the weekday evening peak hour, 24 vehicles would enter the site while 16 would exit. This site development was previously included in the list of specific land uses permitted under CDOT Access Permit No. 220126.

All yielding turning movements at the intersection of Research Drive/Ridgestone Drive currently operate at LOS A (where A is little congestion or delay and F is high level) and are expected to continue to do so in all future scenarios. All yielding turning movements at the site access points on Ridgestone Drive are anticipated to operate at LOS A in all future scenarios.

All yielding turning movements at the Hwy 67/Research Drive are projected to operate at Level of Service C during all peak hours. The City will be constructing northbound and southbound left-turn lanes on SH 67 at the Research Drive intersection as part of a City of Woodland Park highway improvement project.

A southbound right-turn deceleration lane is forecast to be required at the Research Drive/SH 67 intersection in the future, if/when the right-turning volume threshold is exceeded in the future. The need for this turn lane would not be needed solely as a result of this proposed development, but in combination with this and additional future development projected for the area. A right-turn acceleration lane is **not** required at the intersection of SH 67/Research Drive.

In the short-term future, the side-street and major-street left-turning movements are expected to operate at LOS C or better. In the long-term, the eastbound through/left and westbound approach are projected to operate at LOS E or worse during both peak hours. These movements are not anticipated to have a V/C ratio above 1.0, which indicates the movements will not be operating above capacity.

- 6) *The use, height, bulk and location of all principal and accessory buildings proposed on the development plan;*

Complies. The PUD Final Development Plan limits the use to strictly residential. The maximum building height for both patio homes and townhouses is 35 feet. The applicant has submitted examples of housing facades that intend to be compatible with the existing Stone Ridge neighborhood and harmonize with Woodland Park's eclectic vernacular. The proposed designs are described as contemporary western mountain aesthetic.

- 7) *Agreements, provisions, or covenants which govern the use, maintenance and continued protection of the planned development and any of its common open space. Said agreements, provisions or covenants must be written so as to be acceptable to the city;*

Complies. The applicant intends to establish an HOA complete with draft covenants which will be submitted with the Final Plat.

A development schedule indicating the following:

- a. *The approximate date when construction of the project can be expected to begin,*
Complies. The applicant proposes to begin development construction in the summer of 2022 and submit the Final Plat.
- b. *The stages in which the project will be completed and the approximate date when construction of each stage can be expected to begin;*
Complies. The Final Plat and subdivision development agreement must be considered by City Council prior to conveyance of lots. Grading, roads, and utility installations may be completed prior to Final Plat. Zoning Development Permit and Building Permit approval are required for each building.

- 8) *The feasibility of the proposal for the disposition of sanitary waste and storm water runoff;*
Complies. The applicant proposes to connect this development to City water, sewer and surface water systems. Solid waste disposal is by private contract. Asphalt road surfaces in compliance with City standards contributes to the protection of overall air quality. Stormwater drainage on the site will be channeled by curb and gutter and subsurface pipes to the existing regional detention pond located to the east of the development. This existing pond was sized and built to accommodate development of these Tracts.
- 9) *The location, number and dimensional plans of proposed off-street parking and loading facilities;*
Complies. Each lot must indicate provision for at least two off-street parking spaces (may be inside a garage on the driveway) in compliance with the Municipal Code for residential development.
- 10) *A schematic landscaping plan indicating approximate location, number and type of shrubs, conifer, or deciduous trees or other form of landscaping treatment;*
Complies. Landscaping is proposed with this PUD amendment including existing tree preservation where possible, additional water-wise native trees and shrubs, as well as an eye toward wildfire risk with adequate spacing between the proposed plantings and new buildings.
- 11) *All of information required to be contained upon and the supplemental material to be accompanied with a preliminary subdivision plat in accordance with Sections 17.20.070 and 17.20.080 of the city's subdivision regulations, which has not been previously required;*
Complies. A Preliminary Plat has been submitted for consideration and code compliance is assessed in the next section below.

§18.30.090 Common open space requirements. *No open space may be accepted as a common open space under the provisions of this chapter unless its character and quality have been approved by the planning commission:*

- A. *The size and character of the dwellings to be constructed within the planned development;*
- B. *The character of surrounding development;*
- C. *The topography and existing amenities of the open area, including existing trees, groundcover and other natural features;*
- D. *The manner in which the open area is to be improved and maintained for recreational or amenity purposes;*
- E. *The existence of public parks or other public recreational facilities in the vicinity;*
- F. *The relationship of the area in open space to the number of dwelling units;*
- G. *Open space requirement determined by gross land acreage: 10 – 20 gross acres requires 10% open space.*

Complies. The applicant proposes 2.05 acres of common open space which includes trails and the retention of as many existing healthy trees as possible. Maximum lot coverage for patio homes is 60% and 70% for townhome lots with the remainder of the lots being left open as private open space.

§18.30.100 Permitted uses. All uses allowed in a PUD are permitted conditionally and are designated under PUD in the table of permitted uses for business, industrial and residential districts located in Section 18.09.090.

Complies. The PUD conditions are as specified in the PUD Final Development Plan.

§18.30.110 Dimensional Standards. The lot area per dwelling unit within a planned unit development, exclusive of the area occupied by streets, will be in harmony with the surrounding areas (reference Section 18.30.030), intent and purpose of this chapter and determined by serviceability, recommended by the planning commission and approved by city council. The maximum density permitted within a planned unit development is two dwelling units per gross acre. All other dimensional standards, including the maximum percentage of lot coverage by buildings, structures and impervious surface, the maximum height of buildings and structures, the minimum frontage of lots and the minimum front, side and rear yard building and structural setback requirements, shall be recommended by the Planning Commission and approved, approved with conditions or disapproved by City Council.

Complies. The original dimensional standards approved for Tract A and Tract F were:

Original Stone Ridge PUD Standards (Tracts A and F)

Tract A Land Area:	4.16 ac
Tract A Land Use:	Apartments
Tract A Density:	14 Dwelling Units/Acre
Tract A Lots/Units:	58 Apartments
Tract F Land Area:	4.85 ac
Tract F Land Use:	Patio Homes
Tract F Density:	4 Dwelling Units/Acre
Tract F Lots/Units:	19 Patio Homes
Tract A & F Total Units:	77 Units
Tract A & F Open Space:	3.51 ac (Tract A: 1.91 ac, Tract F 1.60)
Building Setbacks:	Front & Rear: 25', Side: 8'

The dimensional standards proposed for this revised integrated design fall below what was originally approved and are:

Dimensional Standards

Maximum Building Height:	35'
Minimum Building Setbacks:	<u>Side:</u> 8' Patio Homes / 6.75' Townhomes Patio Home: 16' Between Structures / Townhome: 13.5' Between Structures
	<u>Front:</u> 25' Applies to Exterior
	<u>Rear:</u> 25' Boundary Lines Only
Proposed Lot Coverages:	60% Max. Patio Homes / 70% Max. Townhomes
Density:	7.65 Units/Acre
Minimum Lot Size:	3,581 SQ. FT. Patio Homes / 1,862 SQ. FT. Townhomes
Average Lot Size:	4,672 SQ. FT. Patio Homes / 2,452 SQ. FT. Townhomes
Anticipated Unit Footprint:	2,185 SQ. FT. Patio Homes / 1,287 SQ. FT. Townhomes

Viable building areas exist on each lot. Construction drawings for roads, infrastructure (water, sewer, stormwater) and buildings are required to consider topography, surface drainage and soils with the design and must comply with City standards. Further, the development will be constructed in accordance with the City regulations including all applicable zoning and subdivision regulations, engineering specifications for roads, utilities, and drainage, and International Building Codes.

§18.30.120 Parking. Off-street parking requirements in a PUD district shall be as follows:

A. For residential uses, as provided in Chapter 18.39 of this title;

Complies. The Municipal Code requires two off-street (on-site) parking spaces for every residential unit. Compliance with parking requirements are reviewed and assessed with the Zoning Development Permit application.

§18.30.130 Landscaping. *Landscaping shall be adequate to provide a park-like appearance for the land, buildings and structures located within the boundaries of the planned unit development district.*

Complies. The creation of a central open space amenity as well as smaller common open spaces with trail connections contribute to a walkable neighborhood. The proposal is to preserve as many trees as is practicable and the final landscaping plan submitted with the construction drawings. At least 2.05 acres of the gross site is dedicated to common open space within which no construction is proposed. Maximum lot coverage for patio homes is 60% and 70% for townhome lots with the remainder of the lots being left open as private open space. All this contributes to a park-like appearance for the development.

CODE COMPLIANCE – CHAPTER 17.20 PRELIMINARY PLAT

This Preliminary Plat application was reviewed under *Title 17 Subdivisions* of the City of Woodland Park Municipal Code. In italics below are the relevant plat and design standards applicable to this Preliminary Plat application followed by a staff analysis. A full copy of the Preliminary Plat is attached to this Staff Report as part of the application.

Chapter 17.20 Preliminary Plat. *The subdivision regulations contain platting standards for all types of subdivisions. The platting standards contain specifications relating to the form and content of the Preliminary Plat.*

§17.20.010 Preparation process. *After the subdivider has received written comments from the city planner, a preliminary plat shall be prepared by a surveyor, architect, professional planner or professional engineer for presentation to the planning commission. The preliminary plat shall be processed as follows: Twenty-five blue-line copies and one reproducible copy of the preliminary plat shall be presented to the city planner along with the required supplemental material at least twenty days prior to a regular planning commission meeting. If the plat is in compliance with these regulations, the city planner will furnish the following agencies with a copy for their review and comments; all public utilities companies, the school district, Teller County, and the State Highway Department (where a subdivision borders on a state highway). The city planner may delay a preliminary plat for one regularly scheduled planning commission meeting if further processing is required.*

Complies. The Preliminary Plat was discussed during several pre-application conferences with the applicant, applicant's engineer and City Staff prior to submittal of the final application. At that time, it was determined that the "Vicinity Sketch Plan" (§17.16.010) complete with a street and lot preliminary layout was feasible for development. The application, preliminary plat and supplemental materials were distributed with the PUD amendment to appropriate agencies for their review and comment.

§17.20.060 Design and drawing. *The Preliminary Plat shall be prepared as follows;*

- A. *The design should be in accordance with the subdivider's plans for actual development and therefore, should be a true representation of the subdivision which may eventually be recorded.*
- B. *The drawing shall be made at a scale of one-inch equals one hundred feet. A map of twenty-four (24) inches by thirty-six (36) inches is required. If more than one page then an index page shall be provided.*

Completed. The Preliminary Plat is a true representation of the subdivision as the applicant intends to record it. It's an acceptable scale and includes an overall utility plan, site utility plan, grading and erosion control plan, and landscape plan.

§17.20.070 Information (A through Q).

Completed. This section is long list of technical information required to be contained on the Preliminary Plat which must be prepared by a licensed professional land surveyor. All criteria from this section has been reviewed by staff. The Preliminary Plat is determined acceptable at this time. Eric R. Simonson of Rampart Surveys, LLC is the Colorado licensed professional Land Surveyor.

§17.20.080 Supplemental Material. *The preliminary plat shall be accompanied by the following supplemental material:*

- A. *A letter of intent addressed to the city council and planning commission containing the following:*
1. *A brief description of the tract, i.e. general location, physical features of the land, total acreage;*
 2. *Existing and proposed zoning;*
 3. *Proposed number of building sites and typical lot size;*
 4. *Proposed structures;*
 5. *A statement detailing how and when the subdivider proposes to provide and install all required sewers, water mains, pavement, sidewalks, drainage ways, trails and other utilities, i.e., electric, gas, telephone, as required;*
 6. *Any proposed variances from the subdivision regulations;*
 7. *Any additional information deemed necessary by the city staff;*
 8. *Signature of the subdivider;*
 9. *A written proposal explaining the subdivider's intent with regards to the dedication of parks, recreation areas, and open spaces and/or parks capital fees of land, the location within the tract or the amount of fees required for approval.*

Completed. The letter of intent was submitted containing the necessary information required above.

- B. *Master Plan. When the preliminary plat covers only a part of the developer's contiguous holdings, twenty-five blueline copies and one reproducible copy of a proposed master plan for development of said contiguous holdings shall be furnished. A master plan need only be submitted with the first preliminary plat submitted for the area and shall be processed along with the first preliminary plat, if not previously processed.*

Not applicable. The preliminary plat covers an independent area that is not part of contiguous holdings with other surrounding PUDs or developments. This preliminary plat is for the entire site and acts as the master plan for the site.

- C. *One copy of the accurate names and mailing addresses of the owners of all immediately adjoining land as their names appear on the tax records of the municipality or county. Also to be included are the names, mailing addresses and phone numbers of individuals or firms to whom notice of public hearings and billings for required fees (recording plats, public notices, sign postings, etc.) are to be sent.*

Completed. Submitted with the application.

- D. *If evidence of a geological hazard is presented by the City at the sketch plan stage, the subdivider shall present geologic hazard information.*

Not applicable. No geological hazard is present.

- E. *One reproducible copy and two blueline copies of a twenty-four-inch by thirty-six-inch plat or plats showing the following 1 through 4 items.*

Completed. The four items have been submitted and include location and size of existing water and sewer lines within or adjacent to the tract; proposed layout of the water and sewer system; preliminary drainage plan; and proposed street grades including approximate horizontal and vertical curve data.

- F. *Applications for any proposed variances from the subdivision regulations. A petition for annexation where applicable. A PUD or other zoning change application where applicable.*

Partially Complies. At the time of Final Plat any potential variance needed for §17.40.140 which requires a 50' minimum width for local road right-of-ways with curb and gutter will need to be clarified.

- G. *One copy of a preliminary utilities report as described in the city engineering specifications (if required).*

A Preliminary Utilities plan was submitted and reviewed by Public Works Director Kip Wiley. Construction drawings will be drawn and submitted for City Engineer's approval as the next step in the development process.

H. *A letter from the surveyor of the plat stating the total area of lots by zone, the area of streets and alleys, and the area of proposed park sites or open spaces and other lands to be dedicated to the city.*

Completed. The applicant shows approximately 2.05 acres of dedicated open space, 2.04 acres of private roads, and 4.92 acres of residential lots.

I. *Completed checklist of Teller County School District RE-2. **Not applicable.** Approved by the City.*

J. *Building envelopes and a driveway plan shall be submitted for all hillside lots showing the lot area from the street to the minimum building setback line at a scale of at least one inch equals one hundred feet, and showing a driveway location which conforms to city engineering specifications.*

Not applicable: No hillside lots exist on this site.

§17.20.100 Conformance to existing zoning and subdivision regulations. *Every plat shall conform to the existing zoning ordinance and subdivision regulations applicable at the time of final approval, except that any plat which has received preliminary approval shall be exempt from any subsequent amendments to the subdivision ordinance and zoning ordinance rendering the plat nonconforming as to the bulk or use provided that final approval is obtained within the extension period.*

Complies. The Preliminary Plat and the PUD Final Development Plan are one in the same. All lots meet the minimum lot frontage of 40 feet. Only the ROW width requires a variance from City Council at the time of Final Plat. This area is capable of being fully serviced by municipal water and sewer facilities. The required setbacks, heights and parking requirements will be evaluated for compliance with zoning upon review and approval of each dwelling unit.

Chapter 17.40. Design Standards. The design standards contain specifications for a reasonable layout and design of lots, blocks, streets, sidewalks, easements and alleys to ensure an efficient, orderly, well planned subdivision ready for future construction. Relevant standards are listed below.

§17.40.010 - Purpose. *The character and environment of the City of Woodland Park for future years will be greatly affected by the design of subdivisions and the plats that are approved by the City. Planning, layout and design of a subdivision are of the utmost concern. The residents must have available to them within the area, safe and convenient movement to points of destination or collection. Modes of travel to achieve this objective should not conflict with each other or with abutting land uses. Lots and blocks should provide desirable settings for the buildings that are to be constructed, make use of natural contours and protect the view, afford privacy for the residents and protection from adverse noise and vehicular traffic. Natural features and vegetation of the area must be preserved if at all possible. Schools, parks, churches and other community facilities should be planned as an integral part of the area. In order to meet the above objectives, the City encourages innovative subdivision design.*

Complies. The proposed 69 dwelling unit subdivision is within a PUD zone and the preliminary plat and the PUD final development plan are identical. The proposed change from patio homes and apartments to an integrated layout of patio homes and townhouses are compatible, harmonize with the neighborhood, provide desirable settings for buildings, make use of natural contours, protect views, afford privacy and do not create conflicts with abutting residential land uses.

§17.40.020 - Site consideration. *Land which the city finds to be unsuitable for subdivision or development due to flooding, improper drainage, steep slopes, rock formations, adverse earth formations or topography, utility easements, or other features which will reasonably be harmful to the safety, health and general welfare of the present or future inhabitants of the subdivision and/or its surrounding areas, shall not be subdivided or developed unless adequate methods are formulated by the developer and approved by the city to solve the problems created by the*

unsuitable land conditions. If the problem cannot be suitably corrected, such land shall be set aside for uses which shall not involve a danger or a harmful situation.

Complies. The Preliminary Plat is sensitive to the natural contours of the property and provides a combination of a central common open space as well as other smaller open space tracts. Lots and roadways are arranged on the most developable portion of the site and provide adequate spacing of the dwelling units and buildings. It is feasible to construct homes on each lot and meet the maximum 17% driveway slope. Water, sewer, electricity, and natural gas can all be installed within the developable portion of the subdivision. Construction Drawings for grading, erosion control, drainage improvements, utilities installation and road construction will be submitted, reviewed and approved by the City Engineer in collaboration with the Fire District, CORE, Black Hills Energy, Century Link and telecom companies.

§17.40.040 – Streets, alleys and easements. *Streets shall conform to the street element of the comprehensive plan of the City of Woodland Park.*

Complies. All roads on-site are proposed as private and will be maintained by the HOA. They are designed to facilitate safe and efficient multi-modal movement consistent with and considering local travel patterns and needs.

§17.40.050 - Streets—Frontage. *No subdivision shall be approved unless the area to be subdivided shall have a frontage on an existing street shown upon a plat approved by the planning commission and city council and recorded in the county clerk and recorder's office. Wherever an area to be subdivided is to utilize an existing adjacent street, the subdivider shall be required to improve said street to city specifications.*

Complies. Each lot exceeds the minimum 40-foot frontage requirement.

§17.40.150 – Street names and numbers. *Street names shall not be used which will duplicate or be confused with the names of existing streets and shall be subject to approval of the City. Street numbers shall be assigned by the City staff.*

In Process. Street names have yet to be proposed, reviewed and approved by E-911. Street names and numbers are assigned by the City at the time of Final Plat.

§17.40.170 - Easements. *Where required, easements for all utilities other than public sewer and water lines shall be a minimum of twenty feet wide, ten feet of which shall be on each side of common rear lot lines where said lines abut. Where the rear lot line abuts on property outside of the subdivision of which there are no easements provided for of at least ten feet in width, then the easement or alley on the rear lot lines in the subdivision shall be at least twenty feet in width. Side lot easements, where necessary shall be at least ten feet in width, five feet of which shall be on each side of a common lot line. Where required, easements for public sewer or water shall be required with the width to be determined in accordance with the city engineering specifications.*

Partially Complies. The Preliminary Plat shows a number of easements for perimeter utility placement. In light of CORE's comments, front yard easement size needs to be resolved.

§17.40.210 - Lots. *The lot arrangement shall be such that there will be no foreseeable difficulties, for reasons of topography or other conditions, in securing building permits to build on all lots in compliance with the zoning ordinance and in driveway access to buildings on such lots from an approved street.*

Complies. All lots are reasonably arranged and buildable with adequate provision made for driveway access from an approved street and provision of a viable building envelope.

REFERRAL

This application was referred to various internal City departments and external agencies and service providers. Comments received have been incorporated into the conditions of approval.

The Preliminary Plat proposes several private open space tracts that will be owned and maintained by the Homeowners Association. The Parks & Recreation Advisory Board reviewed the application on March 9, 2022 and

was very receptive to and like this revised proposal. Park land dedication requirements were satisfied in previous Stone Ridge approvals.

PUBLIC NOTICE

Public notification included the posting of three on-site posters along the perimeter of the site, the publication of the public hearings in the Pikes Peak Courier and notices mailed to all property owners within 150 feet of the site perimeter. Staff has received no written comments from the public as of the writing of this staff report but did talk with an adjacent property owner who had concerns about the loss of mature trees, views, traffic, and property values.

STAFF RECOMMENDATION

APPROVAL, based on the findings in the staff report and as presented at public hearing, of the request by Jeffery Webb (applicant) and Craig O'Boyle, Go Beyond, LLC (Property Owner) for approval of a PUD Amendment (PUD #2021-03) and Site Plan Review (SPR #2021-05) to create 49 townhomes and 20 patio homes on the +/-9.01 acre tracts located southeast of Ridgestone Drive and Research Drive, zoned PUD and legally described as Tracts A & F, Stone Ridge Subdivision (a portion of Sections 12, 13 & 14, T12S, R69W of the 6th PM, in the City of Woodland Park, Teller County, CO).

And,

APPROVAL, based on the findings in this staff report and as presented at public hearing, approval of the request by Jeffery Webb (applicant) and Craig O'Boyle, Go Beyond, LLC (Property Owner) for approval of SUB #2021-14 Preliminary Plat for 49 townhomes and 20 patio homes on the +/-9.01 acre tracts located southeast of Ridgestone Drive and Research Drive, zoned PUD and legally described as Tracts A & F, Stone Ridge Subdivision (a portion of Sections 12, 13 & 14, T12S, R69W of the 6th PM, in the City of Woodland Park, Teller County, CO), subject to the following conditions:

1. Prior to installation of infrastructure, the applicant shall submit and receive approval of a Zoning Development Permit for infrastructure, which application shall include:
 - Final utility plan with profiles for all water, storm and sewer systems; a fire flow analysis for all water main line extensions;
 - Note street lighting location and provide conforming specifications;
 - Relocate fire hydrant across from lot 19 to lot 11/12 and add another one at lot 30 for a total of three hydrants.
 - Final grading and erosion control plan for the entire site and off-site improvements
 - Final on- and off-site street plan with profiles with curb and gutter on both sides of roads.
 - Final drainage plan and report including volume calculations for the existing regional pond
 - Approved SWMP
 - Finalize road right-of-way width and resolve utility easements per CORE comments
2. Multi-family projects, triplex and larger, require a water tap allotment. This will require City Council approval. MC 13,27.050 D
3. Street names must be submitted for review and approval
4. Prior to conveyance of any proposed lot, the applicant shall record a Final Plat
5. Prior to recording the final plat, the applicant shall submit covenants, which include deed restrictions that establish a homeowners association to guarantee the architectural and landscape design and maintenance of the private road

ATTACHMENTS

- A – Application
- B – Project Narrative
- C – PUD/Site Plan, Preliminary Plat, Utility Plans, and Building Elevations
- D – Traffic Report
- E – Drainage Report
- F – Stormwater Management Plan Report
- G – Erosion Control Construction Documents

ATTACHMENT 'A'

Planning Application Entry Form

[Print Record](#)[Go To Development Fees Receipt Form](#)

ID

Permit Number 202111360

Project # EXT/Case # PUD2021-03

Development Case ☒

Date Received 1/28/2022

Date Routed 1/23/2022

Date Initial Permit Approved

*Date Permit Paid 12/2/2021

Open Permit Comments

Fees paid on 12/02/2021 under SPR application #202111362 / SPR2021-05. Awaiting street names for e-911 review (SWR emailed Jeff Webb 11/18/2021). Resubmitted 1/28/2022, Karen Schminke assigned Amy Wolin to reroute revised application on 2/22/2022.

*NOTE: If Non-profit enter Date Approved in Date Permit Paid field for report

Project Type PUD

Project Type Number 20

Project Classification PUD Amendment

Non-Profit, Residential or Commercial Residential

Date CO Requested

Temp CO Auth Approved

Date Temp CO Expires

NOTE: Above Field required only for SINS and TUPs

Project Name The Pines at Stone Ridge - P

Site Address Number Millstone Ln. & Ridgestone D

Site Address Name

Lot Number

Block Number

Subdivision

Filing #

Applicant Business Name Populus Planning and

App First Name Jeffery

App Last Name Webb

App Phone Number 208-284-6942

PO Box

Mailing Address Street # 9570

Mailing Address Street Name Canyon Dr.

City Woodland Park

State CO

Zip Code 80863

Owner First Name Craig

Owner Last Name O'Boyle

Zone Class PUD

Applicant Project Value \$0.00

UTILITIES SECTION

Tap Allocation Date

Allocation Exp Date

Water Tap #

Sewer Tap #

Tap Paid Date

Tap Exp Date

Taps Refunded ☐

Inside/Outside User

Meter Installed ☐

Filed in Area

Planning Director's Office

Planning Application Entry Form

Print Record



Go To Development Fees Receipt Form



ID

Permit Number 202111361

Project # EXT/Case # SUB2021-14

Development Case ☒

Date Received 1/28/2022

Date Routed 2/22/2022

Date Initial Permit Approved

*Date Permit Paid 12/2/2021

Open Permit Comments

1/05/2022: SWR did not charge a fee for this - see her 11/18/2021 email to Jeff Webb. Entered a ZDP paid date of 12/02/2021 (See SPR application #202111362 / SPR2021-05). Developer will pay for Subdivision review when the Townhome Plat(s) are processed. Resubmitted 2/28/2022; Planning Director gave to permit tech on 2/18/2022 to re-route the week of 2/22/2022.

*NOTE: If Non-profit enter Date Approved in Date Permit Paid field for report

Project Type SUB

Project Type Number 5

Project Classification Preliminary Plat

Non-Profit, Residential or Commercial Residential

Date CO Requested

Temp CO Auth Approved

Date Temp CO Expires

NOTE: Above Field required only for SInS and TUPs

Project Name The Pines at Stone Ridge - P

Site Address Number Millstone Ln. & Ridgestone D

Site Address Name

Lot Number

Block Number

Subdivision

Filing #

Applicant Business Name Populus Planning and

App First Name Jeffery

App Last Name Webb

App Phone Number 208-284-6942

PO Box

Mailing Address Street # 9570

Mailing Address Street Name Canyon Dr.

City Woodland Park

State CO

Zip Code 80863

Owner First Name Craig

Owner Last Name O'Boyle

Zone Class PUD

Applicant Project Value \$0.00

UTILITIES SECTION

Tap Allocation Date

Allocation Exp Date

Water Tap #

Sewer Tap #

Tap Paid Date

Tap Exp Date

Taps Refunded ☐

Inside/Outside User

Meter Installed ☐

Filed in Area

Planning Director's Office

Planning Application Entry Form

[Print Record](#)[Go To Development Fees Receipt Form](#)

ID

Permit Number 202111362

Project # EXT/Case # SPR2021-05

Development Case ☒

Date Received 1/28/2022

Date Routed 2/23/2022

Date Initial Permit Approved

*Date Permit Paid 12/2/2021

Open Permit Comments

Awaiting street names for e-911 review (SWR emailed Jeff Webb 11/18/2021). Resubmitted 2/28/2022; Planning Director gave to permit tech on 2/18/2022 to re-route the week of 2/22/2022.

*NOTE: If Non-profit enter Date Approved in Date Permit Paid field for report

Project Type SPR

Project Type Number 4

Project Classification SPR

Non-Profit, Residential or Commercial Residential

Date CO Requested

Temp CO Auth Approved

Date Temp CO Expires

NOTE: Above Field required only for SInS and TUPs

Project Name The Pines at Stone Ridge - S

Site Address Number Millstone Ln. & Ridgestone D

Site Address Name

Lot Number

Block Number

Subdivision

Filing #

Applicant Business Name Populus Planning and

App First Name Jeffery

App Last Name Webb

App Phone Number 208-284-6942

PO Box

Mailing Address Street # 9570

Mailing Address Street Name Canyon Dr.

City Woodland Park

State CO

Zip Code 80863

Owner First Name Craig

Owner Last Name O'Boyle

Zone Class PUD

Applicant Project Value \$0.00

UTILITIES SECTION

Tap Allocation Date

Allocation Exp Date

Water Tap #

Sewer Tap #

Tap Paid Date

Tap Exp Date

Taps Refunded ☐

Inside/Outside User

Meter Installed ☐

Filed in Area

Planning Director's Office

City of Woodland Park

Print
Record



Planning Department Routing/Comment Form

ID _____ Project Name The Pines at Stone Ridge - PUD Amendment Project # EXT/Case #: PUD2021-0
 Permit Number 202111360 Site Address Number Millstone L PO Box _____
 Date Received: 1/28/2022 Site Address Name _____ Mailing Address # 9570
 Project Type PUD Lot Number _____ Block # _____ Mailing Street Canyon Dr.
 Project Type Number 20 Subdivision _____ Filing # _____ App Phone 208-284-6942
 Project Classification PUD Amendment Applicant Business Name Populus Planning and Design, LLC
 Residential or Commercial Residential App First Name Jeffery App Last Name Webb

ZDP Required ☒ Public Review Required ☒ Lead Staff Person Karen Schminke
 Board of Adjustment Date _____ Date Routed 2/23/2022
 Planning Commission Date 4/14/2022 Comments Due Back to Planning 3/8/2022
 City Council (1st Reading) _____ Comments Rec'd ☐ Filed in Area:
 City Council (Public Hearing) _____ Planning Direct

Comments Received

City Manager ☐	Building Dept ☐
City Clerk ☐	Fire District ☒
City Attorney ☐	Re-2 ☐
Utilities Department ☒	URS ☐
City Engineer ☒	IREA ☒
City Inspector ☒	Black Hills ☒
Finance Department ☐	CDOT ☐
Planning Director ☒	CenturyLink ☒
City Planner ☐	TDS Telecom ☒
Police ☐	Other: ☒
Parks & Rec ☒	
Economic Development ☐	

Important Information

Administrator
Routing Instructions:

City of Woodland Park

Print
Record



Planning Department Routing/Comment Form

ID _____ Project Name The Pines at Stone Ridge - Preliminary Plat Project # EXT/Case #: SUB2021-1
 Permit Number 202111361 Site Address Number Millstone L PO Box _____
 Date Received: 1/28/2022 Site Address Name _____ Mailing Address # 9570
 Project Type SUB Lot Number _____ Block # _____ Mailing Street Canyon Dr.
 Project Type Number 5 Subdivision _____ Filing # _____ App Phone 208-284-6942
 Project Classification Preliminary Plat Applicant Business Name Populus Planning and Design, LLC
 Residential or Commercial Residential App First Name Jeffery App Last Name Webb

ZDP Required ☒ Public Review Required ☒ Lead Staff Person Karen Schminke
 Board of Adjustment Date _____ Date Routed 2/22/2022
 Planning Commission Date 4/14/2022 Comments Due Back to Planning 3/8/2022
 City Council (1st Reading) _____ Comments Rec'd ☐ Filed in Area:
 City Council (Public Hearing) _____ Planning Direct

Comments Received

City Manager ☐	Building Dept ☐
City Clerk ☐	Fire District ☒
City Attorney ☐	Re-2 ☐
Utilities Department ☒	URS ☐
City Engineer ☒	IREA ☒
City Inspector ☒	Black Hills ☒
Finance Department ☐	CDOT ☐
Planning Director ☒	CenturyLink ☒
City Planner ☐	TDS Telecom ☒
Police ☐	Other: ☒
Parks & Rec ☒	
Economic Development ☐	

Important Information

Administrator
Routing Instructions:

City of Woodland Park

Print
Record



Planning Department Routing/Comment Form

ID _____ Project Name The Pines at Stone Ridge - SPR Project # EXT/Case #: SPR2021-0
 Permit Number 202111362 Site Address Number Millstone L PO Box _____
 Date Received: 1/28/2022 Site Address Name _____ Mailing Address # 9570
 Project Type SPR Lot Number _____ Block # _____ Mailing Street Canyon Dr.
 Project Type Number 4 Subdivision _____ Filing # _____ App Phone 208-284-6942
 Project Classification SPR Applicant Business Name Populus Planning and Design, LLC
 Residential or Commercial Residential App First Name Jeffery App Last Name Webb

ZDP Required ☒ Public Review Required ☒ Lead Staff Person Karen Schminke
 Board of Adjustment Date _____ Date Routed 2/23/2022
 Planning Commission Date 4/14/2022 Comments Due Back to Planning 3/8/2022
 City Council (1st Reading) _____ Comments Rec'd ☐ Filed in Area:
 City Council (Public Hearing) _____ Planning Direct

Comments Received

City Manager ☐	Building Dept ☐
City Clerk ☐	Fire District ☒
City Attorney ☐	Re-2 ☐
Utilities Department ☒	URS ☐
City Engineer ☒	IREA ☒
City Inspector ☒	Black Hills ☒
Finance Department ☐	CDOT ☐
Planning Director ☒	CenturyLink ☒
City Planner ☐	TDS Telecom ☒
Police ☐	Other: ☒
Parks & Rec ☒	
Economic Development ☐	

Important Information

Administrator
Routing Instructions:



WOODLAND PARK
CITY ABOVE THE CLOUDS

2021 GENERAL APPLICATION
(Revised 1/1/2021)

Project # 202111360 202111361 202111362
Case # PUD 2021-03 SUB 2021-14 SPR 2021-05
Fee(s): See City of Woodland Park
Fees Sheet (Plus publication/recording
fees, as applicable)

Type of Application (Check one or more as applicable)

- | | | |
|--|---|--|
| ☒ Site Plan Review Permitted Use | ☐ Special Use Permit | ☒ Preliminary Plat |
| ☐ Site Plan Review Conditional Use | ☐ Planned Unit Development (PUD) | ☐ Exemption Plat |
| ☐ Conditional Use Permit | ☒ PUD Amendment | ☐ Final Plat |
| ☐ Zoning Change | ☐ Appeal | ☐ Townhouse Plat |
| ☐ Extension of Development | ☐ Variance | ☐ Condominium Plat |

1. Applicant Information

- a. Applicant Name Jeffery Webb, Populus Planning and Design, LLC
- b. Project Coordinator ☒ Property Owner ☐
- c. Mailing Address 9570 Canyon Dr., Woodland Park, CO, 80863
- d. E-mail Address Jefferyallenwebb@gmail.com
- e. Phone Numbers Home _____ Work 208.284.6942 Mobile _____

2. Property Owner Information (if different from above)

- a. Name Craig O'Boyle, Go Beyond, LLC Project Contact? Yes ☐ No ☐
- b. Mailing Address 1685 West Uintah St., Colorado Springs, CO 80904
- c. E-mail Address craig.oboyle@oboylegroups.net
- d. Phone Numbers Home _____ Work 719-576-7373 Mobile 719-229-2060

3. Site Information

- a. Site Address SE OF RIDGESTONE DRIVE AND RESEARCH DRIVE, Woodland Park, CO, 80863 (Parcel ID: 6229.132000880)
- b. Lot ____ Block ____ Subdivision _____
- c. Property Zoning PUD Lot Size +/- 9.01 ac Acres ☒ Square Feet ☐

4. Project Information

- a. Project Name The Pines at Stone Ridge
- b. Brief Description of Project/Request The Pines at Stone Ridge proposes 49 Town Homes and 20 Patio Homes on the +/- 9.01 acre lot located south east of Millstone and Research Drive.
The project will create a vibrant neighborhood that will complement the existing Stone Ridge subdivision through the preservation of open space, creation of new and diverse housing options,
thoughtful and dynamic architectural designs, new park and open space connections, and a focus on a walkable, family-friendly neighborhood. The project requests a PUD amendment to the
existing Stone Ridge Master Plan from a previously approved apartment building and patio home concept to the more compatible townhome and patio home project proposed at The Pines
at Stone Ridge. Included in this application is a Site Plan, Preliminary Plat, PUD Amendment, and all required supporting plans and documents.
- c. Project Narrative (On a separate sheet provide additional project details and how the proposal complies with the applicable code requirements, which can be found in Section 8 of this application.)

6. Submittal Requirements

The following items must be included at time of submittal (in addition to items on the submittal checklists) or the application will not be processed (additional copies may be requested).

Type of Application	24" x 36" Plan Set	11" x 17" Plan Set	Adobe Acrobat Portable Document Format (.pdf) electronic Plan Set on a flash drive	Warranty Deed or Title Policy	List of adjoining property owners within 150'	Copies of reports (narrative, traffic study, drainage, etc.)
All Types	1	1	1	1	1	1

7. Applicable Code Sections

The following are the applicable code sections by type of application and are for assisting applicants in completing the required project narrative. The City of Woodland Park's Municipal Code can be found at www.city-woodlandpark.org/Charter&Code. Subdivision requirements are in Title 17 and Zoning is in Title 18 of the Municipal Code.

Type of Application	Applicable Code Sections
Site Plan Review Permitted Use	Chapters 18.34, 18.33 and 18.39
Site Plan Review Conditional Use	Chapters 18.34, 18.57, 18.33 and 18.39
Conditional Use Permit	Chapter 18.57 plus applicable site plan regulations
Zoning Change	There are no specific standards, but the applicant should provide supporting argument for a zoning change, including how it complies with the Comprehensive Plan
Special Use Permit	Chapter 18.61 plus applicable site plan regulations
Planned Unit Development	Chapters 18.30, 18.33, 18.39, Sections 17.20.070, and 17.20.080
Appeal	Chapter 18.54
Variance	Chapter 18.60
Preliminary Plat	Chapter 17.20 plus applicable subdivision sections
Exemption Plat	Section 17.52.030 plus applicable subdivision sections
Final Plat	Chapter 17.24 plus applicable subdivision sections
Townhouse Plat	Chapter 17.32 plus applicable subdivision sections
Condominium Plat	Chapter 17.32 plus applicable subdivision sections

8. Certification of Ownership

I (We) do hereby declare and affirm that I (we) am (are) the exclusive owner(s) and title holder(s) of the above described property.

Owner

Craig O'Boyle

Date

11-18-22

Owner

(see attached permission by Dana Duncan)

Date

9. Certification: The undersigned applicant certifies under oath and under penalties of perjury that the information found in the application is true and accurate to the best of their knowledge.

I certify that I understand that the proposed development is in accordance with all provisions of the City of Woodland Park's Municipal Code and other applicable regulations.

Applicant

Date

5. Consultant Information (if applicable)

a. Architect

- i. Project Contact Scott Schuster
- ii. Firm Name Echo Architecture + Interiors
- iii. Physical Address 4 South Wahsatch #120, Colorado Springs, CO 80903
- iv. Mailing Address 4 South Wahsatch #120, Colorado Springs, CO 80903
- v. E-mail Address scott@echo-arch.com
- vi. Phone Numbers: Business 719-0387-7836 #102 Mobile _____

b. Engineer

- i. Project Contact Kevin Kofford
- ii. Firm Name Kimley-Horn
- iii. Physical Address 2 North Nevada Avenue, Suite 300, Colorado Springs, CO 80903
- iv. Mailing Address 2 North Nevada Avenue, Suite 300, Colorado Springs, CO 80903
- v. E-mail Address Kevin.Kofford@kimley-horn.com
- vi. Phone Numbers: Business 719-453-0181 Mobile _____

c. Planner

- i. Project Contact Jeffery Webb
- ii. Firm Name Populus Planning and Design
- iii. Physical Address 9570 Canyon Drive, Woodland Park, CO, 80863
- iv. Mailing Address 9570 Canyon Drive, Woodland Park, CO, 80863
- v. E-mail Address jefferyallenwebb@gmail.com
- vi. Phone Numbers: Business 208-284-6942 Mobile _____

d. Surveyor

- i. Project Contact Kevin LLoyd
- ii. Firm Name Rampart Surveys, LLC
- iii. Physical Address 1050 Tamarac Parkway Woodland Park, CO 80863
- iv. Mailing Address PO Box 5101 Woodland Park, CO 80866
- v. E-mail Address klloyd1320@gmail.com
- vi. Phone Numbers: Business 719.650.0798 Mobile _____

e. Other (specify role) Transportation Consultants

- i. Project Contact Jeff Hodsdon
- ii. Firm Name LSC Transportation Consultants, Inc.
- iii. Physical Address 2504 East Pikes Peak Avenue, Suite 304, Colorado Springs, CO 80909
- iv. Mailing Address 2504 East Pikes Peak Avenue, Suite 304, Colorado Springs, CO 80909
- v. E-mail Address colleen@lsctrans.com
- vi. Phone Numbers: Business 719-633-2868 Mobile _____

City Use Only

1. Submission 11/29/2021, 2021, taken by SWR
Fee Received 11/29/2021, 2021, taken by SWR
2. Application is deemed complete – OR – deemed incomplete and returned to applicant to complete on 2 / 22 / 2022
3. Public Hearing Notice
Published 3/30, 2022
Posted 4/4, 2022
Adjacent Property Notification 3/22, 2022
4. Planning Commission Public Hearing 4/14, 2022
Board of Adjustment Public Hearing (when applicable) N/A, 2022
5. City Council First Reading of Ordinance (if applicable) _____, 20____.
City Council Public Hearing _____, 20____.
Notes N/A
6. Letter of Approval/Denial to applicant sent _____, 20____.
7. Additional Information



O'Boyle Real Estate Group

1685 W Uintah St. Suite 213 Colorado Springs, CO 80904

Craig O'Boyle info@oboylegroups.net

Ph: 719-576-7373

The printed portions of this form, except differentiated additions, have been approved by the Colorado Real Estate Commission. (CBS4-5-19) (Mandatory 7-19)

THIS FORM HAS IMPORTANT LEGAL CONSEQUENCES AND THE PARTIES SHOULD CONSULT LEGAL AND TAX OR OTHER COUNSEL BEFORE SIGNING.

CONTRACT TO BUY AND SELL REAL ESTATE

(LAND)

☒ **Property with No Residences)**

☐ **Property with Residences-Residential Addendum Attached)**

Date: 6/22/2021

AGREEMENT

1. AGREEMENT. Buyer agrees to buy and Seller agrees to sell the Property described below on the terms and conditions set forth in this contract (Contract).

2. PARTIES AND PROPERTY.

2.1. Buyer. Buyer, **Go Beyond, LLC** (Buyer) will take title to the Property described below as

☐ **Joint Tenants** ☐ **Tenants In Common** ☐ **Other** n/a.

2.2. No Assignability. This Contract **IS NOT** assignable by Buyer unless otherwise specified in **Additional Provisions.**

2.3. Seller. **Stone Ridge Village, LLC** (Seller) is the current owner of the Property described below.

2.4. Property. The Property is the following legally described real estate in the County of

Teller, Colorado:

4.16 & 4.85 acre land parcels in Stone Ridge Village subdivision designated for patio homes and apartment homes. Final legal to be amended to match the survey done by the original developer/seller.

known as No. **TBD Highway 67, Woodland Park, CO 80863,**

together with the interests, easements, rights, benefits, improvements and attached fixtures appurtenant thereto and all interest of Seller in vacated streets and alleys adjacent thereto except as herein excluded (Property).

2.5. Inclusions. The Purchase Price includes the following items (Inclusions):

2.5.1. Inclusions. The following items, whether fixtures or personal property, are included in the Purchase Price unless excluded under **Exclusions:**

n/a If any additional items are attached to the Property after the date of this Contract, such additional items are also included in the Purchase Price.

2.5.2. Personal Property -- Conveyance. Any personal property must be conveyed at Closing by Seller free and clear of all taxes (except personal property taxes for the year of Closing), liens and encumbrances, except n/a.

Conveyance of all personal property will be by bill of sale or other applicable legal instrument.

2.6. Exclusions. The following items are excluded (Exclusions): n/a

2.7. Water Rights, Well Rights, Water and Sewer Taps.

☐ **2.7.1. Deeded Water Rights.** The following legally described water rights:

n/a

Any deeded water rights will be conveyed by a good and sufficient n/a deed at Closing.

☐ **2.7.2. Other Rights Relating to Water.** The following rights relating to water not included in §§ 2.7.1, 2.7.3, 2.7.4 and 2.7.5, will be transferred to Buyer at Closing: n/a

☐ **2.7.3. Well Rights.** Seller agrees to supply required information to Buyer about the well. Buyer understands that if the well to be transferred is a "Small Capacity Well" or a "Domestic Exempt Water Well" used for ordinary household purposes, Buyer must, prior to or at Closing, complete a Change in Ownership form for the well. If an existing well has not been registered with the Colorado Division of Water Resources in the Department of Natural Resources (Division), Buyer must complete a registration of existing well form for the well and pay the cost of registration. If no person will be providing a closing service in connection with the transaction, Buyer must file the form with the Division within sixty days after Closing. The Well Permit # is n/a.

☐ **2.7.4. Water Stock Certificates.** The water stock certificates to be transferred at Closing are as follows: n/a

2.7.5. Water and Sewer Taps. The parties agree that water and sewer taps listed below for the Property are being conveyed as part of the Purchase Price as follows: n/a

If any water or sewer taps are included in the sale, Buyer is advised to obtain, from the provider, written confirmation of the amount remaining to be paid, if any, time and other restrictions for transfer and use of the taps.

2.7.6. Conveyance. If Buyer is to receive any rights to water pursuant to § 2.7.2 (Other Rights Relating to Water), § 2.7.3 (Well Rights), § 2.7.4 (Water Stock Certificates), or § 2.7.5 (Water and Sewer Taps), Seller agrees to convey such rights to Buyer by executing the applicable legal instrument at Closing.

2.8. Growing Crops. With respect to growing crops, Seller and Buyer agree as follows:

n/a

3. DATES, DEADLINES AND APPLICABILITY.

3.1. Dates and Deadlines.

Item No.	Reference	Event	Date or Deadline	
1	§ 4.3	Alternative Earnest Money Deadline	6/28/2021	Monday
		Title		
2	§ 8.1, 8.4	Record Title Deadline	7/12/2021	Monday
3	§ 8.2, 8.4	Record Title Objection Deadline	n/a	
4	§ 8.3	Off-Record Title Deadline	7/12/2021	Monday
5	§ 8.3	Off-Record Title Objection Deadline	n/a	
6	§ 8.5	Title Resolution Deadline	n/a	
7	§ 8.6	Right of First Refusal Deadline	n/a	
		Owners' Association		
8	§ 7.2	Association Documents Deadline	n/a	
9	§ 7.4	Association Documents Termination Deadline	n/a	
		Seller's Disclosures		
10	§ 10.1	Seller's Property Disclosure Deadline	n/a	
11	§ 10.10	Lead-Based Paint Disclosure Deadline (if Residential Addendum attached)	n/a	
		Loan and Credit		
12	§ 5.1	New Loan Application Deadline	n/a	
13	§ 5.2	New Loan Termination Deadline	n/a	
14	§ 5.3	Buyer's Credit Information Deadline	n/a	
15	§ 5.3	Disapproval of Buyer's Credit Information Deadline	n/a	

16	§ 5.4	Existing Loan Deadline	n/a	
17	§ 5.4	Existing Loan Termination Deadline	n/a	
18	§ 5.4	Loan Transfer Approval Deadline	n/a	
19	§ 4.7	Seller or Private Financing Deadline	n/a	
		Appraisal		
20	§ 6.2	Appraisal Deadline	n/a	
21	§ 6.2	Appraisal Objection Deadline	n/a	
22	§ 6.2	Appraisal Resolution Deadline	n/a	
		Survey		
23	§ 9.1	New ILC or New Survey Deadline	n/a	
24	§ 9.3	New ILC or New Survey Objection Deadline	n/a	
25	§ 9.3	New ILC or New Survey Resolution Deadline	n/a	
		Inspection and Due Diligence		
26	§ 10.3	Inspection Objection Deadline	n/a	
27	§ 10.3	Inspection Termination Deadline	n/a	
28	§ 10.3	Inspection Resolution Deadline	n/a	
29	§ 10.5	Property Insurance Termination Deadline	n/a	
30	§ 10.6	Due Diligence Documents Delivery Deadline	n/a	
31	§ 10.6	Due Diligence Documents Objection Deadline	n/a	
32	§ 10.6	Due Diligence Documents Resolution Deadline	n/a	
33	§ 10.6	Environmental Inspection Termination Deadline	n/a	
34	§ 10.6	ADA Evaluation Termination Deadline	n/a	
35	§ 10.7	Conditional Sale Deadline	n/a	
36	§ 10.10	Lead-Based Paint Termination Deadline (if Residential Addendum attached)	n/a	
37	§ 11.1, 11.2	Estoppel Statements Deadline	n/a	
38	§ 11.3	Estoppel Statements Termination Deadline		
		Closing and Possession		
39	§ 12.3	Closing Date	9/30/2021 Or Before	Thursday
40	§ 17	Possession Date	date of closing	
41	§ 17	Possession Time	after closing and funding	
42	§ 28	Acceptance Deadline Date	6/25/2021	Friday
43	§ 28	Acceptance Deadline Time	5pm	
44	n/a	n/a	n/a	
45	n/a	n/a	n/a	

3.2. Applicability of Terms. Any box checked in this Contract means the corresponding provision applies. If any deadline blank in § 3.1 (Dates and Deadlines) is left blank or completed with the abbreviation "N/A", or the word "Deleted," such deadline is not applicable and the corresponding provision containing the deadline is deleted. If no box is checked in a provision that contains a selection of "None", such provision means that "None" applies.

The abbreviation "MEC" (mutual execution of this Contract) means the date upon which both parties have signed this Contract.

4. PURCHASE PRICE AND TERMS.

4.1. Price and Terms. The Purchase Price set forth below is payable in U.S. Dollars by Buyer as follows:

Item No.	Reference	Item	Amount	Amount
1	§ 4.1	Purchase Price	\$895,000.00	
2	§ 4.3	Earnest Money		\$35,000.00
3	§ 4.5	New Loan		
4	§ 4.6	Assumption Balance		
5	§ 4.7	Private Financing		
6	§ 4.7	Seller Financing		\$670,000.00
7	n/a	n/a		
8	n/a	n/a		
9	§ 4.4	Cash at Closing		\$190,000.00
10		TOTAL	\$895,000.00	\$895,000.00

4.2. Seller Concession. At Closing, Seller will credit to Buyer \$ **n/a** (Seller Concession). The Seller Concession may be used for any Buyer fee, cost, charge or expenditure to the extent the amount is allowed by the Buyer's lender and is included in the Closing Statement or Closing Disclosure at Closing. Examples of allowable items to be paid for by the Seller Concession include, but are not limited to: Buyer's closing costs, loan discount points, loan origination fees, prepaid items and any other fee, cost, charge, expense or expenditure. Seller Concession is in addition to any sum Seller has agreed to pay or credit Buyer elsewhere in this Contract.

4.3. Earnest Money. The Earnest Money set forth in this section, in the form of a **Check**, will be payable to and held by **Empire Title** (Earnest Money Holder), in its trust account, on behalf of both Seller and Buyer. The Earnest Money deposit must be tendered, by Buyer, with this Contract unless the parties mutually agree to an **Alternative Earnest Money Deadline** for its payment. The parties authorize delivery of the Earnest Money deposit to the company conducting the Closing (Closing Company), if any, at or before Closing. In the event Earnest Money Holder has agreed to have interest on Earnest Money deposits transferred to a fund established for the purpose of providing affordable housing to Colorado residents, Seller and Buyer acknowledge and agree that any interest accruing on the Earnest Money deposited with the Earnest Money Holder in this transaction will be transferred to such fund.

4.3.1. Alternative Earnest Money Deadline. The deadline for delivering the Earnest Money, if other than at the time of tender of this Contract, is as set forth as the **Alternative Earnest Money Deadline**.

4.3.2. Return of Earnest Money. If Buyer has a Right to Terminate and timely terminates, Buyer is entitled to the return of Earnest Money as provided in this Contract. If this Contract is terminated as set forth in § 25 and, except as provided in § 24 (Earnest Money Dispute), if the Earnest Money has not already been returned following receipt of a Notice to Terminate, Seller agrees to execute and return to Buyer or Broker working with Buyer, written mutual instructions (e.g., Earnest Money Release form), within three days of Seller's receipt of such form.

4.4. Form of Funds; Time of Payment; Available Funds.

4.4.1. Good Funds. All amounts payable by the parties at Closing, including any loan proceeds, Cash at Closing and closing costs, must be in funds that comply with all applicable Colorado laws, including electronic transfer funds, certified check, savings and loan teller's check and cashier's check (Good Funds).

4.4.2. Time of Payment; Available Funds. All funds, including the Purchase Price to be paid by Buyer, must be paid before or at Closing or as otherwise agreed in writing between the parties to allow disbursement by Closing Company at Closing **OR SUCH NONPAYING PARTY WILL BE IN DEFAULT**. Buyer represents that Buyer, as of the date of this Contract, ☐ **Does** ☐ **Does Not** have funds that are immediately verifiable and available in an amount not less than the amount stated as Cash at Closing in § 4.1.

4.5. New Loan. (Omitted as inapplicable)

4.6. Assumption. (Omitted as inapplicable)

281
282
283 **4.7. Seller or Private Financing.**

284 **WARNING:** Unless the transaction is exempt, federal and state laws impose licensing, other requirements and
285 restrictions on sellers and private financiers. Contract provisions on financing and financing documents, unless
286 exempt, should be prepared by a licensed Colorado attorney or licensed mortgage loan originator. Brokers
287 should not prepare or advise the parties on the specifics of financing, including whether or not a party is
288 exempt from the law.

289
290 **4.7.1. Seller Financing.** If Buyer is to pay all or any portion of the Purchase Price with Seller
291 financing, ☒ **Buyer** ☐ **Seller** will deliver the proposed Seller financing documents to the other party on or
292 before **See Para 30.** days before **Seller or Private Financing Deadline.**

293
294 **4.7.1.1. Seller May Terminate.** If Seller is to provide Seller financing, this Contract is
295 conditional upon Seller determining whether such financing is satisfactory to the Seller, including its payments,
296 interest rate, terms, conditions, cost and compliance with the law. Seller has the Right to Terminate under §
297 25.1, on or before **Seller or Private Financing Deadline**, if such Seller financing is not satisfactory to Seller, in
298 Seller's sole subjective discretion.

299
300 **4.7.2. Buyer May Terminate.** If Buyer is to pay all or any portion of the Purchase Price with
301 Seller or private financing, this Contract is conditional upon Buyer determining whether such financing is
302 satisfactory to Buyer, including its availability, payments, interest rate, terms, conditions and cost. Buyer has
303 the Right to Terminate under § 25.1, on or before **Seller or Private Financing Deadline**, if such Seller or
304 private financing is not satisfactory to Buyer, in Buyer's sole subjective discretion.
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TRANSACTION PROVISIONS

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312 **5. FINANCING CONDITIONS AND OBLIGATIONS.** (Omitted as inapplicable)
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315 **5.3. Credit Information.** If an existing loan is not to be released at Closing, this Contract is conditional
316 (for the sole benefit of Seller) upon Seller's approval of Buyer's financial ability and creditworthiness, which
317 approval will be in Seller's sole subjective discretion. Accordingly: (1) Buyer must supply to Seller by **Buyer's**
318 **Credit Information Deadline**, at Buyer's expense, information and documents (including a current credit
319 report) concerning Buyer's financial, employment and credit condition; (2) Buyer consents that Seller may
320 verify Buyer's financial ability and creditworthiness; and (3) any such information and documents received by
321 Seller must be held by Seller in confidence and not released to others except to protect Seller's interest in this
322 transaction. If the Cash at Closing is less than as set forth in § 4.1 of this Contract, Seller has the Right to
323 Terminate under § 25.1, on or before Closing. If Seller disapproves of Buyer's financial ability or
324 creditworthiness, in Seller's sole subjective discretion, Seller has the Right to Terminate under § 25.1, on or
325 before **Disapproval of Buyer's Credit Information Deadline**.
326
327
328

329 **5.4. Existing Loan Review.** If an existing loan is not to be released at Closing, Seller must deliver
330 copies of the loan documents (including note, deed of trust and any modifications) to Buyer by **Existing Loan**
331 **Deadline**. For the sole benefit of Buyer, this Contract is conditional upon Buyer's review and approval of the
332 provisions of such loan documents. Buyer has the Right to Terminate under § 25.1, on or before **Existing**
333 **Loan Termination Deadline**, based on any unsatisfactory provision of such loan documents, in Buyer's sole
334 subjective discretion. If the lender's approval of a transfer of the Property is required, this Contract is
335 conditional upon Buyer obtaining such approval without change in the terms of such loan, except as set forth in
336 § 4.6. If lender's approval is not obtained by **Loan Transfer Approval Deadline**, this Contract will terminate on
337 such deadline. Seller has the Right to Terminate under § 25.1, on or before Closing, in Seller's sole subjective
338 discretion, if Seller is to be released from liability under such existing loan and Buyer does not obtain such
339 compliance as set forth in § 4.6.
340
341
342
343

344 **6. APPRAISAL PROVISIONS.**

345 **6.1. Appraisal Definition.** An "Appraisal" is an opinion of value prepared by a licensed or certified
346 appraiser, engaged on behalf of Buyer or Buyer's lender, to determine the Property's market value (Appraised
347 Value). The Appraisal may also set forth certain lender requirements, replacements, removals or repairs
348 necessary on or to the Property as a condition for the Property to be valued at the Appraised Value.
349
350

351 **6.2. Appraisal Conclusion.** The applicable appraisal provision set forth below applies to the respective
352 loan type set forth in § 4.5.3, or if a cash transaction (i.e. no financing), § 6.2.1 applies.
353

354 **6.2.1. Conventional/Other.** Buyer has the right to obtain an Appraisal. If the Appraised Value
355 is less than the Purchase Price, or if the Appraisal is not received by Buyer on or before **Appraisal Deadline**
356 Buyer may, on or before **Appraisal Objection Deadline**, notwithstanding § 8.3 or § 13:
357

358 **6.2.1.1. Notice to Terminate.** Notify Seller in writing, pursuant to § 25.1, that this
359 Contract is terminated; or

360 **6.2.1.2. Appraisal Objection.** Deliver to Seller a written objection accompanied by
361 either a copy of the Appraisal or written notice from lender that confirms the Appraised Value is less than the
362 Purchase Price (Lender Verification).
363

364 **6.2.1.3. Appraisal Resolution.** If an Appraisal Objection is received by Seller, on or
365 before **Appraisal Objection Deadline** and if Buyer and Seller have not agreed in writing to a settlement
366 thereof on or before **Appraisal Resolution Deadline**, this Contract will terminate on the **Appraisal Resolution**
367 **Deadline**, unless Seller receives Buyer's written withdrawal of the Appraisal Objection before such termination,
368 i.e., on or before expiration of **Appraisal Resolution Deadline**.
369

370 **6.3. Lender Property Requirements.** If the lender imposes any written requirements, replacements,
371 removals or repairs, including any specified in the Appraisal (Lender Requirements) to be made to the Property
372 (e.g., roof repair, repainting), beyond those matters already agreed to by Seller in this Contract, this Contract
373 terminates on the earlier of three days following Seller's receipt of the Lender Requirements, or Closing, unless
374 prior to termination: (1) the parties enter into a written agreement to satisfy the Lender Requirements; (2) the
375 Lender Requirements have been completed; or (3) the satisfaction of the Lender Requirements is waived in
376 writing by Buyer.
377

378 **6.4. Cost of Appraisal.** Cost of the Appraisal to be obtained after the date of this Contract must be
379 timely paid by ☐ Buyer ☐ Seller. The cost of the Appraisal may include any and all fees paid to the appraiser,
380 appraisal management company, lender's agent or all three.
381
382
383
384

385 **7. OWNERS' ASSOCIATION.** This Section is applicable if the Property is located within a Common
386 Interest Community and subject to the declaration (Association).
387

388 **7.1. Common Interest Community Disclosure.** **THE PROPERTY IS LOCATED WITHIN A**
389 **COMMON INTEREST COMMUNITY AND IS SUBJECT TO THE DECLARATION FOR THE COMMUNITY.**
390 **THE OWNER OF THE PROPERTY WILL BE REQUIRED TO BE A MEMBER OF THE OWNERS'**
391 **ASSOCIATION FOR THE COMMUNITY AND WILL BE SUBJECT TO THE BYLAWS AND RULES AND**
392 **REGULATIONS OF THE ASSOCIATION. THE DECLARATION, BYLAWS AND RULES AND REGULATIONS**
393 **WILL IMPOSE FINANCIAL OBLIGATIONS UPON THE OWNER OF THE PROPERTY, INCLUDING AN**
394 **OBLIGATION TO PAY ASSESSMENTS OF THE ASSOCIATION. IF THE OWNER DOES NOT PAY THESE**
395 **ASSESSMENTS, THE ASSOCIATION COULD PLACE A LIEN ON THE PROPERTY AND POSSIBLY SELL**
396 **IT TO PAY THE DEBT. THE DECLARATION, BYLAWS AND RULES AND REGULATIONS OF THE**
397 **COMMUNITY MAY PROHIBIT THE OWNER FROM MAKING CHANGES TO THE PROPERTY WITHOUT AN**
398 **ARCHITECTURAL REVIEW BY THE ASSOCIATION (OR A COMMITTEE OF THE ASSOCIATION) AND**
399 **THE APPROVAL OF THE ASSOCIATION. PURCHASERS OF PROPERTY WITHIN THE COMMON**
400 **INTEREST COMMUNITY SHOULD INVESTIGATE THE FINANCIAL OBLIGATIONS OF MEMBERS OF THE**
401 **ASSOCIATION. PURCHASERS SHOULD CAREFULLY READ THE DECLARATION FOR THE COMMUNITY**
402 **AND THE BYLAWS AND RULES AND REGULATIONS OF THE ASSOCIATION.**
403
404
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407 **7.2. Association Documents to Buyer.** Seller is obligated to provide to Buyer the Association
408 Documents (defined below), at Seller's expense, on or before **Association Documents Deadline**. Seller
409 authorizes the Association to provide the Association Documents to Buyer, at Seller's expense. Seller's
410 obligation to provide the Association Documents is fulfilled upon Buyer's receipt of the Association Documents,
411 regardless of who provides such documents.
412

413 **7.3. Association Documents.** Association documents (Association Documents) consist of the
414 following:
415

416 **7.3.1.** All Association declarations, articles of incorporation, bylaws, articles of
417 organization, operating agreements, rules and regulations, party wall agreements and the Association's
418 responsible governance policies adopted under § 38-33.3-209.5, C.R.S.;
419
420

7.3.2. Minutes of: (1) the annual owners' or members' meeting and (2) any executive boards' or managers' meetings; such minutes include those provided under the most current annual disclosure required under § 38-33.3-209.4, C.R.S. (Annual Disclosure) and minutes of meetings, if any, subsequent to the minutes disclosed in the Annual Disclosure. If none of the preceding minutes exist, then the most recent minutes, if any (§§ 7.3.1 and 7.3.2, collectively, Governing Documents); and

7.3.3. List of all Association insurance policies as provided in the Association's last Annual Disclosure, including, but not limited to, property, general liability, association director and officer professional liability and fidelity policies. The list must include the company names, policy limits, policy deductibles, additional named insureds and expiration dates of the policies listed (Association Insurance Documents);

7.3.4. A list by unit type of the Association's assessments, including both regular and special assessments as disclosed in the Association's last Annual Disclosure;

7.3.5. The Association's most recent financial documents which consist of: (1) the Association's operating budget for the current fiscal year, (2) the Association's most recent annual financial statements, including any amounts held in reserve for the fiscal year immediately preceding the Association's last Annual Disclosure, (3) the results of the Association's most recent available financial audit or review, (4) list of the fees and charges (regardless of name of title of such fees or charges) that the Association's community association manager or Association will charge in connection with the Closing including, but not limited to, any fee incident to the issuance of the Association's statement of assessments (Status Letter), any rush or update fee charged for the Status Letter, any record change fee or ownership record transfer fees (Record Change Fee), fees to access documents, (5) list of all assessments required to be paid in advance, reserves or working capital due at Closing and (6) reserve study, if any (§§ 7.3.4 and 7.3.5, collectively, Financial Documents);

7.3.6. Any written notice from the Association to Seller of a "construction defect action" under § 38-33.3-303.5, C.R.S. within the past six months and the result of whether the Association approved or disapproved such action (Construction Defect Documents). Nothing in this Section limits the Seller's obligation to disclose adverse material facts as required under § 10.2 (Disclosure of Adverse Material Facts; Subsequent Disclosure; Present Condition) including any problems or defects in the common elements or limited common elements of the Association property.

7.4. Conditional on Buyer's Review. Buyer has the right to review the Association Documents. Buyer has the Right to Terminate under § 25.1, on or before **Association Documents Termination Deadline**, based on any unsatisfactory provision in any of the Association Documents, in Buyer's sole subjective discretion. Should Buyer receive the Association Documents after **Association Documents Deadline**, Buyer, at Buyer's option, has the Right to Terminate under § 25.1 by Buyer's Notice to Terminate received by Seller on or before ten days after Buyer's receipt of the Association Documents. If Buyer does not receive the Association Documents, or if Buyer's Notice to Terminate would otherwise be required to be received by Seller after **Closing Date**, Buyer's Notice to Terminate must be received by Seller on or before Closing. If Seller does not receive Buyer's Notice to Terminate within such time, Buyer accepts the provisions of the Association Documents as satisfactory and Buyer waives any Right to Terminate under this provision, notwithstanding the provisions of § 8.6 (Right of First Refusal or Contract Approval).

8. TITLE INSURANCE, RECORD TITLE AND OFF-RECORD TITLE.

8.1. Evidence of Record Title.

☒ **8.1.1. Seller Selects Title Insurance Company.** If this box is checked, Seller will select the title insurance company to furnish the owner's title insurance policy at Seller's expense. On or before **Record Title Deadline**, Seller must furnish to Buyer, a current commitment for an owner's title insurance policy (Title Commitment), in an amount equal to the Purchase Price, or if this box is checked, ☐ an **Abstract of Title** certified to a current date. Seller will cause the title insurance policy to be issued and delivered to Buyer as soon as practicable at or after Closing.

☐ **8.1.2. Buyer Selects Title Insurance Company.** If this box is checked, Buyer will select the title insurance company to furnish the owner's title insurance policy at Buyer's expense. On or before **Record Title Deadline**, Buyer must furnish to Seller, a current commitment for owner's title insurance policy (Title Commitment), in an amount equal to the Purchase Price.

If neither box in § 8.1.1 or § 8.1.2 is checked, § 8.1.1 applies.

8.1.3. Owner's Extended Coverage (OEC). The Title Commitment ☒ **Will** ☐ **Will Not**

contain Owner's Extended Coverage (OEC). If the Title Commitment is to contain OEC, it will commit to delete or insure over the standard exceptions which relate to: (1) parties in possession, (2) unrecorded easements, (3) survey matters, (4) unrecorded mechanics' liens, (5) gap period (period between the effective date and time of commitment to the date and time the deed is recorded) and (6) unpaid taxes, assessments and unredeemed tax sales prior to the year of Closing. Any additional premium expense to obtain OEC will be paid by ☐ Buyer ☐ Seller ☒ One-Half by Buyer and One-Half by Seller ☐ Other n/a.

Regardless of whether the Contract requires OEC, the Title Insurance Commitment may not provide OEC or delete or insure over any or all of the standard exceptions for OEC. The Title Insurance Company may require a New Survey or New ILC, defined below, among other requirements for OEC. If the Title Insurance Commitment is not satisfactory to Buyer, Buyer has a right to object under § 8.5 (Right to Object to Title, Resolution).

8.1.4. Title Documents. Title Documents consist of the following: (1) copies of any plats, declarations, covenants, conditions and restrictions burdening the Property and (2) copies of any other documents (or, if illegible, summaries of such documents) listed in the schedule of exceptions (Exceptions) in the Title Commitment furnished to Buyer (collectively, Title Documents).

8.1.5. Copies of Title Documents. Buyer must receive, on or before **Record Title Deadline**, copies of all Title Documents. This requirement pertains only to documents as shown of record in the office of the clerk and recorder in the county where the Property is located. The cost of furnishing copies of the documents required in this Section will be at the expense of the party or parties obligated to pay for the owner's title insurance policy.

8.1.6. Existing Abstracts of Title. Seller must deliver to Buyer copies of any abstracts of title covering all or any portion of the Property (Abstract of Title) in Seller's possession on or before **Record Title Deadline**.

8.2. Record Title. Buyer has the right to review and object to the Abstract of Title or Title Commitment and any of the Title Documents as set forth in § 8.5 (Right to Object to Title, Resolution) on or before **Record Title Objection Deadline**. Buyer's objection may be based on any unsatisfactory form or content of Title Commitment or Abstract of Title, notwithstanding § 13, or any other unsatisfactory title condition, in Buyer's sole subjective discretion. If the Abstract of Title, Title Commitment or Title Documents are not received by Buyer on or before the **Record Title Deadline**, or if there is an endorsement to the Title Commitment that adds a new Exception to title, a copy of the new Exception to title and the modified Title Commitment will be delivered to Buyer. Buyer has until the earlier of Closing or ten days after receipt of such documents by Buyer to review and object to: (1) any required Title Document not timely received by Buyer, (2) any change to the Abstract of Title, Title Commitment or Title Documents, or (3) any endorsement to the Title Commitment. If Seller receives Buyer's Notice to Terminate or Notice of Title Objection, pursuant to this § 8.2 (Record Title), any title objection by Buyer is governed by the provisions set forth in § 8.5 (Right to Object to Title, Resolution). If Seller has fulfilled all Seller's obligations, if any, to deliver to Buyer all documents required by § 8.1 (Evidence of Record Title) and Seller does not receive Buyer's Notice to Terminate or Notice of Title Objection by the applicable deadline specified above, Buyer accepts the condition of title as disclosed by the Abstract of Title, Title Commitment and Title Documents as satisfactory.

8.3. Off-Record Title. Seller must deliver to Buyer, on or before **Off-Record Title Deadline**, true copies of all existing surveys in Seller's possession pertaining to the Property and must disclose to Buyer all easements, liens (including, without limitation, governmental improvements approved, but not yet installed) or other title matters (including, without limitation, rights of first refusal and options) not shown by public records, of which Seller has actual knowledge (Off-Record Matters). This Section excludes any **New ILC** or **New Survey** governed under § 9 (New ILC, New Survey). Buyer has the right to inspect the Property to investigate if any third party has any right in the Property not shown by public records (e.g., unrecorded easement, boundary line discrepancy or water rights). Buyer's Notice to Terminate or Notice of Title Objection of any unsatisfactory condition (whether disclosed by Seller or revealed by such inspection, notwithstanding § 8.2 (Record Title) and § 13 (Transfer of Title)), in Buyer's sole subjective discretion, must be received by Seller on or before **Off-Record Title Objection Deadline**. If an Off-Record Matter is received by Buyer after the **Off-Record Title Deadline**, Buyer has until the earlier of Closing or ten days after receipt by Buyer to review and object to such Off-Record Matter. If Seller receives Buyer's Notice to Terminate or Notice of Title Objection pursuant to this § 8.3 (Off-Record Title), any title objection by Buyer is governed by the provisions set forth in §

8.5 (Right to Object to Title, Resolution). If Seller does not receive Buyer's Notice to Terminate or Notice of Title Objection by the applicable deadline specified above, Buyer accepts title subject to such Off-Record Matters and rights, if any, of third parties not shown by public records of which Buyer has actual knowledge.

8.4. Special Taxing Districts. SPECIAL TAXING DISTRICTS MAY BE SUBJECT TO GENERAL OBLIGATION INDEBTEDNESS THAT IS PAID BY REVENUES PRODUCED FROM ANNUAL TAX LEVIES ON THE TAXABLE PROPERTY WITHIN SUCH DISTRICTS. PROPERTY OWNERS IN SUCH DISTRICTS MAY BE PLACED AT RISK FOR INCREASED MILL LEVIES AND TAX TO SUPPORT THE SERVICING OF SUCH DEBT WHERE CIRCUMSTANCES ARISE RESULTING IN THE INABILITY OF SUCH A DISTRICT TO DISCHARGE SUCH INDEBTEDNESS WITHOUT SUCH AN INCREASE IN MILL LEVIES. BUYERS SHOULD INVESTIGATE THE SPECIAL TAXING DISTRICTS IN WHICH THE PROPERTY IS LOCATED BY CONTACTING THE COUNTY TREASURER, BY REVIEWING THE CERTIFICATE OF TAXES DUE FOR THE PROPERTY AND BY OBTAINING FURTHER INFORMATION FROM THE BOARD OF COUNTY COMMISSIONERS, THE COUNTY CLERK AND RECORDER, OR THE COUNTY ASSESSOR.

A tax certificate from the respective county treasurer listing any special taxing districts that effect the Property (Tax Certificate) must be delivered to Buyer on or before **Record Title Deadline**. If the Property is located within a special taxing district and such inclusion is unsatisfactory to Buyer, in Buyer's sole subjective discretion, Buyer may object, on or before **Record Title Objection Deadline**. If the Tax Certificate shows that the Property is included in a special taxing district and is received by Buyer after the **Record Title Deadline**, Buyer has until the earlier of Closing or ten days after receipt by Buyer to review and object to the Property's inclusion in a special taxing district as unsatisfactory to Buyer.

8.5. Right to Object to Title, Resolution. Buyer's right to object, in Buyer's sole subjective discretion, to any title matters includes those matters set forth in § 8.2 (Record Title), § 8.3 (Off-Record Title), § 8.4 (Special Taxing District) and § 13 (Transfer of Title). If Buyer objects to any title matter, on or before the applicable deadline, Buyer has the following options:

8.5.1. Title Objection, Resolution. If Seller receives Buyer's written notice objecting to any title matter (Notice of Title Objection) on or before the applicable deadline and if Buyer and Seller have not agreed to a written settlement thereof on or before **Title Resolution Deadline**, this Contract will terminate on the expiration of **Title Resolution Deadline**, unless Seller receives Buyer's written withdrawal of Buyer's Notice of Title Objection (i.e., Buyer's written notice to waive objection to such items and waives the Right to Terminate for that reason), on or before expiration of **Title Resolution Deadline**. If either the Record Title Deadline or the Off-Record Title Deadline, or both, are extended pursuant to § 8.2 (Record Title), § 8.3 (Off-Record Title) or § 8.4 (Special Taxing Districts), the Title Resolution Deadline also will be automatically extended to the earlier of Closing or fifteen days after Buyer's receipt of the applicable documents; or

8.5.2. Title Objection, Right to Terminate. Buyer may exercise the Right to Terminate under § 25.1, on or before the applicable deadline, based on any title matter unsatisfactory to Buyer, in Buyer's sole subjective discretion.

8.6. Right of First Refusal or Contract Approval. If there is a right of first refusal on the Property or a right to approve this Contract, Seller must promptly submit this Contract according to the terms and conditions of such right. If the holder of the right of first refusal exercises such right or the holder of a right to approve disapproves this Contract, this Contract will terminate. If the right of first refusal is waived explicitly or expires, or the Contract is approved, this Contract will remain in full force and effect. Seller must promptly notify Buyer in writing of the foregoing. If expiration or waiver of the right of first refusal or approval of this Contract has not occurred on or before **Right of First Refusal Deadline**, this Contract will then terminate.

8.7. Title Advisory. The Title Documents affect the title, ownership and use of the Property and should be reviewed carefully. Additionally, other matters not reflected in the Title Documents may affect the title, ownership and use of the Property, including, without limitation, boundary lines and encroachments, set-back requirements, area, zoning, building code violations, unrecorded easements and claims of easements, leases and other unrecorded agreements, water on or under the Property, and various laws and governmental regulations concerning land use, development and environmental matters.

8.7.1. OIL, GAS, WATER AND MINERAL DISCLOSURE. THE SURFACE ESTATE OF THE PROPERTY MAY BE OWNED SEPARATELY FROM THE UNDERLYING MINERAL ESTATE AND TRANSFER OF THE SURFACE ESTATE MAY NOT NECESSARILY INCLUDE TRANSFER OF THE MINERAL ESTATE OR WATER RIGHTS. THIRD PARTIES MAY OWN OR LEASE INTERESTS IN OIL, GAS,

OTHER MINERALS, GEOTHERMAL ENERGY OR WATER ON OR UNDER THE SURFACE OF THE PROPERTY, WHICH INTERESTS MAY GIVE THEM RIGHTS TO ENTER AND USE THE SURFACE OF THE PROPERTY TO ACCESS THE MINERAL ESTATE, OIL, GAS OR WATER.

8.7.2. SURFACE USE AGREEMENT. THE USE OF THE SURFACE ESTATE OF THE PROPERTY TO ACCESS THE OIL, GAS OR MINERALS MAY BE GOVERNED BY A SURFACE USE AGREEMENT, A MEMORANDUM OR OTHER NOTICE OF WHICH MAY BE RECORDED WITH THE COUNTY CLERK AND RECORDER.

8.7.3. OIL AND GAS ACTIVITY. OIL AND GAS ACTIVITY THAT MAY OCCUR ON OR ADJACENT TO THE PROPERTY MAY INCLUDE, BUT IS NOT LIMITED TO, SURVEYING, DRILLING, WELL COMPLETION OPERATIONS, STORAGE, OIL AND GAS, OR PRODUCTION FACILITIES, PRODUCING WELLS, REWORKING OF CURRENT WELLS, AND GAS GATHERING AND PROCESSING FACILITIES.

8.7.4. ADDITIONAL INFORMATION. BUYER IS ENCOURAGED TO SEEK ADDITIONAL INFORMATION REGARDING OIL AND GAS ACTIVITY ON OR ADJACENT TO THE PROPERTY, INCLUDING DRILLING PERMIT APPLICATIONS. THIS INFORMATION MAY BE AVAILABLE FROM THE COLORADO OIL AND GAS CONSERVATION COMMISSION.

8.7.5. Title Insurance Exclusions. Matters set forth in this Section and others, may be excepted, excluded from, or not covered by the owner's title insurance policy.

8.8. Consult an Attorney. Buyer is advised to timely consult legal counsel with respect to all such matters as there are strict time limits provided in this Contract (e.g., Record Title Objection Deadline and Off-Record Title Objection Deadline).

9. NEW ILC, NEW SURVEY.

9.1. New ILC or New Survey. If the box is checked, a: 1) ☐ New Improvement Location Certificate (New ILC); or, 2) ☐ New Survey in the form of n/a; is required and the following will apply:

9.1.1. Ordering of New ILC or New Survey. ☒ Seller ☐ Buyer will order the New ILC or New Survey. The New ILC or New Survey may also be a previous ILC or survey that is in the above-required form, certified and updated as of a date after the date of this Contract.

9.1.2. Payment for New ILC or New Survey. The cost of the New ILC or New Survey will be paid, on or before Closing, by: ☒ Seller ☐ Buyer or ***Note: A new survey shall be obtained by seller only if required by the Title company. Existing survey and plat shall suffice unless none exist.***

9.1.3. Delivery of New ILC or New Survey. Buyer, Seller, the issuer of the Title Commitment (or the provider of the opinion of title if an Abstract of Title) and n/a will receive a New ILC or New Survey on or before New ILC or New Survey Deadline.

9.1.4. Certification of New ILC or New Survey. The New ILC or New Survey will be certified by the surveyor to all those who are to receive the New ILC or New Survey.

9.2. Buyer's Right to Waive or Change New ILC or New Survey Selection. Buyer may select a New ILC or New Survey different than initially specified in this Contract if there is no additional cost to Seller or change to the New ILC or New Survey Objection Deadline. Buyer may, in Buyer's sole subjective discretion, waive a New ILC or New Survey if done prior to Seller incurring any cost for the same.

9.3. New ILC or New Survey Objection. Buyer has the right to review and object to the New ILC or New Survey. If the New ILC or New Survey is not timely received by Buyer or is unsatisfactory to Buyer, in Buyer's sole subjective discretion, Buyer may, on or before New ILC or New Survey Objection Deadline, notwithstanding § 8.3 or § 13:

9.3.1. Notice to Terminate. Notify Seller in writing, pursuant to § 25.1, that this Contract is terminated; or

9.3.2. New ILC or New Survey Objection. Deliver to Seller a written description of any matter that was to be shown or is shown in the New ILC or New Survey that is unsatisfactory and that Buyer requires Seller to correct.

9.3.3. New ILC or New Survey Resolution. If a New ILC or New Survey Objection is received by Seller, on or before New ILC or New Survey Objection Deadline and if Buyer and Seller have not agreed in writing to a settlement thereof on or before New ILC or New Survey Resolution Deadline, this Contract will terminate on expiration of the New ILC or New Survey Resolution Deadline, unless Seller receives Buyer's

written withdrawal of the New ILC or New Survey Objection before such termination, i.e., on or before expiration of **New ILC or New Survey Resolution Deadline**.

DISCLOSURE, INSPECTION AND DUE DILIGENCE

10. PROPERTY DISCLOSURE, INSPECTION, INDEMNITY, INSURABILITY, DUE DILIGENCE, AND SOURCE OF WATER.

10.1. Seller's Property Disclosure. On or before **Seller's Property Disclosure Deadline**, Seller agrees to deliver to Buyer the most current version of the applicable Colorado Real Estate Commission's Seller's Property Disclosure form completed by Seller to Seller's actual knowledge and current as of the date of this Contract.

10.2. Disclosure of Adverse Material Facts; Subsequent Disclosure; Present Condition. Seller must disclose to Buyer any adverse material facts actually known by Seller as of the date of this Contract. Seller agrees that disclosure of adverse material facts will be in writing. In the event Seller discovers an adverse material fact after the date of this Contract, Seller must timely disclose such adverse fact to Buyer. Buyer has the Right to Terminate based on the Seller's new disclosure on the earlier of Closing or five days after Buyer's receipt of the new disclosure. Except as otherwise provided in this Contract, Buyer acknowledges that Seller is conveying the Property to Buyer in an "**As Is**" condition, "**Where Is**" and "**With All Faults**."

10.3. Inspection. Unless otherwise provided in this Contract, Buyer, acting in good faith, has the right to have inspections (by one or more third parties, personally or both) of the Property and Inclusions (Inspection), at Buyer's expense. If (1) the physical condition of the Property, including, but not limited to, the roof, walls, structural integrity of the Property, the electrical, plumbing, HVAC and other mechanical systems of the Property, (2) the physical condition of the Inclusions, (3) service to the Property (including utilities and communication services), systems and components of the Property (e.g., heating and plumbing), (4) any proposed or existing transportation project, road, street or highway, or (5) any other activity, odor or noise (whether on or off the Property) and its effect or expected effect on the Property or its occupants is unsatisfactory, in Buyer's sole subjective discretion, Buyer may:

10.3.1. Inspection Objection. On or before the **Inspection Objection Deadline**, deliver to Seller a written description of any unsatisfactory condition that Buyer requires Seller to correct; or

10.3.2. Terminate. On or before the **Inspection Termination Deadline**, notify Seller in writing, pursuant to § 25.1, that this Contract is terminated due to any unsatisfactory condition. **Inspection Termination Deadline will be on the earlier of Inspection Resolution Deadline or the date specified in § 3.1 for Inspection Termination Deadline.**

10.3.3. Inspection Resolution. If an Inspection Objection is received by Seller, on or before **Inspection Objection Deadline** and if Buyer and Seller have not agreed in writing to a settlement thereof on or before **Inspection Resolution Deadline**, this Contract will terminate on **Inspection Resolution Deadline** unless Seller receives Buyer's written withdrawal of the Inspection Objection before such termination, i.e., on or before expiration of **Inspection Resolution Deadline**.

10.4. Damage, Liens and Indemnity. Buyer, except as otherwise provided in this Contract or other written agreement between the parties, is responsible for payment for all inspections, tests, surveys, engineering reports, or other reports performed at Buyer's request (Work) and must pay for any damage that occurs to the Property and Inclusions as a result of such Work. Buyer must not permit claims or liens of any kind against the Property for Work performed on the Property. Buyer agrees to indemnify, protect and hold Seller harmless from and against any liability, damage, cost or expense incurred by Seller and caused by any such Work, claim, or lien. This indemnity includes Seller's right to recover all costs and expenses incurred by Seller to defend against any such liability, damage, cost or expense, or to enforce this Section, including Seller's reasonable attorney fees, legal fees and expenses. The provisions of this Section survive the termination of this Contract. This § 10.4 does not apply to items performed pursuant to an Inspection Resolution.

10.5. Insurability. Buyer has the right to review and object to the availability, terms and conditions of and premium for property insurance (Property Insurance). Buyer has the Right to Terminate under § 25.1, on or before **Property Insurance Termination Deadline**, based on any unsatisfactory provision of the Property Insurance, in Buyer's sole subjective discretion.

771 **10.6. Due Diligence.**

772 **10.6.1. Due Diligence Documents.** If the respective box is checked, Seller agrees to deliver
773 copies of the following documents and information pertaining to the Property (Due Diligence Documents) to
774 Buyer on or before **Due Diligence Documents Delivery Deadline**:

775 ☐ **10.6.1.1.** All contracts relating to the operation, maintenance and management of the
776 Property;

777 ☐ **10.6.1.2.** Property tax bills for the last n/ years;

778 ☐ **10.6.1.3.** As-built construction plans to the Property and the tenant improvements,
779 including architectural, electrical, mechanical, and structural systems, engineering reports, and permanent
780 Certificates of Occupancy, to the extent now available;

781 ☐ **10.6.1.4.** A list of all Inclusions to be conveyed to Buyer;

782 ☐ **10.6.1.5.** Operating statements for the past n/a years;

783 ☐ **10.6.1.6.** A rent roll accurate and correct to the date of this Contract;

784 ☐ **10.6.1.7.** All current leases, including any amendments or other occupancy
785 agreements, pertaining to the Property. Those leases or other occupancy agreements pertaining to the
786 Property that survive Closing are as follows (Leases): n/a

787 ☐ **10.6.1.8.** A schedule of any tenant improvement work Seller is obligated to complete
788 but has not yet been completed and capital improvement work either scheduled or in process on the date of
789 this Contract;

790 ☐ **10.6.1.9.** All insurance policies pertaining to the Property and copies of any claims
791 which have been made for the past n/a years;

792 ☒ **10.6.1.10.** Soils reports, surveys and engineering reports or data pertaining to the
793 Property (if not delivered earlier under § 8.3);

794 ☐ **10.6.1.11.** Any and all existing documentation and reports regarding Phase I and II
795 environmental reports, letters, test results, advisories and similar documents respective to the existence or
796 nonexistence of asbestos, PCB transformers, or other toxic, hazardous or contaminated substances, and/or
797 underground storage tanks and/or radon gas. If no reports are in Seller's possession or known to Seller, Seller
798 warrants that no such reports are in Seller's possession or known to Seller;

799 ☐ **10.6.1.12.** Any *Americans with Disabilities Act* reports, studies or surveys concerning
800 the compliance of the Property with said Act;

801 ☐ **10.6.1.13.** All permits, licenses and other building or use authorizations issued by any
802 governmental authority with jurisdiction over the Property and written notice of any violation of any such
803 permits, licenses or use authorizations, if any; and

804 ☒ **10.6.1.14.** Other documents and information:

805 **Any and all documentation pertaining to the subject property and the surrounding**
806 **development that effect the subject property, availability of utility service, or the ability to**
807 **develop the property into multi-family residential lots.**

808 **10.6.2. Due Diligence Documents Review and Objection.** Buyer has the right to review and
809 object to Due Diligence Documents. If the Due Diligence Documents are not supplied to Buyer or are
810 unsatisfactory, in Buyer's sole subjective discretion, Buyer may, on or before **Due Diligence Documents**
811 **Objection Deadline**:

812 **10.6.2.1. Notice to Terminate.** Notify Seller in writing, pursuant to § 25.1, that this
813 Contract is terminated; or

814 **10.6.2.2. Due Diligence Documents Objection.** Deliver to Seller a written description
815 of any unsatisfactory Due Diligence Documents that Buyer requires Seller to correct.

816 **10.6.2.3. Due Diligence Documents Resolution.** If a Due Diligence Documents
817 Objection is received by Seller, on or before **Due Diligence Documents Objection Deadline** and if Buyer and
818 Seller have not agreed in writing to a settlement thereof on or before **Due Diligence Documents Resolution**
819 **Deadline**, this Contract will terminate on **Due Diligence Documents Resolution Deadline** unless Seller
820 receives Buyer's written withdrawal of the Due Diligence Documents Objection before such termination, i.e., on
821 or before expiration of **Due Diligence Documents Resolution Deadline**.

822 **10.6.3. Zoning.** Buyer has the Right to Terminate under § 25.1, on or before **Due Diligence**

Documents Objection Deadline, based on any unsatisfactory zoning and all use restrictions imposed by any governmental agency with jurisdiction over the Property, in Buyer's sole subjective discretion.

10.6.4. Due Diligence – Environmental, ADA. Buyer has the right to obtain environmental inspections of the Property including Phase I and Phase II Environmental Site Assessments, as applicable. ☐ Seller ☒ Buyer will order or provide ☐ **Phase I Environmental Site Assessment**, ☐ **Phase II Environmental Site Assessment** (compliant with most current version of the applicable ASTM E1527 standard practices for Environmental Site Assessments) and/or ☐ **n/a**, at the expense of ☐ Seller ☒ Buyer (Environmental Inspection). In addition, Buyer, at Buyer's expense, may also conduct an evaluation whether the Property complies with the *Americans with Disabilities Act* (ADA Evaluation). All such inspections and evaluations must be conducted at such times as are mutually agreeable to minimize the interruption of Seller's and any Seller's tenants' business uses of the Property, if any.

If Buyer's Phase I Environmental Site Assessment recommends a Phase II Environmental Site Assessment, the **Environmental Inspection Termination Deadline** will be extended by n/ days (Extended Environmental Inspection Termination Deadline) and if such Extended Environmental Inspection Termination Deadline extends beyond the **Closing Date**, the **Closing Date** will be extended a like period of time. In such event, ☐ Seller ☐ Buyer must pay the cost for such Phase II Environmental Site Assessment.

Notwithstanding Buyer's right to obtain additional environmental inspections of the Property in this § 10.6.4, Buyer has the Right to Terminate under § 25.1, on or before **Environmental Inspection Termination Deadline**, or if applicable, the Extended Environmental Inspection Termination Deadline, based on any unsatisfactory results of Environmental Inspection, in Buyer's sole subjective discretion.

Buyer has the Right to Terminate under § 25.1, on or before **ADA Evaluation Termination Deadline**, based on any unsatisfactory ADA Evaluation, in Buyer's sole subjective discretion.

10.7. Conditional Upon Sale of Property. This Contract is conditional upon the sale and closing of that certain property owned by Buyer and commonly known as n/a. Buyer has the Right to Terminate under § 25.1 effective upon Seller's receipt of Buyer's Notice to Terminate on or before **Conditional Sale Deadline** if such property is not sold and closed by such deadline. This Section is for the sole benefit of Buyer. If Seller does not receive Buyer's Notice to Terminate on or before **Conditional Sale Deadline**, Buyer waives any Right to Terminate under this provision.

10.8. Source of Potable Water (Residential Land and Residential Improvements Only). Buyer ☐ Does ☒ Does Not acknowledge receipt of a copy of Seller's Property Disclosure or Source of Water Addendum disclosing the source of potable water for the Property. ☒ There is **No Well**. Buyer ☐ Does ☒ Does Not acknowledge receipt of a copy of the current well permit.

Note to Buyer: SOME WATER PROVIDERS RELY, TO VARYING DEGREES, ON NONRENEWABLE GROUND WATER. YOU MAY WISH TO CONTACT YOUR PROVIDER (OR INVESTIGATE THE DESCRIBED SOURCE) TO DETERMINE THE LONG-TERM SUFFICIENCY OF THE PROVIDER'S WATER SUPPLIES.

10.9. Existing Leases; Modification of Existing Leases; New Leases. Seller states that none of the Leases to be assigned to the Buyer at the time of Closing contain any rent concessions, rent reductions or rent abatements except as disclosed in the Lease or other writing received by Buyer. Seller will not amend, alter, modify, extend or cancel any of the Leases nor will Seller enter into any new leases affecting the Property without the prior written consent of Buyer, which consent will not be unreasonably withheld or delayed.

11. ESTOPPEL STATEMENTS.

11.1. Estoppel Statements Conditions. Buyer has the right to review and object to any Estoppel Statements. Seller must request from all tenants of the Property and if received by Seller, deliver to Buyer on or before **Estoppel Statements Deadline**, statements in a form and substance reasonably acceptable to Buyer, from each occupant or tenant at the Property (Estoppel Statement) attached to a copy of the Lease stating:

- 11.1.1.** The commencement date of the Lease and scheduled termination date of the Lease;
- 11.1.2.** That said Lease is in full force and effect and that there have been no subsequent modifications or amendments;
- 11.1.3.** The amount of any advance rentals paid, rent concessions given, and deposits paid to Seller;
- 11.1.4.** The amount of monthly (or other applicable period) rental paid to Seller;

11.1.5. That there is no default under the terms of said Lease by landlord or occupant; and
11.1.6. That the Lease to which the Estoppel Statement is attached is a true, correct and complete copy of the Lease demising the premises it describes.

11.2. **Seller Estoppel Statements.** In the event Seller does not receive from all tenants of the Property a completed signed Estoppel Statement, Seller agrees to complete and execute an Estoppel Statement setting forth the information and documents required §11.1 above and deliver the same to Buyer on or before **Estoppel Statements Deadline**.

11.3. **Estoppel Statements Termination.** Buyer has the Right to Terminate under § 25.1, on or before **Estoppel Statements Termination Deadline**, based on any unsatisfactory Estoppel Statement, in Buyer's sole subjective discretion, or if Seller fails to deliver the Estoppel Statements on or before **Estoppel Statements Deadline**. Buyer also has the unilateral right to waive any unsatisfactory Estoppel Statement.

CLOSING PROVISIONS

12. CLOSING DOCUMENTS, INSTRUCTIONS AND CLOSING.

12.1. **Closing Documents and Closing Information.** Seller and Buyer will cooperate with the Closing Company to enable the Closing Company to prepare and deliver documents required for Closing to Buyer and Seller and their designees. If Buyer is obtaining a loan to purchase the Property, Buyer acknowledges Buyer's lender is required to provide the Closing Company, in a timely manner, all required loan documents and financial information concerning Buyer's loan. Buyer and Seller will furnish any additional information and documents required by Closing Company that will be necessary to complete this transaction. Buyer and Seller will sign and complete all customary or reasonably-required documents at or before Closing.

12.2. **Closing Instructions.** Colorado Real Estate Commission's Closing Instructions ☐Are ☒Are Not executed with this Contract.

12.3. **Closing.** Delivery of deed from Seller to Buyer will be at closing (Closing). Closing will be on the date specified as the **Closing Date** or by mutual agreement at an earlier date. The hour and place of Closing will be as designated by Buyer.

12.4. **Disclosure of Settlement Costs.** Buyer and Seller acknowledge that costs, quality and extent of service vary between different settlement service providers (e.g., attorneys, lenders, inspectors and title companies).

13. **TRANSFER OF TITLE.** Subject to Buyer's compliance with the terms and provisions of this Contract, including the tender of any payment due at Closing, Seller must execute and deliver the following good and sufficient deed to Buyer, at Closing:

☐ special warranty deed ☒ general warranty deed ☐ bargain and sale deed ☐ quit claim deed ☐ personal representative's deed ☐ n/a deed. Seller, provided another deed is not selected, must execute and deliver a good and sufficient special warranty deed to Buyer, at Closing.

Unless otherwise specified in §30 (Additional Provisions), if title will be conveyed using a special warranty deed or a general warranty deed, title will be conveyed "subject to statutory exceptions" as defined in §38-30-113(5)(a), C.R.S.

14. **PAYMENT OF LIENS AND ENCUMBRANCES.** Unless agreed to by Buyer in writing, any amounts owed on any liens or encumbrances securing a monetary sum, including, but not limited to, any governmental liens for special improvements installed as of the date of Buyer's signature hereon, whether assessed or not and previous years' taxes, will be paid at or before Closing by Seller from the proceeds of this transaction or from any other source.

15. CLOSING COSTS, CLOSING FEE, ASSOCIATION FEES AND TAXES.

15.1. **Closing Costs.** Buyer and Seller must pay, in Good Funds, their respective closing costs and all other items required to be paid at Closing, except as otherwise provided herein.

15.2. **Closing Services Fee.** The fee for real estate closing services must be paid at Closing by ☐ Buyer ☐ Seller ☒ One-Half by Buyer and One-Half by Seller

☐ Other n/a

15.3. Status Letter and Record Change Fees. At least fourteen days prior to **Closing Date**, Seller agrees to promptly request the Association to deliver to Buyer a current Status Letter. Any fees incident to the issuance of Association's Status Letter must be paid by ☐None ☐Buyer ☒Seller ☐One-Half by Buyer and One-Half by Seller. Any Record Change Fee must be paid by ☐None ☐Buyer ☐Seller ☐One-Half by Buyer and One-Half by Seller.

15.4. Local Transfer Tax. ☐ The Local Transfer Tax of n/a % of the Purchase Price must be paid at Closing by ☐None ☐Buyer ☒Seller ☐One-Half by Buyer and One-Half by Seller.

15.5. Private Transfer Fee. Private transfer fees and other fees due to a transfer of the Property, payable at Closing, such as community association fees, developer fees and foundation fees, must be paid at Closing by ☐None ☐Buyer ☒Seller ☐One-Half by Buyer and One-Half by Seller. The Private Transfer fee, whether one or more, is for the following association(s): n/a in the total amount of n/a% of the Purchase Price or \$.

15.6. Water Transfer Fees. The Water Transfer Fees can change. The fees, as of the date of this Contract, do not exceed \$n/a for:
☐ Water Stock/Certificates ☐ Water District
☐ Augmentation Membership ☐ Small Domestic Water Company ☐ n/a and must be paid at Closing by ☐None ☐Buyer ☒Seller ☐One-Half by Buyer and One-Half by Seller

15.7. Sales and Use Tax. Any sales and use tax that may accrue because of this transaction must be paid when due by ☒None ☐Buyer ☐Seller ☐One-Half by Buyer and One-Half by Seller.

15.8. FIRPTA and Colorado Withholding.

15.8.1. FIRPTA. The Internal Revenue Service (IRS) may require a substantial portion of the Seller's proceeds be withheld after Closing when Seller is a foreign person. If required withholding does not occur, the Buyer could be held liable for the amount of the Seller's tax, interest and penalties. If the box in this Section is checked, Seller represents that Seller ☐IS a foreign person for purposes of U.S. income taxation. If the box in this Section is not checked, Seller represents that Seller is not a foreign person for purposes of U.S. income taxation. Seller agrees to cooperate with Buyer and Closing Company to provide any reasonably requested documents to verify Seller's foreign person status. If withholding is required, Seller authorizes Closing Company to withhold such amount from Seller's proceeds. Seller should inquire with Seller's tax advisor to determine if withholding applies or if an exemption exists.

15.8.2. Colorado Withholding. The Colorado Department of Revenue may require a portion of the Seller's proceeds be withheld after Closing when Seller will not be a Colorado resident after Closing, if not otherwise exempt. Seller agrees to cooperate with Buyer and Closing Company to provide any reasonably requested documents to verify Seller's status. If withholding is required, Seller authorizes Closing Company to withhold such amount from Seller's proceeds. Seller should inquire with Seller's tax advisor to determine if withholding applies or if an exemption exists.

16. PRORATIONS AND ASSOCIATION ASSESSMENTS. The following will be prorated to the **Closing Date**, except as otherwise provided:

16.1. Taxes. Personal property taxes, if any, special taxing district assessments, if any and general real estate taxes for the year of Closing, based on ☐ Taxes for the Calendar Year Immediately Preceding Closing ☒ Most Recent Mill Levy and Most Recent Assessed Valuation, ☐ Other n/a.

16.2. Rents. Rents based on ☐ Rents Actually Received ☐ Accrued. At Closing, Seller will transfer or credit to Buyer the security deposits for all Leases assigned, or any remainder after lawful deductions and notify all tenants in writing of such transfer and of the transferee's name and address. Seller must assign to Buyer all Leases in effect at Closing and Buyer must assume Seller's obligations under such Leases.

16.3. Association Assessments. Current regular Association assessments and dues (Association Assessments) paid in advance will be credited to Seller at Closing. Cash reserves held out of the regular Association Assessments for deferred maintenance by the Association will not be credited to Seller except as may be otherwise provided by the Governing Documents. Buyer acknowledges that Buyer may be obligated to pay the Association, at Closing, an amount for reserves or working capital. Any special assessment assessed prior to **Closing Date** by the Association will be the obligation of ☐Buyer ☐Seller.

Except however, any special assessment by the Association for improvements that have been installed as of the date of Buyer's signature hereon, whether assessed prior to or after Closing, will be the obligation of Seller. Seller represents there are no unpaid regular or special assessments against the Property except the current regular assessments and *n/a*. Association Assessments are subject to change as provided in the Governing Documents.

16.4. Other Prorations. Water and sewer charges, propane, interest on continuing loan and *n/a*.

16.5. Final Settlement. Unless otherwise agreed in writing, these prorations are final.

17. POSSESSION. Possession of the Property will be delivered to Buyer on **Possession Date** at **Possession Time**, subject to the Leases as set forth in § 10.6.1.7.

If Seller, after Closing, fails to deliver possession as specified, Seller will be subject to eviction and will be additionally liable to Buyer for payment of \$ **100** per day (or any part of a day notwithstanding § 18.1) from **Possession Date** and **Possession Time** until possession is delivered.

GENERAL PROVISIONS

18. DAY; COMPUTATION OF PERIOD OF DAYS, DEADLINE.

18.1. Day. As used in this Contract, the term "day" means the entire day ending at 11:59 p.m., United States Mountain Time (Standard or Daylight Savings, as applicable).

18.2. Computation of Period of Days, Deadline. In computing a period of days (e.g., three days after MEC), when the ending date is not specified, the first day is excluded and the last day is included. If any deadline falls on a Saturday, Sunday or federal or Colorado state holiday (Holiday), such deadline ☒ **Will** ☐ **Will Not** be extended to the next day that is not a Saturday, Sunday or Holiday. Should neither box be checked, the deadline will not be extended.

19. CAUSES OF LOSS, INSURANCE; DAMAGE TO INCLUSIONS AND SERVICES; CONDEMNATION; AND WALK-THROUGH. Except as otherwise provided in this Contract, the Property, Inclusions or both will be delivered in the condition existing as of the date of this Contract, ordinary wear and tear excepted.

19.1. Causes of Loss, Insurance. In the event the Property or Inclusions are damaged by fire, other perils or causes of loss prior to Closing (Property Damage) in an amount of not more than ten percent of the total Purchase Price and if the repair of the damage will be paid by insurance (other than the deductible to be paid by Seller), then Seller, upon receipt of the insurance proceeds, will use Seller's reasonable efforts to repair the Property before **Closing Date**. Buyer has the Right to Terminate under § 25.1, on or before **Closing Date**, if the Property is not repaired before **Closing Date**, or if the damage exceeds such sum. Should Buyer elect to carry out this Contract despite such Property Damage, Buyer is entitled to a credit at Closing for all insurance proceeds that were received by Seller (but not the Association, if any) resulting from damage to the Property and Inclusions, plus the amount of any deductible provided for in the insurance policy. This credit may not exceed the Purchase Price. In the event Seller has not received the insurance proceeds prior to Closing, the parties may agree to extend the **Closing Date** to have the Property repaired prior to Closing or, at the option of Buyer, (1) Seller must assign to Buyer the right to the proceeds at Closing, if acceptable to Seller's insurance company and Buyer's lender; or (2) the parties may enter into a written agreement prepared by the parties or their attorney requiring the Seller to escrow at Closing from Seller's sale proceeds the amount Seller has received and will receive due to such damage, not exceeding the total Purchase Price, plus the amount of any deductible that applies to the insurance claim.

19.2. Damage, Inclusions and Services. Should any Inclusion or service (including utilities and communication services), system, component or fixture of the Property (collectively Service) (e.g., heating or plumbing), fail or be damaged between the date of this Contract and Closing or possession, whichever is earlier, then Seller is liable for the repair or replacement of such Inclusion or Service with a unit of similar size, age and quality, or an equivalent credit, but only to the extent that the maintenance or replacement of such Inclusion or Service is not the responsibility of the Association, if any, less any insurance proceeds received by Buyer covering such repair or replacement. If the failed or damaged Inclusion or Service is not repaired or replaced on or before Closing or possession, whichever is earlier, Buyer has the Right to Terminate under §

25.1, on or before **Closing Date**, or, at the option of Buyer, Buyer is entitled to a credit at Closing for the repair or replacement of such Inclusion or Service. Such credit must not exceed the Purchase Price. If Buyer receives such a credit, Seller's right for any claim against the Association, if any, will survive Closing.

19.3. Condemnation. In the event Seller receives actual notice prior to Closing that a pending condemnation action may result in a taking of all or part of the Property or Inclusions, Seller must promptly notify Buyer, in writing, of such condemnation action. Buyer has the Right to Terminate under § 25.1, on or before **Closing Date**, based on such condemnation action, in Buyer's sole subjective discretion. Should Buyer elect to consummate this Contract despite such diminution of value to the Property and Inclusions, Buyer is entitled to a credit at Closing for all condemnation proceeds awarded to Seller for the diminution in the value of the Property or Inclusions but such credit will not include relocation benefits or expenses, or exceed the Purchase Price.

19.4. Walk-Through and Verification of Condition. Buyer, upon reasonable notice, has the right to walk through the Property prior to Closing to verify that the physical condition of the Property and Inclusions complies with this Contract.

19.5. Home Warranty. [Intentionally Deleted]

19.6. Risk of Loss – – Growing Crops The risk of loss for damage to growing crops by fire or other casualty will be borne by the party entitled to the growing crops as provided in § 2.8 and such party is entitled to such insurance proceeds or benefits for the growing crops.

20. RECOMMENDATION OF LEGAL AND TAX COUNSEL. By signing this Contract, Buyer and Seller acknowledge that the respective broker has advised that this Contract has important legal consequences and has recommended the examination of title and consultation with legal and tax or other counsel before signing this Contract.

21. TIME OF ESSENCE, DEFAULT AND REMEDIES. Time is of the essence for all dates and deadlines in this Contract. This means that all dates and deadlines are strict and absolute. If any payment due, including Earnest Money, is not paid, honored or tendered when due, or if any obligation is not performed timely as provided in this Contract or waived, the non-defaulting party has the following remedies:

21.1. If Buyer is in Default:

☐ **21.1.1. Specific Performance.** Seller may elect to cancel this Contract and all Earnest Money (whether or not paid by Buyer) will be paid to Seller and retained by Seller. It is agreed that the Earnest Money is not a penalty and the Parties agree the amount is fair and reasonable. Seller may recover such additional damages as may be proper. Alternatively, Seller may elect to treat this Contract as being in full force and effect and Seller has the right to specific performance or damages, or both.

21.1.2. Liquidated Damages, Applicable. This § 21.1.2 applies unless the box in § 21.1.1. is checked. Seller may cancel this Contract. All Earnest Money (whether or not paid by Buyer) will be paid to Seller and retained by Seller. It is agreed that the Earnest Money specified in § 4.1 is LIQUIDATED DAMAGES and not a penalty, which amount the parties agree is fair and reasonable and (except as provided in §§ 10.4, 22, 23 and 24), said payment of Earnest Money is SELLER'S ONLY REMEDY for Buyer's failure to perform the obligations of this Contract. Seller expressly waives the remedies of specific performance and additional damages.

21.2. If Seller is in Default: Buyer may elect to treat this Contract as canceled, in which case all Earnest Money received hereunder will be returned to Buyer and Buyer may recover such damages as may be proper. Alternatively, Buyer may elect to treat this Contract as being in full force and effect and Buyer has the right to specific performance or damages, or both.

22. LEGAL FEES, COST AND EXPENSES. Anything to the contrary herein notwithstanding, in the event of any arbitration or litigation relating to this Contract, prior to or after **Closing Date**, the arbitrator or court must award to the prevailing party all reasonable costs and expenses, including attorney fees, legal fees and expenses.

23. MEDIATION. If a dispute arises relating to this Contract (whether prior to or after Closing) and is not resolved, the parties must first proceed, in good faith, to mediation. Mediation is a process in which the parties

meet with an impartial person who helps to resolve the dispute informally and confidentially. Mediators cannot impose binding decisions. Before any mediated settlement is binding, the parties to the dispute must agree to the settlement, in writing. The parties will jointly appoint an acceptable mediator and will share equally in the cost of such mediation. The obligation to mediate, unless otherwise agreed, will terminate if the entire dispute is not resolved within thirty days of the date written notice requesting mediation is delivered by one party to the other at that party's last known address (physical or electronic as provided in § 27). Nothing in this Section prohibits either party from filing a lawsuit and recording a *lis pendens* affecting the Property, before or after the date of written notice requesting mediation. This Section will not alter any date in this Contract, unless otherwise agreed.

24. EARNEST MONEY DISPUTE. Except as otherwise provided herein, Earnest Money Holder must release the Earnest Money following receipt of written mutual instructions, signed by both Buyer and Seller. In the event of any controversy regarding the Earnest Money, Earnest Money Holder is not required to release the Earnest Money. Earnest Money Holder, in its sole subjective discretion, has several options: (1) wait for any proceeding between Buyer and Seller; (2) interplead all parties and deposit Earnest Money into a court of competent jurisdiction (Earnest Money Holder is entitled to recover court costs and reasonable attorney and legal fees incurred with such action); or (3) provide notice to Buyer and Seller that unless Earnest Money Holder receives a copy of the Summons and Complaint or Claim (between Buyer and Seller) containing the case number of the lawsuit (Lawsuit) within one hundred twenty days of Earnest Money Holder's notice to the parties, Earnest Money Holder is authorized to return the Earnest Money to Buyer. In the event Earnest Money Holder does receive a copy of the Lawsuit and has not interpleaded the monies at the time of any Order, Earnest Money Holder must disburse the Earnest Money pursuant to the Order of the Court. The parties reaffirm the obligation of § 23 (Mediation). This Section will survive cancellation or termination of this Contract.

25. TERMINATION.

25.1. Right to Terminate. If a party has a right to terminate, as provided in this Contract (Right to Terminate), the termination is effective upon the other party's receipt of a written notice to terminate (Notice to Terminate), provided such written notice was received on or before the applicable deadline specified in this Contract. If the Notice to Terminate is not received on or before the specified deadline, the party with the Right to Terminate accepts the specified matter, document or condition as satisfactory and waives the Right to Terminate under such provision.

25.2. Effect of Termination. In the event this Contract is terminated, all Earnest Money received hereunder will be returned to Buyer and the parties are relieved of all obligations hereunder, subject to §§ 10.4, 22, 23 and 24.

26. ENTIRE AGREEMENT, MODIFICATION, SURVIVAL; SUCCESSORS. This Contract, its exhibits and specified addenda, constitute the entire agreement between the parties relating to the subject hereof and any prior agreements pertaining thereto, whether oral or written, have been merged and integrated into this Contract. No subsequent modification of any of the terms of this Contract is valid, binding upon the parties, or enforceable unless made in writing and signed by the parties. Any right or obligation in this Contract that, by its terms, exists or is intended to be performed after termination or Closing survives the same. Any successor to a party receives the predecessor's benefits and obligations of this Contract.

27. NOTICE, DELIVERY AND CHOICE OF LAW.

27.1. Physical Delivery and Notice. Any document, or notice to Buyer or Seller must be in writing, except as provided in § 27.2 and is effective when physically received by such party, any individual named in this Contract to receive documents or notices for such party, Broker, or Brokerage Firm or Broker working with such party (except any notice or delivery after Closing must be received by the party, not Broker or Brokerage Firm).

27.2. Electronic Notice. As an alternative to physical delivery, any notice, may be delivered in electronic form to Buyer or Seller, any individual named in this Contract to receive documents or notices for such party, Broker or Brokerage Firm or Broker working with such party (except any notice or delivery after Closing must be received by the party, not Broker or Brokerage Firm) at the electronic address of the recipient

by facsimile, email or n/a.

27.3. Electronic Delivery. Electronic Delivery of documents and notice may be delivered by: (1) email at the email address of the recipient, (2) a link or access to a website or server provided the recipient receives the information necessary to access the documents, or (3) facsimile at the facsimile number (Fax No.) of the recipient.

27.4. Choice of Law. This Contract and all disputes arising hereunder are governed by and construed in accordance with the laws of the State of Colorado that would be applicable to Colorado residents who sign a contract in Colorado for real property located in Colorado.

28. NOTICE OF ACCEPTANCE, COUNTERPARTS. This proposal will expire unless accepted in writing, by Buyer and Seller, as evidenced by their signatures below and the offering party receives notice of such acceptance pursuant to § 27 on or before **Acceptance Deadline Date** and **Acceptance Deadline Time**. If accepted, this document will become a contract between Seller and Buyer. A copy of this Contract may be executed by each party, separately and when each party has executed a copy thereof, such copies taken together are deemed to be a full and complete contract between the parties.

29. GOOD FAITH. Buyer and Seller acknowledge that each party has an obligation to act in good faith including, but not limited to, exercising the rights and obligations set forth in the provisions of **Financing Conditions and Obligations; Title Insurance, Record Title and Off-Record Title; New ILC, New Survey; and Property Disclosure, Inspection, Indemnity, Insurability, Due Diligence and Source of Water.**

ADDITIONAL PROVISIONS AND ATTACHMENTS

30. ADDITIONAL PROVISIONS. (The following additional provisions have not been approved by the Colorado Real Estate Commission.)

1. This contract replaces and terminates upon mutual execution the contract and option agreement executed on both parcel between Buyer and Seller dated 2-22-2021. All things of value and terms of value from the previous contract transfer to this contract. This includes prior \$5,000 earnest money deposit which shall become part of the \$35,000 deposit mentioned in this contract with the remaining \$30,000 due at contract execution.

2. At mutual execution of this contract the earnest money deposit is released to seller and is non-refundable to buyer.

3. Buyer's purchase of subject land parcels is contingent upon approval by local governing bodies of the buyers mixed unit development project. All costs associated with this approval shall be born by the buyer and all earnest money deposits made shall be non-refundable to buyer.

4. Buyer has the right two extend closing date two times for three months at each extension. Each extension shall require buyer to deposit \$20,000 in addition non-refundable earnest money. All such earnest money deposits are credited as part of down payment at closing.

5. Seller financing terms shall match the previously agreed upon financing terms outlined in the prior contract and option agreement. 25% down payment at closing with balance financed at 6% with a 25 year amortization and a 2 year balloon and no pre-payment penalty.

31. OTHER DOCUMENTS.

31.1. The following documents are a part of this Contract:

n/a

31.2. The following documents have been provided but are **not** a part of this Contract:

n/a

SIGNATURES

Craig S O'Boyle, Managing Member

Date: 6/22/2021

Buyer: **Go Beyond, LLC**

By: **Craig S O'Boyle, Managing Member**

[NOTE: If this offer is being countered or rejected, do not sign this document.]

Dana Duncan, Member

Date: 6/23/2021

Seller: **Stone Ridge Village, LLC**

By: **Dana Duncan, Member**

END OF CONTRACT TO BUY AND SELL REAL ESTATE

32. **BROKER'S ACKNOWLEDGMENTS AND COMPENSATION DISCLOSURE.**

(To be completed by Broker working with Buyer)

Broker ☐ **Does** ☐ **Does Not** acknowledge receipt of Earnest Money deposit. Broker agrees that if Brokerage Firm is the Earnest Money Holder and, except as provided in § 24, if the Earnest Money has not already been returned following receipt of a Notice to Terminate or other written notice of termination, Earnest Money Holder will release the Earnest Money as directed by the written mutual instructions. Such release of Earnest Money will be made within five days of Earnest Money Holder's receipt of the executed written mutual instructions, provided the Earnest Money check has cleared.

Although Broker is not a party to the Contract, Broker agrees to cooperate, upon request, with any mediation requested under § 23.

Broker is working with Buyer as a ☐ **Buyer's Agent** ☐ **Transaction-Broker** in this transaction. ☐ This is a **Change of Status**

☐ **Customer.** Broker has no brokerage relationship with Buyer. See § 33 for Broker's brokerage relationship with Seller.

Brokerage Firm's compensation or commission is to be paid by ☐ **Listing Brokerage** ☐ **Buyer** ☐ **Other n/a.**

Brokerage Firm's Name: **O'Boyle Real Estate Group**

Brokerage Firm's License #: **40035023**

Craig O'Boyle

Date: 6/23/2021

Broker's Name: **Craig O'Boyle**

Broker's License #: **40003854**

Address: **1685 W Uintah St. Suite 213 Colorado Springs, CO 80904**

Ph: **719-576-7373** Fax: Email Address: **info@oboylegroups.net**

33. BROKER'S ACKNOWLEDGMENTS AND COMPENSATION DISCLOSURE.

(To be completed by Broker working with Seller)

Broker ☐ **Does** ☒ **Does Not** acknowledge receipt of Earnest Money deposit. Broker agrees that if Brokerage Firm is the Earnest Money Holder and, except as provided in § 24, if the Earnest Money has not already been returned following receipt of a Notice to Terminate or other written notice of termination, Earnest Money Holder will release the Earnest Money as directed by the written mutual instructions. Such release of Earnest Money will be made within five days of Earnest Money Holder's receipt of the executed written mutual instructions, provided the Earnest Money check has cleared.

Although Broker is not a party to the Contract, Broker agrees to cooperate, upon request, with any mediation requested under § 23.

Broker is working with Seller as a ☒ **Seller's Agent** ☐ **Transaction-Broker** in this transaction. ☐ This is a **Change of Status**.

☐ **Customer**. Broker has no brokerage relationship with Seller. See § 32 for Broker's brokerage relationship with Buyer.

Brokerage Firm's compensation or commission is to be paid by ☒ **Seller** ☐ **Buyer** ☐ **Other n/a**.

Brokerage Firm's Name: **REMAX Performance, Inc**

Brokerage Firm's License #:

Dana Duncan

Date: **6/23/2021**

Broker's Name: **Dana Duncan**

Broker's License #:

Address: **n/a n/a, n/a n/a**

Ph: **n/a** Fax: **n/a** Email Address: **LMarttila@rpwp.net**

CBS4-5-19. CONTRACT TO BUY AND SELL REAL ESTATE (LAND)

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Teller County Government

The Official Site For Teller County, Colorado

Property Records Database



Teller Home	County Offices	Contributing Offices	New Search	Mapping Application	Foreclosures
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Property Record Database

Account Information (provided by Assessor)

Account No R0038574

Parcel Id 6229.132000020

2021 Values [A PDF of the 2021 Notice of Value](#)

Actual \$46,372

Assessed \$13,450

Tax Dist 62

Acct Type Vacant Land

School Dist RE-2

Acres 2.3700

Map No. 3029-13

Owner Name STONE RIDGE VILLAGE LLC

Mailing 300 SUNNY GLEN COURT

Address WOODLAND PARK, CO
808637012

Physical RESEARCH DR
Address

Area WP CENTRAL AREA



Legal Description 13-12-69 PT NW4NW4 LYING S OF TAMARAC RESEARCH & DEVELOPMENT

[Show Map](#)

[Show Sales Map](#) [Vacant Land Sales List](#)

Zoning Information (provided by City of Woodland Park for Questions call 719-687-5202)

Zoning PUD

Land Information (provided by Assessor)

Land Type	Abst Code	Acres
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Vacant	0520	2.3700
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TOTAL		2.3700
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Transfers (provided by Assessor)

[Vacant Land Sales List](#)

Sale Date	Reception No	Deed Type	Sale Price
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Teller County Government

The Official Site For Teller County, Colorado

Property Records Database



Teller Home	County Offices	Contributing Offices	New Search	Mapping Application	Foreclosures
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Property Record Database

Account Information (provided by Assessor)

Account No R0056926

Parcel Id 6229.132000880

2021 Values [A PDF of the 2021 Notice of Value](#)

Actual \$119,258

Assessed \$34,580

Tax Dist 62

Acct Type Vacant Land

School Dist RE-2

Acres 10.2200

Map No. 3029-13

Owner Name STONE RIDGE VILLAGE LLC

Mailing Address 300 SUNNY GLEN COURT
WOODLAND PARK, CO
808637012

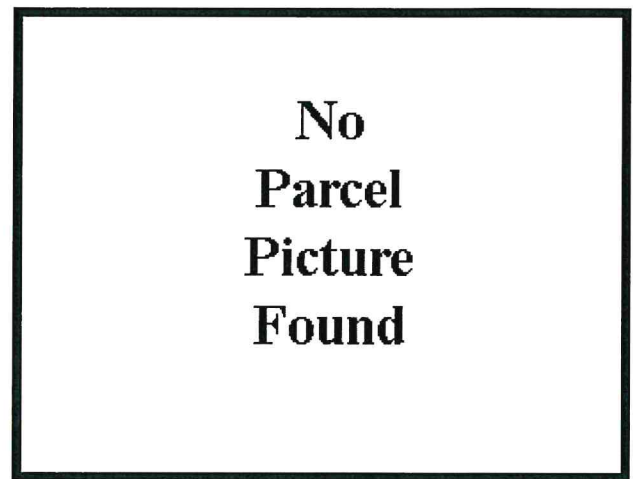
**Physical
Address**

Area WP CENTRAL AREA

Legal Description 13-12-68 PT NW4NW4, PT SW4NW4 ALL LYING N AND E OF STONE RIDGE VILLAGE

[Show Map](#)

[Show Sales Map](#) [Vacant Land Sales List](#)



Zoning Information (provided by City of Woodland Park for Questions call 719-687-5202)

Zoning

Land Information (provided by Assessor)

Land Type	Abst Code	Acres
-----------	-----------	-------

Vacant	0540	10.2200
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TOTAL		10.2200
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Property Tax History (provided by Treasurer). Delinquent taxes are not shown on this website.



City of Woodland Park Development Fees Receipt

Print
Record



ID Project Name The Pines at Stone Ridge - SPR
Project # 202111362 Site Address # Millstone Ln. & Ri Site Address
Project # EXT/Case # SPR2021-05 Lot # Block # Subdivision
Date Initial Permit Approve Filing #
Project Type SPR Applicant Business Name Populus Planning and Design, LLC
Project Type Number 4 App First Name Jeffery App Last Name Webb
Project Classification SPR Filed in Area: Planning Director's
Residential or Commercial Residential

Building Fees	\$0.00	Account Number 100-000-3433	PPRBD Building Fees
Regional Park Fee	\$0.00	Account Number 100-000-3651	
Water Plant Investment Fee	\$0.00	Account Number 510-343-3465	
Water Physical Connection	\$0.00	Account Number 510-342-3462	
Sewer Plant Investment Fee	\$0.00	Account Number 520-348-3475	
Sewer Physical Connection	\$0.00	Account Number 520-347-3472	
Water Right Fee	\$0.00	Account Number 510-344-3468	WATER Rights Fees
Reimbursement Agreement	\$0.00	Account Number 520-000-1920	
Stormwater Capital Fee	\$0.00	Account Number 420-000-3486	
Transportation Capital Fee	\$0.00	Account Number 410-000-3654	
Water Development Fee	\$0.00	Account Number 510-343-3467	
Zoning Development Permit Fee	\$1,963.00	Account Number 100-000-3431	
Other Fees	\$0.00	Account Number	
Description of Other Fees	Incl. SPR, SUB & PUD Amendment fees		
Use Tax Fee	\$0.00	Account Number 100-000-3142	
Total Amount Due	\$1,963.00	Date Permit Paid:	12/2/2021
Amount Receiv	\$1,963.00	Rec'd By	DJB
		Date Payment Received	12/2/2021
		Check #	1038

GO BEYOND LLC
1685 W UINAH ST STE 213
COLORADO SPRINGS, CO 80904

1038

82-656/1021

12-1-21

Date

CHECK ARMOR
FAAST & ASSOCIATES

Pay to the
Order of

City of Woodland Park Planning Dept \$ 1963.00
One thousand nine hundred sixty-three and 00/100 Dollars



www.banksanjuans.com
1-866-618-BOSJ (2675)

For

Gabriella

⑆ 10210656902200003713448⑈01038

ATTACHMENT 'B'

The Pines at Stone Ridge Project Narrative

Stone Ridge Multifamily Development Project
Woodland Park, Colorado 80863

Project Location: SE Corner of Ridgestone Dr. and Research Dr.
Woodland Park, Colorado, 80863

Parcel ID Number: 6229.132000020 and 6229.132000880

Acreage: +/- 9.01 AC

Proposed Lots: 69 total (20 Patio Homes, 49 Townhomes)

Attn: Ms. Karen Schminke, Planning Director
City of Woodland Park
220 W. South Ave., Woodland Park, CO, 80863

Re: The Pines at Stone Ridge – Site Plan, PUD Amendment, and Preliminary Plat

Project Description

The Pines at Stone Ridge proposes 53 Town Homes and 22 Patio Homes on the 9.01-acre lot located east of Millstone Lane and Stone Ridge Drive in the Stone Ridge Subdivision. The project seeks to create a vibrant new neighborhood that will complement the existing Stone Ridge subdivision through the preservation of open space, creation of new and diverse housing options, dynamic and complimentary architectural designs, new park and open space connections, and a focus on creating a walkable, family-friendly neighborhood.

The project requests a PUD amendment to the existing Stone Ridge Master Plan PUD from an apartment building and patio home concept to the more neighborhood-compatible townhome and patio home project proposed at The Pines at Stone Ridge. In keeping with the original intent of the Stone Ridge Master Plan, the Pines at Stone Ridge intends to build 69 dwelling units as was previously approved for the property.

By refining the housing mix to include patio homes and townhomes, the project intends to meet the need for more accessible, purchasable housing (sometimes referred to as the “missing middle”) while also creating a neighborhood that is more harmonious with the surrounding Stone Ridge neighborhood in use, scale, and design than a large apartment complex would be.

Property Description

The Pines at Stone Ridge sits on a 9.01 acres property located west of Highway 67 and south of Research Drive in the Stone Ridge neighborhood. The property is currently undeveloped. Approximately one third of the property features large mature Ponderosa Pine trees in generally good health. Another third of the property is composed of grassy meadow coverage. The final third of the property features younger Ponderosa Pine trees that exhibit moderate health primarily due to their high density and excessive uniformity in age. Generally speaking, the property slopes from south to north with approximately 40' of elevation drop towards Loy Gulch.

Immediately north of the property lies Loy Gulch. Across Loy Gulch and Research Drive there is a large surface parking lot and bus barn facility. To the east is a large open space tract that include Stone Ridge's water quality control feature. South and west of the property is the existing Stone Ridge subdivision featuring newly constructed single family home. Immediately west of the property is Ridgestone Drive, the local road that will provide access to the Pines at Stone Ridge Project.

Existing and Proposed Zoning

In the 2004 Preliminary Plat for the Stone Ridge Subdivision, the property was zoned PUD. The Preliminary Plat identified two roughly equally sized Tracts (A and F) that currently make up the Pines at Stone Ridge property. The Preliminary Plat intended that the northern Tract A would be developed with 58 apartments. The southern Tract F was intended for 19 patio homes. The existing PUD allows for up to 77 dwelling units on the property. The two tracts were to be split roughly equally by a roadway with connections to Highway 67 and Ridgestone Lane.

The project requests a PUD amendment to create a more neighborhood compatible development featuring patio homes and townhomes, rather than patio homes and large apartment buildings. With several large apartments constructed in Woodland Park since 2004, and with several more planned in the near future, this project seeks a PUD amendment to allow for the construction of

townhomes and modestly sized patio homes to help fulfill an unmet housing need in our region, rather than a large apartment complex.

Specifically, this project's PUD amendment proposes 20 patio homes and 49 townhomes for a total of 69 dwelling units on the property, eight less than previously allowed. The primary focus of this PUD amendment is a modification in use to allow for the construction of the above mentioned townhomes, rather than the previously approved apartment units. This change will eliminate the need for one or more large apartment buildings, expansive surface parking lots, trash enclosures, parking lot lighting, and all the assorted infrastructure necessary to support a large apartment complex.

The project proposes side setbacks of 8' for patio homes (16' building separation) and 6.75' for townhomes (13.5' building separation), front setbacks of 8', and a maximum building height of 35', down from the 45' building height previously approved on Tract A. Rear setbacks shall be 25' on the property's exterior boundary, consistent with the surrounding neighborhood. Setbacks, dwelling unit densities, open space areas, and impervious surfacing ratios shall remain as proposed in 2004.

These setback standards will provide for ample separation from existing homes while providing space for additional green space amenities, open space preservation, and will allow the new homes to take advantage of the property's unique natural features. Notably there will be a minimum of 50' of separation between existing homes south of the property and 85' to existing homes west of the property.

The Pines at Stone Ridge PUD amendment will allow for the creation of a vibrant new neighborhood that is both complementary and more compatible with the existing Stone Ridge neighborhood than would be the case under the 2004 PUD. The proposed PUD modifications allow this project to support the Envision Woodland Park Comprehensive Plan's **"Community Character and Design Objective 1.1"**, **"Housing Action 1.1.4"**, and **"Housing Objective 1.1"**

Project Design and Achievement of Woodland Park Planning Standards

The design intent for the Pines at Stone Ridge is to create a neighborhood that features a diverse mix of housing types, allows for the creation of a central park and green space amenity, create new publicly accessible connections to the

large open space property east of the site, and creates a neighborhood that is walkable and promotes interaction and connection between neighbors.

A significant feature of the project is a site design and architectural plans that activate the front and rear of townhomes and patio homes. This design feature will be most evident along the central core of townhomes where a green space and trail will become a lively community space. Somewhat uniquely, the town house design concept creates a “front porch” effect in the rear of the property, helping to activating green space areas and promoting greater interaction between neighbors. This same effect can be found along the north and east property lines, where natural features like Loy Gulch and the large open space area will become valued and appreciated natural amenities that add interest and value to the project.

The roadways within the project will be private with a public access easement to allow for utility and public access. Tracts A, B, C, D, E, F, G, H, and I will be HOA-owned open space amenities that in some cases include utility easements. The southern portion of Tract I will include park amenities, large preserved Ponderosa pine trees, and is anticipated to become a much-appreciated community space. Notably, public access to this HOA-owned park space will be allowed.

The average townhome lot at the Pines at Stone Ridge is 2,452 square feet, with a minimum lot size of 1,860 square feet. The average patio home lot will be 4,672 square feet with a minimum size of 3,580 square feet. Lot coverage shall be a minimum of 70% for townhomes and 60% for patio homes.

Every home at The Pines at Stone Ridge will include a two-car garage as well as an 18’ length minimum driveway. This will provide for up to 300 parking spaces, against the required 150 parking spaces for the project. Further, 4 additional on-street parking spaces will be provided at key locations such as the park area and at the community’s mailbox kiosk.

Taken together, we believe these design elements will help to honor and capitalize on the site’s natural beauty, provide for a diverse and vibrant neighborhood, create meaningful open space amenities, and create a neighborhood that is complementary and compatible with the surrounding Stone Ridge neighborhood.

In addition, the project proposal adheres to accepted planning practices and creates a site plan that:

Promotes Public Health, Safety and General Welfare through the creation of new park, open space, and trail amenities; through thoughtful neighborhood design that promotes positive neighborhood interaction; and through professionally designed utility and drainage plans.

Provides adequate light, air, privacy, and convenience through reduced building heights (35' maximum, down from 45' maximum); preservation of some of the most exceptional trees on the property; through thoughtful architectural designs that provide privacy and capitalize on sunlight, views, and the mountain setting; through a new internal trail network that will provide community access to the large open space east of the property.

Lessen and avoid congestion by reducing the density and the number of dwelling units from the previously approved 77 to 69; by meeting all Woodland Park roadway design criteria; by providing adequate on-site parking on each lot; by building a trail network and internal sidewalks that provide alternatives to driving; and by adding minimal traffic to the surrounding roadways (as demonstrated by the attached Traffic Report).

Conserve the Values of Surrounding Homes by building compatible and complementary townhome and patio home housing on the property- rather than a large apartment complex that some may view as detrimental to surrounding property values; by creating a value-added site design that incorporates ample open space, trail, and park amenities; through dynamic architectural designs that reference local neighborhood styles to create a high-value new neighborhood; by creating neighborhood access to the large open space property for all residents of Stoneridge; and through the creation of a robust HOA that will work to maintain and protect home values in The Pines.

Protect against fire, flooding, and other hazards by utilizing the latest in architectural design and by meeting or exceeding all relevant building codes; through thoughtful civil engineering that addresses stormwater, runoff, and detention onsite; through a thorough understanding of the hydrology of Loy Gulch; through a professional landscape plan that proposed native, water-wise

trees and shrubs to preserve water and address fire risk; by preserving mature trees and by providing adequate spacing between proposed planting and new buildings.

Architectural Intent and Building Description

The architectural inspiration for The Pines at Stone Ridge is drawn from existing homes in Woodland Park and Stone Ridge, our local climate, our region's history as a mining, ranching, transportation, and timber hub, local building materials, and a 'western mountain contemporary' architectural vernacular. While exterior materials and colors are preliminary to indicate general architectural design aesthetic and final selections will be determined prior to final approval, the architecture at The Pines at Stone Ridge was conceived to provide a mountain-western design that complements and builds upon architectural themes found in Woodland Park, Stone Ridge, and mountain communities across Colorado.

Compatible design elements include steeply pitched roofs that provide architectural interest, finely detailed facades that create a visually engaging street frontage, building materials including weathered wood siding and stone architectural elements that are common in mountain architecture, and inviting entrances that will contribute to a lively neighborhood feel. Further, building footprints are 2,185 SF for the patio homes and 1,287 SF for the townhomes with a maximum building height of 35', resulting in a compatibility-scaled neighborhood that adds to the vibrancy of Stone Ridge.

The architectural design of The Pines is intended to help achieve many of the Envision Woodland Park 2030 Comprehensive Plans goals, including:

- **Community Character Design Goal 1**
 - 1.1: *"Continue to implement a quality design standard for development to create a mountain-western theme throughout Woodland Park"*
 - 1.2.1 *"Promote Compatible Infill"*
- **Housing Goal 1**
 - 1.1.1: *"Encourage each new project or subdivision to add to the mix of housing models and styles...."*
- **Land Use and Growth Goal 1** *"Provide opportunities for growth and development while preserving community and environmental quality."*

Installation of Infrastructure

This project submittal includes a site plan detailing the site, architectural, utility grading, and landscape plans for the project. In addition, we are providing a grading and erosion control plan, stormwater management plan, final drainage report, and preliminary utilities report for the project. These plans, along with final construction documents that will be provided in the future, outline the design for all project infrastructure, consistent with federal, state, county, and Woodland Park codes and design guidelines.

Construction shall be managed by an already identified experienced builder and developer team that takes great pride in their work and has a long track record of successful project across the Pikes Peak region. Construction is anticipated to begin in 2022, pending Woodland Park approval of the project.

Long-term maintenance of the Pines at Stone Ridge shall be managed by an HOA that will be established with robust by-laws prior to construction.

Though it may not be relevant to approval of this project, it is worth noting that the project team has deep ties to Woodland Park. The project's planner and landscape architect lives in Woodland Park, one of the architects grew up in this community, the civil engineering team has history of successful project in town, and the developer's family was long-term residents of Woodland Park. The project team cares deeply about the success of this project and we sincerely want to create a project that adds value to the community and is successful for the long term.

Variance Requests

As previously described, this project is requesting a PUD amendment. The most significant change in this request is a shift from apartment buildings to townhomes. Notably, the gross housing density will be decreased with this PUD Amendment. In addition, the site design for this project will shift some of the project's open space to a more central location in Tract I that will create a valuable publicly accessible park amenity. Additional information on these variance requests can be found on the attached Site Plan.

While park dedication requirements have already been satisfied for this project, the inclusion of green spaces and park amenities will be a welcome addition to new residents and existing Stone Ridge home-owners alike.

The variances requested through the PUD amendment will allow for a project that, we believe, will more compatible with surrounding homes in Stone Ridge. Potential impacts from these variances have been mitigated through a site design that aims to respect the site, the existing neighborhood, and the housing needs of Woodland Park.

Comprehensive Plan Compliance

The Envision Woodland Park 2030 Comprehensive Plan is an aspiration and visionary plan that will help to guide the future of Woodland Park for year to comes. The Pines at Stone Ridge is a project that supports many of the goals and actions described with this plan. In particular, the Pines at Stone Ridge will advance:

- **Community Character and Design Objective 1.1**
- **Community Character and Design Action 1.1.1**
- **Community Character and Design Action 1.1.2**
- **Community Character and Design Objective 1.4**
- **Housing Objective 1.1**
- **Housing Action 1.1.4**
- **Land Use and Growth Action 1.1.5**
- **Sustainable Environment Objective 1.1**
- **Sustainable Environment Action 1.1.1**
- **Sustainable Environment Action 1.1.3**
- **Parks, Trails, and Open Space Action 1.1.4**

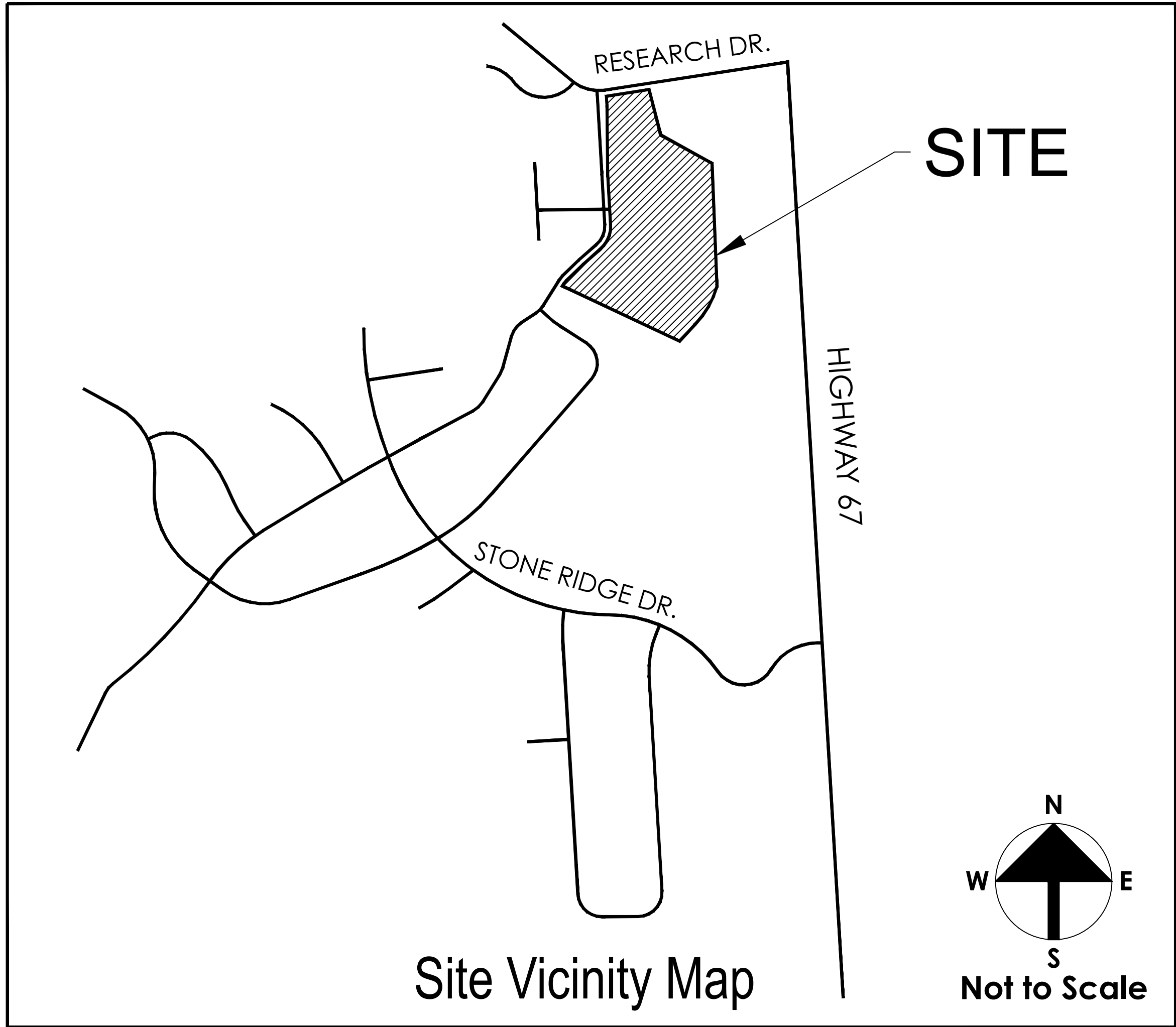
ATTACHMENT 'C'

THE PINES AT STONE RIDGE

SITE PLAN

General Notes

- All common areas, open space and landscape improvements shall be owned and maintained by the Homeowner's Association as described in Land Use Summary Table on this sheet
- FLOODPLAIN STATEMENT: This property is located within Zone X per Map number 08119CO139D with an effective date of September 25, 2009 and revised on May 18, 2017. A small portion of the Tract A is in a special Flood Hazard area, an area of 0.2% annual chance of flood hazard.
- All on-site drives, road, and surface parking facilities shall be asphalt and/or concrete.
- The developer shall install all traffic control measures shown on the Development Plan to meet MUTCD standards.
- Signage is not approved with this plan. A separate sign permit is required.
- The parties responsible for this plan have familiarized themselves with all current accessibility criteria and specifications and the proposed plan reflects all site elements required by the applicable ADA design standards and guidelines as published by the United States Department of Justice. Approval of this plan by the City of Woodland Park does not assure compliance with the ADA or any other Federal or State accessibility laws or any regulations or guidelines enacted or promulgated under or with respect to such laws. Sole responsibility for compliance with Federal and State accessibility laws lies with the property owner.
- All lighting fixtures shall have full cut-off shielding or fixtures to reduce off-site lighting impacts. Additionally, exterior lighting shall be no greater than 3000K. The required parking for all developed uses shall be calculated in accordance with city code.
- Garages shall be setback a minimum of 18' from public sidewalks.
- All proposed driveways shall conform to Woodland Park City Standards.
- Maintenance of street trees along internal roadways shall be the responsibility of the individual adjacent property owners.
- All private to public storm sewer connections must be inspected by the City's Engineering Development Review Inspector.
- BMP maintenance shall be the responsibility of the H.O.A. BMP construction shall commence in Phase One construction.
- HOA covenants shall require that garages be kept clear and be used for homeowner parking.
- All fencing shown shall be the responsibility of homeowners or the HOA, per the Tract Maintenance Schedule.
- Construction of all Public Access Trails within tracts shall be completed prior to issuance of first certificate of occupancy within subdivision, or secured with escrow funds.
- ADA Provisions concerning unit accessibility shall be meet in accordance with local and Federal requirements.
- Final Grading, Utility, Architectural and Landscape Plans shall be submitted at the Construction Document Phase of the Project.
- Streets shall be private and names shall be finalized after verification with local authorities.



Legal Description:

3-12-68 PT NW4NW4, PT SW4NW4 ALL LYING N AND E OF STONE RIDGE VILLAGE

Original Stone Ridge PUD Standards (Tracts A and F)

Tract A Land Area:	4.16 ac
Tract A Land Use:	Apartments
Tract A Density:	14 Dwelling Units/Acre
Tract A Lots/Units:	58 Apartments
Tract F Land Area:	4.85 ac
Tract F Land Use:	Patio Homes
Tract F Density:	4 Dwelling Units/Acre
Tract F Lots/Units:	19 Patio Homes
Tract A & F Total Units:	77 Units
Tract A & F Open Space:	3.51 ac (Tract A: 1.91ac, Tract F 1.60)
Building Setbacks:	Front & Rear: 25', Side: 8'

Parking Summary

Typical Parking: 8' x 20' Standard Parallel Stall

4 On-Street Parking Parallel Parking Spaces
150 Garage Parking Spaces (2 per Lot)
150 Tandem Driveway Parking Spaces (Min. 2 per Lot)

Total Parking Spaces Required: 150
Total Parking Spaces Provided: 304

The Pines Site Data

Master Plan:	STONE RIDGE MASTER PLAN
Existing Zoning:	PUD
Existing Land Use:	Vacant
Proposed Zoning:	PUD
Proposed Land Use:	SINGLE FAMILY TOWNHOMES AND PATIO HOMES
Property Acreage:	+/- 9.01 acres
Proposed Number of Lots:	69 Residential Lots (20 Patio Homes, 49 Townhomes)
Proposed Gross Density:	Maximum 7.7 du/ac
Proposed Open Space:	3.52 ac, (39% of Site)
Tax Schedule Number:	6229.132000880
Property Address:	SE OF RIDGESTONE DRIVE AND RESEARCH DRIVE
Drainage Basin:	
Construction Schedule:	Summer 2022

Dimensional Standards

Maximum Building Height:	35'
Minimum Building Setbacks:	Side: 8' Patio Homes / 6.75' Townhomes Patio Home: 16' Between Structures / Townhome: 13.5' Between Structures
	Front: 25' Applies to Exterior Rear: 25' Boundary Lines Only
Proposed Lot Coverages:	60% Max. Patio Homes / 70% Max. Townhomes
Density:	7.65 Units/Acre
Minimum Lot Size:	3,581 SQ. FT. Patio Homes / 1,862 SQ. FT. Townhomes
Average Lot Size:	4,672 SQ. FT. Patio Homes / 2,452 SQ. FT. Townhomes
Anticipated Unit Footprint:	2,185 SQ. FT. Patio Homes / 1,287 SQ. FT. Townhomes

Project Contacts

OWNER/DEVELOPER
GO BEYOND, LLC
1685 WEST UTAH ST.
COLORADO SPRINGS, CO, 80904
CONTACT: CRAIG O'BOYLE
PHONE: 719-576-7373

APPLICANT
POPULUS PLANNING AND DESIGN
9570 CANYON DRIVE
WOODLAND PARK, CO 80863
CONTACT: JEFFERY WEBB
PHONE: 208-284-6942

CIVIL ENGINEER
KIMLEY-HORN AND ASSOCIATES, INC.
2 N NEVADA AVE SUITE 300
COLORADO SPRINGS, CO 80903
CONTACT: KEVIN KOFFORD
PHONE: 719-453-0181

ARCHITECT
ECHO ARCHITECTURE + INTERIORS
4 South Wahsatch #120
COLORADO SPRINGS, CO, 80903
CONTACT: Scott Schuster
PHONE: 719-453-0181

LANDSCAPE ARCHITECT
POPULUS PLANNING AND DESIGN
9570 CANYON DRIVE
WOODLAND PARK, CO 80863
CONTACT: JEFFERY WEBB
PHONE: 208-284-6942

Land Use Summary

	Area*	Owned By	Maintained By
Patio Home Lots	2.14 ac (20 Lots)	HOMEOWNER	HOMEOWNER
Townhome Lots	2.76 ac (49 Lots)	HOMEOWNER	HOMEOWNER
Public Access Easement (Streets)	2.0 ac (50ft)	H.O.A.	H.O.A.
Tract A (Open Space)	0.71 ac	H.O.A.	H.O.A.
Tract B (Open Space & Utility Easement)	0.19 ac	H.O.A.	H.O.A.
Tract C (Open Space & Utility Easement)	0.08 ac	H.O.A.	H.O.A.
Tract D (Open Space)	0.15 ac	H.O.A.	H.O.A.
Tract E (Open Space)	0.09 ac	H.O.A.	H.O.A.
Tract F (Open Space)	0.09 ac	H.O.A.	H.O.A.
Tract G (Open Space)	0.08 ac	H.O.A.	H.O.A.
Tract H (Open Space)	0.07 ac	H.O.A.	H.O.A.
Tract I (Open Space)	0.58 ac	H.O.A.	H.O.A.

Total: 9.01 acres 69 Lots

*Due to Rounding, Tract and Lot Areas add up to slightly less than 9.01 ac

Impervious Site Area

Existing Impervious Site Area: 0 SF
Proposed Impervious Area: 61,854 SF (Excluding Roof Area)
Impervious Area Percentage: 16%

Sheet Index

DP1	COVER SHEET & NOTES	1 OF 13
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DP4	PRELIMINARY UTILITY PLAN	4 OF 13
DP5	PRELIMINARY GRADING PLAN	5 OF 13
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DP12	ARCHITECTURAL ELEVATIONS	12 OF 13
DP13	ARCHITECTURAL ELEVATIONS	13 OF 13

APPROVAL CONDITIONS & RESTRICTIONS

APPROVAL

I HEREBY CERTIFY THAT I AM THE CITY PLANNER FOR THE CITY OF WOODLAND PARK, COLORADO, AND THAT I ATTEST THAT THIS PRELIMINARY PLAT/SITE PLAN/PUD AMENDMENT WAS APPROVED, SUBJECT TO CONDITIONS, AS CONTAINED HEREIN, CITY OF WOODLAND PARK PLANNING DEPARTMENT, BY THE CITY OF WOODLAND PARK PLANNING COMMISSION ON_____, AFTER A PROPERLY CONDUCTED PUBLIC HEARING BY CITY COUNCIL HELD ON_____, 20__.

DATE

CITY PLANNER
CITY OF WOODLAND PARK

*PRELIMINARY PLAT
THE PINES AT STONE RIDGE
CITY OF WOODLAND PARK, TELLER COUNTY, COLORADO*

LEGEND — TRACTS		
TRACT	LAND USE	GROSS ACREAGE OF TRACT
A	TRAIL AND OPEN SPACE AMENITY	0.71
B	UTILITY EASEMENT & OPEN SPACE	0.19
C	UTILITY EASEMENT & OPEN SPACE	0.08
D	OPEN SPACE	0.15
E	OPEN SPACE	0.10
F	TRAIL AND OPEN SPACE AMENITY	0.09
G	OPEN SPACE	0.09
H	OPEN SPACE	0.07
I	TRAIL AND OPEN SPACE AMENITY	0.58

LEGEND – DIMENSIONAL STANDARDS			
DIMENSION STANDARD CATEGORY		SINGLE FAMILY RESIDENCE	APPLIES TO EXTERIOR BOUNDARY LINES ONLY
BUILDING SETBACK	FRONT	25'	
	REAR	25'	
	SIDE	8'	
MAXIMUM HEIGHT	MAIN BLDG.	35'	
	ACCESSORY BUILDING	20'	

THE UNDERSIGNED HEREBY CERTIFY THAT THEY ARE THE OWNER OF THE SUBJECT PROPERTY AND THAT THE UNDERSIGNED SHALL ABIDE BY THE PROVISION AS SPECIFIED UPON THIS PRELIMINARY PLAT AS PRESENTED AND ANY CONDITIONS AND REQUIREMENTS THAT ARE SPECIFIED BY THE CITY OF WOODLAND PARK CITY COUNCIL IN RENDERING ITS APPROVAL.

DANA DUNCAN, OWNER

I HEREBY CERTIFY THAT I AM THE CITY PLANNER FOR THE CITY OF WOODLAND PARK, COLORADO, AND THAT I ATTEST THAT THIS PRELIMINARY PLAT WAS APPROVED SUBJECT TO CONDITIONS CONTAINED HEREIN BY THE CITY OF WOODLAND PARK CITY COUNCIL ON _____, 2022, AFTER A PROPERLY CONDUCTED PUBLIC HEARING HELD ON _____, 2022.

CITY PLANNER, CITY OF WOODLAND PARK DATE

OWNER

DANA DUNCAN
STONE RIDGE VILLAGE, LLC
P.O. BOX 5044
WOODLAND PARK, CO 80863
(719) 687-0800

DESIGNER

JEFF WEBB
POPULUS PLANNING & DESIGN
9570 CANYON DRIVE
WOODLAND PARK, CO 80863
(208) 284-6942

SLOPE ANALYSIS:

0-30% = 99.5%
31%-40% = 0.5%
41%-100% = 0%

SHADED AREAS = 30% OR GREATER SLOPE
 SLOPES GREATER THAN 30%

AREA SUMMARY:

TOTAL AREA OF PROJECT = 9.01 ACRES
TOTAL AREA OF STREETS = 2.04 ACRES
TOTAL AREA OF SINGLE-FAMILY = 4.92 ACRES
TOTAL AREA OF TRACTS = 2.05 ACRES

FLOOD PLAIN CERTIFICATION:

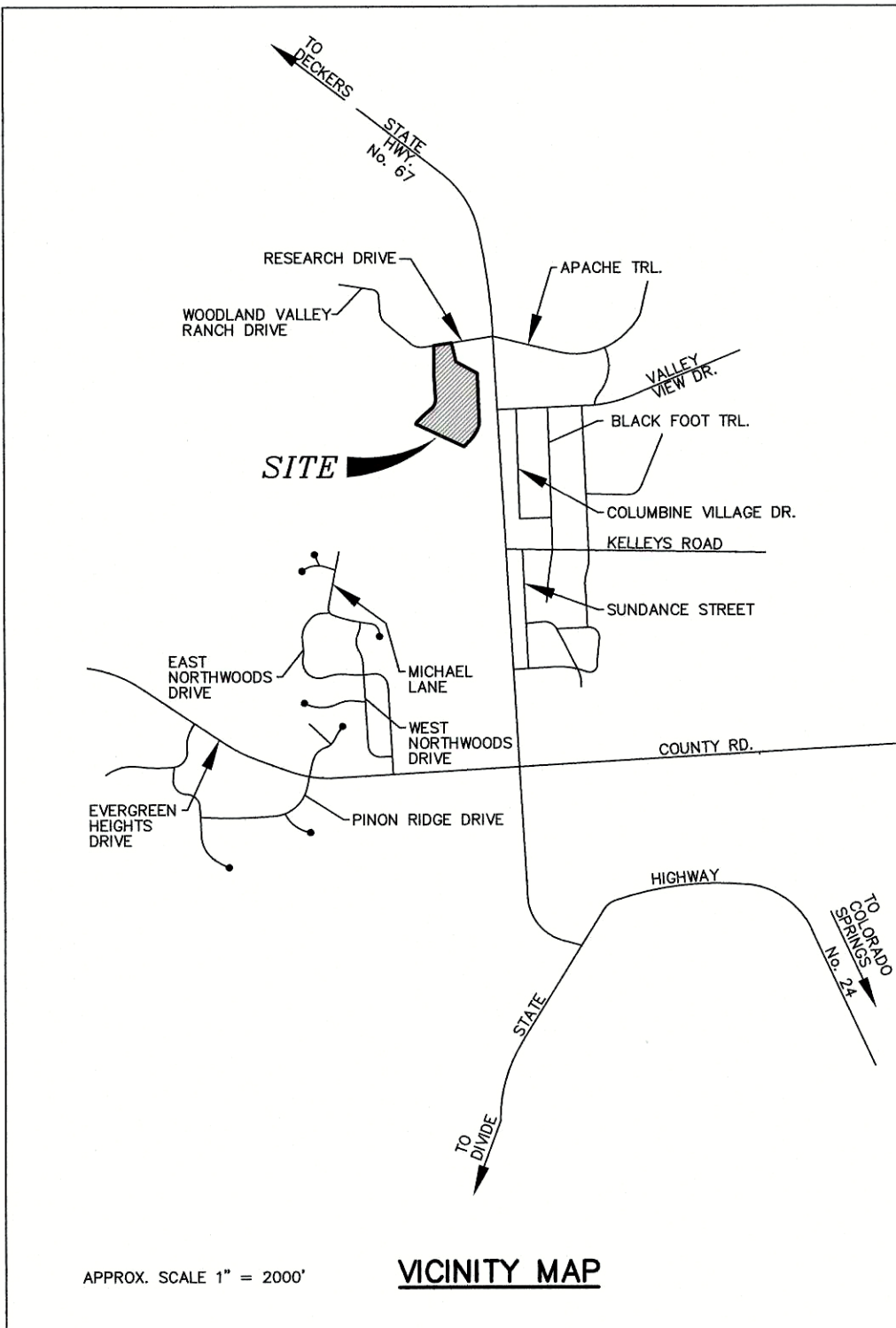
ACCORDING TO NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP NUMBER 0819NC0139D (EFFECTIVE DATE SEPTEMBER 25, 2009), REVISED TO REFLECT LOMF EFFECTIVE MAY 18, 2017, THE MAJORITY OF THE DESCRIBED AREA IS LOCATED WITHIN AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. A SMALL PORTION OF TRACT A IS IN A SPECIAL FLOOD HAZARD AREA, AN AREA OF 0.2% ANNUAL CHANCE FLOOD HAZARD, AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTH LESS THAN ONE FOOT OR WITH DRAINAGE AREAS OF LESS THAN ONE SQUARE MILE.

PRELIMINARY PLAT - THE PINES AT STONE RIDGE
CITY OF WOODLAND PARK, TELLER COUNTY, COLORADO

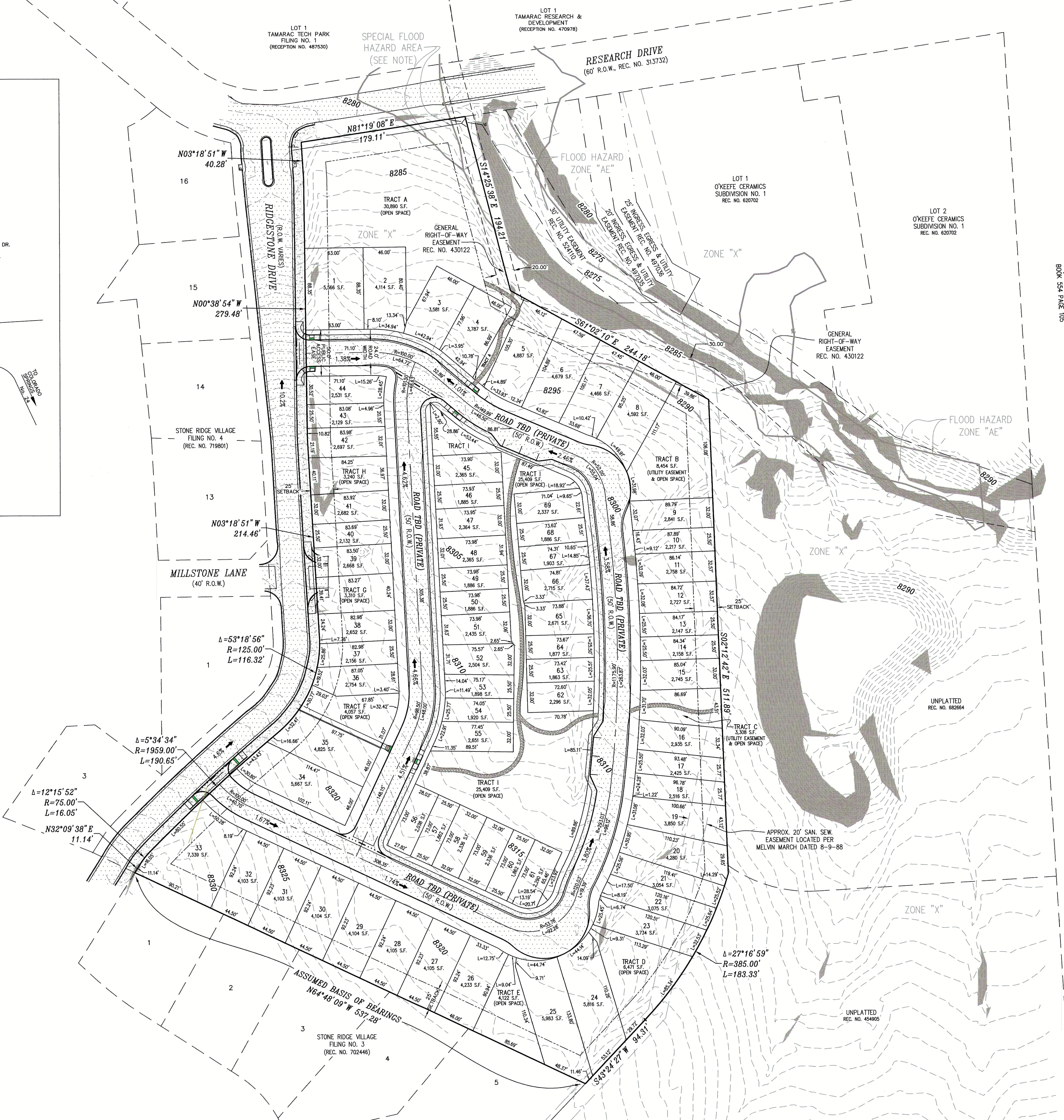
RAMPART
SURVEYS, LLC

P.O. Box 5101 Woodland Park, CO. 80866 (719) 687-0920

DRAWING: 21505 PP.DWG PAGE 1 OF 1



CITY COMMENTS



THE PINES AT STONE RIDGE
SITE PLAN

POPULUS
Planning & Design

9570 CANYON DRIVE
WOODLAND PARK, CO, 80906
208-284-6942
JEFFERYVALLENWEBB@GMAIL.COM

THE PINES AT STONE RIDGE
MILLSTONE LANE AND STONE RIDGE DRIVE
WOODLAND PARK, COLORADO

NOT FOR CONSTRUCTION

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OF THIS DOCUMENT IS LIMITED AND CAN BE EXTENDED ONLY BY
WRITTEN AGREEMENT WITH POPULUS PLANNING AND DESIGN.

REVISION:
NO. DATE BY

DATE: 1.11.2021
DRAWN BY: PPD
CHECKED BY: JAW

SITE PLAN

DP3

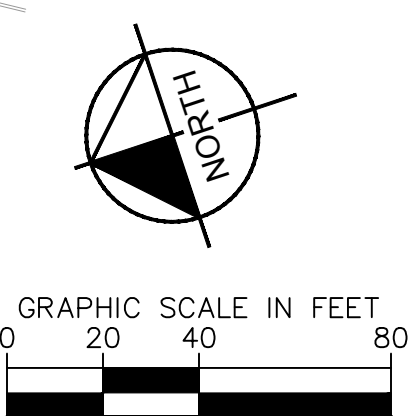
SHEET 3 OF 13



Scale: 1" = 40'-0"

PUD AMENDMENT: THE PINES AT STONE RIDGE - SITE PLAN

PUD AMENDMENT: THE PINES AT STONE RIDGE - SITE PLAN



THE PINES AT STONE RIDGE
DEVELOPMENT PLAN

Kimley»Horn

© 2021 KIMLEY-HORN AND ASSOCIATES, INC.
2 N NEVADA AVE, SUITE 300,
COLORADO SPRINGS, CO 80903
PHONE: 719-453-0180

POPULUS
Planning & Design

THE PINES AT STONE RIDGE
MILLSTONE LANE AND STONE RIDGE DRIVE
WOODLAND PARK, COLORADO

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DATE: 01.18.2022
DRAWN BY: AIL
CHECKED BY: KRK

PRELIMINARY
GRADING
PLAN

DP5
SHEET 5 OF 13

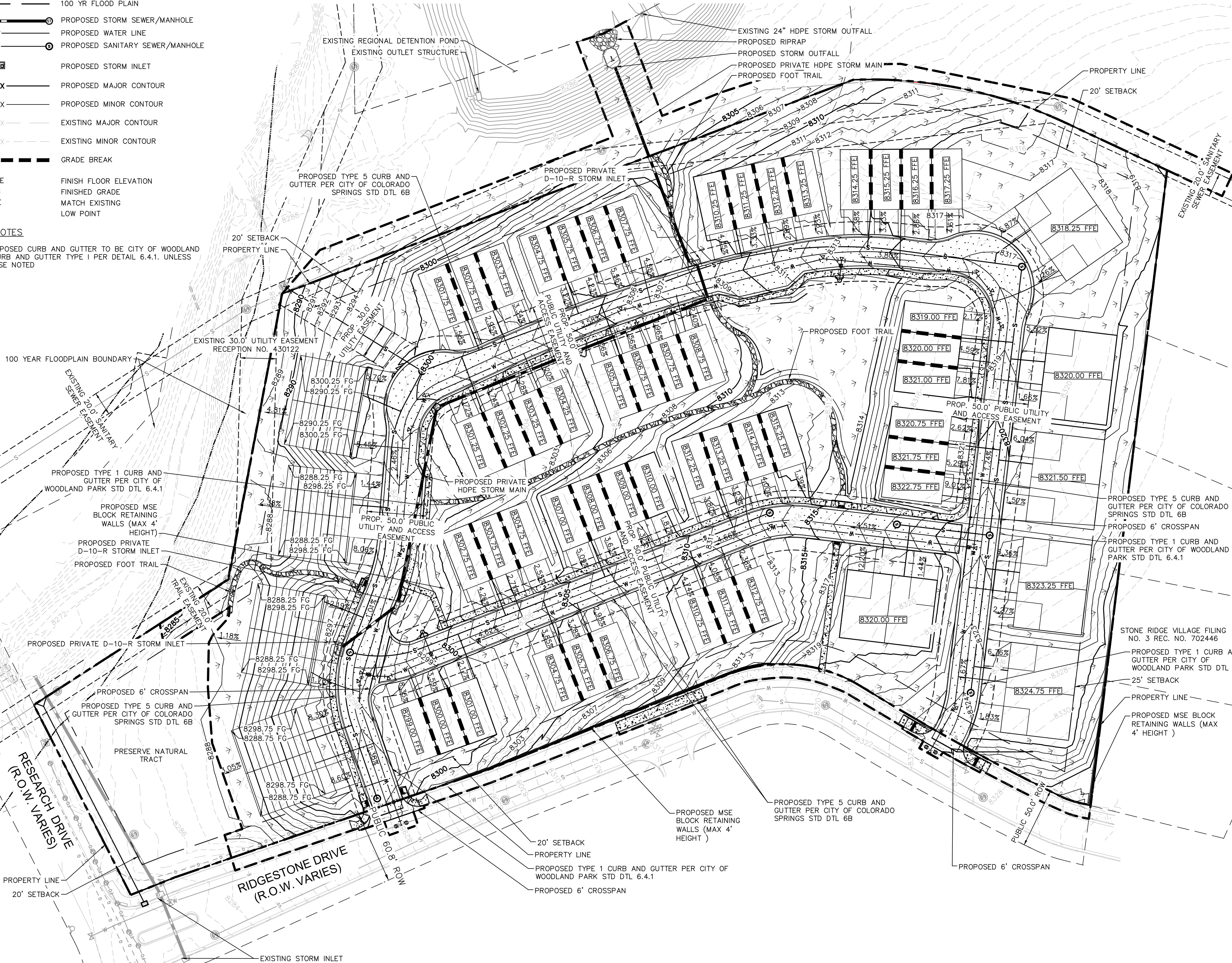
PUD AMENDMENT: THE PINES AT STONE RIDGE - SITE PLAN

LEGEND:

- PROPERTY BOUNDARY
--- LOT LINE
--- EASEMENT
--- 100 YR FLOOD PLAIN
--- PROPOSED STORM SEWER/MANHOLE
--- W --- PROPOSED WATER LINE
--- S --- PROPOSED SANITARY SEWER/MANHOLE
--- PROPOSED STORM INLET
--- XXXX --- PROPOSED MAJOR CONTOUR
--- XXXX --- PROPOSED MINOR CONTOUR
--- XXXX --- EXISTING MAJOR CONTOUR
--- XXXX --- EXISTING MINOR CONTOUR
--- GRADE BREAK
FFE FINISH FLOOR ELEVATION
FG FINISHED GRADE
ME MATCH EXISTING
LP LOW POINT

GENERAL NOTES

1. ALL PROPOSED CURB AND GUTTER TO BE CITY OF WOODLAND PARK CURB AND GUTTER TYPE I PER DETAIL 6.4.1. UNLESS OTHERWISE NOTED



THE PINES AT STONE RIDGE

LANDSCAPE PLAN

THE PINES AT STONE RIDGE

MILLSTONE LANE AND STONE RIDGE DRIVE
WOODLAND PARK, COLORADO

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SITE PLAN

DP6

SHEET 6 OF 13

PUD AMENDMENT: THE PINES AT STONE RIDGE - SITE PLAN

Scale: 1" = 40'-0"

0' 20' 40' 80' 120'



PLANT SCHEDULE				
TREE TYPES	QTY	ASH	TREE TYPE	PLANTING SIZE
	41	EX	EXISTING TREE TO REMAIN	N/A
	54	PE	PROPOSED EVERGREEN TREE	6" H
	26	PD	PROPOSED DECIDUOUS TREE	18" 2" DIA
Total Tree Count (Preliminary): 121				
GROUND COVER SCHEDULE				
GROUND COVERS	QTY	NOTES		
	163,900 sf	Low Grow Native Mix Grass Seed		
	22,220 sf	Off-Site Vegetation Restoration		
	33,215 sf	Existing Vegetation to Remain		
	3,300 sf	Shrub Planting Area		

General Notes

- All drawings are preliminary and intent is to convey the landscape design approach that will be implemented throughout the project area. Final landscape design will comply with Section 1833.180 of the Woodland Park Code.
- Final plant materials and quantities and locations will be based off of final utility alignment, building locations, easements, and lot lines. Final landscape plans will be provided with the project's construction document submittal.
- Landscape plans for individual lots shall be the responsibility of the builder/developer and/or property owner and shall comply with all relevant Woodland Park design codes. It is intended that individual lot landscape shall be complimentary to project's overall landscape theme and plan.
- Every practicable effort shall be made to preserve existing trees on the property. Final determination of tree preservation shall be made during the construction document phase of the project.
- Tract E includes trail, park, and open space amenities. Final design of the park feature will be determined at the construction document phase of the project. It is anticipated that park elements will include a communal gathering space and other typical park features.
- All disturbed areas (on-site and off-site) shall be planted with native grasses to aid in restoration.

THE PINES AT STONE RIDGE
SNOW STORAGE AND SLOPE EXHIBIT

THE PINES AT STONE RIDGE
MILLSTONE LANE AND STONE RIDGE DRIVE
WOODLAND PARK, COLORADO

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SNOW STORAGE
& SLOPE EXHIBIT

DP7

SHEET 7 OF 13

Snow Storage Exhibit

-  Snow Storage Areas
-  Overflow Snow Storage Area

Sidewalk and Roadway Area: 65,900 SF
Required Snow Storage Area: 6,590 SF
Provided Snow Storage Area: 12,000 SF

High Slopes Exhibit

-  30% to 40% Slopes
-  40%+ Slopes

30% to 40% Slopes: None on Site
40% and Above Slopes: None on Site

Scale: 1" = 40'-0"
0' 20' 40' 80' 120'



THE PINES AT STONE RIDGE

4 UNIT TOWNHOME ELEVATIONS



2 REAR ELEVATION
3/16" = 1'-0"



1 FRONT ELEVATION
3/16" = 1'-0"

POPULUS
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208-284-6942
JEFF@CIVICDESIGNPARTNERSHIP.COM

ECHO

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Colorado Springs, CO 80903
www.echo-arch.com
1719.382.7836

THE PINES AT STONE RIDGE
MILLSTONE LANE AND STONE RIDGE DRIVE
WOODLAND PARK, COLORADO

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PRELIMINARY
ARCHITECTURAL
ELEVATIONS

DP8

SHEET 8 OF 13

THE PINES AT STONE RIDGE
4 UNIT TOWNHOME ELEVATIONS

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THE PINES AT STONE RIDGE
MILLSTONE LANE AND STONE RIDGE DRIVE
WOODLAND PARK, COLORADO



2 SIDE ELEVATION (RIGHT)
3/16" = 1'-0"



1 SIDE ELEVATION (LEFT)
3/16" = 1'-0"

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PRELIMINARY
ARCHITECTURAL
ELEVATIONS

DP9

SHEET 9 OF 13

THE PINES AT STONE RIDGE

3 UNIT TOWNHOME ELEVATIONS

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THE PINES AT STONE RIDGE
MILLSTONE LANE AND STONE RIDGE DRIVE
WOODLAND PARK, COLORADO



2 REAR ELEVATION
3/16" = 1'-0"



1 FRONT ELEVATION
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PRELIMINARY
ARCHITECTURAL
ELEVATIONS

DP10

SHEET 10 OF 13

THE PINES AT STONE RIDGE
3 UNIT TOWNHOME ELEVATIONS

POPULUS
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THE PINES AT STONE RIDGE
MILLSTONE LANE AND STONE RIDGE DRIVE
WOODLAND PARK, COLORADO



2 SIDE ELEVATION (RIGHT)
3/16" = 1'-0"



1 SIDE ELEVATION (LEFT)
3/16" = 1'-0"

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PRELIMINARY
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ELEVATIONS

DP11

SHEET 11 OF 13

THE PINES AT STONE RIDGE
PATIO HOME ELEVATIONS

POPULUS
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THE PINES AT STONE RIDGE
MILLSTONE LANE AND STONE RIDGE DRIVE
WOODLAND PARK, COLORADO



2 REAR ELEVATION
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1 FRONT ELEVATION
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PRELIMINARY
ARCHITECTURAL
ELEVATIONS

DP12

SHEET 12 OF 13

THE PINES AT STONE RIDGE
PATIO HOME ELEVATIONS

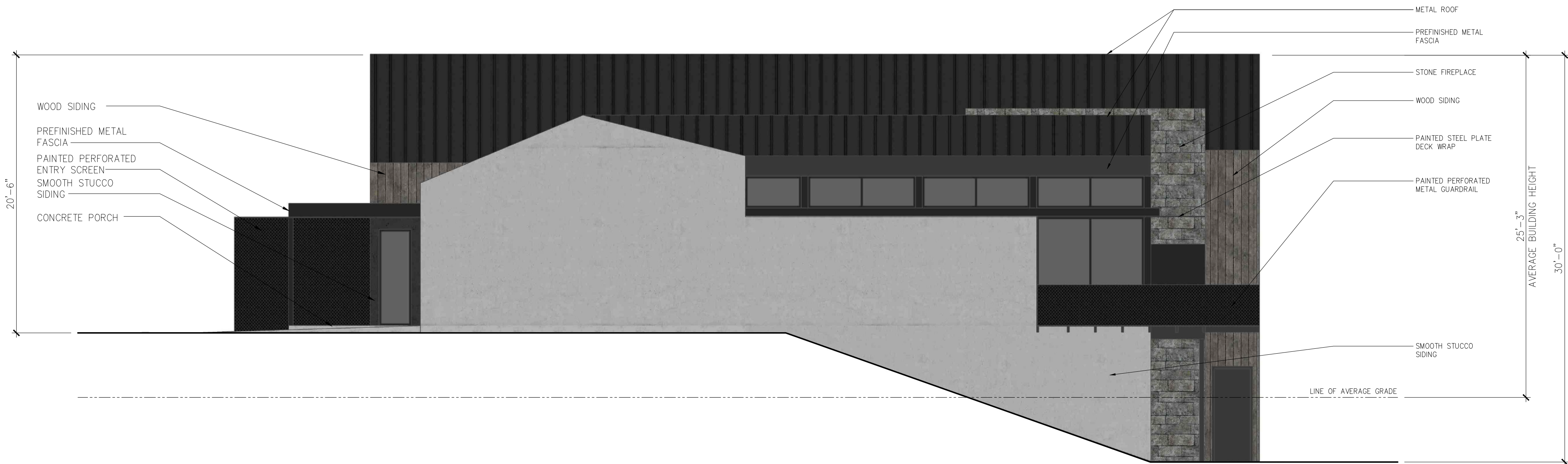
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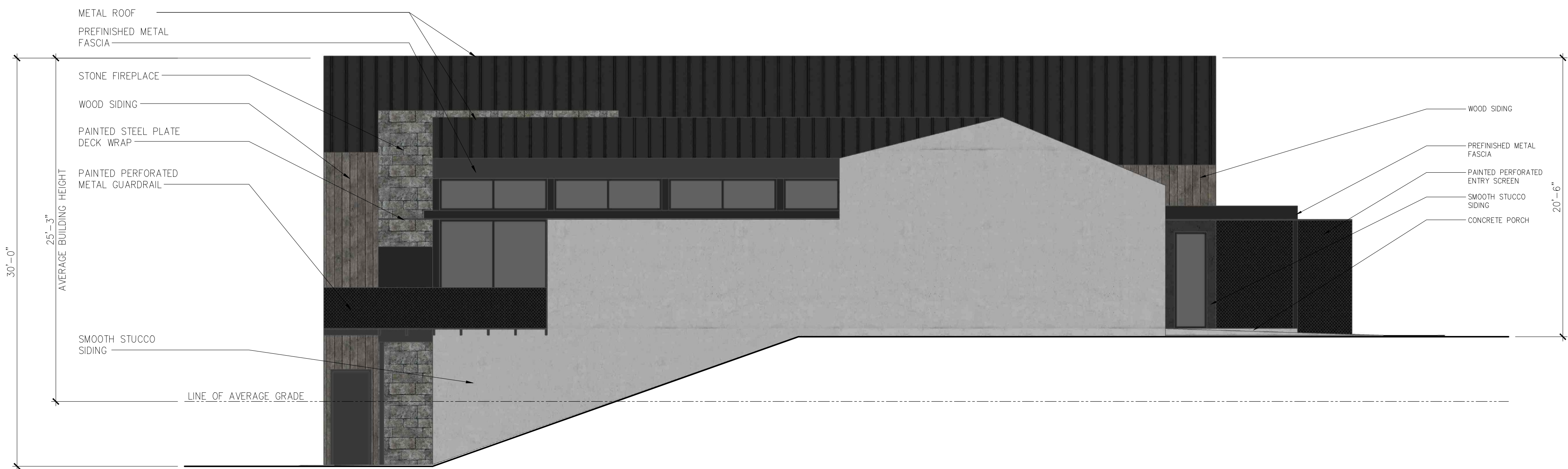
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THE PINES AT STONE RIDGE
MILLSTONE LANE AND STONE RIDGE DRIVE
WOODLAND PARK, COLORADO



2 SIDE ELEVATION (RIGHT)
3/16" = 1'-0"



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DATE: 11.02.2021
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PRELIMINARY
ARCHITECTURAL
ELEVATIONS

DP13

SHEET 13 OF 13

ATTACHMENT 'D'

The Pines at Stone Ridge Traffic Impact Study

Prepared for:

Kimley Horn

2 North Nevada Ave, Suite 300

Colorado Springs, CO 80903

Contact: Mr. Kevin Kofford

NOVEMBER 24, 2021

LSC Transportation Consultants

Prepared by:

Jeffrey C. Hodsdon, P.E.

LSC #S214710



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Table 4

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Traffic Count Reports

Synchro LOS Reports



LSC TRANSPORTATION CONSULTANTS, INC.
2504 East Pikes Peak Avenue, Suite 304
Colorado Springs, CO 80909
(719) 633-2868
FAX (719) 633-5430
E-mail: lsc@lsctrans.com
Website: <http://www.lsctrans.com>

November 24, 2021

Kevin Kofford
Kimley Horn
2 North Nevada Ave, Suite 300
Colorado Springs, CO 80903

RE: The Pines at Stone Ridge
Woodland Park, CO
Traffic Impact Study
LSC #S214710

Dear Mr. Kofford,

LSC Transportation Consultants, Inc. has prepared this traffic impact study for the “The Pines at Stone Ridge” proposed residential development with approximately 75 total dwelling units in Woodland Park, Colorado. The site is located southeast of the intersection of Research Drive and Ridgestone Drive and is planned to have two access points to Ridgestone Drive.

This report has been prepared for submittal to the City of Woodland Park. The study will also potentially be reviewed by the Colorado Department of Transportation (CDOT).

REPORT CONTENTS

The preparation of this report included the following:

- An inventory of existing roadway and traffic conditions on major thoroughfares adjacent to the site, including surface conditions, functional classification, widths, pavement markings, traffic-control signs, posted speed limits, intersection and access spacing, roadway and intersection alignments, roadway grades, and auxiliary turn lanes;
- Weekday peak-hour (morning and late-afternoon) turning-movement traffic counts at the intersections of State Highway (SH) 67/Research Drive and Research Drive/Ridgestone Drive;
- Estimated average weekday traffic (AWT) volumes adjacent to the proposed residential development on SH 67 and Research Drive;
- Projections of 20-year background traffic volumes at SH 67/Research Drive and Research Drive/Ridgestone Drive;
- The proposed site land use and access plan;

- Estimates of average weekday and weekday peak-hour trip generation for the proposed development and the estimated directional distribution of site-generated vehicle trips on roadways and intersections adjacent to and in the vicinity of the site;
- Projected site-generated, background, and resulting total peak-hour intersection traffic volumes at the study-area intersections SH 67/Research Drive, Research Drive/Ridgestone Drive, and site access points;
- Projected site-generated, background, and resulting total daily traffic volumes on the study-area streets and roadways;
- Intersection level of service analysis at the study-area intersections;
- Evaluation of access sight distance at the proposed south and north access points to Ridgestone Drive;
- Evaluation of existing and long-term projected intersection volumes to determine requirements for auxiliary right-/left-turn lanes at the proposed site access points and at the study-area intersections, based on City criteria and the criteria in CDOT's *State Highway Access Code*; and
- Findings and recommendations.

LIST OF OTHER TRAFFIC REPORTS USED IN THE PREPARATION OF THIS REPORT

The following traffic reports and plans were utilized in the preparation of this report:

- Tamarac Tech Park Lots 6 and 7 Traffic Impact Study (October 2021)
- *State Highway 67 Traffic Analysis/Auxiliary Lanes* (May 2020) (and CDOT review comments on that study).
- Tamarac Residential Development (July 2019)
- The Pines at Tamarac (June 2019)
- Stone Ridge Village (June 2016)

LAND USE AND ACCESS

Stone Ridge Village Development

This site is part of the overall, partially-developed Stone Ridge Village development, generally located south of Research Drive and west of SH 67. Stone Ridge Village, at buildout, will include commercial and residential land uses, along with a church. Currently, access is via Stone Ridge Drive and Ridgestone Drive (which extends south from Research Drive). Land use and corresponding traffic projections have been taken from the *Stone Ridge Village Transportation Memorandum* dated June 17, 2016 (prepared by LSC). Estimates of projected additional traffic volumes associated with buildout of the Stone Ridge Village development have been included in the long-term "background" traffic.

Current Site Development

Figure 1 shows the site location relative to the adjacent and nearby roadways for the proposed residential development. Located southeast of the intersection of Research Drive and Ridgestone Drive in Woodland Park, Colorado, the 9.01-acre site would consist of 75 dwelling units (22 patio homes (duplex units) and 53 townhomes).

Two full-movement site access points are proposed to Ridgestone Drive. No direct access would be provided to Research Drive. The first access point is proposed to be located 250 feet south of the intersection of Research Drive/Ridgestone Drive (centerline-to-centerline). The second access will be located 450 feet further south.

Figure 2 contains the proposed site plan showing the proposed land uses, on-site circulation, and proposed access points.

SIGHT DISTANCE

Sight distance for the proposed access locations will be required to meet City standards. Both access points will be required to have a minimum sight distance of 250 feet for a passenger car. Line-of-sight “triangles” will need to be kept free of site improvements (that would limit the line of sight needed to maintain prescribed sight distance). Examples of site improvements include landscaping, monument signs, parking areas, berms, etc. Obstruction height to maintain passenger-car line of sight is about 18 inches. Obstruction height to maintain truck line of sight is higher as the truck “driver’s eye” is significantly higher than the “driver’s eye” for a passenger vehicle.

ROAD AND TRAFFIC CONDITIONS AND MTCP CLASSIFICATION

Figure 1 shows the roads adjacent to and in the vicinity of the site. Adjacent roads serving the site are identified below, followed by a brief description of each:

State Highway (SH) 67 is a north/south state highway classified as NR-B (Non-Rural Arterial) that extends through Teller County. The segment of SH 67 in the vicinity of the site begins in Woodland Park at US Highway (US Hwy) 24 and extends north through the city, continuing north through the community of Deckers and Douglas County. The posted speed limit through the intersections with Tamarac Parkway and Research Drive is 50 miles per hour (mph).

Research Drive is a two-lane City street extending west from SH 67 about 470 feet south of the SH 67/Tamarac Parkway intersection. The intersection of SH 67/Research may be signalized in the future as recommended in the *Access Control Plan Report* for SH 67. Previous LSC traffic studies have stated that, ultimately, SH 67/Research or SH 67/Tamarac Parkway (455 feet north of Research Drive) will be signalized and the determination will be made based on future land uses and traffic studies.

Ridgestone Drive is a two-lane City street extending south from Research Drive approximately 1,200 feet south, just past Firestone Drive. The intersection of Research Drive/Ridgestone Drive is stop-controlled.

Existing Traffic Volumes

Vehicular turning-movement counts were conducted at the following times in August 2021:

- State Highway 67/Research Drive
- AM peak – Wednesday, August 11, 2021 from 6:30-8:30 a.m.
- PM peak – Wednesday, August 11, 2021 from 4:00-6:00 p.m.
- Research Drive/Ridgestone Drive
- AM peak – Wednesday, August 11, 2021 from 6:30-8:30 a.m.
- PM peak – Wednesday, August 11, 2021 from 4:00-6:00 p.m.

Figure 3 shows these turning-movement volumes, as well as the average weekday traffic volumes (estimated based on factored peak-hour count data) on the study-area roadways. Raw count data are attached.

NEARBY FUTURE TRIP-GENERATING LAND USES

Tamarac “Tiny Home” Residential Development

The most likely new development to occur in the short term within the study area would be on an adjacent site located at the north end of Tamarac Parkway (Teller County parcel number 6229.123210050). Tamarac residential development is proposed to consist of about 53 “tiny-home” dwelling units. This property is zoned MFS and the proposed use (small modular homes on permanent foundations on leased land) is a permitted use within the MFS zone. No direct access to SH 67 is proposed, as this project would access Tamarac Parkway.

Tamarac Park Lots 6 + 7, Tamarac Tech Park

Tamarac Park residential development with approximately 167 dwelling units is proposed for the site is located between Tamarac Parkway and State Highway 67 (SH 67) – generally northwest of the intersection of SH 67/Tamarac Parkway. Please refer to the LSC TIS report dated October 28, 2021 for additional details.

Other Potential Future Development

Assumptions have been made regarding additional future developments that may be constructed in the area. On the northwest corner of SH 67/Tamarac Parkway, parcel number 6229123210080, a possible future gas station with convenience market has been assumed. There are multiple undeveloped small parcels that will access Tamarac Parkway that are all currently zoned as

commercial. These potential future developments are included in the long-term background traffic in this study.

TRIP GENERATION

Estimates of the vehicle trips projected to be generated by the The Pines at Stone Ridge residential development have been made using the nationally-published trip-generation rates from *Trip Generation, 11th Edition, 2021* by the Institute of Transportation Engineers (ITE). Corresponding trip-generation rates from ITE Land Use Categories “215 - Single-Family Attached Housing” and “220 - Multi-Family Housing (Low-Rise)” have been used to estimate trip generation for the site.

Table 1 below presents a summary of the estimated site trip generation. A detailed trip-generation estimate for the site, including ITE rates for the proposed land uses, is presented in Table 4 (attached). Figure 2 shows the layout within the proposed residential development.

Table 1: Estimated External Site Vehicle-Trip Generation

Analysis Period	Weekday		
	In	Out	Total
Morning Peak Hour	8	24	32
Evening Peak Hour	24	16	40
Daily/24-hour	258	258	515

The site is projected to generate about 515 total vehicle trips on the average weekday during a 24-hour period, with approximately half entering and half exiting the site. During the morning peak hour, approximately 8 entering vehicles and 24 exiting vehicles would be generated. Approximately 24 entering and 16 exiting vehicles would be generated by the site during the afternoon peak hour. Detailed trip-generation rates are shown in Table 4.

TRIP DISTRIBUTION AND ASSIGNMENT

Trip Directional Distribution

Estimating the directional distribution of site-generated vehicle trips to the study-area roads and intersections is a necessary component in determining the site’s traffic impacts. Figure 4 shows the percentages of the site-generated vehicle trips projected to be oriented to and from the site’s major approaches. Estimates have been based on the following factors: the proposed new land use, the area roadway system serving the site, and the site’s geographic location relative to the overall greater Teller County/Woodland Park area. Additionally, directional-distribution splits from LSC’s previously-conducted traffic studies for this site (mentioned above in the “List of Other

Traffic Reports Used in the Preparation of This Report” section) were used to estimate the trip distribution for this development.

Site-Generated Traffic

Site-generated traffic volumes have been estimated at the following intersections:

- State Highway 67/Research Drive
- Research Drive/Ridgestone Drive
- Ridgestone Drive/Site Access Points

These volumes have been calculated by applying the directional-distribution percentages estimated by LSC (from Figure 4) to the trip-generation estimates (from Table 4). Figure 4 shows the projected site-generated traffic volumes for the weekday morning and evening peak hours. The figure also shows the estimated average daily traffic volumes (ADTs).

Short-Term Background Traffic Volumes

The short-term background traffic volumes are based on existing traffic plus a growth rate of 1.5 percent per year over two years. Additionally, traffic was added to account for school-related traffic as school was not in session when counts were collected. Figure 5 shows the resulting short-term background volumes.

2040 Background Traffic Volumes

The 2040 background traffic volumes are generally based on projections presented in recent traffic studies mentioned in the “List of Other Traffic Reports Used in the Preparation of This Report” section above. Traffic from the proposed residential development is **not** included in the 2040 **background** traffic volumes. Figure 6 shows the resulting long-term background traffic volumes.

Short-Term-Baseline-Plus-Site-Generated Traffic Volumes

Figure 7 shows the sum of the short-term background traffic volumes (from Figure 5) and site-generated peak-hour traffic volumes (shown in Figure 4). These volumes represent the projected short-term total traffic following site buildout. Assumptions for laneage and traffic control at the study-area intersections following site buildout are also shown in Figure 7. This figure shows the assumption of added northbound and southbound left-turn lanes on SH 67 at Research Drive. It is our understanding that these are to be constructed in the short term as a City project.

2040 Total Traffic Volumes

Figure 8 shows the sum of 2040 background traffic volumes (from Figure 6) plus site-generated traffic volumes (from Figure 4). These volumes represent the projected long-term total traffic with the proposed development. Assumptions for laneage and traffic control at the study-area intersections following site buildout are also shown in Figure 8.

LEVEL OF SERVICE ANALYSIS

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection and is indicated on a scale from "A" to "F." LOS A is indicative of little congestion or delay. LOS F indicates a high level of congestion or delay. Table 2 shows the level of service delay ranges for signalized and unsignalized intersections.

Table 2: Intersection Levels of Service Delay Ranges

Level of Service	Signalized Intersections	Unsignalized Intersections
	Average Control Delay (seconds per vehicle)	Average Control Delay (seconds per vehicle) ⁽¹⁾
A	10.0 sec or less	10.0 sec or less
B	10.1-20.0 sec	10.1-15.0 sec
C	20.1-35.0 sec	15.1-25.0 sec
D	35.1-55.0 sec	25.1-35.0 sec
E	55.1-80.0 sec	35.1-50.0 sec
F	80.1 sec or more	50.1 sec or more
(1) For unsignalized intersections, if V/C ratio is greater than 1.0 the level of service is LOS F, regardless of the projected average control delay per vehicle.		

LOS values have been included on each figure for each turning movement/approach during the weekday morning and evening peak hours for the proposed site-access intersections and off-site intersections in the study area:

- Figure 3: Existing Conditions
- Figure 5: Short-Term Background Conditions
- Figure 6: Long-Term Background Conditions
- Figure 7: Short-Term Total Conditions
- Figure 8: Long-Term Total Conditions

LOS calculations for long-term scenarios were based upon the recommended lane geometries and traffic controls outlined in the figures above (which were based on recommended improvements in the aforementioned adjacent traffic studies).

SH 67/Research Drive

As shown, all yielding turning movements at the intersection of SH 67/Research Drive currently operate at LOS C or better during all peak hours. The analysis results for the short- and long-term future scenarios assume completion of a northbound left turn and short southbound left-turn bay on SH 67 at this intersection. The long-term scenario also assumes a future southbound right-turn deceleration lane. In the short-term future, the side-street and major-street left-turning movements are expected to operate at LOS C or better.

In the long term, the eastbound through/left and westbound approach are projected to operate at LOS E or worse during both peak hours. These movements are not anticipated to have a V/C ratio above 1.0, which indicates the movements will **not** be operating above capacity.

Research Drive/Ridgestone Drive

As shown, all yielding turning movements at the intersection of Research Drive/Ridgestone Drive currently operate at LOS A and expected to continue to do so in all future scenarios.

Site Access Points

As shown, all yielding turning movements at the site access points on Ridgestone Drive are anticipated to operate at LOS A in all future scenarios.

AUXILIARY TURN-LANE ANALYSIS, INTERSECTION CONFIGURATION, AND TRAFFIC CONTROL

CDOT's *State Highway Access Code* contains turning-volume thresholds which require auxiliary left- or right-turn lanes by roadway classifications.

SH 67/Research Drive

Please refer to the attached exhibit entitled "Auxiliary Turn-Lane Improvements (w/ Pavement Markings)" from the traffic study for the City SH 67 highway improvement project.

Northbound Left-Turn Deceleration Lanes

It is our understanding that northbound and southbound left-turn lanes on SH 67 at the Research Drive intersection are to be constructed in the short term as part of a City of Woodland Park highway improvement project. Please refer to the report by LSC entitled "State Highway 67 Traffic Analysis/Auxiliary Lanes" (May 2020), CDOT review comments on that study, CDOT Access Permit No. 220126, and CDOT Design Waiver(s) and/or the designs for highway improvements by Kimley Horn (once available) for details.

Southbound Right-Turn Deceleration Lane

A southbound right-turn deceleration lane is forecast to be required at the Research Drive/SH 67 intersection in the future, if/when the right-turning volume threshold is exceeded in the future. These lanes are identified as “Future” in Figure 6 & Figure 6. The CDOT access permit specifies: *“A future southbound to westbound right-turn deceleration lane will be required when the threshold is met on SH 67D north of Research Drive.”* The need for this turn lane would not be needed solely as a result of this proposed development, but in combination with this and additional future development projected for the area.

The future improvement cost of this turn lane will be shared by future developments accessed by Research Parkway as part of the City of Woodland Park street improvement fee program. These would include other developments within Stone Ridge Village and other potential future developments accessed via Research Drive.

Southbound Right-Turn Acceleration Lane

A right-turn acceleration lane is **not** required at the intersection of SH 67/Research Drive, based on projected volumes, the NR-B category of SH 67, and associated criteria in the *State Highway Access Code*.

Eastbound Right-Turn Lane

The CDOT access permit specifies: *“An eastbound to southbound right turn deceleration lane is required on Research Dr. to SH 67.”* There is currently a 75-foot long (plus taper) right-turn bay on the eastbound approach to Research/SH 67. It appears that the lane is not currently striped. Unless the left-turn volume on this approach increases significantly such that the eastbound left-turn queue regularly blocks the entry to this right-turn bay, the existing 75-foot turn bay should suffice.

Research Drive/Ridgestone Drive

The intersection of Research Drive/Ridgestone Drive will not require any auxiliary lanes.

Site Accesses

The site-access points will not require any auxiliary lanes.

QUEUEING ANALYSIS

Queue lengths were analyzed at the study intersections. Table 3 below shows the 95th percentile queue length for each lane/approach at the study intersection or SH 67/Research Drive. As shown, the queue lengths on SH 67 are not anticipated to exceed the available turn lanes.

Table 3: 95th Percentile Queue Lengths (feet)

Turning Movement	Existing Traffic	Short-Term Future Traffic	Long-Term Future Traffic
SH 67/Research Dr			
EB Left/Through	25	25	50
EB Right	25	25	50
WB Approach	25	25	75
NB Left	-	25	25
NB Through/Right	25	-	-
SB Left	-	25	25
SB Through/Right	25	-	-

TRAFFIC-SIGNAL WARRANTS

It is unlikely that a four-hour volume or eight-hour volume traffic-signal warrant would be met at the intersection of Research/SH 67. The combined future eastbound through/left volumes are about 35 vehicles per hour. This approach volume would be below the side-street volume thresholds in the MUTCD warrants.

ROADWAY CLASSIFICATIONS

All internal streets within the site are planned to be private.

CDOT ACCESS PERMIT

This Stone Ridge Village development, of which this site development is a part, was included in the list of specific land uses permitted under CDOT Access Permit No. 220126.

- The permitted number of trips for the Research Parkway city street “access” to SH 67 is 2,253 daily trips.
- The estimated short-term baseline volume on Research Drive west of SH 67 is about 1,400 vehicles per day.
- The number of trips included for this site in the SH 67 traffic study (and accounted for in the permit) is 511 daily trips.
- The short-term total with the trips from this site would be about 1,900 trips. This would be below the permitted number of 2,253.
- The estimated 20-year future volume is 3,511 vehicles per day, which would exceed the permitted volume of 2,253. Therefore, once the 2,253 volume is exceeded by 20 percent, a new access permit would be required.

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

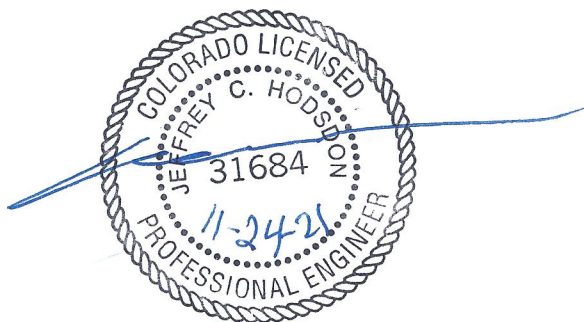
- The site is projected to generate about 515 new driveway vehicle trips on the average weekday.
- During the weekday morning peak hour of adjacent street traffic, 8 vehicles would enter the site while 24 vehicles would exit.
- During the weekday evening peak hour of adjacent street traffic, 24 vehicles would enter the site while 16 vehicles would exit.
- Please refer to the "Level of Service Analysis" section for detailed LOS results at the study-area intersections.
- It is unlikely that a four-hour volume or eight-hour volume traffic-signal warrant would be met at the intersection of Research/SH 67.
- Please refer to the "Auxiliary Turn-Lane Analysis" section for details regarding auxiliary turn-lane improvements at the SH 67/Research Drive intersection.
- This development is accounted for within CDOT access permit No. 220126. Please refer to the access permit section for additional details.

* * * * *

Please contact me if you have any questions regarding this report.

Respectfully Submitted,

LSC TRANSPORTATION CONSULTANTS, INC.



By: _____
Jeffrey C. Hodsdon, P.E.
Principal

JCH/JAB/CRG:jas

Enclosures: Table 4
Figures 1-9
Traffic Count Reports
Synchro LOS Reports

Tables

Table 4: Detailed Trip Generation Estimate

Land Use Code	Land Use Description	Trip Generation Units	Trip Generation Rates ⁽¹⁾					Total Trips Generated				
			Average Weekday Traffic ⁽²⁾	Morning Peak Hour		Afternoon Peak Hour		Average Weekday Traffic	Morning Peak Hour		Afternoon Peak Hour	
				In	Out	In	Out		In	Out		
215	Single Family Attached Housing	22 DU ⁽²⁾	7.18	0.14	0.36	0.32	0.27	158	3	8	7	6
220	Multi-Family Housing	53 DU	6.74	0.09	0.30	0.32	0.19	357	5	16	17	10
							Total	515	8	24	24	16
Notes:												
(1) Source: "Trip Generation, 11th Edition, 2021" by the Institute of Transportation Engineers (ITE)												
(2) DU = dwelling unit												
Source: LSC Transportation Consultants, Inc.												

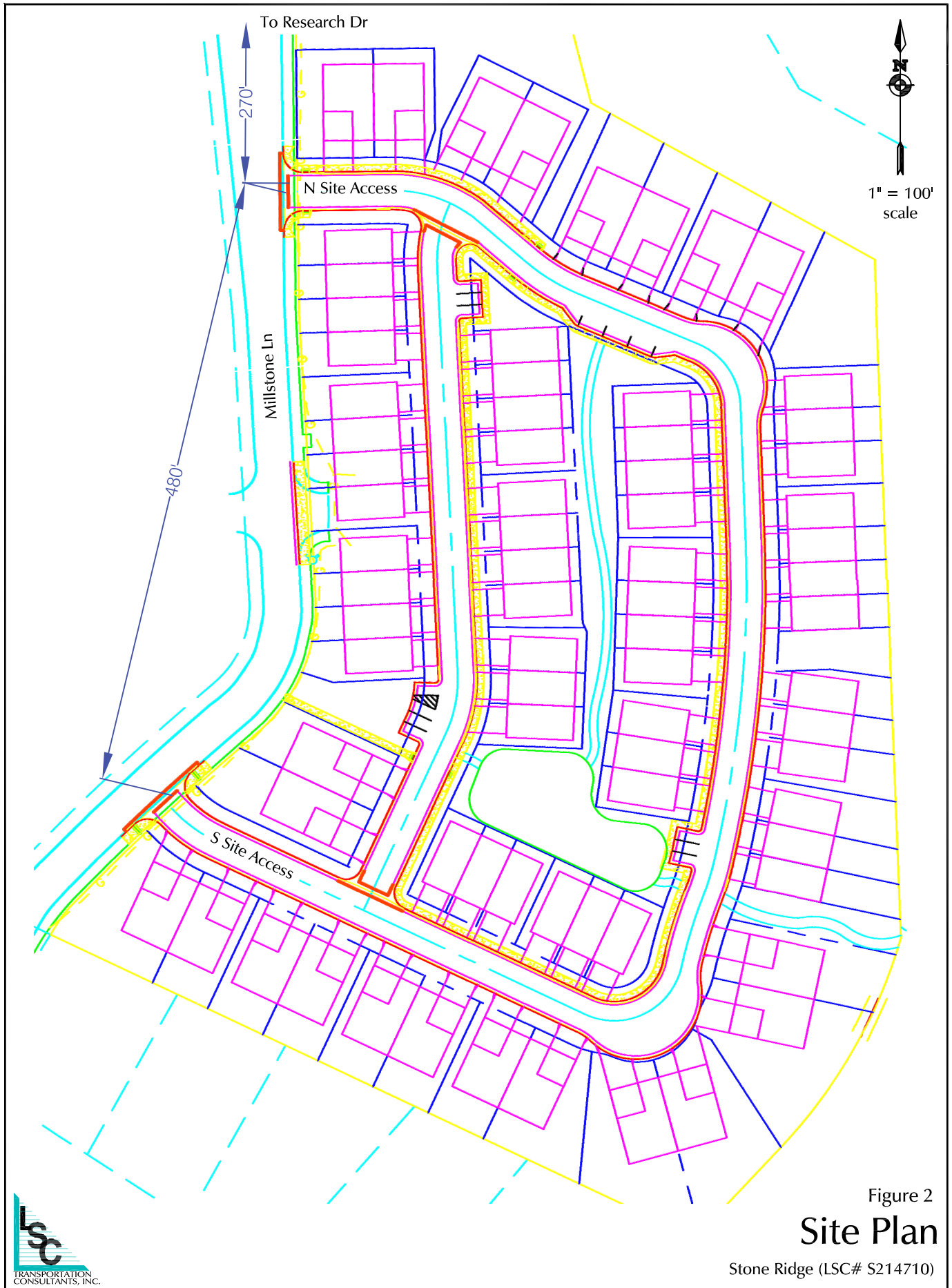
Figures

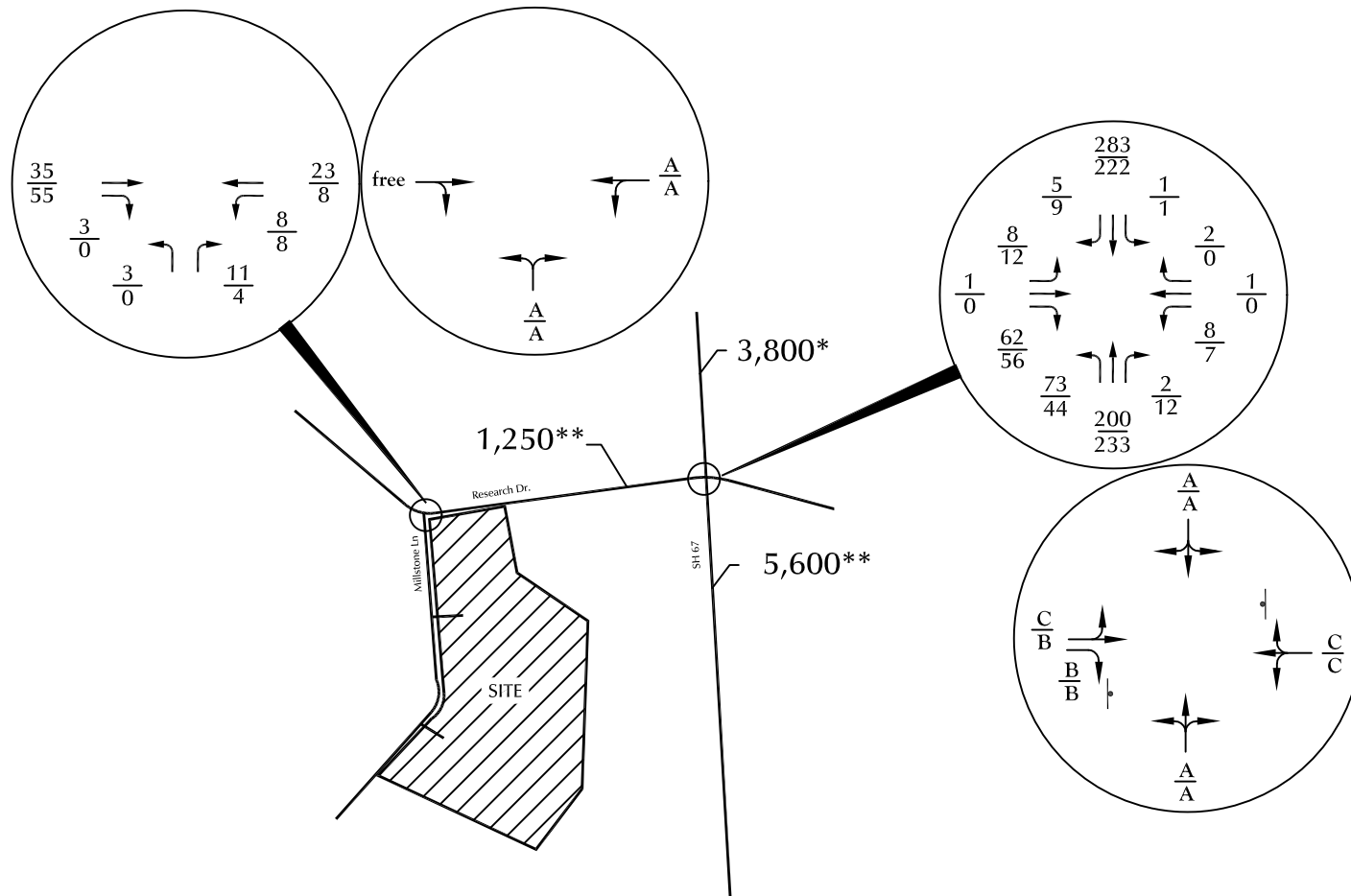


Figure 1

Vicinity Map

Stone Ridge (LSC# S214710)





Not to scale

LEGEND: $\frac{XX}{XX}$ = AM Peak-Hour Traffic (veh/hr) / PM Peak-Hour Traffic (veh/hr) Counts by LSC August 2021

XXX = Average Weekday Traffic (vehicles per day)

$\frac{A}{B}$ = AM Individual Movement Peak-Hour Level of Service / PM Individual Movement Peak-Hour Level of Service

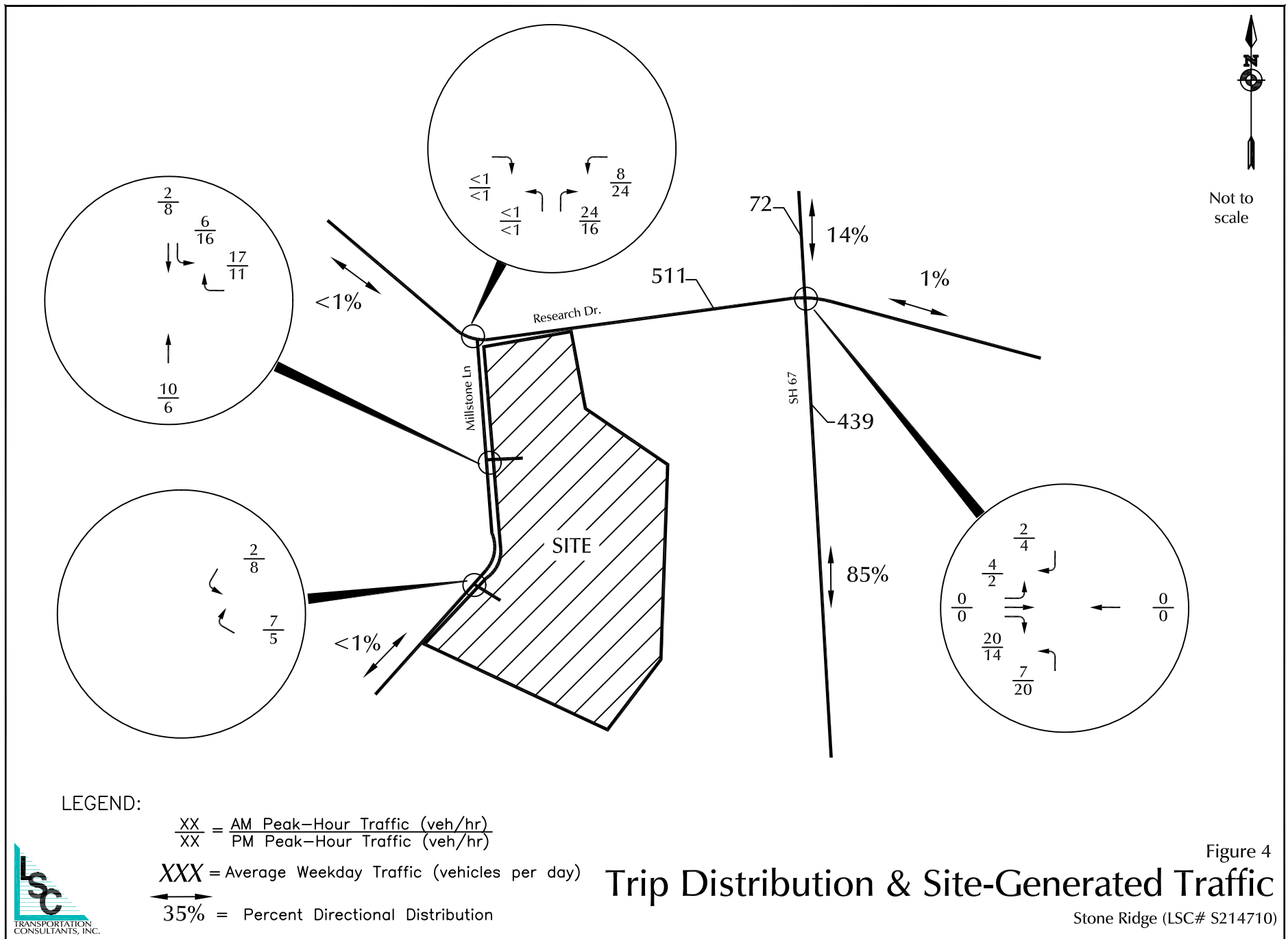
⊥ = Stop Sign

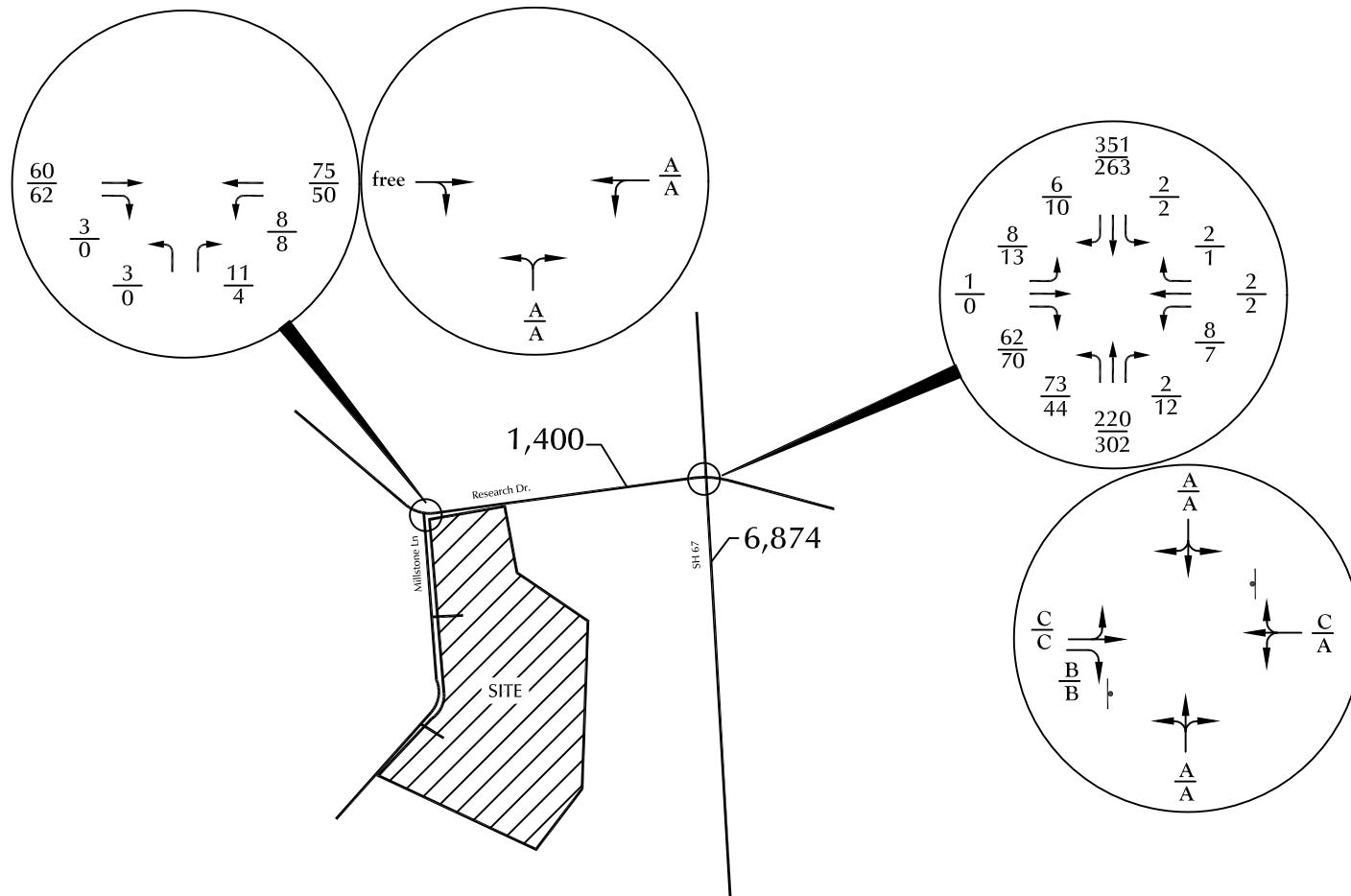
* CDOT 2019 data
** LSC Estimate



Figure 3
Existing Conditions

Stone Ridge (LSC# S214710)





LEGEND:

$\frac{XX}{XX}$ = AM Peak-Hour Traffic (veh/hr)
 PM Peak-Hour Traffic (veh/hr)

XXX = Average Weekday Traffic (vehicles per day)

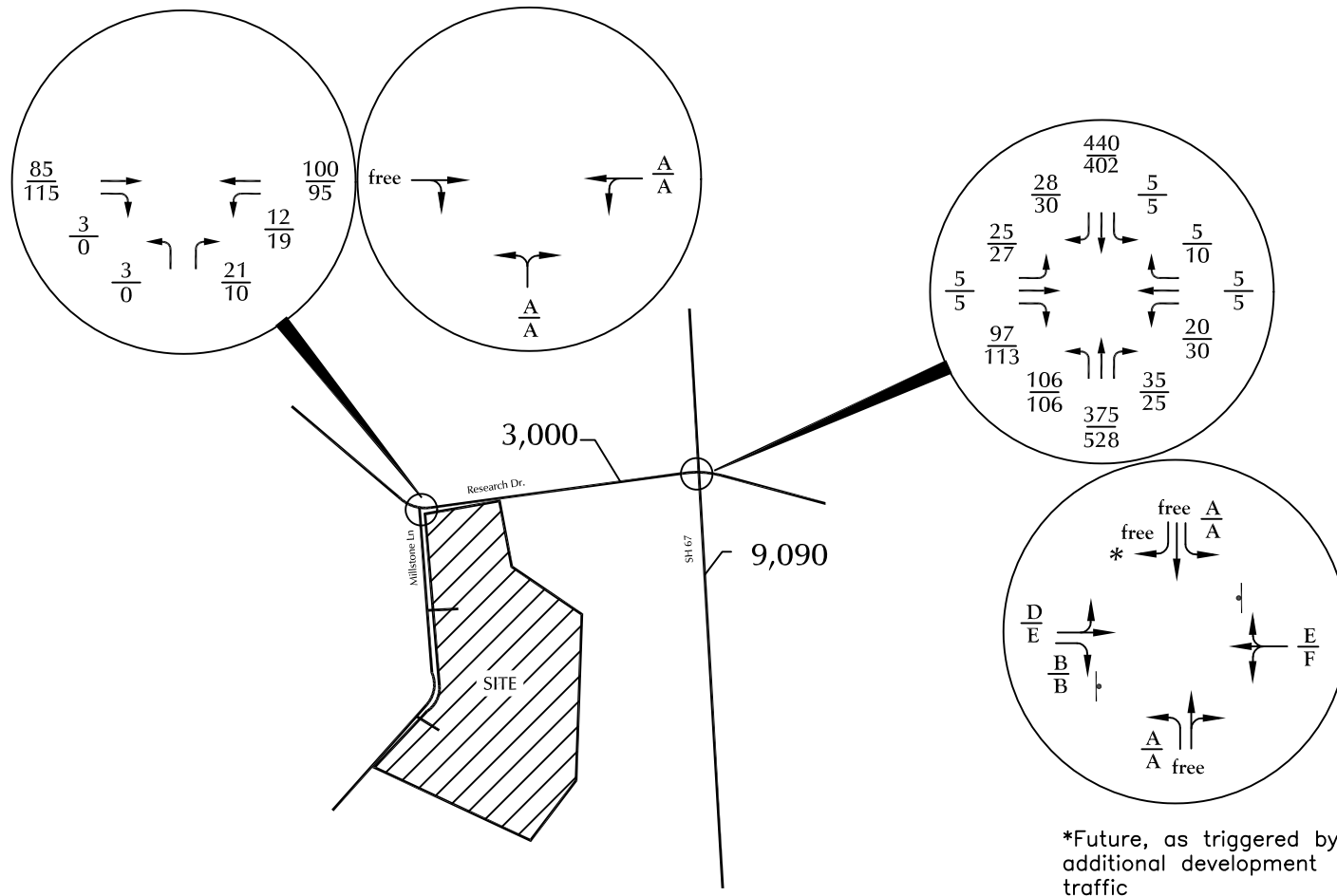
$\frac{A}{B}$ = AM Individual Movement Peak-Hour Level of Service
 PM Individual Movement Peak-Hour Level of Service

┤ = Stop Sign

Short-Term Background Conditions

Figure 5

Stone Ridge (LSC# S214710)



LEGEND:

$\frac{XX}{XX}$ = AM Peak-Hour Traffic (veh/hr)
PM Peak-Hour Traffic (veh/hr)

XXX = Average Weekday Traffic (vehicles per day)

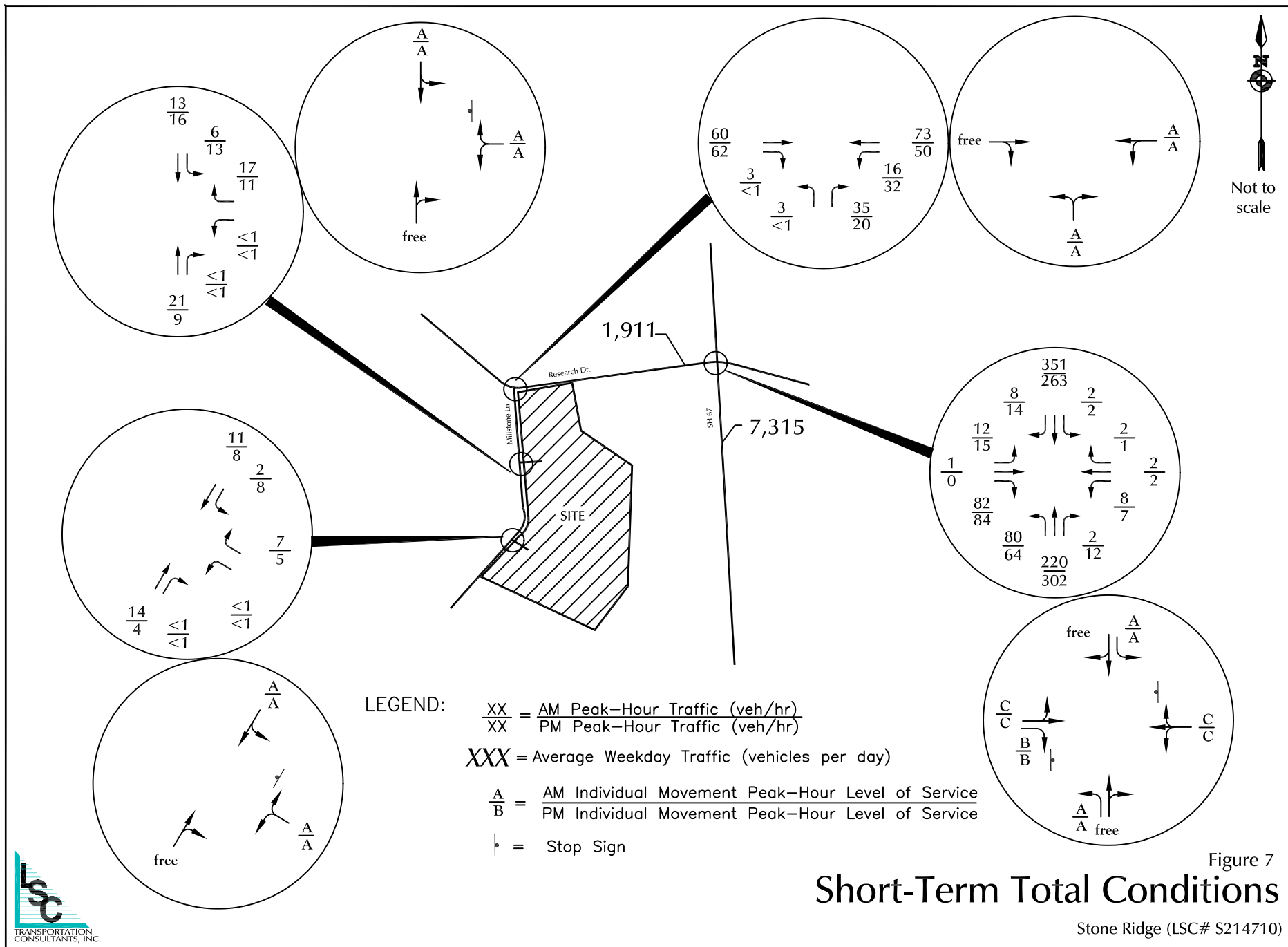
$\frac{A}{B}$ = AM Individual Movement Peak-Hour Level of Service
PM Individual Movement Peak-Hour Level of Service

| = Stop Sign



Figure 6
Long-Term Background Conditions

Stone Ridge (LSC# S214710)



Traffic Counts

LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : SH 67 - Research Rd AM
Site Code : S214710
Start Date : 8/11/2021
Page No : 1

Groups Printed- Unshifted

	SH 67 Southbound					Research Dr Westbound					SH 67 Northbound					Research Dr Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
06:30 AM	0	44	0	0	44	1	0	0	0	1	5	27	0	0	32	1	0	6	0	7	84
06:45 AM	0	32	0	0	32	1	0	1	0	2	9	28	0	0	37	0	0	11	0	11	82
Total	0	76	0	0	76	2	0	1	0	3	14	55	0	0	69	1	0	17	0	18	166
07:00 AM	1	43	1	0	45	0	0	1	0	1	7	23	0	0	30	0	0	16	0	16	92
07:15 AM	0	44	1	0	45	3	0	0	0	3	14	32	0	0	46	2	0	15	0	17	111
07:30 AM	0	51	0	0	51	1	1	0	0	2	10	29	1	0	40	3	1	16	0	20	113
07:45 AM	0	49	4	0	53	1	0	1	0	2	18	50	0	0	68	5	0	11	0	16	139
Total	1	187	6	0	194	5	1	2	0	8	49	134	1	0	184	10	1	58	0	69	455
08:00 AM	1	50	3	0	54	3	0	1	0	4	8	36	2	0	46	1	0	15	0	16	120
08:15 AM	0	43	1	0	44	2	0	0	0	2	11	39	2	0	52	1	0	14	0	15	113
Grand Total	2	356	10	0	368	12	1	4	0	17	82	264	5	0	351	13	1	104	0	118	854
Apprch %	0.5	96.7	2.7	0		70.6	5.9	23.5	0		23.4	75.2	1.4	0		11	0.8	88.1	0		
Total %	0.2	41.7	1.2	0	43.1	1.4	0.1	0.5	0	2	9.6	30.9	0.6	0	41.1	1.5	0.1	12.2	0	13.8	

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	SH 67 Southbound					Research Dr Westbound					SH 67 Northbound					Research Dr Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 7:30:00 AM																					
7:30:00 AM	0	51	0	0	51	1	1	0	0	2	10	29	1	0	40	3	1	16	0	20	113
7:45:00 AM	0	49	4	0	53	1	0	1	0	2	18	50	0	0	68	5	0	11	0	16	139
8:00:00 AM	1	50	3	0	54	3	0	1	0	4	8	36	2	0	46	1	0	15	0	16	120
8:15:00 AM	0	43	1	0	44	2	0	0	0	2	11	39	2	0	52	1	0	14	0	15	113
Total Volume	1	193	8	0	202	7	1	2	0	10	47	154	5	0	206	10	1	56	0	67	485
% App. Total	0.5	95.5	4	0		70	10	20	0		22.8	74.8	2.4	0		14.9	1.5	83.6	0		
PHF	.250	.946	.500	.000	.935	.583	.250	.500	.000	.625	.653	.770	.625	.000	.757	.500	.250	.875	.000	.838	.872

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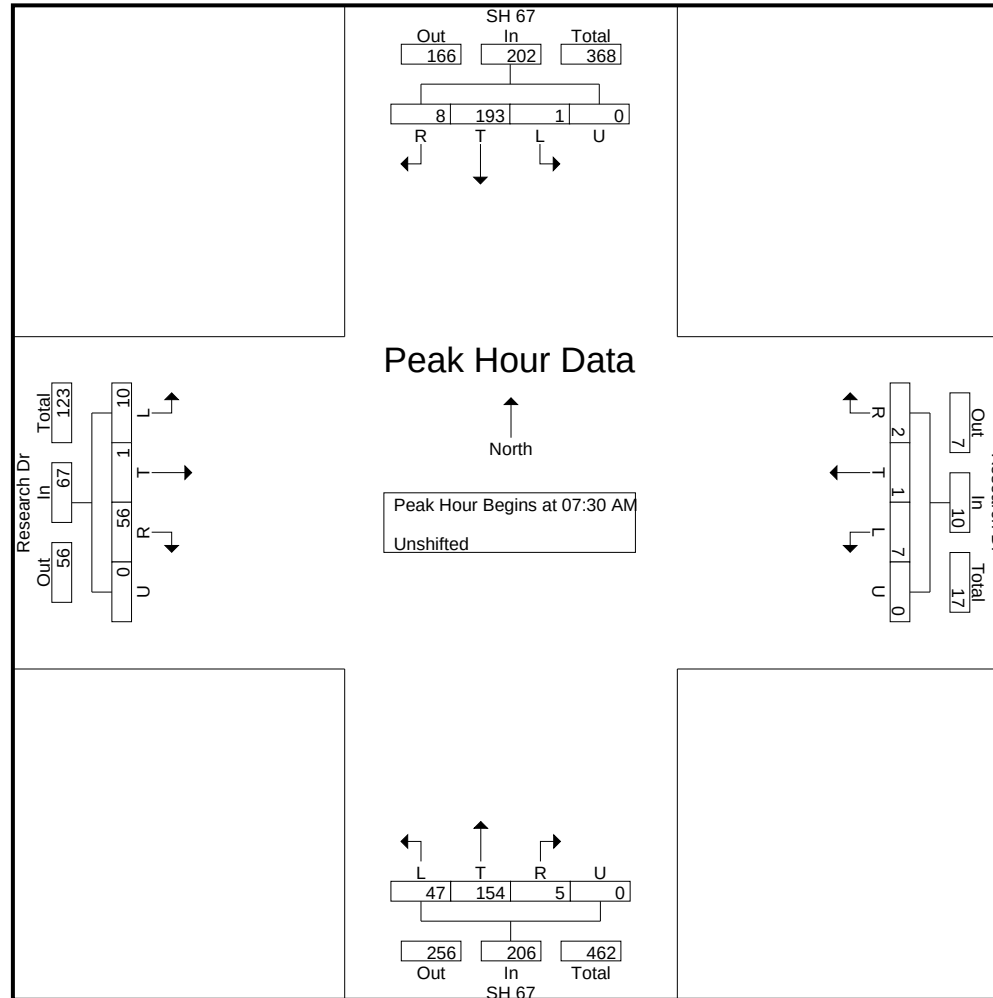
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Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	7:15:00 AM					7:15:00 AM					7:30:00 AM					7:00:00 AM					
+0 mins.	0	44	1	0	45	3	0	0	0	3	10	29	1	0	40	0	0	16	0	16	
+5 mins.	0	51	0	0	51	1	1	0	0	2	18	50	0	0	68	2	0	15	0	17	
+10 mins.	0	49	4	0	53	1	0	1	0	2	8	36	2	0	46	3	1	16	0	20	
+15 mins.	1	50	3	0	54	3	0	1	0	4	11	39	2	0	52	5	0	11	0	16	
Total Volume	1	194	8	0	203	8	1	2	0	11	47	154	5	0	206	10	1	58	0	69	
% App. Total	0.5	95.6	3.9	0		72.7	9.1	18.2	0		22.8	74.8	2.4	0		14.5	1.4	84.1	0		
PHF	.250	.951	.500	.000	.940	.667	.250	.500	.000	.688	.653	.770	.625	.000	.757	.500	.250	.906	.000	.863	

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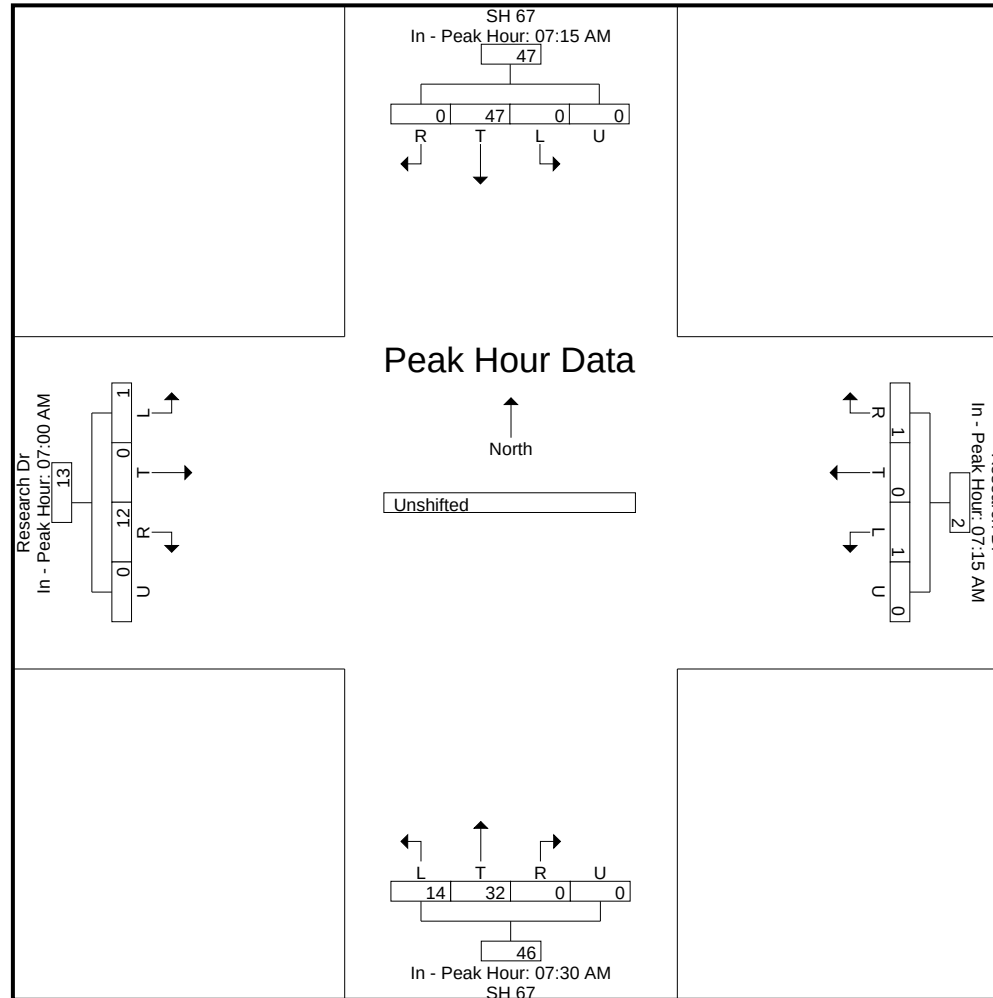
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File Name : SH 67 - Research Rd PM
Site Code : S214710
Start Date : 8/11/2021
Page No : 1

Groups Printed- Unshifted

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Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
04:00 PM	0	49	2	1	52	1	0	0	0	1	7	53	5	0	65	2	0	5	0	7	125
04:15 PM	1	79	1	0	81	0	0	0	0	0	13	62	2	1	78	3	0	18	0	21	180
04:30 PM	0	47	1	0	48	3	0	0	0	3	10	52	4	0	66	3	0	33	0	36	153
04:45 PM	0	47	1	0	48	1	0	0	0	1	6	57	5	0	68	0	0	14	0	14	131
Total	1	222	5	1	229	5	0	0	0	5	36	224	16	1	277	8	0	70	0	78	589
05:00 PM	2	47	1	0	50	1	0	0	0	1	5	49	1	0	55	1	0	12	0	13	119
05:15 PM	0	42	1	0	43	2	0	0	0	2	9	44	3	0	56	3	0	9	0	12	113
05:30 PM	0	34	0	0	34	2	0	0	0	2	13	47	2	0	62	1	0	10	0	11	109
05:45 PM	0	51	3	0	54	2	0	0	0	2	11	67	6	0	84	2	0	7	0	9	149
Total	2	174	5	0	181	7	0	0	0	7	38	207	12	0	257	7	0	38	0	45	490
Grand Total	3	396	10	1	410	12	0	0	0	12	74	431	28	1	534	15	0	108	0	123	1079
Apprch %	0.7	96.6	2.4	0.2		100	0	0	0		13.9	80.7	5.2	0.2		12.2	0	87.8	0		
Total %	0.3	36.7	0.9	0.1	38	1.1	0	0	0	1.1	6.9	39.9	2.6	0.1	49.5	1.4	0	10	0	11.4	

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	SH 67 Southbound					Research Dr Westbound					SH 67 Northbound					Research Dr Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 4:00:00 PM																					
4:00:00 PM	0	49	2	1	52	1	0	0	0	1	7	53	5	0	65	2	0	5	0	7	125
4:15:00 PM	1	79	1	0	81	0	0	0	0	0	13	62	2	1	78	3	0	18	0	21	180
4:30:00 PM	0	47	1	0	48	3	0	0	0	3	10	52	4	0	66	3	0	33	0	36	153
4:45:00 PM	0	47	1	0	48	1	0	0	0	1	6	57	5	0	68	0	0	14	0	14	131
Total Volume	1	222	5	1	229	5	0	0	0	5	36	224	16	1	277	8	0	70	0	78	589
% App. Total	0.4	96.9	2.2	0.4		100	0	0	0		13	80.9	5.8	0.4		10.3	0	89.7	0		
PHF	.250	.703	.625	.250	.707	.417	.000	.000	.000	.417	.692	.903	.800	.250	.888	.667	.000	.530	.000	.542	.818

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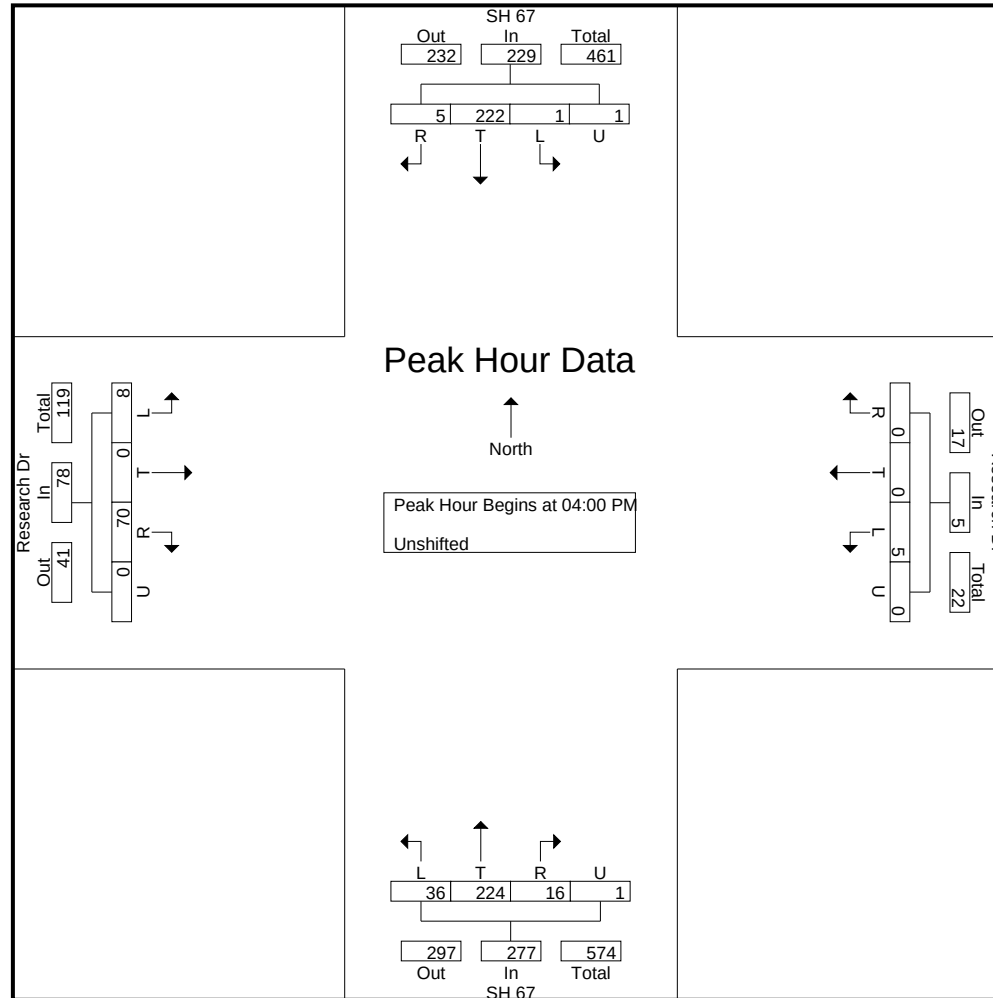
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File Name : SH 67 - Research Rd PM

Site Code : S214710

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	SH 67 Southbound					Research Dr Westbound					SH 67 Northbound					Research Dr Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	4:00:00 PM					4:30:00 PM					4:00:00 PM					4:15:00 PM					
+0 mins.	0	49	2	1	52	3	0	0	0	3	7	53	5	0	65	3	0	18	0	21	
+5 mins.	1	79	1	0	81	1	0	0	0	1	13	62	2	1	78	3	0	33	0	36	
+10 mins.	0	47	1	0	48	1	0	0	0	1	10	52	4	0	66	0	0	14	0	14	
+15 mins.	0	47	1	0	48	2	0	0	0	2	6	57	5	0	68	1	0	12	0	13	
Total Volume	1	222	5	1	229	7	0	0	0	7	36	224	16	1	277	7	0	77	0	84	
% App. Total	0.4	96.9	2.2	0.4		100	0	0	0		13	80.9	5.8	0.4		8.3	0	91.7	0		
PHF	.250	.703	.625	.250	.707	.583	.000	.000	.000	.583	.692	.903	.800	.250	.888	.583	.000	.583	.000	.583	

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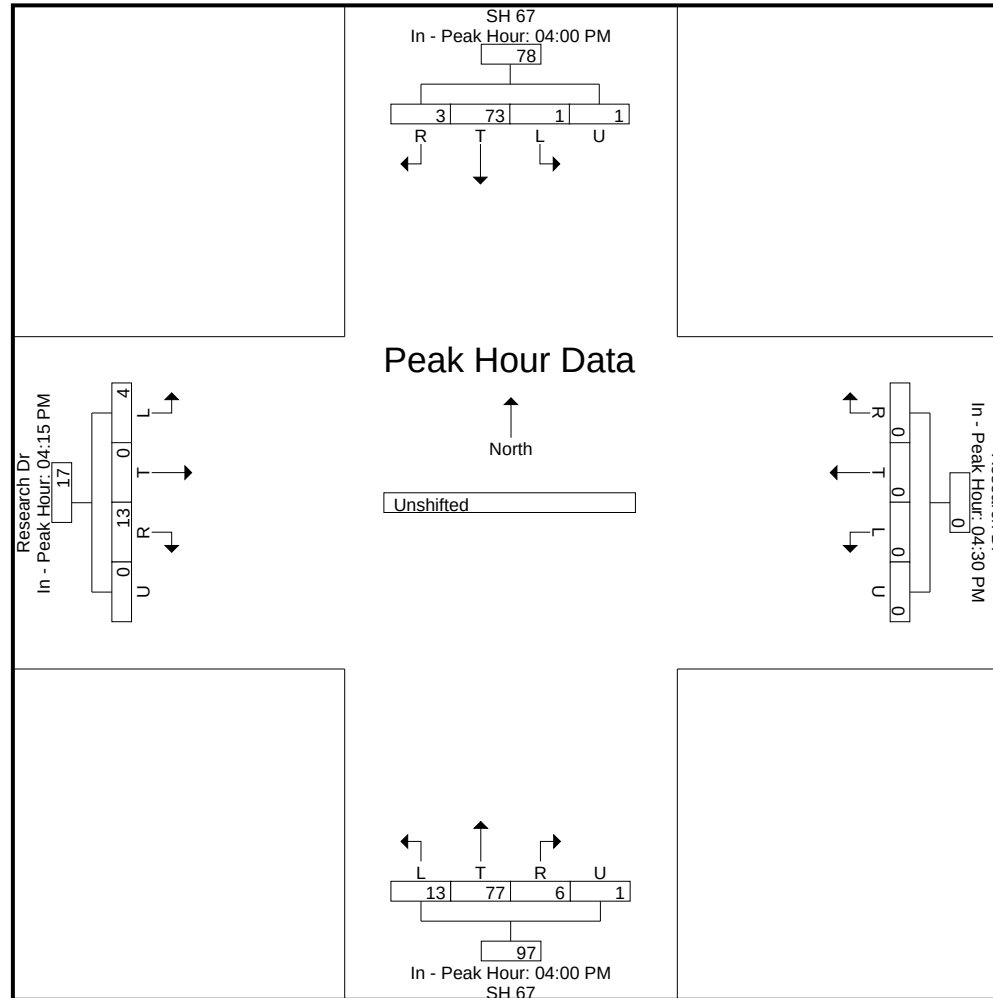
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719-633-2868

File Name : SH 67 - Research Rd PM

Site Code : S214710

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File Name : Ridgestone Dr - Research Rd AM
Site Code : S214710
Start Date : 8/11/2021
Page No : 1

Groups Printed- Bank 1

Start Time	Southbound					Research Dr Westbound					Ridgestone Dr Northbound					Research Dr Eastbound					Int. Total
	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	
06:30 AM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	6	0	0	6	8
06:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0	11	0	0	11	14
Total	0	0	0	0	0	1	3	0	0	4	0	0	1	0	1	0	17	0	0	17	22
07:00 AM	0	0	0	0	0	0	5	0	0	5	0	0	1	0	1	0	9	0	0	9	15
07:15 AM	0	0	0	0	0	3	1	0	0	4	0	0	1	0	1	0	14	0	0	14	19
07:30 AM	0	0	0	0	0	1	2	0	0	3	0	0	2	0	2	0	16	0	0	16	21
07:45 AM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	10	0	0	10	12
Total	0	0	0	0	0	5	9	0	0	14	0	0	4	0	4	0	49	0	0	49	67
08:00 AM	0	0	0	0	0	3	4	0	0	7	0	0	1	0	1	0	15	0	0	15	23
08:15 AM	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	11	0	0	11	14
Grand Total	0	0	0	0	0	10	18	0	0	28	0	0	6	0	6	0	92	0	0	92	126
Apprch %	0	0	0	0		35.7	64.3	0	0		0	0	100	0		0	100	0	0		
Total %	0	0	0	0		7.9	14.3	0	0	22.2	0	0	4.8	0	4.8	0	73	0	0	73	

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719-633-2868

File Name : Ridgestone Dr - Research Rd AM
Site Code : S214710
Start Date : 8/11/2021
Page No : 2

	Southbound					Research Dr Westbound					Ridgestone Dr Northbound					Research Dr Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 7:15:00 AM																					
7:15:00 AM	0	0	0	0	0	3	1	0	0	4	0	0	1	0	1	0	14	0	0	14	19
7:30:00 AM	0	0	0	0	0	1	2	0	0	3	0	0	2	0	2	0	16	0	0	16	21
7:45:00 AM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	10	0	0	10	12
8:00:00 AM	0	0	0	0	0	3	4	0	0	7	0	0	1	0	1	0	15	0	0	15	23
Total Volume	0	0	0	0	0	8	8	0	0	16	0	0	4	0	4	0	55	0	0	55	75
% App. Total	0	0	0	0		50	50	0	0		0	0	100	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.667	.500	.000	.000	.571	.000	.000	.500	.000	.500	.000	.859	.000	.000	.859	.815

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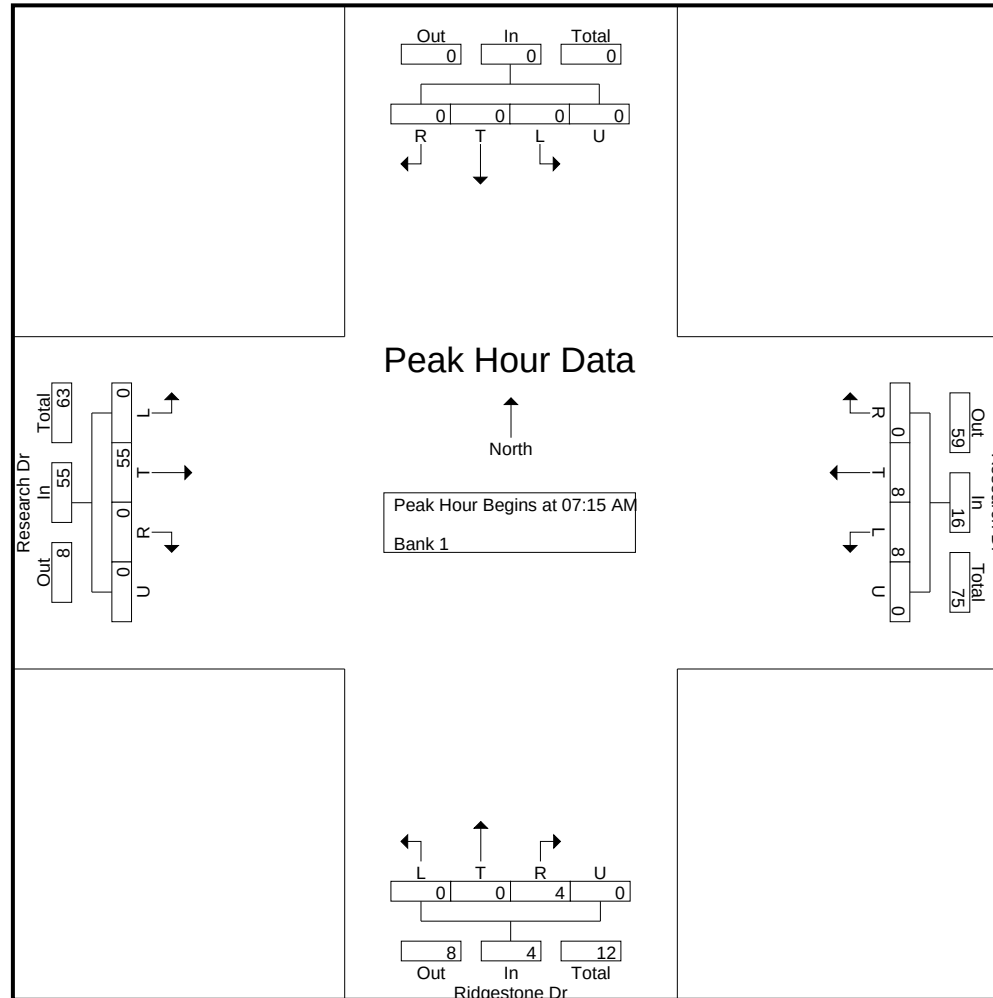
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File Name : Ridgestone Dr - Research Rd AM

Site Code : S214710

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Site Code : S214710
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	Southbound					Research Dr Westbound					Ridgestone Dr Northbound					Research Dr Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	6:30:00 AM					7:15:00 AM					6:45:00 AM					7:15:00 AM					
+0 mins.	0	0	0	0	0	3	1	0	0	4	0	0	1	0	1	0	14	0	0	14	
+5 mins.	0	0	0	0	0	1	2	0	0	3	0	0	1	0	1	0	16	0	0	16	
+10 mins.	0	0	0	0	0	1	1	0	0	2	0	0	1	0	1	0	10	0	0	10	
+15 mins.	0	0	0	0	0	3	4	0	0	7	0	0	2	0	2	0	15	0	0	15	
Total Volume	0	0	0	0	0	8	8	0	0	16	0	0	5	0	5	0	55	0	0	55	
% App. Total	0	0	0	0		50	50	0	0		0	0	100	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.667	.500	.000	.000	.571	.000	.000	.625	.000	.625	.000	.859	.000	.000	.859	

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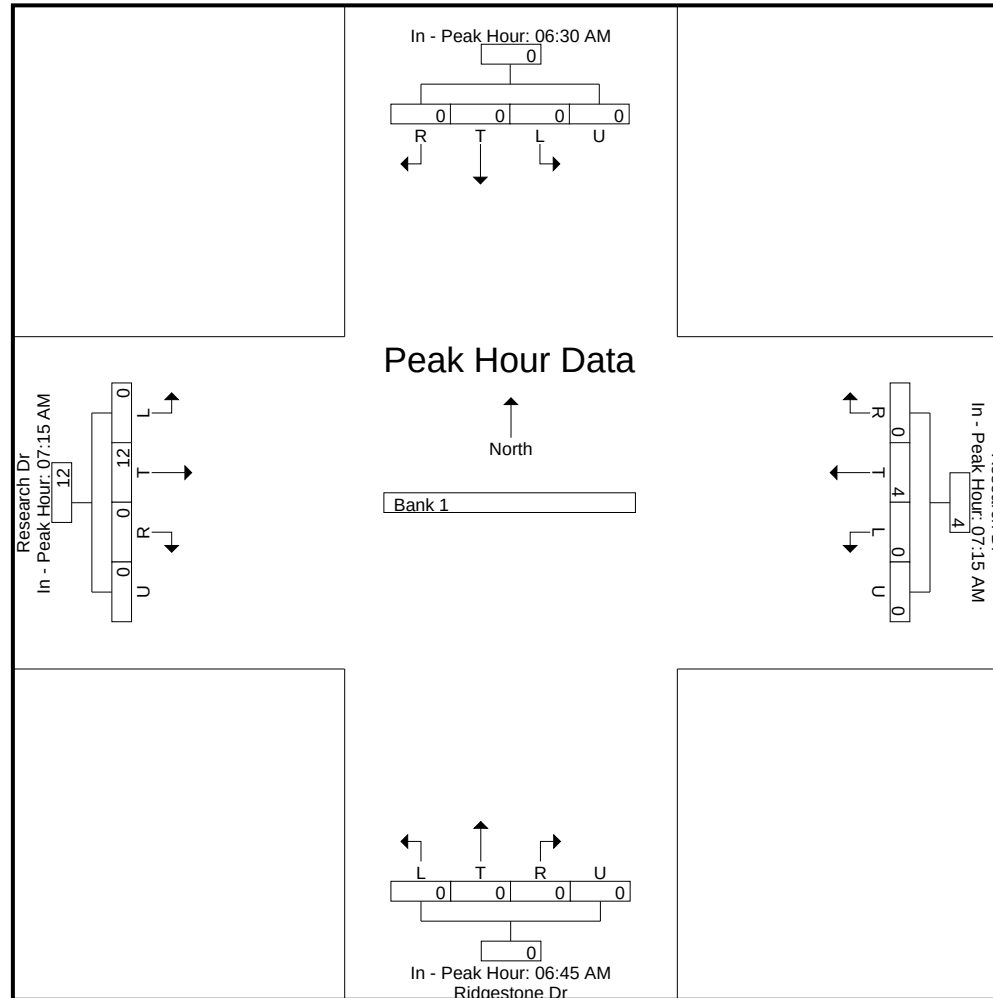
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File Name : Ridgestone Dr - Research Rd AM

Site Code : S214710

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File Name : Ridgestone Dr - Research Rd PM
Site Code : S214710
Start Date : 8/11/2021
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Groups Printed- Bank 1

Start Time	Southbound					Research Dr Westbound					Ridgestone Dr Northbound					Research Dr Eastbound					Int. Total
	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	
04:00 PM	0	0	0	0	0	2	4	0	0	6	0	0	1	0	1	0	2	0	0	2	9
04:15 PM	0	0	0	0	0	3	8	0	0	11	0	0	6	0	6	0	8	0	0	8	25
04:30 PM	0	0	0	0	0	2	5	0	0	7	1	0	3	0	4	0	12	1	0	13	24
04:45 PM	0	0	0	0	0	1	6	0	0	7	2	0	0	0	2	0	7	2	0	9	18
Total	0	0	0	0	0	8	23	0	0	31	3	0	10	0	13	0	29	3	0	32	76
05:00 PM	0	0	0	0	0	2	4	0	0	6	0	0	2	0	2	0	8	0	0	8	16
05:15 PM	0	0	0	0	0	0	6	0	0	6	1	0	0	0	1	0	7	0	0	7	14
05:30 PM	0	0	0	0	0	0	11	0	0	11	0	0	2	0	2	0	7	0	0	7	20
05:45 PM	0	0	0	0	0	4	11	0	0	15	0	0	0	0	0	0	6	0	0	6	21
Total	0	0	0	0	0	6	32	0	0	38	1	0	4	0	5	0	28	0	0	28	71
Grand Total	0	0	0	0	0	14	55	0	0	69	4	0	14	0	18	0	57	3	0	60	147
Apprch %	0	0	0	0		20.3	79.7	0	0		22.2	0	77.8	0		0	95	5	0		
Total %	0	0	0	0	0	9.5	37.4	0	0	46.9	2.7	0	9.5	0	12.2	0	38.8	2	0	40.8	

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File Name : Ridgestone Dr - Research Rd PM
Site Code : S214710
Start Date : 8/11/2021
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	Southbound					Research Dr Westbound					Ridgestone Dr Northbound					Research Dr Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 4:15:00 PM																					
4:15:00 PM	0	0	0	0	0	3	8	0	0	11	0	0	6	0	6	0	8	0	0	8	25
4:30:00 PM	0	0	0	0	0	2	5	0	0	7	1	0	3	0	4	0	12	1	0	13	24
4:45:00 PM	0	0	0	0	0	1	6	0	0	7	2	0	0	0	2	0	7	2	0	9	18
5:00:00 PM	0	0	0	0	0	2	4	0	0	6	0	0	2	0	2	0	8	0	0	8	16
Total Volume	0	0	0	0	0	8	23	0	0	31	3	0	11	0	14	0	35	3	0	38	83
% App. Total	0	0	0	0		25.8	74.2	0	0		21.4	0	78.6	0		0	92.1	7.9	0		
PHF	.000	.000	.000	.000	.000	.667	.719	.000	.000	.705	.375	.000	.458	.000	.583	.000	.729	.375	.000	.731	.830

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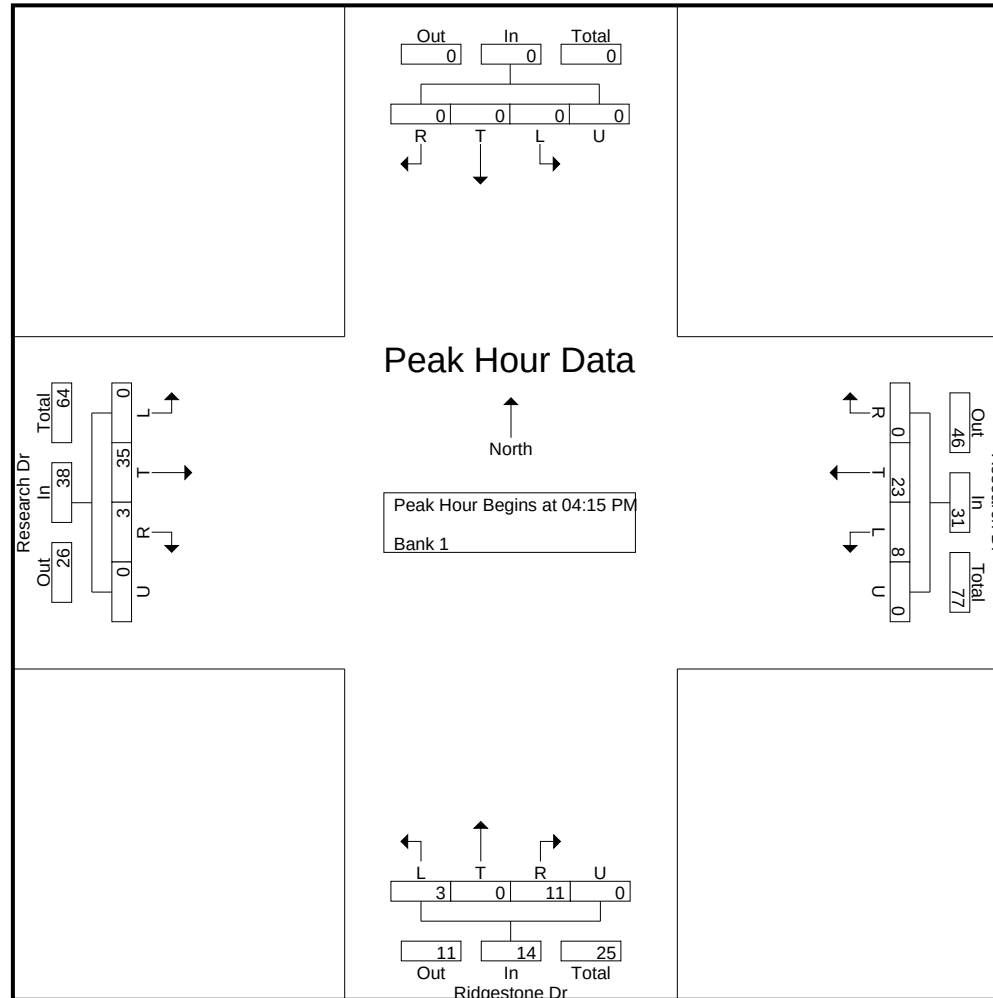
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719-633-2868

File Name : Ridgestone Dr - Research Rd PM

Site Code : S214710

Start Date : 8/11/2021

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File Name : Ridgestone Dr - Research Rd PM
Site Code : S214710
Start Date : 8/11/2021
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	Southbound					Research Dr Westbound					Ridgestone Dr Northbound					Research Dr Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	4:00:00 PM					5:00:00 PM					4:15:00 PM					4:15:00 PM					
+0 mins.	0	0	0	0	0	2	4	0	0	6	0	0	6	0	6	0	8	0	0	8	
+5 mins.	0	0	0	0	0	0	6	0	0	6	1	0	3	0	4	0	12	1	0	13	
+10 mins.	0	0	0	0	0	0	11	0	0	11	2	0	0	0	2	0	7	2	0	9	
+15 mins.	0	0	0	0	0	4	11	0	0	15	0	0	2	0	2	0	8	0	0	8	
Total Volume	0	0	0	0	0	6	32	0	0	38	3	0	11	0	14	0	35	3	0	38	
% App. Total	0	0	0	0		15.8	84.2	0	0		21.4	0	78.6	0		0	92.1	7.9	0		
PHF	.000	.000	.000	.000	.000	.375	.727	.000	.000	.633	.375	.000	.458	.000	.583	.000	.729	.375	.000	.731	

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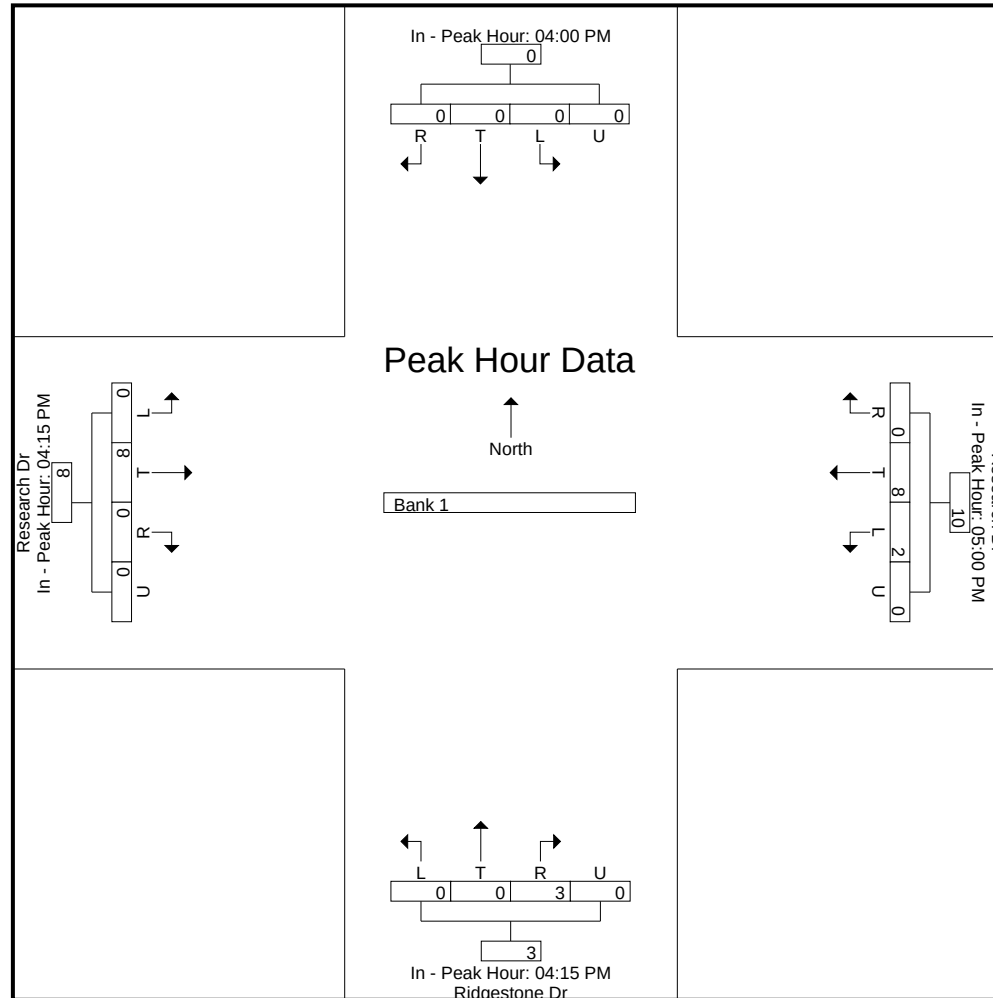
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File Name : Ridgestone Dr - Research Rd PM

Site Code : S214710

Start Date : 8/11/2021

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File Name : Ridgestone Dr - Research Rd AM Bus
Site Code : S214710
Start Date : 8/11/2021
Page No : 1

Groups Printed- Bank 2

Groups Plotted - Page 2																						
	Southbound					Research Dr Westbound					Ridgestone Dr Northbound					Research Dr Eastbound						
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total	
*** BREAK ***																						
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	
*** BREAK ***																						
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	4	
*** BREAK ***																						
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	6	
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	100	0	0			
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	100		

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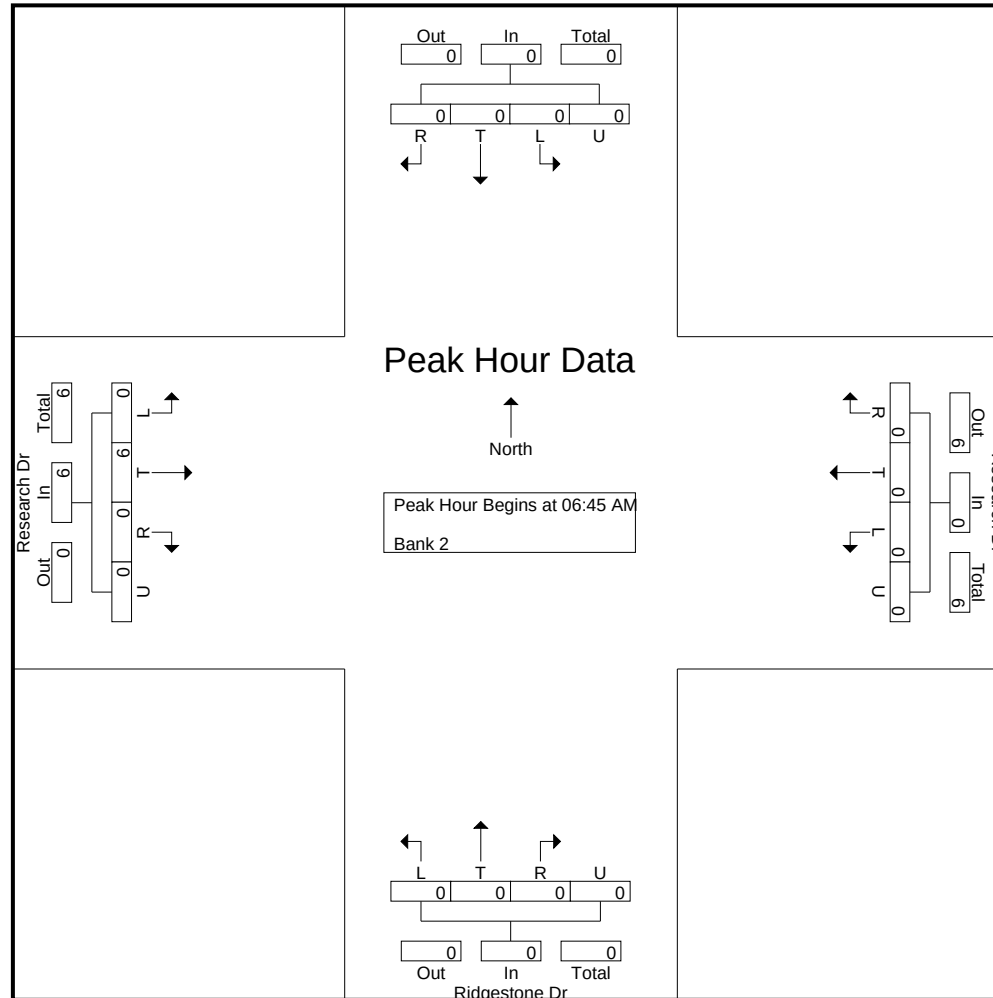
File Name : Ridgestone Dr - Research Rd AM Bus
Site Code : S214710
Start Date : 8/11/2021
Page No : 2

	Southbound					Research Dr Westbound					Ridgestone Dr Northbound					Research Dr Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 6:45:00 AM																					
6:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
7:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	6
% App. Total	0	0	0	0		0	0	0	0		0	0	0	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.750	.000	.000	.750	.750

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File Name : Ridgestone Dr - Research Rd AM Bus
Site Code : S214710
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Start Date : 8/11/2021
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Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	6:30:00 AM					6:30:00 AM					6:30:00 AM					6:45:00 AM					
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
+5 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
+10 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6
% App. Total	0	0	0	0		0	0	0	0		0	0	0	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.750	.000	.000		.750

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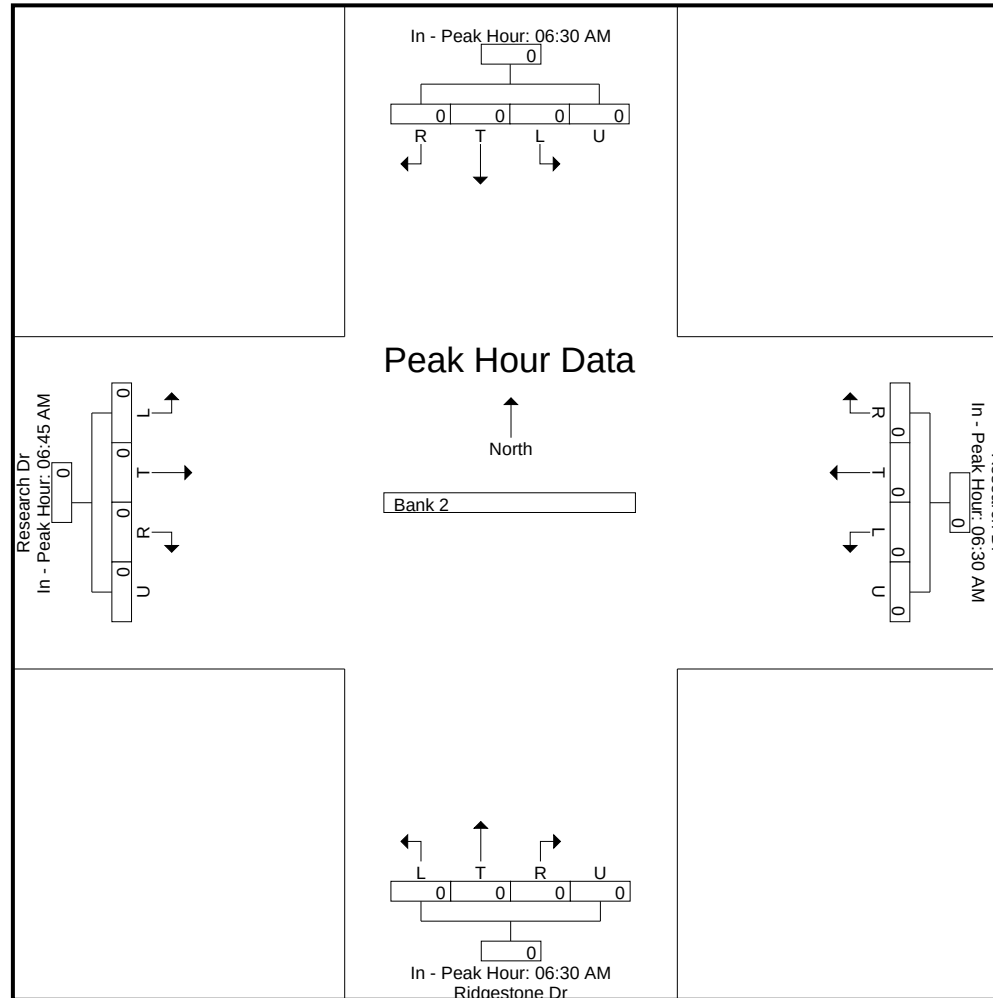
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File Name : Ridgestone Dr - Research Rd AM Bus

Site Code : S214710

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File Name : Ridgestone Dr - Research Rd PM Bus

Site Code : S214710

Start Date : 8/11/2021

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Groups Printed- Bank 2

[illegible]

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719-633-2868

File Name : Ridgestone Dr - Research Rd PM Bus
Site Code : S214710
Start Date : 8/11/2021
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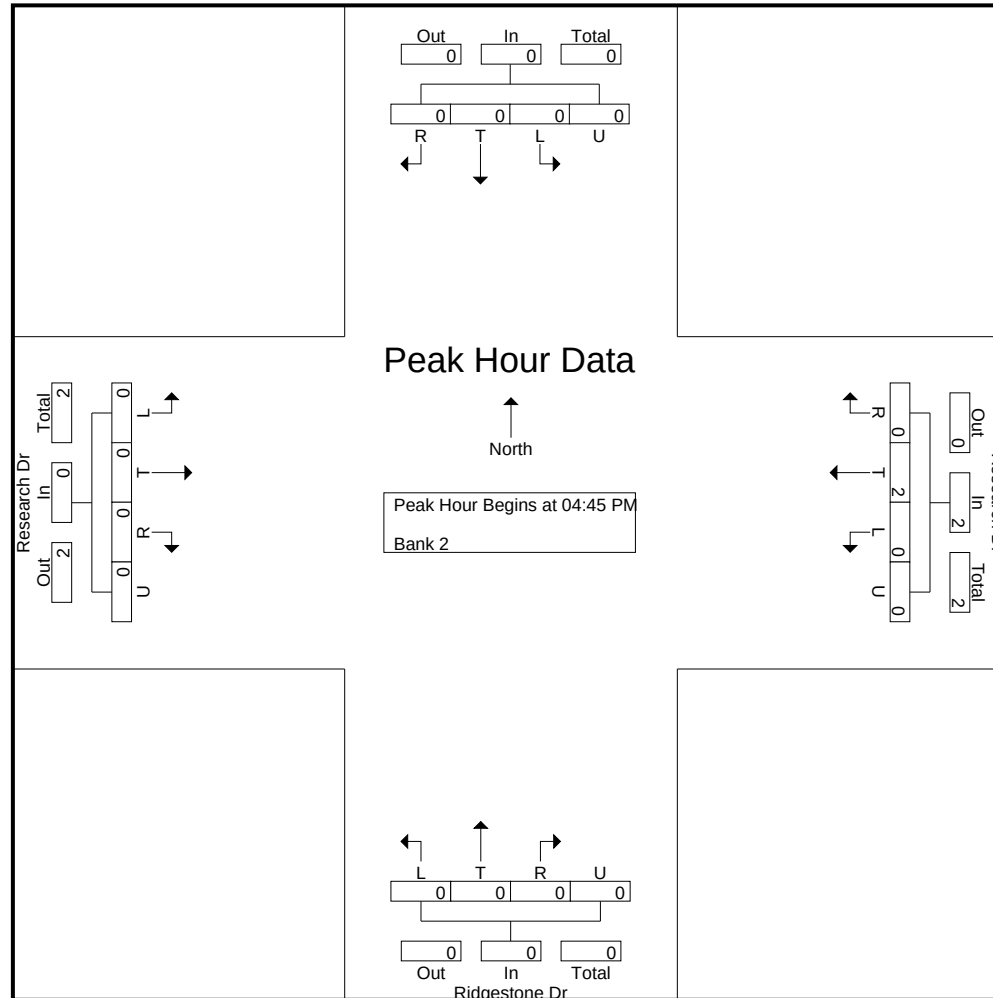
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File Name : Ridgestone Dr - Research Rd PM Bus

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File Name : Ridgestone Dr - Research Rd PM Bus

Site Code : S214710

Start Date : 8/11/2021

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	Southbound					Research Dr Westbound					Ridgestone Dr Northbound					Research Dr Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total

Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

[illegible]

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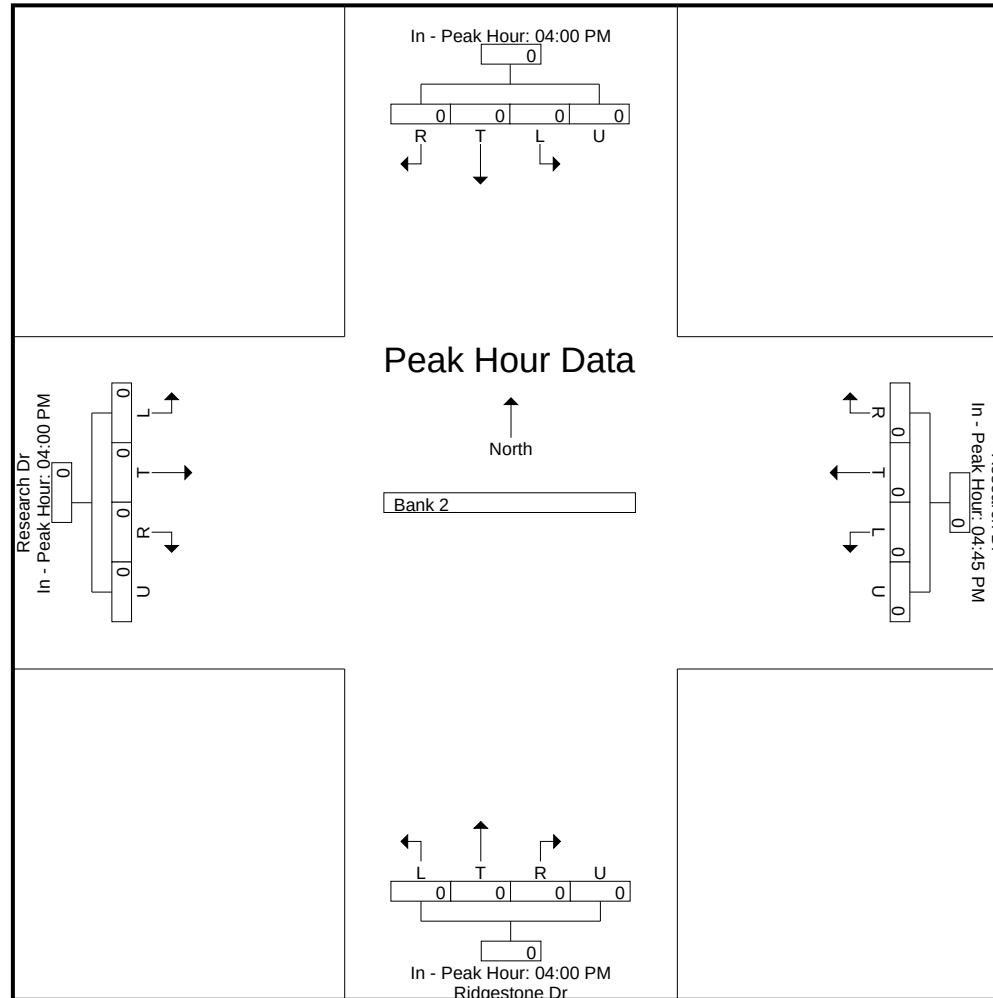
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File Name : Ridgestone Dr - Research Rd PM Bus

Site Code : S214710

Start Date : 8/11/2021

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Levels of Service

HCM 6th TWSC
2: SH 67 & Research Dr/CR 72

Existing
AM

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔			↔			↔	
Traffic Vol, veh/h	8	1	62	8	1	2	73	200	2	1	283	5
Future Vol, veh/h	8	1	62	8	1	2	73	200	2	1	283	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	25	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	78	78	78	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	1	75	10	1	3	79	217	2	1	308	5
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	691	690	311	727	691	218	313	0	0	219	0	0
Stage 1	313	313	-	376	376	-	-	-	-	-	-	-
Stage 2	378	377	-	351	315	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	359	368	729	339	368	822	1247	-	-	1350	-	-
Stage 1	698	657	-	645	616	-	-	-	-	-	-	-
Stage 2	644	616	-	666	656	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	337	341	729	286	341	822	1247	-	-	1350	-	-
Mov Cap-2 Maneuver	337	341	-	286	341	-	-	-	-	-	-	-
Stage 1	648	656	-	599	572	-	-	-	-	-	-	-
Stage 2	594	572	-	596	655	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	11.2			16.4			2.1			0		
HCM LOS	B			C								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	1247	-	-	337	729	330	1350	-	-			
HCM Lane V/C Ratio	0.064	-	-	0.032	0.102	0.043	0.001	-	-			
HCM Control Delay (s)	8.1	0	-	16	10.5	16.4	7.7	0	-			
HCM Lane LOS	A	A	-	C	B	C	A	A	-			
HCM 95th %tile Q(veh)	0.2	-	-	0.1	0.3	0.1	0	-	-			

HCM 6th TWSC
9: Ridgestone Dr & Research Dr

Existing
AM

Intersection						
Int Delay, s/veh	2.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	35	3	8	23	3	11
Future Vol, veh/h	35	3	8	23	3	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	4	10	29	4	14
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	49	0	96	47
Stage 1	-	-	-	-	47	-
Stage 2	-	-	-	-	49	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1558	-	903	1022
Stage 1	-	-	-	-	975	-
Stage 2	-	-	-	-	973	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1558	-	897	1022
Mov Cap-2 Maneuver	-	-	-	-	897	-
Stage 1	-	-	-	-	975	-
Stage 2	-	-	-	-	966	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.9		8.7	
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	992	-	-	1558	-	
HCM Lane V/C Ratio	0.018	-	-	0.007	-	
HCM Control Delay (s)	8.7	-	-	7.3	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

HCM 6th TWSC
2: SH 67 & Research Dr/CR 72

Existing
PM

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	
Traffic Vol, veh/h	12	0	56	7	0	0	44	233	12	1	222	9
Future Vol, veh/h	12	0	56	7	0	0	44	233	12	1	222	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	25	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	78	78	78	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	0	67	9	0	0	48	253	13	1	241	10
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	604	610	246	638	609	260	251	0	0	266	0	0
Stage 1	248	248	-	356	356	-	-	-	-	-	-	-
Stage 2	356	362	-	282	253	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	410	409	793	389	410	779	1314	-	-	1298	-	-
Stage 1	756	701	-	661	629	-	-	-	-	-	-	-
Stage 2	661	625	-	725	698	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	396	391	793	344	392	779	1314	-	-	1298	-	-
Mov Cap-2 Maneuver	396	391	-	344	392	-	-	-	-	-	-	-
Stage 1	723	700	-	633	602	-	-	-	-	-	-	-
Stage 2	633	598	-	663	697	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.8		15.7		1.2		0					
HCM LOS	B		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	1314	-	-	396	793	344	1298	-	-			
HCM Lane V/C Ratio	0.036	-	-	0.037	0.085	0.026	0.001	-	-			
HCM Control Delay (s)	7.8	0	-	14.4	10	15.7	7.8	0	-			
HCM Lane LOS	A	A	-	B	B	C	A	A	-			
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.3	0.1	0	-	-			

HCM 6th TWSC
9: Ridgestone Dr & Research Dr

Existing
PM

Intersection						
Int Delay, s/veh	1.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	55	0	8	8	0	4
Future Vol, veh/h	55	0	8	8	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	66	0	10	10	0	5
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	66	0	96	66
Stage 1	-	-	-	-	66	-
Stage 2	-	-	-	-	30	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1536	-	903	998
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	993	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1536	-	897	998
Mov Cap-2 Maneuver	-	-	-	-	897	-
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	986	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	3.7		8.6		
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	998	-	-	1536	-	
HCM Lane V/C Ratio	0.005	-	-	0.007	-	
HCM Control Delay (s)	8.6	-	-	7.4	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰			↰			↰	
Traffic Vol, veh/h	8	1	62	8	2	2	73	220	2	2	351	6
Future Vol, veh/h	8	1	62	8	2	2	73	220	2	2	351	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	25	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	78	78	78	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	1	75	10	3	3	79	239	2	2	382	7
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	791	789	386	826	791	240	389	0	0	241	0	0
Stage 1	390	390	-	398	398	-	-	-	-	-	-	-
Stage 2	401	399	-	428	393	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	307	323	662	291	322	799	1170	-	-	1326	-	-
Stage 1	634	608	-	628	603	-	-	-	-	-	-	-
Stage 2	626	602	-	605	606	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	286	297	662	242	296	799	1170	-	-	1326	-	-
Mov Cap-2 Maneuver	286	297	-	242	296	-	-	-	-	-	-	-
Stage 1	585	607	-	579	556	-	-	-	-	-	-	-
Stage 2	573	555	-	535	605	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	12			18.4			2.1			0		
HCM LOS	B			C								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	1170	-	-	287	662	284	1326	-	-			
HCM Lane V/C Ratio	0.068	-	-	0.038	0.113	0.054	0.002	-	-			
HCM Control Delay (s)	8.3	0	-	18	11.1	18.4	7.7	0	-			
HCM Lane LOS	A	A	-	C	B	C	A	A	-			
HCM 95th %tile Q(veh)	0.2	-	-	0.1	0.4	0.2	0	-	-			

Intersection						
Int Delay, s/veh	1.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	60	3	8	73	3	11
Future Vol, veh/h	60	3	8	73	3	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	72	4	10	94	4	14
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	76	0	188	74
Stage 1	-	-	-	-	74	-
Stage 2	-	-	-	-	114	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1523	-	801	988
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	911	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1523	-	795	988
Mov Cap-2 Maneuver	-	-	-	-	795	-
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	905	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.7		8.9	
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	939	-	-	1523	-	
HCM Lane V/C Ratio	0.019	-	-	0.007	-	
HCM Control Delay (s)	8.9	-	-	7.4	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰			↰			↰	
Traffic Vol, veh/h	13	0	70	7	2	1	44	302	12	2	263	10
Future Vol, veh/h	13	0	70	7	2	1	44	302	12	2	263	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	25	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	78	78	78	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	84	9	3	1	48	328	13	2	286	11
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	729	733	292	769	732	335	297	0	0	341	0	0
Stage 1	296	296	-	431	431	-	-	-	-	-	-	-
Stage 2	433	437	-	338	301	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	338	348	747	318	348	707	1264	-	-	1218	-	-
Stage 1	712	668	-	603	583	-	-	-	-	-	-	-
Stage 2	601	579	-	676	665	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	323	331	747	272	331	707	1264	-	-	1218	-	-
Mov Cap-2 Maneuver	323	331	-	272	331	-	-	-	-	-	-	-
Stage 1	679	667	-	575	556	-	-	-	-	-	-	-
Stage 2	569	552	-	598	664	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	11.4			17.5			1			0.1		
HCM LOS	B			C								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	1264	-	-	323	747	301	1218	-	-			
HCM Lane V/C Ratio	0.038	-	-	0.048	0.113	0.043	0.002	-	-			
HCM Control Delay (s)	8	0	-	16.7	10.4	17.5	8	0	-			
HCM Lane LOS	A	A	-	C	B	C	A	A	-			
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.4	0.1	0	-	-			

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	62	0	8	50	0	4
Future Vol, veh/h	62	0	8	50	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	75	0	10	60	0	5
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	75	0	155	75
Stage 1	-	-	-	-	75	-
Stage 2	-	-	-	-	80	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1524	-	836	986
Stage 1	-	-	-	-	948	-
Stage 2	-	-	-	-	943	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1524	-	830	986
Mov Cap-2 Maneuver	-	-	-	-	830	-
Stage 1	-	-	-	-	948	-
Stage 2	-	-	-	-	936	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1		8.7	
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	986	-	-	1524	-	
HCM Lane V/C Ratio	0.005	-	-	0.006	-	
HCM Control Delay (s)	8.7	-	-	7.4	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔		↔	↔		↔	↔	
Traffic Vol, veh/h	12	1	82	8	2	2	80	220	2	2	351	8
Future Vol, veh/h	12	1	82	8	2	2	80	220	2	2	351	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	25	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	78	78	78	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	1	99	10	3	3	87	239	2	2	382	9

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	808	806	387	855	809	240	391	0	0	241	0	0
Stage 1	391	391	-	414	414	-	-	-	-	-	-	-
Stage 2	417	415	-	441	395	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	299	316	661	278	314	799	1168	-	-	1326	-	-
Stage 1	633	607	-	616	593	-	-	-	-	-	-	-
Stage 2	613	592	-	595	605	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	279	292	661	222	290	799	1168	-	-	1326	-	-
Mov Cap-2 Maneuver	279	292	-	222	290	-	-	-	-	-	-	-
Stage 1	586	606	-	570	549	-	-	-	-	-	-	-
Stage 2	563	548	-	504	604	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.4		19.5		2.2		0	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1168	-	-	280	661	264	1326	-	-
HCM Lane V/C Ratio	0.074	-	-	0.056	0.149	0.058	0.002	-	-
HCM Control Delay (s)	8.3	-	-	18.6	11.4	19.5	7.7	-	-
HCM Lane LOS	A	-	-	C	B	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0.5	0.2	0	-	-

Intersection						
Int Delay, s/veh	2.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	60	3	16	73	3	35
Future Vol, veh/h	60	3	16	73	3	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	72	4	19	88	4	45
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	76	0	200	74
Stage 1	-	-	-	-	74	-
Stage 2	-	-	-	-	126	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1523	-	789	988
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	900	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1523	-	779	988
Mov Cap-2 Maneuver	-	-	-	-	779	-
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	888	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.3		8.9	
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	968	-	-	1523	-	
HCM Lane V/C Ratio	0.05	-	-	0.013	-	
HCM Control Delay (s)	8.9	-	-	7.4	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.2	-	-	0	-	

HCM 6th TWSC
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Intersection

Int Delay, s/veh 2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	7	14	1	2	11
Future Vol, veh/h	0	7	14	1	2	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	9	18	1	3	14

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	39	19	0
Stage 1	19	-	-
Stage 2	20	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	973	1059	-
Stage 1	1004	-	-
Stage 2	1003	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	971	1059	-
Mov Cap-2 Maneuver	971	-	-
Stage 1	1004	-	-
Stage 2	1001	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	1.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1059	1597
HCM Lane V/C Ratio	-	-	0.008	0.002
HCM Control Delay (s)	-	-	8.4	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC
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Short-Term Baseline + Site
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Intersection						
Int Delay, s/veh	3.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	17	21	1	6	13
Future Vol, veh/h	0	17	21	1	6	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	22	27	1	8	17
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	61	28	0	0	28	0
Stage 1	28	-	-	-	-	-
Stage 2	33	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	945	1047	-	-	1585	-
Stage 1	995	-	-	-	-	-
Stage 2	989	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	940	1047	-	-	1585	-
Mov Cap-2 Maneuver	940	-	-	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	984	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.5	0		2.3		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 1047		1585	-	
HCM Lane V/C Ratio	-	- 0.021		0.005	-	
HCM Control Delay (s)	-	- 8.5		7.3	0	
HCM Lane LOS	-	- A		A	A	
HCM 95th %tile Q(veh)	-	- 0.1		0	-	

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↗	↕		↗	↕	
Traffic Vol, veh/h	15	0	84	7	2	1	64	302	12	2	263	14
Future Vol, veh/h	15	0	84	7	2	1	64	302	12	2	263	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	25	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	78	78	78	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	0	101	9	3	1	70	328	13	2	286	15
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	775	779	294	823	780	335	301	0	0	341	0	0
Stage 1	298	298	-	475	475	-	-	-	-	-	-	-
Stage 2	477	481	-	348	305	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	315	327	745	292	327	707	1260	-	-	1218	-	-
Stage 1	711	667	-	570	557	-	-	-	-	-	-	-
Stage 2	569	554	-	668	662	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	299	308	745	241	308	707	1260	-	-	1218	-	-
Mov Cap-2 Maneuver	299	308	-	241	308	-	-	-	-	-	-	-
Stage 1	671	666	-	538	526	-	-	-	-	-	-	-
Stage 2	534	523	-	576	661	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	11.7		18.9		1.4		0.1					
HCM LOS	B		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	1260	-	-	299	745	271	1218	-	-			
HCM Lane V/C Ratio	0.055	-	-	0.06	0.136	0.047	0.002	-	-			
HCM Control Delay (s)	8	-	-	17.8	10.6	18.9	8	-	-			
HCM Lane LOS	A	-	-	C	B	C	A	-	-			
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0.5	0.1	0	-	-			

Intersection						
Int Delay, s/veh	2.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	62	0	32	50	0	20
Future Vol, veh/h	62	0	32	50	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	75	0	39	60	0	26
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	75	0	213	75
Stage 1	-	-	-	-	75	-
Stage 2	-	-	-	-	138	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1524	-	775	986
Stage 1	-	-	-	-	948	-
Stage 2	-	-	-	-	889	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1524	-	755	986
Mov Cap-2 Maneuver	-	-	-	-	755	-
Stage 1	-	-	-	-	948	-
Stage 2	-	-	-	-	866	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		2.9		8.7	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	986	-	-	1524	-	
HCM Lane V/C Ratio	0.026	-	-	0.025	-	
HCM Control Delay (s)	8.7	-	-	7.4	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-	

HCM 6th TWSC
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Short-Term Baseline + Site
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Intersection						
Int Delay, s/veh	4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	4	0	8	8
Future Vol, veh/h	0	5	4	0	8	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	6	5	0	10	10
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	35	5	0	0	5	0
Stage 1	5	-	-	-	-	-
Stage 2	30	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	978	1078	-	-	1616	-
Stage 1	1018	-	-	-	-	-
Stage 2	993	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	972	1078	-	-	1616	-
Mov Cap-2 Maneuver	972	-	-	-	-	-
Stage 1	1018	-	-	-	-	-
Stage 2	987	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.4	0		3.6		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 1078		1616	-	
HCM Lane V/C Ratio	-	- 0.006		0.006	-	
HCM Control Delay (s)	-	- 8.4		7.2	0	
HCM Lane LOS	-	- A		A	A	
HCM 95th %tile Q(veh)	-	- 0		0	-	

HCM 6th TWSC
13: Ridgestone Dr & North Access

Short-Term Baseline + Site
PM

Intersection						
Int Delay, s/veh	4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	11	9	0	16	16
Future Vol, veh/h	0	11	9	0	16	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	14	12	0	21	21
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	75	12	0	0	12	0
Stage 1	12	-	-	-	-	-
Stage 2	63	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	928	1069	-	-	1607	-
Stage 1	1011	-	-	-	-	-
Stage 2	960	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	916	1069	-	-	1607	-
Mov Cap-2 Maneuver	916	-	-	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	948	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.4	0		3.6		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 1069		1607	-	
HCM Lane V/C Ratio	-	- 0.013		0.013	-	
HCM Control Delay (s)	-	- 8.4		7.3	0	
HCM Lane LOS	-	- A		A	A	
HCM 95th %tile Q(veh)	-	- 0		0	-	

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↱		↰	↱	↱
Traffic Vol, veh/h	25	5	97	20	5	5	106	375	35	5	440	28
Future Vol, veh/h	25	5	97	20	5	5	106	375	35	5	440	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	25	-	-	-	100	-	-	100	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	78	78	78	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	6	117	26	6	6	115	408	38	5	478	30

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1151	1164	478	1222	1175	427	508	0	0	446	0	0
Stage 1	488	488	-	657	657	-	-	-	-	-	-	-
Stage 2	663	676	-	565	518	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	175	194	587	156	192	628	1057	-	-	1114	-	-
Stage 1	561	550	-	454	462	-	-	-	-	-	-	-
Stage 2	450	453	-	510	533	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	154	172	587	111	170	628	1057	-	-	1114	-	-
Mov Cap-2 Maneuver	154	172	-	111	170	-	-	-	-	-	-	-
Stage 1	500	548	-	405	412	-	-	-	-	-	-	-
Stage 2	391	404	-	402	531	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	17.9		40.9		1.8		0.1	
HCM LOS	C		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1057	-	-	157	587	138	1114	-	-
HCM Lane V/C Ratio	0.109	-	-	0.23	0.199	0.279	0.005	-	-
HCM Control Delay (s)	8.8	-	-	34.7	12.7	40.9	8.2	-	-
HCM Lane LOS	A	-	-	D	B	E	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	0.8	0.7	1.1	0	-	-

Intersection						
Int Delay, s/veh	1.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	85	3	12	100	3	21
Future Vol, veh/h	85	3	12	100	3	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	102	4	14	120	4	27
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	106	0	252	104
Stage 1	-	-	-	-	104	-
Stage 2	-	-	-	-	148	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1485	-	737	951
Stage 1	-	-	-	-	920	-
Stage 2	-	-	-	-	880	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1485	-	730	951
Mov Cap-2 Maneuver	-	-	-	-	730	-
Stage 1	-	-	-	-	920	-
Stage 2	-	-	-	-	871	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.8		9.1	
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	916	-	-	1485	-	
HCM Lane V/C Ratio	0.034	-	-	0.01	-	
HCM Control Delay (s)	9.1	-	-	7.4	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↱		↰	↱	↱
Traffic Vol, veh/h	27	5	113	30	5	10	106	528	25	5	402	30
Future Vol, veh/h	27	5	113	30	5	10	106	528	25	5	402	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	25	-	-	-	100	-	-	100	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	78	78	78	93	93	93	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	6	136	38	6	13	114	568	27	5	437	33
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1266	1270	437	1345	1290	582	470	0	0	595	0	0
Stage 1	447	447	-	810	810	-	-	-	-	-	-	-
Stage 2	819	823	-	535	480	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	146	168	620	129	163	513	1092	-	-	981	-	-
Stage 1	591	573	-	374	393	-	-	-	-	-	-	-
Stage 2	369	388	-	529	554	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	126	150	620	90	145	513	1092	-	-	981	-	-
Mov Cap-2 Maneuver	126	150	-	90	145	-	-	-	-	-	-	-
Stage 1	530	570	-	335	352	-	-	-	-	-	-	-
Stage 2	316	348	-	406	551	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	19.5		63.4		1.4		0.1					
HCM LOS	C		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	1092	-	-	129	620	116	981	-	-			
HCM Lane V/C Ratio	0.104	-	-	0.299	0.22	0.497	0.006	-	-			
HCM Control Delay (s)	8.7	-	-	44.4	12.4	63.4	8.7	-	-			
HCM Lane LOS	A	-	-	E	B	F	A	-	-			
HCM 95th %tile Q(veh)	0.3	-	-	1.2	0.8	2.3	0	-	-			

Intersection						
Int Delay, s/veh	1.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	85	3	12	100	3	21
Future Vol, veh/h	85	3	12	100	3	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	102	4	14	120	4	27
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	106	0	252	104
Stage 1	-	-	-	-	104	-
Stage 2	-	-	-	-	148	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1485	-	737	951
Stage 1	-	-	-	-	920	-
Stage 2	-	-	-	-	880	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1485	-	730	951
Mov Cap-2 Maneuver	-	-	-	-	730	-
Stage 1	-	-	-	-	920	-
Stage 2	-	-	-	-	871	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.8		9.1	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	916	-	-	1485	-	
HCM Lane V/C Ratio	0.034	-	-	0.01	-	
HCM Control Delay (s)	9.1	-	-	7.4	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

Intersection												
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↱		↰	↱	↱
Traffic Vol, veh/h	29	5	117	20	5	5	113	375	35	5	440	30
Future Vol, veh/h	29	5	117	20	5	5	113	375	35	5	440	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	25	-	-	-	100	-	-	100	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	78	78	78	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	35	6	141	26	6	6	123	408	38	5	478	33

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1167	1180	478	1251	1194	427	511	0	0	446	0	0
Stage 1	488	488	-	673	673	-	-	-	-	-	-	-
Stage 2	679	692	-	578	521	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	171	190	587	149	187	628	1054	-	-	1114	-	-
Stage 1	561	550	-	445	454	-	-	-	-	-	-	-
Stage 2	441	445	-	501	532	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	149	167	587	100	164	628	1054	-	-	1114	-	-
Mov Cap-2 Maneuver	149	167	-	100	164	-	-	-	-	-	-	-
Stage 1	495	548	-	393	401	-	-	-	-	-	-	-
Stage 2	379	393	-	375	530	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	18.6		45.7		1.9		0.1	
HCM LOS	C		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1054	-	-	151	587	126	1114	-	-
HCM Lane V/C Ratio	0.117	-	-	0.271	0.24	0.305	0.005	-	-
HCM Control Delay (s)	8.9	-	-	37.5	13.1	45.7	8.2	-	-
HCM Lane LOS	A	-	-	E	B	E	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	1	0.9	1.2	0	-	-

Intersection						
Int Delay, s/veh	2.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	85	3	20	100	3	45
Future Vol, veh/h	85	3	20	100	3	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	102	4	24	120	4	58
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	106	0	272	104
Stage 1	-	-	-	-	104	-
Stage 2	-	-	-	-	168	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1485	-	717	951
Stage 1	-	-	-	-	920	-
Stage 2	-	-	-	-	862	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1485	-	705	951
Mov Cap-2 Maneuver	-	-	-	-	705	-
Stage 1	-	-	-	-	920	-
Stage 2	-	-	-	-	847	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	1.2		9.1		
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	931	-	-	1485	-	
HCM Lane V/C Ratio	0.066	-	-	0.016	-	
HCM Control Delay (s)	9.1	-	-	7.5	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.2	-	-	0	-	

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	7	24	0	2	15
Future Vol, veh/h	0	7	24	0	2	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	9	31	0	3	19
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	56	31	0	0	31	0
Stage 1	31	-	-	-	-	-
Stage 2	25	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	952	1043	-	-	1582	-
Stage 1	992	-	-	-	-	-
Stage 2	998	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	950	1043	-	-	1582	-
Mov Cap-2 Maneuver	950	-	-	-	-	-
Stage 1	992	-	-	-	-	-
Stage 2	996	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.5	0		0.9		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 1043		1582	-	
HCM Lane V/C Ratio	-	- 0.009		0.002	-	
HCM Control Delay (s)	-	- 8.5		7.3	0	
HCM Lane LOS	-	- A		A	A	
HCM 95th %tile Q(veh)	-	- 0		0	-	

Intersection

Int Delay, s/veh 2.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	17	31	0	6	17
Future Vol, veh/h	0	17	31	0	6	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	22	40	0	8	22

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	78	40	0
Stage 1	40	-	-
Stage 2	38	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	925	1031	-
Stage 1	982	-	-
Stage 2	984	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	920	1031	-
Mov Cap-2 Maneuver	920	-	-
Stage 1	982	-	-
Stage 2	979	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	1.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1031	1570
HCM Lane V/C Ratio	-	-	0.021	0.005
HCM Control Delay (s)	-	-	8.6	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection												
Int Delay, s/veh	6.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↗	↖		↗	↖	↗
Traffic Vol, veh/h	29	5	127	30	5	10	126	528	25	5	402	34
Future Vol, veh/h	29	5	127	30	5	10	126	528	25	5	402	34
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	25	-	-	-	100	-	-	100	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	78	78	78	93	93	93	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	35	6	153	38	6	13	135	568	27	5	437	37
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1308	1312	437	1397	1336	582	474	0	0	595	0	0
Stage 1	447	447	-	852	852	-	-	-	-	-	-	-
Stage 2	861	865	-	545	484	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	136	159	620	118	153	513	1088	-	-	981	-	-
Stage 1	591	573	-	354	376	-	-	-	-	-	-	-
Stage 2	350	371	-	523	552	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	115	139	620	78	133	513	1088	-	-	981	-	-
Mov Cap-2 Maneuver	115	139	-	78	133	-	-	-	-	-	-	-
Stage 1	518	570	-	310	329	-	-	-	-	-	-	-
Stage 2	293	325	-	388	549	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	20.8		78.7		1.6		0.1					
HCM LOS	C		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	1088	-	-	118	620	102	981	-	-			
HCM Lane V/C Ratio	0.125	-	-	0.347	0.247	0.566	0.006	-	-			
HCM Control Delay (s)	8.8	-	-	50.9	12.7	78.7	8.7	-	-			
HCM Lane LOS	A	-	-	F	B	F	A	-	-			
HCM 95th %tile Q(veh)	0.4	-	-	1.4	1	2.6	0	-	-			

Intersection						
Int Delay, s/veh	2.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	115	0	43	95	0	26
Future Vol, veh/h	115	0	43	95	0	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	139	0	52	114	0	33
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	139	0	357	139
Stage 1	-	-	-	-	139	-
Stage 2	-	-	-	-	218	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1445	-	641	909
Stage 1	-	-	-	-	888	-
Stage 2	-	-	-	-	818	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1445	-	617	909
Mov Cap-2 Maneuver	-	-	-	-	617	-
Stage 1	-	-	-	-	888	-
Stage 2	-	-	-	-	787	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		2.4		9.1	
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	909	-	-	1445	-	
HCM Lane V/C Ratio	0.037	-	-	0.036	-	
HCM Control Delay (s)	9.1	-	-	7.6	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-	

Intersection						
Int Delay, s/veh	3.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	10	0	8	9
Future Vol, veh/h	0	5	10	0	8	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	6	13	0	10	12
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	45	13	0	0	13	0
Stage 1	13	-	-	-	-	-
Stage 2	32	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	965	1067	-	-	1606	-
Stage 1	1010	-	-	-	-	-
Stage 2	991	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	959	1067	-	-	1606	-
Mov Cap-2 Maneuver	959	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	985	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.4	0		3.4		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	- 1067	1606	-		
HCM Lane V/C Ratio	-	- 0.006	0.006	-		
HCM Control Delay (s)	-	- 8.4	7.3	0		
HCM Lane LOS	-	- A	A	A		
HCM 95th %tile Q(veh)	-	- 0	0	-		

Intersection						
Int Delay, s/veh	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	11	15	0	16	17
Future Vol, veh/h	0	11	15	0	16	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	14	19	0	21	22

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	83	19	0
Stage 1	19	-	-
Stage 2	64	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	919	1059	-
Stage 1	1004	-	-
Stage 2	959	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	907	1059	-
Mov Cap-2 Maneuver	907	-	-
Stage 1	1004	-	-
Stage 2	947	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	3.5
HCM LOS	A		

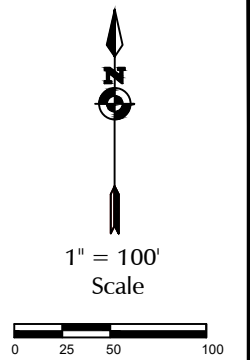
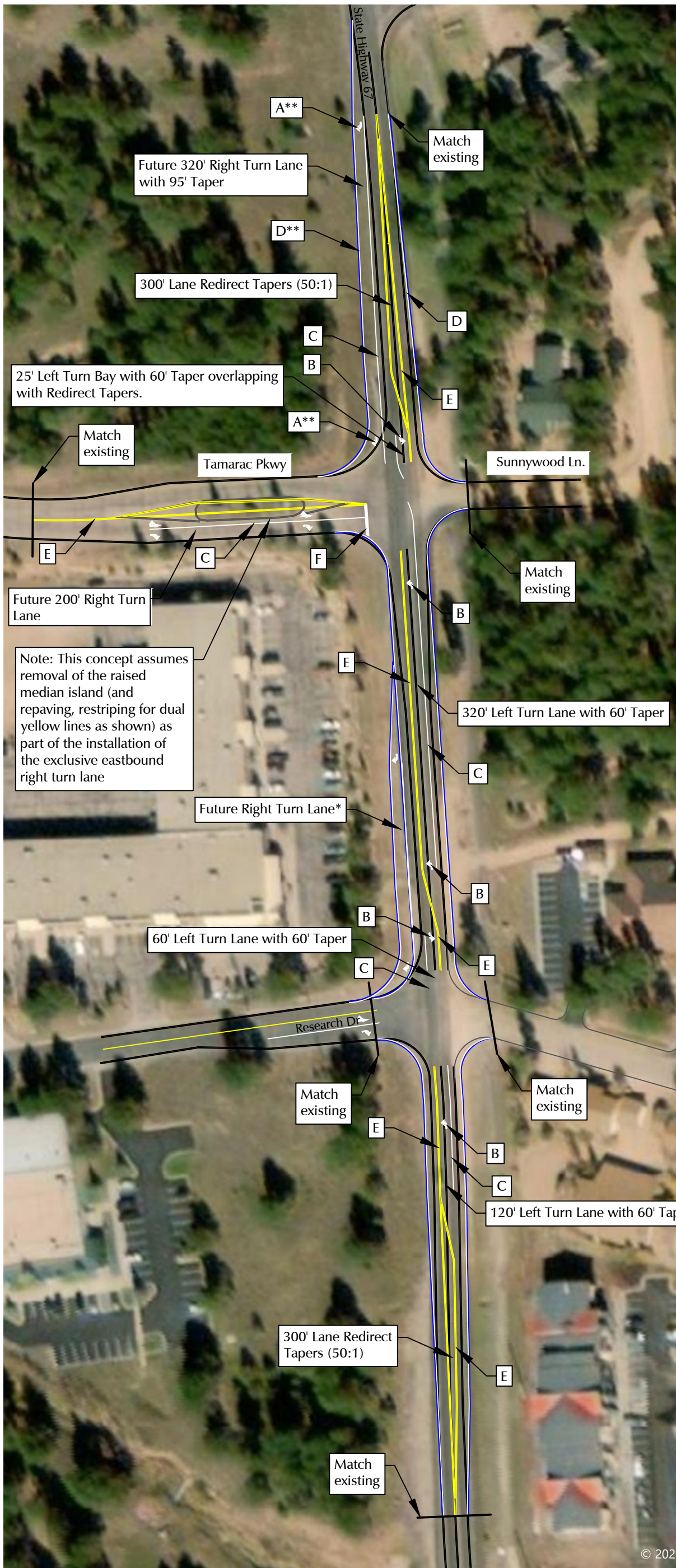
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1059	1597
HCM Lane V/C Ratio	-	-	0.013	0.013
HCM Control Delay (s)	-	-	8.4	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Additional Attachments

Figure 10 from:

Tamarac Park (Lots 6 and 7, Tamarac Tech Park) Traffic Impact Study





Pavement Markings

- [A] Right-turn arrow (solid white)
- [B] Left-turn arrow (solid white)
- [C] Striping (8" solid white)
- [D] Striping (4" solid white)
- [E] Striping (4" dual solid yellow)
- [F] 2' stop bar (solid white)

*Length & taper dimensions to be determined at the time this lane becomes necessary.

**With future right-turn lane

Figure 10
Auxiliary Turn Lane Improvements (w/ Pavement Markings)

ATTACHMENT 'E'



FINAL DRAINAGE REPORT for

Stone Ridge Village Tracts A & F

Stone Ridge Village Woodland Park, CO

Prepared for:

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Project #: 196259000

Prepared: January 13, 2022



CERTIFICATION

ENGINEERS STATEMENT

This report and plan for the final drainage design of Tracts A & F of Stone Ridge Village was prepared by me (or under my direct supervision) in accordance with the provisions of City of Woodland Park Drainage Design and Technical Criteria for the owners thereof. I understand that the City of Woodland Park does not and will not assume liability for drainage facilities designed by others.

SIGNATURE:_____

Registered Professional Engineer State of Colorado No. 57234

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APPENDIX11

Appendix A: Soils Report & FEMA Firm Map

Appendix B: Hydrologic Calculations

Appendix C: Hydraulic Calculations

Appendix D: Drainage Maps

Appendix E: Stone Ridge Subdivision Final Drainage Report Excerpts

GENERAL LOCATION AND DESCRIPTION

LOCATION

The property is located within a portion of the west half of the northwest quarter of Section 13, Township 12 South, Range 69 West of the 6th Principal Meridian, City of Woodland Park, County of Teller, State of Colorado. This property will be platted as part of the project. The property is bounded by Research Drive to the North; Ridgestone Drive to the West; a regional drainage detention facility, vacant land, and CO 67 to the East; and Stone Ridge Village Filing No. 3 and vacant land to the South.

DESCRIPTION OF PROPERTY

The proposed improvements consist of the construction of 62 multifamily townhomes and patio homes, as well as associated drive aisles and infrastructure. Tract A contains approximately 4.85 acres and Tract F contains approximately 4.16 acres for a total area of 9.01 acres, more or less. The entire drainage area is approximately 10.6 acres.

The Property is currently undeveloped and consists of vacant land with existing tree cover. The Property generally slopes from southwest to northeast at slopes of approximately 5%. Existing stormwater sheet flows overland into Loy Gulch or directly into an existing regional detention facility.

NRCS soil data is available for this Site and it has been noted that soils onsite are “Plome-Pimsby Complex”, classified as USCS Type B. The NRSC Soils map is provided in the Appendix.

There is a drainage easement on the east side of the site which currently directs existing overland flow to the detention facility east of the site. An ALTA and topographic field survey were completed for the Project by Rampart Surveys, LLC dated August 25, 2021 and is the basis for design for the drainage improvements.

DRAINAGE DESIGN CRITERIA

DEVELOPMENT CRITERIA REFERENCE

The proposed storm facilities follow the City of Woodland Park Storm Drainage Criteria (the “CRITERIA”) and the Urban Storm Drainage Criteria Manual (the “MANUAL”). There are no provisions selected or deviations from the CRITERIA and MANUAL for the proposed development.

HYDROLOGIC CRITERIA

The 5-year and 100-year design storm events were used in determining rainfall and runoff for the proposed drainage system per Chapter 6 of the CRITERIA. Table 6-2 of the CRITERIA is the source for rainfall data for the 5-year and 100-year design storm events. Design runoff was calculated using the Rational Method for developed conditions as established in the CRITERIA and MANUAL. Runoff coefficients for the proposed development were determined using Table 6-5 of the CRITERIA by calculating weighted impervious values for each specific site basin.

HYDRAULIC CRITERIA

The proposed drainage facilities are designed in accordance with the CRITERIA and MANUAL. Floodplain identification was determined using FIRM panels by FEMA and information provided in the CRITERIA. Hydraulic calculations were computed using StormCAD, and UD Inlet. Results of the hydraulic calculations are summarized in the Appendix.

DRAINAGE BASINS AND SUBBASINS

MAJOR BASIN DESCRIPTION

The existing Site is within the Loy Gulch Drainage Basin and is a part of the Stone Ridge Subdivision Final Drainage Report. The Flood Insurance Rate Map (FIRM) 08119C0139D effective date September 25, 2009 indicates that there is a small area (0.04 acres) in the northeastern corner of the Site that falls within Zone AE. The portion of the site within Zone AE has no proposed structures or grading. The rest of the Site categorized as Zones X (outside of the 500-year flood plain). The FIRM panel is included in the Appendix. The FIRM map provides a base flood elevation of 8279 feet at the area of the site within the floodplain. There are no known irrigation facilities or other obstructions which could influence or be influenced by the local drainage.

The Project is within the Loy Gulch Drainage Basin and part of the Stone Ridge Subdivision Final Drainage Report. The proposed flows from the Site are within compliance of the designed flows described in “Final Drainage Report for Stone Ridge Subdivision – Phase 2” dated August 20, 2007, revised November 16, 2007 prepared by JPS Engineering

The proposed drainage facilities for the Site are designed to follow the historic runoff patterns of the Property as well as the intent of the original storm water design for the existing development. A copy of the previously proposed development has been provided in the appendix.

SUB BASIN DESCRIPTION

The existing Site flows overland from southwest to northeast. There is an existing regional detention facility located east of the property line associated with the Stoneridge Subdivision. There is an existing outlet structure in the regional detention facility that ultimately outfalls into Loy Gulch, designed per the “Final Drainage Report For Stone Ridge Subdivision – Phase 2” dated August 20, 2007, revised November 16, 2007 prepared by JPS Engineering, found in the appendix.

EXISTING DRAINAGE CONDITIONS

EXISTING DRAINAGE BASIN

The existing Site is vacant land. Runoff generally sheet flows across the Site from southwest to northeast. The existing Site has been divided into 3 sub basins, E1-E3. A description of each sub-basin is listed below. Calculations for the existing sub-basins on the Site have been completed using current stormwater criteria. An existing conditions Drainage map is provided in the appendix of this report. The weighted imperviousness of the entire Site under existing conditions is 2.5%.

Sub-Basin E1

Sub-basin E1 is 1.42 acres and consists of vacant wooded land. The runoff developed in this sub-basin generally sheet flows to the north to an existing natural swale at DP E1 and is eventually conveyed directly into Loy Gulch. The direct runoff from sub-basin E1 is 0.27 cfs for the 5-year event and 2.50 cfs for the 100-year event.

Sub-Basin E2

Sub-basin E2 is 7.12 acres and consists of existing vacant wooded land, and a portion of the Stoneridge Village Filing No. 3 to the south. The runoff developed in this sub-basin sheet flows northeast overland towards DP E2 where it is conveyed directly into Loy Gulch. The direct runoff from sub-basin E2 is 1.58 cfs for the 5-year event and 12.42 cfs for the 100-year event.

Sub-Basin E3

Sub-basin E3 is 2.06 acres and consists of existing vacant wooded land, and a portion of the Stoneridge Village Filing No. 3 to the south. The runoff developed in this sub-basin sheet flows northeast overland towards DP E3 where it flows directly into the existing regional detention facility. The direct runoff from sub-basin E3 is 0.62 cfs for the 5-year event and 4.09 cfs for the 100-year event.

Summary of Existing Sub-Basins

A table of the minor and major storm events for the existing sub-basin is provided below:

SUMMARY - EXISTING RUNOFF TABLE						
DESIGN POINT	BASIN DESIGNATION	BASIN AREA (ACRES)	DIRECT 5-YR RUNOFF (CFS)	DIRECT 100-YR RUNOFF (CFS)	CUMULATIVE 5-YR RUNOFF (CFS)	CUMULATIVE 100-YR RUNOFF (CFS)
E1	E1	1.42	0.27	2.50	0.27	2.50
E2	E2	7.12	1.58	12.42	1.58	12.42
E3	E3	2.06	0.62	4.09	0.62	4.09

PROPOSED DRAINAGE CONDITIONS

GENERAL CONCEPT

The developed runoff from the Project will generally sheet flow south to north and be collected by means of proposed cross pans, inlets, and curb and gutter and routed to the existing regional detention facility east of the project site.

The Property has been divided into six sub-basins, P1-P5 and O1. Sub-basins P1-P4 will be captured and diverted to the existing regional detention facility. Sub-basin P5 flows overland offsite directly into the existing regional detention facility. Sub-basin O1 will follow historic flow patterns and flow offsite into Loy Gulch. The total weighted imperviousness of the proposed site is 40.7%. Chapter 6 of the CRITERIA was used in calculating existing and proposed runoff values.

SPECIFIC DETAILS

Sub-Basin P1

Sub-basin P1 is 3.44 acres located along the southern portion of the property and includes a portion of the Stoneridge Village Filing No. 3 to the south. This sub-basin consists of existing and proposed roadway, patio and town homes, and associated driveways and landscaping. Developed runoff in the sub-basin will sheet flow to the roadway where it will be carried via curb and gutter to the proposed private 10' Colorado Springs type D-10-R storm inlet at design point P1 and ultimately discharged into the existing regional detention facility. The developed direct runoff from sub-basin P1 is 3.06 cfs for the 5-year event and 9.95 cfs for the 100-year event.

Sub-Basin P2

Sub-basin P2 is 0.73 acres located in the southern portion of the property between sub-basins P1 and P3. This sub-basin consists of proposed roadway, patio and town homes, and associated driveways and landscaping. Developed runoff in the sub-basin will sheet flow to the roadway where it will be carried via curb and gutter to the proposed private 5' Colorado Springs type D-10-R storm inlet at design point P2 and ultimately discharged into the existing regional detention facility. The developed direct runoff from sub-basin P2 is 1.19 cfs for the 5-year event and 3.16 cfs for the 100-year event.

Sub-Basin P3

Sub-basin P3 is 3.35 acres located in the central portion of the property along Ridgestone Drive on the west side of the Site. This sub-basin consists of proposed roadway, patio and town home lots, and associated driveways and landscaping. Developed runoff in the sub-basin will sheet flow to the roadways where it will be carried via curb and gutter to the proposed private 10' Colorado Springs type D-10-R storm inlet at design point P3, conveyed through proposed storm infrastructure and ultimately discharged into the existing regional detention facility. The developed direct runoff from sub-basin P3 is 3.81 cfs for the 5-year event and 10.74 cfs for the 100-year event.

Sub-Basin P4

Sub-basin P4 is 0.90 acres located in the eastern portion of the property between sub-basins O2 and P3. This sub-basin consists of proposed roadway, patio and town homes, and associated driveways and landscaping. Developed runoff in the sub-basin will sheet flow to the roadway where it will be carried via curb and gutter to the proposed private 10' Colorado Springs type D-10-R storm inlet at design point P4, conveyed through proposed storm infrastructure and ultimately discharged into the existing regional detention facility. The developed direct runoff from sub-basin P4 is 1.68 cfs for the 5-year event and 4.33 cfs for the 100-year event.

Sub-Basin P5

Sub-basin P5 is 0.70 acres and located along the southeast portion of the property. The sub-basin consists of the rear of several lots, and the eastern hillside of the property. The runoff developed within this sub-basin sheet flows overland off site towards design point P5 directly into the existing regional detention facility. Flows from this sub-basin will follow historic patterns. The developed direct runoff from sub-basin P5 is 0.52 cfs for the 5-year event and 2.06 cfs for the 100-year event.

Sub-Basin O1

Sub-basin O1 is 1.46 acres and located along the northern portion of the property. The sub-basin consists of the rear of several lots, and the northern hillside of the property. The runoff developed within this sub-basin will follow historic drainage patterns and sheet flows overland off site towards design point O1 where it is ultimately discharged into Loy Gulch. The developed direct runoff from sub-basin O1 is 0.87 cfs for the 5-year event and 4.04 cfs for the 100-year event.

Summary of Sub-Basins P1-P5, O1

A table of the minor and major storm events for the proposed sub-basins is provided below:

SUMMARY - PROPOSED RUNOFF TABLE						
DESIGN POINT	BASIN DESIGNATION	BASIN AREA (ACRES)	DIRECT 5-YR RUNOFF (CFS)	DIRECT 100-YR RUNOFF (CFS)	CUMULATIVE 5-YR RUNOFF (CFS)	CUMULATIVE 100-YR RUNOFF (CFS)
P1	P1	3.44	3.06	9.95	3.06	9.95
P2	P2	0.73	1.19	3.16	1.19	3.16
P3	P3	3.35	3.81	10.74	3.81	10.74
P4	P4	0.90	1.68	4.33	1.68	4.33
P5	P5	0.70	0.52	2.06	0.52	2.06
O1	O1	1.46	0.87	4.04	0.87	4.04

COMPLIANCE WITH EXISTING FDR

General Concept

The proposed site is within an existing master development plan as outlined in “Final Drainage Report for Stone Ridge Subdivision – Phase 2” dated August 2007 and prepared by JPS Engineering. The proposed site lies within sub-basins LY6 and LY8 and a small portion of LY7B as outlined by the above FDR. The regional detention facility (Pond L1) was designed with existing and future developments in mind and is currently sized for the proposed development. “Final Drainage Report for Stone Ridge Subdivision – Phase 3”, submitted September 21, 2021 and under current review, calculates the existing capacity of Detention Pond L1 and includes the current calculations from this proposed project. The report concludes that “Detention Pond L1 is adequate for the interim development conditions encompassing the remaining single-family and multi-family developments.” The calculations and reference report for Phase 3 are included in the appendix. The proposed weighted C value used for the areas of development within Sub-Basins LY6, LY8, and LY7B is 0.75 for a 100-year event. This value was used in the calculations to determine pond sizing. The weighted 100-year C value was calculated to be 0.59, which is less than the indicated 0.75 C value. The “Final Drainage Report for Stone Ridge Subdivision – Phase 2” dated August 2007 and prepared by JPS Engineering have been provided in the appendix.

Water Quality Design

Water quality and detention will be provided by the existing regional detention facility located to the east of the proposed Site. In accordance with the City of Woodland Park the proposed site was taken into consideration during the development and sizing of the existing detention facility. As per “Final Drainage Report for Stone Ridge Subdivision – Phase 3” dated September 21, 2021 and prepared by JPS Engineering. “Pond L1 was designed to intercept developed flows from Basins LY3-LY4, along with future developed flows from Basins H4-H5 and LY5-LY6. Pond L1 was designed with sufficient volume to “over-detain” to account for direct release of developed flows from Basins LY1-LY2 and LY7-LY8.”

MAINTENANCE AND OPERATIONS

Maintenance and operation of the existing regional drainage facility is performed by the City of Woodland Park. Alterations to the maintenance and operations of this facility will not be made with the proposed development.

EMERGENCY OVERFLOW PATH

An emergency overflow path was provided on the west side of the existing regional detention facility. Excerpts of site as-builts have been provided in the appendix. Emergency overflow from our sump condition inlets will back up the road and drain through tract B and the drainage swales in the adjacent patio homes.

STRUCTURAL AND NON-STRUCTURAL BMP'S

The proposed Stormwater Management Plan will provide details for the structural and non-structural BMP's. BMP's may include permanent structures such as swales and the detention facility. BMP's may also consist of temporary structures such as silt fence, inlet protection, rock socks, erosion control blankets, sediment control logs and temporary sediment basins as needed.

CONCLUSION

COMPLIANCE WITH STANDARDS

The drainage design presented within this report for the proposed Project is in compliance with the City of Woodland Park Drainage Criteria Manual, City of Woodland Park Stormwater Master Plan, and the Mile High Flood Control District Manual. There are no waivers or variances proposed with this design. The proposed Project development will not adversely impact surrounding developments adjacent to the Project Site or negatively influence the upstream or downstream properties.

REFERENCES

1. City of Woodland Park Drainage Criteria Manual, adopted February 2014.
2. City of Woodland Park Detention Workbook Summary Memo, dated July 6, 2015.
3. City of Woodland Park Stormwater Master Plan, dated November 2015.
4. Mile High Flood Control District Manual (MHFCD), Vol. 1, prepared by Wright-McLaughlin Engineers, June 2001, with latest revisions.
5. Flood Insurance Rate Map, El Paso County, Colorado and Incorporated Areas, Map Number 08119CO139D, Effective Date September 25, 2009, prepared by the Federal Emergency Management Agency (FEMA).
6. Final Drainage Report for Stone Ridge Subdivision – Phase 3, prepared by JPS Engineering, September 21, 2021
7. Final Drainage Report for Stone Ridge Subdivision – Phase 2, prepared by JPS Engineering, August 2007

APPENDIX

APPENDIX A: SOILS MAP AND FEMA FIRM PANEL



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Teller-Park Area, Colorado, Parts of Park and Teller Counties



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



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 1:24,000.

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: Teller-Park Area, Colorado, Parts of Park and Teller Counties
Survey Area Data: Version 13, Aug 31, 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

MAP LEGEND

MAP INFORMATION

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
81	Plome-Pimsby complex, 5 to 40 percent slopes	23.8	100.0%
Totals for Area of Interest		23.8	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Teller-Park Area, Colorado, Parts of Park and Teller Counties

81—Plome-Pimsby complex, 5 to 40 percent slopes

Map Unit Setting

National map unit symbol: k0yj
Elevation: 8,200 to 8,600 feet
Mean annual precipitation: 20 to 22 inches
Mean annual air temperature: 42 to 44 degrees F
Frost-free period: 80 to 100 days
Farmland classification: Not prime farmland

Map Unit Composition

Plome and similar soils: 65 percent
Pimsby, north slopes, and similar soils: 15 percent
Pimsby and similar soils: 15 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Plome

Setting

Landform: Hills on grabens
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Slope alluvium derived from arkose

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 5 inches: sandy loam
E - 5 to 13 inches: gravelly sandy loam
E/Bt - 13 to 17 inches: gravelly sandy loam
E/Bt - 17 to 20 inches: gravelly sandy clay loam
Bt - 20 to 29 inches: gravelly coarse sandy loam
C - 29 to 60 inches: gravelly coarse sandy loam

Properties and qualities

Slope: 5 to 20 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: R048AY255CO - Pine Grasslands

Custom Soil Resource Report

Other vegetative classification: Ponderosa pine - Douglas-fir/mountain muhly
(PIPO-PSME/MUMO) (C1117)
Hydric soil rating: No

Description of Pimsby

Setting

Landform: Hills on grabens
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Slope alluvium derived from arkose

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 5 inches: sandy loam
E - 5 to 14 inches: gravelly loamy coarse sand
E and Bt - 14 to 19 inches: very gravelly loamy coarse sand
E and Bt - 19 to 24 inches: very gravelly sandy loam
Bt and E - 24 to 35 inches: very gravelly sandy loam
Bt and E - 35 to 47 inches: very gravelly loamy coarse sand
C - 47 to 60 inches: stratified gravelly loamy coarse sand to gravelly sandy loam

Properties and qualities

Slope: 5 to 20 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A
Ecological site: R048AY255CO - Pine Grasslands
Other vegetative classification: Ponderosa pine - Douglas-fir/mountain muhly
(PIPO-PSME/MUMO) (C1117)
Hydric soil rating: No

Description of Pimsby, North Slopes

Setting

Landform: Hills on grabens
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Slope alluvium derived from arkose

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 5 inches: sandy loam
E - 5 to 14 inches: gravelly loamy coarse sand
E and Bt - 14 to 19 inches: very gravelly loamy coarse sand

Custom Soil Resource Report

E and Bt - 19 to 24 inches: very gravelly sandy loam
Bt and E - 24 to 35 inches: very gravelly sandy loam
Bt and E - 35 to 47 inches: very gravelly loamy coarse sand
C - 47 to 60 inches: stratified gravelly loamy coarse sand to gravelly sandy loam

Properties and qualities

Slope: 5 to 40 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R048AY255CO - Pine Grasslands
Other vegetative classification: Ponderosa pine - Douglas-fir/mountain muhly
(PIPO-PSME/MUMO) (C1117), Douglas-fir/kinnikinnick-common juniper
(PSME/ARUV-JUCO6) (C1219)
Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 3 percent
Landform: Knobs, hills
Landform position (three-dimensional): Nose slope, crest
Hydric soil rating: No

Typic haplustolls

Percent of map unit: 2 percent
Landform: Hills on grabens
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

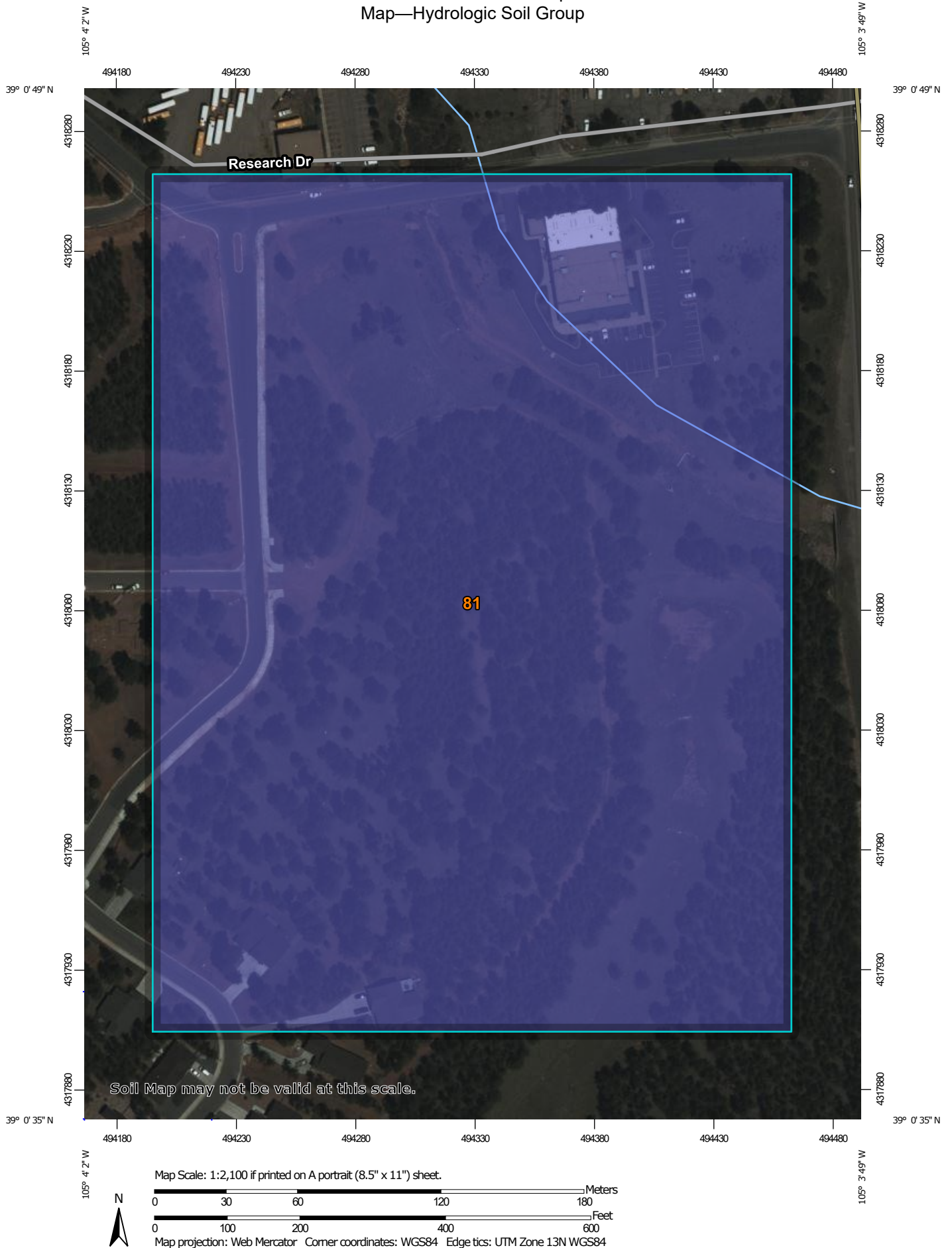
Custom Soil Resource Report

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Custom Soil Resource Report
Map—Hydrologic Soil Group



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points

 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

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 1:24,000.

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: Teller-Park Area, Colorado, Parts of Park and Teller Counties
Survey Area Data: Version 13, Aug 31, 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

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
81	Plome-Pimsby complex, 5 to 40 percent slopes	B	23.8	100.0%
Totals for Area of Interest			23.8	100.0%

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
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- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

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United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

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United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **Floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only to landward of 0.9 North American Vertical Datum of 1988 (NAVD88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 13. The **horizontal datum** was NAD83 (GRS80) spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRM for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988 (NAVD88). These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NGS12
National Geodetic Survey
SSM-C, #0022
1315 East-West Highway
Silver Spring, MD 20910-3262

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242 or visit its website at <http://www.ngs.noaa.gov>.

Base Map information shown on this FIRM was provided in digital format by Teller County. These data are current as of 2007.

This map reflects more detailed and up-to-date stream channel configurations and **floodplain delineations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels, community map repository addresses, and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and is website at <http://www.fema.gov>.

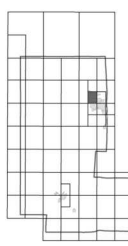
If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-Map (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov>.

Teller County Vertical Datum Offset Table

Flooding Source	Vertical Datum Offset (ft)
East Fork Fountain Creek	4.2
East Fork Paint Pony	4.2
Fountain Creek	4.2
Loy Gulch	4.2
Loy Gulch	4.2
Paint Pony	4.2
Trout Creek	4.2

Example: To convert Fountain Creek elevations to NAVD 88, 4.2 feet were added to the NGVD 29 elevations.

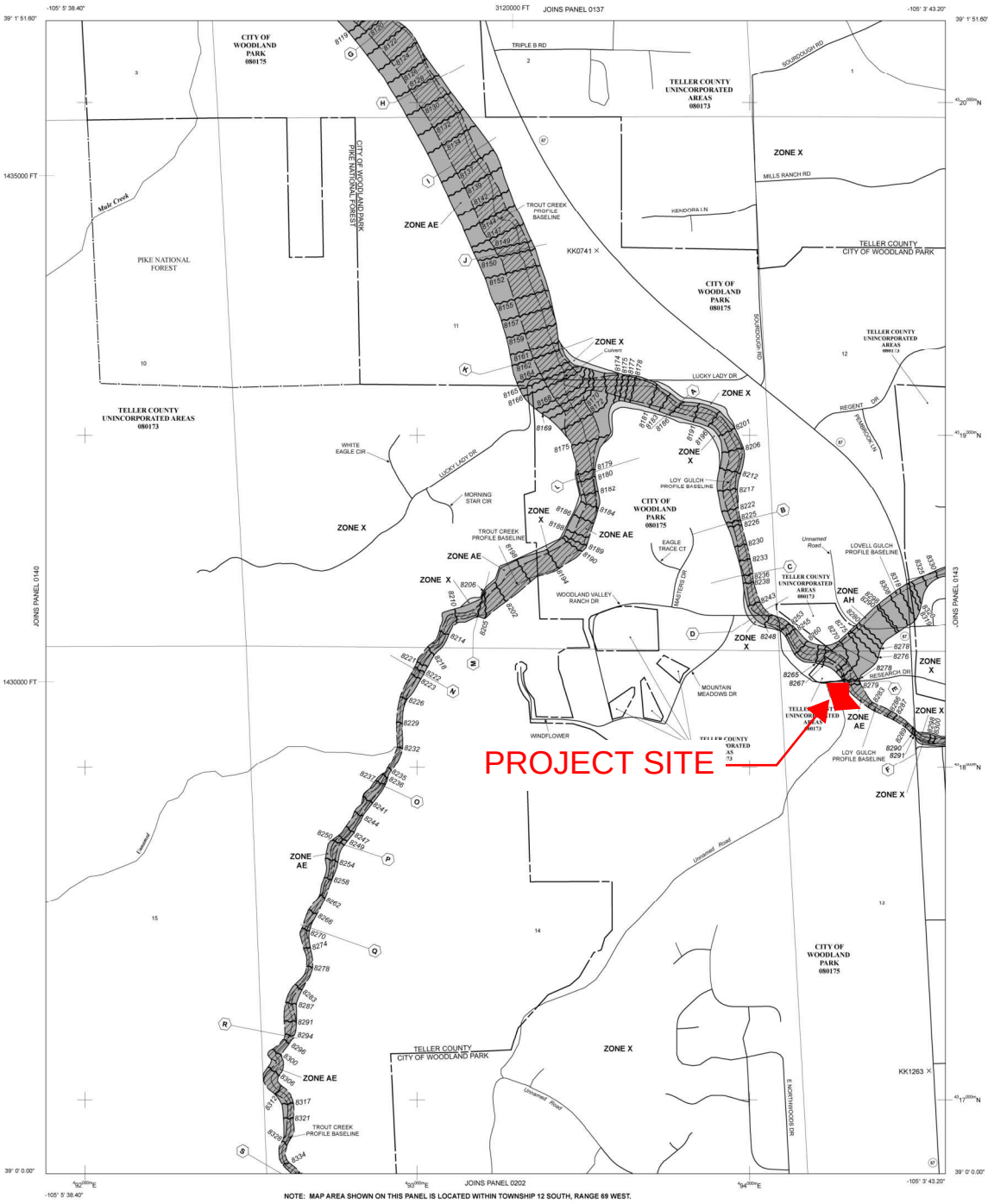
Panel Location Map



This Digital Flood Insurance Rate Map (DFIRM) was produced through a Cooperating Technical Partner (CTP) agreement between the State of Colorado Water Conservation Board (CWB) and the Federal Emergency Management Agency (FEMA).



Additional Flood Hazard information and resources are available from local communities and the Colorado Water Conservation Board.



NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 12 SOUTH, RANGE 69 WEST.

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAS) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The base flood is the minimum flood elevation in the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zone AE, AH, AR, A9, V, VE, and D. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood.

- ZONE AE** No Base Flood Elevations determined.
- ZONE AH** Base Flood Elevations determined. Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AR** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A9** Special Flood Hazard Area Formerly protected from the 1% annual chance flood by a flood control system that was subsequently abandoned. Zone AE indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A9A** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS
ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

OTHER AREAS
ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary**
- Floodway boundary**
- Zone D boundary**
- CBRS and OPA boundary**
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities**
- Base Flood Elevation line and value, elevation in feet***
- Base Flood Elevation value when uniform within zone; elevation in feet***

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

Cross section line
23-23

Transect line
97° 30' 30" W
32° 22' 30" N

Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
75° 15' W
32° 22' 30" N

500-foot grid ticks: Colorado State Plane coordinate system, central zone (NAD 83), Lambert Conformal Conic projection

DX5510
Bench mark (see explanation in Notes to Users section of this FIRM panel)

M1.5
River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTRYWIDE FLOOD INSURANCE RATE MAP
September 30, 1988

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
SEPTEMBER 25, 2009 - to update corporate limits, to change Base Flood Elevations and Special Flood Hazard Areas, to update map format, to add roads and rail names, and to incorporate previously issued Letters of Map Revision.

For community map revision history prior to countrywide mapping, refer to the Community Map History Table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6625.

MAP SCALE 1" = 500'
250 500 1000 FEET
150 0 150 300 METERS

NFP PANEL 0139D

FIRM FLOOD INSURANCE RATE MAP

TELLER COUNTY, COLORADO AND INCORPORATED AREAS

PANEL 0139 OF 0415
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS

COMMUNITY
TELLER COUNTY
WOODLAND PARK
CITY OF

NUMBERS
08119
08119
08119

PANEL
0139
0139
0139

SUFFIX
0
0
0

Notice to User: The Map Number shown below should be used when showing maps to others. The Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
08119C0139D

MAP REVISED
SEPTEMBER 25, 2009

Federal Emergency Management Agency

APPENDIX B: HYDROLOGIC CALCULATIONS

Weighted Imperviousness Calculations

SUB-BASIN	AREA (SF)	AREA (Acres)	ROOF AREA	ROOF IMPERVIOUSNESS	ROOF				LANDSCAPE AREA	LANDSCAPE IMPERVIOUSNESS	LANDSCAPE				PAVEMENT AREA	PAVEMENT IMPERVIOUSNESS	PAVEMENT				WEIGHTED IMPERVIOUSNESS	COMPOSITE C VALUES			
					C2	C5	C10	C100			C2	C5	C10	C100			C2	C5	C10	C100		C2	C5	C10	C100
E1	61,816	1.42	0	90%	0.71	0.73	0.75	0.81	61,816	0%	0.02	0.08	0.15	0.35	0	100%	0.89	0.90	0.92	0.96	0.0%	0.02	0.08	0.15	0.35
E2	309,941	7.12	5,320	90%	0.71	0.73	0.75	0.81	302,543	0%	0.02	0.08	0.15	0.35	2,078	100%	0.89	0.90	0.92	0.96	2.2%	0.04	0.10	0.17	0.36
E3	89,629	2.06	2,054	90%	0.71	0.73	0.75	0.81	84,863	0%	0.02	0.08	0.15	0.35	2,712	100%	0.89	0.90	0.92	0.96	5.1%	0.06	0.12	0.19	0.38
TOTAL	461,386	10.59	7,374	90%	0.71	0.73	0.75	0.81	449,222	0%	0.02	0.08	0.15	0.35	4,790	100%	0.89	0.90	0.92	0.96	2.5%	0.04	0.10	0.17	0.36

Stone Ridge MF
Final Drainage Report
Woodland Park, CO

11/09/21
 Calculated by:AJL

Stone Ridge - Final Drainage Report Existing Runoff Calculations Time of Concentration																
					Forest & Meadow		2.50	Short Grass Pasture & Lawns		7.00	Grassed Waterway		15.00			
					Fallow or Cultivation		5.00	Nearly Bare Ground		10.00	Paved Area & Shallow Gutter		20.00			
DESIGN POINT	SUB-BASIN DATA				INITIAL / OVERLAND TIME			TRAVEL TIME T(t)				T(c) CHECK (URBANIZED BASINS)			FINAL T(c)	
	DRAIN BASIN	AREA sq. ft.	AREA ac.	C(5)	Length ft.	Slope %	T(i) min	Length ft.	Slope %	Coeff.	Velocity fps	T(t) min.	COMP. T(c)	TOTAL LENGTH	L/180+10	min.
E1	E1	61,816	1.42	0.08	425	6.8%	20.3	0	0.0%	2.50	0.0	0.0	20.3	425	12.4	12.4
E2	E2	309,941	7.12	0.10	650	4.6%	28.2	0	0.0%	2.50	0.0	0.0	28.2	650	13.6	13.6
E3	E3	89,629	2.06	0.12	222	5.4%	15.2	0	0.0%	2.50	0.0	0.0	15.2	222	11.2	11.2

Stone Ridge MF
Final Drainage Report
Woodland Park, CO

11/09/21
Calculated by: AJL

Stone Ridge - Final Drainage Report Existing Runoff Calculations (Rational Method Procedure) Design Storm 5 Year												
BASIN INFORMATION				DIRECT RUNOFF				CUMULATIVE RUNOFF				NOTES
DESIGN POINT	DRAIN BASIN	AREA ac.	RUNOFF COEFF	T(c) min	C x A	I in/hr	Q cfs	T(c) min	C x A	I in/hr	Q cfs	
E1	E1	1.42	0.08	12.4	0.11	2.40	0.27				0.27	
E2	E2	7.12	0.10	13.6	0.69	2.30	1.58				1.58	
E3	E3	2.06	0.12	11.2	0.25	2.51	0.62				0.62	

Stone Ridge MF
Final Drainage Report
Woodland Park, CO

11/09/21
 Calculated by: AJL

Stone Ridge - Final Drainage Report Existing Runoff Calculations <i>(Rational Method Procedure)</i>											
Design Storm 100 Year											
BASIN INFORMATION				DIRECT RUNOFF				CUMULATIVE RUNOFF			
DESIGN POINT	DRAIN BASIN	AREA ac.	RUNOFF COEFF	T(c) min	C x A	I in/hr	Q cfs	T(c) min	C x A	I in/hr	Q cfs
E1	E1	1.42	0.35	12.4	0.50	5.02	2.50				2.50
E2	E2	7.12	0.36	13.6	2.58	4.82	12.42				12.42
E3	E3	2.06	0.38	11.2	0.78	5.25	4.09				4.09

**Stone Ridge MF
Final Drainage Report
Woodland Park, CO**

11/09/21
Calculated by:AJL

SUMMARY - EXISTING RUNOFF TABLE						
DESIGN POINT	BASIN DESIGNATION	BASIN AREA (ACRES)	DIRECT 5-YR RUNOFF (CFS)	DIRECT 100-YR RUNOFF (CFS)	CUMULATIVE 5-YR RUNOFF (CFS)	CUMULATIVE 100-YR RUNOFF (CFS)
E1	E1	1.42	0.27	2.50	0.27	2.50
E2	E2	7.12	1.58	12.42	1.58	12.42
E3	E3	2.06	0.62	4.09	0.62	4.09

Weighted Imperviousness Calculations

SUB-BASIN	AREA (SF)	AREA (Acres)	ROOF AREA	ROOF IMPERVIOUSNESS	ROOF				LANDSCAPE AREA	LANDSCAPE IMPERVIOUSNESS	LANDSCAPE				PAVEMENT AREA	PAVEMENT IMPERVIOUSNESS	PAVEMENT				WEIGHTED IMPERVIOUSNESS	COMPOSITE C VALUES			
					C2	C5	C10	C100			C2	C5	C10	C100			C2	C5	C10	C100		C2	C5	C10	C100
P1	149,729	3.44	34,375	90%	0.71	0.73	0.75	0.81	92,760	0%	0.02	0.08	0.15	0.35	22,594	100%	0.89	0.90	0.92	0.96	35.8%	0.31	0.35	0.40	0.55
P2	31,834	0.73	5,795	90%	0.71	0.73	0.75	0.81	12,647	0%	0.02	0.08	0.15	0.35	13,392	100%	0.89	0.90	0.92	0.96	58.5%	0.51	0.54	0.58	0.69
P3	145,995	3.35	40,376	90%	0.71	0.73	0.75	0.81	68,239	0%	0.02	0.08	0.15	0.35	37,380	100%	0.89	0.90	0.92	0.96	50.5%	0.43	0.47	0.51	0.63
P4	39,393	0.90	8,139	90%	0.71	0.73	0.75	0.81	13,422	0%	0.02	0.08	0.15	0.35	17,832	100%	0.89	0.90	0.92	0.96	63.9%	0.56	0.59	0.62	0.72
P5	30,636	0.70	7,718	90%	0.71	0.73	0.75	0.81	22,918	0%	0.02	0.08	0.15	0.35	0	100%	0.89	0.90	0.92	0.96	22.7%	0.19	0.24	0.30	0.47
O1	63,740	1.46	11,073	90%	0.71	0.73	0.75	0.81	52,667	0%	0.02	0.08	0.15	0.35	0	100%	0.89	0.90	0.92	0.96	15.6%	0.14	0.19	0.25	0.43
TOTAL	461,327	10.59	107,476	90%	0.71	0.73	0.75	0.81	262,653	0%	0.02	0.08	0.15	0.35	91,198	100%	0.89	0.90	0.92	0.96	40.7%	0.35	0.39	0.44	0.58

Stone Ridge MF
Final Drainage Report
Woodland Park, CO

11/09/21
Calculated by: AJL

Stone Ridge - Final Drainage Report																
Proposed Runoff Calculations																
Time of Concentration																
Watercourse Coefficient																
					Forest & Meadow		2.50	Short Grass Pasture & Lawns		7.00	Grassed Waterway		15.00			
					Fallow or Cultivation		5.00	Nearly Bare Ground		10.00	Paved Area & Shallow Gutter		20.00			
DESIGN POINT	SUB-BASIN DATA				INITIAL / OVERLAND TIME			TRAVEL TIME T(t)				T(c) CHECK (URBANIZED BASINS)				FINAL T(c) min.
	DRAIN BASIN	AREA sq. ft.	AREA ac.	C(5)	Length ft.	Slope %	T(i) min	Length ft.	Slope %	Coeff.	Velocity fps	T(t) min.	COMP. T(c)	TOTAL LENGTH	L/180+10	
P1	P1	149,729	3.44	0.35	100	4.0%	8.6	500	3.0%	20.00	3.5	2.4	11.0	600	13.3	11.0
P2	P2	31,834	0.73	0.54	100	4.5%	6.2	188	4.5%	20.00	4.2	0.7	6.9	288	11.6	6.9
P3	P3	145,995	3.35	0.47	87	0.5%	13.6	300	4.5%	20.00	4.2	1.2	14.8	387	12.2	12.2
P4	P4	39,393	0.90	0.59	50	5.0%	3.9	340	2.5%	20.00	3.2	1.8	5.7	390	12.2	5.7
P5	P5	30,636	0.70	0.24	65	6.5%	6.8	0	0.0%	7.00	0.0	0.0	6.8	65	10.4	6.8
O1	O1	63,740	1.46	0.19	75	11.5%	6.4	0	0.0%	7.00	0.0	0.0	6.4	75	10.4	6.4

Stone Ridge - Final Drainage Report Proposed Runoff Calculations (Rational Method Procedure) Design Storm 5 Year												
BASIN INFORMATION				DIRECT RUNOFF				CUMULATIVE RUNOFF				NOTES
DESIGN POINT	DRAIN BASIN	AREA ac.	RUNOFF COEFF	T(c) min	C x A	I in/hr	Q cfs	T(c) min	C x A	I in/hr	Q cfs	
P1	P1	3.44	0.35	11.0	1.21	2.52	3.06				3.06	
P2	P2	0.73	0.54	6.9	0.40	2.99	1.19				1.19	
P3	P3	3.35	0.47	12.2	1.57	2.42	3.81				3.81	
P4	P4	0.90	0.59	5.7	0.53	3.18	1.68				1.68	
P5	P5	0.70	0.24	6.8	0.17	3.01	0.52				0.52	
O1	O1	1.46	0.19	6.4	0.28	3.07	0.87				0.87	

Stone Ridge - Final Drainage Report												
Proposed Runoff Calculations				Design Storm 100 Year								
(Rational Method Procedure)												
BASIN INFORMATION				DIRECT RUNOFF				CUMULATIVE RUNOFF				NOTES
DESIGN POINT	DRAIN BASIN	AREA ac.	RUNOFF COEFF	T(c) min	C x A	I in/hr	Q cfs	T(c) min	C x A	I in/hr	Q cfs	
P1	P1	3.44	0.55	11.0	1.88	5.28	9.95				9.95	
P2	P2	0.73	0.69	6.9	0.50	6.26	3.16				3.16	
P3	P3	3.35	0.63	12.2	2.12	5.06	10.74				10.74	
P4	P4	0.90	0.72	5.7	0.65	6.65	4.33				4.33	
P5	P5	0.70	0.47	6.8	0.33	6.30	2.06				2.06	
O1	O1	1.46	0.43	6.4	0.63	6.42	4.04				4.04	

SUMMARY - PROPOSED RUNOFF TABLE						
DESIGN POINT	BASIN DESIGNATION	BASIN AREA (ACRES)	DIRECT 5-YR RUNOFF (CFS)	DIRECT 100-YR RUNOFF (CFS)	CUMULATIVE 5-YR RUNOFF (CFS)	CUMULATIVE 100-YR RUNOFF (CFS)
P1	P1	3.44	3.06	9.95	3.06	9.95
P2	P2	0.73	1.19	3.16	1.19	3.16
P3	P3	3.35	3.81	10.74	3.81	10.74
P4	P4	0.90	1.68	4.33	1.68	4.33
P5	P5	0.70	0.52	2.06	0.52	2.06
O1	O1	1.46	0.87	4.04	0.87	4.04

APPENDIX C: HYDRAULIC CALCULATIONS

INLET MANAGEMENT

Worksheet Protected

INLET NAME	INLET P1	INLET P2	INLET P3	INLET P4
Site Type (Urban or Rural)				
Inlet Application (Street or Area)	STREET	STREET	STREET	STREET
Hydraulic Condition	On Grade	On Grade	In Sump	In Sump
Inlet Type	Colorado Springs D-10-R	Colorado Springs D-10-R	Colorado Springs D-10-R	Colorado Springs D-10-R

USER-DEFINED INPUT**User-Defined Design Flows**

Minor Q_{KNOWN} (cfs)	3.1	1.2	3.8	1.7
Major Q_{KNOWN} (cfs)	10.0	3.2	10.7	4.3

Bypass (Carry-Over) Flow from Upstream

Receive Bypass Flow from:	No Bypass Flow Received	No Bypass Flow Received	INLET P2	INLET P1
Minor Bypass Flow Received, Q_b (cfs)	0.0	0.0	0.0	0.0
Major Bypass Flow Received, Q_b (cfs)	0.0	0.0	0.7	2.1

Watershed Characteristics

Subcatchment Area (acres)				
Percent Impervious				
NRCS Soil Type				

Watershed Profile

Overland Slope (ft/ft)				
Overland Length (ft)				
Channel Slope (ft/ft)				
Channel Length (ft)				

Minor Storm Rainfall Input

Design Storm Return Period, T_r (years)				
One-Hour Precipitation, P_1 (inches)				

Major Storm Rainfall Input

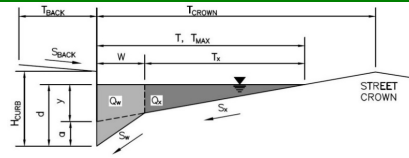
Design Storm Return Period, T_r (years)				
One-Hour Precipitation, P_1 (inches)				

CALCULATED OUTPUT

Minor Total Design Peak Flow, Q (cfs)	3.1	1.2	3.8	1.7
Major Total Design Peak Flow, Q (cfs)	10.0	3.2	11.4	6.4
Minor Flow Bypassed Downstream, Q_b (cfs)	0.0	0.0	N/A	N/A
Major Flow Bypassed Downstream, Q_b (cfs)	2.1	0.7	N/A	N/A

ALLOWABLE CAPACITY FOR ONE-HALF OF STREET (Minor & Major Storm)

(Based on Regulated Criteria for Maximum Allowable Flow Depth and Spread)

Project: **STONE RIDGE MULTI-FAMILY**Inlet ID: **INLET P1****Gutter Geometry:**

Maximum Allowable Width for Spread Behind Curb

Side Slope Behind Curb (leave blank for no conveyance credit behind curb)

Manning's Roughness Behind Curb (typically between 0.012 and 0.020)

Height of Curb at Gutter Flow Line

Distance from Curb Face to Street Crown

Gutter Width

Street Transverse Slope

Gutter Cross Slope (typically 2 inches over 24 inches or 0.083 ft/ft)

Street Longitudinal Slope - Enter 0 for sump condition

Manning's Roughness for Street Section (typically between 0.012 and 0.020)

T_{BACK}	=	5.0	ft
S_{BACK}	=	0.075	ft/ft
n_{BACK}	=	0.020	

H_{CURB}	=	6.00	inches
T_{CROWN}	=	14.0	ft
W	=	2.00	ft
S_x	=	0.030	ft/ft
S_y	=	0.083	ft/ft
S_o	=	0.040	ft/ft
n_{STREET}	=	0.016	

Max. Allowable Spread for Minor & Major Storm

Max. Allowable Depth at Gutter Flowline for Minor & Major Storm

Allow Flow Depth at Street Crown (check box for yes, leave blank for no)

	Minor Storm	Major Storm	
T_{MAX}	14.0	14.0	ft
d_{MAX}	6.0	6.0	inches
	☐	☐	

MINOR STORM Allowable Capacity is based on Depth Criterion

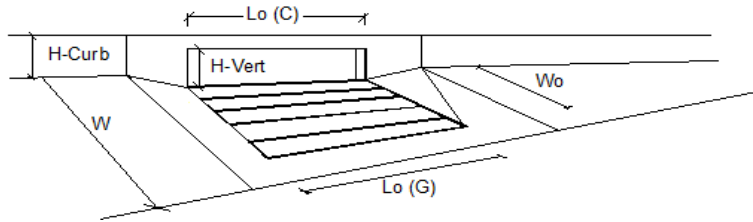
MAJOR STORM Allowable Capacity is based on Depth Criterion

	Minor Storm	Major Storm	
Q_{allow}	12.6	12.6	cfs

Minor storm max. allowable capacity GOOD - greater than the design flow given on sheet 'Inlet Management'**Major storm max. allowable capacity GOOD - greater than the design flow given on sheet 'Inlet Management'**

INLET ON A CONTINUOUS GRADE

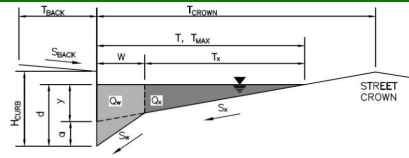
MHFD-Inlet, Version 5.01 (April 2021)



Design Information (Input)		MINOR		MAJOR
Type of Inlet	Colorado Springs D-10-R	Type =	Colorado Springs D-10-R	
Local Depression (additional to continuous gutter depression 'a')		a_{LOCAL} =	4.0	4.0 inches
Total Number of Units in the Inlet (Grate or Curb Opening)		N_o =	1	1
Length of a Single Unit Inlet (Grate or Curb Opening)		L_o =	10.00	10.00 ft
Width of a Unit Grate (cannot be greater than W, Gutter Width)		W_o =	N/A	N/A ft
Clogging Factor for a Single Unit Grate (typical min. value = 0.5)		C_r-G =	N/A	N/A
Clogging Factor for a Single Unit Curb Opening (typical min. value = 0.1)		C_r-C =	0.10	0.10
Street Hydraulics: OK - $Q < \text{Allowable Street Capacity}$		MINOR		MAJOR
Total Inlet Interception Capacity		Q =	3.1	7.9 cfs
Total Inlet Carry-Over Flow (flow bypassing inlet)		Q_b =	0.0	2.1 cfs
Capture Percentage = Q_i/Q_o =		$C\%$ =	100	79 %

ALLOWABLE CAPACITY FOR ONE-HALF OF STREET (Minor & Major Storm)

(Based on Regulated Criteria for Maximum Allowable Flow Depth and Spread)

Project: **STONE RIDGE MULTI-FAMILY**Inlet ID: **INLET P2****Gutter Geometry:**

Maximum Allowable Width for Spread Behind Curb

Side Slope Behind Curb (leave blank for no conveyance credit behind curb)

Manning's Roughness Behind Curb (typically between 0.012 and 0.020)

Height of Curb at Gutter Flow Line

Distance from Curb Face to Street Crown

Gutter Width

Street Transverse Slope

Gutter Cross Slope (typically 2 inches over 24 inches or 0.083 ft/ft)

Street Longitudinal Slope - Enter 0 for sump condition

Manning's Roughness for Street Section (typically between 0.012 and 0.020)

T_{BACK}	=	5.0	ft
S_{BACK}	=	0.050	ft/ft
n_{BACK}	=	0.016	

H_{CURB}	=	6.00	inches
T_{CROWN}	=	14.0	ft
W	=	2.00	ft
S_x	=	0.030	ft/ft
S_y	=	0.083	ft/ft
S_o	=	0.040	ft/ft
n_{STREET}	=	0.016	

Max. Allowable Spread for Minor & Major Storm

Max. Allowable Depth at Gutter Flowline for Minor & Major Storm

Allow Flow Depth at Street Crown (check box for yes, leave blank for no)

	Minor Storm	Major Storm	
T_{MAX}	14.0	14.0	ft
d_{MAX}	6.0	6.0	inches
	☐	☐	

MINOR STORM Allowable Capacity is based on Depth Criterion

MAJOR STORM Allowable Capacity is based on Depth Criterion

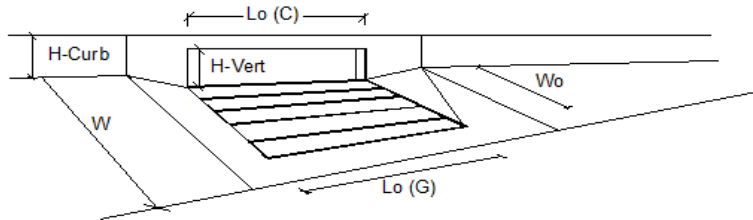
	Minor Storm	Major Storm	
Q_{allow}	12.6	12.6	cfs

Minor storm max. allowable capacity GOOD - greater than the design flow given on sheet 'Inlet Management'

Major storm max. allowable capacity GOOD - greater than the design flow given on sheet 'Inlet Management'

INLET ON A CONTINUOUS GRADE

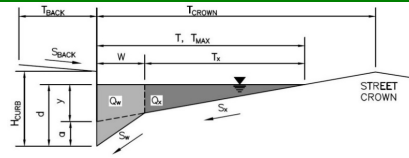
MHFD-Inlet, Version 5.01 (April 2021)



Design Information (Input)		MINOR		MAJOR
Type of Inlet	Colorado Springs D-10-R	Type =	Colorado Springs D-10-R	
Local Depression (additional to continuous gutter depression 'a')		a_{LOCAL} =	4.0	4.0 inches
Total Number of Units in the Inlet (Grate or Curb Opening)		N_o =	1	1
Length of a Single Unit Inlet (Grate or Curb Opening)		L_o =	5.00	5.00 ft
Width of a Unit Grate (cannot be greater than W, Gutter Width)		W_o =	N/A	N/A ft
Clogging Factor for a Single Unit Grate (typical min. value = 0.5)		C_r-G =	N/A	N/A
Clogging Factor for a Single Unit Curb Opening (typical min. value = 0.1)		C_r-C =	0.10	0.10
Street Hydraulics: OK - $Q < \text{Allowable Street Capacity}$		MINOR		MAJOR
Total Inlet Interception Capacity		Q =	1.2	2.5 cfs
Total Inlet Carry-Over Flow (flow bypassing inlet)		Q_b =	0.0	0.7 cfs
Capture Percentage = Q_i/Q_o =		$C\%$ =	100	78 %

ALLOWABLE CAPACITY FOR ONE-HALF OF STREET (Minor & Major Storm)

(Based on Regulated Criteria for Maximum Allowable Flow Depth and Spread)

Project: **STONE RIDGE MULTI-FAMILY**Inlet ID: **INLET P3****Gutter Geometry:**

Maximum Allowable Width for Spread Behind Curb

Side Slope Behind Curb (leave blank for no conveyance credit behind curb)

Manning's Roughness Behind Curb (typically between 0.012 and 0.020)

Height of Curb at Gutter Flow Line

Distance from Curb Face to Street Crown

Gutter Width

Street Transverse Slope

Gutter Cross Slope (typically 2 inches over 24 inches or 0.083 ft/ft)

Street Longitudinal Slope - Enter 0 for sump condition

Manning's Roughness for Street Section (typically between 0.012 and 0.020)

T_{BACK}	=	20.0	ft
S_{BACK}	=	0.150	ft/ft
n_{BACK}	=	0.020	

H_{CURB}	=	6.00	inches
T_{CROWN}	=	14.0	ft
W	=	2.00	ft
S_X	=	0.040	ft/ft
S_W	=	0.083	ft/ft
S_O	=	0.000	ft/ft
n_{STREET}	=	0.016	

Max. Allowable Spread for Minor & Major Storm

Max. Allowable Depth at Gutter Flowline for Minor & Major Storm

Check boxes are not applicable in SUMP conditions

	Minor Storm	Major Storm	
T_{MAX}	14.0	14.0	ft
d_{MAX}	6.0	12.0	inches
	☐	☐	

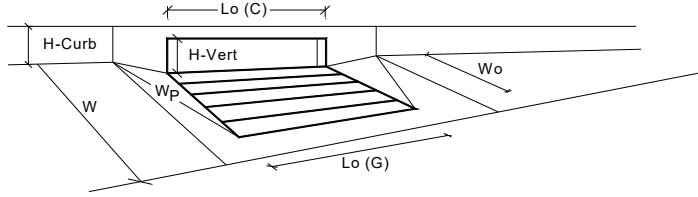
MINOR STORM Allowable Capacity is based on Depth Criterion

MAJOR STORM Allowable Capacity is based on Depth Criterion

	Minor Storm	Major Storm	
Q_{allow}	SUMP	SUMP	cfs

INLET IN A SUMP OR SAG LOCATION

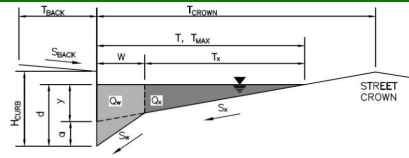
MHFD-Inlet, Version 5.01 (April 2021)



Design Information (Input)		MINOR		MAJOR	
Type of Inlet	Colorado Springs D-10-R				
Local Depression (additional to continuous gutter depression 'a' from above)		a _{local} =	4.00	4.00	inches
Number of Unit Inlets (Grate or Curb Opening)		No =	1	1	
Water Depth at Flowline (outside of local depression)		Ponding Depth =	6.0	7.8	inches
<u>Grate Information</u>		MINOR		MAJOR	
Length of a Unit Grate		L _o (G) =	N/A	N/A	feet
Width of a Unit Grate		W _o =	N/A	N/A	feet
Area Opening Ratio for a Grate (typical values 0.15-0.90)		A _{ratio} =	N/A	N/A	
Clogging Factor for a Single Grate (typical value 0.50 - 0.70)		C _f (G) =	N/A	N/A	
Grate Weir Coefficient (typical value 2.15 - 3.60)		C _w (G) =	N/A	N/A	
Grate Orifice Coefficient (typical value 0.60 - 0.80)		C _o (G) =	N/A	N/A	
<u>Curb Opening Information</u>		MINOR		MAJOR	
Length of a Unit Curb Opening		L _o (C) =	10.00	10.00	feet
Height of Vertical Curb Opening in Inches		H _{vert} =	8.00	8.00	inches
Height of Curb Orifice Throat in Inches		H _{throat} =	8.00	8.00	inches
Angle of Throat (see USDCM Figure ST-5)		Theta =	81.00	81.00	degrees
Side Width for Depression Pan (typically the gutter width of 2 feet)		W _p =	2.00	2.00	feet
Clogging Factor for a Single Curb Opening (typical value 0.10)		C _f (C) =	0.10	0.10	
Curb Opening Weir Coefficient (typical value 2.3-3.7)		C _w (C) =	3.60	3.60	
Curb Opening Orifice Coefficient (typical value 0.60 - 0.70)		C _o (C) =	0.67	0.67	
<u>Low Head Performance Reduction (Calculated)</u>		MINOR		MAJOR	
Depth for Grate Midwidth		d _{Grate} =	N/A	N/A	ft
Depth for Curb Opening Weir Equation		d _{Curb} =	0.33	0.48	ft
Combination Inlet Performance Reduction Factor for Long Inlets		RF _{Combination} =	0.57	0.73	
Curb Opening Performance Reduction Factor for Long Inlets		RF _{Curb} =	0.93	1.00	
Grated Inlet Performance Reduction Factor for Long Inlets		RF _{Grate} =	N/A	N/A	
Total Inlet Interception Capacity (assumes clogged condition)		MINOR		MAJOR	
Inlet Capacity IS GOOD for Minor and Major Storms(>Q PEAK)		Q _s =	8.3	15.3	cfs
		Q _{PEAK REQUIRED} =	3.8	11.4	cfs

ALLOWABLE CAPACITY FOR ONE-HALF OF STREET (Minor & Major Storm)

(Based on Regulated Criteria for Maximum Allowable Flow Depth and Spread)

Project: **STONE RIDGE MULTI-FAMILY**Inlet ID: **INLET P4****Gutter Geometry:**

Maximum Allowable Width for Spread Behind Curb

Side Slope Behind Curb (leave blank for no conveyance credit behind curb)

Manning's Roughness Behind Curb (typically between 0.012 and 0.020)

Height of Curb at Gutter Flow Line

Distance from Curb Face to Street Crown

Gutter Width

Street Transverse Slope

Gutter Cross Slope (typically 2 inches over 24 inches or 0.083 ft/ft)

Street Longitudinal Slope - Enter 0 for sump condition

Manning's Roughness for Street Section (typically between 0.012 and 0.020)

T_{BACK}	=	18.0	ft
S_{BACK}	=	0.070	ft/ft
n_{BACK}	=	0.020	

H_{CURB}	=	6.00	inches
T_{CROWN}	=	14.0	ft
W	=	2.00	ft
S_X	=	0.030	ft/ft
S_W	=	0.083	ft/ft
S_O	=	0.000	ft/ft
n_{STREET}	=	0.016	

Max. Allowable Spread for Minor & Major Storm

Max. Allowable Depth at Gutter Flowline for Minor & Major Storm

Check boxes are not applicable in SUMP conditions

	Minor Storm	Major Storm	
T_{MAX}	14.0	14.0	ft
d_{MAX}	6.0	12.0	inches
	☐	☐	

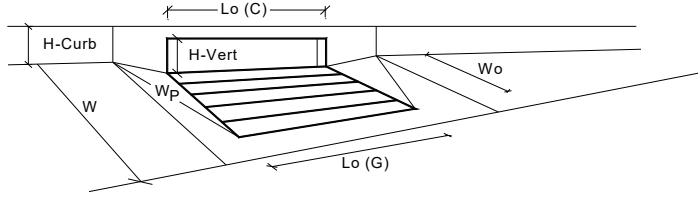
MINOR STORM Allowable Capacity is based on Depth Criterion

MAJOR STORM Allowable Capacity is based on Depth Criterion

	Minor Storm	Major Storm	
Q_{allow}	SUMP	SUMP	cfs

INLET IN A SUMP OR SAG LOCATION

MHFD-Inlet, Version 5.01 (April 2021)



Design Information (Input)		MINOR		MAJOR	
Type of Inlet	Colorado Springs D-10-R				
Local Depression (additional to continuous gutter depression 'a' from above)		a _{local} =	4.00	4.00	inches
Number of Unit Inlets (Grate or Curb Opening)		No =	1	1	
Water Depth at Flowline (outside of local depression)		Ponding Depth =	6.0	6.3	inches
<u>Grate Information</u>		MINOR		MAJOR	
Length of a Unit Grate		L _o (G) =	N/A	N/A	feet
Width of a Unit Grate		W _o =	N/A	N/A	feet
Area Opening Ratio for a Grate (typical values 0.15-0.90)		A _{ratio} =	N/A	N/A	
Clogging Factor for a Single Grate (typical value 0.50 - 0.70)		C _f (G) =	N/A	N/A	
Grate Weir Coefficient (typical value 2.15 - 3.60)		C _w (G) =	N/A	N/A	
Grate Orifice Coefficient (typical value 0.60 - 0.80)		C _o (G) =	N/A	N/A	
<u>Curb Opening Information</u>		MINOR		MAJOR	
Length of a Unit Curb Opening		L _o (C) =	10.00	10.00	feet
Height of Vertical Curb Opening in Inches		H _{vert} =	8.00	8.00	inches
Height of Curb Orifice Throat in Inches		H _{throat} =	8.00	8.00	inches
Angle of Throat (see USDCM Figure ST-5)		Theta =	81.00	81.00	degrees
Side Width for Depression Pan (typically the gutter width of 2 feet)		W _p =	2.00	2.00	feet
Clogging Factor for a Single Curb Opening (typical value 0.10)		C _f (C) =	0.10	0.10	
Curb Opening Weir Coefficient (typical value 2.3-3.7)		C _w (C) =	3.60	3.60	
Curb Opening Orifice Coefficient (typical value 0.60 - 0.70)		C _o (C) =	0.67	0.67	
<u>Low Head Performance Reduction (Calculated)</u>		MINOR		MAJOR	
Depth for Grate Midwidth		d _{Grate} =	N/A	N/A	ft
Depth for Curb Opening Weir Equation		d _{Curb} =	0.33	0.36	ft
Combination Inlet Performance Reduction Factor for Long Inlets		RF _{Combination} =	0.57	0.60	
Curb Opening Performance Reduction Factor for Long Inlets		RF _{Curb} =	0.93	0.95	
Grated Inlet Performance Reduction Factor for Long Inlets		RF _{Grate} =	N/A	N/A	
Total Inlet Interception Capacity (assumes clogged condition)		MINOR		MAJOR	
Inlet Capacity IS GOOD for Minor and Major Storms(>Q PEAK)		Q _s =	8.3	9.4	cfs
		Q _{PEAK REQUIRED} =	1.7	6.4	cfs

Forebay Release and Configuration	Forebay A		
	Required	Flow: Q_{100} = (cfs)	Release Rate
Release 2% of the undetained 100-year peak discharge by way of a wall/notch or berm/pipe configuration		28.18	0.56

Minimum Forebay Volume Required	2% of the WQCV	40hr drain time $a = 1$ $I = 0.47$ $A = 9.02$ AC	Required (CF)	Provided (CF)
			139.82	160.00

Maximum Forebay Depth	Required	Provided	Concrete Forebay Structure
	18" Max	12"	

Forebay Notch Calculations			
$Q = C_o A_o (2gH_o)^{0.5}$			
Q _a	0.56 cfs		2% of Peak 100 YR Discharge for contributing Sub-Basins
C _o	0.6		
H _o	0.5 ft		
g	32.2 ft/s ²		
A _a	0.17 ft ²		
L _a	0.11 ft		
	1.32 in		3" Minimum per Criteria

$$WQCV = a(0.91I^3 - 1.19I^2 + 0.78I) \quad \text{Equation 3-1}$$

Where:

- WQCV = Water Quality Capture Volume (watershed inches)
 a = Coefficient corresponding to WQCV drain time (Table 3-2)
 I = Imperviousness (%/100) (see Figures 3-3 through 3-5 [single family land use] and /or the *Runoff* chapter of Volume 1 [other typical land uses])

Table 3-2. Drain Time Coefficients for WQCV Calculations

Drain Time (hrs)	Coefficient, a
12 hours	0.8
24 hours	0.9
40 hours	1.0

Stone Ridge Multi-Family
Active Scenario: 5 YEAR
FlexTable: Catch Basin Table

Label	Elevation (Invert) (ft)	Flow (Local In) (cfs)	Flow (Total Out) (cfs)
P4	8,291.51	1.70	1.70
P3	8,290.60	3.80	5.50
P2	8,288.25	1.20	6.70
P1	8,287.89	3.10	9.80

Stone Ridge Multi-Family
Active Scenario: 100 YEAR
FlexTable: Catch Basin Table

Label	Elevation (Invert) (ft)	Flow (Local In) (cfs)	Flow (Total Out) (cfs)
P4	8,291.51	6.40	6.40
P3	8,290.60	11.40	17.80
P2	8,288.25	3.20	21.00
P1	8,287.89	10.00	31.00

Stone Ridge Multi-Family

Active Scenario: 5 YEAR

FlexTable: Conduit Table

Label	Start Node	Stop Node	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Flow (cfs)	Velocity (ft/s)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
MH2 ---> P2	P2	MH2	8,288.45	8,289.66	241.5	-0.005	30.0	5.50	5.48	8,290.43	8,289.43
P2 ---> P1	P2	P1	8,288.25	8,288.09	32.1	0.005	30.0	6.70	5.80	8,289.11	8,288.95
P1 ---> O1	O1	P1	8,287.00	8,287.89	177.6	-0.005	30.0	9.80	6.45	8,288.93	8,287.87
P3 ---> MH2	MH2	P3	8,289.86	8,290.60	148.3	-0.005	30.0	5.50	5.48	8,291.37	8,290.50
P4 ---> MH1	MH1	P4	8,291.17	8,291.51	69.7	-0.005	30.0	1.70	3.88	8,291.94	8,291.62
MH1 ---> P3	P3	MH1	8,290.80	8,290.97	33.5	-0.005	30.0	1.70	3.88	8,291.53	8,291.55

Stone Ridge Multi-Family
Active Scenario: 100 YEAR
FlexTable: Conduit Table

Label	Start Node	Stop Node	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Flow (cfs)	Velocity (ft/s)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
MH2 ---> P2	P2	MH2	8,288.45	8,289.66	241.5	-0.005	30.0	17.80	7.57	8,291.09	8,290.48
P2 ---> P1	P2	P1	8,288.25	8,288.09	32.1	0.005	30.0	21.00	7.89	8,289.81	8,289.83
P1 ---> O1	O1	P1	8,287.00	8,287.89	177.6	-0.005	30.0	31.00	8.57	8,289.79	8,288.73
P3 ---> MH2	MH2	P3	8,289.86	8,290.60	148.3	-0.005	30.0	17.80	7.57	8,292.03	8,291.32
P4 ---> MH1	MH1	P4	8,291.17	8,291.51	69.7	-0.005	30.0	6.40	5.72	8,292.35	8,292.49
MH1 ---> P3	P3	MH1	8,290.80	8,290.97	33.5	-0.005	30.0	6.40	5.73	8,292.39	8,292.40

Stone Ridge Multi-Family

Active Scenario: 5 YEAR

FlexTable: Manhole Table

Label	Flow (Total Out) (cfs)	Velocity (Out) (ft/s)	Diameter (in)	Depth (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
MH2	5.50	4.25	48.0	0.77	8,290.54	8,290.43
MH1	1.70	2.04	48.0	0.57	8,291.62	8,291.53

Stone Ridge Multi-Family
Active Scenario: 100 YEAR
FlexTable: Manhole Table

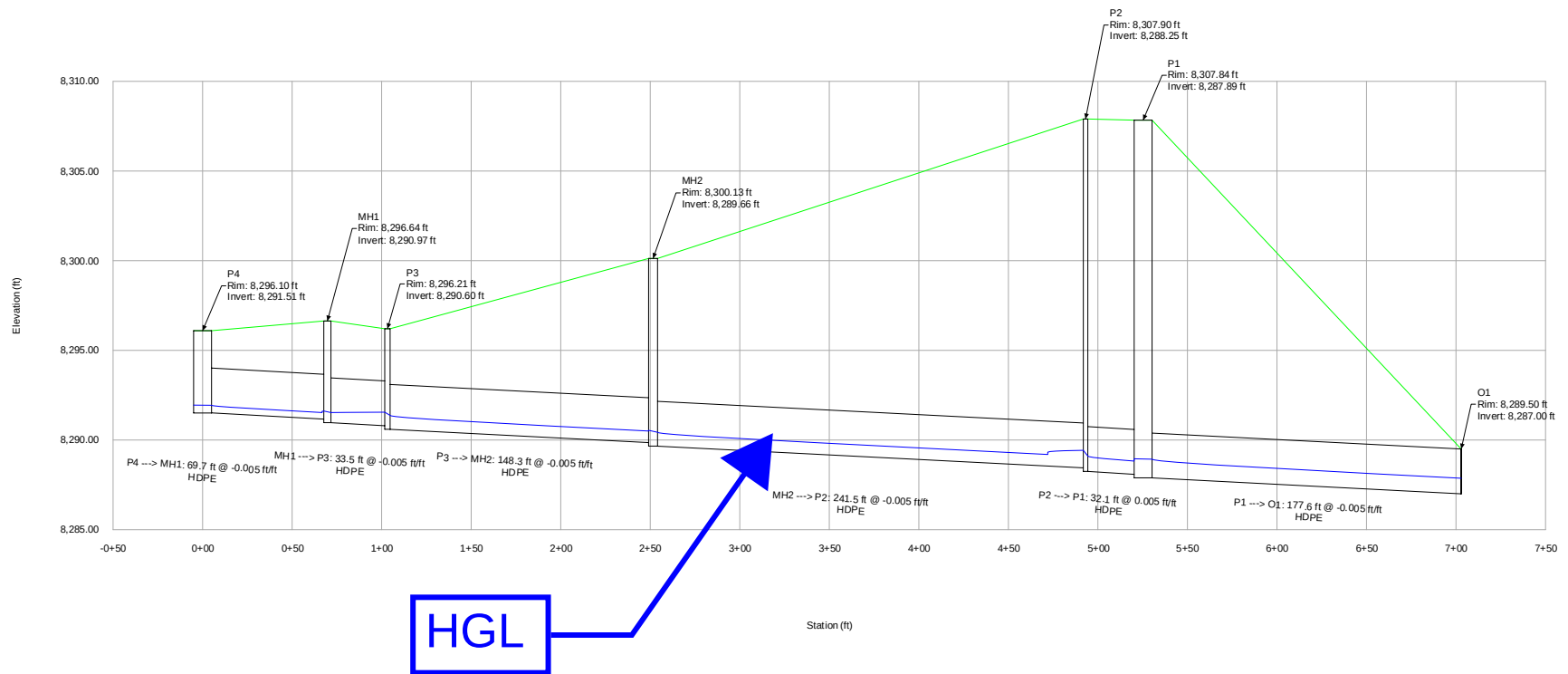
Label	Flow (Total Out) (cfs)	Velocity (Out) (ft/s)	Diameter (in)	Depth (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
MH2	17.80	6.14	48.0	1.43	8,291.32	8,291.09
MH1	6.40	2.21	48.0	1.43	8,292.49	8,292.39

Stone Ridge Multi-Family

Active Scenario: 5 YEAR

Profile Report

Engineering Profile - Storm Network (Untitled1.stsw)

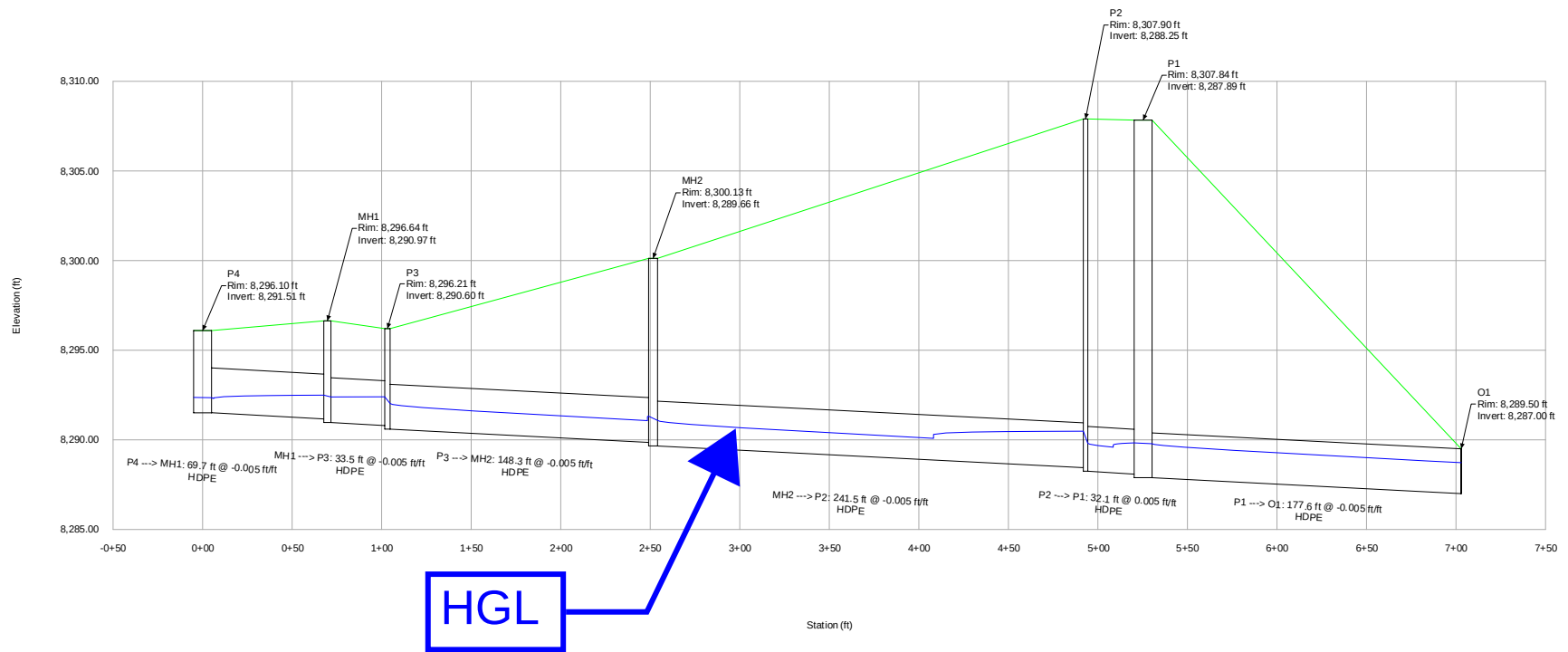


Stone Ridge Multi-Family

Active Scenario: 100 YEAR

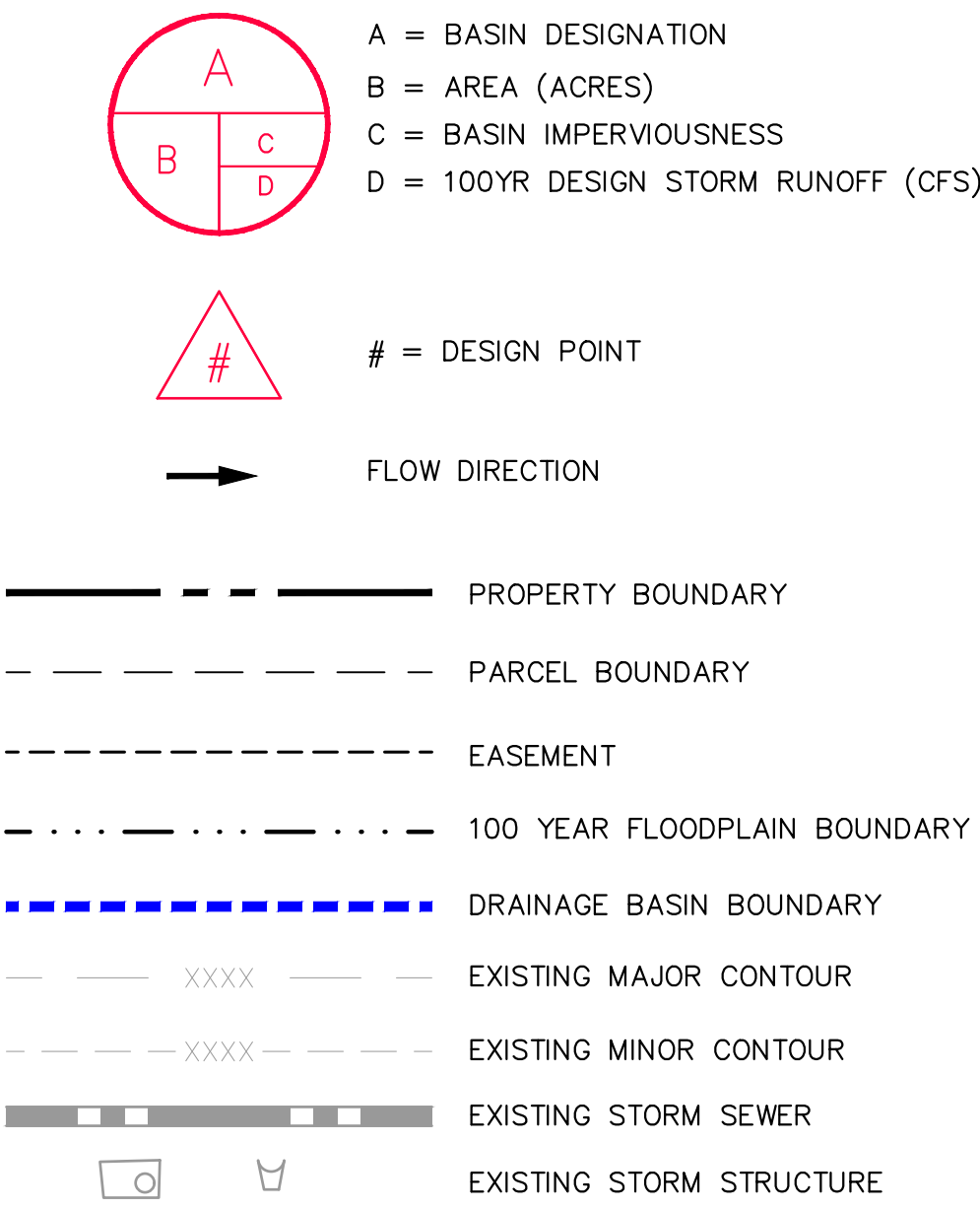
Profile Report

Engineering Profile - Storm Network (Untitled1.stsw)

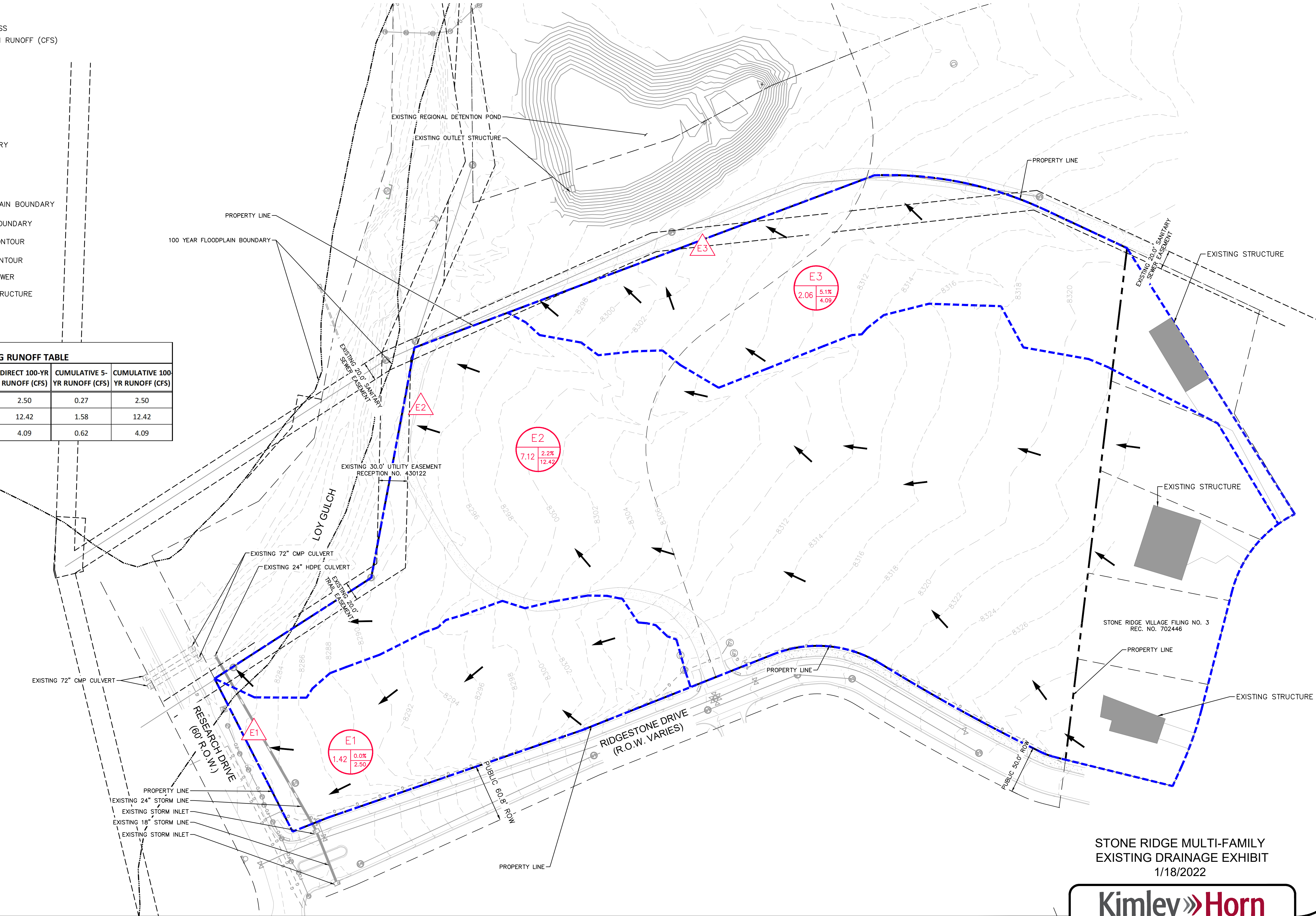
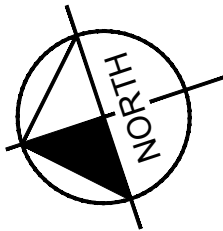
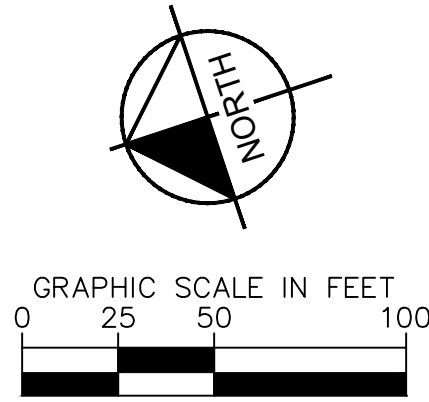


APPENDIX D: DRAINAGE EXHIBITS

LEGEND



SUMMARY - EXISTING RUNOFF TABLE						
DESIGN POINT	BASIN DESIGNATION	BASIN AREA (ACRES)	DIRECT 5-YR RUNOFF (CFS)	DIRECT 100-YR RUNOFF (CFS)	CUMULATIVE 5-YR RUNOFF (CFS)	CUMULATIVE 100-YR RUNOFF (CFS)
E1	E1	1.42	0.27	2.50	0.27	2.50
E2	E2	7.12	1.58	12.42	1.58	12.42
E3	E3	2.06	0.62	4.09	0.62	4.09

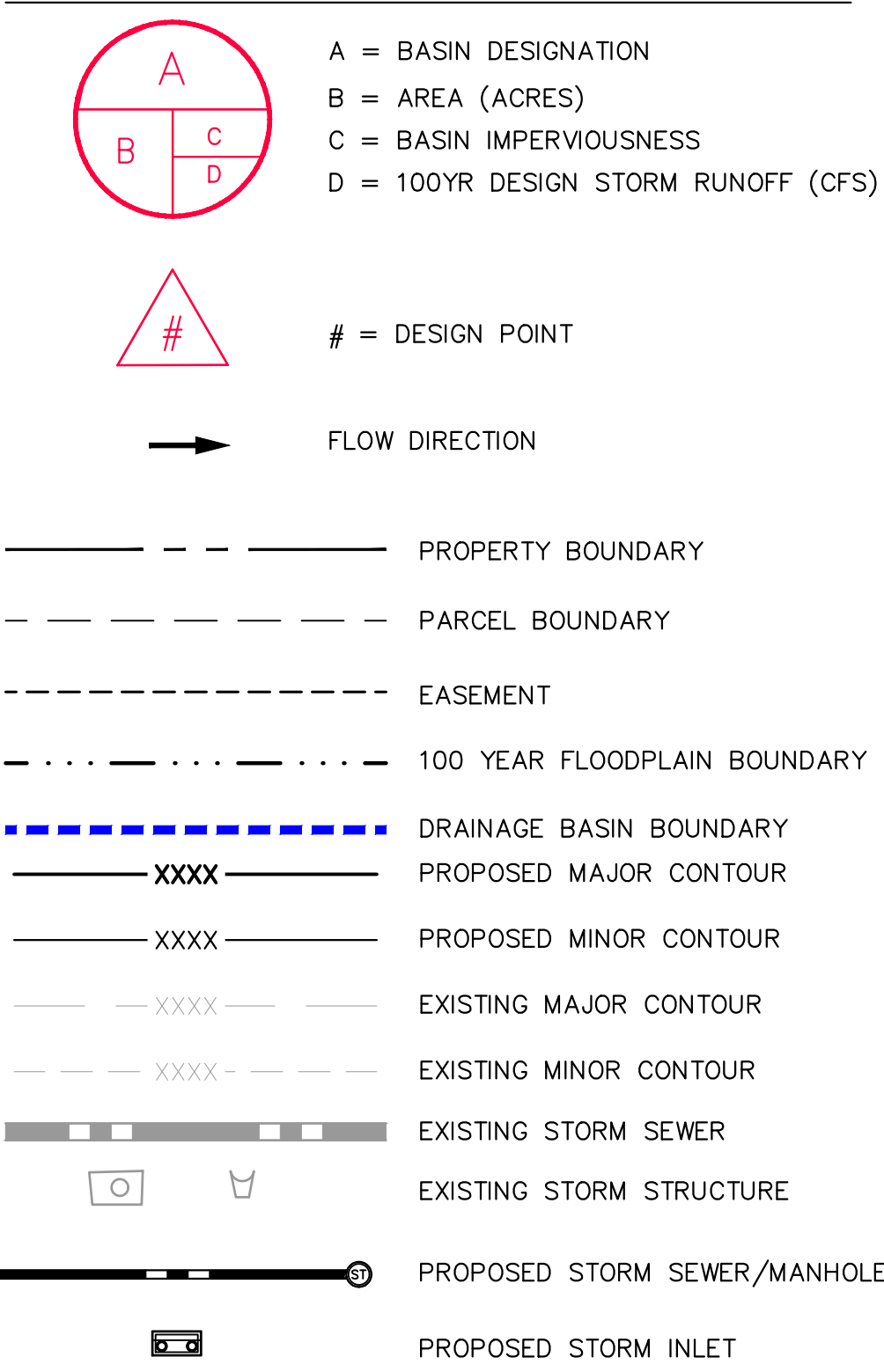


STONE RIDGE MULTI-FAMILY
EXISTING DRAINAGE EXHIBIT
1/18/2022

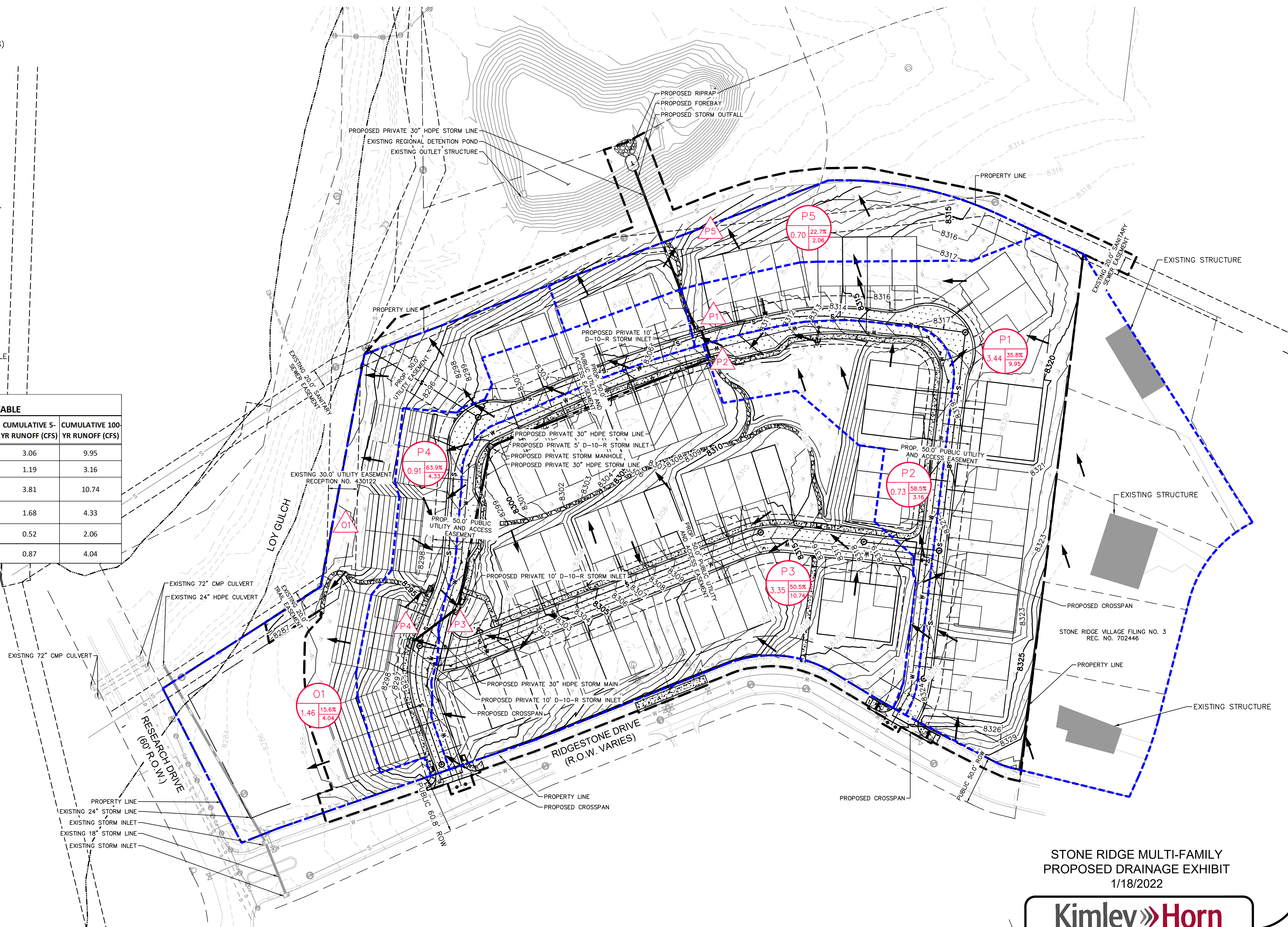
Kimley»Horn

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2 N NEVADA AVE., SUITE 300, COLORADO SPRINGS, 80903
PHONE: 719-453-0180

LEGEND



SUMMARY - PROPOSED RUNOFF TABLE						
DESIGN POINT	BASIN DESIGNATION	BASIN AREA (ACRES)	DIRECT 5-YR RUNOFF (CFS)	DIRECT 100-YR RUNOFF (CFS)	CUMULATIVE 5-YR RUNOFF (CFS)	CUMULATIVE 100-YR RUNOFF (CFS)
P1	P1	3.44	3.06	9.95	3.06	9.95
P2	P2	0.73	1.19	3.16	1.19	3.16
P3	P3	3.35	3.81	10.74	3.81	10.74
P4	P4	0.90	1.68	4.33	1.68	4.33
P5	P5	0.70	0.52	2.06	0.52	2.06
O1	O1	1.46	0.87	4.04	0.87	4.04



STONE RIDGE MULTI-FAMILY
PROPOSED DRAINAGE EXHIBIT
1/18/2022

Kimley»Horn

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PHONE: 719-453-0180

APPENDIX E: FINAL DRAINAGE REPORT DRAINAGE EXCERPTS

3. Developed Drainage Conditions

Construction of the proposed development will require grading and paving of new roads through the site and related utility work, resulting in additional impervious areas across the site. The general concept for management of developed storm runoff is to grade the majority of the developed site to drain towards the proposed public road system. The road curb and gutter and storm sewer system will convey developed runoff flows through the site to the proposed regional detention facilities along the Loy Gulch tributary channel. The developed drainage basins, projected flows, and proposed improvements are shown in Figures D1 and D2.01 (Appendix A).

The majority of developed flows from Phase 1 of the subdivision are conveyed through Basins N4 and N5 into a storm sewer system along the south side of Stone Ridge Drive, which intercepts surface runoff and conveys these flows to the existing Detention Pond N1 on the north side of Stone Ridge Drive.

Off-site flows from Basins ON1-ON2 combine with on-site flows from Basins N3-N5 at Design Point #N1, with developed peak flows of $Q_5 = 50.9$ cfs and $Q_{100} = 187.0$ cfs. These flows are detained to historic levels though Detention Pond N1, located on the downstream side of the proposed Kelley's Road extension.

Off-site flows from Basins OH1-OH2 will combine with on-site flows from Basins H3-H5 flowing northerly along the SH67 frontage. A 36-inch storm drain system has been installed at the intersection of Kelley's Road and SH67 (Design Point H3), and this storm sewer system will be extended with future intersection improvements at the northerly commercial access drive with SH67 (Design Point H4).

Phase 2 includes development within Basins LY2, LY4, LY6, and LY7. Storm sewer improvements will be extended through the Phase 2 area to serve future upstream development within Basin LY3.

According to the street capacity calculations in Appendix C, an underground storm sewer system will be required to intercept street flows from future development in Basins LY3A and LY3C. Storm Drain LY4 will ultimately serve storm inlets at the future roundabout intersection of Stone Ridge Drive and Stone Mountain Drive. This 24-inch storm sewer system will extend northeasterly in Stone Mountain Drive to Sorrel Sky Drive, and then continue southeasterly to the Loy Gulch Tributary Drainage Channel, ultimately reaching the proposed Detention Pond L1.

The existing 48-inch discharge pipe from Detention Pond N1 will be extended northeasterly through Basin LY6 along the existing tributary drainage channel to maximize useable open space area. Flows from Storm Drain LY4 will combine with Storm Drain N1 and flow northeasterly into Detention Pond L1. Pond L1 has also been sized to accept future developed flows from Basins H4, H5, and LY5. Developed flows from Design Points H5, N1, and Basins LY3-LY5 combine at Design Point L1, with calculated peak flows of $Q_5 = 102.4$ cfs and $Q_{100} = 370.9$ cfs.

Another storm sewer system will intercept street flows from the developed area near the north boundary of the subdivision. Inlet LY2A will capture flows from the north end of Millstone Lane, and Inlets LY2C and LY2B will intercept street flows at the northeast end of Roberts Ranch Road. 18-inch storm sewers from these inlets will combine with Inlets LY7A and LY7B at the north end of Stone Mountain Drive, at which point a 24-inch storm sewer will extend easterly to daylight in the Loy Gulch Channel. Pond L1 has been sized to **over-detain** to account for release of developed flows from Basins LY2, LY7, and LY8. Developed flows from Design Point L1 combine with Basins LY1, LY2, LY7, and LY8 at Design Point #1, with calculated peak flows of $Q_5 = 104.6$ cfs and $Q_{100} = 380.5$ cfs.

B. Comparison of Developed to Historic Discharges

Based on the hydrologic calculations in Appendix B1, the total undetained developed flow from the site would exceed historic flow from the site. As previously stated, the increase in developed flows will be mitigated by routing flows through the proposed detention ponds. The comparison of developed to historic discharges at key design points is summarized as follows:

Design Point	Historic Flow			Developed Flow			Comparison of Developed to Historic Flow ($Q_5\%/Q_{100}\%$)
	Area (ac)	Q_5 (cfs)	Q_{100} (cfs)	Area (ac)	Q_5 (cfs)	Q_{100} (cfs)	
N1	230.6	41.8	167.3	231.9	50.9	187.0	122% / 112% (increase)
L1	444.8	66.5	282.5	479.7	102.4	370.9	154% / 131% (increase)
1	496.9	67.3	299.4	510.6	104.6	380.5	155% / 127% (increase)

C. Detention Ponding

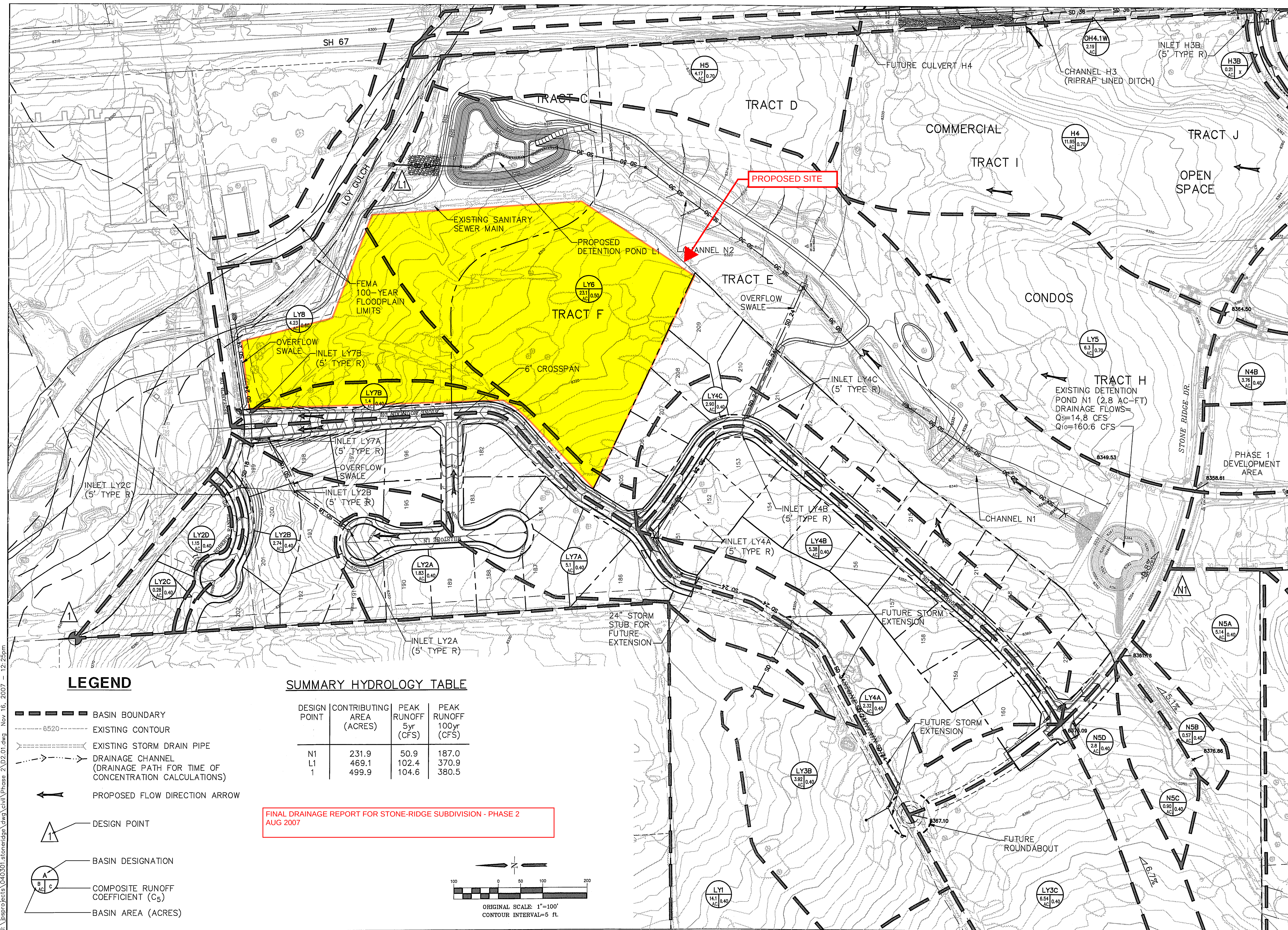
Runoff flows from the majority of developed areas in the Stone Ridge Subdivision will be collected in a storm sewer system and diverted into the proposed detention ponds along the Loy Gulch tributary channel. The proposed detention ponds have been sized to maintain historic flows at the pond outlet. In accordance with City of Woodland Park drainage criteria, the required pond volume was calculated as the sum of the low flow volume (75% of 2-year volume), the 5-year storage volume, and the 100-year storage volume. Grass-lined ponds with 3:1 side slopes can be constructed within the proposed Open Space Tract to meet the specified detention storage requirements. The pond outlet structures will be designed to release historic flows towards the existing natural swale downstream.

The proposed detention ponds have been sized utilizing preliminary estimating procedures as delineated in the CDOT Drainage Design Manual (see Appendix D), resulting in the following preliminary pond sizes:

**FINAL DRAINAGE REPORT FOR STONE-RIDGE SUBDIVISION - PHASE 2
AUG 2007**

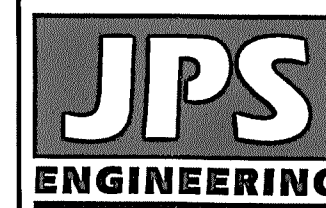
BASIN	TOTAL AREA (AC)	SOIL TYPE	(AC)	SUB-AREA 1 DEVELOPMENT/ COVER	C	AREA (AC)	SUB-AREA 2 DEVELOPMENT/ COVER	C	(AC)	SUB-AREA 3 DEVELOPMENT/ COVER	C	WEIGHTED C VALUE
LY1	14.1	B	14.1	SF RESID.	0.456							0.456
LY2D	1.2	B	1.2	SF RESID.	0.456							0.456
LY3A	29.1	B	21.1	SF RESID.	0.456	8	OPEN SPACE	0.188				0.382
LY3C	6.5	B	6.5	SF RESID.	0.456							0.456
LY3A,LY3C	35.6	B										0.396
LY3B	3.9	B	3.9	SF RESID.	0.456							0.456
LY4A	2.3	B	2.3	SF RESID.	0.456							0.405
LY3A-LY4A	41.9	B										0.456
LY4B	5.4	B	5.4	SF RESID.	0.456							0.411
LY3A-LY4B	47.3	B										0.456
LY4C	2.9	B	2.9	SF RESID.	0.456							0.413
LY3A-LY4C	50.2	B										
LY5	6.3	B	6.3	SF RESID.	0.456							0.456
LY6	23.1	B	5.0	PATIO HOMES	0.75	18.1	OPEN SPACE	0.188				0.310
H5+N1+(LY3-LY6)	479.7	B										0.507
LY7,LY2	11.4	B	11.4	SF RESID.	0.456							0.456
LY8	4.2	B	4.2	APARTMENTS	0.75							0.750
L1+LY1-2+LY7-8	510.5	B										0.506

FINAL DRAINAGE REPORT FOR STONE-RIDGE SUBDIVISION - PHASE 2
AUG 2007



STONE RIDGE SUBDIVISION – PHASE 2

PHASE 2 DEVELOPED DRAINAGE PLAN



19 E. Willamette Ave.
Colorado Springs, CO
80903
PH: 719-477-9429
FAX: 719-471-0766

[illegible]

HORZ. SCALE:	1"=100'	DRAWN:	MJP
VERT. SCALE:	N/A	DESIGNED:	JPS
SURVEYED:	RAMPART	CHECKED:	JPS
CREATED:	11/6/06	LAST MODIFIED:	11/16/07
PROJECT NO:	040301	MODIFIED BY:	BJJ
SHEET:			

D2.01

Phases 1-2

The majority of developed flows from Phase 1 of the subdivision are conveyed through Basins N4 and N5 into a storm sewer system along the south side of Stone Ridge Drive, which intercepts surface runoff and conveys these flows to the existing Detention Pond N1 on the north side of Stone Ridge Drive.

Off-site flows from Basins ON1-ON2 combine with on-site flows from Basins N3-N5 at Design Point #N1, with developed peak flows of $Q_5 = 50.9$ cfs and $Q_{100} = 187.0$ cfs (SCS calculations from previously approved Phase 1-2 Drainage Reports). These flows are detained to historic levels through Detention Pond N1, located on the downstream side of Stone Ridge Drive. The discharge pipe from Detention Pond N1 was previously extended northeasterly through Basin LY6 along the tributary drainage channel to maximize useable open space area.

Phase 2 included development within Basins LY2, LY4, LY6, and LY7. Storm sewer improvements have been extended through the Phase 2 area to serve future upstream development in Phase 3 within Basin LY3. Storm Drain LY4 (24-inch) collects drainage from the Ridgestone Drive and Firestone Drive corridors (Basins LY3-LY4) and flows northeasterly to Storm Sewer N1 (30" HDPE) along the Loy Gulch tributary drainage channel, ultimately reaching Detention Pond L1.

Flows from Storm Drain LY4 combine with Storm Drain N1 and flow northeasterly into Detention Pond L1. Developed flows from Design Points H5, N1, and Basins LY3-LY5 combine at Design Point L1, with calculated peak flows of $Q_5 = 102.4$ cfs and $Q_{100} = 370.9$ cfs (SCS calculations from 2007 FDR).

As described in the previously approved "Final Drainage Report for Stone Ridge Subdivision – Phase 2," Detention Pond L1 has been sized to "over-detain" to account for release of developed flows from Basins LY2, LY7, and LY8. Developed flows from Design Point L1 combine with Basins LY1, LY2, LY7, and LY8 at Design Point #1, with calculated peak flows of $Q_5 = 104.6$ cfs and $Q_{100} = 380.5$ cfs (SCS calculations from 2007 FDR).

Phase 3

Phase 3 includes development within Basins LY1, LY3, and LY4.

The northerly fringe of Phase 3 is located in Basins LY1A and LY1B which sheet flow northeasterly to the north subdivision boundary.

Flows from Basins LY1A and LY1B are combined at Design Point #LY1, with developed peak flows calculated as $Q_5 = 7.1$ cfs and $Q_{100} = 28.1$ cfs. The proposed street layout and storm sewer system reduces the developed flow area draining to Design Point LY1, resulting in no increase in developed drainage at the north subdivision boundary (Design Point #LY1).

Basin LY3A comprises the southwesterly part of Phase 3 (including the balance of single-family residential lots), and this area will generally sheet flow northeasterly to the street system flowing to Inlet A1 on the southwest side of Goldstone Court (16' D10R Sump Inlet). Storm sewer A1 (24-inch HDPE) will convey the flow from Inlet A1 across the street to Inlet A2 (5' Type R Inlet), and Storm Sewer A2 (24" HDPE) will flow northeasterly to Inlet C (5' Type R) at the downstream low point on the southwest side of Stone Ridge Drive. Basin LY3C will flow northeasterly to Inlet C.

Basin LY3B will flow northeasterly to Inlet B (10' Type R) at the southwest corner of Ridgestone Drive and Stone Ridge Drive, and Storm Sewer B (18" HDPE) will convey the flow from Inlet B northwesterly to Inlet C.

Storm Sewer C (24" HDPE) will convey the flow from Inlet C across Stone Ridge Drive to Inlet D (5' Type R), and Storm Sewer D (24" HDPE) will continue northeasterly along Gold Digger Court to Inlet D2 on the northeast side of the cul-de-sac.

Storm Sewer D2 (24" HDPE) will flow northeasterly to Inlet E (Type C) at the north subdivision boundary, and Storm Sewer E (24" HDPE) will continue easterly to Storm Manhole LY4A in Ridgestone Drive, connecting to the existing 24-inch storm sewer stubbed from Phase 2.

Flows from Basins LY3A-LY4C combine at Design Point #LY4, with developed peak flows calculated as $Q_5 = 17.1$ cfs and $Q_{100} = 74.7$ cfs. The existing downstream 24"-30" storm sewer system flows to Detention Pond L1.

B. Detention Pond Evaluation

Runoff flows from the majority of developed areas in the Stone Ridge Subdivision will be collected in a storm sewer system and routed through the on-site detention ponds along the Loy Gulch tributary channel, which have been designed to maintain historic flows downstream of the subdivision. Design details for Pond N1 and L1 were provided with the previously approved Final Drainage Reports for Filing No. 1 and Phase 2.

Stormwater detention for the remaining phases of the Stone Ridge Subdivision is provided in Detention Pond L1, which was constructed in 2008 and is located at the northeast corner of the development. Pond L1 was designed to mitigate the developed drainage impacts from the Phase 3 area and other future development areas.

The City of Woodland Park adopted a new Drainage Criteria Manual (DCM) in February, 2014, which generally requires full-spectrum detention for new developments. In support of the Phase 3 development plans, we have performed an evaluation of the existing Stormwater Detention Pond L1 capacity under the new City Drainage Criteria Manual.

As described in the 2007 FDR, Pond L1 was designed to intercept developed flows from Basins LY3-LY4, along with future developed flows from Basins H4-H5 and LY5-LY6. Pond L1 was designed with sufficient volume to “over-detain” to account for direct release of developed flows from Basins LY1-LY2 and LY7-LY8.

According to calculations in the 2007 FDR, the total required detention volume for Pond L1 was identified as 3.4 acre-feet. Sheet C2 of the Phase 2 Construction Drawings identifies the design volume of Detention Pond L1 is 4.4 acre-feet. Based on a recent site visit, the as-constructed pond appears to provide a significant retention volume below the outlet structure, providing additional storage volume and resulting in significant stormwater infiltration in keeping with the intent of current City of Woodland Park drainage criteria.

We have reviewed the capacity of Detention Pond L1 based on the anticipated interim and ultimate impervious areas associated with development of the Stone Ridge Subdivision. The interim conditions were assumed to include full development of the remaining single-family residential areas in Phases 2-4 (Basins LY1-LY4 and LY7), as well as the multi-family residential areas (Basins LY5, LY6, and LY8). Ultimate conditions include the anticipated future commercial development in Basins H4-H5 (see enclosed “Figure D1: Developed Drainage Plan”).

Based on the anticipated impervious areas of the development, required full-spectrum detention pond volumes have been calculated using the City of Woodland Park’s “WP-Detention-v2.35” software (see Appendix C). Detention pond design parameters are summarized as follows:

Pond	Basins	Tributary Area (ac)	Percent Impervious (%)	Required 100-Year Full-Spectrum Detention Volume (ac-ft)
L1 – Interim Conditions	LY1-LY8	97.5	21.4%	3.7
L1 – Ultimate Conditions	LY1-LY8; H4-H5	113.6	28.1%	5.7

According to this evaluation, the existing capacity of Detention Pond L1 (4.4 acre-feet) is adequate for the interim development conditions encompassing the remaining single-family and multi-family residential areas.

Future phases of the Stone Ridge Subdivision project may require expansion of Detention Pond L1 for the ultimate development of anticipated commercial areas (Basins H4-H5). The capacity of Pond L1 should be further evaluated during drainage planning of future development phases beyond the residential areas. Depending on the future final development plans for the multi-family and commercial areas, additional on-site detention could be incorporated in selected locations or Detention Pond L1 could be expanded and upgraded as needed.

In summary, the existing capacity of Detention Pond L1 is adequate for the remaining phases of residential development within Stone Ridge Subdivision, and Detention Pond L1 may need to be enlarged and upgraded in conjunction with future commercial development phases.

FINAL DRAINAGE REPORT FOR STONE-RIDGE SUBDIVISION - PHASE 3 SEPT. 2021

JPS ENGINEERING

STONE RIDGE SUBDIVISION COMPOSITE IMPERVIOUS AREAS - DETENTION POND L1												
BASIN	TOTAL AREA (AC)	SOIL TYPE	(AC)	SUB-AREA 1 DEVELOPMENT/ COVER	IMP. AREA (%)	AREA (AC)	SUB-AREA 2 DEVELOPMENT/ COVER	IMP. AREA (%)	(AC)	SUB-AREA 3 DEVELOPMENT/ COVER	IMP. AREA (%)	WEIGHTED IMPERVIOUS AREA (%)
PHASE 2 FLOWS (OVER-DETAINED BY POND L1):												
LY2A-LY2D	7.0	B	7.0	SF RESID (1/3-AC)	30							30.000
LY7A-LY7B	6.5	B	6.5	SF RESID (1/3-AC)	30							30.000
LY2A-LY7B	13.5	B										30.000
PHASE 3:												
LY1A	9.1	B	9.1	SF RESID (1/3-AC)	30							30.000
LY1B	1.8	B	1.8	SF RESID (1/3-AC)	30							30.000
LY3A	29.3	B	11.5	SF RESID (1/3-AC)	30	9.6	SF RESID (1-AC)	20	8.2	OPEN SPACE	0	18.34
LY3B	4.9	B	4.9	SF RESID (1/3-AC)	30							30.000
LY3A,LY3B	34.2	B										20.015
LY3C	1.5	B	1.5	SF RESID (1/3-AC)	30							30.000
LY3A-LY3C	35.7	B										20.426
LY3D	2.1	B	2.1	SF RESID (1/3-AC)	30							30.000
LY3A-LY3D	37.8	B										20.959
LY3E	0.8	B	0.8	SF RESID (1/3-AC)	30							30.000
LY4A	3.4	B	3.4	SF RESID (1/3-AC)	30							30.000
LY3A-LY4A	42.0	B										21.862
LY4B	5.5	B	5.5	SF RESID (1/3-AC)	30							30.000
LY3A-LY4B	47.5	B										22.808
LY4C	2.9	B	2.9	SF RESID (1/3-AC)	30							30.000
LY3A-LY4C	50.4	B										23.222
FUTURE PHASES (OVER-DETAINED BY POND L1):												
LY5	6.3	B	6.3	CONDOS	50							0.000
LY6	23.1	B	4.85	PATIO HOMES	50	2.0	SF RESID (1/3-AC)	30	16.3	OPEN SPACE	0	13.095
LY8	4.23	B	4.16	APARTMENTS	50	0.07	OPEN SPACE	0				49.173
LY5,LY6,LY8	33.6	B										15.180
LY1-LY8	97.5											21.383
FUTURE COMMERCIAL DEVELOPMENT AREAS (EAST SIDE):												
H4	11.95	B	8.88	COMMERCIAL	85	3.07	OPEN SPACE	0				63.16
H5	4.17	B	4.17	COMMERCIAL	85							85.00
H4-H5	16.1	B										68.812
LY1-LY8,H4-H5	113.6	B										28.115

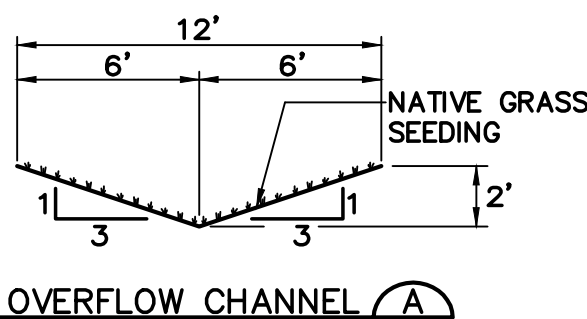
*EXCLUDES UPSTREAM PREVIOUSLY DETAINED FLOWS

EROSION CONTROL:

- SILT FENCE
- ⊗ RIPRAP
- 6490 — EXISTING CONTOURS
- 6490 — PROPOSED CONTOURS
- × 55.0 PROPOSED SPOT ELEVATION (FLOWLINE)
- ⊙ IP INLET PROTECTION (GRAVEL FILTER)
- ⊙ SF SILT FENCE
- ⊙ VTC VEHICLE TRACKING PAD (6" LAYER OF 1-1/2" ROCK)
- ⊙ TM TEMPORARY SEED AND MULCH ON DISTURBED SLOPES
- ⊙ SB SEDIMENT BASIN
- ⊙ RR RIPRAP
- ⊙ SFB TEMPORARY SILT FENCE BARRIERS

KEYED NOTES:

- ① CONTRACTOR MAY WASTE EXCESS CUT MATERIAL OR BORROW SUITABLE FILL MATERIAL FROM THIS AREA. MATCH INTO EXISTING GRADES WITH 3:1 MAX CUT AND FILL SLOPES AND MAINTAIN POSITIVE DRAINAGE IN ALL AREAS.
- ② TOPSOIL STOCKPILE AREA
- ③ HYDROSEED DISTURBED SLOPES
- ④ PROTECT EXISTING TREES BEYOND LIMITS OF GRADING



EROSION CONTROL NOTES:

AT LEAST TEN DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE ACRE OR MORE, THE CONTRACTOR SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY CONTROL DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT WATER QUALITY CONTROL DIVISION
WQCD—PERMITS
4300 CHERRY CREEK DRIVE SOUTH, DENVER, COLORADO
80246-1530
ATTN.: PERMITS UNIT

TOTAL DISTURBED AREA = 12.0 ACRES

BENCHMARK:
CONTROL POINT AT TOP OF CURB, SOUTH SIDE OF TAMARAC PARKWAY, WEST OF SH67; EL.=8289.40 (DATUM: NAVD88)

PHASE 2 — ESTIMATED EARTHWORK QUANTITY:

	EXCAVATION (TOTAL CUT)	EMBANKMENT FILL ^A	NET
PHASE 2 ROADS	7,376 CY	3,007 CY	4,369 CY (CUT)

(ASSUMES 15% COMPACTION FACTOR)

NOTE: THIS ESTIMATE IS PROVIDED FOR INFORMATION ONLY, REPRESENTING THE CALCULATED BULK EARTHWORK VOLUME TO FINISHED GRADE, EXCLUDING ANY ADJUSTMENT FOR PAVEMENT DEPTHS, ETC. CONTRACTOR SHALL MAKE HIS OWN DETERMINATION OF EARTHWORK QUANTITIES AS BASIS FOR BID PRICING AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

Prepared under my direct supervision:

John P. Schwab, P.E. No. 29891

Date:

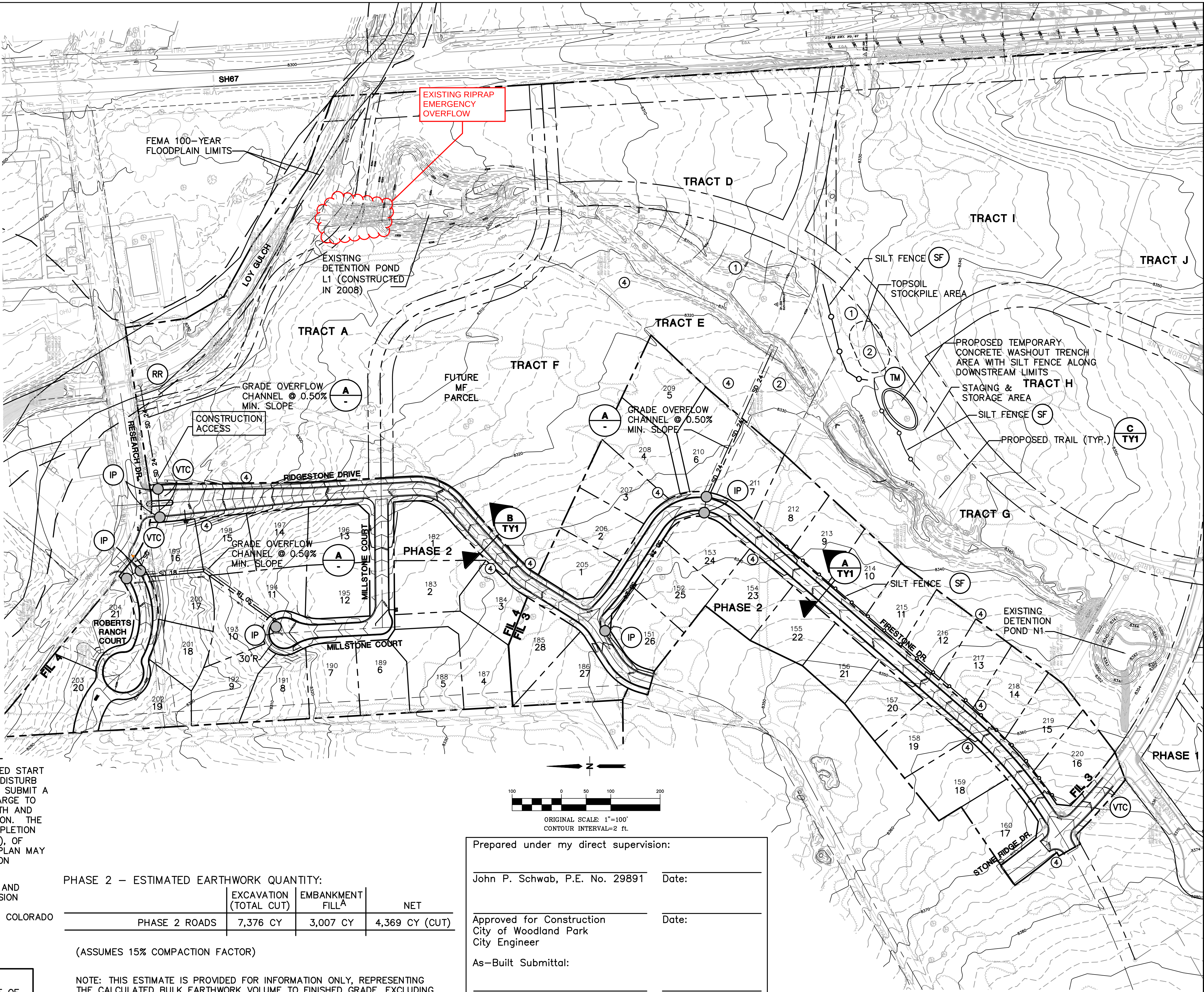
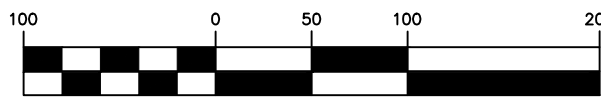
Approved for Construction
City of Woodland Park
City Engineer

Date:

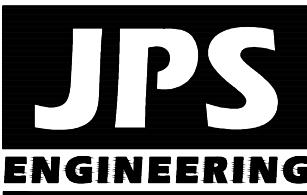
As-Built Submittal:

Received for As-Built Record
City of Woodland Park
City Engineer

Date:



STONE RIDGE SUBDIVISION - PHASE 2 (FILING 3&4)



19 E. Willamette Ave.
Colorado Springs, CO
80903
PH: 719-477-9429
FAX: 719-471-0766
www.jpsengr.com



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BEFORE YOU DIG, GRADE, OR EXCAVATE
FOR THE MARKING OF UNDERGROUND
MEMBER UTILITIES

No.	REVISION	DATE	BY
1	MILLSTONE/ROBERTS R. RD. REV.	3/11/08	JPS
2	CITY SUBMITTAL	4/27/16	JPS
3	CITY COMMENTS	7/07/16	JPS
4	CITY COMMENTS	11/30/16	JPS
5	AS-BUILT	4/18/18	JPS

MASTER GRADING &
EROSION CONTROL PLAN

HORZ. SCALE: 1"=100'	DRAWN: MJP
VERT. SCALE: N/A	DESIGNED: JPS
SURVEYED: RAMPART	CHECKED: JPS
CREATED: 10/13/06	LAST MODIFIED: 4/18/18
PROJECT NO: 040301	MODIFIED BY: BJJ

SHEET: C1.01

ATTACHMENT 'F'



Stone Ridge Village Tract A & F

Stone Ridge Village Woodland Park, CO

STORMWATER MANAGEMENT PLAN (SWMP) REPORT

Prepared for:

**Go Beyond, LLC
1685 W. Uintah Street
Colorado Springs, CO 80904
Craig O'Boyle
(719) 229-2060**

Prepared by:

**Kimley-Horn and Associates, Inc.
2 North Nevada Avenue, Suite 300
Colorado Springs, Colorado 80903
Kevin Kofford, P.E.
(719) 453-0180**

JANUARY 2022

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CERTIFICATION

DEVELOPER/OWNER'S STATEMENT

"The owner will comply with the requirements of the Erosion and Stormwater Quality Control Plan including temporary BMP inspection requirements and final stabilization requirements. I acknowledge the responsibility to determine whether the construction activities on these plans require Colorado Discharge Permit System (CDPS) permitting for Stormwater discharges associated with Construction Activity."

Developer/Owner Signature: _____

Name of Developer/Owner: _____ Date: _____

DBA: _____ Phone: _____

Title: _____ Email: _____

Address: _____ Fax: _____

ENGINEER'S STATEMENT

"This Erosion and Stormwater Quality Control/Grading Plan was prepared under my direction and supervision and is correct to the best of my knowledge and belief. If such work is performed in accordance with the grading and erosion control plan, the work will not become a hazard to life and limb, endanger property, or adversely affect the safety, use, or stability of a public way, drainage channel, or other property."

Signature: _____ Date: _____

Printed Name: Kevin Kofford, P.E.

INTRODUCTION

INTRODUCTION AND PURPOSE

This GESC Report is provided to support the approval of the Erosion and Sediment Control Plan Construction Drawings through the City and the issuance of a CDPS General Permit through CDPHE. This report, in conjunction with the Construction Drawings in **Appendix A**, provide a site and project understanding along with guidelines for implementation and maintenance of erosion, sediment and stormwater quality control measures prior to and during construction of the Project.

The primary goal of pollution prevention efforts during project construction is to control sediment and pollutants that originate on the site and prevent them from flowing to surface waters. A successful pollution prevention program also relies upon careful inspection and adjustments during the construction process to enhance its effectiveness. It is the intent of this plan to implement stormwater control measures, also referred to as best management practices (BMP) for enhancing the quality of stormwater discharges associated with the construction activity. Control measures designs are based on the criteria set forth by the General Permit and the Urban Storm Drainage Criteria Manual, Volume 3.

This plan must be implemented before construction begins on the site. It primarily addresses the impact of storm rainfall and runoff on areas of the ground surface disturbed during the construction process. In addition, there are recommendations for controlling other sources of pollution that could accompany the major construction activities. Applicability of this plan shall be terminated when disturbed areas are stabilized, temporary erosion controls are removed, construction activities covered herein have ceased and the permit has been inactivated.

PERMIT COVERAGE AND APPLICATIONS

The Grading, Erosion & Sediment Control for this Project shall be approved by the City of Woodland Park prior to issuance of construction related permits.

Based upon a Site Disturbance Area of one (1) acre or more, this site requires the issuance of a Colorado Discharge Permit System (CDPS) - Stormwater Discharge Associated with Construction Activities Permit (General Permit) through the Colorado Department of Public Health and Environment (CDPHE). A copy of the CDPS General Permit Application is included in **Appendix B** of this report.

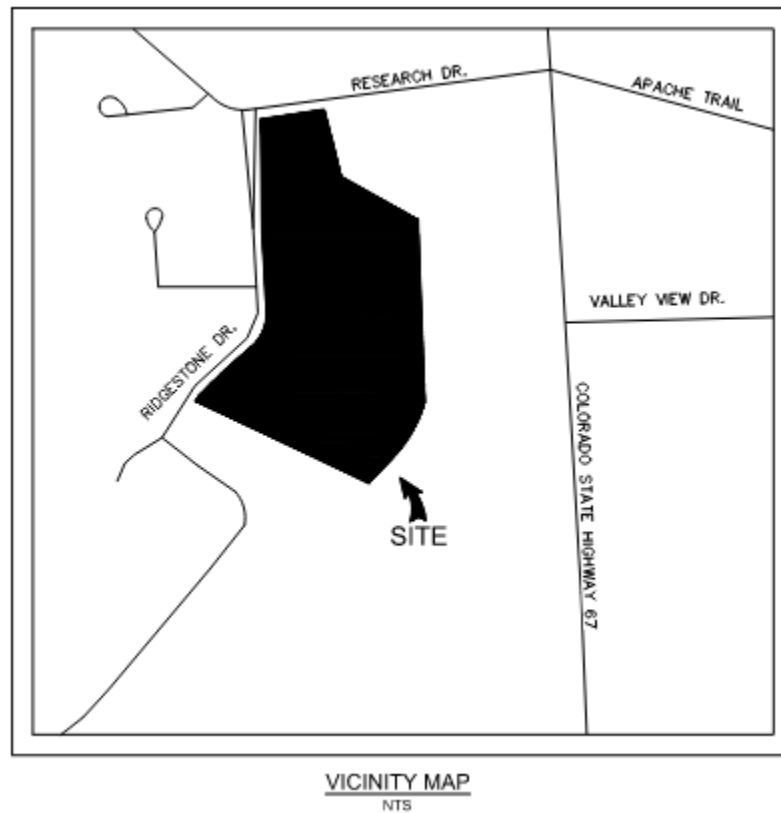
GENERAL LOCATION

PROJECT LOCATION

The property is located in the northeast quarter of section 13, township 12 south, range 69 west of the 6th p.m. city of woodland park, county of teller, state of Colorado. (the “Site” or “Property”).

The Property consists of an existing gravel roadway, Ridgestone Dr, with existing coniferous trees along the edges and throughout the property. The purpose of this project is to construct 69 townhome and patio home units, serving as a multi-family residential living community.

VICINITY MAP



Adjacent parcels consist of:

- North – Research Drive,
- South – Stone Ridge Village Filing No. 3
- East – State Highway 67
- West – Stone Ridge Village Filing No. 4

SITE DESCRIPTION

GENERAL PROJECT DESCRIPTION

The Site consists of ± 9.01 acres of currently undeveloped land and an existing gravel roadway. The limits of construction are ± 8.97 acres, ± 8.26 acres in on-site disturbance and ± 0.71 acres in off-site disturbance. The project includes the planning and development of 69 townhome lots as well as roadway and drainage improvements.

VEGETATION

The existing site is currently vacant land with forest / greenbelt characteristics. The lot has a vegetation density of approximately 90%, consisting of meadowy grass throughout and is thoroughly littered in coniferous trees.

DRAINAGE CHARACTERISTICS

The site will maintain the general historic drainage pattern of southwest to northeast and flow down the existing gravel roadway. The existing slopes are approximately 5% from southwest to northeast.

The Flood Insurance Rate Maps (FIRM) 08119CO139D effective date September 25, 2009, by FEMA, indicates there is a small area (0.04 acres) in the northeastern corner of the site that falls within Zone AE. The portion of the site within Zone AE has no proposed structures or grading. The rest of the site is categorized within Zone X, outside of the 500-year floodplain. Per the FIRM map, the base flood elevation is 8279 feet, at the area of the site which lands in the floodplain (Zone AE). There are no known irrigation facilities or other obstructions which could influence or be influenced by the local drainage. The FIRM is provided in **Appendix C**.

ULTIMATE DISCHARGE

Flows within the project area currently flows northwest overland. Existing inlet structures on Ridgestone Drive facilitate roadway runoff into Loy Gulch just to the west. All flows ultimately outfall into Trout Creek, approximately 0.5 miles northwest of the property. This historic runoff pattern will generally be maintained and unaffected with the proposed Project. All offsite drainage conditions are routed around the project per historical runoff patterns.

SITE SOILS

A review of the Natural Resource Conservation Service (NRCS) Web Soil Survey determined that the Site is made up of Plome-Pimsby Complex, an NRCS Soil type of A/B. The soils information is found in **Appendix D** of the report.

DEWATERING

Groundwater dewatering is not anticipated. If groundwater is encountered during construction, the operator shall file for appropriate dewatering permits (Permit No. COG070000) with the CDPHE.

If groundwater is encountered on the project site, a State of Colorado General Permit for Construction Dewater Activities will be required. The state dewatering permit application and associated information can be found at <https://www.colorado.gov/pacific/cdphe/wq-construction-general-permits>. The permit application will need to be filled out 30 days prior to the anticipated discharge. Refer to the UDFCDs detail and fact sheet for additional dewatering operations information.

AREAS AND VOLUMES

The total anticipated project disturbance area is approximately 8.97 acres. The estimated earthwork quantities are as follows:

Cut: ±9,799 cubic yards

Fill: ±13,402 cubic yards

Net: ±3,603 (Fill) cubic yards

TIMING AND PHASING SCHEDULE

The operator shall utilize the following general construction practices which are required throughout the project at locations shown on the Erosion and Sediment Control Plan or as dictated by construction activities.

- Materials handling and spill prevention
- Waste management and disposal
- Hazardous material storage and containment area
- Vehicle maintenance fueling and storage
- Solid waste containment facility
- Sanitary waste facility
- Street Sweeping (SS) – performed by the Operator

These practices shall remain active and operational throughout the duration of construction and be identified on the Erosion and Sediment Control Plan. Due to any phasing required for the Project, it is understood that these control measures may be relocated as needed to facilitate construction operations. The Operator shall locate and identify the original and current location of these control measures on the Erosion and Sediment Control Plan, throughout the construction of the Project. An updated copy of the Erosion and Sediment Control Plan shall be kept onsite throughout construction of the Project.

General construction sequencing and activities associated with this project are described below. They are presented in the order (or sequence) they are expected to begin, but each activity will not necessarily be completed before the next begins.

The anticipated construction start date is Fall 2022 and the anticipated construction completion date is Winter 2023.

INITIAL PHASE

The initial phase shall consist of applying for and receiving the CDPS General Permit as well as construction/installation of temporary control measures to minimize potential for erosion and sediment transfer while mobilizing and preparing the site for construction activities. The operator shall minimize site disturbance by minimizing the extent of grading and clearing to effectively reduce sediment yield. The operator shall complete the anticipated initial phase sequencing as follows:

1. Prepare and submit the State of Colorado, Colorado Department of Public Health and Environment (CDPHE) Colorado Discharge Permit System (CDPS) General Permit. A copy of the permit shall be provided to the owner upon receipt from the CDPHE.
2. Install two *Vehicle Tracking Control (VTC)* at the proposed site entrances on Ridgestone Dr.
3. Install and denote on the plan any of the following areas: trailer, parking, lay down, porta-potty, wheel wash, concrete washout, fuel and material storage containers, solid waste containers, etc.
4. Prepare *Stabilized Staging Area (SSA)*. Contractor to note the actual size and location of this area and shall minimize this area.
5. Install perimeter controls including *Silt Fence (SF)* as shown on the Erosion and Sediment Control Plans. Ensure that the limits of construction are defined as necessary and known by all parties which will be responsible for construction on the site.
6. Install *Inlet Protection (IP)* around all inlets as denoted on the Erosion and Sediment Control Plans.
7. Upon completion of the initial control measure installation the Operator shall schedule and hold a meeting with the Contractor and Inspector that shall take place prior to the Pre-Construction Meeting.

8. The Operator shall schedule a Pre-Construction Meeting with the City and Owner to confirm control measures installed are adequate prior to proceeding with additional land disturbing activities.
9. Begin clearing and grubbing of the site.
10. Install *Concrete Washout Area (CWA)* prior to construction of concrete improvements.

FINAL PHASE

The final phase shall consist of construction of site improvements, construction of permanent control measures, and final stabilization of the Site. The operator shall complete the anticipated final phase sequencing as follows:

1. Confirm existing control measures from the initial and interim phases, which are to be maintained throughout construction, are in working order and compliant with applicable regulations.
2. Repair and/or replace any existing control measures which are deemed inadequate.
3. *Temporarily Seed (TS)*, throughout construction, denuded areas that will be inactive for 14 days or more.
4. Complete installation of utilities and curb and gutters, as well as add inlet protection to proposed inlets.
5. Permanently stabilize areas to be vegetated as they are brought to final grade.
6. Prepare site for paving.
7. Pave site, including laydown yard, concrete sidewalk, and paved parking lot.
8. Complete grading and installation of *Permanent Seeding (PS)* over all areas in accordance with seeding specifications included in the SMWP Plans.
9. Remove remaining control measures once permanent stabilization has been achieved and accepted by the City Inspector. Repair and stabilize areas disturbed through control measure removal.
10. Notify the owner of intent to file the Notice of Inactivation with CDPHE and receive Owner acceptance to proceed with Stormwater Management Close-out.
11. Proceed with filing the Notice of Inactivation with CDPHE.
12. Provide the Owner with a copy of all stormwater documentation (permits, inspection reports, logs, etc.) upon completion of Project Stormwater Notice of Inactivation.

STORMWATER MANAGEMENT PLAN SITE MAP

SITE MAP MINIMUM REQUIREMENTS

The Site Map for this project is included within **Appendix A** of this report and meets the following minimum requirements:

- Construction Site Boundaries
- Flow Arrows Depicting Stormwater Flow Directions
- Identification of Ground Surface Disturbance
- Areas of Storage of Building Materials, Equipment, Soil or Waste
- Location of Dedicated Asphalt or Concrete Batch Plants (As Applicable)
- Location of Structural Control Measures
- Location of Non-Structural Control Measures
- Location of Springs, Streams, Wetlands or other Surface Waters (As Applicable)
- Location of All Stream Crossings Located Within the Construction Site Boundary (As Applicable)

STORMWATER MANAGEMENT CONTROLS

QUALIFIED STORMWATER MANAGER

The Qualified Stormwater Manager is the Operator selected for the project. The Qualified Stormwater Manager is an individual knowledgeable in the principles and practices of erosion and sediment control and pollution prevention, and with the skills to assess the effectiveness of stormwater controls implemented to meet the requirements of the General Permit. The Qualified Stormwater Manager is responsible for developing, implementing, maintaining and revising the Grading, Erosion and Sediment Control Plan. The activities and responsibilities of the Qualified Stormwater Manager shall address all aspects of the facility's Grading, Erosion and Sediment Control Plan.

Company: _____
Contact: _____
Address: _____

Phone: _____
Email: _____

Qualified Stormwater Manager contact info will be given to the City of Woodland Park prior to work commencing.

SITE SPECIFIC POLLUTION SOURCES

Further identification of site-specific pollutants that fall within the categories outlined in the next section may be field noted using the corresponding log included in **Appendix E** of this report. The logs are intended to record site specific pollutants, the date of arrival on the site, the date removed from the site, and the methods of treatment.

IDENTIFICATION OF POLLUTANT SOURCES

Evaluation of general sediment and non-sediment pollution sources associated with site construction activities, as outlined within the General Permit, consist of the following:

- **Disturbed and Stored Soils** – Earth disturbing activities (grading, excavation, etc.) will be necessary for this project; therefore, the potential exists for disturbed site soils to contribute sediment to stormwater discharges.
- **Vehicle Tracking and Sediment** – Construction traffic will be entering and exiting the Site; therefore, the potential exists for vehicle tracking to contribute sediment to stormwater discharges.
- **Management of Contaminated Soils** – Contaminated soils are not anticipated on this Site. If encountered, the ESC Administrator shall take appropriate containment and treatment measures.
- **Loading and Unloading Operations** – Loading and unloading operations will be taking place at the Site; therefore, the potential exists for these operations to introduce sediment and non-sediment pollutants to stormwater discharges.
- **Outdoor Storage of Materials** – Limited outdoor storage of materials is anticipated with construction of this site; however, outdoor storage of chemicals, fertilizers, etc. is not anticipated.

- **Vehicle and Equipment Maintenance and Fueling** – Routine maintenance and fueling of vehicles and equipment is anticipated with this Site; therefore, the potential exists for pollutants associated with these activities to contribute pollutants to stormwater discharges.
- **Significant Dust or Particulate Generating Processes** – Earth disturbing activities (grading, excavation, etc.) will be necessary for this project; therefore, the potential exists for windblown site soils to contribute sediment to stormwater discharges.
- **Routine Maintenance** – Routine maintenance involving fertilizers, pesticides, detergents, fuels, solvents, oils, etc., other than those identified within Vehicle and Equipment Maintenance and Fueling are not anticipated with this project. If encountered, the ESC Administrator shall take appropriate containment and treatment measures.
- **Onsite Waste Management** – Waste management consisting of solid waste piles, liquid wastes, dumpsters, etc. are anticipated onsite; therefore, the potential exists for these operations to introduce sediment and non-sediment pollutants to stormwater discharges.
- **Concrete Truck / Equipment Washing** – Concrete truck and equipment washing are not anticipated with this project. If encountered, the ESC Administrator shall take appropriate containment and treatment measures.
- **Dedicated Asphalt and Concrete Batch Plants** – Dedicated asphalt and/or concrete batch plants are not anticipated with this project. If encountered, the ESC Administrator shall take appropriate containment and treatment measures and document as necessary.
- **Non-Industrial Waste Sources** – Non-Industrial waste sources limited to portable sanitary facilities are anticipated with this project.
- **Additional Pollutant Sources** – Additional areas or procedures where potential spills could occur are not anticipated with this project.

Logs for the identification of pollutant sources are included in **Appendix E** for reference and use.

Based on the following, the potential to contribute pollutants to stormwater discharges is not significant for most of the pollutants identified above:

- Relatively Low Frequency of the Activities
- The Ability to Schedule Activities During Dry Weather
- Existing Site Topography
- The Ability to Implement Primary and Secondary Containment for Product Storage
- The Ability to Locate Activities Away from Drainage Ways

Potential pollutant sources noted below shall be mitigated by use of Best Management Practices (BMPs) as noted in the following sections:

- Disturbed and Stored Soils
- Vehicle Tracking and Sediment
- Loading and Unloading Operations
- Outdoor Storage
- Vehicle Equipment and Maintenance Fueling
- Significant Dust or Particulate Generating Processes
- Non-Industrial Waste Sources

NON-STORMWATER DISCHARGE COMPONENTS

Only specifically authorized non-stormwater discharges are allowed to enter the storm sewer and all

authorized non-stormwater discharges shall be eliminated or reduced to the extent practical.

Appropriate control measures shall be used to minimize the discharge of pollutants. Such control measures will be strictly followed to ensure any impacts from non-stormwater discharges are reduced or eliminated.

Appropriate control measures are:

- Uncontaminated ground water or spring water

If possible, direct uncontaminated ground water or spring water to stabilized points of discharge. If discharged to a disturbed area, assure measures to control erosive velocities and sediment control measures are implemented. Velocity control measures include riprap aprons and other conveyance measures. Sediment control measures might include stone check dams, sediment traps and basins.

If uncontaminated ground water is discharged off-site, a Construction Dewatering Permit will be required. This Permit will not apply if dewatering is not performed or if water is not discharged off-site.

- Landscape Irrigation Return Flows

Volume of water used for irrigation prior to establishment of vegetation shall be controlled to prevent excess runoff and erosion. Temporary sediment control measures shall remain in place until all upstream disturbed areas are stabilized. Sediment loss will be controlled using sediment control measures such as wattles, sediment fence, and vegetative buffers.

CONTROL MEASURES FOR STORMWATER POLLUTION PREVENTION

There are three general types of control measures that will be utilized for the Project: Erosion Control, Sediment Control, and Site/Material Management control measures. Erosion Control measures are used to limit the amount and extent of erosion. Sediment Control measures are designed to capture eroded sediments prior to their conveyance offsite. Site/Material Management control measures are related to construction access and staging. Several control measures described below may be categorized into more than one of the types described above. Also, these control measures may be categorized into one or more of the following construction phases which pertain to the phase of development in which they may be implemented. Initial Stage control measures shall be installed on existing grades at the outset of construction. Final Stage control measures shall be installed on proposed grades and drainage features after initial site grading. Construction of the identified improvements will take place under two phases of construction anticipated as identified within the construction sequencing included within this report.

Refer to the Erosion and Sediment Control Plans for the location and implementation of erosion control measures for the phases of the Project. The following is a brief description of temporary sediment and erosion control measures to be utilized on this Site and the application those control measures are treating.

EROSION CONTROL

Protection of steep slopes is not anticipated on this project. Steep slopes are defined as slopes greater than 3:1 that are higher than 5-feet vertically. Temporary slopes during construction that are greater than 3:1 need to be addressed along with any permanent slopes which are greater than 3:1. The Permittee may need to implement the use of diversion ditches to reroute the storm runoff, terrace the grades to break up the flow of incidental runoff down slopes, compost mulch to protect the exposed soil or other control

measure as approved by the inspector. Slopes steeper than 3:1 shall be protected with an erosion control blanket. No un-protected final grades shall be allowed greater than 2:1.

Permanent soil erosion control measures for all slopes, channels, ditches, or any disturbed land area shall be completed within fourteen (14) calendar days after final grading or the final earth disturbances have been completed. When it is not possible to permanently stabilize a disturbed area after an earth disturbance has been completed or where significant earth disturbance activity ceases, temporary soil erosion control measures shall be implemented within fourteen (14) calendar days. All temporary soil erosion control measures shall be maintained until permanent soil erosion measures are implemented.

All disturbed areas shall be stabilized as soon as possible. Seeding and Mulching (SM), to provide protection against rain and wind erosion, shall be performed temporarily, as needed, during the pre-construction, initial, and interim phases and maintained until final stabilization is completed. Site Stabilization will be achieved through use of temporary seeding and mulching (TS) and ultimately permanent landscaping (PS). All disturbed areas which are either final graded or will remain inactive for a period of more than 30 days shall be required to be stabilized within 14 days of the completion of the grading activities.

SEDIMENT CONTROL

Silt Fence (SF) is located downstream of disturbed areas and provides a sediment barrier for runoff. SF is installed to help reduce the amount of sediment in surface runoff that will be exiting/entering the Site. SF will be installed along portions of the limits of construction line located throughout the Site as denoted on the Site Map. The SF will be installed during the initial phases of construction activities and maintained throughout construction.

Rock Socks (RS) will be installed along the perimeter of the site on paved areas as shown on the Plans. RSs help trap sediment and shall be installed at angles along the curb line, typically near inlet protection or access driveways.

SITE/MATERIAL MANAGEMENT

Two construction entrances with Vehicle Tracking Control (VTC) shall be installed, both on Ridgestone Drive. Each VTC is located at a proposed entrance/exit, in an effort to reduce off-site sediment tracking. The VTC shall be installed during the initial phase of construction activities.

A stabilized staging area (SSA) to provide an area for construction activities and material storage will be located on the northwest side of the Site near an open clearing adjacent to the road. The SSA provides a designated area for staging of construction materials and equipment, placement of job trailer, contractor parking, etc.

Street Sweeping (SS) is necessary for any site that has trackout onto adjacent sites or roadways. Paved and impervious surfaces which are adjacent to construction sites must be swept on a weekly basis or as needed during the week when sediment and other materials are tracked or discharged onto them. Either sweeping by hand or use of street sweepers is acceptable. Street sweepers using water while sweeping is preferred in order to minimize dust. Scraped or swept material shall not be deposited in the storm sewer. Materials collected by the inlet protection shall be removed and shall not be deposited in the storm sewer. Street sweeping is the responsibility of the Operator and will not be performed by the City to meet the requirements of this Plan.

OTHER POTENTIAL POLLUTION CONSIDERATIONS

MATERIALS HANDLING AND SPILL PREVENTION

Any hazardous or potentially hazardous material that is brought onto the construction site shall be handled properly to reduce the potential for stormwater pollution. In an effort to minimize the potential for a spill of petroleum product or hazardous materials to come in contact with stormwater, the following steps shall be implemented:

- Material Safety Data Sheets (MSDS) information shall be kept on site for any and all applicable materials.
- All materials with hazardous properties (such as pesticides, petroleum products, fertilizers, detergents, construction chemicals, acids, paints, paint solvents, additives for soil stabilization, concrete, curing compounds and additives, etc.) shall be stored in a secure location, under cover and in appropriate, tightly sealed containers when not in use.
- The minimum practical quantity of all such materials shall be kept on the job site and scheduled for delivery as close to time of use as practical.
- A spill control and containment kit shall be provided on the construction site and location(s) shown on Site Maps.
- All of the product in a container shall be used before the container is disposed of. All such containers shall be triple rinsed, with water prior to disposal. The rinse water used in these containers shall be disposed of in a manner in compliance with State and Federal regulations and shall not be allowed to mix with stormwater discharges.
- All products shall be stored in and used from the original container with the original product label and used in strict compliance with the instructions on the product label.
- The disposal of excess or used products shall be in strict compliance with instructions on the product label.

Fueling for construction is anticipated to be conducted with a fuel truck that will not be kept permanently on-site. If utilized, temporary onsite fuel tanks for construction vehicles shall meet all state and federal regulations. Tanks shall have approved spill containment with the capacity required by the applicable regulations. From NFPA 30: All tanks shall be provided with secondary containment (i.e. containment external to and separate from primary containment). Secondary containment shall be constructed of materials of sufficient thickness, density and composition so as not to be structurally weakened as a result of contact with the fuel stored and capable of containing discharged fuel for a period of time equal to or longer than the maximum anticipated time sufficient to allow recovery of discharged fuel.

The tanks shall be in sound condition free of rust or other damage which might compromise containment. Fuel storage areas shall meet all Environmental Protection Agency (EPA), OSHA and other regulatory requirements for signage, fire extinguisher, etc. Hoses, valves, fittings, caps, filler nozzles and associated hardware shall be maintained in proper working condition at all times. The location of fuel tanks shall be shown on the Site Maps and shall be located to minimize exposure to weather and surface water drainage features.

The Operator shall develop and implement a Materials Handling and Spill Prevention Plan (MHSP) in accordance with the EPA and State of Colorado requirements. In the event of an accidental spill, immediate action shall be undertaken by the Operator to contain and remove the spilled material. All hazardous materials, including contaminated soil, shall be disposed of by the Operator in the manner specified by

federal, state and local regulations and by the manufacturer of such products. As soon as possible, the spill shall be reported to the appropriate agencies. As required under the provisions of the Clean Water Act, any spill or discharge entering waters of the United States shall be properly reported. The Operator shall prepare a written record of any spill and associated clean-up activities of petroleum products or hazardous materials in excess of 1 gallon or reportable quantities, whichever is less. A copy of the Spill Report Form is included in **Appendix G** of this report.

Accidental spills shall be handled expeditiously as outlined in CDPHE guidance. Any spills of petroleum products or hazardous materials in excess of Reportable Quantities as defined by EPA or the state or local agency regulations, shall be immediately reported to the Colorado Department of Public Health and Environment spill reporting lines.

- CDPHE Environmental Release and Incident Reporting Line (877) 518-5608.
- National Response Center - (800) 424-8802

VEHICLE TRACKING AND DUST CONTROL

Vehicle Tracking Control measures (structural and non-structural) shall be implemented in order to control potential sediment discharges from vehicle tracking. Practices shall be implemented for all areas of potential vehicle tracking which include but are not limited to reduced site access and utilization of designated haul routes.

Areas of soil that are denuded of vegetation and have little protection from particles being picked up and carried by wind should be protected with a temporary cover or kept under control with water or other soil adhering products to limit wind transported particles exiting the site perimeter.

DEDICATED CONCRETE OR ASPHALT BATCH PLANTS

Dedicated concrete or asphalt batch plants are not anticipated with this project. If encountered, the Qualified Stormwater Manager shall take appropriate containment and treatment measures and document as necessary.

WASTE MANAGEMENT AND DISPOSAL

An effective first step towards preventing pollution in stormwater from work sites involves using a common-sense approach to improve the facility's basic housekeeping methods. Poor housekeeping practices result in increased waste and potential for stormwater contamination.

No solid materials are allowed to be discharged from the site with stormwater. All solid waste, including disposable materials incidental to the construction activities, must be collected and placed in containers. Secure covers for the containers shall be provided if required by state and local requirements. The location of solid waste receptacles shall be identified on the SWMP by the Operator.

Concrete waste is anticipated with this project; and therefore, a dedicated concrete washout is required. The Qualified Stormwater Manager shall take appropriate containment and treatment measures and document as necessary

GROUNDWATER AND STORMWATER DEWATERING

Except as noted below, all discharges covered by this permit shall be composed entirely of stormwater associated with construction activity.

- Emergency Fire Fighting Activities
- Uncontaminated Spring Water

Groundwater dewatering is not anticipated. If groundwater is encountered during construction, the operator shall file for appropriate dewatering permits (Permit No. COG070000) with the CDPHE.

STABILIZATION AND STORMWATER MANAGEMENT

TEMPORARY STABILIZATION AND SHORT-TERM STORMWATER MANAGEMENT

The City considers the completion of over-lot grading operations, by definition, to be substantially complete; therefore, all areas that will be dormant for more than 30 days after the completion of the over-lot grading will require temporary seeding within 14 days of establishment. This does not preclude the 7-day requirement for areas fully completed in the future. At a minimum, in ensuring that this requirement is followed, adequate phasing/scheduling will be required.

FINAL STABILIZATION AND LONG-TERM STORMWATER MANAGEMENT

In the natural condition, the site soil is stabilized by means of native vegetation. The final stabilization technique to be used at this project for stabilizing soils shall be to provide a protective cover of landscaping vegetation, pavement and granular stabilization material. Seeding should be conducted after final grade is achieved and soils are prepared to take advantage of soil moisture and seed germination. The Qualified Stormwater Manager should evaluate the short and long-term forecasts prior to applying permanent seed.

Final site stabilization is achieved when vegetative cover provides permanent stabilization with a density greater than 70 percent of the pre-disturbance levels, or equivalent permanent, physical erosion reduction methods have been employed over the entire area to be stabilized by vegetative cover. This area is exclusive of areas that are covered with rock (crushed granite, gravel, etc.) or landscape mulch, paved or have a building or other permanent structure on them.

INSPECTION AND MAINTENANCE

Inspections shall be the responsibility of the Qualified Stormwater Manager throughout the construction process.

INSPECTION SCHEDULE REQUIREMENTS

Inspection and maintenance of erosion control measures shall comply with the criteria set forth by the General Permit (COR400000), or the following, whichever is more stringent.

The Permittee or Contractor shall make routine checks of all erosion control measures to determine if repairs or sediment removal is necessary. Written inspection records a minimum of once biweekly and within 24 hours after every significant precipitation event or after every significant precipitation event that

causes surface erosion. All necessary maintenance and repair shall be completed immediately. If more frequent inspections are required to ensure that control measures are properly maintained and operated, the inspection schedule shall be modified to meet this need.

When snow cover exists over the entire site for an extended period, inspections are not always feasible. This condition should be documented, including date of snowfall and date of melting conditions to bring awareness of and preparation for areas where melting conditions may pose a risk of surface erosion.

A copy of the SWMP shall be maintained at the site at all times. Any degradation of the control measures described in the SWMP or excessive accumulation of sediments shall be remedied immediately upon discovery. The Contractor shall record all storm events on the Storm Event Log included in **Appendix H**.

INSPECTION PROCEDURES

The inspection shall include observations of:

- The Construction Site Perimeter and Discharge Points;
- All Disturbed Areas;
- Vehicles and Equipment;
- Areas Used for Material / Waste Storage That are Exposed to Precipitation;
- Other Areas Determined to Have a Significant Potential for Stormwater Pollution;
- Erosion and Sediment Control Measures Identified in the SWMP; and
- Any Other Structural Control Measures That May Require Maintenance.

The inspection must determine if there is evidence of, or the potential for, pollutants entering the drainage system. Control measures should be reviewed to determine if they still meet the design intent and operational criteria in the SWMP and if they continue to adequately control pollutants at the site. Any control measures not operating in accordance with the SWMP must be addressed as soon as possible, immediately in most cases, to minimize the discharge of pollutants and the SWMP must be updated and inspections must be documented.

Examples of specific items to evaluate during site inspections are listed below. This list is not intended to be comprehensive. Ultimately, it is the responsibility of the Contractor to assure the adequacy of site pollutant discharge controls. Actual physical site conditions or contractor practices could make it necessary to install more controls than are shown on the plans. Assessing the need for additional controls and implementing them or adjusting existing controls will be an ongoing requirement until the site achieves final stabilization.

1. Vehicle Tracking Control - Locations where vehicles enter and exit the site shall be inspected for evidence of offsite sediment tracking. Exits shall be maintained as necessary to prevent the release of sediment from vehicles leaving the site. Any sediment deposited on the adjacent roadway shall be removed as necessary throughout the day or at the end of every day and disposed of in an appropriate manner. Sediment shall not be washed into storm sewer systems.
2. Erosion Control Devices - Rolled erosion control products (nets, blankets, turf reinforcement mats) and marginally vegetated areas (areas not meeting required vegetative densities for final stabilization) must be inspected frequently. Riling, rutting and other signs of erosion indicate the erosion control device is not functioning properly and additional erosion control devices are warranted.
3. Sediment Control Devices - Sediment barriers (silt fence, sediment control logs, etc.), traps and basins must be inspected, and they must be cleaned out at such time as their original capacity has been reduced by 50 percent. All material excavated from behind sediment barriers or in traps and

basins shall be incorporated into onsite soils or spread out on an upland portion of the site and stabilized. To minimize the potential for sediment releases from the Project, site perimeter control devices shall be inspected with consideration given to changing up-gradient conditions.

4. Material Storage Areas - Material storage areas should be located to minimize exposure to weather. Inspections shall evaluate disturbed areas and areas used for storing materials that are exposed to rainfall for evidence of, or the potential for, pollutants entering the drainage system or discharging from the site. If necessary, the materials must be covered, or original covers must be repaired or supplemented. Also, protective berms must be constructed, if needed, in order to contain runoff from material storage areas. All state and local regulations pertaining to material storage areas shall be adhered to.
5. Vegetation - Seed/Sod shall be free of weedy species and appropriate for site soils and regional climate. Seeding, sodding, tacking, and mulching shall be completed, in accordance with the requirements outlined within the Project Manual and locations identified within the plans, immediately after topsoil is applied and final grade is reached. Grassed areas shall be inspected to confirm that a healthy stand of grass is maintained. Rip-rap, mulch, gravel, decomposed granite or other equivalent permanent stabilization measures may be employed in lieu of vegetation based on site-specific conditions and Owner approval.
6. Discharge Points - All discharge points must be inspected to determine whether erosion and sediment control measures are effective in preventing discharge of sediment from the site or impacts to receiving waters.

Based on the inspection results, all necessary maintenance and repair shall be completed immediately and in no cases longer than seventy-two (72) hours after identification. The inspection reports must be completed after each inspection. An important aspect of the inspection report is the description of additional measures that need to be taken to enhance plan effectiveness. The inspection report must identify whether the site was in compliance with the SWMP at the time of inspection and specifically identify all incidents of non-compliance.

The Qualified Stormwater Manager shall ensure that, at a minimum, the following is recorded for each inspection and kept onsite for reference:

- a. The inspector's name (must be a Qualified Stormwater Manager),
- b. The date and type of the inspection (regular inspection vs. post-storm inspection),
- c. Weather conditions at the time of the inspection,
- d. Phase of construction at the time of the inspection,
- e. Estimated acreage of disturbance at the time of inspection,
- f. The minimum frequency of inspections chosen,
- g. Location(s) of discharges of sediment or other pollutants from the site,
- h. Location(s) of control measures needing maintenance,
- i. Location(s) and identification of inadequate control measures
- j. Location(s) and identification of additional control measures are needed that were not in place at the time of inspection, and
- k. Any corrective actions taken.

If repairs are needed to any control measures, they shall be completed immediately. After adequate corrective action(s) and maintenance have been taken, or where a report does not identify any incidents requiring corrective action or maintenance, the report shall contain a statement stating the following:

"I verify that, to the best of my knowledge and belief, all corrective action and maintenance items identified during the inspection are complete, and the site is currently in compliance with the permit."

This statement must be signed by a Qualified Stormwater Manager. If it is infeasible to install or repair of control measure immediately after discovering the deficiency, the following information must be

documented and kept on record:

1. Describe why it is infeasible to initiate the installation or repair immediately; and
2. Provide a schedule for installing or repairing the control measure and returning it to an effective operating condition as soon as possible.

The use and maintenance of log books, photographs, field notebooks, drawings or maps should also be included in the SWMP records when appropriate. Copies of the Inspection and Sampling Report Forms have been included in **Appendix I** for reference and use.

CONTROL MEASURE MAINTENANCE / REPLACEMENT AND FAILED CONTROL MEASURES

Site inspection procedures noted above must address maintenance of control measures that are found to no longer function as needed and designed, as well as preventive measures to proactively ensure continued operation.

The Qualified Stormwater Manager shall implement a preventative maintenance program to ensure that control measure breakdowns and failures are handled proactively. Site inspections should uncover any conditions which could result in the discharge of pollutants to storm sewers and surface waters and shall be rectified. For example, sediment shall be removed from silt fences on a regular basis to prevent failure of the control measure. Sediment shall be removed to an appropriate location so that it will not become an additional pollutant source.

The inspection process must also include replacement of control measures when needed or the addition of new control measures in order to adequately manage the pollutant sources at the site.

Any control measure deficiencies, replacement or additional control measures that may be required shall be documented on the Stormwater Management Site Map and on the appropriate Inspection Form. If amendments to the SWMP are required, these amendments shall be documented on the SWMP Amendment Log included in **Appendix J** for reference and use.

DISPOSITION OF TEMPORARY MEASURES

Most temporary erosion and sediment control measures must be removed within 30 days after final site stabilization is achieved. Trapped sediment and disturbed soil areas resulting from the disposal of temporary measures must be returned to final plan grades and permanently stabilized to prevent further soil erosion.

PLAN MODIFICATIONS

Plan revisions made prior to or following a change(s) onsite, including revisions to sections addressing site conditions and control measures, a notation must be included in the plan that identifies:

- Date of site change,
- The control measure removed or modified,
- The location(s) of those control measures, and
- Any changes to the control measure.

REFERENCES

Colorado Discharge Permit System (CDPS) – Stormwater Discharge Associated with Construction Activities Application - Prepared by Water Quality Control Division, Colorado Department of Public Health and Environment; Revised April 2019.

Colorado Discharge Permit System (CDPS) General Permit – Stormwater Discharges Associated with Construction Activity - Prepared by Water Quality Control Division, Colorado Department of Public Health and Environment; signed and issued on May 31, 2007 and administratively continued effective July 1, 2012.

NRCS Web Soil Survey - Website: <http://websoilsurvey.nrcs.usda.gov>, accessed August 20, 2019.

Stormwater Discharges Associated with Construction Activity – Stormwater Management Plan Preparation Guidance - Prepared by Water Quality Control Division, Colorado Department of Public Health and Environment; Revised April 2011.

Threatened, Endangered, Candidate and Proposed Species by County - Prepared by US Department of the Interior, Fish and Wildlife Services, Ecological Services, Colorado Field Offices; printed March 2019.

Urban Storm Drainage Criteria Manual, Volume 3 - Urban Drainage and Flood Control District, Denver, CO.; November 2015.

APPENDIX

APPENDIX A

STORMWATER MANAGEMENT PLANS / SITE MAPS

STONE RIDGE MULTI-FAMILY TRACTS A AND F - WOODLAND PARK
EROSION CONTROL CONSTRUCTION DOCUMENTS
TRACTS A AND F

LOCATED IN THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 12 SOUTH, RANGE 69 WEST OF THE 6TH
P.M. CITY OF WOODLAND PARK, COUNTY OF TELLER, STATE OF COLORADO

LAND AREA:

392,510 SQ. FT. OR 9.01 ACRES MORE OR LESS

BASIS OF BEARING:

BEGINNING AT THE MOST NORTHERLY CORNER OF LOT 1, STONE RIDGE VILLAGE FILING NO. 3, AS RECORDED UNDER RECEPTION NO. 702446 OF SAID COUNTY RECORDS, SAID POINT ALSO BEING A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF RIDGESTONE DRIVE, AS SHOWN ON THE PLAT OF STONE RIDGE VILLAGE FILING NO. 4, AS RECORDED UNDER RECEPTION NO. 719801 OF SAID COUNTY RECORDS, FROM WHICH THE MOST EASTERLY CORNER OF LOT 5 OF SAID STONE RIDGE VILLAGE FILING NO. 3 BEARS S64°48'09"E, A DISTANCE OF 537.28 FEET AND IS THE BASIS OF BEARING USED HEREIN.

BENCHMARK:

ELEVATIONS ARE BASED UPON NGS POINT DESIGANTION "B 174" (ELEVATION = 8202.88 NAVD88).

LEGAL DESCRIPTION

TRACTS A AND F, STONE RIDGE VILLAGE, IN THE CITY OF WOODLAND PARK, COUNTY OF TELLER, STATE OF COLORADO

FEMA CLASSIFICATION

THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP NO. 08119C0139D, EFFECTIVE DATE SEPTEMBER 25, 2009, INDICATES THAT THERE IS A SMALL AREA (0.04 ACRES) IN THE NORTHEASTERN CORNER OF THE SITE THAT FALLS WITHIN ZONE AE (THE FLOODWAY IS THE CHANNEL OF A STREAM PLUS ANY ADJACENT FLOODPLAIN AREAS THAT MUST BE KEPT FREE OF ENCROACHMENT SO THAT THE 1% ANNUAL CHANCE FLOOD CAN BE CARRIED WITHOUT SUBSTANTIAL INCREASE IN FLOOD HEIGHTS). THE REMAINING PARCEL OF LAND TO BE LOCATED IN ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN).

SITE SUMMARY DATA

SITE AREA: 9.01± AC (392,510 SF)

EXISTING LAND USE: VACANT LAND

EXISTING ZONING: PLANNED UNIT DEVELOPMENT (PUD)

PROPOSED LAND USE: MULTI-FAMILY DWELLINGS, WHICH FALLS INTO TO EXISTING SITE ZONING OF PLANNED UNIT DEVELOPMENT

ACCOUNT NO:

PARCEL ID: 6229.132000880 AND 6229.132000020

SOIL TYPE: 100% +/- SOIL TYPE A/B FOUND ON SITE

SCHEDULE:

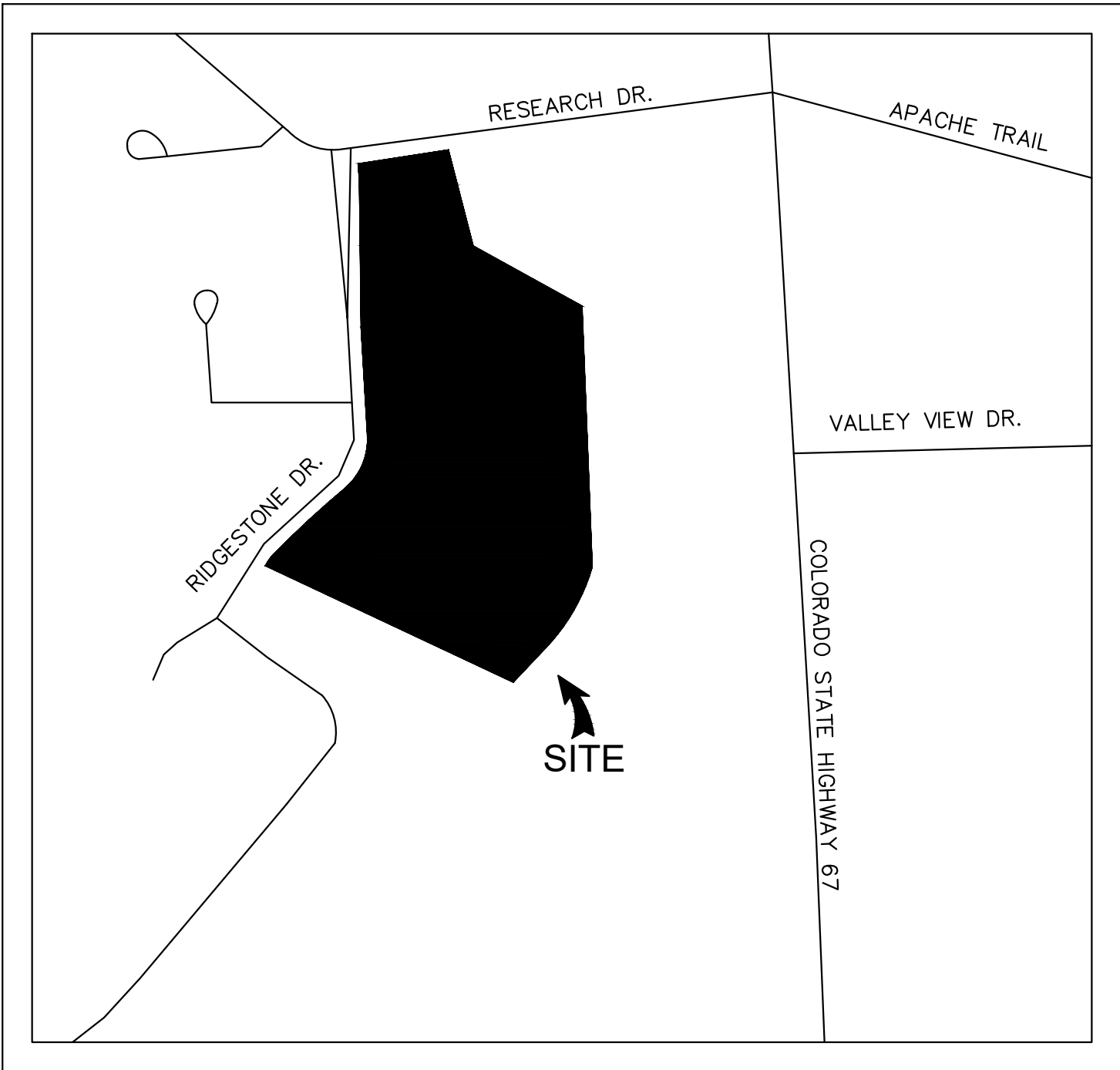
ANTICIPATED START DATE: FALL 2022
ANTICIPATED COMPLETION DATE: WINTER 2023

STANDARD GRADING EROSION AND STORMWATER QUALITY
CONTROL PLAN NOTES:

THE INTENT OF THIS PLAN IS TO IDENTIFY THE EROSION CONTROL PRACTICES RECOMMENDED. THE CONTRACTOR SHALL REFERENCE ADDITIONAL CONSTRUCTION PLANS FOR DEMOLITION OF EXISTING AND CONSTRUCTION OF PROPOSED IMPROVEMENTS.

- STANDARD DETAILS INCORPORATED BY REFERENCE WITHIN THIS DRAWING SHALL CONSIST OF THE STANDARD DETAILS INDICATED AND ALL SUBSEQUENT DETAILS WITH MAY BE REFERENCED THEREIN.
- CONTRACTOR SHALL LOCATE ON SWMP PLANS SIZE AND LOCATION OF ALL STOCKPILES.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE IMPROVEMENTS SHOWN BY THESE PLANS.
- CONTRACTOR TO LIMIT DISTURBANCE OF SITE IN STRICT ACCORDANCE WITH THE EROSION CONTROL SHOWN ON THIS PLAN. NO UNNECESSARY OR IMPROPERLY SEQUENCED CLEARING AND/OR GRADING SHALL BE PERMITTED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ELIMINATE TRACK-OUT FROM THE AREAS WITHIN THE LIMITS OF DISTURBANCE. NO STOCKPILING, TEMPORARY STORAGE OF STAGING OF EITHER NEW, SALVAGED OR WASTE MATERIAL SHALL BE ALLOWED BEYOND THE LIMITS BUT WITHIN LIMITS OF DISTURBANCE MAY BE USED FOR CONTRACTOR PARKING. ANY DISTURBANCE BEYOND THE LIMITS OF DISTURBANCE IS STRICTLY PROHIBITED.

THE DESIGN PROFESSIONAL RESPONSIBLE FOR THIS PLAN HAS FAMILIARIZED THEMSELVES WITH ALL CURRENT ADA CRITERIA AND SPECIFICATIONS, AND THE PROPOSED PLAN REFLECTS REQUIRED SITE ELEMENTS. SEE "2010 ADA STANDARDS FOR ACCESSIBLE DESIGN", AS PUBLISHED BY THE DEPARTMENT OF JUSTICE (DOJ).



VICINITY MAP
NTS

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
1	COVER SHEET - GEC
2	EROSION CONTROL PLAN - INITIAL
3	EROSION CONTROL PLAN - FINAL
4	EROSION CONTROL DETAILS
5	EROSION CONTROL DETAILS
6	EROSION CONTROL DETAILS
7	EROSION CONTROL DETAILS

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DESIGNED BY: KRK
DRAWN BY: AJL
CHECKED BY: KRK
DATE: 01/18/22

STONERIDGE MF TRACT A & F
GRADING AND EROSION CONTROL PLANS
COVER SHEET - GEC

PROJECT NO.
196259000

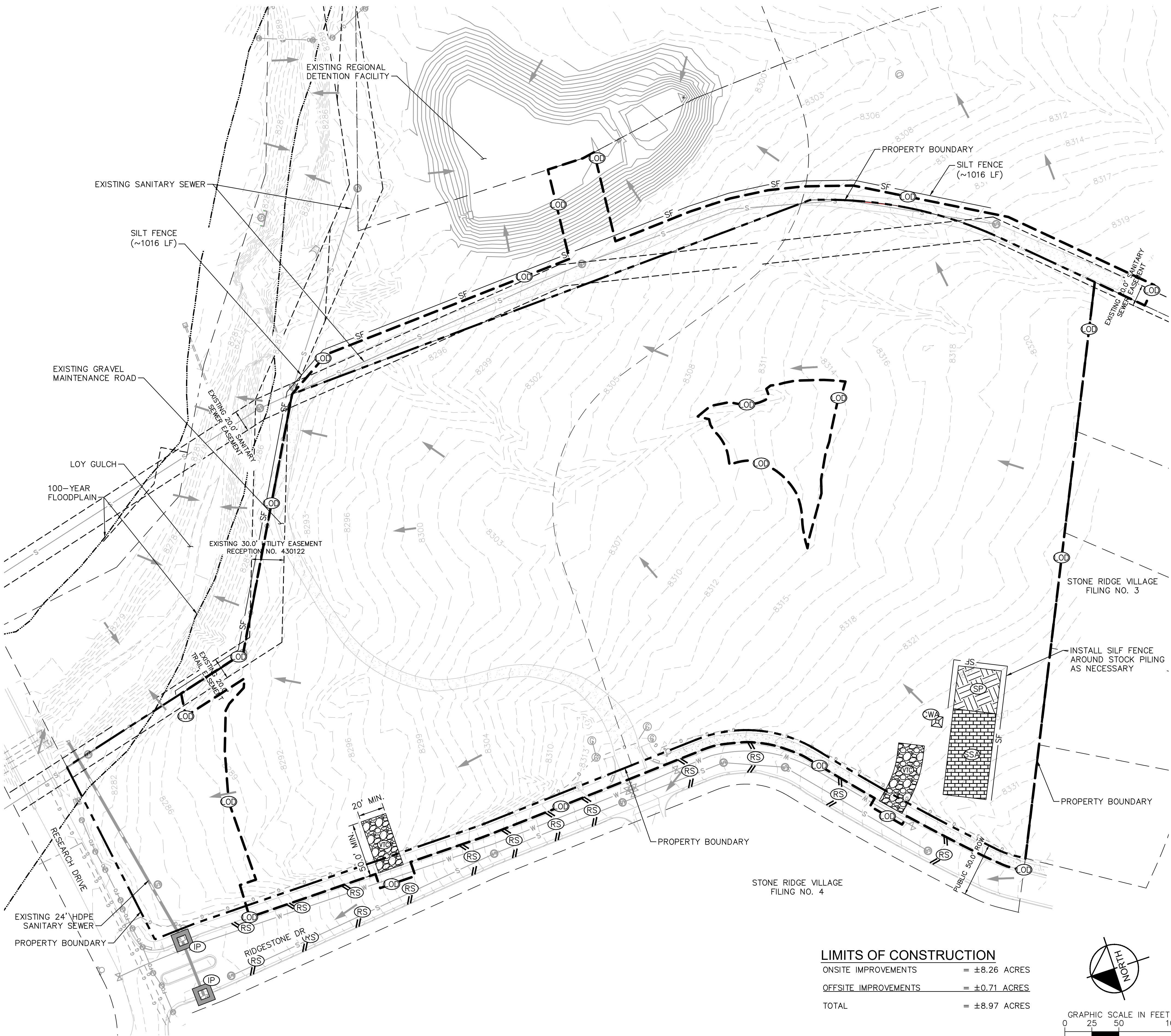
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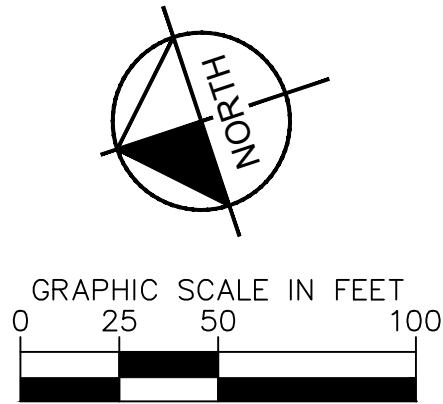


Know what's below.
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LIMITS OF CONSTRUCTION	
ONSITE IMPROVEMENTS	= ±8.26 ACRES
OFFSITE IMPROVEMENTS	= ±0.71 ACRES
TOTAL	= ±8.97 ACRES

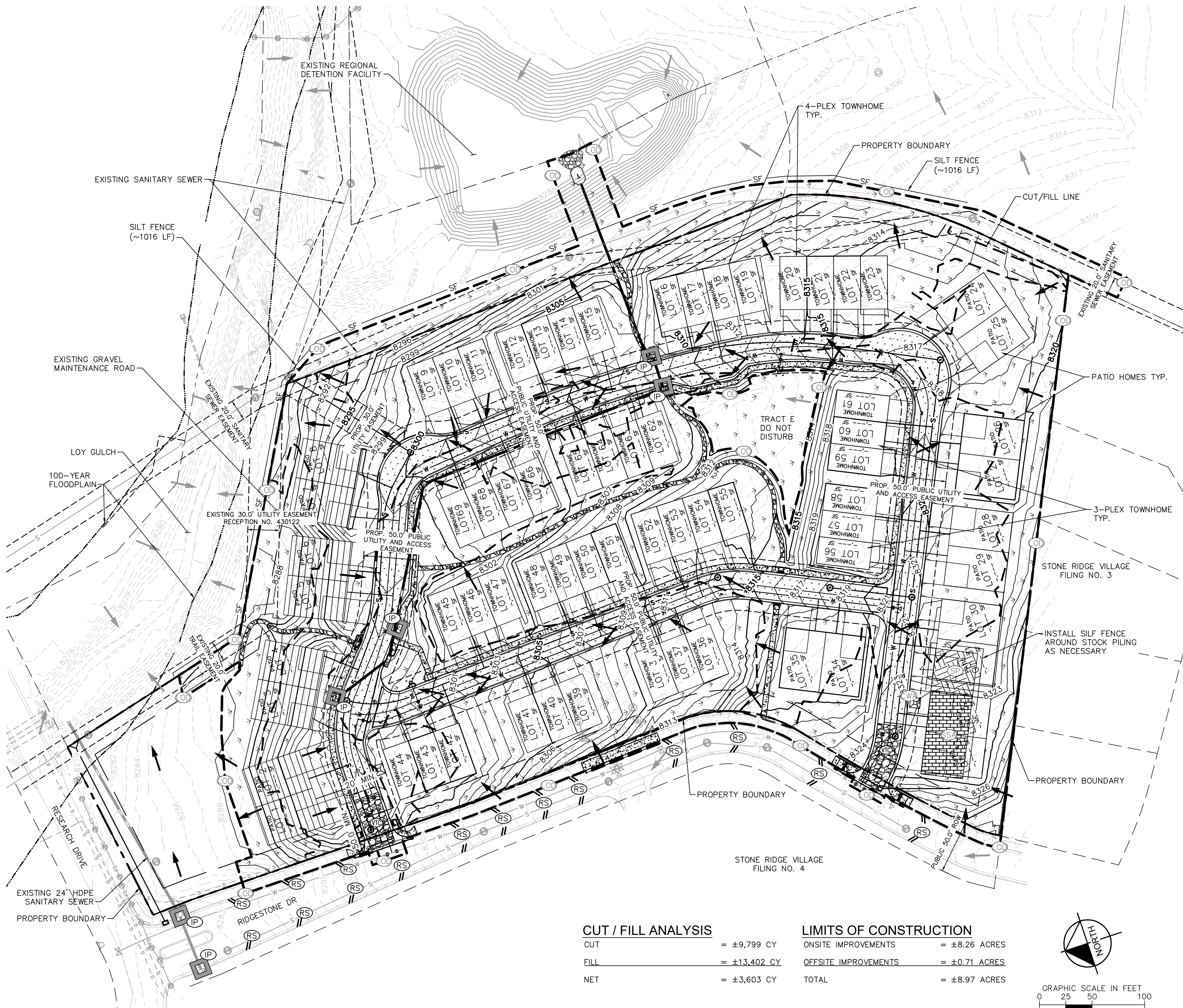


LEGEND:	
	PROPERTY BOUNDARY
	LOT LINE
	EASEMENT
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	LOD LIMITS OF DISTURBANCE
	CF CONSTRUCTION FENCE
	SF SILT FENCE
	CUT/FILL LINE
	SSA STABILIZED STAGING AREA
	CWA CONCRETE WASHOUT
	VTC VEHICLE TRACKING CONTROL
	RS CURB SOCKS (ROCK SOCKS)
	SP SOIL STOCKPILE
	IP INLET PROTECTION
	FLOW ARROW
	FINAL STABILIZATION. (REFERENCE LANDSCAPING PLANS)

- NOTES**
1. THE INTENT OF THIS PLAN IS TO IDENTIFY THE EROSION CONTROL PRACTICES RECOMMENDED. THE CONTRACTOR SHALL REFERENCE ADDITIONAL CONSTRUCTION PLANS FOR DEMOLITION OF EXISTING AND CONSTRUCTION OF PROPOSED IMPROVEMENTS.
 2. ADJACENT STREETS AND SIDEWALK SHALL BE KEPT CLEAN AND FREE OF SEDIMENT AND/OR DEBRIS AT ALL TIMES. CONTRACTOR SHALL PERFORM STREET SWEEPING AT ALL TIMES DURING ACTIVE TRACKING AND AT A MINIMUM ON A DAILY BASIS AT THE END OF EACH CONSTRUCTION DAY.
 3. TEMPORARY STABILIZATION (TS) SHALL BE IMPLEMENTED WITHIN THE DISTURBED PORTIONS OF THE PROJECT SITE NO LATER THAN 14 DAYS FOLLOWING THE CEASE OF CONSTRUCTION ACTIVITIES WITHIN THE DISTURBED AREAS.
 4. PERMANENT STABILIZATION (PS) MAY BE USED WITHIN AREAS OF TEMPORARY STABILIZATION (TS) AT THE CONTRACTOR'S DISCRETION. STABILIZATION SHALL BE APPLIED IN ACCORDANCE WITH APPLICABLE TEMPORARY STABILIZATION SEQUENCING REQUIREMENTS.
 5. CONTRACTOR SHALL UTILIZE ROLLED EROSION CONTROL PRODUCTS ON ALL SLOPES 3H:1V OR GREATER TO ACHIEVE REQUIRED STABILIZATION.
 6. CONTRACTOR SHALL MAINTAIN ACCEPTABLE EROSION CONTROL PRACTICES WITHIN THE ANTICIPATED LIMITS OF CONSTRUCTION IDENTIFIED HEREIN. BEST MANAGEMENT PRACTICES AND STABILIZATION SHALL BE COMPLETED AS IDENTIFIED HEREIN IN ACCORDANCE WITHIN OWNER REQUIREMENTS.
 7. ALL WORK IN THE PRIVATE SHARED ACCESS ROW REQUIRES AN AGREEMENT BETWEEN THE SELLER AND MCDONALD'S.
 8. CONTRACTOR SHALL REFER TO THE APPROVED GEOTECHNICAL REPORT FOR OVEREXCAVATION REQUIREMENTS AND ADDITIONAL INFORMATION.
 9. SILT FENCE TO BE INSTALLED PRIOR TO COMMENCEMENT OF ONSITE GRADING AND CONSTRUCTION ACTIVITIES.
 10. DEMOLITION, REMOVAL AND SOIL TREATMENT SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER RECOMMENDATIONS AS NOTED IN THE APPROVED PROJECT GEOTECHNICAL REPORT.
 11. CONTRACTOR TO NOTE PROXIMITY OF EXISTING IMPROVEMENTS ADJACENT TO THE SITE AND PROVIDE NECESSARY MEASURES TO PROTECT ALL FACILITIES AND STRUCTURES IN PLACE.
 12. CONTRACTOR SHALL MAINTAIN STABILIZED STAGING AREA (SSA), VEHICLE TRACKING CONTROL (VTC), AND CONCRETE WASHOUT AREA (CWA) AT THE CONSTRUCTION ENTRANCE AT ALL TIMES. CONTRACTOR SHALL UPDATE THE EROSION CONTROL PLAN IN THE FIELD TO INDICATE THE LOCATION OF THE SSA, VTC, AND CWA BMPS AS EXCAVATION SEQUENCING DICTATES.
 13. CONTRACTOR MAY SUBSTITUTE SEDIMENT CONTROL LOGS (SCL) FOR SILT FENCE (SF) AS PERIMETER CONTROL, DEPENDING UPON SITE CONDITIONS. SCL, AND SF MAY BE INTERCHANGED DEPENDING ON SITE CONDITIONS.
 14. CONTRACTOR SHALL OBTAIN R.O.W. PERMITS FOR ANY R.O.W. CLOSURES.



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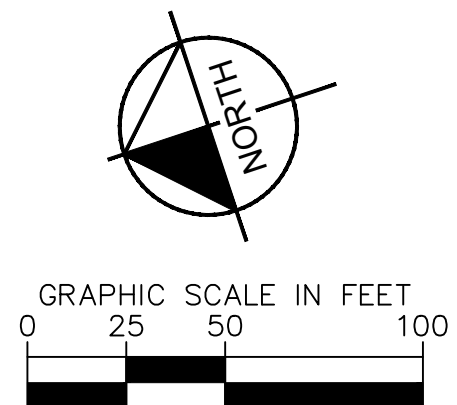


CUT / FILL ANALYSIS

CUT = ±9,799 CY
FILL = ±13,402 CY
NET = ±3,603 CY

LIMITS OF CONSTRUCTION

ONSITE IMPROVEMENTS = ±8.26 ACRES
OFFSITE IMPROVEMENTS = ±0.71 ACRES
TOTAL = ±8.97 ACRES



LEGEND:

- PROPERTY BOUNDARY
- LOT LINE
- EASEMENT
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- LIMITS OF DISTURBANCE
- CONSTRUCTION FENCE
- SILT FENCE
- CUT/FILL LINE
- STABILIZED STAGING AREA
- CONCRETE WASHOUT
- VEHICLE TRACKING CONTROL
- CURB SOCKS (ROCK SOCKS)
- SOIL STOCKPILE
- INLET PROTECTION
- FLOW ARROW
- FINAL STABILIZATION. (REFERENCE LANDSCAPING PLANS)

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STONERIDGE MF TRACT A & F
GRADING AND EROSION CONTROL PLANS
EROSION CONTROL PLAN - FINAL

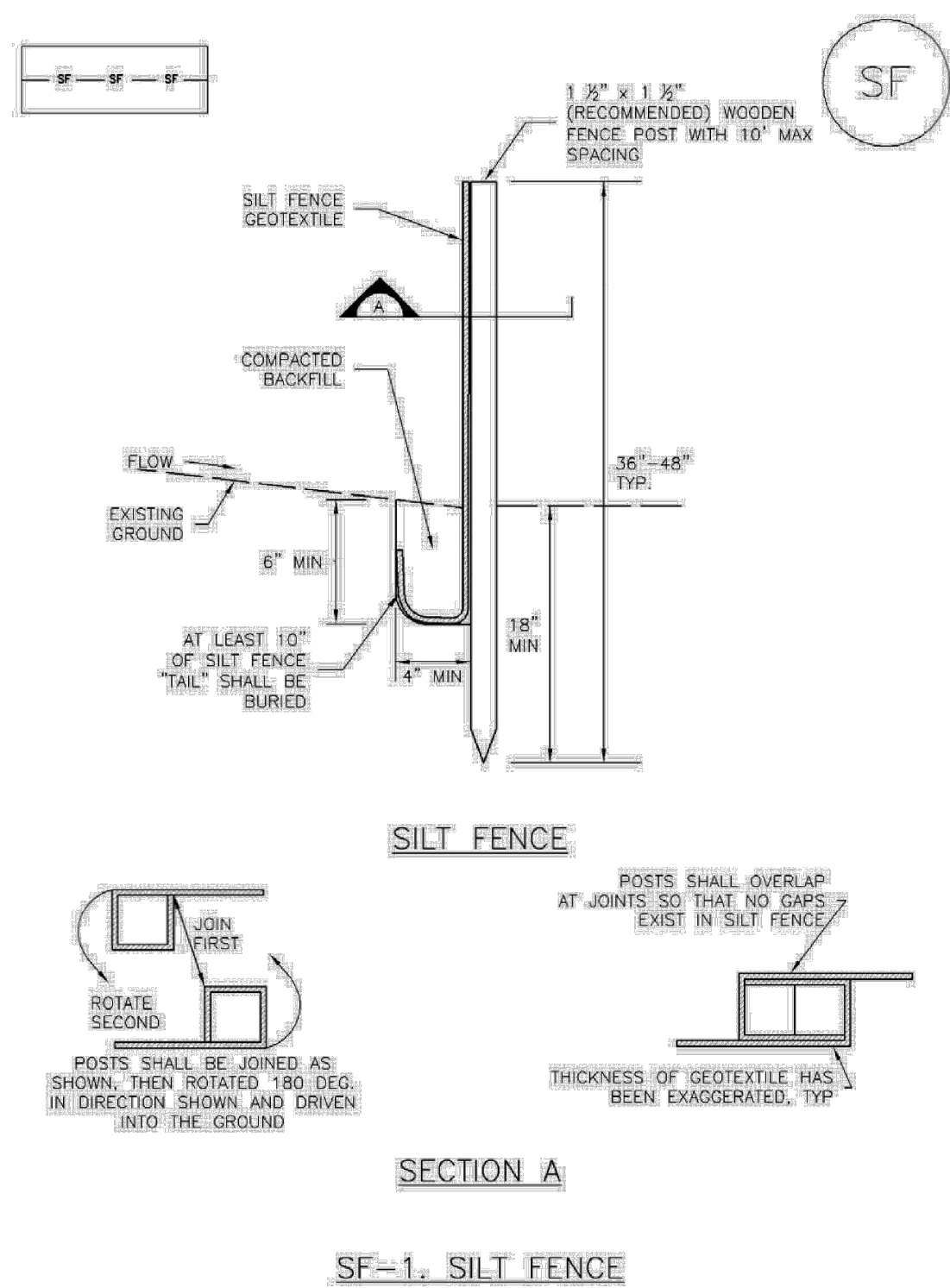
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Silt Fence (SF)

SC-1



November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SF-3

SC-1

Silt Fence (SF)

SILT FENCE INSTALLATION NOTES

1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.
2. A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.
3. COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.
6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "U-HOOK." THE "U-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' - 20').
7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".
5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.
6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.
7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

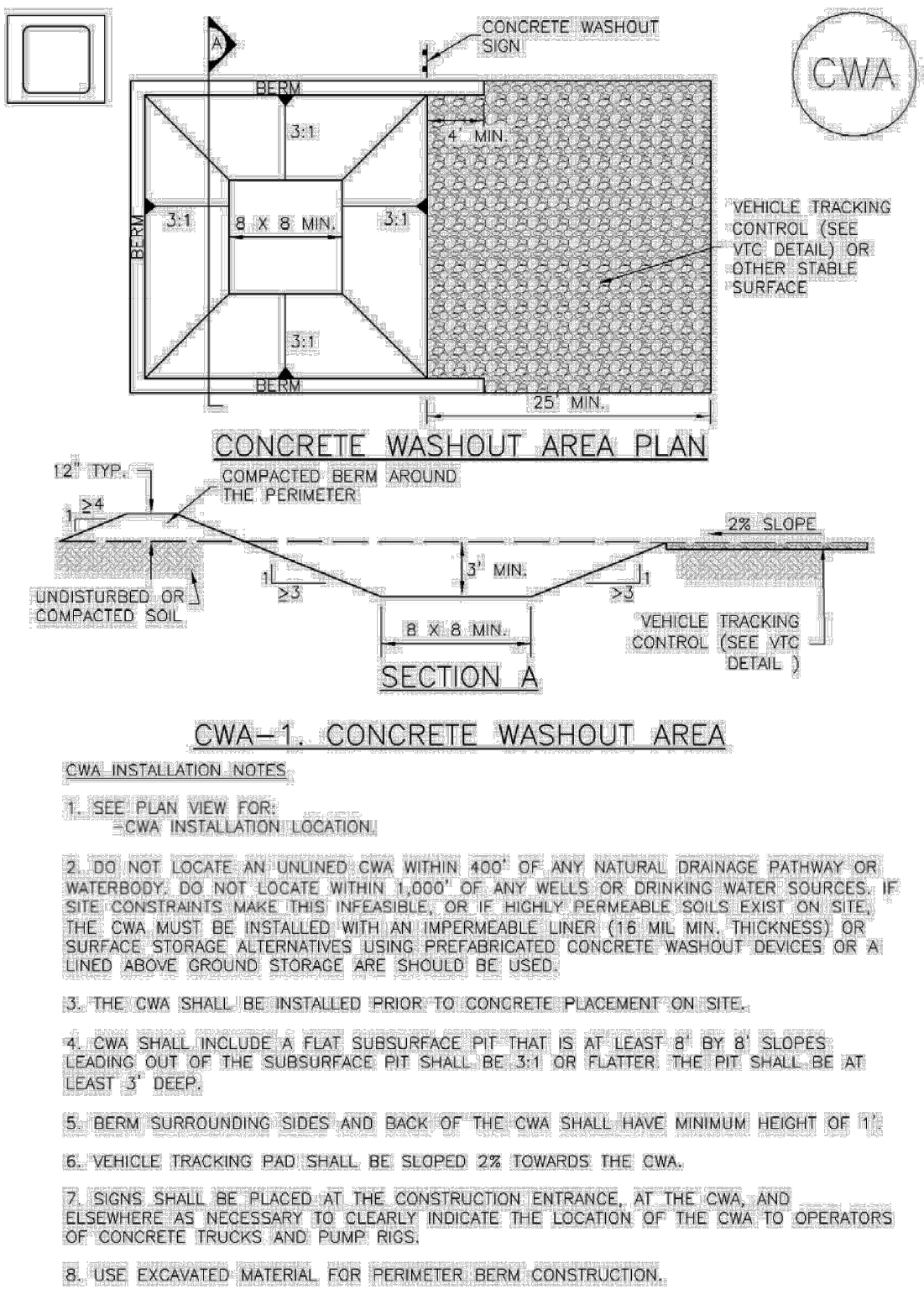
[DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO; NOT AVAILABLE IN AUTOCAD]

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SF-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Concrete Washout Area (CWA)

MM-1



November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 CWA-3

MM-1

Concrete Washout Area (CWA)

CWA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS ACCUMULATED IN PIT SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.
5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED, AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

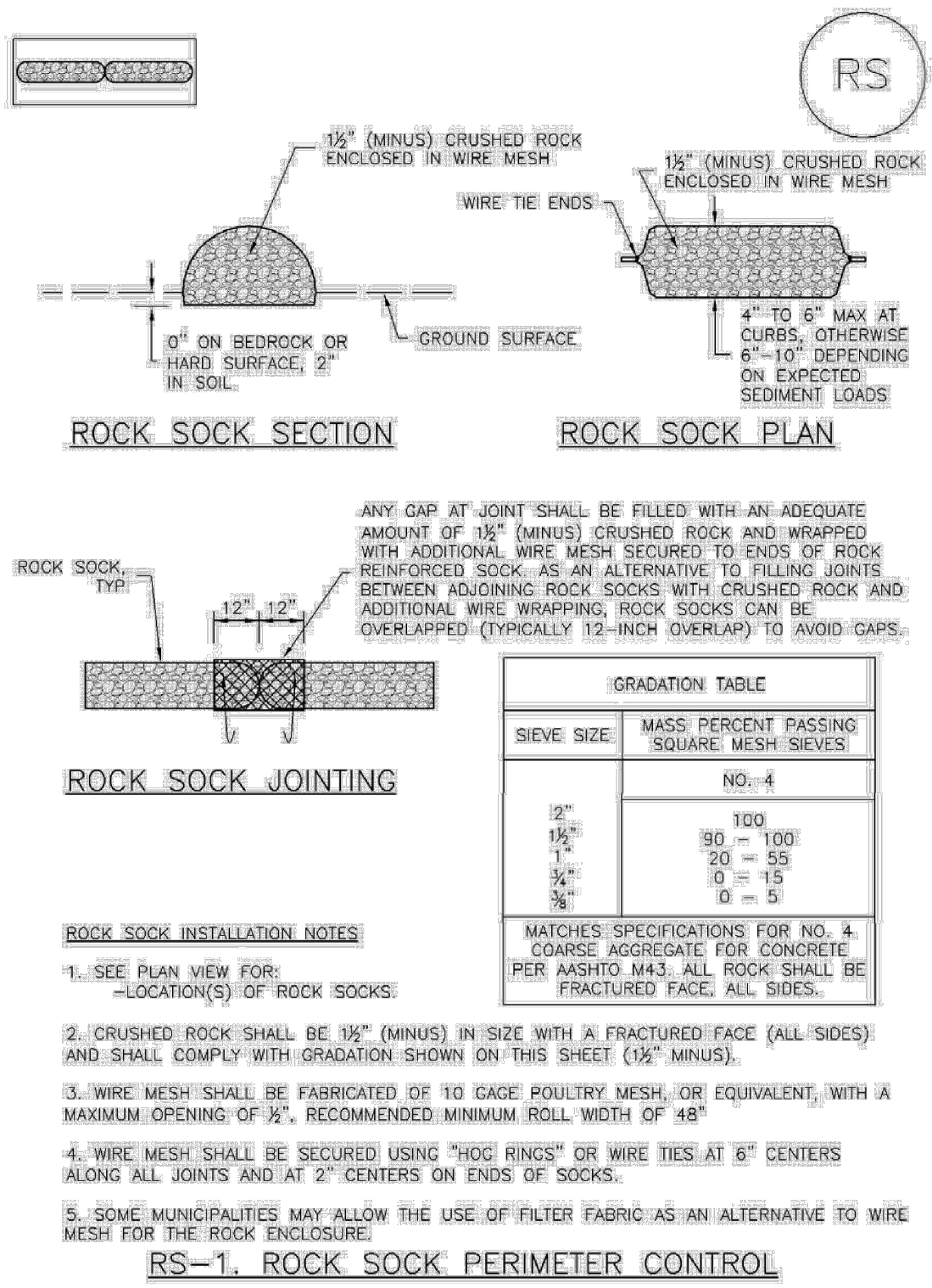
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NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

CWA-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

SC-5

Rock Sock (RS)



November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 RS-2

Rock Sock (RS)

SC-5

ROCK SOCK MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ROCK SOCKS SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, OR DAMAGED BEYOND REPAIR.
5. SEDIMENT ACCUMULATED UPSTREAM OF ROCK SOCKS SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE ROCK SOCK.
6. ROCK SOCKS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
7. WHEN ROCK SOCKS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

[DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO; NOT AVAILABLE IN AUTOCAD]

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF ROCK SOCK INSTALLATION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY OTHER SIMILAR PROPRIETARY PRODUCTS ON THE MARKET. UDFCD NEITHER ENDORSES NOR DISCOURAGES USE OF PROPRIETARY PROTECTION PRODUCTS; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SHOP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 RS-3

Kimley»Horn

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Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KRK
DRAWN BY: AJL
CHECKED BY: KRK
DATE: 01/18/22

STONERIDGE MF TRACT A & F
GRADING AND EROSION CONTROL PLANS
EROSION CONTROL DETAILS

PROJECT NO.
196259000

SHEET

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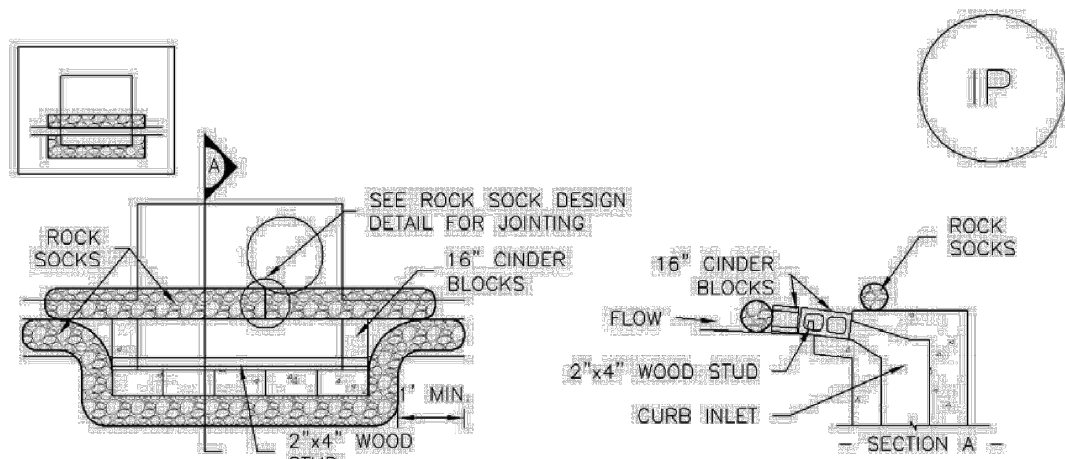


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SC-6

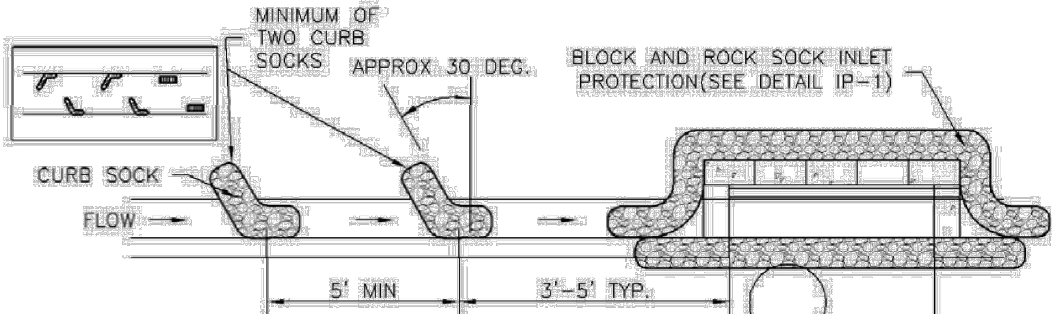
Inlet Protection (IP)



IP-1. BLOCK AND ROCK SOCK SUMP OR ON GRADE INLET PROTECTION

BLOCK AND CURB SOCK INLET PROTECTION INSTALLATION NOTES:

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. CONCRETE "CINDER" BLOCKS SHALL BE LAID ON THEIR SIDES AROUND THE INLET IN A SINGLE ROW, ABUTTING ONE ANOTHER WITH THE OPEN END FACING AWAY FROM THE CURB.
3. GRAVEL BAGS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.



IP-2. CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION

CURB ROCK SOCK INLET PROTECTION INSTALLATION NOTES:

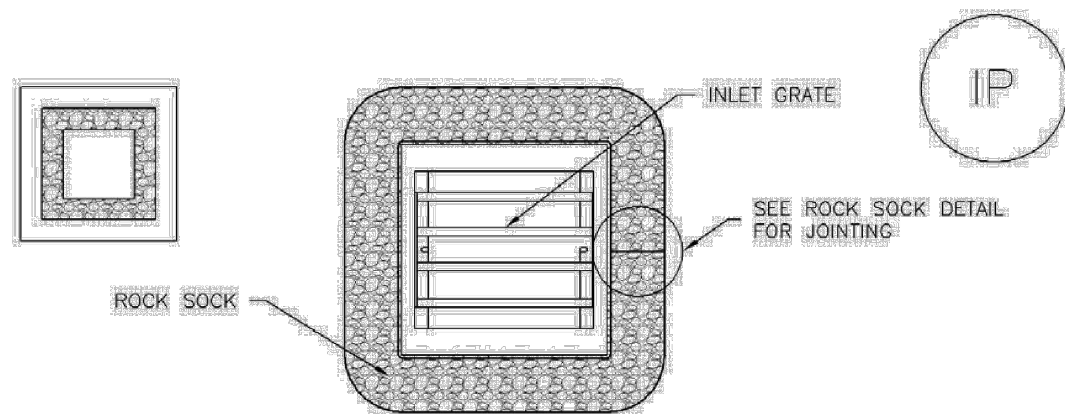
1. SEE ROCK SOCK DESIGN DETAIL INSTALLATION REQUIREMENTS.
2. PLACEMENT OF THE SOCK SHALL BE APPROXIMATELY 30 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION OF FLOW.
3. SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5 FEET APART.
4. AT LEAST TWO CURB SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADE INLETS.

IP-4

Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3

August 2013

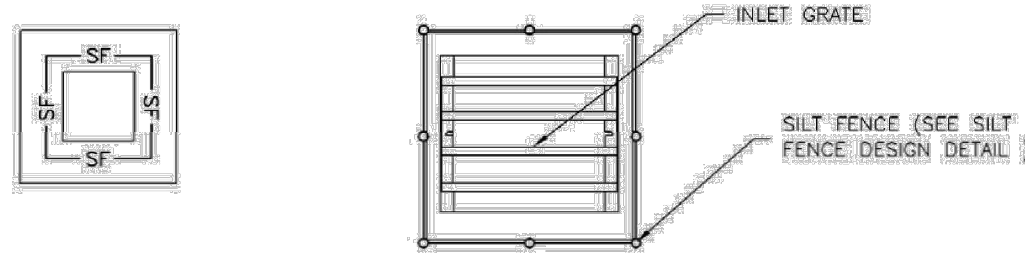
Inlet Protection (IP)



IP-3. ROCK SOCK SUMP/AREA INLET PROTECTION

ROCK SOCK SUMP/AREA INLET PROTECTION INSTALLATION NOTES:

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.



IP-4. SILT FENCE FOR SUMP INLET PROTECTION

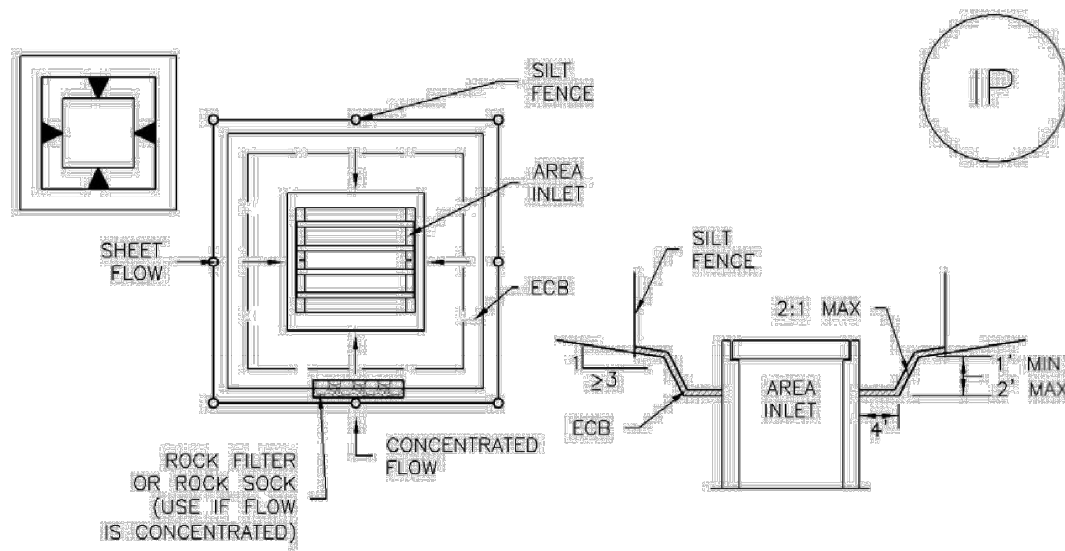
SILT FENCE INLET PROTECTION INSTALLATION NOTES:

1. SEE SILT FENCE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF 3 FEET.
3. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF SILT FENCE FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.

SC-6

SC-6

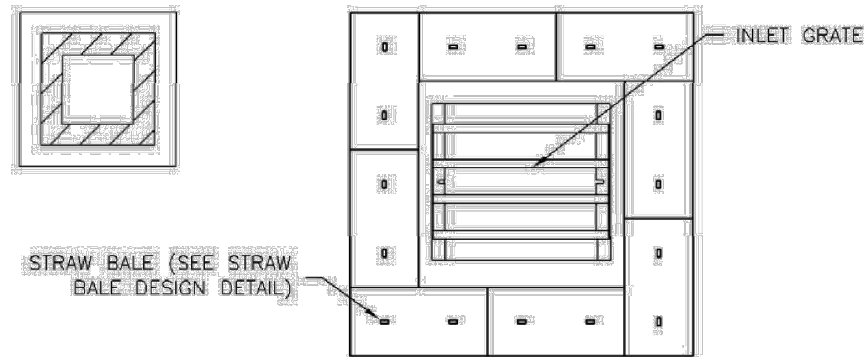
Inlet Protection (IP)



IP-5. OVEREXCAVATION INLET PROTECTION

OVEREXCAVATION INLET PROTECTION INSTALLATION NOTES:

1. THIS FORM OF INLET PROTECTION IS PRIMARILY APPLICABLE FOR SITES THAT HAVE NOT YET REACHED FINAL GRADE AND SHOULD BE USED ONLY FOR INLETS WITH A RELATIVELY SMALL CONTRIBUTING DRAINAGE AREA.
2. WHEN USING FOR CONCENTRATED FLOWS, SHAPE BASIN IN 2:1 RATIO WITH LENGTH ORIENTED TOWARDS DIRECTION OF FLOW.
3. SEDIMENT MUST BE PERIODICALLY REMOVED FROM THE OVEREXCAVATED AREA.



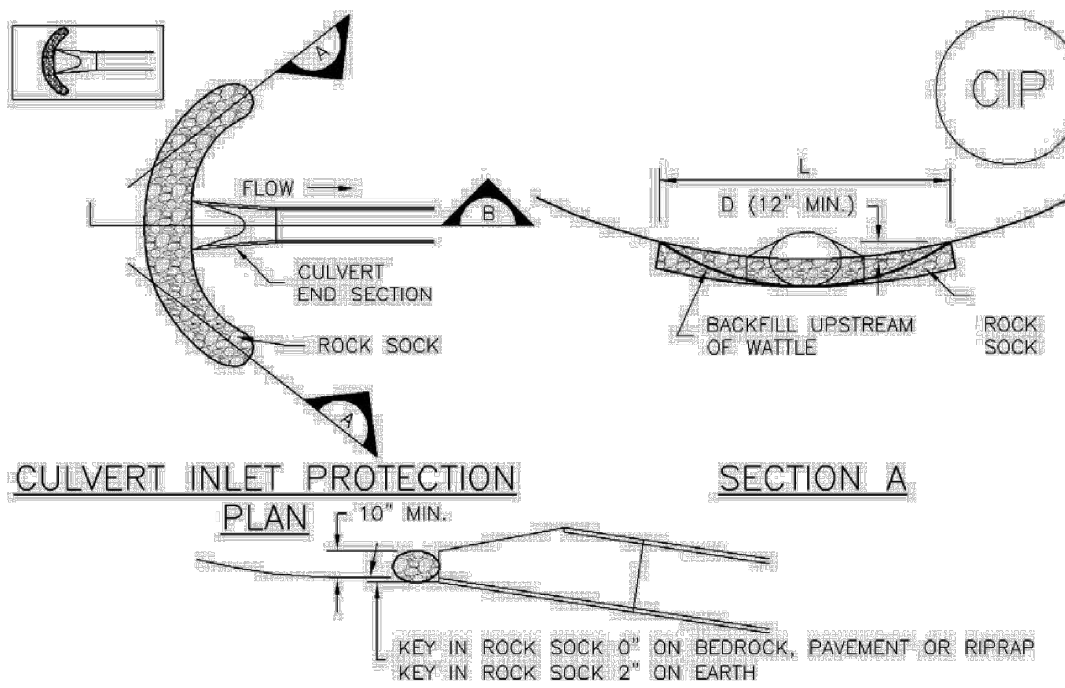
IP-6. STRAW BALE FOR SUMP INLET PROTECTION

STRAW BALE BARRIER INLET PROTECTION INSTALLATION NOTES:

1. SEE STRAW BALE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. BALES SHALL BE PLACED IN A SINGLE ROW AROUND THE INLET WITH ENDS OF BALES TIGHTLY ABUTTING ONE ANOTHER.

Inlet Protection (IP)

SC-6



CIP-1. CULVERT INLET PROTECTION

CULVERT INLET PROTECTION INSTALLATION NOTES:

1. SEE PLAN VIEW FOR -LOCATION OF CULVERT INLET PROTECTION.
2. SEE ROCK SOCK DESIGN DETAIL FOR ROCK GRADATION REQUIREMENTS AND JOINTING DETAIL.

CULVERT INLET PROTECTION MAINTENANCE NOTES:

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF THE CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS $\frac{1}{2}$ THE HEIGHT OF THE ROCK SOCK.
5. CULVERT INLET PROTECTION SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM JUIROKA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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IP-7

SC-6

Inlet Protection (IP)

GENERAL INLET PROTECTION INSTALLATION NOTES:

1. SEE PLAN VIEW FOR:
 - LOCATION OF INLET PROTECTION.
 - TYPE OF INLET PROTECTION (IP-1, IP-2, IP-3, IP-4, IP-5, IP-6)
2. INLET PROTECTION SHALL BE INSTALLED PROMPTLY AFTER INLET CONSTRUCTION OR PAVING IS COMPLETE (TYPICALLY WITHIN 48 HOURS). IF A RAINFALL/RUNOFF EVENT IS FORECAST, INSTALL INLET PROTECTION PRIOR TO ONSET OF EVENT.
3. MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

INLET PROTECTION MAINTENANCE NOTES:

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED AS NECESSARY TO MAINTAIN BMP EFFECTIVENESS. TYPICALLY WHEN STORAGE VOLUME REACHES 50% OF CAPACITY, A DEPTH OF 6" WHEN SILT FENCE IS USED, OR $\frac{1}{2}$ OF THE HEIGHT FOR STRAW BALES.
5. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED, UNLESS THE LOCAL JURISDICTION APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.
6. WHEN INLET PROTECTION AT AREA INLETS IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF JUIROKA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF INLET PROTECTION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY PROPRIETARY INLET PROTECTION METHODS ON THE MARKET. UDFCD NEITHER ENDORSES NOR DISCOURAGES USE OF PROPRIETARY INLET PROTECTION; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

NOTE: SOME MUNICIPALITIES DISCOURAGE OR PROHIBIT THE USE OF STRAW BALES FOR INLET PROTECTION. CHECK WITH LOCAL JURISDICTION TO DETERMINE IF STRAW BALE INLET PROTECTION IS ACCEPTABLE.

IP-8

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August 2013

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DESIGNED BY: KRK
DRAWN BY: AJL
CHECKED BY: KRK
DATE: 01/18/22

STONERIDGE MF TRACT A & F
GRADING AND EROSION CONTROL PLANS
EROSION CONTROL DETAILS

PROJECT NO.
196259000

SHEET

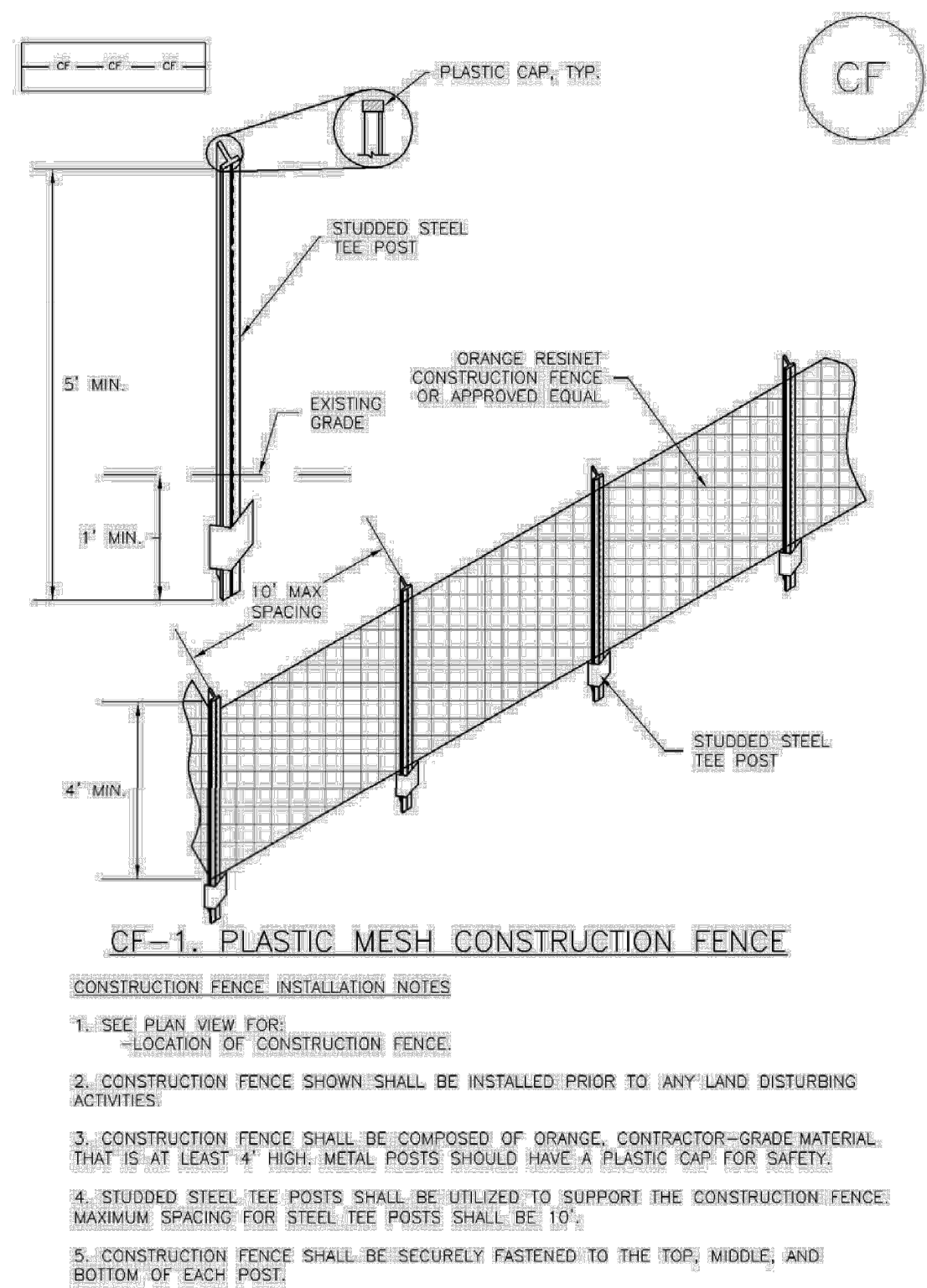
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Know what's below.
Call before you dig.

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SM-3 Construction Fence (CF)



CF-2 Urban Drainage and Flood Control District November 2010
Urban Storm Drainage Criteria Manual Volume 3

Construction Fence (CF) SM-3

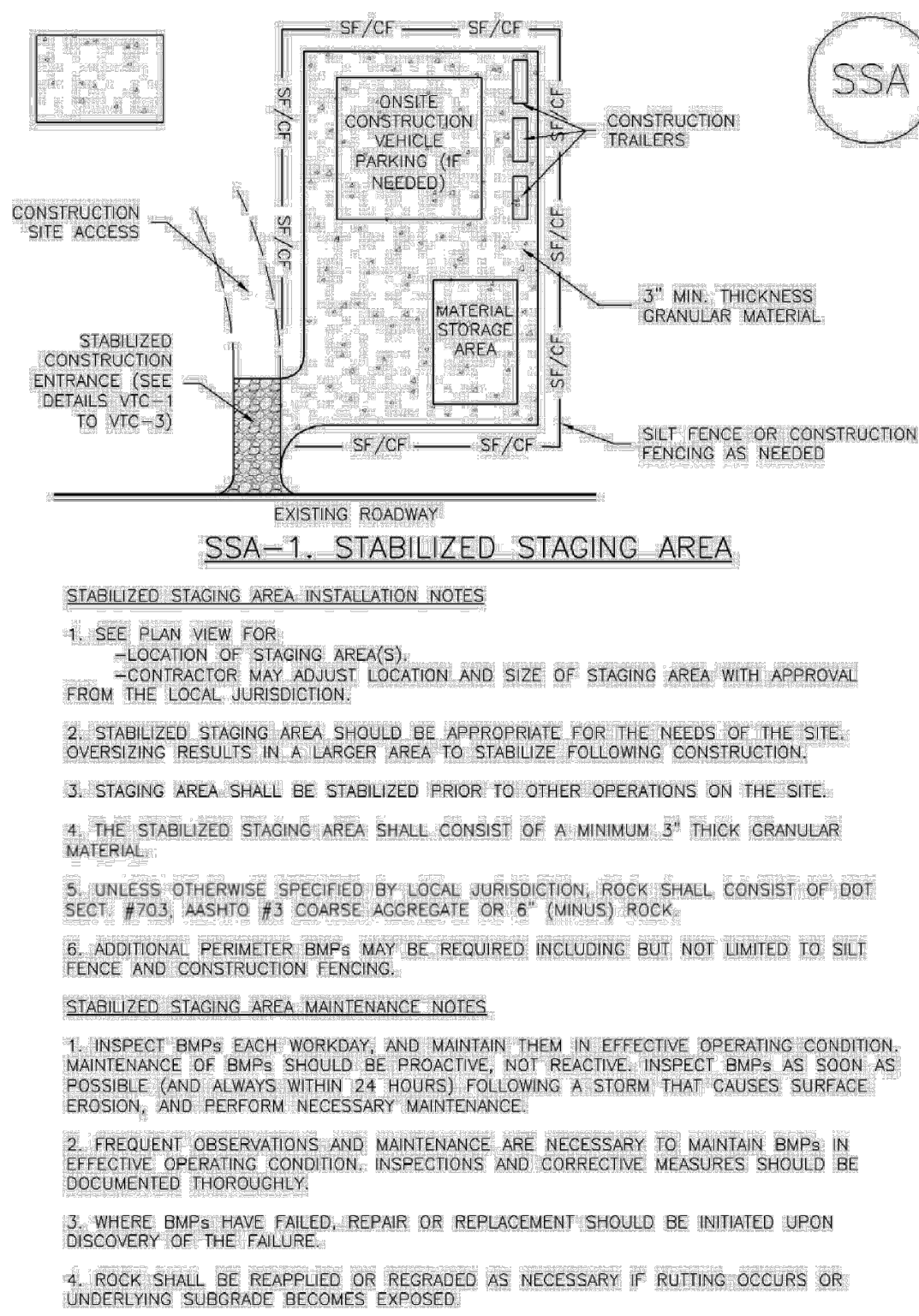
CONSTRUCTION FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 4. CONSTRUCTION FENCE SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF DAMAGE SUCH AS RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
 5. WHEN CONSTRUCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

November 2010 Urban Drainage and Flood Control District CF-3
Urban Storm Drainage Criteria Manual Volume 3

Stabilized Staging Area (SSA) SM-6



November 2010 Urban Drainage and Flood Control District SSA-3
Urban Storm Drainage Criteria Manual Volume 3

Stabilized Staging Area (SSA) SM-6

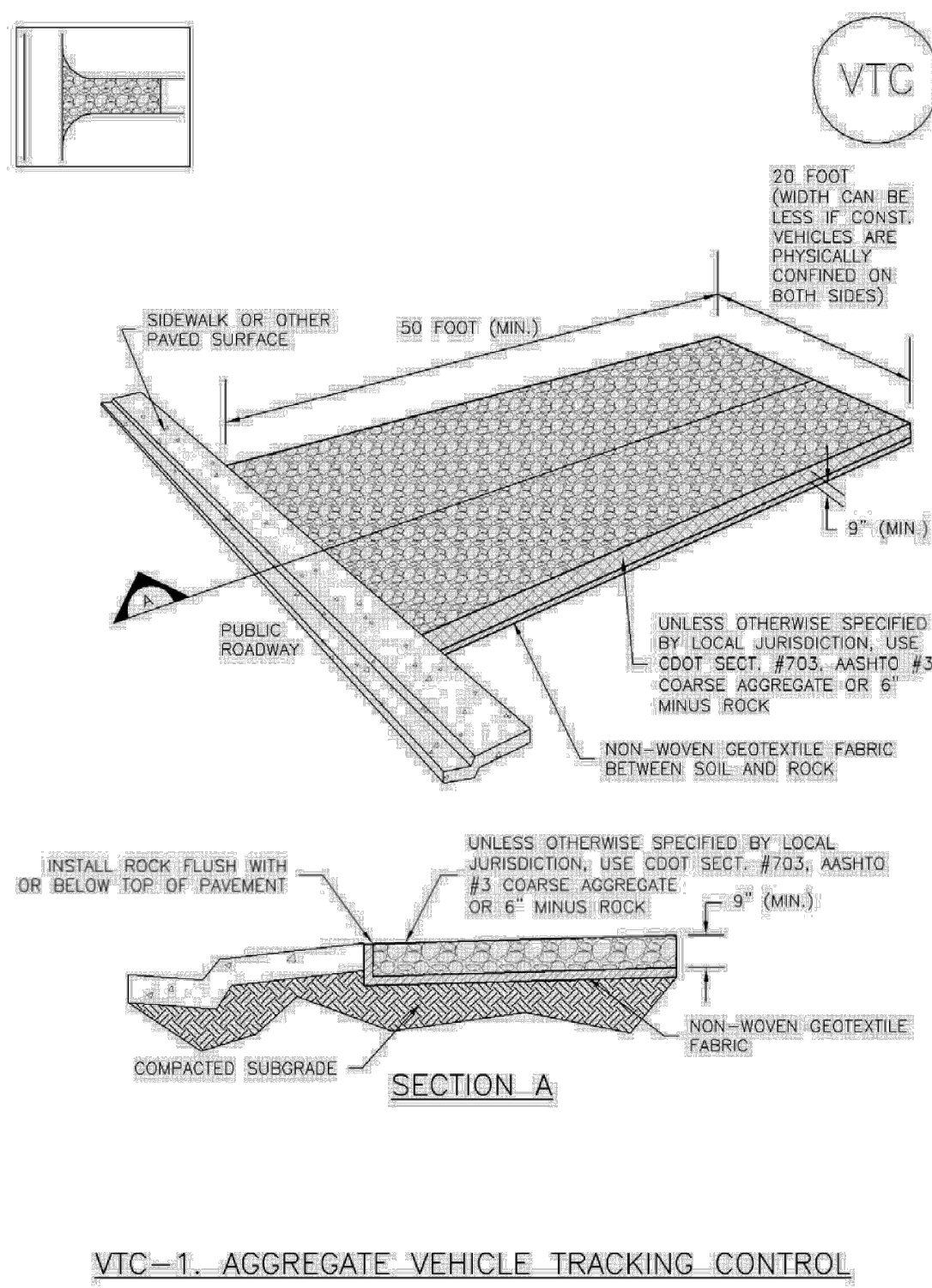
STABILIZED STAGING AREA MAINTENANCE NOTES

5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
 6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.
- NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

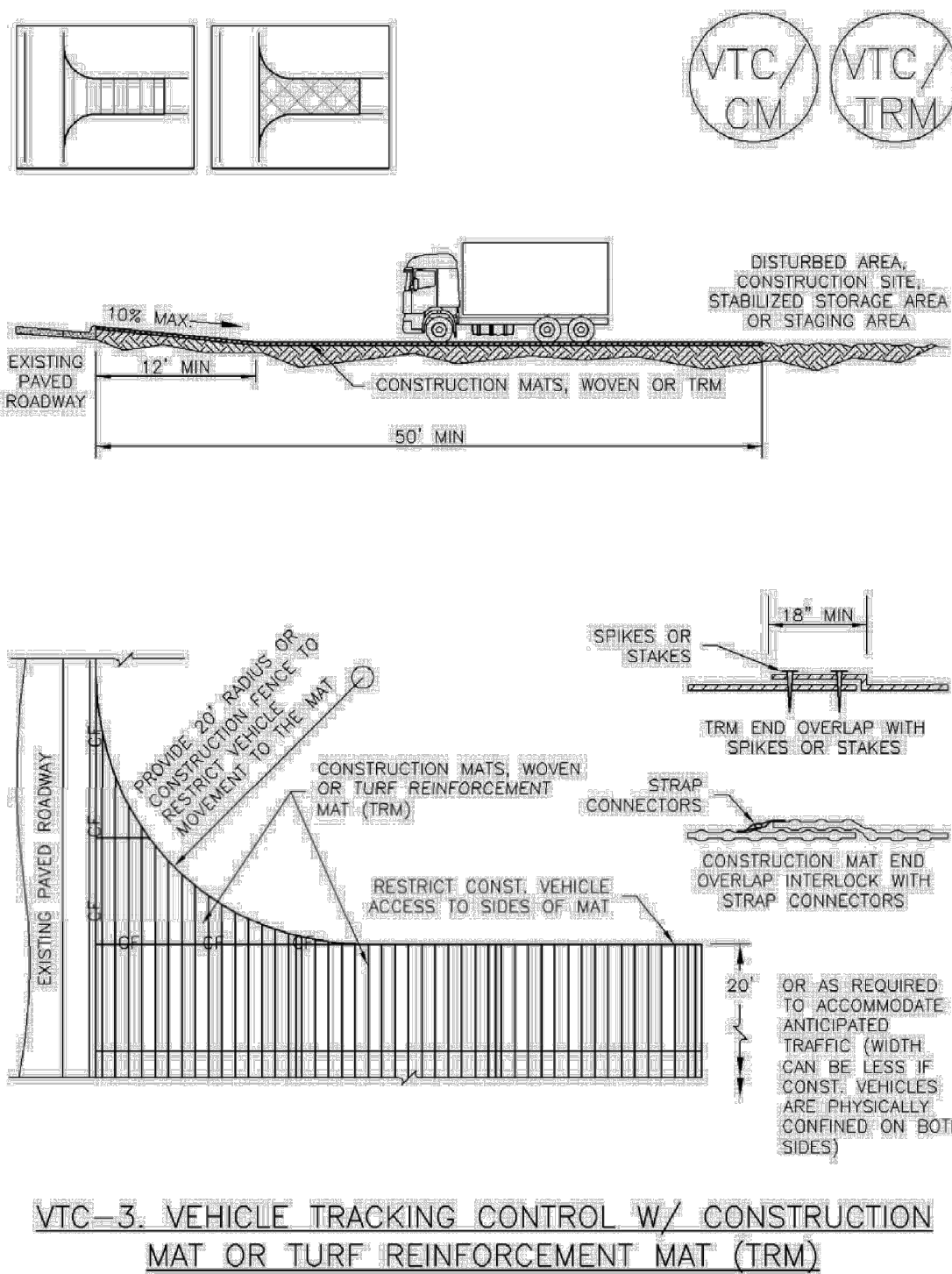
November 2010 Urban Drainage and Flood Control District SSA-4
Urban Storm Drainage Criteria Manual Volume 3

Vehicle Tracking Control (VTC) SM-4



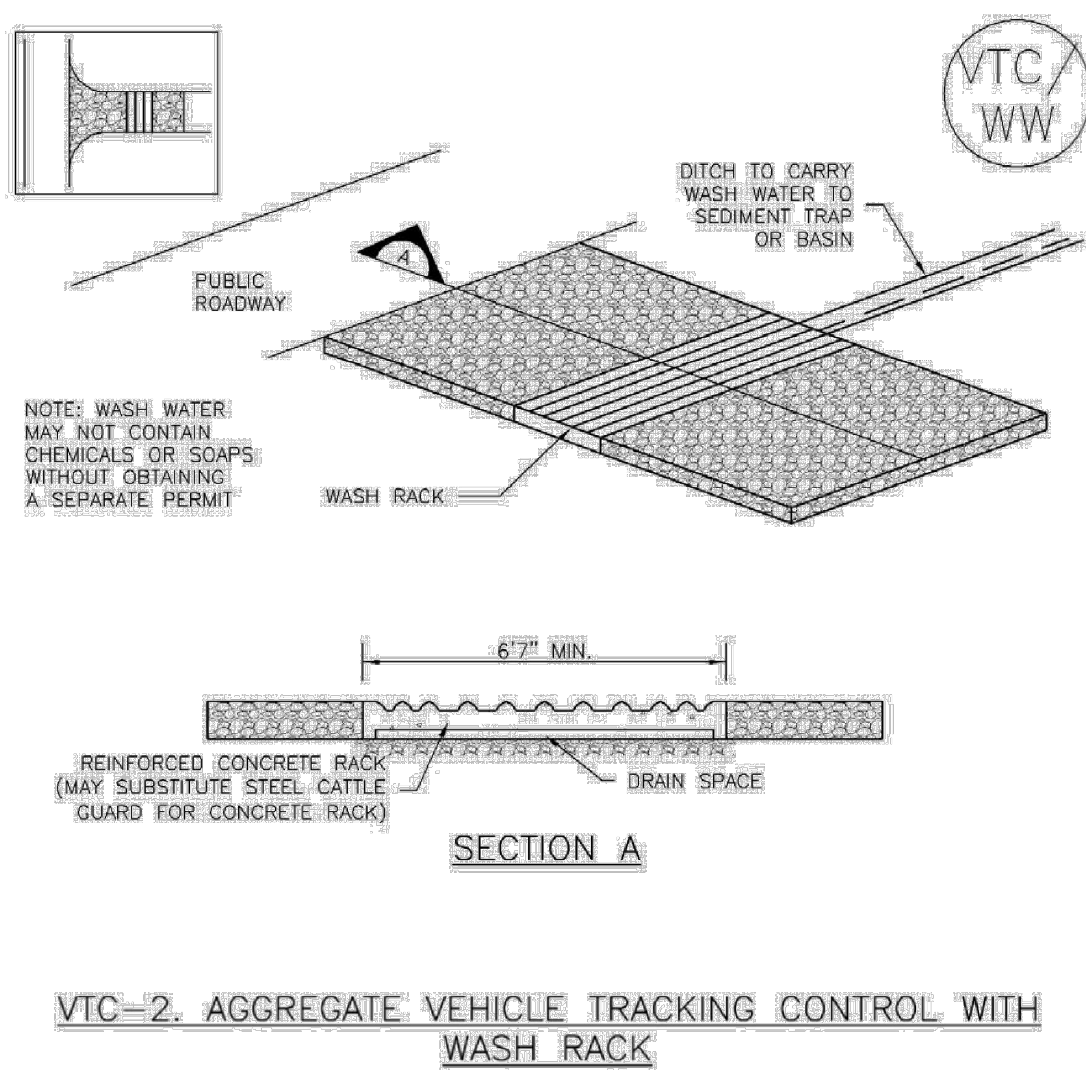
November 2010 Urban Drainage and Flood Control District VTC-3
Urban Storm Drainage Criteria Manual Volume 3

Vehicle Tracking Control (VTC) SM-4



November 2010 Urban Drainage and Flood Control District VTC-5
Urban Storm Drainage Criteria Manual Volume 3

Vehicle Tracking Control (VTC) SM-4



VTC-4 Urban Drainage and Flood Control District November 2010
Urban Storm Drainage Criteria Manual Volume 3

Vehicle Tracking Control (VTC) SM-4

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
 - LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
 - TYPE OF CONSTRUCTION ENTRANCE(S)/EXIT(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).
 2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.
 3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.
 4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
 5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.
 6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
- STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES**
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.
 5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- (DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

VTC-6 Urban Drainage and Flood Control District November 2010
Urban Storm Drainage Criteria Manual Volume 3



Kimley»Horn
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DESIGNED BY: KRK
DRAWN BY: AJL
CHECKED BY: KRK
DATE: 01/18/22

STONERIDGE MF TRACT A & F
GRADING AND EROSION CONTROL PLANS
EROSION CONTROL DETAILS

PROJECT NO.
196259000

SHEET

7

APPENDIX B

CDPHE STORMWATER PERMIT



STATE OF COLORADO

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
Water Quality Control Division

CDPS GENERAL PERMIT
STORMWATER DISCHARGES ASSOCIATED WITH
CONSTRUCTION ACTIVITY
AUTHORIZATION TO DISCHARGE UNDER THE
COLORADO DISCHARGE PERMIT SYSTEM (CDPS)

In compliance with the provisions of the Colorado Water Quality Control Act, (25-8-101 et seq., CRS, 1973 as amended) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq.; the "Act"), this permit authorizes the discharge of stormwater associated with construction activities (and specific allowable non-stormwater discharges in accordance with Part I.A.1. of the permit) certified under this permit, from those locations specified throughout the State of Colorado to specified waters of the State.

Such discharges shall be in accordance with the conditions of this permit. This permit specifically authorizes the facility listed on the certification to discharge in accordance with permit requirements and conditions set forth in Parts I and II hereof. All discharges authorized herein shall be consistent with the terms and conditions of this permit.

This permit becomes effective on April 1, 2019, and shall expire at midnight March 31, 2024.

Issued and signed this 1st day of November 2018.

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Ellen Howard Kutzer, Permits Section Manager
Water Quality Control Division

Permit History

Originally signed and issued October 31, 2018; effective April 1, 2019.

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PART I

Permit No.: COR400000

X. Duration of Permit.....30

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Part I

Note: At the first mention of terminology that has a specific connotation for the purposes of this permit, the terminology is electronically linked to the definitions section of the permit in Part I.E.

A. COVERAGE UNDER THIS PERMIT**1. Authorized Discharges**

This general permit authorizes [permittee\(s\)](#) to discharge the following to state waters: stormwater associated with [construction activity](#) and specified non-stormwater associated with construction activity. The following types of stormwater and non-stormwater discharges are authorized under this permit:

a. Allowable Stormwater Discharges

- i. Stormwater discharges associated with construction activity.
- ii. Stormwater discharges associated with producing earthen materials, such as soils, sand, and gravel dedicated to providing material to a single contiguous site, or within ¼ mile of a construction site (i.e. borrow or fill areas)
- iii. Stormwater discharges associated with [dedicated asphalt, concrete batch plants and masonry mixing stations](#) (Coverage under this permit is not required if alternative coverage has been obtained.)

b. Allowable Non-Stormwater Discharges

The following non-stormwater discharges are allowable under this permit if the discharges are identified in the stormwater management plan in accordance with Part I.C. and if they have appropriate [control measures](#) in accordance with Part I.B.1.

- i. Discharges from uncontaminated springs that do not originate from an area of land disturbance.
- ii. Discharges to the ground of concrete washout water associated with the washing of concrete tools and concrete mixer chutes. Discharges of concrete washout water must not leave the site as surface runoff or reach [receiving waters](#) as defined by this permit.
- iii. Discharges of landscape irrigation return flow.

c. Emergency Fire Fighting

Discharges resulting from emergency firefighting activities are authorized by this permit.

2. Limitations on Coverage

Discharges not authorized by this permit include, but are not limited to, the discharges and activities listed below. Permittees may seek individual or alternate general permit coverage for the discharges, as appropriate and available.

a. Discharges of Non-Stormwater

Discharges of non-stormwater, except the authorized non-stormwater discharges listed in Part I.A.1.b., are not eligible for coverage under this permit.

- b. Discharges Currently Covered by another Individual or General Permit
- c. Discharges Currently Covered by a Water Quality Control Division (division) Low Risk Guidance Document

3. Permit Certification and Submittal Procedures

a. Duty to apply

The following activities shall apply for coverage under this permit:

- i. Construction sites that will disturb one acre or more; or
- ii. Construction sites that are part of a [common plan of development or sale](#); or
- iii. Stormwater discharges that are designated by the division as needing a stormwater permit because the discharge:
 - (a) Contributes to a violation of a water quality standard; or
 - (b) is a significant contributor of pollutants to state waters.

b. Application Requirements

To obtain authorization to discharge under this permit, applicants applying for coverage following the effective date of the renewal permit shall meet the following requirements:

- i. Owners and operators submitting an application for permit coverage will be co-permittees subject to the same benefits, duties, and obligations under this permit.
- ii. Signature requirements: Both the [owner](#) and [operator](#) (permittee) of the construction site, as defined in Part I.E., must agree to the terms and conditions of the permit and submit a completed application that includes the signature of both the owner and the operator. In cases where the duties of the owner and operator are managed by the owner, both application signatures may be completed by the owner. Both the owner and operator are responsible for ensuring compliance with all terms and conditions of the permit, including implementation of the stormwater management plan.
- iii. Applicants must use the paper form provided by the division or the electronic form provided on the division's web-based application platform when applying for coverage under this permit.
- iv. The applicant(s) must develop a stormwater management plan (SWMP) in accordance with the requirements of Part I.C. The applicant(s) must also certify that the SWMP is complete, or will be complete, prior to commencement of any construction activity.

- v. The applicant(s) must submit a complete, accurate, and signed permit application electronically, by mail or hand delivery to the division at least 10 days prior to the commencement of construction activity except that construction activities that are in response to a [public emergency related site](#) shall apply for coverage no later than 14 days after the commencement of construction activities. The provisions of this part in no way remove a violation of the Colorado Water Quality Control Act if a point source discharge occurs prior to the issuance of a CDPS permit.
- vi. The application must be signed in accordance with the requirements of Part IA. Applications submitted by mail or hand delivered should be directed to:

Colorado Department of Public Health and Environment
Water Quality Control Division
Permits Section, WQCD-PS-B2
4300 Cherry Creek Drive South
Denver, CO 80246

- vii. The applicant(s) must receive written notification that the division granted permit coverage prior to conducting construction activities except for construction activities that are in response to a public emergency related site
- c. Division Review of Permit Application
- Within 10 days of receipt of the application, and following review of the application, the division may:
- i. Issue a certification of coverage;
 - ii. request additional information necessary to evaluate the discharge;
 - iii. delay the authorization to discharge pending further review;
 - iv. notify the applicant that additional terms and conditions are necessary; or
 - v. deny the authorization to discharge under this general permit.
- d. Alternative Permit Coverage
- i. Division Required Alternate Permit Coverage:
The Division may require an applicant or permittee to apply for an individual permit or an alternative general permit if it determines the discharge does not fall under the scope of this general permit. In this case, the Division will notify the applicant or permittee that an individual permit application is required.
 - ii. Permittee Request for alternate permit coverage:
A permittee authorized to discharge stormwater under this permit may request to be excluded from coverage under this general permit by applying for an individual permit. In this case, the permittee must submit an individual application, with reasons supporting the request, to the Division at least 180 days prior to any discharge. When an individual permit is issued, the permittee's authorization to discharge under this permit is terminated on the effective date of the individual permit.
- e. Submittal Signature Requirements

Documents required for submittal to the division in accordance with this permit, including applications for permit coverage and other documents as requested by the division, must include signatures by both the owner and the operator, except for instances where the duties of the owner and operator are managed by the owner.

Signatures on all documents submitted to the division as required by this permit must meet the Standard Signatory Requirements in Part II.K. of this permit in accordance with 40 C.F.R. 122.41(k).

i. Signature Certification

Any person(s) signing documents required for submittal to the Division must make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

f. Compliance Document Signature Requirements

Documents which are required for compliance with the permit, but for which submittal to the division is not required unless specifically requested by the division, must be signed by the individual(s) designated as the Qualified Stormwater Manager, as defined in Part I.E.

i. Any person(s) signing inspection documents required for compliance with the permit must make the following statement:

"I verify that, to the best of my knowledge and belief, all corrective action and maintenance items identified during the inspection are complete, and the site is currently in compliance with the permit."

g. Field Wide Permit Coverage for Oil and Gas Construction

At the discretion of the division, a single permit certification may be issued to a single oil and gas permittee to cover construction activity related discharges from an oil and gas field at multiple locations that are not necessarily contiguous.

h. Permit Coverage without Application

Qualifying Local Program: When a small construction site is within the jurisdiction of a qualifying local program, the owner and operator of the construction activity are authorized to discharge stormwater associated with small construction activity under this general permit without the submittal of an application to the division. Sites covered by a qualifying local program are exempt from the following sections of this general permit:

Part I.A.3.a.; Part I.A.3.b.; Part I.A.3.c.; Part I.A.3.d.; Part I.A.3.g.; Part I.A.3.i.; Part I.A.3.j.; Part I.A.3.k.

Sites covered by a qualifying local program are subject to the following requirements:

- i. **Local Agency Authority:** This permit does not pre-empt or supersede the authority of local agencies to prohibit, restrict, or control discharges of stormwater to storm drain systems or other water courses within their jurisdiction.
- ii. **Permit Coverage Termination:** When a site under a Qualifying Local Program is finally stabilized, coverage under this permit is automatically terminated.
- iii. **Compliance with Qualifying Local Program:** Qualifying Local Program requirements that are equivalent to the requirements of this permit are incorporated by reference. Permittees authorized to discharge under this permit, must comply with the equivalent requirements of the Qualifying Local Program that has jurisdiction over the site as a condition of this permit.
- iv. **Compliance with Remaining Permit Conditions.** Requirements of this permit that are in addition to or more stringent than the requirements of the Qualifying Local Program apply in addition to the requirements of the Qualifying Local Program.
- v. **Written Authorization of Coverage:** The division or local municipality may require any permittee within the jurisdiction of a Qualifying Local Program covered under this permit to apply for, and obtain written authorization of coverage under this permit. The permittee must be notified in writing that an application for written authorization of coverage is required.
- i. **Permittee Initiated Permit Actions**
Permittee initiated permit actions, including but not limited to modifications, contact changes, transfers, reassignments, and terminations, shall be conducted following division guidance and using appropriate division-provided forms.
- j. **Sale of Residence to Homeowner**
Residential construction sites only: The permittee may remove residential lots from permit coverage once the lot meets the following criteria:
 - i. the residential lot has been sold to the homeowner(s) for private residential use;
 - ii. a certificate of occupancy, or equivalent, is maintained on-site and is available during division inspections;
 - iii. the lot is less than one acre of disturbance;
 - iv. all construction activity conducted on the lot by the permittee is complete;
 - v. the permittee is not responsible for final stabilization of the lot; and
 - vi. the SWMP was modified to indicate the lot is no longer part of the construction activity.

If the residential lot meets the criteria listed above then activities occurring on the lot are no longer considered to be construction activities with a duty to apply and maintain permit coverage. Therefore, the permittee is not required to meet the final stabilization requirements and may terminate permit coverage for the lot.

k. Permit Expiration and Continuation of Permit Coverage

Authorization to discharge under this general permit shall expire at midnight on March 31, 2024. While Regulation 61.4 requires a permittee to submit an application for continuing permit coverage 180 days before the permit expires, the division is requiring that permittees desiring continued coverage under this general permit must reapply at least 90 days in advance of this permit expiration. The Division will determine if the permittee may continue to discharge stormwater under the terms of the general permit. An individual permit may be required for any facility not reauthorized to discharge under the reissued general permit.

If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued and remain in force and effect. For permittees that have applied for continued permit coverage, discharges authorized under this permit prior to the expiration date will automatically remain covered by this permit until the earliest of:

- i. An authorization to discharge under a reissued permit, or a replacement of this permit, following the timely and appropriate submittal of a complete application requesting authorization to discharge under the new permit and compliance with the requirements of the new permit; or
- ii. The issuance and effect of a termination issued by the Division; or
- iii. The issuance or denial of an individual permit for the facility's discharges; or
- iv. A formal permit decision by the Division not to reissue this general permit, at which time the Division will identify a reasonable time period for covered dischargers to seek coverage under an alternative general permit or an individual permit. Coverage under this permit will cease when coverage under another permit is granted/authorized; or
- v. The Division has informed the permittee that discharges previously authorized under this permit are no longer covered under this permit.

B. EFFLUENT LIMITATIONS

1. Requirements for Control Measures Used to Meet Effluent Limitations

The permittee must implement control measures to **minimize** the discharge of pollutants from all potential pollutant sources at the site. Control measures must be installed prior to commencement of activities that may contribute pollutants to stormwater discharges. Control measures must be selected, designed, installed and maintained in accordance with good engineering, hydrologic and pollution control practices. Control measures implemented at the site must be designed to prevent pollution or degradation of state waters.

a. Stormwater Pollution Prevention

The permittee must implement structural and/or nonstructural control measures that effectively minimize erosion, sediment transport, and the release of other pollutants related to construction activity.

i. Control Measures for Erosion and Sediment Control

Control measures for erosion and sediment control may include, but are not limited to, wattles/sediment control logs, silt fences, earthen dikes, drainage swales, sediment traps, subsurface drains, pipe slope drains, inlet protection, outlet protection, gabions, sediment basins, temporary vegetation, permanent vegetation, mulching, geotextiles, sod stabilization, slope roughening, maintaining existing vegetation, protection of trees, and preservation of mature vegetation. Specific non-structural control measures must meet the requirements listed below.

Specific control measures must meet the requirements listed below.

- (a) Vehicle tracking controls shall either be implemented to minimize vehicle tracking of sediment from disturbed areas, or the areas where vehicle tracking occurs shall meet subsection Part I.B.1.a.i(b);
- (b) Stormwater runoff from all disturbed areas and soil storage areas for which permanent or temporary stabilization is not implemented, must flow to at least one control measure to minimize sediment in the discharge. This may be accomplished through filtering, settling, or straining. The control measure must be selected, designed, installed and adequately sized in accordance with good engineering, hydrologic and pollution control practices. The control measure(s) must contain or filter flows in order to prevent the bypass of flows without treatment and must be appropriate for stormwater runoff from disturbed areas and for the expected flow rate, duration, and flow conditions (i.e., sheet or concentrated flow);
- (c) Outlets that withdraw water from or near the surface shall be installed when discharging from basins and impoundments, unless [infeasible](#).
- (d) Maintain pre-existing vegetation or equivalent control measures for areas within 50 horizontal feet of receiving waters as defined by this permit, unless infeasible.
- (e) Soil compaction must be minimized for areas where infiltration control measures will occur or where [final stabilization](#) will be achieved through vegetative cover.
- (f) Unless infeasible, topsoil shall be preserved for those areas of a site that will utilize vegetative final stabilization.
- (g) Minimize the amount of soil exposed during construction activity, including the disturbance of steep slopes.

ii. Practices for Other Common Pollutants

- (a) Bulk storage, 55 gallons or greater, for petroleum products and other liquid chemicals must have secondary containment, or equivalent protection, in order to contain [spills](#) and to prevent spilled material from entering state waters.
- (b) Control measures designed for concrete washout waste must be implemented. This includes washout waste discharged to the ground as authorized under this permit and washout waste from concrete trucks and masonry operations contained on site. The permittee must ensure the washing activities do not contribute pollutants to stormwater runoff, or receiving waters in accordance Part I.A.1.b.ii. Discharges that may reach groundwater must flow through soil

that has buffering capacity prior to reaching groundwater, as necessary to meet the effluent limits in this permit, including Part I.B.3.a. The concrete washout location shall not be located in an area where shallow groundwater may be present and would result in buffering capacity not being adequate, such as near natural drainages, springs, or wetlands. This permit authorizes discharges to the ground of concrete washout waste.

iii. Stabilization Requirements

The following requirements must be implemented for each site.

- (a) Temporary stabilization must be implemented for earth disturbing activities on any portion of the site where ground disturbing construction activity has permanently ceased, or temporarily ceased for more than 14 calendar days. Temporary stabilization methods may include, but are not limited to, tarps, soil tackifier, and hydroseed. The permittee may exceed the 14-day schedule when either the function of the specific area of the site requires it to remain disturbed, or, physical characteristics of the terrain and climate prevent stabilization. The SWMP must document the constraints necessitating the alternative schedule, provide the alternate stabilization schedule, and identify all locations where the alternative schedule is applicable on the site map.
- (b) Final stabilization must be implemented for all construction sites. Final stabilization is reached when all ground surface disturbing activities at the construction site are complete; and, for all areas of ground surface disturbing activities, either a uniform vegetative cover with an individual plant density of at least 70 percent of pre-disturbance levels is established, or equivalent permanent alternative stabilization methods are implemented. The division may approve alternative final stabilization criteria for specific operations.
- (c) Final stabilization must be designed and installed as a permanent feature. Final stabilization measures for obtaining a vegetative cover or alternative stabilization methods include, but are not limited to, the following as appropriate:
 - (1) Seed mix selection and application methods;
 - (2) Soil preparation and amendments;
 - (3) Soil stabilization methods (e.g., crimped straw, hydro mulch or rolled erosion control products);
 - (4) Appropriate sediment control measures as needed until final stabilization is achieved;
 - (5) Permanent pavement, hardscape, xeriscape, stabilized driving surfaces;
 - (6) Other alternative stabilization practices as applicable;

- (d) The permittee(s) must ensure all temporary control measures are removed from the construction site once final stabilization is achieved, except when the control measure specifications allow the control measure to be left in place (i.e., bio-degradable control measures).

- b. Maintenance

The permittee must ensure that all control measures remain in effective operating condition and are protected from activities that would reduce their effectiveness. Control measures must be maintained in accordance with good engineering, hydrologic and pollution control practices. Observations leading to the required maintenance of control measures can be made during a site inspection, or during general observations of site conditions. The necessary repairs or modifications to a [control measure requiring routine maintenance](#), as defined in Part I.E., must be conducted to maintain an effective operating condition. This section is not subject to the requirements in Part I.B.1.c. below.

- c. Corrective Actions

The permittee must assess the adequacy of control measures at the site, and the need for changes to those control measures, to ensure continued effective performance. When an [inadequate control measure](#), as defined in Part I.E., is identified (i.e., new or replacement control measures become necessary), the following corrective action requirements apply. The permittee is in noncompliance with the permit until the inadequate control measure is replaced or corrected and returned to effective operating condition in compliance with Part I.B.1. and the general requirements in Part I.B.3. If the inadequate control measure results in noncompliance that meets the conditions of Part II.L., the permittee must also meet the requirements of that section.

- i. The permittee must take all necessary steps to minimize or prevent the discharge of pollutants, until a control measure is implemented and made operational and/or an inadequate control measure is replaced or corrected and returned to effective operating condition. If it is infeasible to install or repair of control measure immediately after discovering the deficiency, the following must be documented and kept on record in accordance with the recordkeeping requirements in Part II.

- (a) Describe why it is infeasible to initiate the installation or repair immediately; and

- (b) Provide a schedule for installing or repairing the control measure and returning it to an effective operating condition as soon as possible.

- ii. If applicable, the permittee must remove and properly dispose of any unauthorized release or discharge (e.g., discharge of non-stormwater, spill, or leak not authorized by this permit.) The permittee must also clean up any contaminated surfaces to minimize discharges of the material in subsequent storm events.

2. Discharges to an Impaired Waterbody

- a. Total Maximum Daily Load (TMDL)

If the permittee's discharge flows to or could reasonably be expected to flow to any water body for which a TMDL has been approved, and stormwater discharges

associated with construction activity were assigned a pollutant-specific Wasteload Allocation (WLA) under the TMDL, the division may:

- i. ensure the WLA is implemented properly through alternative local requirements, such as by a municipal stormwater permit; or
- ii. notify the permittee of the WLA and amend the permittee's certification to add specific effluent limits and other requirements, as appropriate. The permittee may be required to do the following:
 - (a) under the permittee's SWMP, implement specific control measures based on requirements of the WLA, and evaluate whether the requirements are met through implementation of existing stormwater control measures or if additional control measures are necessary. Document the calculations or other evidence demonstrating that the requirements are expected to be met; and
 - (b) if the evaluation shows that additional or modified control measures are necessary, describe the type and schedule for the control measure additions or modifications.
- iii. Discharge monitoring may also be required. The permittee may maintain coverage under the general permit provided they comply with the applicable requirements outlined above. The division reserves the right to require individual or alternate general permit coverage.

3. General Requirements

- a. Discharges authorized by this permit shall not cause, have the reasonable potential to cause, or measurably contribute to an exceedance of any applicable water quality standard, including narrative standards for water quality.
- b. The division may require sampling and testing, on a case-by-case basis, in the event that there is reason to suspect that the SWMP is not adequately minimizing pollutants in stormwater or in order to measure the effectiveness of the control measures in removing pollutants in the effluent. Such monitoring may include Whole Effluent Toxicity testing.
- c. The permittee must comply with the lawful requirements of federal agencies, municipalities, counties, drainage districts and other local agencies including applicable requirements in Municipal Stormwater Management Programs developed to comply with CDPS permits. The permittee must comply with local stormwater management requirements, policies and guidelines including those for erosion and sediment control.
- d. All construction site wastes must be properly managed to prevent potential pollution of state waters. This permit does not authorize on-site waste disposal.
- e. This permit does not relieve the permittee of the reporting requirements in 40 CFR 110, 40 CFR 117 or 40 CFR 302. Any discharge of hazardous material must be handled in accordance with the division's Noncompliance Notification Requirements (see Part II.L. of the permit).

C. STORMWATER MANAGEMENT PLAN (SWMP) REQUIREMENTS**1. SWMP General Requirements**

- a. A SWMP shall be developed for each construction site covered by this permit. The SWMP must be prepared in accordance with good engineering, hydrologic and pollution control practices.
 - i. For public emergency related sites a SWMP shall be created no later than 14 days after the commencement of construction activities.
- b. The permittee must implement the provisions of the SWMP as written and updated, from commencement of construction activity until final stabilization is complete. The division may review the SWMP.
- c. A copy of the SWMP must be retained onsite or be onsite when construction activities are occurring at the site unless the permittee specifies another location and obtains approval from the division.

2. SWMP Content

- a. The SWMP, at a minimum, must include the following elements.
 - i. Qualified Stormwater Manager. The SWMP must list individual(s) by title and name who are designated as the site's qualified stormwater manager(s) responsible for implementing the SWMP in its entirety. This role may be filled by more than one individual.
 - ii. Spill Prevention and Response Plan. The SWMP must have a spill prevention and response plan. The plan may incorporate by reference any part of a Spill Prevention Control and Countermeasure (SPCC) plan under section 311 of the Clean Water Act (CWA) or a Spill Prevention Plan required by a separate CDPS permit. The relevant sections of any referenced plans must be available as part of the SWMP consistent with Part I.C.4.
 - iii. Materials Handling. The SWMP must describe and locate all control measures implemented at the site to minimize impacts from handling **significant materials** that could contribute pollutants to runoff. These handling procedures can include control measures for pollutants and activities such as, exposed storage of building materials, paints and solvents, landscape materials, fertilizers or chemicals, sanitary waste material, trash and equipment maintenance or fueling procedures.
 - iv. Potential Sources of Pollution. The SWMP must list all potential sources of pollution which may reasonably be expected to affect the quality of stormwater discharges associated with construction activity from the site. This shall include, but is not limited to, the following pollutant sources:
 - (a) disturbed and stored soils;
 - (b) vehicle tracking of sediments;
 - (c) management of contaminated soils;
 - (d) loading and unloading operations;

- (e) outdoor storage activities (erodible building materials, fertilizers, chemicals, etc.);
 - (f) vehicle and equipment maintenance and fueling;
 - (g) significant dust or particulate generating processes (e.g., saw cutting material, including dust);
 - (h) routine maintenance activities involving fertilizers, pesticides, herbicides, detergents, fuels, solvents, oils, etc.;
 - (i) on-site waste management practices (waste piles, liquid wastes, dumpsters);
 - (j) concrete truck/equipment washing, including washing of the concrete truck chute and associated fixtures and equipment;
 - (k) dedicated asphalt, concrete batch plants and masonry mixing stations;
 - (l) non-industrial waste sources such as worker trash and portable toilets.
- v. Implementation of Control Measures. The SWMP must include design specifications that contain information on the implementation of the control measure in accordance with good engineering hydrologic and pollution control practices; including as applicable drawings, dimensions, installation information, materials, implementation processes, control measure-specific inspection expectations, and maintenance requirements.

The SWMP must include a documented use agreement between the permittee and the owner or operator of any control measures located outside of the permitted area, that are utilized by the permittee's construction site for compliance with this permit, but not under the direct control of the permittee. The permittee is responsible for ensuring that all control measures located outside of their permitted area, that are being utilized by the permittee's construction site, are properly maintained and in compliance with all terms and conditions of the permit. The SWMP must include all information required of and relevant to any such control measures located outside the permitted area, including location, installation specifications, design specifications and maintenance requirements.

- vi. Site Description. The SWMP must include a site description which includes, at a minimum, the following:
- (a) the nature of the construction activity at the site;
 - (b) the proposed schedule for the sequence for major construction activities and the planned implementation of control measures for each phase. (e.g.: clearing, grading, utilities, vertical, etc.);
 - (c) estimates of the total acreage of the site, and the acreage expected to be disturbed by clearing, excavation, grading, or any other construction activities;
 - (d) a summary of any existing data used in the development of the construction site plans or SWMP that describe the soil or existing potential for soil erosion;

- (e) a description of the percent of existing vegetative ground cover relative to the entire site and the method for determining the percentage;
 - (f) a description of any allowable non-stormwater discharges at the site, including those being discharged under a division low risk discharge guidance policy;
 - (g) a description of areas receiving discharge from the site. Including a description of the immediate source receiving the discharge. If the stormwater discharge is to a municipal separate storm sewer system, the name of the entity owning that system, the location of the storm sewer discharge, and the ultimate receiving water(s); and
 - (h) a description of all stream crossings located within the construction site boundary.
- vii. Site Map. The SWMP must include a site map which includes, at a minimum, the following:
- (a) construction site boundaries;
 - (b) flow arrows that depict stormwater flow directions on-site and runoff direction;
 - (c) all areas of ground disturbance including areas of borrow and fill;
 - (d) areas used for storage of soil;
 - (e) locations of all waste accumulation areas, including areas for liquid, concrete, masonry, and asphalt;
 - (f) locations of dedicated asphalt, concrete batch plants and masonry mixing stations;
 - (g) locations of all structural control measures;
 - (h) locations of all non-structural control measures;
 - (i) locations of springs, streams, wetlands and other state waters, including areas that require pre-existing vegetation be maintained within 50 feet of a receiving water, where determined feasible in accordance with Part I.B.1.a.i.(d).; and
 - (j) locations of all stream crossings located within the construction site boundary.
- viii. Final Stabilization and Long Term Stormwater Management. The SWMP must describe the practices used to achieve final stabilization of all disturbed areas at the site and any planned practices to control pollutants in stormwater discharges that will occur after construction operations are completed. Including but not limited to, detention/retention ponds, rain gardens, stormwater vaults, etc.
- ix. Inspection Reports. The SWMP must include documented inspection reports in accordance with Part ID.

3. SWMP Review and Revisions

Permittees must keep a record of SWMP changes made that includes the date and identification of the changes. The SWMP must be amended when the following occurs:

- a. a change in design, construction, operation, or maintenance of the site requiring implementation of new or revised control measures;
- b. the SWMP proves ineffective in controlling pollutants in stormwater runoff in compliance with the permit conditions;
- c. control measures identified in the SWMP are no longer necessary and are removed; and
- d. corrective actions are taken onsite that result in a change to the SWMP.

For SWMP revisions made prior to or following a change(s) onsite, including revisions to sections addressing site conditions and control measures, a notation must be included in the SWMP that identifies the date of the site change, the control measure removed, or modified, the location(s) of those control measures, and any changes to the control measure(s). The permittee must ensure the site changes are reflected in the SWMP. The permittee is noncompliant with the permit until the SWMP revisions have been made.

4. SWMP Availability

A copy of the SWMP must be provided upon request to the division, EPA, and any local agency with authority for approving sediment and erosion plans, grading plans or stormwater management plans within the time frame specified in the request. If the SWMP is required to be submitted to any of these entities, the submission must include a signed certification in accordance with Part I.A.3.e., certifying that the SWMP is complete and compliant with all terms and conditions of the permit.

All SWMPs required under this permit are considered reports that must be available to the public under Section 308(b) of the CWA and Section 61.5(4) of the CDPS regulations. The permittee must make plans available to members of the public upon request. However, the permittee may claim any portion of a SWMP as confidential in accordance with 40 CFR Part 2.

D. SITE INSPECTIONS

Site inspections must be conducted in accordance with the following requirements. The required inspection schedules are a minimum frequency and do not affect the permittee's responsibility to implement control measures in effective operating condition as prescribed in the SWMP. Proper maintenance of control measures may require more frequent inspections. Site inspections shall start within 7 calendar days of the commencement of construction activities on site.

1. Person Responsible for Conducting Inspections

The person(s) inspecting the site may be on the permittee's staff or a third party hired to conduct stormwater inspections under the direction of the permittee(s). The permittee is responsible for ensuring that the inspector is a qualified stormwater manager.

2. Inspection Frequency

Permittees must conduct site inspections in accordance with one of the following minimum frequencies, unless the site meets the requirements of Part ID.3

- a. At least one inspection every 7 calendar days. Or
- b. At least one inspection every 14 calendar days, if post-storm event inspections are conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosion. Post-storm inspections may be used to fulfill the 14-day routine inspection requirement.
- c. When site conditions make the schedule required in this section impractical, the permittee may petition the Division to grant an alternate inspection schedule. The alternative inspection schedule may not be implemented prior to written approval by the division and incorporation into the SWMP.

3. Inspection Frequency for Discharges to Outstanding Waters

Permittees must conduct site inspections at least once every 7 calendar days for sites that discharge to a water body designated as an Outstanding Water by the Water Quality Control Commission.

4. Reduced Inspection Frequency

The permittee may perform site inspections at the following reduced frequencies when one of the following conditions exists:

a. Post-Storm Inspections at Temporarily Idle Sites

For permittees choosing to combine 14-day inspections and post-storm-event inspections, if no construction activities will occur following a storm event, post-storm event inspections must be conducted prior to re-commencing construction activities, but no later than 72 hours following the storm event. The delay of any post-storm event inspection must be documented in the inspection record. Routine inspections must still be conducted at least every 14 calendar days.

b. Inspections at Completed Sites/Areas

When the site, or portions of a site are awaiting establishment of a vegetative ground cover and final stabilization, the permittee must conduct a thorough inspection of the stormwater management system at least once every 30 days. Post-storm event inspections are not required under this schedule. This reduced inspection schedule is allowed if all of the following criteria are met:

- i. all construction activities resulting in ground disturbance are complete;
- ii. all activities required for final stabilization, in accordance with the SWMP, have been completed, with the exception of the application of seed that has not occurred due to seasonal conditions or the necessity for additional seed application to augment previous efforts; and
- iii. the SWMP has been amended to locate those areas to be inspected in accordance with the reduced schedule allowed for in this paragraph.

c. Winter Conditions Inspections Exclusion

Inspections are not required for sites that meet all of the following conditions: construction activities are temporarily halted, snow cover exists over the entire site for an extended period, and melting conditions posing a risk of surface erosion do not exist. This inspection exception is applicable only during the period where melting conditions do not exist, and applies to the routine 7-day, 14-day and monthly inspections, as well as the post-storm-event inspections. When this inspection exclusion is implemented, the following information must be documented in accordance with the requirements in Part II:

- i. dates when snow cover existed;
- ii. date when construction activities ceased; and
- iii. date melting conditions began.

5. Inspection Scope

a. Areas to be Inspected

When conducting a site inspection the following areas, if applicable, must be inspected for evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system, or discharging to state waters:

- i. construction site perimeter;
- ii. all disturbed areas;
- iii. designated haul routes;
- iv. material and waste storage areas exposed to precipitation;
- v. locations where stormwater has the potential to discharge offsite; and
- vi. locations where vehicles exit the site.

b. Inspection Requirements

- i. Visually verify whether all implemented control measures are in effective operational condition and are working as designed in their specifications to minimize pollutant discharges.
- ii. Determine if there are new potential sources of pollutants.
- iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges.
- iv. Identify all areas of non-compliance with the permit requirements and, if necessary, implement corrective action in accordance with Part IB.1.c.

c. Inspection Reports

The permittee must keep a record of all inspections conducted for each permitted site. Inspection reports must identify any incidents of noncompliance with the terms and conditions of this permit. Inspection records must be retained in accordance with Part II.O. and signed in accordance with Part I.A.3.f. At a minimum, the inspection report must include:

- i. the inspection date;

- ii. name(s) and title(s) of personnel conducting the inspection;
- iii. weather conditions at the time of inspection;
- iv. phase of construction at the time of inspection;
- v. estimated acreage of disturbance at the time of inspection
- vi. location(s) of discharges of sediment or other pollutants from the site;
- vii. location(s) of control measures needing maintenance;
- viii. location(s) and identification of inadequate control measures;
- ix. location(s) and identification of additional control measures are needed that were not in place at the time of inspection;
- x. description of the minimum inspection frequency (either in accordance with Part I.D.2., I.D.3. or I.D.4.) utilized when conducting each inspection.
- xi. deviations from the minimum inspection schedule as required in Part I.D.2.;
- xii. after adequate corrective action(s) and maintenance have been taken, or where a report does not identify any incidents requiring corrective action or maintenance, the report shall contain a statement as required in Part I.A.3.f.

E. DEFINITIONS

For the purposes of this permit:

- (1) Bypass - the intentional diversion of waste streams from any portion of a treatment facility in accordance with 40 CFR 122.41(m)(1)(i) and Regulation 61.2(12).
- (2) Common Plan of Development or Sale - A contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules, but remain related. The Division has determined that "contiguous" means construction activities located in close proximity to each other (within ¼ mile). Construction activities are considered to be "related" if they share the same development plan, builder or contractor, equipment, storage areas, etc. "Common plan of development or sale" includes construction activities that are associated with the construction of field wide oil and gas permits for facilities that are related.
- (3) Construction Activity - Ground surface disturbing and associated activities (land disturbance), which include, but are not limited to, clearing, grading, excavation, demolition, installation of new or improved haul roads and access roads, staging areas, stockpiling of fill materials, and borrow areas. Construction does not include routine maintenance to maintain the original line and grade, hydraulic capacity, or original purpose of the facility. Activities to conduct repairs that are not part of routine maintenance or for replacement are construction activities and are not routine maintenance. Repaving activities where underlying and/or surrounding soil is exposed as part of the repaving operation are considered construction activities. Construction activity is from initial ground breaking to final stabilization regardless of ownership of the construction activities.
- (4) Control Measure - Any best management practice or other method used to prevent or reduce the discharge of pollutants to state waters. Control measures include, but are not limited to, best management practices. Control measures can include other methods such as the installation, operation, and maintenance of structural controls and treatment devices.

- (5) Control Measure Requiring Routine Maintenance - Any control measure that is still operating in accordance with its design and the requirements of this permit, but requires maintenance to prevent a breach of the control measure. See also inadequate control measure.
- (6) Dedicated Asphalt, Concrete Batch Plants and Masonry Mixing Stations – are batch plants or mixing stations located on, or within $\frac{1}{4}$ mile of, a construction site and that provide materials only to that specific construction site.
- (7) Final Stabilization - The condition reached when all ground surface disturbing activities at the site have been completed, and for all areas of ground surface disturbing activities where a uniform vegetative cover has been established with an individual plant density of at least 70 percent of pre-disturbance levels, or equivalent permanent, physical erosion reduction methods have been employed.
- (8) Good Engineering, Hydrologic and Pollution Control Practices: are methods, procedures, and practices that:
 - a. Are based on basic scientific fact(s).
 - b. Reflect best industry practices and standards.
 - c. Are appropriate for the conditions and pollutant sources.
 - d. Provide appropriate solutions to meet the associated permit requirements, including practice based effluent limits.
- (9) Inadequate Control Measure - Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. See also Control Measure Requiring Routine Maintenance.
- (10) Infeasible – Not technologically possible, or not economically practicable and achievable in light of best industry practices.
- (11) Minimize - reduce or eliminate to the extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practice.
- (12) Municipality - A city, town, county, district, association, or other public body created by, or under, State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or a designated and approved management agency under section 208 of CWA (1987).
- (13) Municipal Separate Storm Sewer System (MS4) - A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):
 - a) owned or operated by a State, city, town, county, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or a designated and approved management agency under section 208 of the CWA that discharges to state waters;
 - i. designed or used for collecting or conveying stormwater;
 - ii. are not a combined sewer; and
 - iii. are not part of a Publicly Owned Treatment Works (POTW). See 5 CCR 1002-61.2(62).
- (14) Municipal Stormwater Management Program - A stormwater program operated by a municipality, typically to meet the requirements of the municipalities MS4 discharge certification.

- (15) Operator - The party that has operational control over day-to-day activities at a project site which are necessary to ensure compliance with the permit. This party is authorized to direct individuals at a site to carry out activities required by the permit.(e.g. the general contractor)
- (16) Owner - The party that has overall control of the activities and that has funded the implementation of the construction plans and specifications. This is the party with ownership of, a long term lease of, or easements on the property on which the construction activity is occurring (e.g., the developer).
- (17) Permittee(s) - The owner and operator named in the discharge certification issued under this permit for the construction site specified in the certification.
- (18) Point Source - Any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. Point source does not include irrigation return flow. See 5 CCR 102-61.2(75).
- (19) Pollutant - Dredged spoil, dirt, slurry, solid waste, incinerator residue, sewage, sewage sludge, garbage, trash, chemical waste, biological nutrient, biological material, radioactive material, heat, wrecked or discarded equipment, rock, sand, or any industrial, municipal or agricultural waste. See 5 CCR 1002-61.2(76).
- (20) Presentation of credentials – a government issued form of identification, if in person; or (ii) providing name, position and purpose of inspection if request to enter is made via telephone, email or other form of electronic communication. A Permittee's non-response to a request to enter upon presentation of credentials constitutes a denial to such request, and may result in violation of the Permit.
- (21) Process Water - Any water which, during manufacturing or processing, comes into contact with or results from the production of any raw material, intermediate product, finished product, by product or waste product.
- (22) Public Emergency Related Site - a project initiated in response to an unanticipated emergency (e.g., mud slides, earthquake, extreme flooding conditions, disruption in essential public services), for which the related work requires immediate authorization to avoid imminent endangerment to human health or the environment, or to reestablish essential public services.
- (23) Qualified Stormwater Manager - An individual knowledgeable in the principles and practices of erosion and sediment control and pollution prevention, and with the skills to assess conditions at construction sites that could impact stormwater quality and to assess the effectiveness of stormwater controls implemented to meet the requirements of this permit.
- (24) Qualifying Local Program - A municipal program for stormwater discharges associated with small construction activity that was formally approved by the division as a qualifying local program.
- (25) Receiving Water - Any classified or unclassified surface water segment (including tributaries) in the State of Colorado into which stormwater associated with construction activities discharges. This definition includes all water courses, even if they are usually dry, such as borrow ditches, arroyos, and other unnamed waterways.
- (26) Severe Property Damage - substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. See 40 CFR 122.41(m)(1)(ii).

- (27) Significant Materials - Include, but not limited to, raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical the permittee is required to report under section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with stormwater discharges.
- (28) Small Construction Activity - The discharge of stormwater from construction activities that result in land disturbance of equal to, or greater than, one acre and less than five acres. Small construction activity also includes the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale, if the larger common plan ultimately disturbs equal to, or greater than, one acre and less than five acres.
- (29) Spill - An unintentional release of solid or liquid material which may pollute state waters.
- (30) State Waters - means any and all surface and subsurface waters which are contained in or flow in or through this state, but does not include waters in sewage systems, waters in treatment works of disposal systems, waters in potable water distribution systems, and all water withdrawn for use until use and treatment have been completed.
- (31) Steep Slopes: where a local government, or industry technical manual (e.g., stormwater BMP manual) has defined what is to be considered a "steep slope", this permit's definition automatically adopts that definition. Where no such definition exists, steep slopes are automatically defined as those that are 3:1 or greater.
- (32) Stormwater - Precipitation runoff, snow melt runoff, and surface runoff and drainage. See 5 CCR 1002-61.2(103).
- (33) Total Maximum Daily Loads (TMDLs) -The sum of the individual wasteload allocations (WLA) for point sources and load allocations (LA) for nonpoint sources and natural background. For the purposes of this permit, a TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL includes WLAs, LAs, and must include a margin of safety (MOS), and account for seasonal variations. See section 303(d) of the CWA and 40 C.F.R. 130.2 and 130.7.
- (34) Upset - an exceptional incident in which there is unintentional and temporary noncompliance with permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation in accordance with 40 CFR 122.41(n) and Regulation 61.2(114).

F. MONITORING

The division may require sampling and testing, on a case-by-case basis. If the division requires sampling and testing, the division will send a notification to the permittee. Reporting procedures for any monitoring data collected will be included in the notification.

If monitoring is required, the following applies:

1. the thirty (30) day average must be determined by the arithmetic mean of all samples collected during a thirty (30) consecutive-day period; and
2. a grab sample, for monitoring requirements, is a single "dip and take" sample.

G. Oil and Gas Construction

Stormwater discharges associated with construction activities directly related to oil and gas exploration, production, processing, and treatment operations or transmission facilities are regulated under the Colorado Discharge Permit System Regulations (5 CCR 1002-61), and require coverage under this permit in accordance with that regulation. However, references in this permit to specific authority under the CWA do not apply to stormwater discharges associated with these oil and gas related construction activities, to the extent that the references are limited by the federal Energy Policy Act of 2005.

Part II: Standard Permit Conditions**A. DUTY TO COMPLY**

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Water Quality Control Act and is grounds for:

- a. enforcement action;
- b. permit termination, revocation and reissuance, or modification; or
- c. denial of a permit renewal application.

B. DUTY TO REAPPLY

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain authorization as required by Part I.A.3.k. of the permit.

C. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. DUTY TO MITIGATE

A permittee must take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. PROPER OPERATION AND MAINTENANCE

A permittee must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of this permit. This requirement can be met by meeting the requirements for Part I.B., I.C., and I.D. above. See also 40 C.F.R. § 122.41(e).

F. PERMIT ACTIONS

This permit may be modified, revoked and reissued, or terminated for cause. The permittee request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. Any request for modification, revocation, reissuance, or termination under this permit must comply with all terms and conditions of Regulation 61.8(8).

G. PROPERTY RIGHTS

In accordance with 40 CFR 122.41(g) and 5 CCR 1002-61, 61.8(9):

1. The issuance of a permit does not convey any property or water rights in either real or personal property, or stream flows or any exclusive privilege.

2. The issuance of a permit does not authorize any injury to person or property or any invasion of personal rights, nor does it authorize the infringement of federal, state, or local laws or regulations.
3. Except for any toxic effluent standard or prohibition imposed under Section 307 of the Federal act or any standard for sewage sludge use or disposal under Section 405(d) of the Federal act, compliance with a permit during its term constitutes compliance, for purposes of enforcement, with Sections 301, 302, 306, 318, 403, and 405(a) and (b) of the Federal act. However, a permit may be modified, revoked and reissued, or terminated during its term for cause as set forth in Section 61.8(8) of the Colorado Discharge Permit System Regulations.

H. DUTY TO PROVIDE INFORMATION

The permittee shall furnish to the division, within a reasonable time, any information which the division may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the division, upon request, copies of records required to be kept by this permit in accordance with 40 CFR 122.41(h) and/or Regulation 61.8(3)(q).

I. INSPECTION AND ENTRY

The permittee shall allow the division and the authorized representative, upon the presentation of credentials as required by law, to allow for inspections to be conducted in accordance with 40 CFR 122.41(i), Regulation 61.8(3), and Regulation 61.8(4):

1. to enter upon the permittee's premises where a regulated facility or activity is located or in which any records are required to be kept under the terms and conditions of this permit;
2. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit;
3. at reasonable times, inspect any monitoring equipment or monitoring method required in the permit; and
4. to enter upon the permittee's premises in a reasonable manner and at a reasonable time to inspect or investigate, any actual, suspected, or potential source of water pollution, or any violation of the Colorado Water Quality Control Act. The investigation may include: sampling of any discharges, stormwater or process water, taking of photographs, interviewing site staff on alleged violations and other matters related to the permit, and assessing any and all facilities or areas within the site that may affect discharges, the permit, or an alleged violation.

The permittee shall provide access to the division or other authorized representatives upon presentation of proper credentials. A permittee's non-response to a request to enter upon presentation of credentials constitutes a denial of such request, and may result in a violation of the permit.

J. MONITORING AND RECORDS

1. Samples and measurements taken for the purpose of monitoring must be representative of the volume and nature of the monitored activity.

2. The permittee must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date the permit expires or the date the permittee's authorization is terminated. This period may be extended by request of the division at any time.
3. Records of monitoring information must include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling or measurements;
 - c. The date(s) analyses were performed
 - d. The individual(s) who performed the analyses;
 - e. The analytical techniques or methods used; and
 - f. The results of such analyses.
4. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in the permit.

K. SIGNATORY REQUIREMENTS**1. Authorization to Sign:**

All documents required to be submitted to the division by the permit must be signed in accordance with the following criteria:

- a. For a corporation: By a responsible corporate officer. For the purpose of this subsection, a responsible corporate officer means:
 - i. a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or
 - ii. the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- b. For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or
- c. For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a federal agency includes
 - i. (i) the chief executive officer of the agency, or

- ii. (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency. (e.g., Regional Administrator of EPA)

2. Electronic Signatures

For persons signing applications for coverage under this permit electronically, in addition to meeting other applicable requirements stated above, such signatures must meet the same signature, authentication, and identity-proofing standards set forth at 40 CFR § 3.2000(b) for electronic reports (including robust second-factor authentication). Compliance with this requirement can be achieved by submitting the application using the Colorado Environmental Online Service (CEOS) system.

3. Change in Authorization to Sign

If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization must be submitted to the division, prior to the re-authorization, or together with any reports, information, or applications to be signed by an authorized representative.

L. REPORTING REQUIREMENTS

1. Planned Changes

The permittee shall give advance notice to the division, in writing, of any planned physical alterations or additions to the permitted facility in accordance with 40 CFR 122.41(l) and Regulation 61.8(5)(a). Notice is required only when:

- a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
- b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.41(a)(1).

2. Anticipated Non-Compliance

The permittee shall give advance notice to the division, in writing, of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements. The timing of notification requirements differs based on the type of non-compliance as described in subparagraphs 5, 6, 7, and 8 below.

3. Transfer of Ownership or Control

The permittee shall notify the division, in writing, ten (10) calendar days in advance of a proposed transfer of the permit. This permit is not transferable to any person except after notice is given to the division.

- a. Where a facility wants to change the name of the permittee, the original permittee (the first owner or operators) must submit a Notice of Termination.
- b. The new owner or operator must submit an application. See also signature requirements in Part II.K, above.
- c. A permit may be automatically transferred to a new permittee if:
 - i. The current permittee notifies the Division in writing 30 calendar days in advance of the proposed transfer date; and
 - ii. The notice includes a written agreement between the existing and new permittee(s) containing a specific date for transfer of permit responsibility, coverage and liability between them; and
 - iii. The division does not notify the existing permittee and the proposed new permittee of its intent to modify, or revoke and reissue the permit.
 - iv. Fee requirements of the Colorado Discharge Permit System Regulations, Section 61.15, have been met.

4. Monitoring reports

Monitoring results must be reported at the intervals specified in this permit per the requirements of 40 CFR 122.41(l)(4).

5. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule in the permit, shall be submitted on the date listed in the compliance schedule section. The fourteen (14) calendar day provision in Regulation 61.8(4)(n)(i) has been incorporated into the due date.

6. Twenty-four hour reporting

In addition to the reports required elsewhere in this permit, the permittee shall report the following circumstances orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall mail to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances:

- a. Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident;
- b. Circumstances leading to any unanticipated bypass which exceeds any effluent limitations in the permit;
- c. Circumstances leading to any upset which causes an exceedance of any effluent limitation in the permit;

- d. Daily maximum violations for any of the pollutants limited by Part I of this permit. This includes any toxic pollutant or hazardous substance or any pollutant specifically identified as the method to control any toxic pollutant or hazardous substance.
- e. The division may waive the written report required under subparagraph 6 of this section if the oral report has been received within 24 hours.

7. Other non-compliance

A permittee must report all instances of noncompliance at the time monitoring reports are due. If no monitoring reports are required, these reports are due at least annually in accordance with Regulation 61.8(4)(p). The annual report must contain all instances of non-compliance required under either subparagraph 5 or subparagraph 6 of this subsection.

8. Other information

Where a permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the Permitting Authority, it has a duty to promptly submit such facts or information.

M. BYPASS

1. Bypass not exceeding limitations

The permittees may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Part II.M.2 of this permit. See 40 CFR 122.41(m)(2).

2. Notice of bypass

- a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, the permittee must submit prior notice, if possible at least ten days before the date of the bypass. See 40 CFR §122.41(m)(3)(i) and/or Regulation 61.9(5)(c).
- b. Unanticipated bypass. The permittee must submit notice of an unanticipated bypass in accordance with Part II.L.6. See 40 CFR §122.41(m)(3)(ii) .

3. Prohibition of Bypass

Bypasses are prohibited and the division may take enforcement action against the permittee for bypass, unless:

- i. the bypass is unavoidable to prevent loss of life, personal injury, or severe property damage;

- ii. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
- iii. proper notices were submitted to the division.

N. UPSET**1. Effect of an upset**

An upset constitutes an affirmative defense to an action brought for noncompliance with permit effluent limitations if the requirements of Part II.N.2. of this permit are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review in accordance with Regulation 61.8(3)(j).

2. Conditions necessary for demonstration of an Upset

A permittee who wishes to establish the affirmative defense of upset shall demonstrate through properly signed contemporaneous operating logs, or other relevant evidence that

- a. an upset occurred and the permittee can identify the specific cause(s) of the upset;
- b. the permitted facility was at the time being properly operated and maintained; and
- c. the permittee submitted proper notice of the upset as required in Part II.L.6.(24-hour notice); and
- d. the permittee complied with any remedial measure necessary to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. In addition to the demonstration required above, a permittee who wishes to establish the affirmative defense of upset for a violation of effluent limitations based upon water quality standards shall also demonstrate through monitoring, modeling or other methods that the relevant standards were achieved in the receiving water.

3. Burden of Proof

In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

O. RETENTION OF RECORDS**1. Post-Expiration or Termination Retention**

Copies of documentation required by this permit, including records of all data used to complete the application for permit coverage to be covered by this permit, must be

retained for at least three years from the date that permit coverage expires or is terminated. This period may be extended by request of EPA at any time.

2. On-site Retention

The permittee must retain an electronic version or hardcopy of the SWMP at the construction site from the date of the initiation of construction activities to the date of expiration or inactivation of permit coverage; unless another location, specified by the permittee, is approved by the division.

P. REOPENER CLAUSE

1. Procedures for modification or revocation

Permit modification or revocation of this permit or coverage under this permit will be conducted according to Regulation 61.8(8).

2. Water quality protection

If there is evidence indicating that the stormwater discharges authorized by this permit cause, have the reasonable potential to cause or contribute to an excursion above any applicable water quality standard, the permittee may be required to obtain an individual permit, or the permit may be modified to include different limitations and/or requirements.

Q. SEVERABILITY

The provisions of this permit are severable. If any provisions or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances and the application of the remainder of this permit shall not be affected.

R. NOTIFICATION REQUIREMENTS

1. Notification to Parties

All notification requirements, excluding information submitted using the CEOS portal, shall be directed as follows:

a. Oral Notifications, during normal business hours shall be to:

Clean Water Compliance Section
Water Quality Control Division
Telephone: (303) 692-3500

b. Written notification shall be to:

Clean Water Compliance Section
Water Quality Control Division
Colorado Department of Public Health and Environment
WQCD-WQP-B2
4300 Cherry Creek Drive South
Denver, CO 80246-1530

S. RESPONSIBILITIES**1. Reduction, Loss, or Failure of Treatment Facility**

The permittee has the duty to halt or reduce any activity if necessary to maintain compliance with the effluent limitations of the permit. It shall not be a defense for a permittee in an enforcement action that it would be necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

T. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under Section 311 (Oil and Hazardous Substance Liability) of the CWA.

U. Emergency Powers

Nothing in this permit shall be construed to prevent or limit application of any emergency power of the division.

V. Confidentiality

Any information relating to any secret process, method of manufacture or production, or sales or marketing data which has been declared confidential by the permittee, and which may be acquired, ascertained, or discovered, whether in any sampling investigation, emergency investigation, or otherwise, shall not be publicly disclosed by any member, officer, or employee of the Water Quality Control Commission or the division, but shall be kept confidential. Any person seeking to invoke the protection of of this section shall bear the burden of proving its applicability. This section shall never be interpreted as preventing full disclosure of effluent data.

W. Fees

The permittee is required to submit payment of an annual fee as set forth in the 2016 amendments to the Water Quality Control Act. Section 25-8-502 (1.1) (b), and the Colorado Discharge Permit System Regulations 5 CCR 1002-61, Section 61.15 as amended. Failure to submit the required fee when due and payable is a violation of the permit and will result in enforcement action pursuant to Section 25-8-601 et. seq., C.R.S.1973 as amended.

X. Duration of Permit

The duration of a permit shall be for a fixed term and shall not exceed five (5) years. If the permittee desires to continue to discharge, a permit renewal application shall be submitted at least ninety (90) calendar days before this permit expires. Filing of a timely and complete application shall cause the expired permit to continue in force to the effective date of the new permit. The permit's duration may be extended only through administrative extensions and not through interim modifications. If the permittee anticipates there will be no discharge after the expiration date of this permit, the division should be promptly notified so that it can terminate the permit in accordance with Part I.A.3.i.

Y. Section 307 Toxics

If a toxic effluent standard or prohibition, including any applicable schedule of compliance specified, is established by regulation pursuant to Section 307 of the Federal Act for a toxic pollutant which is present in the permittee's discharge and such standard or prohibition is more stringent than any limitation upon such pollutant in the discharge permit, the division

shall institute proceedings to modify or revoke and reissue the permit to conform to the toxic effluent standard or prohibition

APPENDIX C
FEMA FIRM MAP

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0 0' North American Vertical Datum of 1988 (NAVD88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 13. The **horizontal datum** was NAD83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988 (NAVD88). These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov/> or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-2, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242 or visit its website at <http://www.ngs.noaa.gov/>.

Base Map information shown on this FIRM was provided in digital format by Teller County. These data are current as of 2007.

This map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the *Flood Insurance Study Report* (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a *Flood Insurance Study Report*, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at <http://www.msc.fema.gov/>.

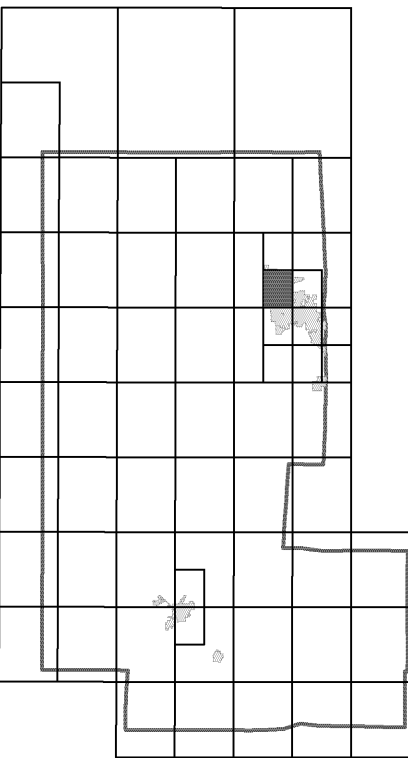
If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA Map (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/>.

Teller County Vertical Datum Offset Table

Flooding Source	Vertical Datum Offset (ft)
East Fork Fountain Creek	4.2
East Fork Paint Pony	4.2
Fountain Creek	4.2
Lovell Gulch	4.2
Loy Gulch	4.2
Paint Pony	4.2
Trout Creek	4.2

Example: To convert Fountain Creek elevations to NAVD 88, 4.2 feet were added to the NGVD 29 elevations.

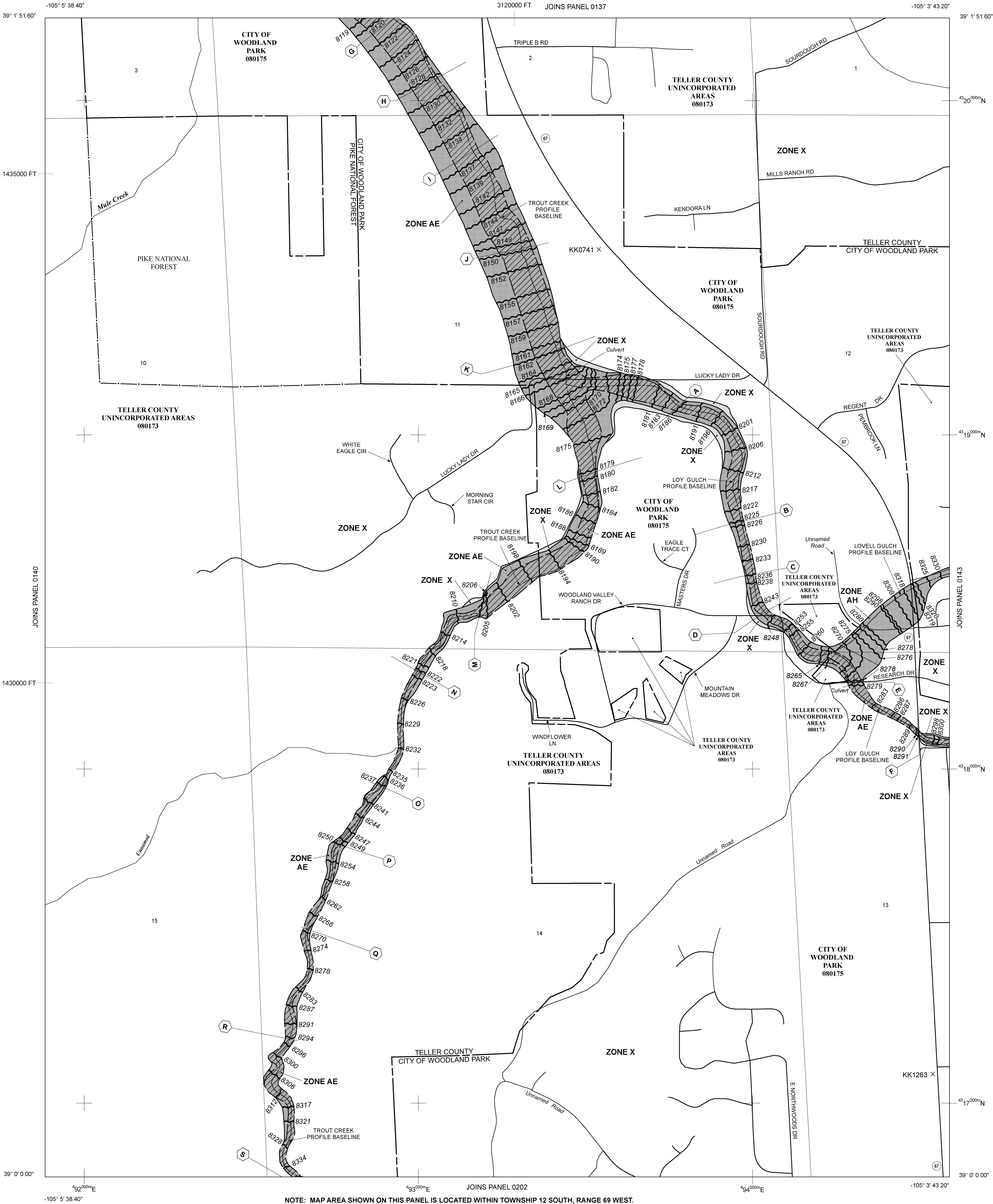
Panel Location Map



This Digital Flood Insurance Rate Map (DFIRM) was produced through a Cooperating Technical Partner (CTP) agreement between the State of Colorado Water Conservation Board (CWCB) and the Federal Emergency Management Agency (FEMA).



Additional Flood Hazard information and resources are available from local communities and the Colorado Water Conservation Board.



NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 12 SOUTH, RANGE 69 WEST.

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.
ZONE AE Base Flood Elevations determined.
ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Special Flood Hazard Area Formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

Floodplain boundary
 Floodway boundary
 Zone D Boundary
 CBRS and OPA boundary

Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.

Base Flood Elevation line and value; elevation in feet* (EL 987)
 Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

Cross section line

Transect line
97° 07' 30.00"
32° 22' 30.00"
43° 19' 00"N

6000000 FT
1000-meter Universal Transverse Mercator grid ticks, zone 13

5000-foot grid ticks: Colorado State Plane coordinate system, central zone (FIPSZONE 0502), Lambert Conformal Conic projection

Bench mark (see explanation in Notes to Users section of this FIRM panel)

River Mile

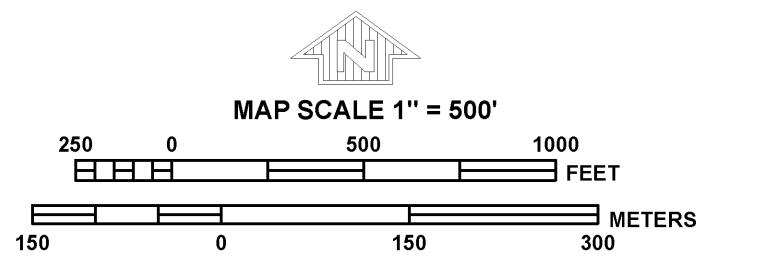
MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
September 30, 1988

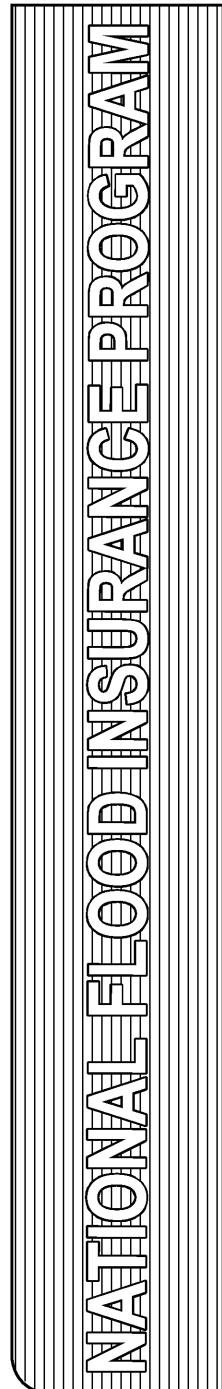
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
SEPTEMBER 25, 2009 - to update corporate limits, to change Base Flood Elevations and Special Flood Hazard Areas, to update map format, to add roads and road names, and to incorporate previously issued Letters of Map Revision.

For community map revision history prior to countywide mapping, refer to the Community Map History Table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.



**PANEL 0139D**

**FIRM**
FLOOD INSURANCE RATE MAP
TELLER COUNTY, COLORADO
AND INCORPORATED AREAS

PANEL 0139 OF 0415
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS

COMMUNITY	NUMBER	PANEL	SUFFIX
TELLER COUNTY	080173	0139	D
WOODLAND PARK, CITY OF	080175	0139	D

Notice to User: The Map Number shown below should be used when placing map orders. The Community Number shown above should be used on insurance applications for the subject community.
MAP NUMBER 08119C0139D

MAP REVISED SEPTEMBER 25, 2009
Federal Emergency Management Agency

APPENDIX D

SOILS INFORMATION



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Teller-Park Area, Colorado, Parts of Park and Teller Counties

Stone Ridge MF



November 15, 2021

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Teller-Park Area, Colorado, Parts of Park and Teller Counties.....	14
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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



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 1:24,000.

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: Teller-Park Area, Colorado, Parts of Park and Teller Counties
Survey Area Data: Version 13, Aug 31, 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

MAP LEGEND

MAP INFORMATION

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
81	Plome-Pimsby complex, 5 to 40 percent slopes	9.2	100.0%
Totals for Area of Interest		9.2	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Teller-Park Area, Colorado, Parts of Park and Teller Counties

81—Plome-Pimsby complex, 5 to 40 percent slopes

Map Unit Setting

National map unit symbol: k0yj
Elevation: 8,200 to 8,600 feet
Mean annual precipitation: 20 to 22 inches
Mean annual air temperature: 42 to 44 degrees F
Frost-free period: 80 to 100 days
Farmland classification: Not prime farmland

Map Unit Composition

Plome and similar soils: 65 percent
Pimsby, north slopes, and similar soils: 15 percent
Pimsby and similar soils: 15 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Plome

Setting

Landform: Hills on grabens
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Slope alluvium derived from arkose

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 5 inches: sandy loam
E - 5 to 13 inches: gravelly sandy loam
E/Bt - 13 to 17 inches: gravelly sandy loam
E/Bt - 17 to 20 inches: gravelly sandy clay loam
Bt - 20 to 29 inches: gravelly coarse sandy loam
C - 29 to 60 inches: gravelly coarse sandy loam

Properties and qualities

Slope: 5 to 20 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: R048AY255CO - Pine Grasslands

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Other vegetative classification: Ponderosa pine - Douglas-fir/mountain muhly
(PIPO-PSME/MUMO) (C1117)
Hydric soil rating: No

Description of Pimsby

Setting

Landform: Hills on grabens
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Slope alluvium derived from arkose

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 5 inches: sandy loam
E - 5 to 14 inches: gravelly loamy coarse sand
E and Bt - 14 to 19 inches: very gravelly loamy coarse sand
E and Bt - 19 to 24 inches: very gravelly sandy loam
Bt and E - 24 to 35 inches: very gravelly sandy loam
Bt and E - 35 to 47 inches: very gravelly loamy coarse sand
C - 47 to 60 inches: stratified gravelly loamy coarse sand to gravelly sandy loam

Properties and qualities

Slope: 5 to 20 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A
Ecological site: R048AY255CO - Pine Grasslands
Other vegetative classification: Ponderosa pine - Douglas-fir/mountain muhly
(PIPO-PSME/MUMO) (C1117)
Hydric soil rating: No

Description of Pimsby, North Slopes

Setting

Landform: Hills on grabens
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Slope alluvium derived from arkose

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 5 inches: sandy loam
E - 5 to 14 inches: gravelly loamy coarse sand
E and Bt - 14 to 19 inches: very gravelly loamy coarse sand

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E and Bt - 19 to 24 inches: very gravelly sandy loam
Bt and E - 24 to 35 inches: very gravelly sandy loam
Bt and E - 35 to 47 inches: very gravelly loamy coarse sand
C - 47 to 60 inches: stratified gravelly loamy coarse sand to gravelly sandy loam

Properties and qualities

Slope: 5 to 40 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R048AY255CO - Pine Grasslands
Other vegetative classification: Ponderosa pine - Douglas-fir/mountain muhly
(PIPO-PSME/MUMO) (C1117), Douglas-fir/kinnikinnick-common juniper
(PSME/ARUV-JUCO6) (C1219)
Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 3 percent
Landform: Knobs, hills
Landform position (three-dimensional): Nose slope, crest
Hydric soil rating: No

Typic haplustolls

Percent of map unit: 2 percent
Landform: Hills on grabens
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

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APPENDIX E

IDENTIFICATION OF POLLUTANT SOURCES

Outdoor Storage of Materials Log

[illegible]

Vehicle Equipment Maintenance and Fueling Log

[illegible]

Routine Maintenance Log

[illegible]

Onsite Waste Management Log

[illegible]

Non-Industrial Waste Sources Log

[illegible]

Additional Pollutant Sources Log

[illegible]

APPENDIX F

LAND DISTURBANCE / CONTROL MEASURE / STABILIZATION LOG

Land Disturbance / Control Measure / Stabilization Log

[illegible]

APPENDIX G

CDPHE ENVIRONMENTAL SPILL REPORTING / CONTROL MEASURE

involving a radioactive or infectious material, or there is a release of a marine pollutant.

Spills and incidents that have or may result in a spill along a highway must be reported to the nearest law enforcement agency immediately. The Colorado State Patrol and CDPHE must also be notified as soon as possible. In the event of a spill of hazardous waste at a transfer facility, the transporter must notify CDPHE within 24 hours if the spill exceeds 55 gallons or if there is a fire or explosion.

The National Response Center should be notified as soon as possible after discovery of a release of a hazardous liquid or carbon dioxide from a pipeline system if a person is killed or injured, there is a fire or explosion, there is property damage of \$50,000 or more, or any nearby water body is contaminated.

The National Response Center and the Colorado Public Utilities Commission Gas Pipeline Safety Section must be notified as soon as possible, but not more than two hours after discovery of a release of gas from a natural gas pipeline or liquefied natural gas facility if a person is killed or injured, there is an emergency shutdown of the facility, or there is property damage of \$50,000 or more. The Colorado Public Utilities Commission should also be notified if there is a gas leak from a pipeline, liquefied natural gas system, master meter system or a propane system that results in the evacuation of 50 or more people from an occupied building or the closure of a roadway.

Oil and Gas Exploration

All Class I major events on federal lands, including releases of hazardous substances in excess of the CERCLA reportable quantity and spills of more than 100 barrels of fluid and/or 500 MCF of gas released, must be reported to the Bureau of Land Management (BLM) immediately. Spills of oil, gas, salt water, toxic liquids and waste materials must also be reported to the BLM and the surface management agency.

Spills of exploration and production (E&P) waste on state or private lands in excess of 20 barrels, and spills of any size that impact or threaten to impact waters of the state, an occupied structure, or public byway must be reported to the Colorado Oil and Gas Conservation Commission as soon as practicable, but not more than 24 hours after discovery. Spills of any

size that impact or threaten to impact waters of the state must be reported to CDPHE immediately. Spills that impact or threaten to impact a surface water intake must be reported to the emergency contact for that facility immediately after discovery. Spills of more than five (5) barrels of E&P waste must be reported in writing to the Oil and Gas Conservation Commission within 10 days of discovery.

REPORTING NUMBERS

National Response Center (24-hour)
1-800-424-8802

CDPHE Colorado Environmental Release and Incident Reporting Line (24-hour)
1-877-518-5608

Radiation Incident Reporting Line (24-hour)
303-877-9757

Colorado State Patrol (24-hour)
303-239-4501

Division of Oil and Public Safety
(business hours)
303-318-8547

Oil and Gas Conservation Commission
(business hours)
303-894-2100

Colorado Public Utilities Commission Gas Pipeline Safety Section (business hours)
303-894-2851

Local Emergency Planning Committees
(to obtain list, business hours)
720-852-6603



**Colorado Department
of Public Health
and Environment**

Environmental Spill Reporting

Colorado Department of Public
Health and Environment
4300 Cherry Creek Drive South
Denver, CO 80246-1530

<http://www.cdphe.state.co.us>

January 2009

When a release of a hazardous material or other substance occurs to the environment, there are a number of reporting and notification requirements that must be followed by the company or individual responsible for the release. Most spills are covered by more than one reporting requirement, and **all** requirements must be met. In addition to verbal notification, written reports are generally required. This brochure briefly explains the major requirements. A more detailed description is provided in the "Reporting Environmental Releases in Colorado" Guidance Document, available on the web.

Releases that must be reported to the Colorado Department of Public Health and Environment (CDPHE) may be reported to the Colorado Environmental Release and Incident Reporting Line.

ENVIRONMENTAL SPILL REPORTING

CERCLA, EPCRA and RCRA

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Emergency Planning and Community Right-to-Know Act (EPCRA) require that a release of a reportable quantity or more of a hazardous substance to the environment be reported immediately to the appropriate authorities when the release is discovered.

Under CERCLA, reportable quantities were established for hazardous substances listed or designated under other environmental statutes. These include:

- all hazardous air pollutants (HAPs) listed under Section 112(b) of the Clean Air Act.
- all toxic pollutants designated under Section 307(a) or Section 311(b)(2)(A) of the Clean Water Act.
- all Resource Conservation and Recovery Act (RCRA) characteristic and listed hazardous wastes.
- any element, compound, or substance designated under Section 102 of CERCLA.

EPCRA established a list of extremely hazardous substances (EHS) that could cause serious irreversible health effects from accidental releases. Many substances appear on both the CERCLA and EPCRA lists. EPCRA extremely hazardous substances that are also CERCLA hazardous substances have the same reportable quantity (RQ) as under CERCLA. EPCRA extremely hazardous substances that are not listed under CERCLA have a reportable quantity that is equal to their threshold planning quantity (TPQ). A list of CERCLA reportable quantities is included in 40 CFR Section 302.4. A list of EPCRA threshold planning quantities is included in 40 CFR Part 355 Appendices A & B.

CERCLA-reportable releases must be reported immediately to the National Response Center (NRC), while EPCRA-reportable releases must be reported immediately to the National Response Center, the State Emergency Response Commission (SERC) and the affected Local Emergency Planning Committee (LEPC). If the release is an EPCRA extremely

hazardous substance, but not a CERCLA hazardous substance, and there is absolutely no potential to affect off-site persons, then only the State Emergency Planning Commission (represented by CDPHE for reporting purposes) and the Local Emergency Planning Committee need to be notified.

In the case of a release of hazardous waste stored in tanks, RCRA-permitted facilities and large quantity generators must also notify CDPHE within 24 hours of any release to the environment that is greater than one (1) pound.

Radiation Control

Each licensee or registrant must report to the Radiation Incident Reporting Line in the event of lost, stolen or missing licensed or registered radioactive materials or radiation machines, releases of radioactive materials, contamination events, and fires or explosions involving radioactive materials. Releases of radionuclides are reportable under CERCLA.

Clean Water Act

The Clean Water Act requires the person in charge of a facility or vessel to immediately report to the National Response Center all discharges of oil or designated hazardous substances to water. Oil means oil of any kind or form. Designated hazardous substances are included in the CERCLA list.

The Clean Water Act also requires that facilities with a National Pollutant Discharge Elimination System (NPDES) permit report to the National Response Center within 24 hours of becoming aware of any unanticipated bypasses or upsets that cause an exceedance of the effluent limits in their permit and any violations of their maximum daily discharge limits for pollutants listed in their permit.

A release of any chemical, oil, petroleum product, sewage, etc., which may enter waters of the state of Colorado (which include surface water, ground water and dry gullies and storm sewers leading to surface water) must be reported immediately to CDPHE. Any accidental discharge to the sanitary sewer system must be reported immediately to the local sewer authority and the affected wastewater treatment plant. For additional regarding releases to water, please see "Guidance for Reporting Spills under the Colorado

Water Quality Control Act and Colorado Discharge Permits" at <http://www.cdphe.state.co.us/op/wqcc/Resources/Guidance/spillguidance.pdf>.

Clean Air Act

Hazardous air pollutants (HAPs) are designated as hazardous substances under CERCLA. If a facility has an air permit but the permit does not allow for or does not specify the release of a substance, or if the facility does not have an air permit, then all releases in excess of the CERCLA / EPCRA reportable quantity for that substance must be reported to the National Response Center and CDPHE. If the facility releases more of a substance than is allowed under its air permit, the facility must also report the release. Discharges of a substance that are within the allowable limits specified in the facility's permit do not need to be reported.

Regulated Storage Tanks

Owners and operators of regulated storage tank systems must report a release or suspected release of regulated substances to the Division of Oil and Public Safety at the Colorado Department of Labor and Employment within 24 hours. Under this program, the reportable quantity for petroleum releases is 25 gallons or more, or any amount that causes a sheen on nearby surface water. Spills of less than 25 gallons of petroleum must be immediately contained and cleaned up. If cleanup cannot be accomplished within 24 hours, the Division of Oil and Public Safety must be notified immediately.

Spills of hazardous substances from tanks in excess of the CERCLA or EPCRA reportable quantity must be reported immediately to the National Response Center, CDPHE and the local fire authority, and to the Division of Oil and Public Safety within 24 hours.

Transportation and Pipelines

The person in physical possession of a hazardous material must notify the National Response Center as soon as practical, but not to exceed 12 hours after the incident, if as a direct result of the hazardous material, a person is killed or injured, there is an evacuation of the general public lasting more than an hour, a major transportation artery is shut down for an hour or more, the flight pattern of an aircraft is altered, there is fire, spillage or suspected contamination

APPENDIX H

STORM EVENT LOG

APPENDIX I

INSPECTION AND SAMPLING REPORTS

CONSTRUCTION STORMWATER SITE INSPECTION REPORT

Facility Name		Permittee					
Date of Inspection		Weather Conditions					
Permit Certification #		Disturbed Acreage					
Phase of Construction		Inspector Title					
Inspector Name							
Is the above inspector a qualified stormwater manager? (permittee is responsible for ensuring that the inspector is a qualified stormwater manager)			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">YES</td> <td style="width: 50%; text-align: center;">NO</td> </tr> <tr> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> </table>	YES	NO	☐	☐
YES	NO						
☐	☐						

INSPECTION FREQUENCY					
Check the box that describes the minimum inspection frequency utilized when conducting each inspection					
At least one inspection every 7 calendar days	☐				
At least one inspection every 14 calendar days, with post-storm event inspections conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosions	☐				
• This is this a post-storm event inspection. Event Date: _____	☐				
Reduced inspection frequency - Include site conditions that warrant reduced inspection frequency	☐				
• Post-storm inspections at temporarily idle sites	☐				
• Inspections at completed sites/area	☐				
• Winter conditions exclusion	☐				
Have there been any deviations from the minimum inspection schedule? If yes, describe below.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">YES</td> <td style="width: 50%; text-align: center;">NO</td> </tr> <tr> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> </table>	YES	NO	☐	☐
YES	NO				
☐	☐				

INSPECTION REQUIREMENTS*
i. Visually verify all implemented control measures are in effective operational condition and are working as designed in the specifications
ii. Determine if there are new potential sources of pollutants
iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges
iv. Identify all areas of non-compliance with the permit requirements, and if necessary, implement corrective action
*Use the attached Control Measures Requiring Routine Maintenance and Inadequate Control Measures Requiring Corrective Action forms to document results of this assessment that trigger either maintenance or corrective actions

AREAS TO BE INSPECTED			
Is there evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system or discharging to state waters at the following locations?			
	NO	YES	If "YES" describe discharge or potential for discharge below. Document related maintenance, inadequate control measures and corrective actions Inadequate Control Measures Requiring Corrective Action form
Construction site perimeter	☐	☐	
All disturbed areas	☐	☐	
Designated haul routes	☐	☐	
Material and waste storage areas exposed to precipitation	☐	☐	
Locations where stormwater has the potential to discharge offsite	☐	☐	
Locations where vehicles exit the site	☐	☐	
Other: _____	☐	☐	

CONTROL MEASURES REQUIRING ROUTINE MAINTENANCE

Definition: Any control measure that is still operating in accordance with its design and the requirements of the permit, but requires maintenance to prevent a breach of the control measure. These items are not subject to the corrective action requirements as specified in Part I.B.1.c of the permit.

Are there control measures requiring maintenance?	NO	YES	
	☐	☐	If "YES" document below

[illegible]

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

Are there inadequate control measures requiring corrective action?	NO	YES	
	☐	☐	If "YES" document below

Are there additional control measures needed that were not in place at the time of inspection?	NO	YES	
	☐	☐	If "YES" document below

[illegible]

REPORTING REQUIREMENTS

The permittee shall report the following circumstances orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall mail to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances. The division may waive the written report required if the oral report has been received within 24 hours.

All Noncompliance Requiring 24-Hour Notification per Part II.L.6 of the Permit
a. Endangerment to Health or the Environment Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident (See Part II.L.6.a of the Permit) <i>This category would primarily result from the discharge of pollutants in violation of the permit</i>
b. Numeric Effluent Limit Violations - o Circumstances leading to any unanticipated bypass which exceeds any effluent limitations (See Part II.L.6.b of the Permit) - o Circumstances leading to any upset which causes an exceedance of any effluent limitation (See Part II.L.6.c of the Permit) - o Daily maximum violations (See Part II.L.6.d of the Permit) <i>Numeric effluent limits are very uncommon in certifications under the COR400000 general permit. This category of noncompliance only applies if numeric effluent limits are included in a permit certification.</i>

Has there been an incident of noncompliance requiring 24-hour notification?	NO ☐	YES ☐	If "YES" document below
---	--------------------------------	---------------------------------	-------------------------

Date and Time of Incident	Location	Description of Noncompliance	Description of Corrective Action	Date and Time of 24 Hour Oral Notification	Date of 5 Day Written Notification *

*Attach copy of 5 day written notification to report. Indicate if written notification was waived, including the name of the division personnel who granted waiver.

After adequate corrective action(s) and maintenance have been taken, or where a report does not identify any incidents requiring corrective action or maintenance, the individual(s) designated as the Qualified Stormwater Manager, shall sign and certify the below statement:

“I verify that, to the best of my knowledge and belief, all corrective action and maintenance items identified during the inspection are complete, and the site is currently in compliance with the permit.”

Name of Qualified Stormwater Manager

Title of Qualified Stormwater Manager

Signature of Qualified Stormwater Manager

Date

Notes/Comments

APPENDIX J

SWMP AMENDMENT LOG

AMENDMENT LOG

[illegible]

ATTACHMENT 'G'

STONE RIDGE MULTI-FAMILY TRACTS A AND F - WOODLAND PARK
EROSION CONTROL CONSTRUCTION DOCUMENTS
TRACTS A AND F

LOCATED IN THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 12 SOUTH, RANGE 69 WEST OF THE 6TH
P.M. CITY OF WOODLAND PARK, COUNTY OF TELLER, STATE OF COLORADO

LAND AREA:

392,510 SQ. FT. OR 9.01 ACRES MORE OR LESS

BASIS OF BEARING:

BEGINNING AT THE MOST NORTHERLY CORNER OF LOT 1, STONE RIDGE VILLAGE FILING NO. 3, AS RECORDED UNDER RECEPTION NO. 702446 OF SAID COUNTY RECORDS, SAID POINT ALSO BEING A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF RIDGESTONE DRIVE, AS SHOWN ON THE PLAT OF STONE RIDGE VILLAGE FILING NO. 4, AS RECORDED UNDER RECEPTION NO. 719801 OF SAID COUNTY RECORDS, FROM WHICH THE MOST EASTERLY CORNER OF LOT 5 OF SAID STONE RIDGE VILLAGE FILING NO. 3 BEARS S64°48'09"E, A DISTANCE OF 537.28 FEET AND IS THE BASIS OF BEARING USED HEREIN.

BENCHMARK:

ELEVATIONS ARE BASED UPON NGS POINT DESIGNATION "B 174" (ELEVATION = 8202.88 NAVD88).

LEGAL DESCRIPTION

TRACTS A AND F, STONE RIDGE VILLAGE, IN THE CITY OF WOODLAND PARK, COUNTY OF TELLER, STATE OF COLORADO

FEMA CLASSIFICATION

THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP NO. 08119C0139D, EFFECTIVE DATE SEPTEMBER 25, 2009, INDICATES THAT THERE IS A SMALL AREA (0.04 ACRES) IN THE NORTHEASTERN CORNER OF THE SITE THAT FALLS WITHIN ZONE AE (THE FLOODWAY IS THE CHANNEL OF A STREAM PLUS ANY ADJACENT FLOODPLAIN AREAS THAT MUST BE KEPT FREE OF ENCROACHMENT SO THAT THE 1% ANNUAL CHANCE FLOOD CAN BE CARRIED WITHOUT SUBSTANTIAL INCREASE IN FLOOD HEIGHTS). THE REMAINING PARCEL OF LAND TO BE LOCATED IN ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN).

SITE SUMMARY DATA

SITE AREA: 9.01± AC (392,510 SF)

EXISTING LAND USE: VACANT LAND

EXISTING ZONING: PLANNED UNIT DEVELOPMENT (PUD)

PROPOSED LAND USE: MULTI-FAMILY DWELLINGS, WHICH FALLS INTO TO EXISTING SITE ZONING OF PLANNED UNIT DEVELOPMENT

ACCOUNT NO:

PARCEL ID: 6229.132000880 AND 6229.132000020

SOIL TYPE: 100% +/- SOIL TYPE A/B FOUND ON SITE

SCHEDULE:

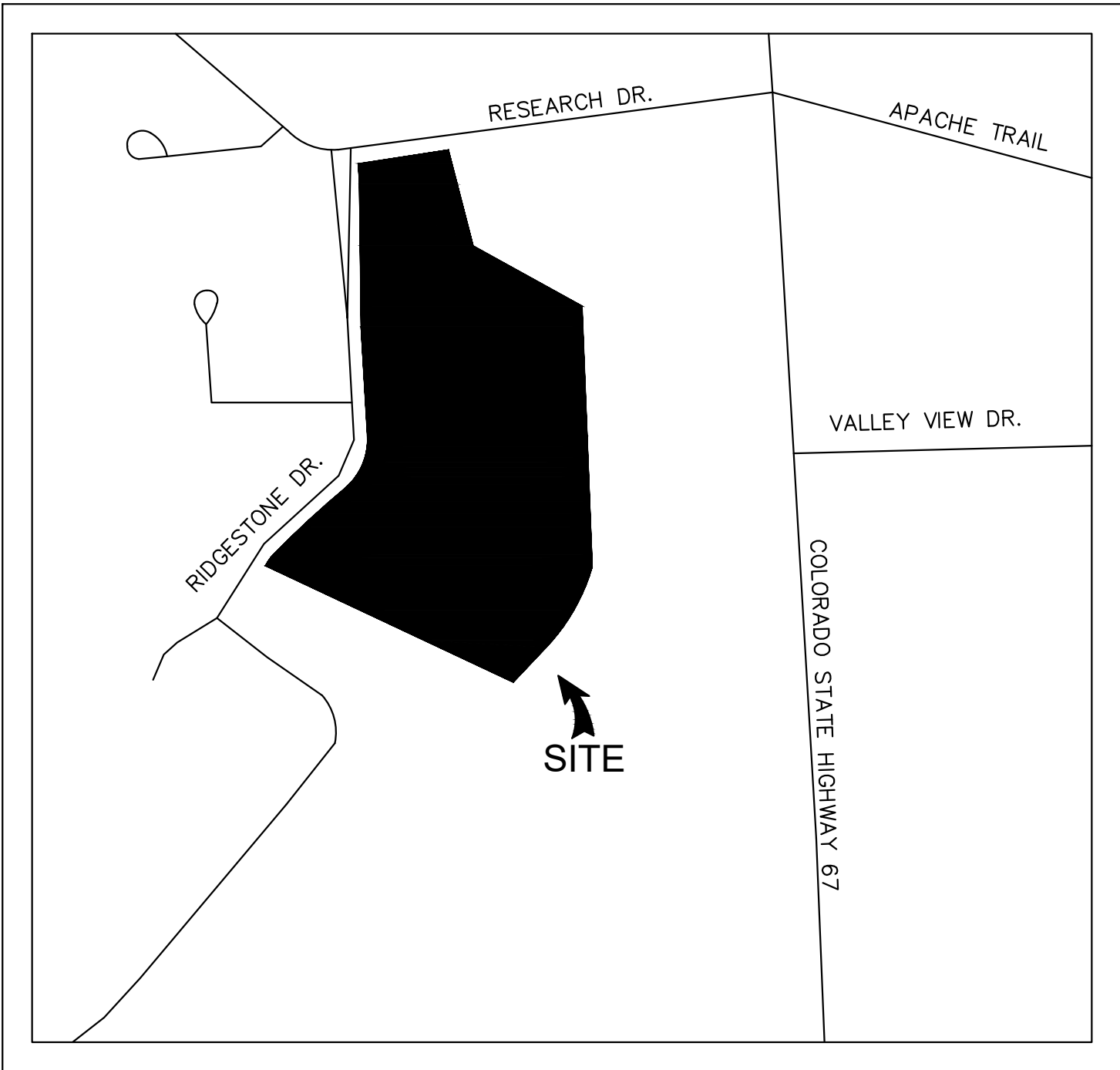
ANTICIPATED START DATE: FALL 2022
ANTICIPATED COMPLETION DATE: WINTER 2023

STANDARD GRADING EROSION AND STORMWATER QUALITY
CONTROL PLAN NOTES:

THE INTENT OF THIS PLAN IS TO IDENTIFY THE EROSION CONTROL PRACTICES RECOMMENDED. THE CONTRACTOR SHALL REFERENCE ADDITIONAL CONSTRUCTION PLANS FOR DEMOLITION OF EXISTING AND CONSTRUCTION OF PROPOSED IMPROVEMENTS.

- STANDARD DETAILS INCORPORATED BY REFERENCE WITHIN THIS DRAWING SHALL CONSIST OF THE STANDARD DETAILS INDICATED AND ALL SUBSEQUENT DETAILS WITH MAY BE REFERENCED THEREIN.
- CONTRACTOR SHALL LOCATE ON SWMP PLANS SIZE AND LOCATION OF ALL STOCKPILES.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE IMPROVEMENTS SHOWN BY THESE PLANS.
- CONTRACTOR TO LIMIT DISTURBANCE OF SITE IN STRICT ACCORDANCE WITH THE EROSION CONTROL SHOWN ON THIS PLAN. NO UNNECESSARY OR IMPROPERLY SEQUENCED CLEARING AND/OR GRADING SHALL BE PERMITTED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ELIMINATE TRACK-OUT FROM THE AREAS WITHIN THE LIMITS OF DISTURBANCE. NO STOCKPILING, TEMPORARY STORAGE OF STAGING OF EITHER NEW, SALVAGED OR WASTE MATERIAL SHALL BE ALLOWED BEYOND THE LIMITS BUT WITHIN LIMITS OF DISTURBANCE MAY BE USED FOR CONTRACTOR PARKING. ANY DISTURBANCE BEYOND THE LIMITS OF DISTURBANCE IS STRICTLY PROHIBITED.

THE DESIGN PROFESSIONAL RESPONSIBLE FOR THIS PLAN HAS FAMILIARIZED THEMSELVES WITH ALL CURRENT ADA CRITERIA AND SPECIFICATIONS, AND THE PROPOSED PLAN REFLECTS REQUIRED SITE ELEMENTS. SEE "2010 ADA STANDARDS FOR ACCESSIBLE DESIGN", AS PUBLISHED BY THE DEPARTMENT OF JUSTICE (DOJ).



VICINITY MAP
NTS

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
1	COVER SHEET - GEC
2	EROSION CONTROL PLAN - INITIAL
3	EROSION CONTROL PLAN - FINAL
4	EROSION CONTROL DETAILS
5	EROSION CONTROL DETAILS
6	EROSION CONTROL DETAILS
7	EROSION CONTROL DETAILS

CONTACTS:

ENGINEER
KIMLEY-HORN AND ASSOCIATES, INC.
2 NEVADA NORTH AVE., SUITE 300
COLORADO SPRINGS, CO 80903
TEL: (719) 453-0180
CONTACT: KEVIN KOFFORD

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATES, INC.
2 NEVADA NORTH AVE., SUITE 300
COLORADO SPRINGS, CO 80903
TEL: (719) 453-0180
CONTACT:

OWNER:
GO BEYOND, LLC
1685 W. UINTAH STREET
COLORADO SPRINGS, CO 80904
TEL: (719) 229-2060
CONTACT: CRAIG O'BOYLE

ARCHITECT:
POPULUS PLANNING AND DESIGN
9570 CANTON DRIVE
WOODLAND PARK, CO 80906
TEL: (208)-284-6942
CONTACT: JEFF WEBB

SURVEYOR:
RAMPART SURVEYS, LLC
P.O. BOX 5101
WOODLAND PARK, CO 80866
TEL: (719) 687-0920
EMAIL: ERIC@RAMPARTLS.COM
CONTACT: ERIC SIMONSON, P.L.S

Kimley»Horn

2022 KIMLEY-HORN AND ASSOCIATES, INC.
2 North Nevada Avenue, Suite 300
Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KRK
DRAWN BY: AJL
CHECKED BY: KRK
DATE: 01/18/22

STONERIDGE MF TRACT A & F
GRADING AND EROSION CONTROL PLANS
COVER SHEET - GEC

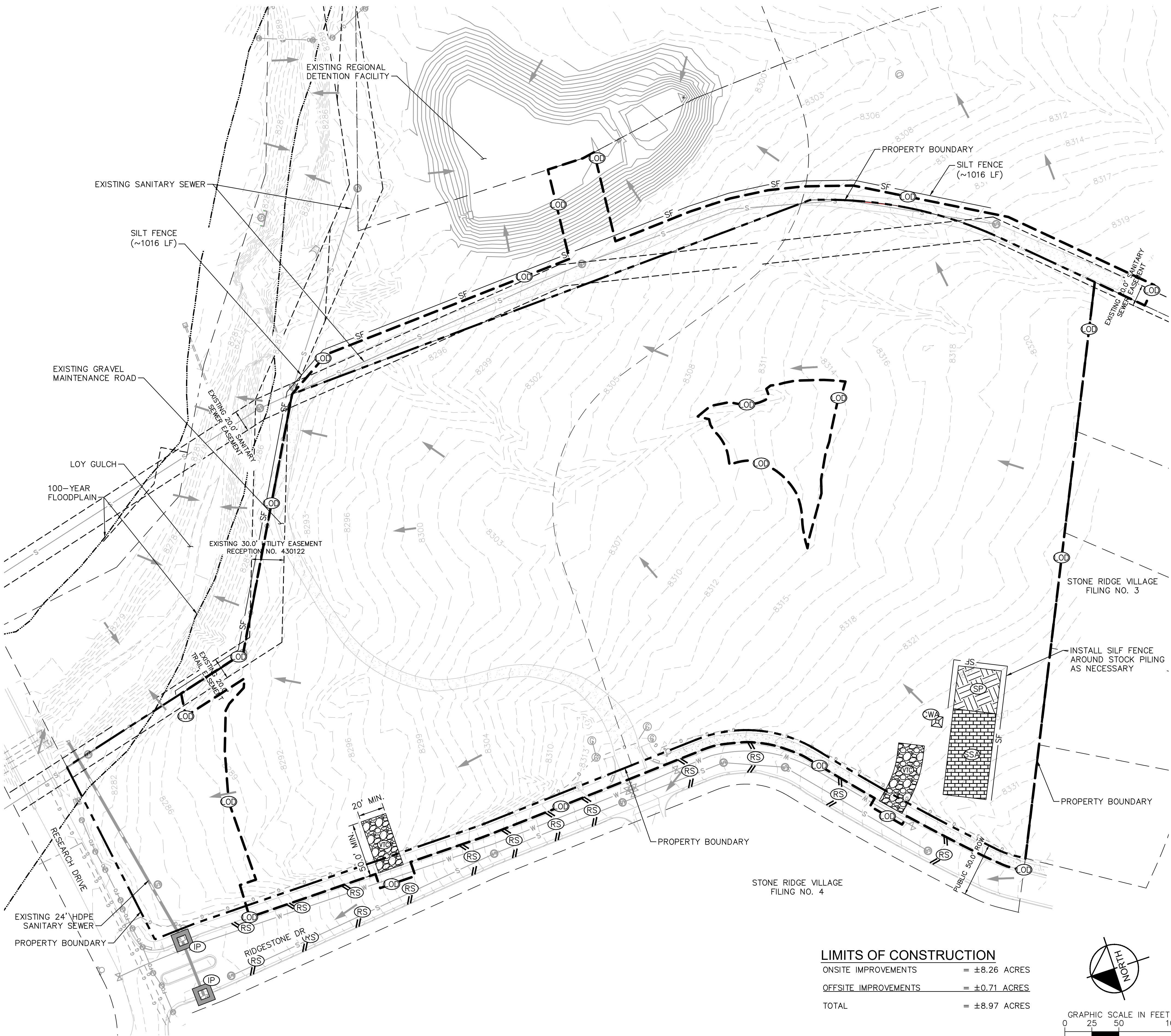
PROJECT NO.
196259000

SHEET

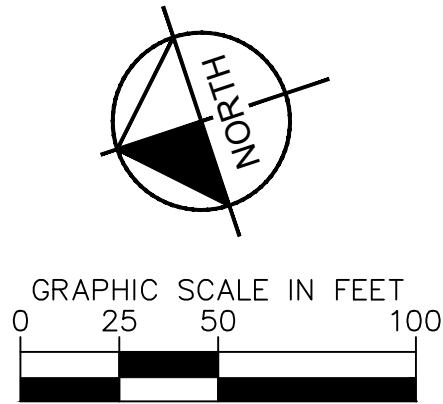
1



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LIMITS OF CONSTRUCTION	
ONSITE IMPROVEMENTS	= ±8.26 ACRES
OFFSITE IMPROVEMENTS	= ±0.71 ACRES
TOTAL	= ±8.97 ACRES



LEGEND:	
	PROPERTY BOUNDARY
	LOT LINE
	EASEMENT
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	LOD LIMITS OF DISTURBANCE
	CF CONSTRUCTION FENCE
	SF SILT FENCE
	CUT/FILL LINE
	SSA STABILIZED STAGING AREA
	CWA CONCRETE WASHOUT
	VTC VEHICLE TRACKING CONTROL
	RS CURB SOCKS (ROCK SOCKS)
	SP SOIL STOCKPILE
	IP INLET PROTECTION
	FLOW ARROW
	FINAL STABILIZATION. (REFERENCE LANDSCAPING PLANS)

- NOTES**
1. THE INTENT OF THIS PLAN IS TO IDENTIFY THE EROSION CONTROL PRACTICES RECOMMENDED. THE CONTRACTOR SHALL REFERENCE ADDITIONAL CONSTRUCTION PLANS FOR DEMOLITION OF EXISTING AND CONSTRUCTION OF PROPOSED IMPROVEMENTS.
 2. ADJACENT STREETS AND SIDEWALK SHALL BE KEPT CLEAN AND FREE OF SEDIMENT AND/OR DEBRIS AT ALL TIMES. CONTRACTOR SHALL PERFORM STREET SWEEPING AT ALL TIMES DURING ACTIVE TRACKING AND AT A MINIMUM ON A DAILY BASIS AT THE END OF EACH CONSTRUCTION DAY.
 3. TEMPORARY STABILIZATION (TS) SHALL BE IMPLEMENTED WITHIN THE DISTURBED PORTIONS OF THE PROJECT SITE NO LATER THAN 14 DAYS FOLLOWING THE CEASE OF CONSTRUCTION ACTIVITIES WITHIN THE DISTURBED AREAS.
 4. PERMANENT STABILIZATION (PS) MAY BE USED WITHIN AREAS OF TEMPORARY STABILIZATION (TS) AT THE CONTRACTOR'S DISCRETION. STABILIZATION SHALL BE APPLIED IN ACCORDANCE WITH APPLICABLE TEMPORARY STABILIZATION SEQUENCING REQUIREMENTS.
 5. CONTRACTOR SHALL UTILIZE ROLLED EROSION CONTROL PRODUCTS ON ALL SLOPES 3H:1V OR GREATER TO ACHIEVE REQUIRED STABILIZATION.
 6. CONTRACTOR SHALL MAINTAIN ACCEPTABLE EROSION CONTROL PRACTICES WITHIN THE ANTICIPATED LIMITS OF CONSTRUCTION IDENTIFIED HEREIN. BEST MANAGEMENT PRACTICES AND STABILIZATION SHALL BE COMPLETED AS IDENTIFIED HEREIN IN ACCORDANCE WITHIN OWNER REQUIREMENTS.
 7. ALL WORK IN THE PRIVATE SHARED ACCESS ROW REQUIRES AN AGREEMENT BETWEEN THE SELLER AND MCDONALD'S.
 8. CONTRACTOR SHALL REFER TO THE APPROVED GEOTECHNICAL REPORT FOR OVEREXCAVATION REQUIREMENTS AND ADDITIONAL INFORMATION.
 9. SILT FENCE TO BE INSTALLED PRIOR TO COMMENCEMENT OF ONSITE GRADING AND CONSTRUCTION ACTIVITIES.
 10. DEMOLITION, REMOVAL AND SOIL TREATMENT SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER RECOMMENDATIONS AS NOTED IN THE APPROVED PROJECT GEOTECHNICAL REPORT.
 11. CONTRACTOR TO NOTE PROXIMITY OF EXISTING IMPROVEMENTS ADJACENT TO THE SITE AND PROVIDE NECESSARY MEASURES TO PROTECT ALL FACILITIES AND STRUCTURES IN PLACE.
 12. CONTRACTOR SHALL MAINTAIN STABILIZED STAGING AREA (SSA), VEHICLE TRACKING CONTROL (VTC), AND CONCRETE WASHOUT AREA (CWA) AT THE CONSTRUCTION ENTRANCE AT ALL TIMES. CONTRACTOR SHALL UPDATE THE EROSION CONTROL PLAN IN THE FIELD TO INDICATE THE LOCATION OF THE SSA, VTC, AND CWA BMPS AS EXCAVATION SEQUENCING DICTATES.
 13. CONTRACTOR MAY SUBSTITUTE SEDIMENT CONTROL LOGS (SCL) FOR SILT FENCE (SF) AS PERIMETER CONTROL, DEPENDING UPON SITE CONDITIONS. SCL, AND SF MAY BE INTERCHANGED DEPENDING ON SITE CONDITIONS.
 14. CONTRACTOR SHALL OBTAIN R.O.W. PERMITS FOR ANY R.O.W. CLOSURES.



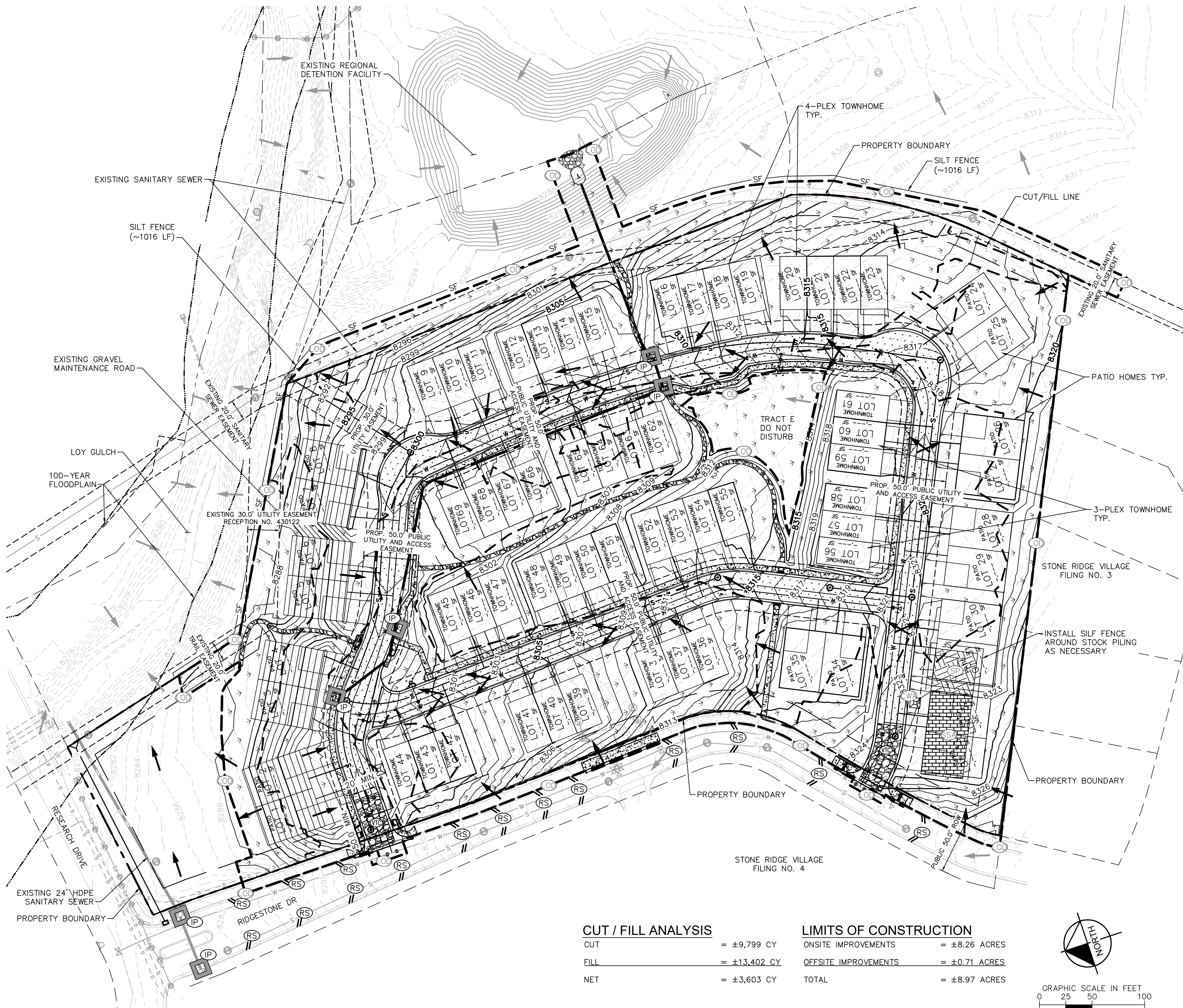
Kimley»Horn
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2 North Nevada Avenue, Suite 300
Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KKK
DRAWN BY: AJL
CHECKED BY: KKK
DATE: 01/18/22

STONERIDGE MF TRACT A & F
GRADING AND EROSION CONTROL PLANS
EROSION CONTROL PLAN - INITIAL

PROJECT NO.
196259000
SHEET
2

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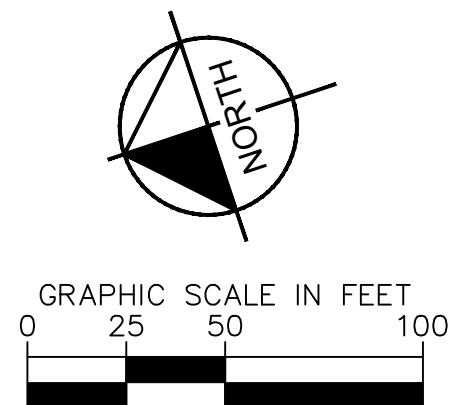


CUT / FILL ANALYSIS

CUT = ±9,799 CY
FILL = ±13,402 CY
NET = ±3,603 CY

LIMITS OF CONSTRUCTION

ONSITE IMPROVEMENTS = ±8.26 ACRES
OFFSITE IMPROVEMENTS = ±0.71 ACRES
TOTAL = ±8.97 ACRES



LEGEND:

- PROPERTY BOUNDARY
- LOT LINE
- EASEMENT
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- LIMITS OF DISTURBANCE
- CONSTRUCTION FENCE
- SILT FENCE
- CUT/FILL LINE
- STABILIZED STAGING AREA
- CONCRETE WASHOUT
- VEHICLE TRACKING CONTROL
- CURB SOCKS (ROCK SOCKS)
- SOIL STOCKPILE
- INLET PROTECTION
- FLOW ARROW
- FINAL STABILIZATION. (REFERENCE LANDSCAPING PLANS)

NOTES

- THE INTENT OF THIS PLAN IS TO IDENTIFY THE EROSION CONTROL PRACTICES RECOMMENDED. THE CONTRACTOR SHALL REFERENCE ADDITIONAL CONSTRUCTION PLANS FOR DEMOLITION OF EXISTING AND CONSTRUCTION OF PROPOSED IMPROVEMENTS.
- ADJACENT STREETS AND SIDEWALK SHALL BE KEPT CLEAN AND FREE OF SEDIMENT AND/OR DEBRIS AT ALL TIMES. CONTRACTOR SHALL PERFORM STREET SWEEPING AT ALL TIMES DURING ACTIVE TRACKING AND AT A MINIMUM ON A DAILY BASIS AT THE END OF EACH CONSTRUCTION DAY.
- TEMPORARY STABILIZATION (TS) SHALL BE IMPLEMENTED WITHIN THE DISTURBED PORTIONS OF THE PROJECT SITE NO LATER THAN 14 DAYS FOLLOWING THE CEASE OF CONSTRUCTION ACTIVITIES WITHIN THE DISTURBED AREAS.
- PERMANENT STABILIZATION (PS) MAY BE USED WITHIN AREAS OF TEMPORARY STABILIZATION (TS) AT THE CONTRACTOR'S DISCRETION. STABILIZATION SHALL BE APPLIED IN ACCORDANCE WITH APPLICABLE TEMPORARY STABILIZATION SEQUENCING REQUIREMENTS.
- CONTRACTOR SHALL UTILIZE ROLLED EROSION CONTROL PRODUCTS ON ALL SLOPES 3H:1V OR GREATER TO ACHIEVE REQUIRED STABILIZATION.
- CONTRACTOR SHALL MAINTAIN ACCEPTABLE EROSION CONTROL PRACTICES WITHIN THE ANTICIPATED LIMITS OF CONSTRUCTION IDENTIFIED HEREIN. BEST MANAGEMENT PRACTICES AND STABILIZATION SHALL BE COMPLETED AS IDENTIFIED HEREIN IN ACCORDANCE WITH OWNER REQUIREMENTS.
- ALL WORK IN THE PRIVATE SHARED ACCESS ROW REQUIRES AN AGREEMENT BETWEEN THE SELLER AND McDONALD'S.
- CONTRACTOR SHALL REFER TO THE APPROVED GEOTECHNICAL REPORT FOR OVEREXCAVATION REQUIREMENTS AND ADDITIONAL INFORMATION.
- SILT FENCE TO BE INSTALLED PRIOR TO COMMENCEMENT OF ONSITE GRADING AND CONSTRUCTION ACTIVITIES.
- DEMOLITION, REMOVAL AND SOIL TREATMENT SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER RECOMMENDATIONS AS NOTED IN THE APPROVED PROJECT GEOTECHNICAL REPORT.
- CONTRACTOR TO NOTE PROXIMITY OF EXISTING IMPROVEMENTS ADJACENT TO THE SITE AND PROVIDE NECESSARY MEASURES TO PROTECT ALL FACILITIES AND STRUCTURES IN PLACE.
- CONTRACTOR SHALL MAINTAIN STABILIZED STAGING AREA (SSA), VEHICLE TRACKING CONTROL (VTC), AND CONCRETE WASHOUT AREA (CWA) AT THE CONSTRUCTION ENTRANCE AT ALL TIMES. CONTRACTOR SHALL UPDATE THE EROSION CONTROL PLAN IN THE FIELD TO INDICATE THE LOCATION OF THE SSA, VTC, AND CWA BMPS AS EXCAVATION SEQUENCING DICTATES.
- CONTRACTOR MAY SUBSTITUTE SEDIMENT CONTROL LOGS (SCL) FOR SILT FENCE (SF) AS PERIMETER CONTROL, DEPENDING UPON SITE CONDITIONS. SCL, AND SF MAY BE INTERCHANGED DEPENDING ON SITE CONDITIONS.
- CONTRACTOR SHALL OBTAIN R.O.W. PERMITS FOR ANY R.O.W. CLOSURES.

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STONERIDGE MF TRACT A & F
GRADING AND EROSION CONTROL PLANS
EROSION CONTROL PLAN - FINAL

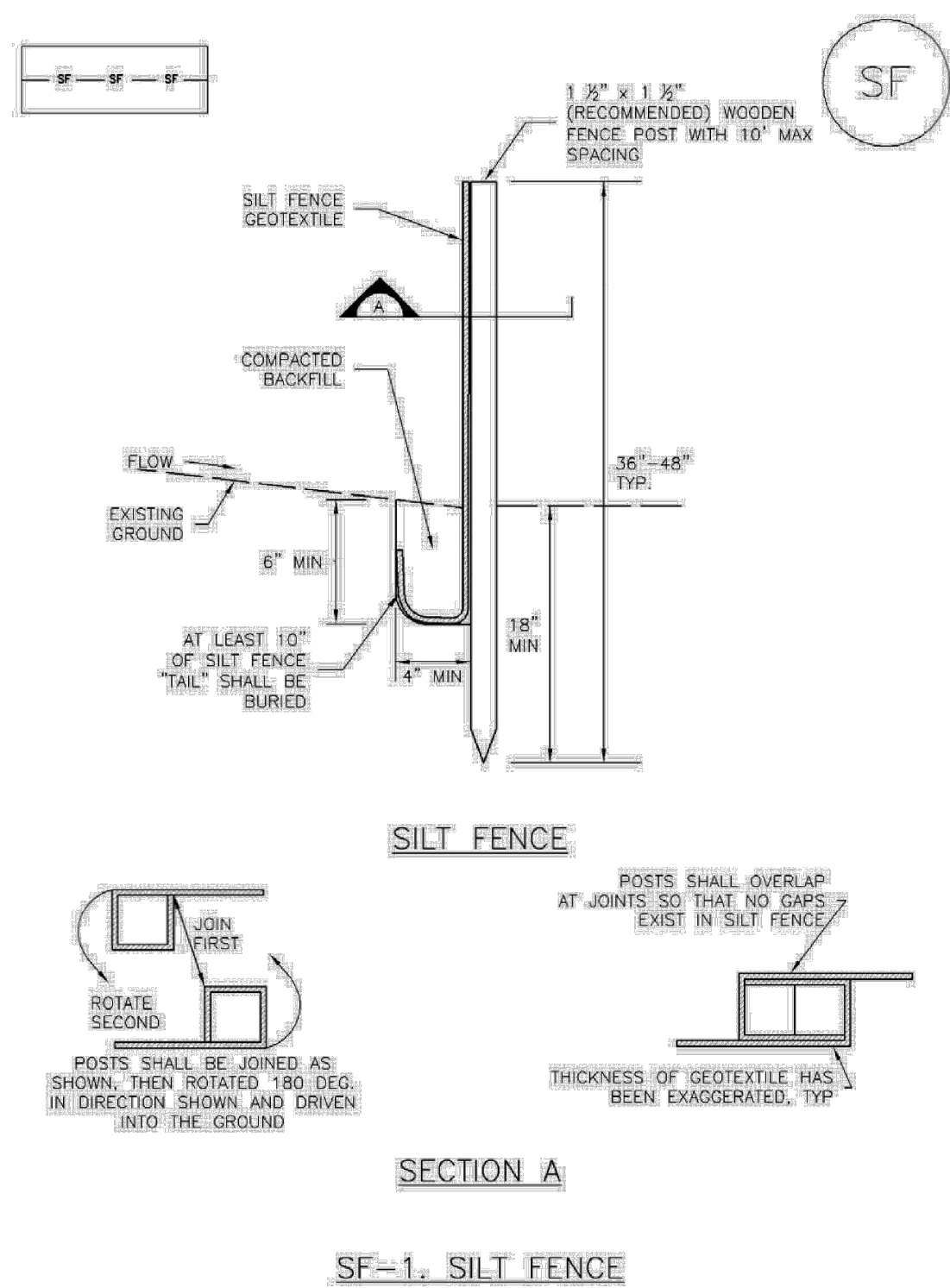
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Silt Fence (SF)

SC-1



November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SF-3

SC-1

Silt Fence (SF)

SILT FENCE INSTALLATION NOTES

1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.
2. A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.
3. COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.
6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "U-HOOK." THE "U-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' - 20').
7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".
5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.
6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.
7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

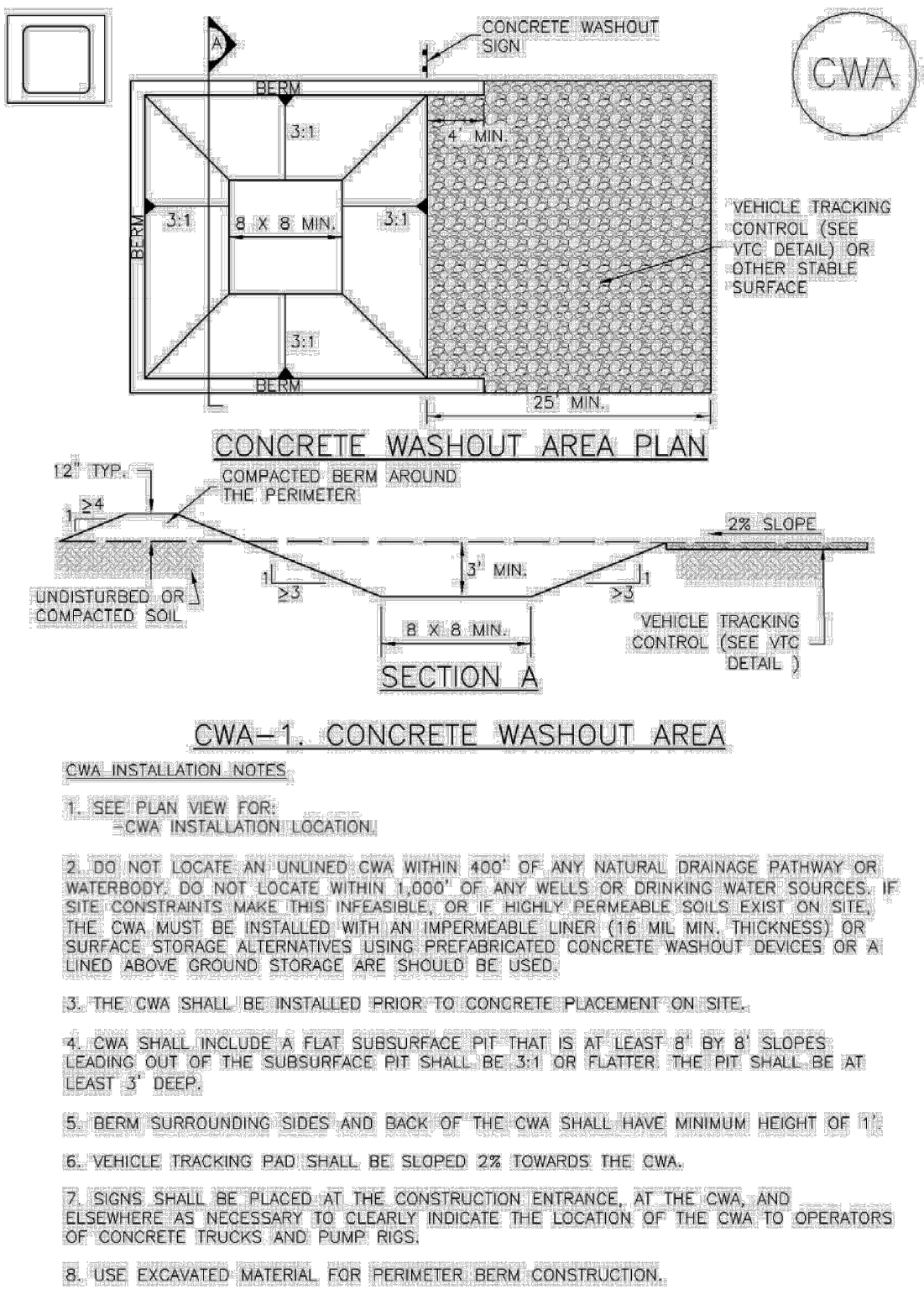
[DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO; NOT AVAILABLE IN AUTOCAD]

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SF-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Concrete Washout Area (CWA)

MM-1



November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 CWA-3

MM-1

Concrete Washout Area (CWA)

CWA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS ACCUMULATED IN PIT SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.
5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED, AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

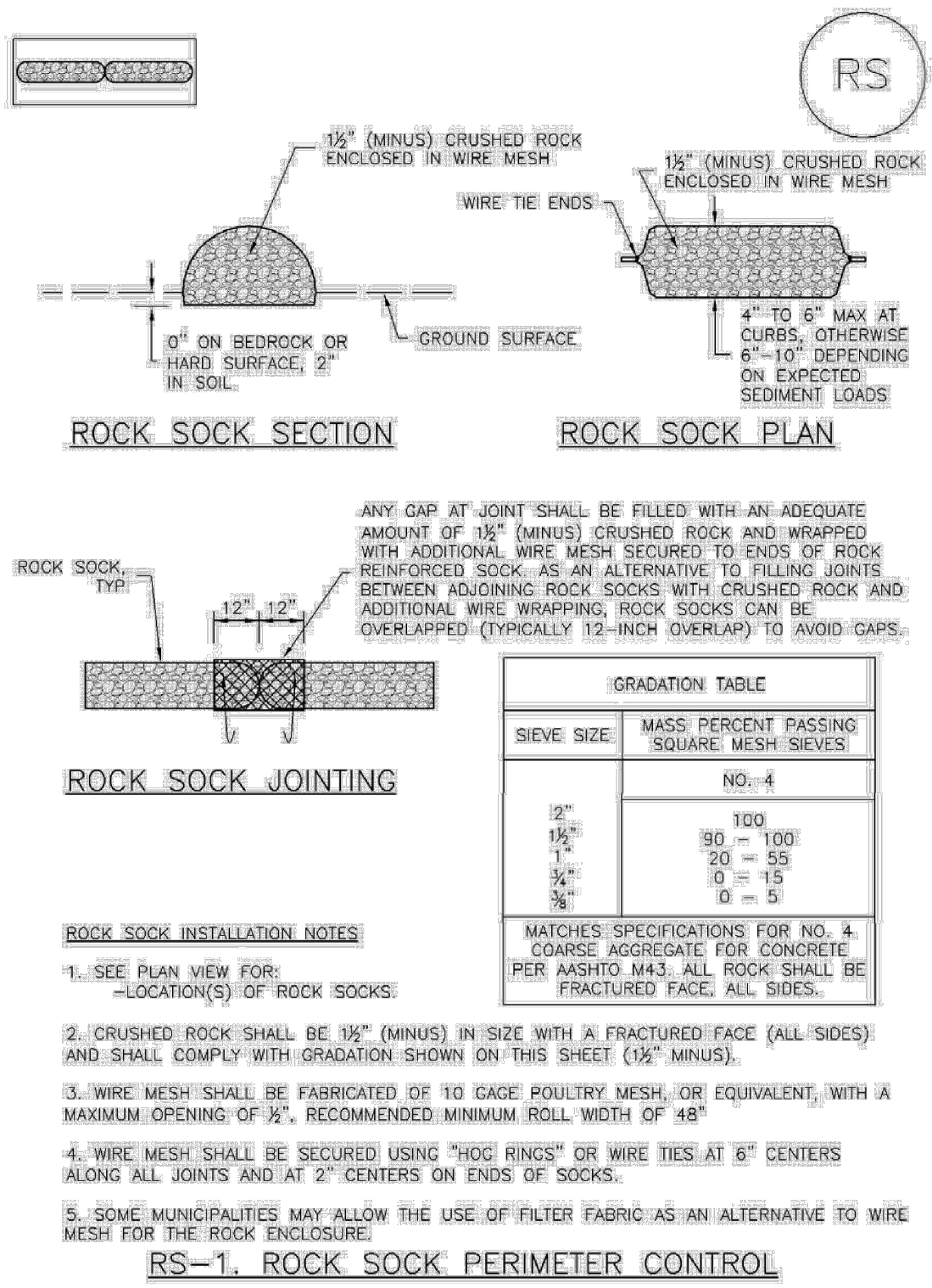
[DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO; NOT AVAILABLE IN AUTOCAD]

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

CWA-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

SC-5

Rock Sock (RS)



November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 RS-2

Rock Sock (RS)

SC-5

ROCK SOCK MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ROCK SOCKS SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, OR DAMAGED BEYOND REPAIR.
5. SEDIMENT ACCUMULATED UPSTREAM OF ROCK SOCKS SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE ROCK SOCK.
6. ROCK SOCKS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
7. WHEN ROCK SOCKS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

[DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO; NOT AVAILABLE IN AUTOCAD]

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF ROCK SOCK INSTALLATION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY OTHER SIMILAR PROPRIETARY PRODUCTS ON THE MARKET. UDFCD NEITHER ENDORSES NOR DISCOURAGES USE OF PROPRIETARY PROTECTION PRODUCTS; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SHOP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

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DRAWN BY: AJL
CHECKED BY: KRK
DATE: 01/18/22

STONERIDGE MF TRACT A & F
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EROSION CONTROL DETAILS

PROJECT NO.
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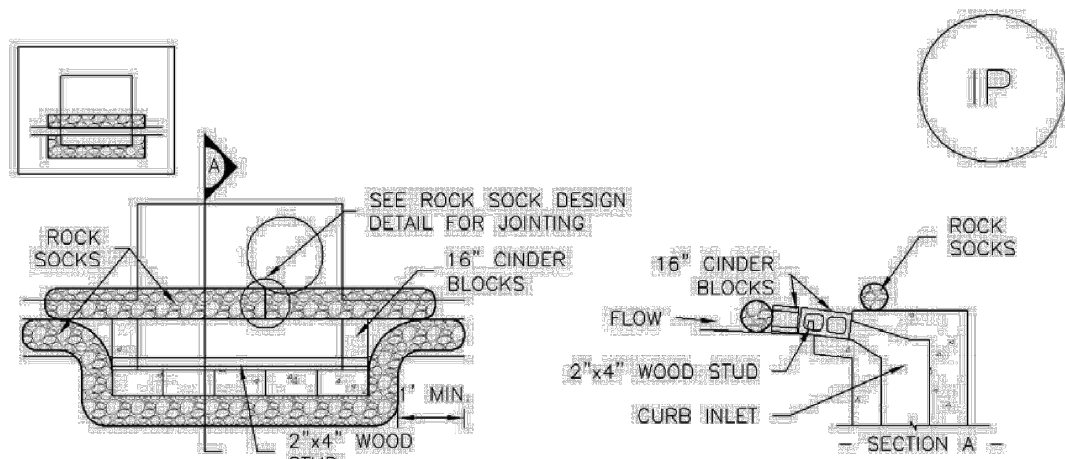
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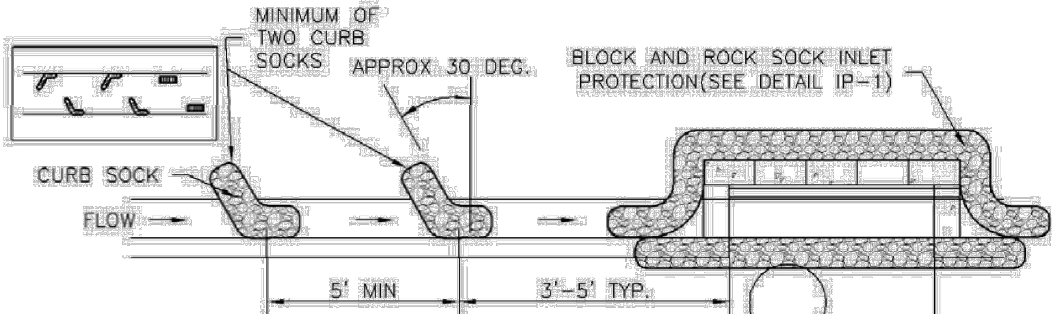
Inlet Protection (IP)



IP-1. BLOCK AND ROCK SOCK SUMP OR ON GRADE INLET PROTECTION

BLOCK AND CURB SOCK INLET PROTECTION INSTALLATION NOTES:

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. CONCRETE "CINDER" BLOCKS SHALL BE LAID ON THEIR SIDES AROUND THE INLET IN A SINGLE ROW, ABUTTING ONE ANOTHER WITH THE OPEN END FACING AWAY FROM THE CURB.
3. GRAVEL BAGS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.



IP-2. CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION

CURB ROCK SOCK INLET PROTECTION INSTALLATION NOTES:

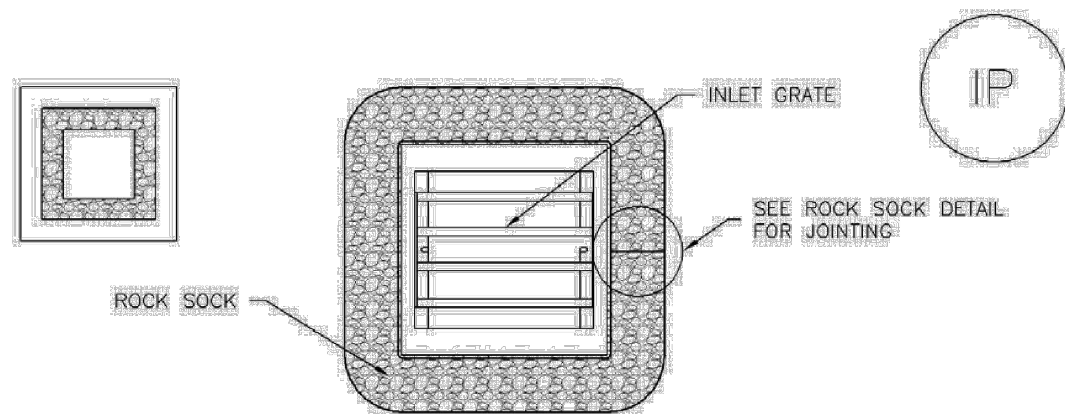
1. SEE ROCK SOCK DESIGN DETAIL INSTALLATION REQUIREMENTS.
2. PLACEMENT OF THE SOCK SHALL BE APPROXIMATELY 30 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION OF FLOW.
3. SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5 FEET APART.
4. AT LEAST TWO CURB SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADE INLETS.

IP-4

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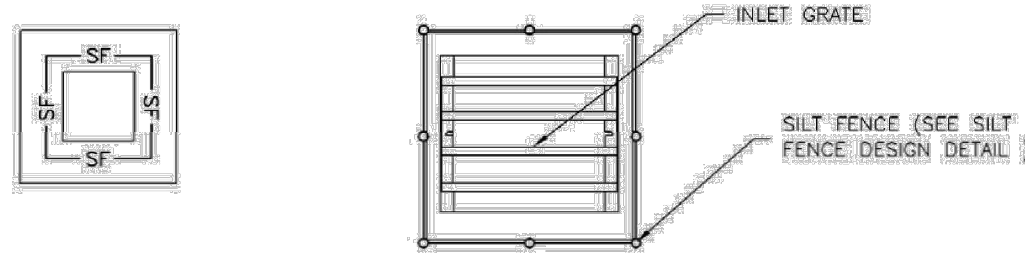
Inlet Protection (IP)



IP-3. ROCK SOCK SUMP/AREA INLET PROTECTION

ROCK SOCK SUMP/AREA INLET PROTECTION INSTALLATION NOTES:

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.



IP-4. SILT FENCE FOR SUMP INLET PROTECTION

SILT FENCE INLET PROTECTION INSTALLATION NOTES:

1. SEE SILT FENCE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF 3 FEET.
3. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF SILT FENCE FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.

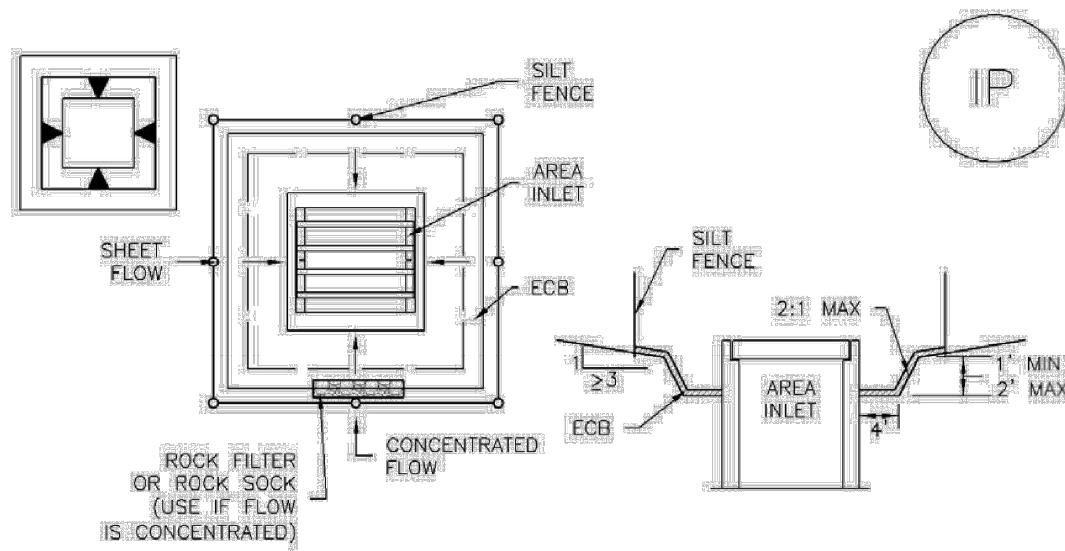
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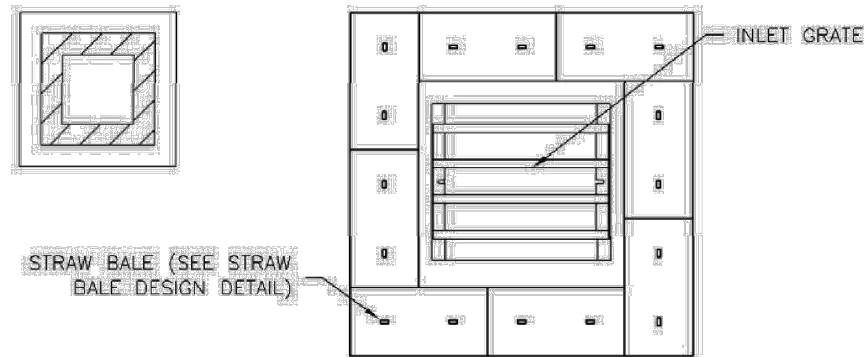
Inlet Protection (IP)



IP-5. OVEREXCAVATION INLET PROTECTION

OVEREXCAVATION INLET PROTECTION INSTALLATION NOTES:

1. THIS FORM OF INLET PROTECTION IS PRIMARILY APPLICABLE FOR SITES THAT HAVE NOT YET REACHED FINAL GRADE AND SHOULD BE USED ONLY FOR INLETS WITH A RELATIVELY SMALL CONTRIBUTING DRAINAGE AREA.
2. WHEN USING FOR CONCENTRATED FLOWS, SHAPE BASIN IN 2:1 RATIO WITH LENGTH ORIENTED TOWARDS DIRECTION OF FLOW.
3. SEDIMENT MUST BE PERIODICALLY REMOVED FROM THE OVEREXCAVATED AREA.



IP-6. STRAW BALE FOR SUMP INLET PROTECTION

STRAW BALE BARRIER INLET PROTECTION INSTALLATION NOTES:

1. SEE STRAW BALE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. BALES SHALL BE PLACED IN A SINGLE ROW AROUND THE INLET WITH ENDS OF BALES TIGHTLY ABUTTING ONE ANOTHER.

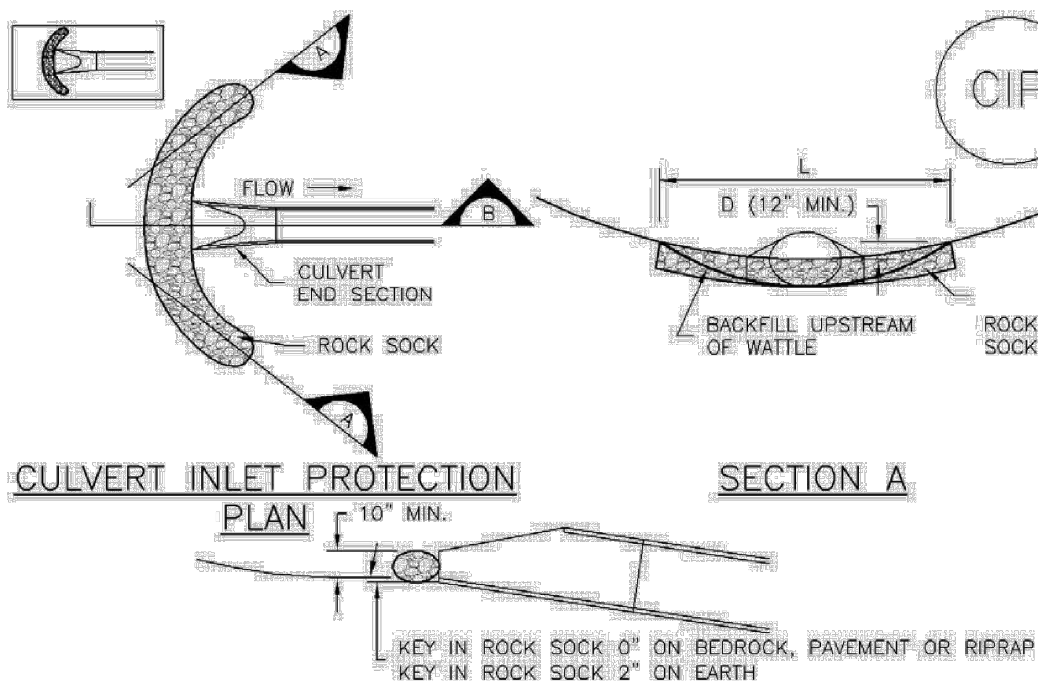
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Inlet Protection (IP)

SC-6



CIP-1. CULVERT INLET PROTECTION

CULVERT INLET PROTECTION INSTALLATION NOTES:

1. SEE PLAN VIEW FOR -LOCATION OF CULVERT INLET PROTECTION.
2. SEE ROCK SOCK DESIGN DETAIL FOR ROCK GRADATION REQUIREMENTS AND JOINTING DETAIL.

CULVERT INLET PROTECTION MAINTENANCE NOTES:

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF THE CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS $\frac{1}{2}$ THE HEIGHT OF THE ROCK SOCK.
5. CULVERT INLET PROTECTION SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM JUIROKA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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Inlet Protection (IP)

GENERAL INLET PROTECTION INSTALLATION NOTES:

1. SEE PLAN VIEW FOR:
 - LOCATION OF INLET PROTECTION;
 - TYPE OF INLET PROTECTION (IP-1, IP-2, IP-3, IP-4, IP-5, IP-6)
2. INLET PROTECTION SHALL BE INSTALLED PROMPTLY AFTER INLET CONSTRUCTION OR PAVING IS COMPLETE (TYPICALLY WITHIN 48 HOURS). IF A RAINFALL/RUNOFF EVENT IS FORECAST, INSTALL INLET PROTECTION PRIOR TO ONSET OF EVENT.
3. MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

INLET PROTECTION MAINTENANCE NOTES:

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED AS NECESSARY TO MAINTAIN BMP EFFECTIVENESS. TYPICALLY WHEN STORAGE VOLUME REACHES 50% OF CAPACITY, A DEPTH OF 6" WHEN SILT FENCE IS USED, OR $\frac{1}{2}$ OF THE HEIGHT FOR STRAW BALES.
5. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED, UNLESS THE LOCAL JURISDICTION APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.
6. WHEN INLET PROTECTION AT AREA INLETS IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF JUIROKA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF INLET PROTECTION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY PROPRIETARY INLET PROTECTION METHODS ON THE MARKET. UDFCD NEITHER ENDORSES NOR DISCOURAGES USE OF PROPRIETARY INLET PROTECTION; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

NOTE: SOME MUNICIPALITIES DISCOURAGE OR PROHIBIT THE USE OF STRAW BALES FOR INLET PROTECTION. CHECK WITH LOCAL JURISDICTION TO DETERMINE IF STRAW BALE INLET PROTECTION IS ACCEPTABLE.

IP-8

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August 2013

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DESIGNED BY: KRK
DRAWN BY: AJL
CHECKED BY: KRK
DATE: 01/18/22

STONERIDGE MF TRACT A & F
GRADING AND EROSION CONTROL PLANS
EROSION CONTROL DETAILS

PROJECT NO.
196259000

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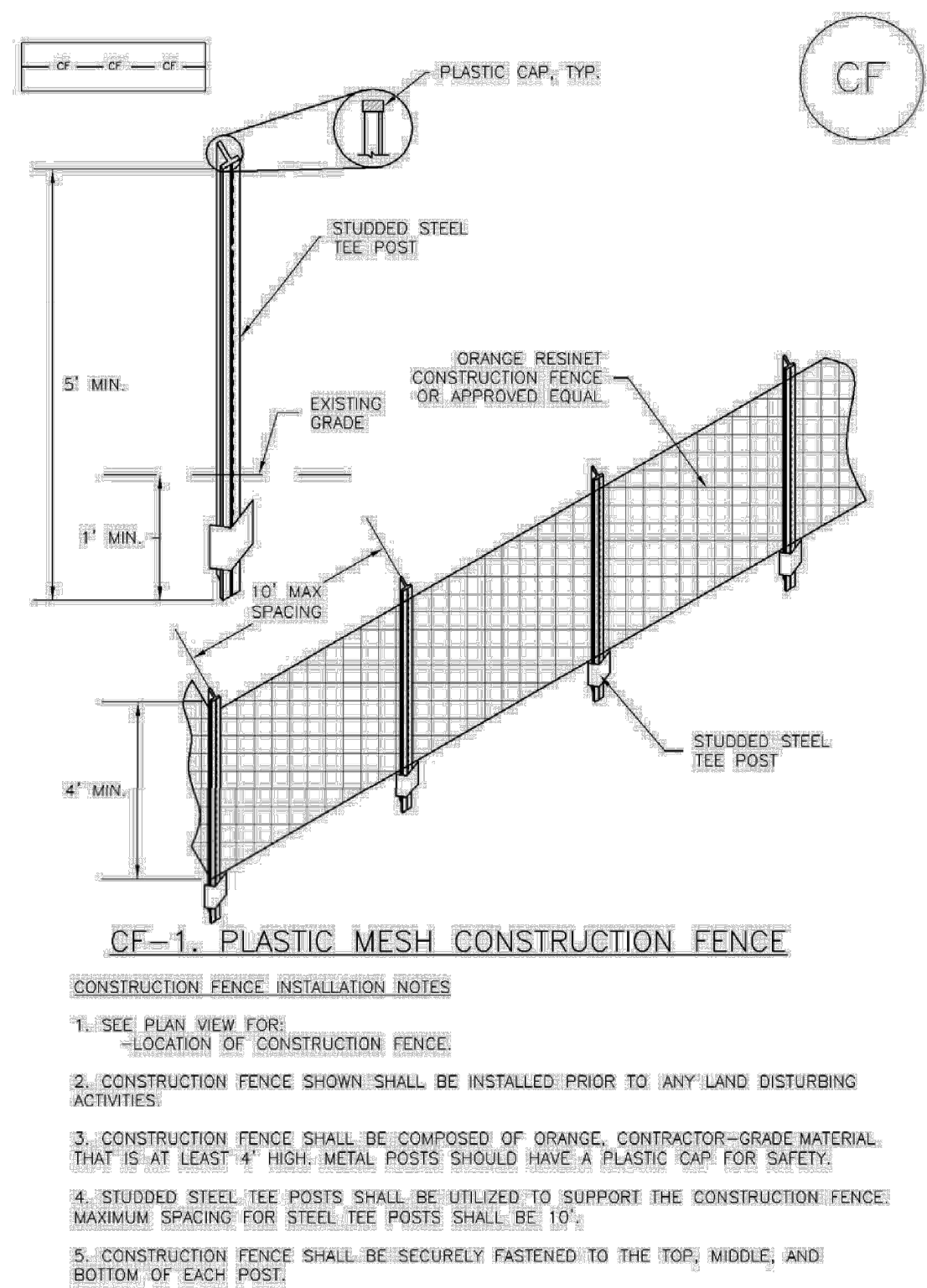
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SM-3 Construction Fence (CF)



CF-2 Urban Drainage and Flood Control District November 2010
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Construction Fence (CF) SM-3

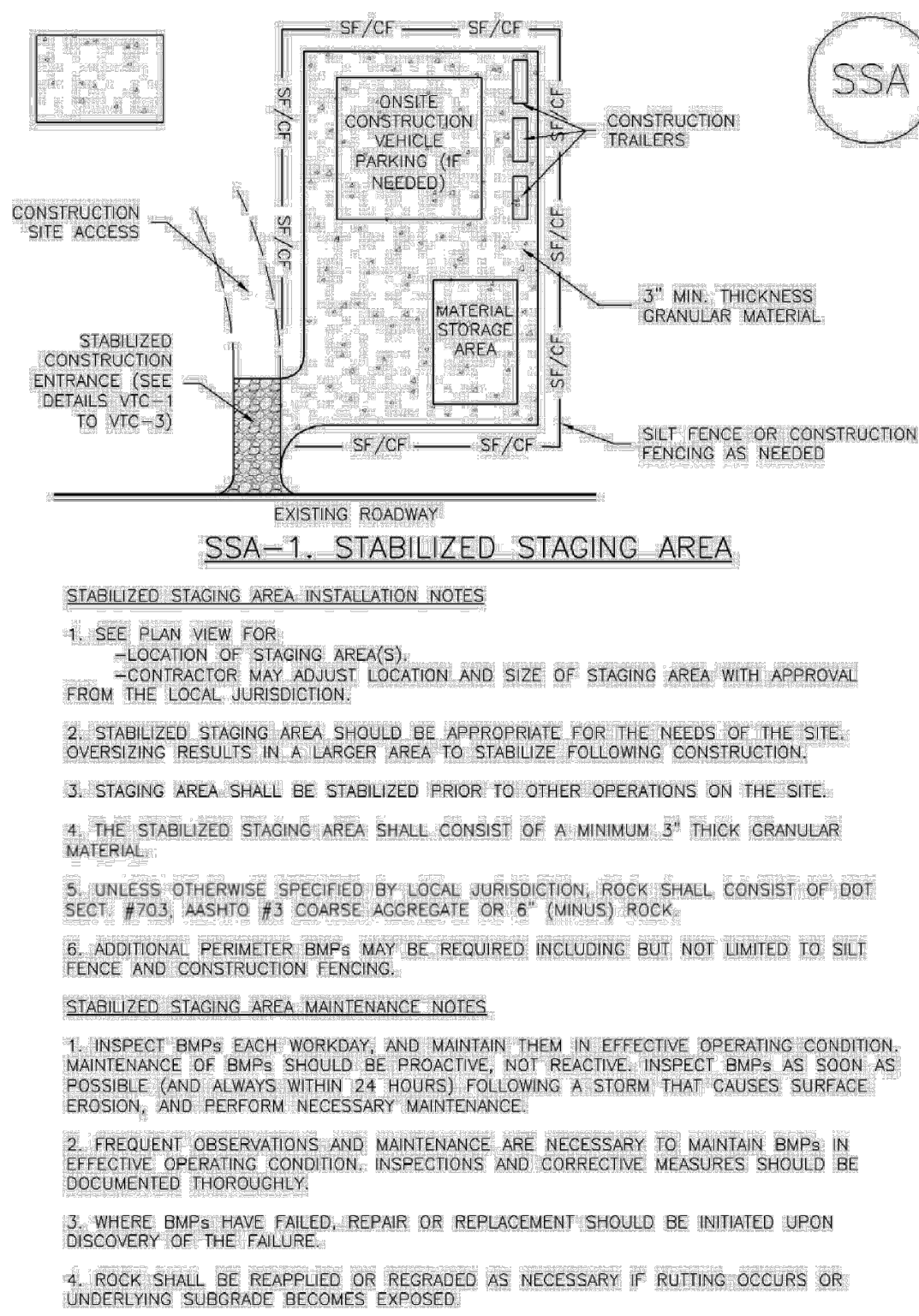
CONSTRUCTION FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 4. CONSTRUCTION FENCE SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF DAMAGE SUCH AS RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
 5. WHEN CONSTRUCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

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Stabilized Staging Area (SSA) SM-6



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Stabilized Staging Area (SSA) SM-6

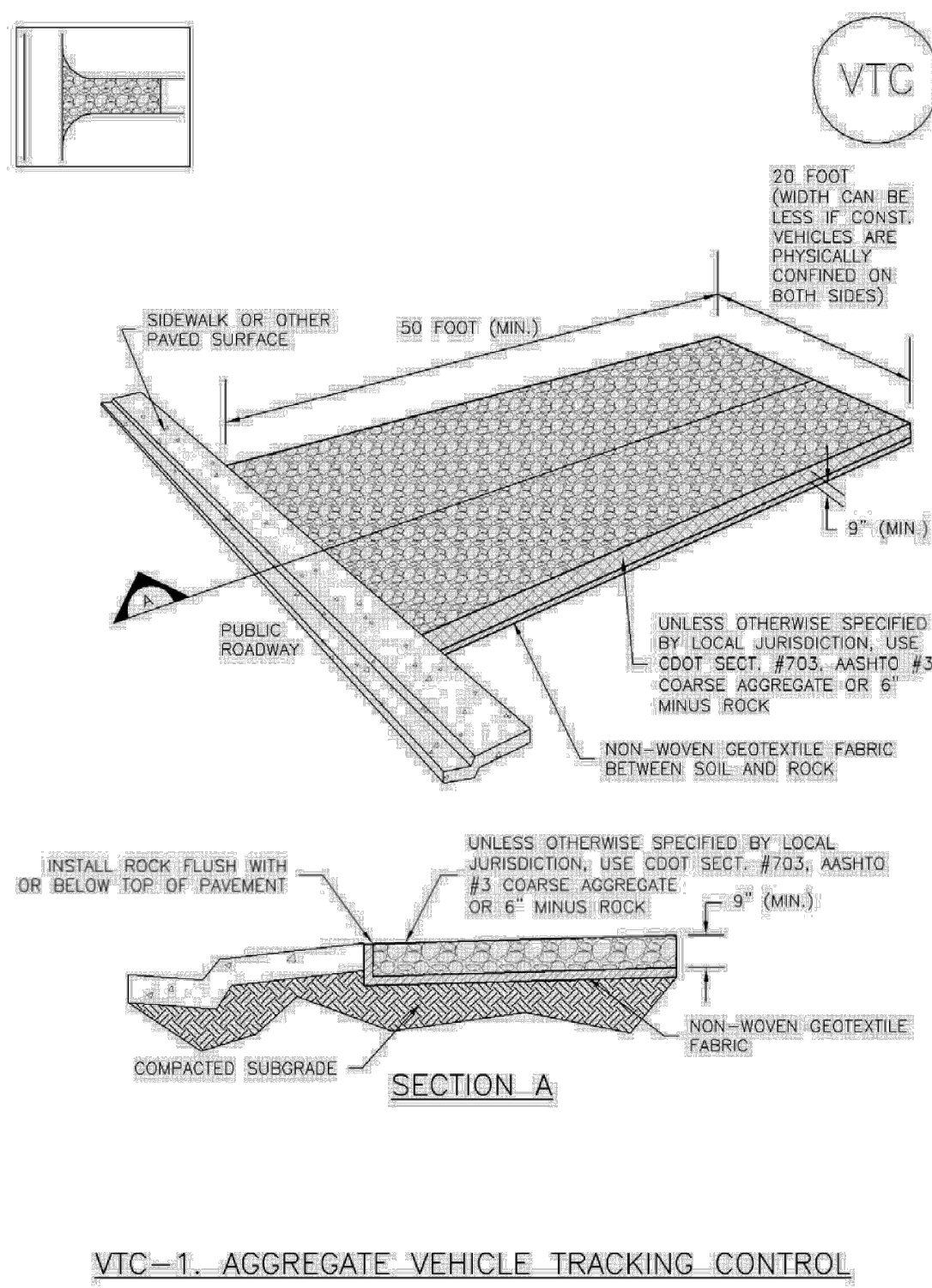
STABILIZED STAGING AREA MAINTENANCE NOTES

5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
 6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.
- NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

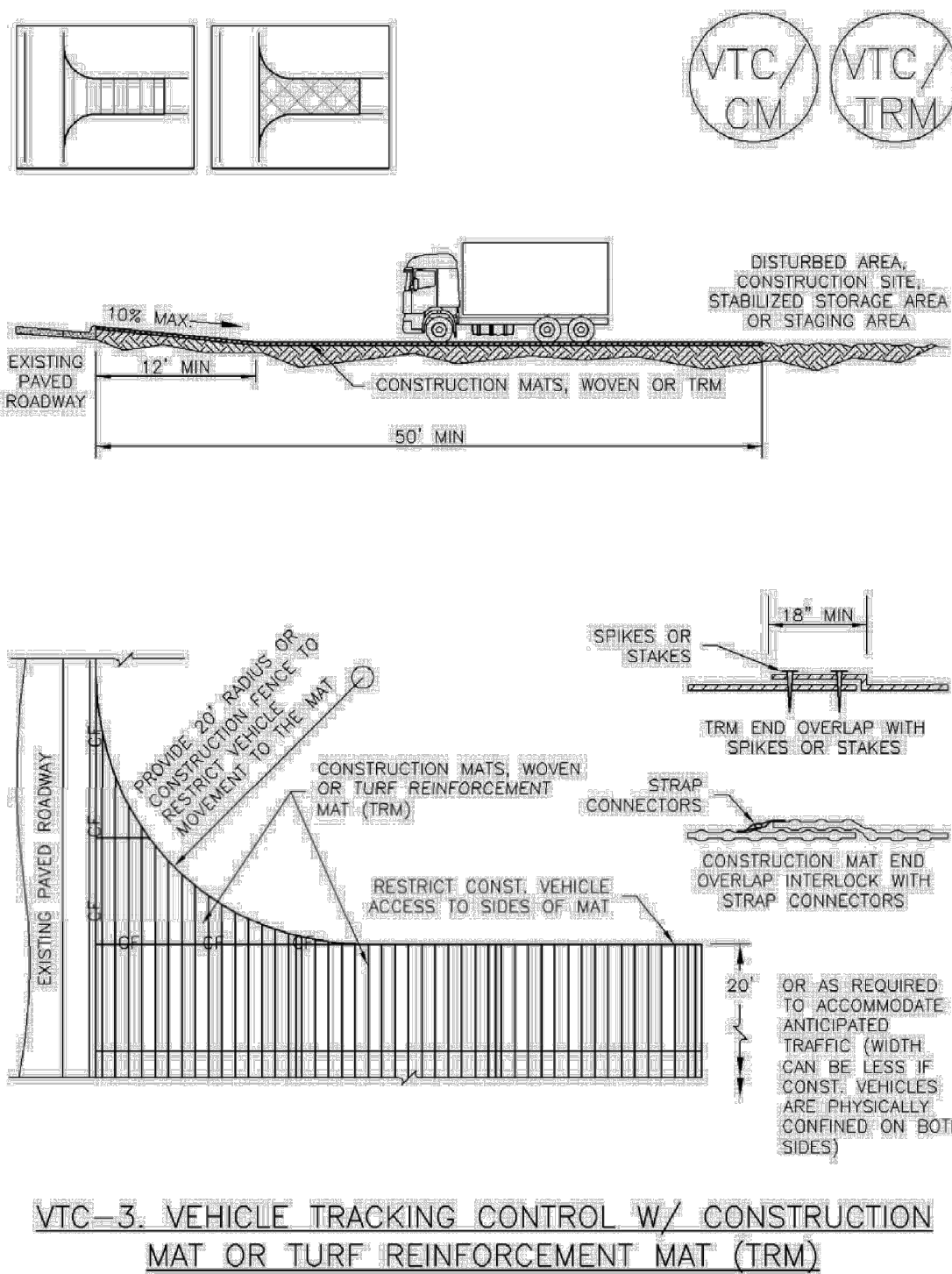
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Vehicle Tracking Control (VTC) SM-4



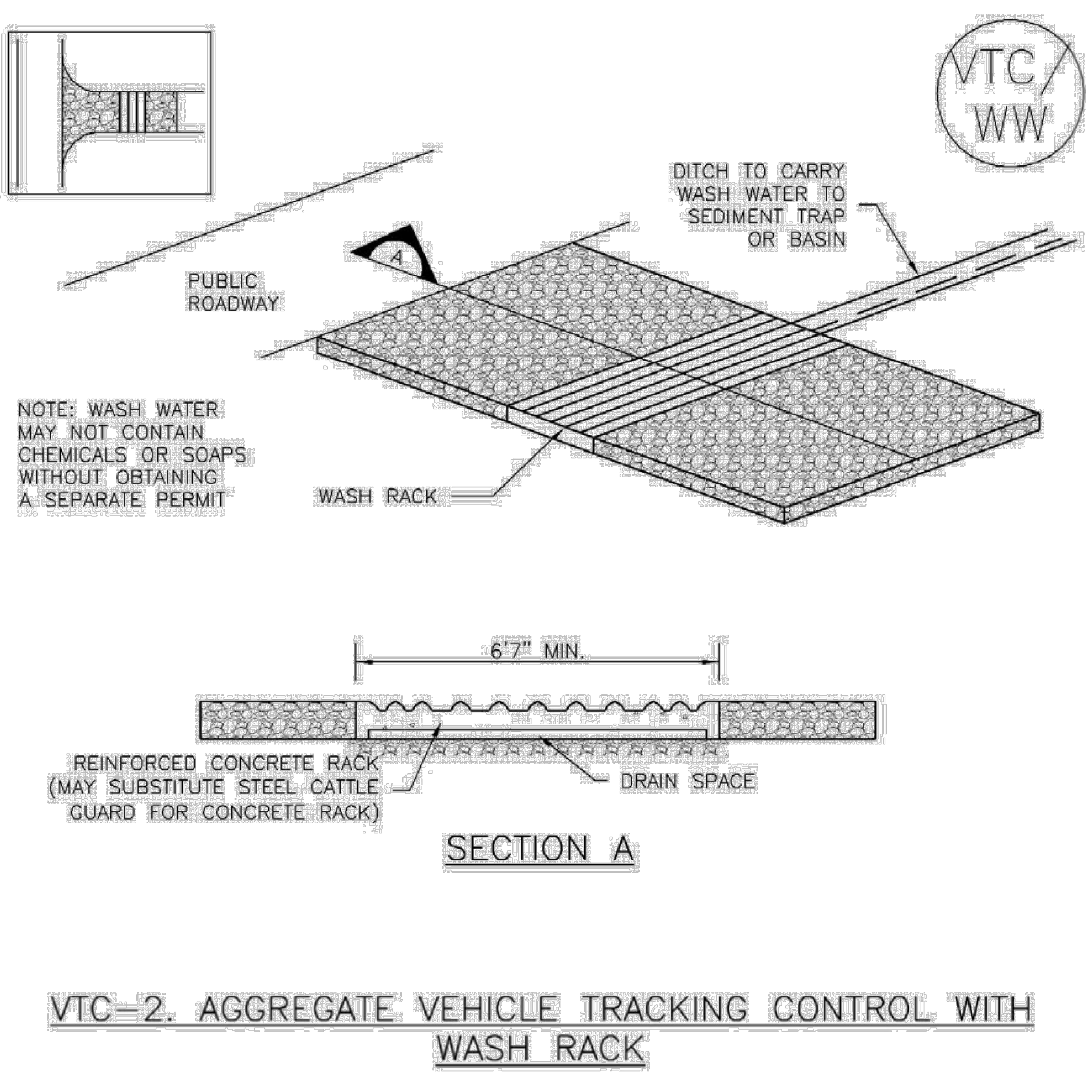
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STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
 - LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
 - TYPE OF CONSTRUCTION ENTRANCE(S)/EXIT(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).
2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.
3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.
4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.
6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.
 5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

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DATE: 01/18/22

STONERIDGE MF TRACT A & F
GRADING AND EROSION CONTROL PLANS
EROSION CONTROL DETAILS

PROJECT NO.
196259000

SHEET

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